WEST SENECA
PLANNING BOARD
1300 Union Road, West Seneca, NY 14224
6:00 PM in the Community Center
August 13, 2026

AGENDA

Meeting # 2026-08

CALL TO ORDER

APPROVAL OF PROOFS OF PUBLICATION

APPROVAL OF MINUTES

1. Minutes of Meeting #2026-07

OLD BUSINESS

SPR 2026-003
A request of Home Leasing, for site plan approval for a property located at 2544 Clinton Street to permit a 3-story multi-unit residential building with all associated site work.

NEW BUSINESS

SPR 2026-007
A request from Benchmark Streamline LLC for property located at 325 Orchard Park Rd for approval of a multi-building, mixed use, development and all associated site work.

ADJOURN

West Seneca Community Center
1300 Union Rd
West Seneca, NY 14224

Planning Board Proceedings
Minutes#2026-07
July 9, 2026

Roll Call

Present:

- Mark Beeler, Planning Board Member
- Joe Sherman, Planning Board Member
- Margaret Bebak, Chairperson
- James Frick, Planning Board Member
- Eric Sailer, Planning Board Member
- Tim Hayes, Planning Board Member
- William Wise, Planning Board Member

Absent: None

Call To Order

The meeting was called to order By Margaret Bebak, seconded by James Frick @ 6:00 pm

Approval of Proofs of Publication

- **Motion:** A motion was made to approve the proof of publication.
- **Recommendation:** Approve
- **Motion by:** Margaret Bebak
- **Seconded by:** James Frick
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

Approval of Meeting Minutes #2026-06

- **Motion:** A motion was made to approve the minutes from the previous meeting.
- **Recommendation:** Approve
- **Motion by:** Margaret Bebak
- **Seconded by:** Joseph Sherman
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

Old Businesses

SPR 2026-002: New Leaf, Inc for site plan approval for property located at 705 Orchard Park Road to permit an EV Parking Station and all associated site work.

- **Motion:** A motion was made to table the request
- Recommendation: Table
- **Motion by**: Margaret Bebak
- **Seconded by:** Tim Hayes
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

SPR 2026-003: Home Leasing, for site plan approval for a property located at 2544 Clinton Street to permit a 3-story multi-unit residential building with all associated site work.

- **Motion:** A motion was made to table the request for site plan approval.
- **Recommendation:** Table
- **Motion by:** Margaret Bebak
- **Seconded by:** Tim Hayes
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

SPR 2026-005: Zen Nails, for property located at 1976 Ridge Road to permit an addition to the existing building and all associated site work.

- Mike Berger of Sutton Architecture represented the business. He explained that after failing to secure an access agreement with the adjacent property owner, the plan was revised. The new plan eliminates rear access and maintains the existing access points on Ridge Road. A 6x4 dumpster in an 8x8 enclosure will be added on the side of the property, accessible only from the Zen Nails property. Details for landscaping have been provided as requested at the last meeting.
- **Board Questions and Answers:**
    - **Q (Tim Hayes):** Asked for clarification on exiting to the rear, noting it seems physically possible.
    - **A (Mike Berger):** Acknowledged it's not physically obstructed but stated they do not have a legal agreement with the property owner, so they are closing it off with green space and landscaping to discourage unauthorized use.
    - **Q (William Wise):** Asked if the closure would be a fence.
    - **A (Mike Berger):** No, it will be a grass transition with landscaping elements.

    - **Q (Joseph Sherman):** Asked if the business will remain "appointment only."
    - **A (Mike Berger):** Yes, that is the intent.
    - **Q (Tim Hayes):** Asked about addressing minor engineering questions.
    - **A (Mike Berger):** Confirmed they will address ADA compliance issues. Sidewalks will be flush, and bumper stops will be added for cars. They plan to maintain existing grade levels to avoid issues with the building's interior floor levels.
- **Public Comments:** None.
- **Motion:** To approve the site plan and landscaping, subject to the conditions in the Town of West Seneca Engineering Department letter dated July 9, 2026.
- **Recommendation:** Approve with conditions
- **Motion by:** Margaret Bebak
- **Seconded by:** James Frick
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

SPR 2026-006: Carmina Wood Design, for site plan approval for property located at 1425 Orchard Park Road to permit the development of fa multi-unit town house development with all associated site work.

- Anthony Pandolfi of Carmina Wood Design, the project engineer, presented updates since the last meeting. Additional parking has been added for the two southern six-unit buildings. "No Parking" signs will be added in front of the units. Regarding school bus service, he spoke with West Seneca Schools' transportation director. Students in grades 7-12 will likely use the bus shelter at the front of the site, as their policy allows for a walk of up to 0.3 miles. For K-6 students, who are only required to walk up to 0.1 miles, the bus will need to enter the site to pick them up from the rear units. A turning plan was provided to and approved by the school. Attempts to get a response from the school about a walking path to the playground have been unsuccessful. The town engineer issued a letter indicating comfort with the board issuing an approval contingent on resolving minor final engineering comments.
- **Board Questions and Answers:**
    - **Q (Margaret Bebak):** Confirmed there are 29 units, not 25.
    - **A (Anthony Pandolfi):** Correct, 29 units.
    - **Q (Tim Hayes):** Asked if the "minor" engineering comments regarding stormwater analysis would require new data collection.
    - **A (Anthony Pandolfi):** No, he believes it's a minor issue. The town wants them to account for offsite drainage in the pond calculations, but since the land already drains toward the wetlands, they can simply reroute it without needing treatment, which shouldn't require major plan changes.
    - **Q (Eric Sailer):** Asked if additional waiting areas for K-6 students will be provided, since a bus will enter the site for them.
    - **A (Anthony Pandolfi):** The plan shows one shelter by Orchard Park Road, but there are sidewalks where students can congregate in the back.

    - **Q (Eric Sailer):** Inquired about the anticipated number of children, given they are patio homes.
    - **A (Anthony Pandolfi):** They are all two-bedroom units, and the target demographic is seniors looking to downsize, so they do not anticipate a large number of children.
- **Public Comments:** None.
- **Motion:** To approve the site plan, subject to the applicant's response to the requirements in the engineering department letter dated July 9, 2026.
- **Recommendation:** Approve with conditions
- **Motion by:** Margaret Bebak
- **Seconded by:** Eric Sailer
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

New Businesses

SPR 2026-004: Armstrong's Beer Company, for property located at 1340 Orchard Park Road for a special permit to allow the service of alcohol.

- Alex Armstrong, the owner, described his plan to create a family-friendly tap house inspired by a brewery in Rehoboth Beach, DE. The goal is to provide a social space for families. The establishment will have a tavern wine license to serve draft and canned craft beer, ciders, and wine. The layout includes tables, couches, and a kids' area in the back with a theater, Lego room, and small arcade. A simple food menu with items like a burger and fries will be offered, with a focus on a kids' menu. Service will be handled at the bar, not via table service.
- **Board Questions and Answers:**
    - **Q (Joseph Sherman):** Asked if they will have a self-pour system like The Ridge.
    - **A (Alex Armstrong):** No, bartenders will pour all drinks.
    - **Q (Eric Sailer):** Asked about outdoor seating.
    - **A (Alex Armstrong):** There is an outdoor area they have rights to use, but they will address outdoor seating plans in the spring as they plan to open in the late fall or winter.
    - **Q (Joseph Sherman):** Asked if alcohol would be served in the outdoor area.
    - **A (Alex Armstrong):** Yes.
    - **Q (Tim Hayes):** Confirmed no hard liquor will be served.
    - **A (Alex Armstrong):** Correct, just beer, wine, and cider. They do not anticipate being a late-night destination.
    - **Q (Tim Hayes):** Asked about hours of operation.
    - **A (Alex Armstrong):** 11:00 AM to 9:00 PM.
    - **Q (Margaret Bebak):** Asked for clarification on the "family basement" concept.
    - **A (Alex Armstrong):** Confirmed the concept. They will have cameras in the kids' area so parents can monitor them on their phones, and there will be chairs nearby for parents who wish to watch their children directly.

    - **Q (Joseph Sherman):** Asked about supervision for the children's area.
    - **A (Alex Armstrong):** Parents will be responsible for their own children.
    - **Q (Alex Armstrong / Self-Addressed):** Addressed potential parking concerns, noting the shared lot with Molly's Mutt (a drop-off location) and a Mexican restaurant is large and rarely full. He noted an unused grass area owned by the landlord could potentially be converted to parking if needed.
- **Public Comments:** None.
- **Motion:** To recommend to the Town Board that they issue the special permit.
- **Recommendation:** Recommend Approval
- **Motion by:** Margaret Bebak
- **Seconded by:** William Wise
- **Ayes:** All
- **Noes:** None
- **Abstain:** None
- **Motion Carried**

Adjourn

- **Motion by:** Margaret Bebak
- **Seconded by:** Mark Beehler
- The motion was second and all were in favor. Meeting adjourned 6:23pm

April 20, 2026

Jeffery Schieber
Code Enforcement Officer
1250 Union Road – Room 210
West Seneca, New York 14224

RE: 2544 Clinton Street – Home Leasing Development
Site Plan Review Application Package

Mr. Schieber:

On behalf of Home Leasing Development, I am pleased to submit a Site Plan Review Application Package for the proposed affordable multi-family housing project "West Seneca Apartments", located on one parcel at 2544 Clinton Street.

Home Leasing is seeking Site Plan Approval to develop the project on an approximately 12.7-acre site. (TA#124.00-2-5). The project proposes the construction of 75-units spanning across two buildings – the existing mansion on site (15-units) and a new 3-story multifamily apartment building (60-units) with associated parking, site and drainage improvements.

The original project was approved by the Town Board for Rezoning, Special Use Permit and SEQR Negative Declaration on 1/27/2025. The revised layout for the project was approved by the Town Board for an Amendment to the existing Special Use Permit on 2/9/2026.

This package includes a fully engineered site package for Planning Board Review.

Per Town of West Seneca Code – Site Plan Review Criteria - "Planning Board Actions; project review criteria" (Code Section 102-12 (A & B)), we offer the following responses:

(1) Conformance with this chapter and other adopted Town plans, an approved development plan that includes the subject site, if one exists, and all other applicable laws;

To the best of our knowledge, the project is in compliance with all regulations of the R-50 zoning district and supplemental multifamily housing requirements. Based on the 2016 Comprehensive Plan – Neighborhoods – Section A, B and C – the plan supports continuing to build affordable housing with West Seneca.

(2) Compatibility of the proposed development with the natural features of the land and the environmental attributes of the site;

The project is designed to preserve and avoid disturbance in the environmentally sensitive areas located on the site. There will be no disturbance within the archeological buffer area and 100-year floodplain. All development is located in FEMA Zone X and areas of minimal flood hazard. Development is located away from Cayuga creek to maintaining an existing natural buffer. The site layout is designed to maintain existing trees/vegetation along Clinton Street and along the perimeter of the parcel.

(3) The project's compliance with grading and drainage requirements of the Town;

The project is designed to comply with the town standards. Stormwater is designed to meet NYS Stormwater Design Manual standards, grading and disturbance will be limited to areas as required for installation of stormwater practices and to achieve positive drainage away from buildings/across hardscape areas.

(4) The project's compliance with the Town's Flood Damage Prevention Law;

The project is located partially within FEMA Zone X, with the majority of the development sitting outside of all mapped zones. Per Town Code Section 77-12 – A floodplain development permit is not required for development within Zone X.

(5) The general layout and design of buildings, lighting, signage, open space and development features consistent with reasonable planning principles;

The proposed singular new 3-story building (60-units) along with utilizing the existing mansion for an additional 15-units was chosen to lessen the overall footprint on the property. The existing landscaping and stone wall are being preserved to the greatest extent possible, providing screening of the new building and parking lot from Clinton Street. Roads and parking lots have been designed to meet town standards and allow for proper emergency access.

(6) The location and design of vehicular entrances/exits, including emergency access and fire lanes, in relation to the street system, traffic circulation and control within the site, and coordination of access points and circulation with adjoining properties;

The existing entrance to the property is being utilized with minor widening to allow for adequate space for emergency vehicles. The parking lot and roadways are designed to meet NYS Fire Code including: fire lanes for aerial apparatus access along two sides of building, fire turnarounds, a looped parking lot, and two new private fire hydrants.

(7) The provision and protection of pedestrian movement on the site and coordination of pedestrian movement on adjoining properties and the street system;

Sidewalks are provided throughout the proposed development. All sidewalks (as shown on the plans) are ADA compliant. Sidewalk access is provided out to Clinton Street and a new segment of sidewalk within the ROW and extends to the west to the limits of the existing guardrail, in accordance with previous coordination with NYSDOT.

(8) The location, design, layout and adequacy of parking, loading and stacking areas, including the provision of opportunities for handicapped parking;

The parking lot provides the code required 170 spaces – including 20 visitor spaces. The submitted plans proposes 20-banked parking spaces to be constructed in the future if demand requires it. ADA and EV spaces are provided at both buildings, adjacent to the accessible entrances for the respective buildings.

(9) Provision of landscaping, screening and buffers to complement development and protect adjacent uses and public rights-of-way from unsightliness, noise, glare and other nuisances. Such elements shall also be used to promote the availability of green space in nonresidential development and recreation space in residential development to avoid a continuous paved or built environment;

The project layout was designed to preserve open space. Existing natural buffers will be maintained along the north, east and west boundaries of the site. Trees along the south (Clinton Street) will be maintained – other than removal required for the widening of the driveway. A patio area and playground are provided, along with landscaped islands throughout the parking lot. Trees will be added along the entrance drive to provide additional screening of the new development from Clinton Street.

(10) Adequate provision of drainage and stormwater management facilities;

A Stormwater Pollution Prevention Plan (SWPPP) was prepared for the site and is included in this submission package. The site is designed per the NYS Stormwater Design Manual standards and NYSDEC Standards and Specifications for Erosion and Sediment Control. Several stormwater practices are proposed for the site including bioretention areas, underground stormwater chambers and use of a hydrodynamic separator (water quality unit).

(11) Adequacy of sewer and water facilities, fire protection and conformance with Town regulations for the provision and construction of those services;

A full sewer report (including flow testing) has been completed. Findings of the monitoring was reviewed and approved by Erie County Sewer, concluding that the sewer has sufficient capacity to support the proposed project. Existing flow tests for the watermain on Clinton Street have been reviewed and it was determined that the existing watermain has sufficient pressure to support the proposed project. Both buildings will be designed to meet NYS Fire Code (for rehabilitation of the existing building and new construction).

(12) Where appropriate and applicable, the concurrence of Town agencies, New York State Department of Transportation, New York State Department of Environmental Conservation and other county or state agencies, as appropriate; and

Correspondence with reviewing agencies will be/has been provided to the town as a part of the site plan review. To date NYSDOT and SHPO correspondence was provided as part of SEQR review and issuance of the Special Use Permit.

(13) Meeting the requirements for a site plan, as identified in this chapter.

This application package as submitted meets the requirements of the Town Code, to the best of our knowledge.

Included for your consideration in the Site Plan Review are the following items:

- Site Plan Application
- Civil Plan Set
- Architectural Elevations & Rendering
- Preliminary ALTA
- Engineering Report
- SWPPP
- Check – Review Fee (mailed separately)

We look forward to presenting this project to the Planning Board on May 14th, 2026. If you have any questions or need any additional information, please feel free to contact me at 585-770-2525 or svakiener@labellapc.com.

Respectfully submitted,

LaBella Associates



Shelby Vakiener, Civil Engineer

TOWN OF WEST SENECA

APPLICATION FOR SITE PLAN REVIEW APPROVAL

TO BE COMPLETED BY APPLICANT

DATE 4/20/2026 FILE # _____

PROJECT NAME West Seneca Apartments

PROJECT LOCATION (Include address and distance to nearest intersection)
2544 Clinton Street - Nearest cross street - Lakeside Court (+/- 750 LF to the East)

APPLICANT Home Leasing - (contact - Angela Eicholtz) PH/FAX (248) 978-4420

ADDRESS 45 East Avenue, 2nd Floor, Rochester, NY 14604

PROPERTY OWNER Clinton Street Realty Holdings PH/FAX _____

ADDRESS _____

ENGINEER/ ARCHITECT Labella Associates DPC - (contact - Shelby Vakiener) PH/ FAX (585) 454-6110

ADDRESS 300 Pearl Street, Suite 130, Buffalo, NY 14202

SBL # 124.00-2-5

PROJECT DESCRIPTION (Include all uses and any required construction)

Construction of a new multifamily housing project with 75 total units. Includes a new +/- 75,900 SF building with 60 units and the re-purposing of the existing mansion on site with 15 units. Also includes, driveway, parking, stormwater management facilities

SIZE OF LOT (acres) 12.7 (to creek CL) ACREAGE TO BE REZONED N/A

ADJACENT ROAD NAMES AND AMOUNT OF FRONTAGE ON EACH
Clinton Street: +/- 205 LF of frontage

EXISTING ZONING R-50 PROPOSED ZONING R-50

EXISTING USE(S) ON PROPERTY Commercial

PROPOSED USE(S) ON PROPERTY Residential - Mutlifamily

EXISTING USE(S) AND ZONING ON ALL PROPERTY WITHIN 500 FEET

Zoning: R75(S), R-100 A, R-100A(S), C-2, C-2(S)
Uses include: 1 Family Residential, 2 Family Residential, Residential vacant land, Residential w/ community use, warehouse, converted residential

PUBLIC SEWER YES X NO ___ PUBLIC WATER YES X NO ___

VARIANCES AND OTHER APPROVALS OR PERMITS REQUIRED
Special Use Permit - Issued by Town Board on 2/9/2026

APPLICATIONS WILL NOT BE ACCEPTED WITHOUT COMPLETION OF ALL REQUIREMENTS LISTED HEREIN

TO BE COMPLETED BY THE TOWN OF WEST SENECA

DATE RECEIVED _____ BY _____

PLANNING BOARD MEETING DATE _____

TOWN BOARD MEETING DATE _____

TOWN BOARD RESOLUTION DATE _____

NON – REFUNDABLE FILING FEE (Payable to the Town Clerk): $

TOWN OF WEST SENECA

APPLICANT CHECKLIST FOR SITE PLAN REVIEW

PLEASE REFER TO APPENDICES A, B, & C AND THE TOWN OF WEST SENECA ZONING ORDINANCE FOR ADDITIONAL DESIGN INFORMATION. THE APPLICANT/ AGENT MUST INITIAL EACH ELEMENT AS PROOF THAT ALL REQUIREMENTS HAVE BEEN MET.

I. SITE PLAN All site plan drawings shall be prepared, signed, and sealed by an architect, landscape architect, engineer, or surveyor licensed in the State of New York, drawn to scale, and must include the following elements (also see checklist in Appendix A) :

__SV__ Title of drawing.

__SV__ Name, address, and telephone number of applicant, owner of record, and person who prepared the drawing. If owner of record is different from applicant, a letter of authorization from the owner or a contract of sale is required.

__SV__ North arrow, scale, revisions block and date.

__SV__ Site location map.

__SV__ Name, location, width, and jurisdiction of existing roads and sidewalks.

__SV__ Location of curb cuts on project site and on adjacent properties (including properties across the street).

__SV__ Location of all existing and proposed buildings and structures, paving, curbs, and pedestrian and bicycle facilities with those to be removed clearly identified.

__SV__ Show all zoning district boundaries, zoning classifications for all adjacent properties (including across the street), and zoning setback dimensions. If a portion of the site is proposed to be rezoned, the new zoning district boundaries should be shown.

__SV__ Zoning data block comparing existing and proposed requirements, including greenspace and parking calculations.

__SV__ Location of any areas proposed for outdoor display and sale of merchandise, if applicable.

__SV__ Layout of all off-street parking areas showing access drives, aisles, parking spaces, handicapped accessible spaces, and loading areas (conforming to all requirements of the Town of West Seneca Zoning Ordinance). A cross-section of proposed pavement must be provided.

__SV__ Existing and proposed rights-of-way and easements and location of areas to be in common ownership or to be offered for dedication.

__SV__ Existing and proposed watercourses including wetlands, floodways, and floodplains (this information should also appear in the drainage plan and grading plan).

__SV__ Location of all proposed signage (conforming to all requirements of the Town of West Seneca Zoning Ordinance).

__SV__ Any other information as might be required by the Planning Board.

II. BOUNDARY SURVEY

SV A **topographic boundary survey** and a **written legal description.** (metes and bounds)
Provide in Electronic Form as well as written

III. UTILITY PLAN – to include the following elements (also see checklist in Appendix A)

SV Location of existing water mains, showing main size and material type, o-site and off-site fire hydrant locations, and on-site main line valve locations.

SV Location of proposed water service showing material type and diameter of water main.

SV Location of existing and proposed gas and electric service.

SV Sanitary service showing location, proposed line, and existing main size. Include all manhole rim and invert elevations, pipe slope, and construction materials, if appropriate

SV The estimated daily sanitary sewage flow calculations must be included in the site plan Engineering Report.

SV Written confirmation that the process has been initiated with County or State Highway Departments for sanitary sewer connection, curb cuts, work permits, etc. (Applicant must furnish a letter from the appropriate County or State agency indicating their approval of the proposal prior to issuance of a Building Permit)(if necessary).

IV. GRADING PLAN – To include the following elements (also see checklist in Appendix A).

SV Existing and proposed grade elevation with contour lines at 1-foot intervals.

SV Finished floor elevations for all proposed and adjacent structures.

V. DRAINAGE PLAN – to include the following elements (also see checklist in Appendix A):

SV All catch basins, line size, and proposed construction materials. No stormwater shall drain onto adjoining properties. All downspouts shall be connected to the stormwater collection system.

SV Systems shall be designed for a minimum 10-year storm.

SV Stormwater calculations, prepared by a person licensed to design a storm drainage system in New York State.

SV Site plan Engineering Report (refer to requirements in Appendices A & B).

SV Any proposed project that will involve one or more acres of soil disturbance is required to comply with NYSDEC SPDES General Permit requirements for stormwater discharges. A copy of the Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (WPPP) must be provided with the site plan Engineering Report..

VI. LANDSCAPING PLAN – to include the following elements (also see Appendix C).

_SV_ All existing and proposed tree lines.

FUTURE All proposed trees, shrubs, and other plantings with appropriate labeling.

FUTURE Planting schedule data block with legend key, species name (botanical and common names), quantity, size, and spacing.

_SV_ Planting details for trees and evergreens must illustrate the crown of root ball at six (6) inches above finished grade; three (3) inches for shrubs.

_SV_ Refer to the Town of West Seneca Zoning Ordinance for applicable landscaping and screening requirements.

VII. CLEARING 7 SOIL EROSION CONTROL PLAN - to include the following elements:

_SV_ Site preparation and clearing shall be designed to fit with the vegetation, topography, and other natural features of the site and shall preserve as many of these features of the sight and shall preserve as many of these features as possible.

_SV_ Show clearing limits, stock pile area, and all temporary and permanent drainage facilities. Erosion and sediment control facilities must be shown.

_SV_ A time schedule that is keyed to the operation must be provided.

_SV_ Include a note on the plan to indicate that stumps and brush may not be buried in the Town and that topsoil may not be removed from the work site without a permit.

VII. LIGHTING PLAN – to include the following elements:

_SV_ Location of all lighting fixtures and standards on the property and structures, including a fixture schedule.

_SV_ Photometric data for site illumination.

IX. BUILDING HEIGHT AND DESIGN

_SV_ Building elevations and floor plans of all non – residential structures and all residential structures containing three (3) or more dwelling units (including net floor area calculations).

I, Shelby Vakiener - agent for applicant as owner/applicant of West Seneca Apartments, located at 2544 Clinton Street. Town of West Seneca, to the best of my knowledge has submitted a complete application package for a site plan for review.

TOWN OF WEST SENECA

APPENDIX A-SITE PLAN APPLICATION CHECKLIST

I. GENERAL

SV All elevations must reference the actual elevation of the site and proposed building (utilize Town of West Seneca data). Setting a base elevation at the centerline of the road to use as reference is not acceptable.

SV All profiles provided must be drawn so that the horizontal scale is no more than 1" = 10' horizontal, and 1" = 5' vertical.

SV Profiles be provided for utility crossings, the sanitary sewer system, and storm sewer system.

SV Profiles for any utilities as deemed necessary by the engineer for construction.

II. UTILITY PLAN

SV Add a note to the plan that states: "A minimum of 10 feet of horizontal and 18 inches of vertical separation must be maintained between all sanitary sewer and water services".

SV Add a note to the plan that states: "The Erie County Water Authority is to be notified a minimum of 48-hours prior to starting the connection to the new water service.

SV Add a note to the plan that states: "Select backfill is required for all utilities (gas, water, storm, sanitary) that cross through any pavement area." The limits of the select backfill must be shown on the utility plan.

SV The plans must clearly state the type of proposed connection to the existing waterline to be made. Will it saddle with corporation stop or tapping sleeve and valve.

SV All existing utilities, grading, etc. must be shown as a grey line type.

SV All proposed utilities, grading, etc. must be shown as a black line type.

SV Provide a trench detail for the proposed waterline installation. The detail must show the depth of cover, stone bedding, and indicate the use of underground waterline marker tape.

SV Provide a trench detail for the proposed sanitary sewer lateral. The detail must show the depth of cover, stone bedding, and indicate the use of underground waterline marker tape. /when connecting the Erie County Sewer District No. 1 or No. 3 system, their details must be provided.

FUTURE Provide a profile for the proposed sanitary sewer service showing the connection to the existing system and connection at the facility.

III. PAVEMENT

SV Asphalt pavement grades should be at least 1.5%, preferably 2.0% to drain properly, minimize public safety concerns, and avoid liability issues. Theses grades must be shown on the drainage plan with flow arrows showing the direction of water flow.

SV Show on the plans a cross-section of the proposed sidewalk.

SV Show on the plans a cross-section of the proposed asphalt pavement. It is suggested that a thicker asphalt section be used for high traffic travel areas, where the dumpster is located, or where the deliveries will occur.

SV On the asphalt pavement cross-section, show the use of filter fabric (Mirafi 140N, or equal) under the pavement sub-base.

n/a If connections to cross –access driveways are being made with adjacent sites, a detail must be shown on the plans for the proposed connection. The pavement transition detail must include a V-shaped saw cut into the existing pavement and tack coat.

IV. DRAINAGE/GRADING

SV The stockpile area for topsoil and fill must be shown on the design plans.

SV Spot elevations for adjacent properties must be provided on the grading plan.

SV A minimum of 6-nches of cover are required for all storm sewer pipes in grass area. A minimum of 12-inches of cover are required for all storm sewer pipes in pavement. Storm sewer pipe located within the sub-base of the pavement is not allowed.

SV Invert elevations must be shown for all culverts under driveways.

n/a Provide stone rip rap at the pipe outlets from the detention pond.

n/a Provide emergency overflow for the detention pond for the 100-year storm elevation.

SV All culverts under driveways must be shown with galvanized end sections.

SV Diameter, material type, and inverts of all roof leader downspouts must be shown.

SV Diameter, material type, and inverts of all storm sewer pipes must be shown on the plans.

n/a For sites with less than one (1) acre of disturbance, the design engineer is required to detain the difference between the 10-year pre-developed storm and the 25-year post-developed storm.

SV For sites with greater than one (1) acre of disturbance, the design engineer is required to comply with all NYSDEC Stormwater Phase 2 regulations and design guidance.

V. SITE PLAN ENGINEERING REPORT

SV The applicant must provide three (3) copies of the site plan Engineering Report. This report will contain (at a minimum), the following sections:

- General Project Description.
- Project Location Map.
- Water System Calculations.
- Sanitary Sewer System Calculations.
- Stormwater Calculations

SV Provide the following information related to the proposed waterline for the facility in the design report. This would include the following:

- Domestic water demand (include calculations).
- Static waterline pressure (at the water right-of way).

FUTURE Anticipated pressure at the facility (include head loss calculations through the water service and backflow preventer/RPZ and meter); the design engineer must comment on the need to provide a sprinkler system for the facility. Provide fire flow calculation s for the facility (if applicable). Provide the following information related to the proposed sanitary sewer system for the facility in the design report. This would include the following:

- Number of employees at the facility.
- Sanitary sewer demand and lateral pipe sizing (include calculations).

SV Provide the following information related to the stormwater calculations for the facility in the design report. This would include the following:

Soil types of the site.

- Permeability and depth of water table of the soil.
- Description/dialogue on existing grading and stormwater runoff.
- Description/dialogue on proposed grading and stormwater runoff.
- Comment on the presence and show location of any NYSDEC or Federal Wetlands or 100-year Floodplain boundary.
- For sites with less than one (1) acre of disturbance, the design engineer is required to detain the difference between the 10-year pre-developed storm and the 25-year post-developed storm. Calculations must be provided
- For sites with greater than one (1) acre of disturbance, the design engineer is required to comply with all NYSDEC Stormwater Phase 2 regulations. Calculations must be provided.
- Calculations to be provided must include all assumptions, time of concentration, and detention pond sizing, and stormwater pipe sizing.
- All existing headwater and tailwater conditions must be considered for the design calculations.

Refer to APPENDIX B "Design of Stormwater Detention Facilities" for design guidance.

APPENDIX B-DESIGN OF STORMWATER DETENTION FACILITIES

The following method of determining the size of stormwater detention and retention facilities is presented as a guide for engineers, architects, and developers involved with construction projects in the Town of West Seneca.

Detention facilities are those facilities that detain the flow of stormwater runoff and discharge it at a reduced rate from the detention area. /this type of system operates by gravity with a large inlet and a small inlet. Retention facilities retain stormwater runoff, and it is necessary to pump the collected water into the downstream drainage system after peak flows have passed. Normally, detention facilities are installed much more frequently than retention facilities.

The Town of West Seneca requires that the stormwater detention system be designed in accordance with the following documents:

1. NYS Stormwater Design Manual
2. NYSDEC:SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001)
3. NYSDEC: Standards and Specifications for Erosion and Sediment Control

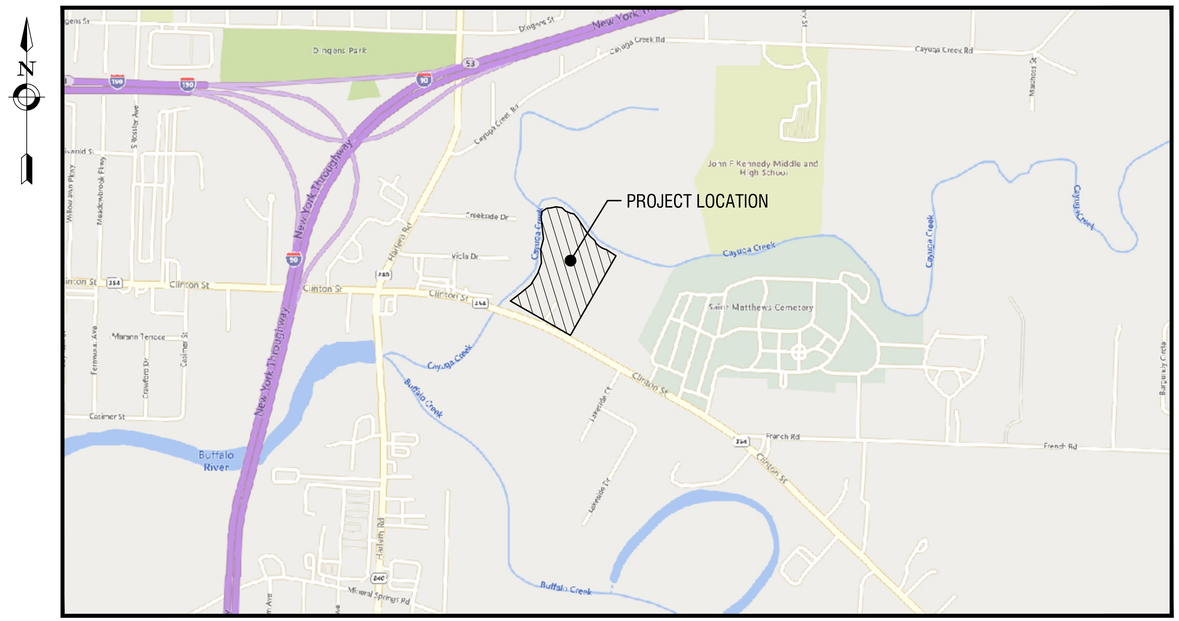
A copy of the Notice of Intent (NOI) and Storm Water Pollution Prevention Plan(SWPPP) as required by the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001) must be received and accepted by the Town prior to construction activities.

- For projects accepted by the town, construction cannot begin until:
  * Five (5) business days from the date the NYSDEC receives a copy of the NOI; or the applicant receives an Acknowledgement Letter from the NYSDEC.

The engineer must provide all calculation and mappings, and state all assumptions necessary for review by the Town of West Seneca.

WEST SENECA APARTMENTS

2544 CLINTON ST,
WEST SENECA, NY 14224



LOCATION MAP
N.T.S.

HOME LEASING

75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604
PROJECT NO: 2241067
APRIL 2026

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Buffalo, NY 14202
716-551-6281

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ISSUED FOR SITE PLAN APPROVAL
APRIL 2026

HOME LEASING
PROJECT NO: 2241067

WEST SENECA APARTMENTS
2544 CLINTON ST, WEST SENECA, NY 14224

GENERAL NOTES

1. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE TO LOCATE UTILITIES OUTSIDE THE RIGHT-OF-WAY INCLUDING PRIVATE ROADS.
2. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL MATERIALS, TOOLS AND EQUIPMENT, INCLUDING SPECIAL CUTTING DEVICES, NECESSARY TO PERFORM THE WORK CONTAINED IN THIS CONTRACT.
4. THE SIZES AND MATERIAL OF CONSTRUCTION OF WATER MAINS, SANITARY SEWERS AND STORM SEWERS TO REMAIN ARE REPUTED. THE CONTRACTOR SHALL VERIFY SIZES OF ALL UTILITIES WHERE CONNECTIONS TO SAID EXISTING UTILITIES ARE REQUIRED. EXCAVATION TO VERIFY THESE UTILITIES SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE AMENITIES NOT DESIGNATED FOR REMOVAL.
6. UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING FROM DAMAGE ALL TREES, SHRUBS AND PLANTS IN THE VICINITY OF THE PROPOSED WORK.
7. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES DESIGNATED TO REMAIN FOR THE DURATION OF THE CONTRACT.
8. ANY SITE AMENITY, UTILITY, STREET APPURTENANCE, OR OTHER ITEM WHICH BECOMES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND BY THE CONTRACTOR AS DETERMINED BY THE PROJECT MANAGER OR ARCHITECT/ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.

SURVEY NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY MARKERS AND RIGHT-OF-WAY MARKERS IN THE AREA OF CONSTRUCTION.
3. ANY IRON PINS, MONUMENTS OR OTHER ITEMS DEFINING PROPERTY LINES WHICH ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PROPERLY TIED AND ACCURATELY RESET BY A NYS LICENSED SURVEYOR UPON COMPLETION OF THE WORK.
4. HORIZONTAL DATUM BASED OFF NAD83.
5. VERTICAL BASED OFF OF NAVD88.

DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DIG SAFE NEW YORK AT 811 TO REQUEST UTILITY STAKEOUT OF ALL PUBLIC UTILITIES.
3. WORK ASSOCIATED WITH THIS CONTRACT WILL OCCUR AT AN ACTIVE AND FUNCTIONAL FACILITY. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO MINIMIZE DISRUPTION TO THE OPERATIONS OF THE FACILITY. CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE A SAFE WORK SITE AND TO PROTECT THE PUBLIC, VISITORS AND EMPLOYEES FROM HARM AS A RESULT OF HIS CONSTRUCTION ACTIVITIES.
4. THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES, STRUCTURES, AND APPURTENANCES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES, STRUCTURES, AND APPURTENANCES IN THE PATH OF AND ADJACENT TO THE PROPOSED WORK.
5. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
6. CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES DESIGNATED TO REMAIN FOR THE DURATION OF THE CONTRACT.
7. THE CONTRACTOR SHALL NOTIFY THE LOCAL GOVERNMENT, LOCAL FIRE DEPARTMENT AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) AS NECESSARY AND SHALL OBTAIN ANY REQUIRED PERMITS PRIOR TO BEGINNING WORK. COPIES OF ANY REQUIRED PERMITS SHALL BE PROVIDED TO THE OWNER PRIOR TO BEGINNING THE WORK.
8. CONTRACTOR SHALL REMOVE FROM SITE, MATERIALS NOT INDICATED TO BE SALVAGED INCLUDING ALL DEBRIS. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF CONTRACTOR WHO SHALL LEGALLY DISPOSE OF SAME.
9. ALL TREES, SHRUBS AND PLANTS DESIGNATED TO REMAIN AND DISTURBED BY CONSTRUCTION OPERATIONS, SHALL BE REPLACED IN-KIND AS DIRECTED BY THE ARCHITECT/ENGINEER AND/OR OWNER'S DESIGNATED REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS TO THE EXISTING BUILDINGS FOR THE DURATION OF THE CONTRACT.
11. WHEN EXISTING CONSTRUCTION WHICH IS TO REMAIN IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF CONTRACTORS WORK, IT SHALL BE REPAIRED AND/OR REPLACED WITH SIMILAR OR LIKE MATERIALS AS MUCH AS POSSIBLE, AT NO COST TO THE OWNER. ALL REPAIRS AND/OR REPLACEMENTS WILL BE SUBJECT TO OWNERS APPROVAL.
12. COORDINATE LOCATION OF TEMPORARY CONSTRUCTION FENCE AND TEMPORARY STONE STAGING AREA WITH OWNER

SITE NOTES

1. WELL COMPACTED SUBGRADE SHALL BE UTILIZED UNDERNEATH CONSTRUCTION OF PAVEMENT AND CONCRETE BASES.
2. ALL STAKEOUT FOR THE PROPOSED SITE IMPROVEMENTS SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
3. IF ANY DISCREPANCIES ARE NOTED BETWEEN THESE CONSTRUCTION DOCUMENTS AND INFORMATION PROVIDED OR AN ERROR IS SUSPECT, IT SHALL BE IMMEDIATELY REPORTED TO THE CONSTRUCTION MANAGER AND LABELLA ASSOCIATES PROJECT MANAGER IN WRITING.
4. ANY PROOF-ROLLING OF EXPOSED SUBBASE BY A MINIMUM 10 TON SMOOTH DRUM ROLLER SHALL BE DONE UNDER THE GUIDANCE OF, AND OBSERVED BY, QUALIFIED ENGINEERING PERSONNEL PRIOR TO PLACEMENT OF SUBBASE MATERIAL. THE ROLLER SHOULD BE OPERATED IN THE STATIC MODE AND COMPLETE AT LEAST TWO (2) PASSES OVER THE EXPOSED SUBGRADES.
5. EXISTING WETLANDS DELINEATED BY XXXX ON XX/XX/XXXX.
6. PARCEL LINES AS SHOWN BY XXXX COUNTY GIS DATABASE, FOR THE TOWN OF XXXX.

UTILITY NOTES

1. CONTRACTOR SHALL COORDINATE INSTALLATION OF WATER MAIN / WATER SERVICE WITH ERIE COUNTY WATER AUTHORITY AND THE ERIE COUNTY HEALTH DEPARTMENT (ECDOH). NO WORK SHALL BEGIN ON THE WATER MAIN / WATER SERVICE WITHOUT ECWA AND ECDOH SIGNATURES ON THE UTILITY PLAN.
2. CONTRACTOR SHALL COORDINATE INSTALLATION OF SANITARY MAIN / SANITARY SERVICE WITH ERIE COUNTY PURE WATERS (ECPW). NO WORK SHALL BEGIN ON THE SANITARY MAIN / SANITARY SERVICE WITHOUT ECPW SIGNATURE ON THE UTILITY PLAN.

GRADING NOTES

1. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF OSHA, AND ANY OTHER AGENCY HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS WITH TRENCHING OPERATIONS. THE REQUIREMENTS SET FORTH HEREIN ARE INTENDED TO SUPPLEMENT REQUIREMENTS ESTABLISHED BY THESE AGENCIES. IN THE CASE OF A CONFLICT BETWEEN REQUIREMENTS OF OTHER JURISDICTIONAL AGENCIES AND THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT ON THE CONTRACTOR SHALL APPLY.
2. SHEETING, IF REQUIRED DURING CONSTRUCTION, IS CONSIDERED TO BE PART OF THIS CONTRACT AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
3. ALL TRENCHES THROUGH PAVEMENT SHALL BE SAW CUT PRIOR TO EXCAVATION AND AGAIN PRIOR TO PAVEMENT RESTORATION.
4. CONTRACTOR SHALL ADJUST THE RIMS OF ALL MANHOLES, CATCH BASINS, VALVE BOXES AND OTHER UTILITY SITE STRUCTURES TO MEET FINISHED GRADE IN AREAS REQUIRING REPAVING OR REGRADING AS PART OF THE WORK, INCLUDING THOSE THAT MAY NOT BE SHOWN ON THE PLANS.
5. VOIDS LEFT BY UTILITY OR STRUCTURE REMOVAL OR GRUBBING OPERATIONS SHALL BE BACKFILLED AND PROPERLY COMPACTED WITH STRUCTURAL FILL (NYSDOT ITEM 304.12) IN AREAS UNDER AND WITHIN 5 FEET HORIZONTALLY OF ALL STRUCTURES, BUILDINGS AND PAVEMENTS, IN GRASSED AREAS, VOIDS LEFT SHALL BE FILLED AND PROPERLY COMPACTED WITH SUITABLE ON-SITE OR IMPORTED EARTHEN BACKFILL. ALL DISTURBED AREAS SHALL BE RESTORED.
6. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS TO PREVENT THE INTRODUCTION OF GROUNDWATER INTO THE TRENCHES/EXCAVATIONS. PROVIDE ALL EQUIPMENT NECESSARY TO MAINTAIN THE GROUNDWATER LEVEL AS NECESSARY.
7. THE CONTRACTOR SHALL PLACE AT MINIMUM 6 INCHES OF CLEANED SCREENED TOPSOIL IN ALL DISTURBED AREAS PRIOR TO SEEDING.

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AND LOCAL GOVERNING SOIL AND WATER CONSERVATION AGENCY RECOMMENDATIONS AND STANDARDS. CONTRACTOR SHALL SUBMIT PROPOSED EROSION CONTROL PLAN INCLUDING SEQUENCING OF WORK TO THE ENGINEER FOR REVIEW PRIOR TO START OF WORK.
2. UTILIZE CONSTRUCTION METHODS/TECHNIQUES, WHICH WILL LIMIT THE EXPOSED EARTHEN AREAS AND MINIMIZE THE EFFECT OF EARTH DISTURBANCE ACTIVITIES ON SOIL EROSION. THE AREA OF DISTURBANCE SHALL BE LIMITED TO A MAXIMUM OF 5 ACRES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. ALL SEDIMENTATION BARRIERS AND OTHER TEMPORARY OR PERMANENT MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION. PLANS SHOW THE SUGGESTED MINIMUM MEASURES REQUIRED.
4. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE COMPLETED AT THE APPROVAL OF THE OWNER AND ENGINEER. THE COST OF REMOVING THESE MEASURES SHALL ALSO BE INCLUDED IN THE BID PRICE.
5. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM STORM/SANITARY SEWERS, AND/OR OTHER WATER COURSES FROM CONTAMINATION BY WATER BORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS OR OTHER POLLUTANTS ORIGINATING FROM ANY WORK DONE ON, OR IN SUPPORT OF THIS PROJECT.
6. DURING CONSTRUCTION NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO STORM/SANITARY SEWERS, DITCHES OR OTHER WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY STORM/SANITARY SEWERS, DITCHES, RIVERS, OR WATER COURSES.
7. ALL EXCAVATED OR IMPORTED EARTHEN STOCKPILES SHALL BE SUITABLY STABILIZED AND PROTECTED BY SILT FENCE SO THAT IT CANNOT REASONABLY ENTER ANY WATER BODY, OR STORM OR SANITARY SEWER.
8. ALL METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK FOR EROSION AND POLLUTION CONTROL SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
9. THE CONTRACTOR SHALL BE REQUIRED TO TREAT TRAVELED AREAS TO CONTROL DUST. WATER SHALL BE APPLIED TO SUCH TRAVELED AREAS AS THE ARCHITECT/ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE MAY DESIGNATE. THE NUMBER OF APPLICATIONS AND THE AMOUNT OF WATER SHALL BE BASED UPON FIELD AND WEATHER CONDITIONS.
10. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT WHICH WILL NOT BE SUBJECT TO FURTHER EARTHWORK OR CONSTRUCTION ACTIVITIES SHALL BE PERMANENTLY SEEDED TO ESTABLISH GRASS, AND MULCHED WITH HAY OR STRAW WITHIN ONE WEEK OF FINAL DISTURBANCE. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER IS ESTABLISHED.
11. CONTRACTOR STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCE(S), AS SHOWN ON THE PLANS SHALL BE PROVIDED. ALL DISTURBED AREAS SHALL BE RESTORED.
12. ALL CATCH BASINS/DRAINAGE INLETS SHALL HAVE STONED INLET PROTECTION AROUND THEM AND GEOTEXTILE FABRIC OVER THE GRATE TO PREVENT SEDIMENTATION FROM ENTERING THE STORM SYSTEM.
13. TILL ALL COMPACTED SOILS LOCATED IN LAWN AREAS TO RESTORE THE ORIGINAL PROPERTIES OF THE SOIL PRIOR TO SEEDING.

LEGEND

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		FLOODZONE			END SECTION
		ARCHAEOLOGICAL BUFFER			CATCH BASIN
		TREE REMOVAL			DRAIN BASIN
		UTILITY REMOVAL			INLET MANHOLE
		SAWCUT			STORM MANHOLE
		TREE PROTECTION			SANITARY MANHOLE
		CHAIN LINK FENCE			INLET DRYWELL
		BOARD-ON-BOARD FENCE			CLEAN OUT
		GUARD RAIL			DOWN SPOUT
		TREE/VEGETATION LIMIT			HYDRANT
BLDG	BLDG	BUILDING/STRUCTURE			VALVE
		PROPERTY LINE			FLOW ARROW
		EASEMENTS			TELEPHONE LINE
		RIGHT-OF-WAY			OVERHEAD ELECTRIC
		RETAINING WALL			UNDERGROUND ELECTRIC
		BOLLARD			GAS LINE
FLAG POLE		FLAG POLE			SANITARY LINE
		SIGN			STORM LINE
		DECIDUOUS TREE			STORM UNDERDRAIN PIPE
		CONIFEROUS TREE			WATER FIRE SERVICE LINE
		TREE STUMP			WATER LINE
		OUTLET PROTECTION	-510-	510	MAJOR CONTOUR
		BIORETENTION	-509-	509	MINOR CONTOUR
		BOLLARD LIGHT POLE			% OF DRAINAGE SWALE
		LIGHT POLE SINGLE			EROSION FENCE
		LIGHT POLE DOUBLE			FLOW/SLOPE DIRECTION
		UTILITY POLE			SILT SOCK INLET PROTECTION
HH	HH	HANDHOLE			SILT FENCE INLET PROTECTION
E	E	MANHOLE			CHECK DAM
					STABILIZED CONSTRUCTION ENTRANCE

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C001 GENERAL NOTES, LEGEND, AND DRAWING INDEX
C003 TOTAL LAND HOLDINGS
C101 EXISTING CONDITIONS AND DEMOLITION PLAN
C102 EXISTING CONDITIONS AND DEMOLITION PLAN
C200 OVERALL SITE PLAN
C201 SITE PLAN
C202 SITE PLAN
C203 FIRE TRUCK AND SITE EMERGENCY ACCESS PLAN
C301 UTILITY PLAN
C302 UTILITY PLAN
C401 GRADING, EROSION, AND SEDIMENT CONTROL PLAN
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C501 CONSTRUCTION DETAILS
C502 CONSTRUCTION DETAILS
C503 CONSTRUCTION DETAILS
C504 CONSTRUCTION DETAILS
C505 CONSTRUCTION DETAILS
C506 CONSTRUCTION DETAILS
C507 CONSTRUCTION DETAILS
C508 CONSTRUCTION DETAILS
L501 LANDSCAPE DETAILS

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STATE OF NEW YORK — JOHN D. LaBELLA — 84011 — LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec, 7209 & Art, 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

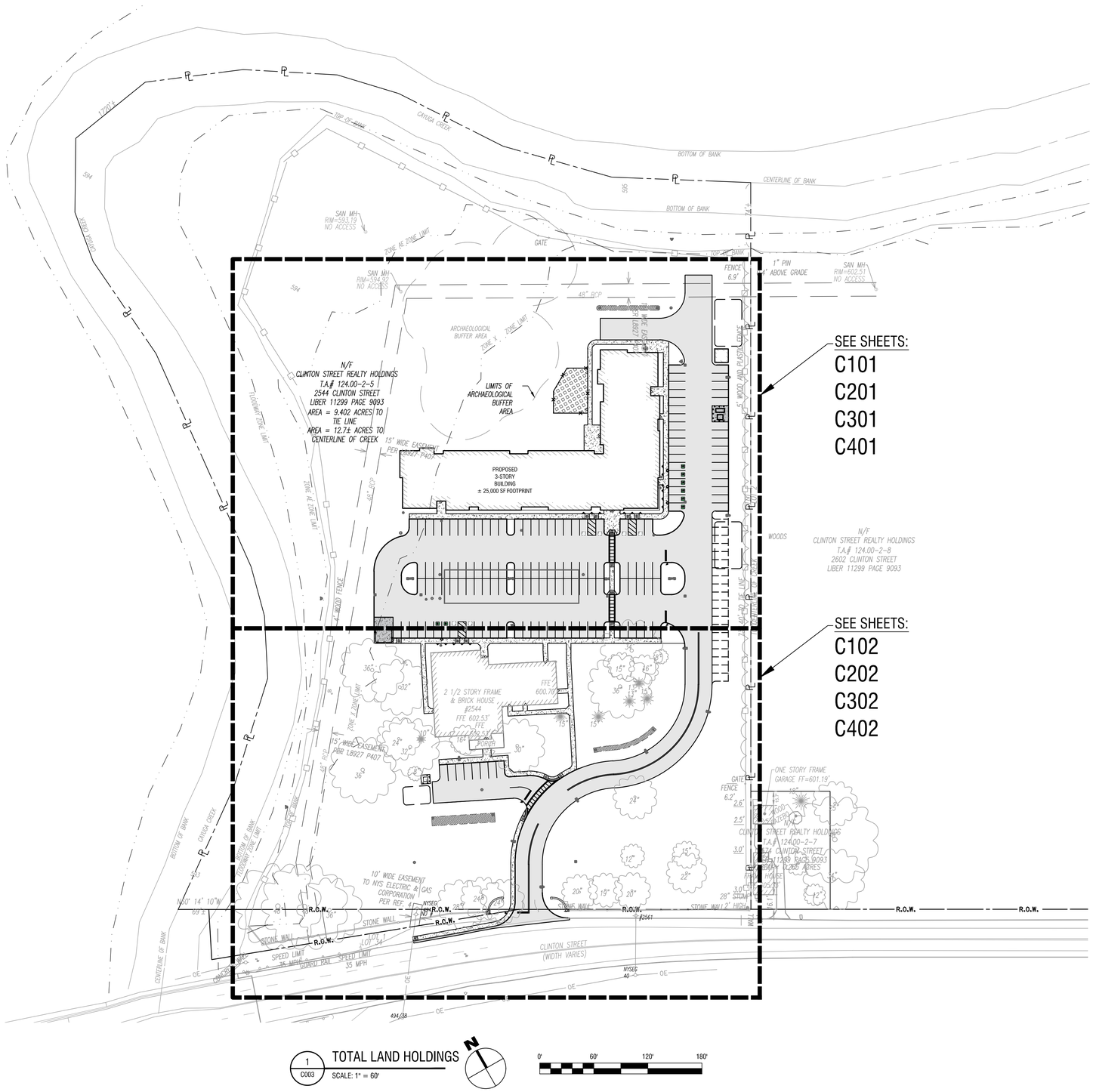
GENERAL NOTES, LEGEND, AND DRAWING INDEX

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C001

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1 C003 TOTAL LAND HOLDINGS
SCALE: 1" = 60'

0' 60' 120' 180'

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TOTAL LAND HOLDINGS

DRAWING NUMBER:

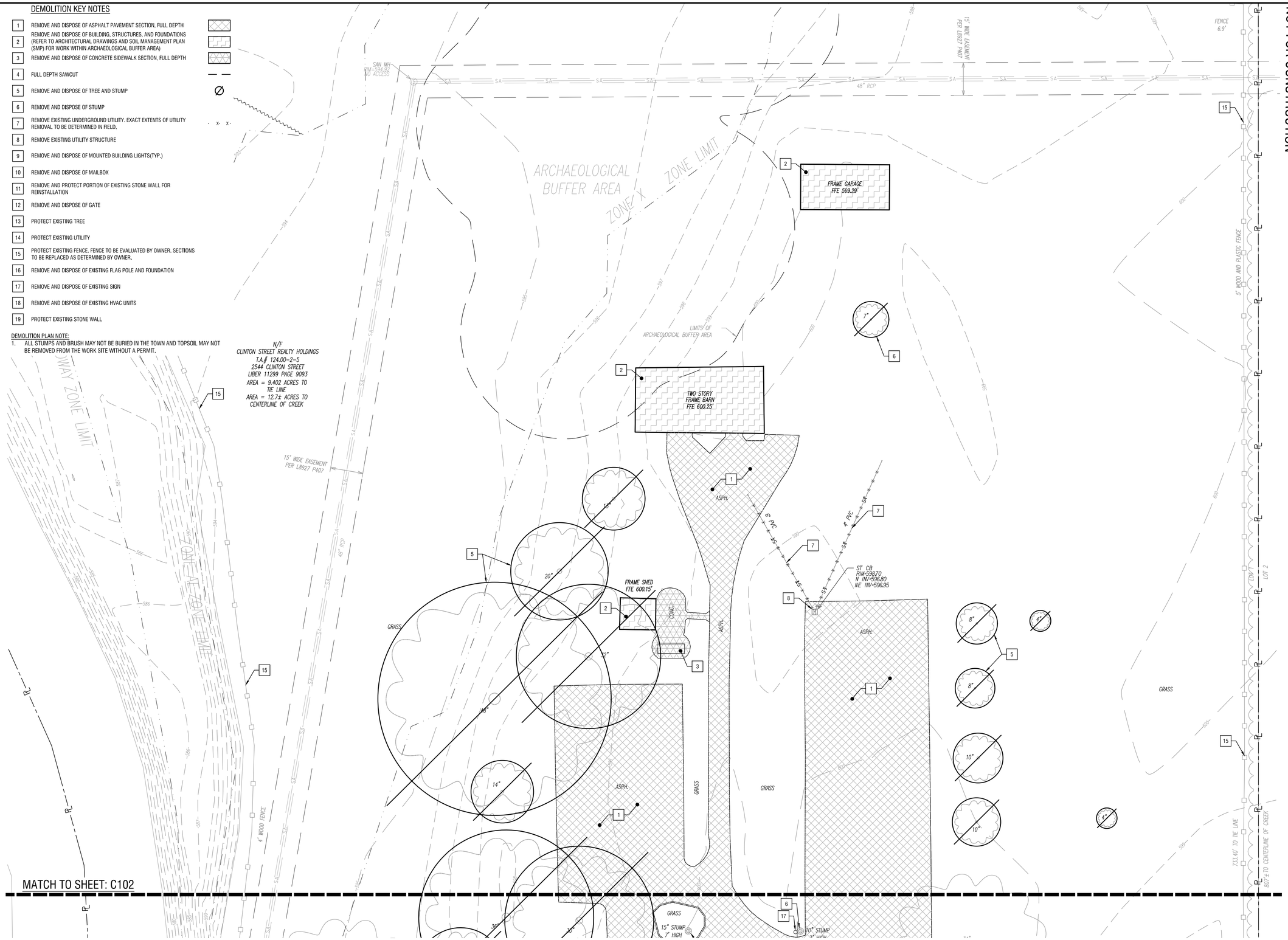
C003

DEMOLITION KEY NOTES

1	REMOVE AND DISPOSE OF ASPHALT PAVEMENT SECTION, FULL DEPTH
2	REMOVE AND DISPOSE OF BUILDING, STRUCTURES, AND FOUNDATIONS (REFER TO ARCHITECTURAL DRAWINGS AND SOIL MANAGEMENT PLAN (SMP) FOR WORK WITHIN ARCHAEOLOGICAL BUFFER AREA)
3	REMOVE AND DISPOSE OF CONCRETE SIDEWALK SECTION, FULL DEPTH
4	FULL DEPTH SAWCUT
5	REMOVE AND DISPOSE OF TREE AND STUMP
6	REMOVE AND DISPOSE OF STUMP
7	REMOVE EXISTING UNDERGROUND UTILITY. EXACT EXTENTS OF UTILITY REMOVAL TO BE DETERMINED IN FIELD.
8	REMOVE EXISTING UTILITY STRUCTURE
9	REMOVE AND DISPOSE OF MOUNTED BUILDING LIGHTS(TYP.)
10	REMOVE AND DISPOSE OF MAILBOX
11	REMOVE AND PROTECT PORTION OF EXISTING STONE WALL FOR REINSTALLATION
12	REMOVE AND DISPOSE OF GATE
13	PROTECT EXISTING TREE
14	PROTECT EXISTING UTILITY
15	PROTECT EXISTING FENCE. FENCE TO BE EVALUATED BY OWNER. SECTIONS TO BE REPLACED AS DETERMINED BY OWNER.
16	REMOVE AND DISPOSE OF EXISTING FLAG POLE AND FOUNDATION
17	REMOVE AND DISPOSE OF EXISTING SIGN
18	REMOVE AND DISPOSE OF EXISTING HVAC UNITS
19	PROTECT EXISTING STONE WALL

DEMOLITION PLAN NOTE:

1. ALL STUMPS AND BRUSH MAY NOT BE BURIED IN THE TOWN AND TOPSOIL MAY NOT BE REMOVED FROM THE WORK SITE WITHOUT A PERMIT.



1 C101 EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

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STATE OF NEW YORK — DANIEL J. [illegible] — 84011 — LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

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EXISTING CONDITIONS AND DEMOLITION PLAN

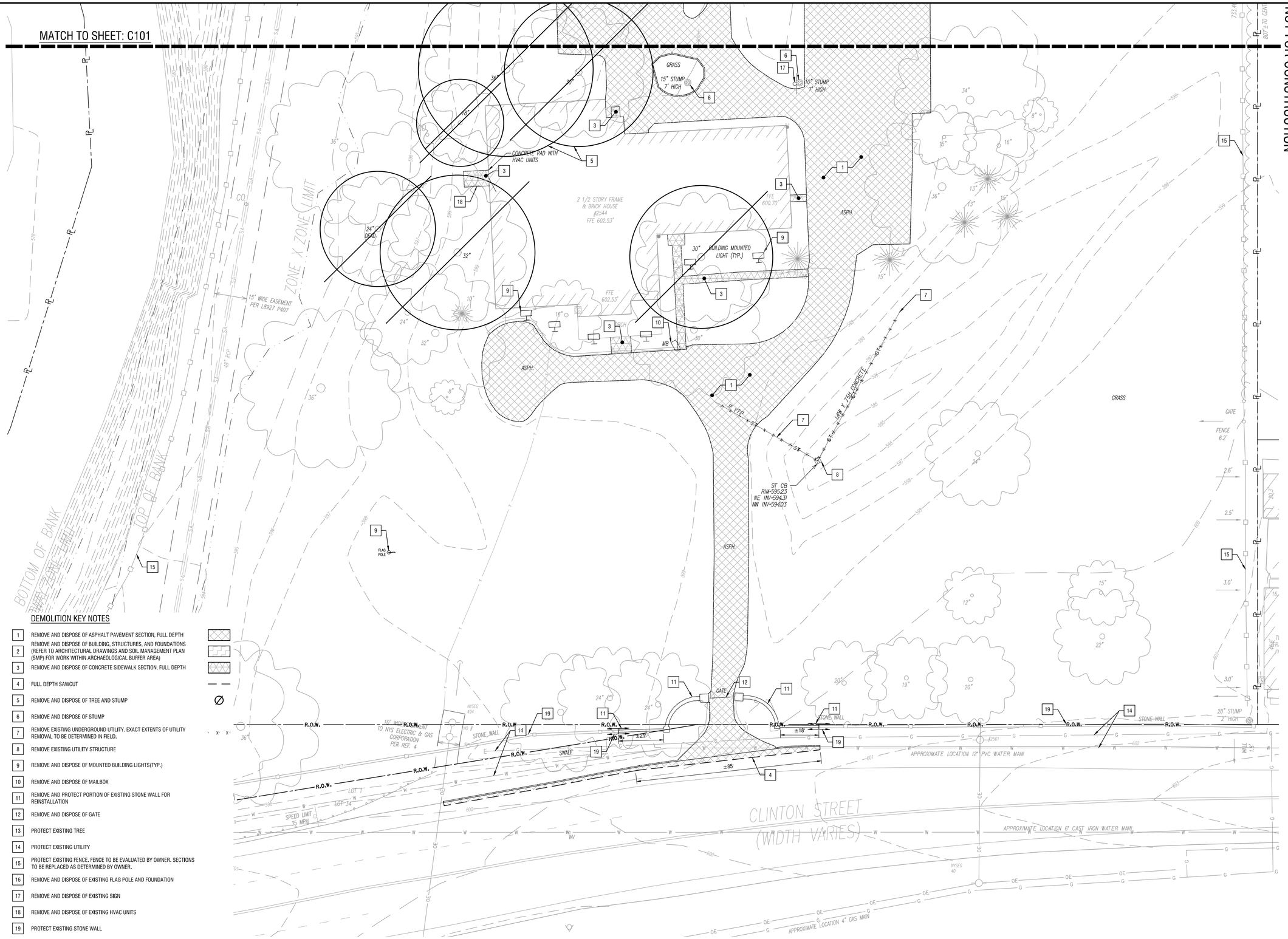
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MATCH TO SHEET: C101

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DEMOLITION KEY NOTES

1	REMOVE AND DISPOSE OF ASPHALT PAVEMENT SECTION, FULL DEPTH
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12	REMOVE AND DISPOSE OF GATE
13	PROTECT EXISTING TREE
14	PROTECT EXISTING UTILITY
15	PROTECT EXISTING FENCE. FENCE TO BE EVALUATED BY OWNER. SECTIONS TO BE REPLACED AS DETERMINED BY OWNER.
16	REMOVE AND DISPOSE OF EXISTING FLAG POLE AND FOUNDATION
17	REMOVE AND DISPOSE OF EXISTING SIGN
18	REMOVE AND DISPOSE OF EXISTING HVAC UNITS
19	PROTECT EXISTING STONE WALL

DEMOLITION PLAN NOTE:

1. ALL STUMPS AND BRUSH MAY NOT BE BURIED IN THE TOWN AND TOPSOIL MAY NOT BE REMOVED FROM THE WORK SITE WITHOUT A PERMIT.

1 / C102 EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec, 7209 & Art, 147 Sec, 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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HOME LEASING
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ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

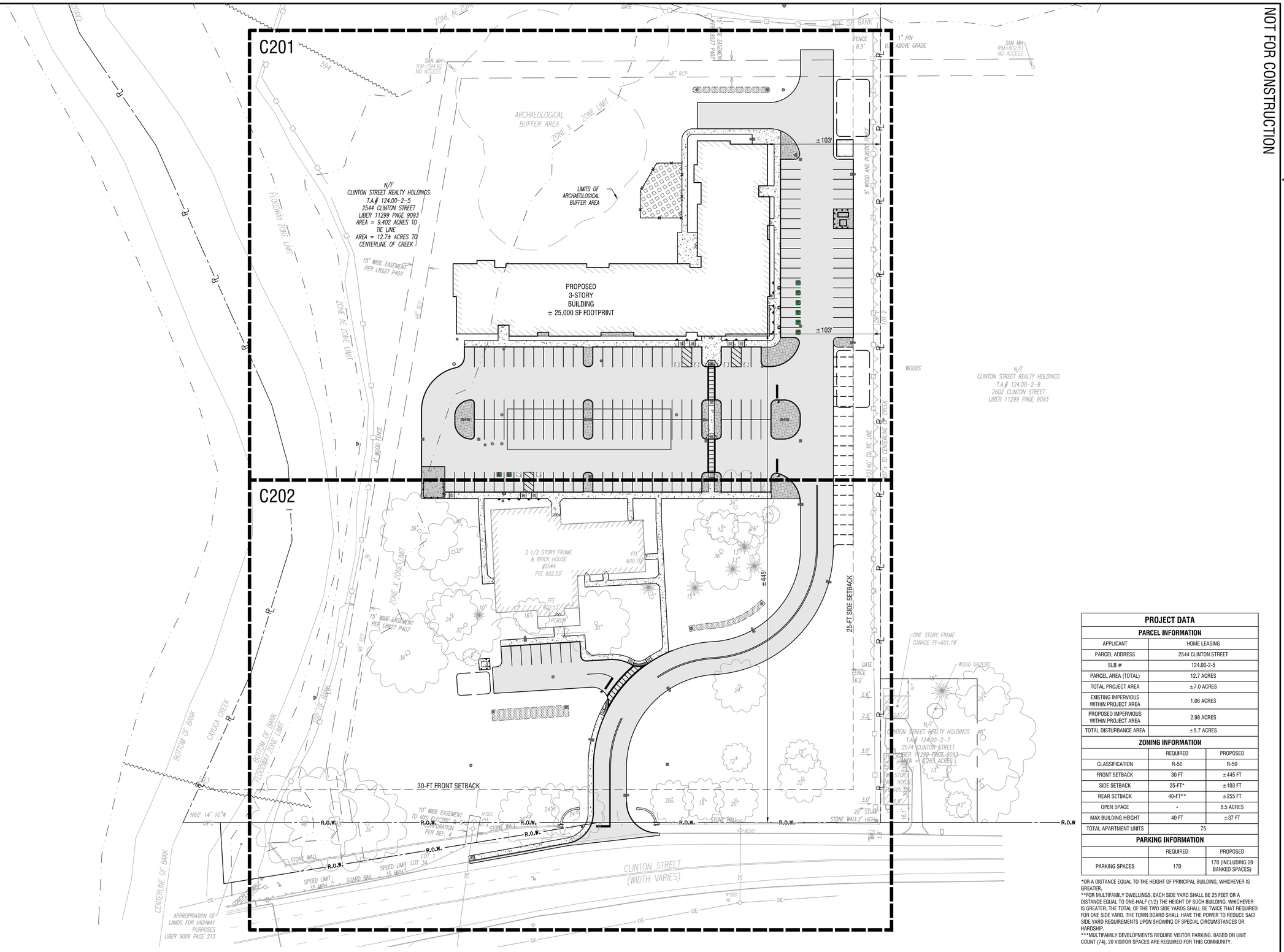
EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING NUMBER:

C102

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NOT FOR CONSTRUCTION



1 / C200 OVERALL SITE PLAN
SCALE: 1" = 40'

0' 40' 80' 120'

PROJECT DATA		
PARCEL INFORMATION		
APPLICANT	HOME LEASING	
PARCEL ADDRESS	2544 CLINTON STREET	
SLB #	124.00-2-5	
PARCEL AREA (TOTAL)	12.7 ACRES	
TOTAL PROJECT AREA	±7.0 ACRES	
EXISTING IMPERVIOUS WITHIN PROJECT AREA	1.06 ACRES	
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	2.98 ACRES	
TOTAL DISTURBANCE AREA	±5.7 ACRES	
ZONING INFORMATION		
	REQUIRED	PROPOSED
CLASSIFICATION	R-50	R-50
FRONT SETBACK	30 FT	±445 FT
SIDE SETBACK	25-FT*	±103 FT
REAR SETBACK	40-FT**	±255 FT
OPEN SPACE	-	8.5 ACRES
MAX BUILDING HEIGHT	40 FT	±37 FT
TOTAL APARTMENT UNITS	75	
PARKING INFORMATION		
	REQUIRED	PROPOSED
PARKING SPACES	170	170 (INCLUDING 20 BANKED SPACES)

*OR A DISTANCE EQUAL TO THE HEIGHT OF PRINCIPAL BUILDING, WHICHEVER IS GREATER.
**FOR MULTIFAMILY DWELLINGS, EACH SIDE YARD SHALL BE 25 FEET OR A DISTANCE EQUAL TO ONE-HALF (1/2) THE HEIGHT OF SUCH BUILDING, WHICHEVER IS GREATER, THE TOTAL OF THE TWO SIDE YARDS SHALL BE TWICE THAT REQUIRED FOR ONE SIDE YARD. THE TOWN BOARD SHALL HAVE THE POWER TO REDUCE SAID SIDE YARD REQUIREMENTS UPON SHOWING OF SPECIAL CIRCUMSTANCES OR HARDSHIP.
***MULTIFAMILY DEVELOPMENTS REQUIRE VISITOR PARKING. BASED ON UNIT COUNT (74), 20 VISITOR SPACES ARE REQUIRED FOR THIS COMMUNITY.

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STATE OF NEW YORK
DANIEL J. NOWICKI
084011
LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

OVERALL SITE PLAN

DRAWING NUMBER:

C200

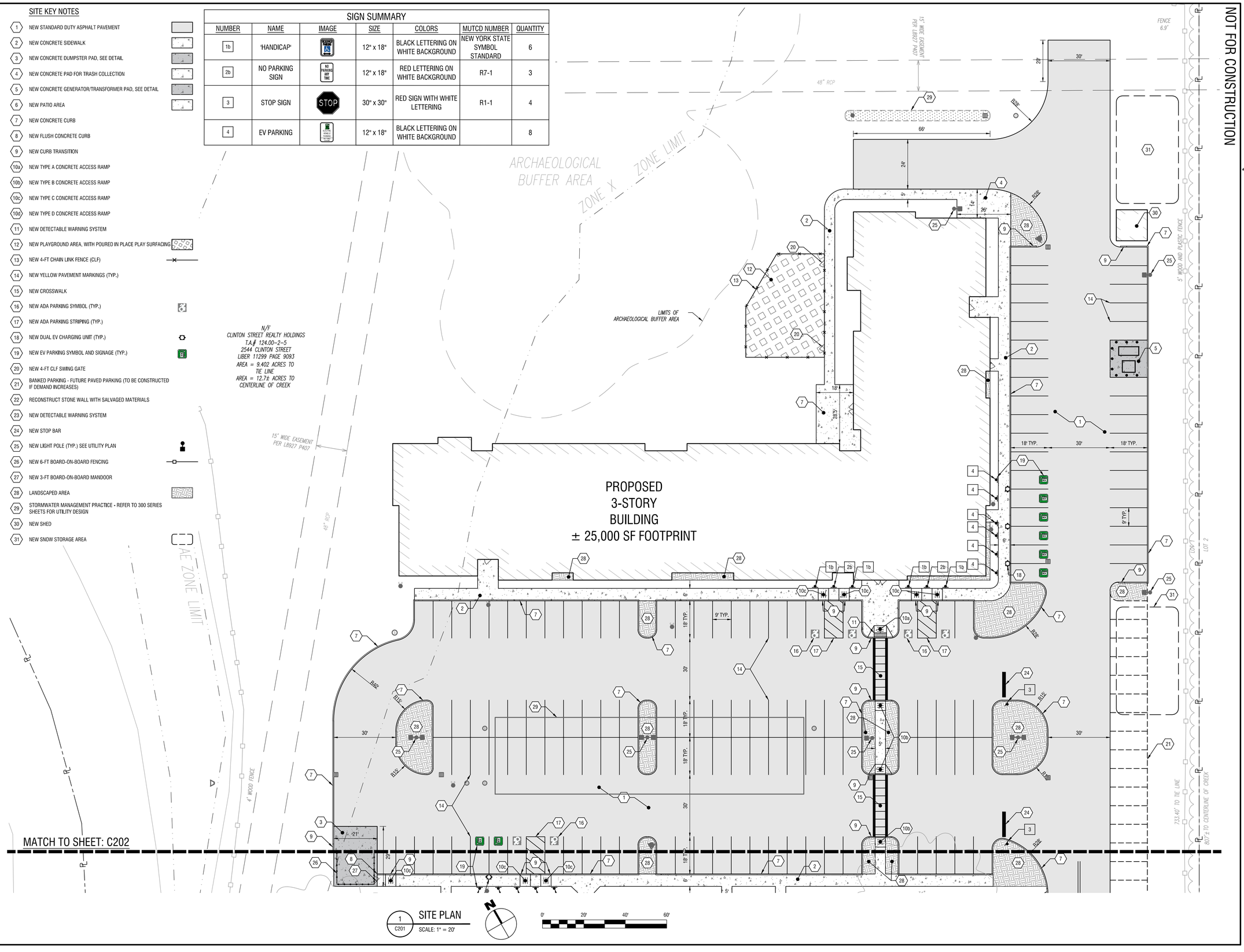
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SITE KEY NOTES

1. NEW STANDARD DUTY ASPHALT PAVEMENT
2. NEW CONCRETE SIDEWALK
3. NEW CONCRETE DUMPSTER PAD, SEE DETAIL
4. NEW CONCRETE PAD FOR TRASH COLLECTION
5. NEW CONCRETE GENERATOR/TRANSFORMER PAD, SEE DETAIL
6. NEW PATIO AREA
7. NEW CONCRETE CURB
8. NEW FLUSH CONCRETE CURB
9. NEW CURB TRANSITION
10a. NEW TYPE A CONCRETE ACCESS RAMP
10b. NEW TYPE B CONCRETE ACCESS RAMP
10c. NEW TYPE C CONCRETE ACCESS RAMP
10d. NEW TYPE D CONCRETE ACCESS RAMP
11. NEW DETECTABLE WARNING SYSTEM
12. NEW PLAYGROUND AREA, WITH POURED IN PLACE PLAY SURFACING
13. NEW 4-FT CHAIN LINK FENCE (CLF)
14. NEW YELLOW PAVEMENT MARKINGS (TYP.)
15. NEW CROSSWALK
16. NEW ADA PARKING SYMBOL (TYP.)
17. NEW ADA PARKING STRIPING (TYP.)
18. NEW DUAL EV CHARGING UNIT (TYP.)
19. NEW EV PARKING SYMBOL AND SIGNAGE (TYP.)
20. NEW 4-FT CLF SWING GATE
21. BANKED PARKING - FUTURE PAVED PARKING (TO BE CONSTRUCTED IF DEMAND INCREASES)
22. RECONSTRUCT STONE WALL WITH SALVAGED MATERIALS
23. NEW DETECTABLE WARNING SYSTEM
24. NEW STOP BAR
25. NEW LIGHT POLE (TYP.) SEE UTILITY PLAN
26. NEW 6-FT BOARD-ON-BOARD FENCING
27. NEW 3-FT BOARD-ON-BOARD MANDOOR
28. LANDSCAPED AREA
29. STORMWATER MANAGEMENT PRACTICE - REFER TO 300 SERIES SHEETS FOR UTILITY DESIGN
30. NEW SHED
31. NEW SNOW STORAGE AREA

SIGN SUMMARY

NUMBER	NAME	IMAGE	SIZE	COLORS	MUTCD NUMBER	QUANTITY
1b	'HANDICAP'		12" x 18"	BLACK LETTERING ON WHITE BACKGROUND	NEW YORK STATE SYMBOL STANDARD	6
2b	NO PARKING SIGN	NO PARKING ANY TIME	12" x 18"	RED LETTERING ON WHITE BACKGROUND	R7-1	3
3	STOP SIGN	STOP	30" x 30"	RED SIGN WITH WHITE LETTERING	R1-1	4
4	EV PARKING		12" x 18"	BLACK LETTERING ON WHITE BACKGROUND		8



1 / C201 SITE PLAN
SCALE: 1" = 20'

N

0' 20' 40' 60'

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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

SITE PLAN

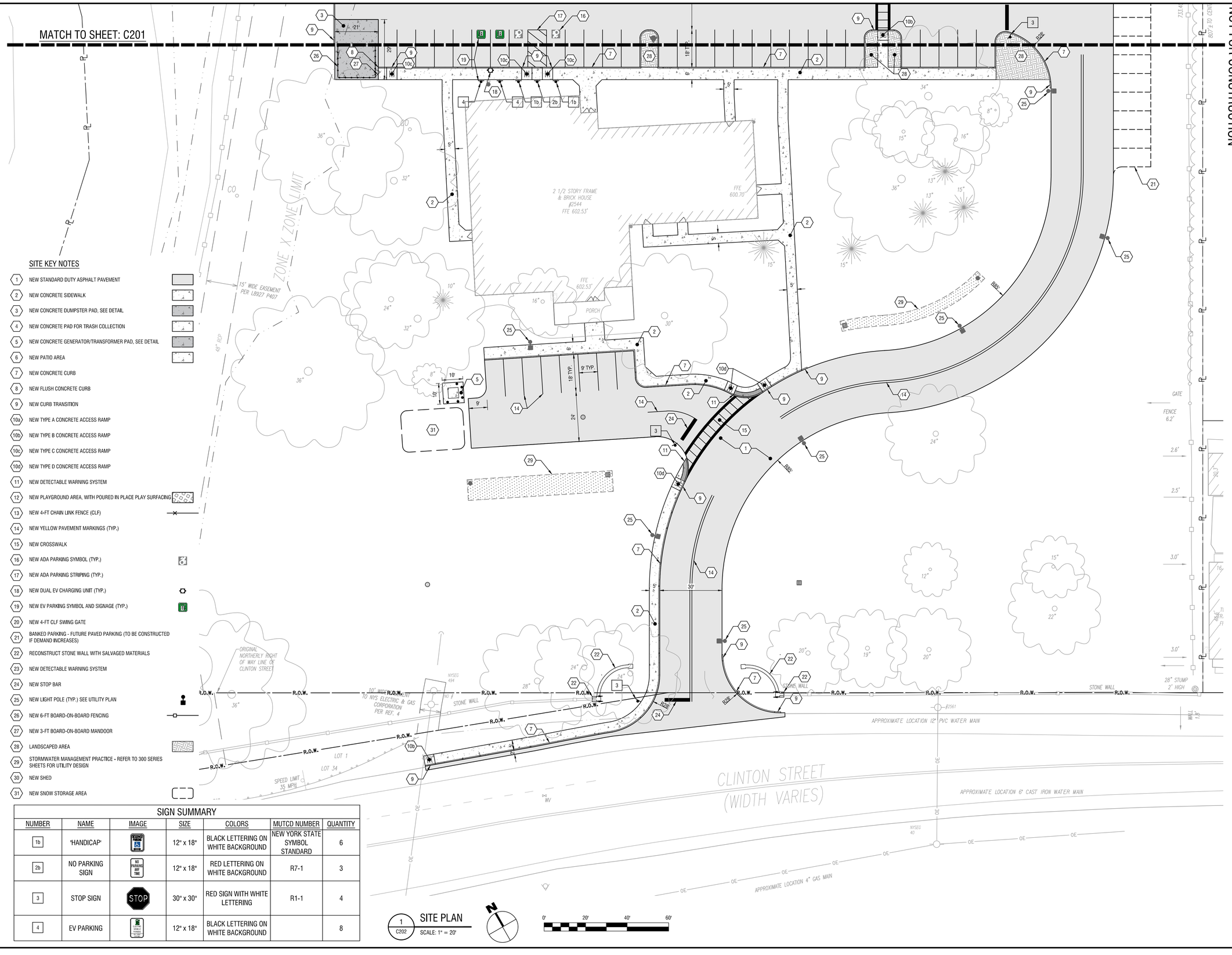
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C201

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MATCH TO SHEET: C201



SITE KEY NOTES

1. NEW STANDARD DUTY ASPHALT PAVEMENT
2. NEW CONCRETE SIDEWALK
3. NEW CONCRETE DUMPSTER PAD, SEE DETAIL
4. NEW CONCRETE PAD FOR TRASH COLLECTION
5. NEW CONCRETE GENERATOR/TRANSFORMER PAD, SEE DETAIL
6. NEW PATIO AREA
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24. NEW STOP BAR
25. NEW LIGHT POLE (TYP.) SEE UTILITY PLAN
26. NEW 6-FT BOARD-ON-BOARD FENCING
27. NEW 3-FT BOARD-ON-BOARD MANDOOR
28. LANDSCAPED AREA
29. STORMWATER MANAGEMENT PRACTICE - REFER TO 300 SERIES SHEETS FOR UTILITY DESIGN
30. NEW SHED
31. NEW SNOW STORAGE AREA

SIGN SUMMARY

NUMBER	NAME	IMAGE	SIZE	COLORS	MUTCD NUMBER	QUANTITY
1b	'HANDICAP'	PARKING PERMIT SPACE	12" x 18"	BLACK LETTERING ON WHITE BACKGROUND	NEW YORK STATE SYMBOL STANDARD	6
2b	NO PARKING SIGN	NO PARKING ANY TIME	12" x 18"	RED LETTERING ON WHITE BACKGROUND	R7-1	3
3	STOP SIGN	STOP	30" x 30"	RED SIGN WITH WHITE LETTERING	R1-1	4
4	EV PARKING	ELECTRIC VEHICLE CHARGING ONLY	12" x 18"	BLACK LETTERING ON WHITE BACKGROUND		8

1 / C202 SITE PLAN
SCALE: 1" = 20'

0' 20' 40' 60'

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STATE OF NEW YORK — PAUL G. JOHNSON — 084011 — LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

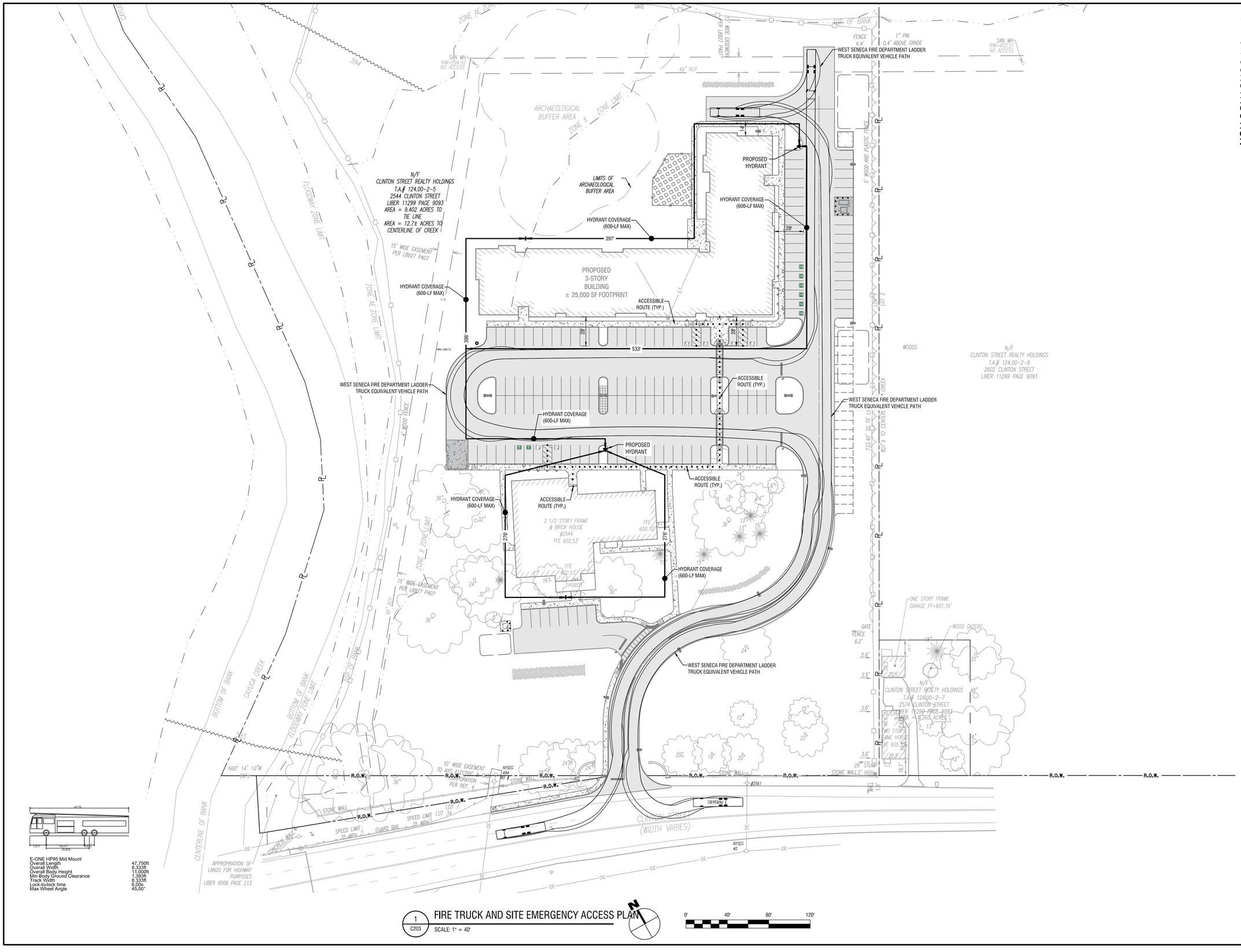
SITE PLAN

DRAWING NUMBER:

C202

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1 C203 FIRE TRUCK AND SITE EMERGENCY ACCESS PLAN

SCALE: 1" = 40'

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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

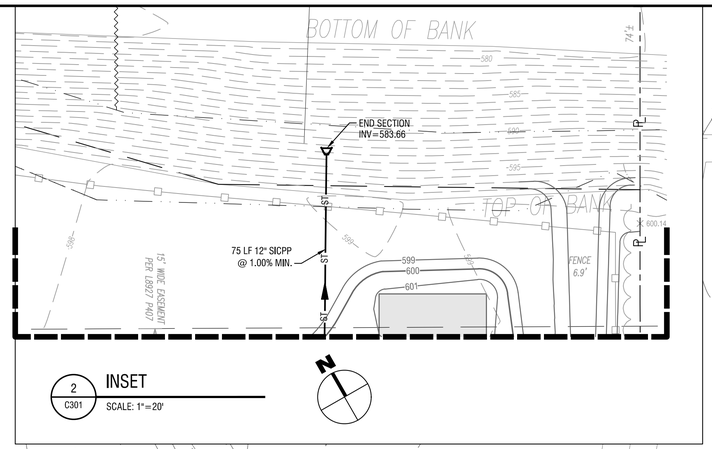
FIRE TRUCK AND SITE EMERGENCY ACCESS PLAN

DRAWING NUMBER:

C203

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2 C301 INSET
SCALE: 1"=20'

1 C301 UTILITY PLAN
SCALE: 1" = 20'

0' 20' 40' 60'

UTILITY PLAN NOTES:
1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

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STATE OF NEW YORK
PETER J. GALLO
040111
LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

UTILITY PLAN

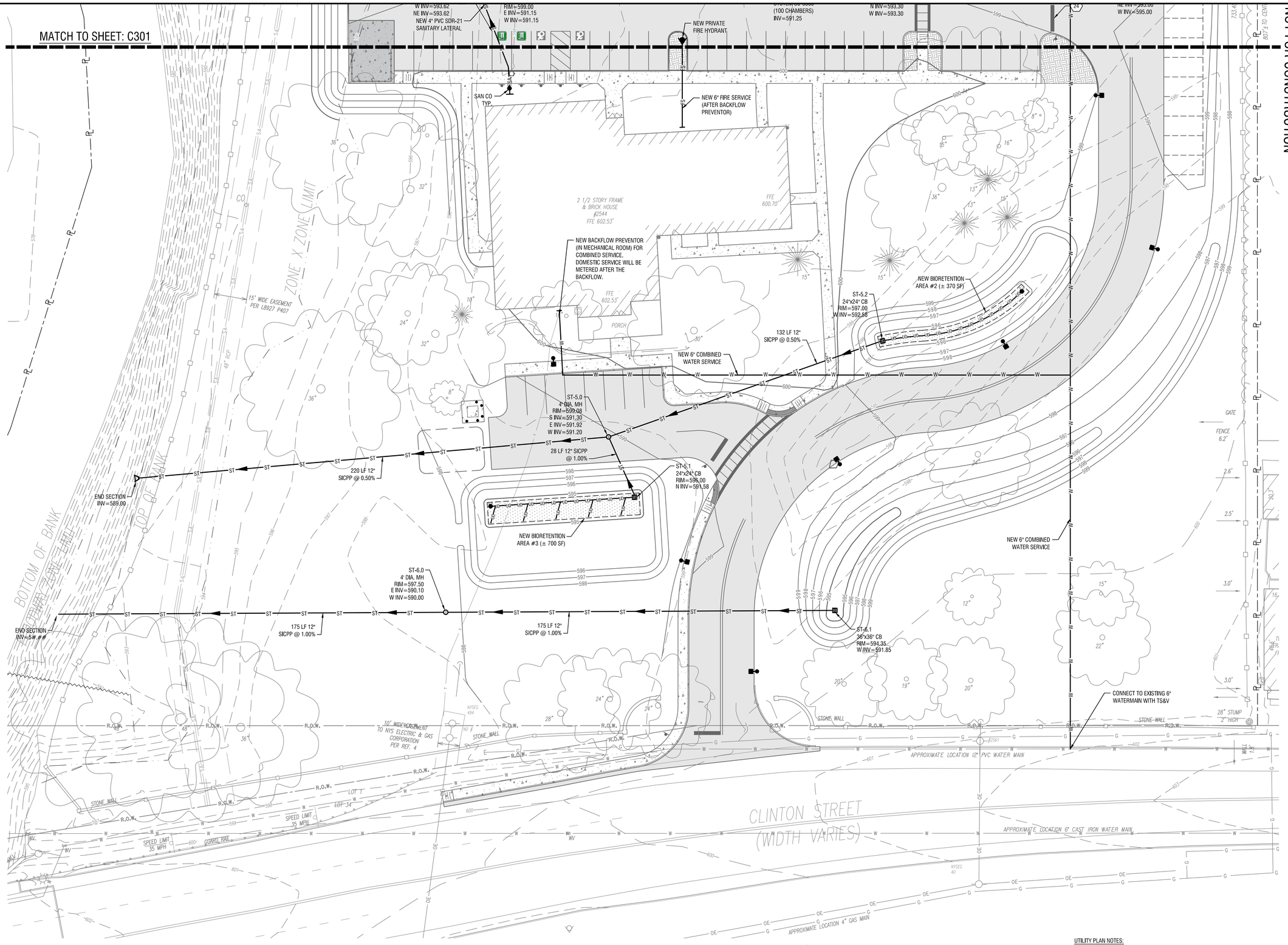
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C301

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MATCH TO SHEET: C301



1 C302 **UTILITY PLAN**

SCALE: 1" = 20'

0' 20' 40' 60'

UTILITY PLAN NOTES:

1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

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STATE OF NEW YORK
PAUL D. BOEHNE
040111
LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
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ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

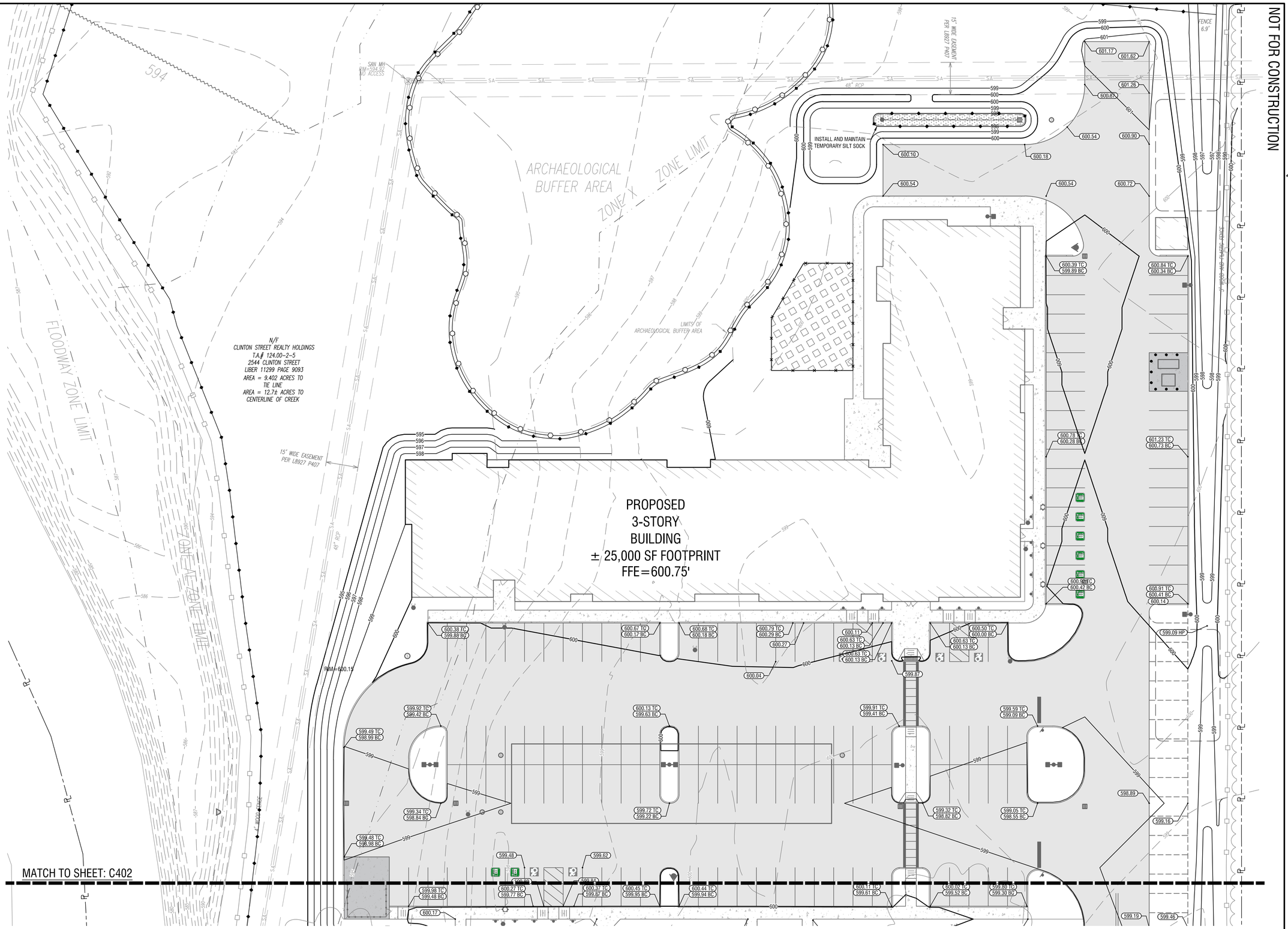
UTILITY PLAN

DRAWING NUMBER:

C302

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NOT FOR CONSTRUCTION



1 C401 GRADING, EROSION, AND SEDIMENT CONTROL PLAN
SCALE: 1" = 20'

0' 20' 40' 60'

4/20/2026 1:17:56 PM
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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

GRADING, EROSION, AND SEDIMENT CONTROL PLAN

DRAWING NUMBER:

C401

MATCH TO SHEET: C401

NOT FOR CONSTRUCTION

2 1/2 STORY FRAME & BRICK HOUSE #2544 FFE 602.53'

FFE 600.70'

FFE 602.53'

PORCH

ZONE X ZONE LIMIT

BOTTOM OF BANK

TOP OF BANK

FEDERAL WETLAND LIMIT

INSTALL AND MAINTAIN TEMPORARY SILT SOCK

INSTALL AND MAINTAIN TEMPORARY CONCRETE WASHOUT

INSTALL AND MAINTAIN TEMPORARY CONSTRUCTION ENTRANCE

CLINTON STREET (WIDTH VARIES)

APPROXIMATE LOCATION 12" PVC WATER MAIN

APPROXIMATE LOCATION 6" CAST IRON WATER MAIN

LOT 1

LOT 34

1 C402 GRADING, EROSION, AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

4/20/2026 1:17:35 PM
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EXP: EXP:

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067

DRAWN BY: EMM / SCB

REVIEWED BY: SRV / DPB

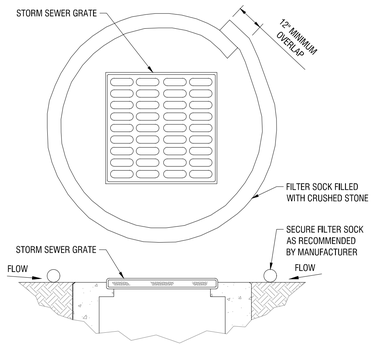
ISSUED FOR: SITE PLAN APPROVAL

DATE: 4/20/2026

DRAWING NAME: GRADING, EROSION, AND SEDIMENT CONTROL PLAN

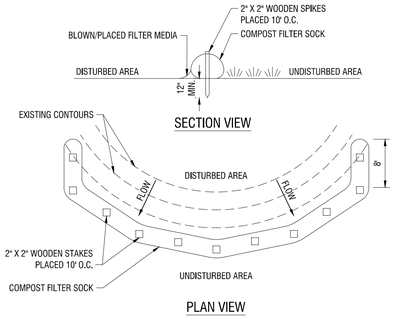
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NOT FOR CONSTRUCTION



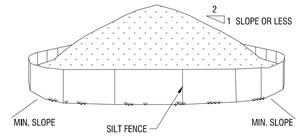
6 C501 **INLET PROTECTION IN PAVEMENT**

N.T.S.



5 C501 **COMPOST FILTER SOCK**

NYS DEC DETAIL: COMPOST FILTER SOCK

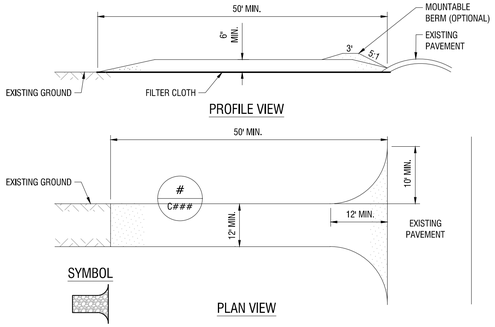


NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS AND DETAIL FOR INSTALLATION OF SILT FENCE.

4 C501 **TEMPORARY SOIL STOCKPILE**

N.T.S.

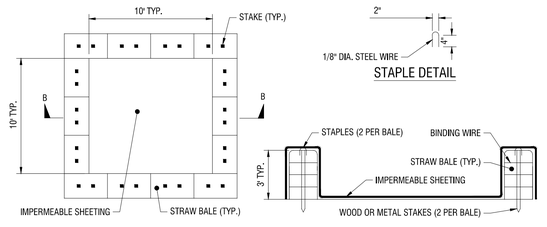


CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

3 C501 **STABILIZED CONSTRUCTION ENTRANCE**

N.YS DEC DETAIL: STABILIZED CONSTRUCTION ACCESS



NOTE:

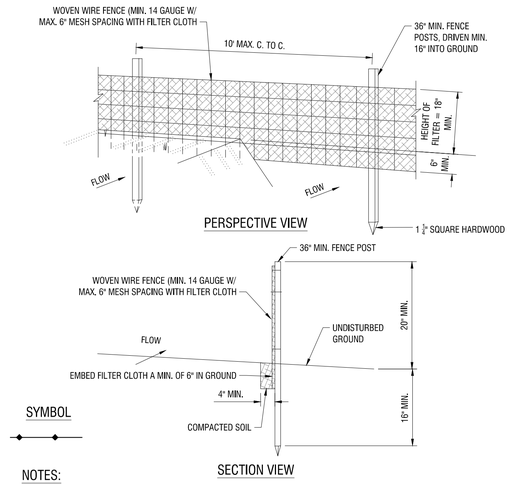
1. CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 100 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 C501 **CONCRETE WASHOUT AREA WITH STRAW BALES**

N.T.S.



NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA 140N, OR APPROVED EQUAL.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 C501 **SILT FENCE**

NYS DEC DETAIL: SILT FENCE

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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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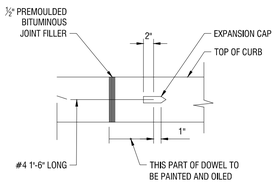
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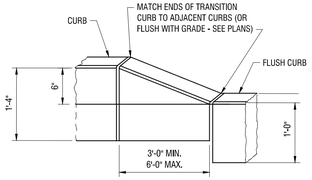
C501

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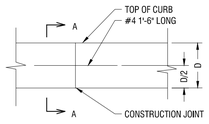
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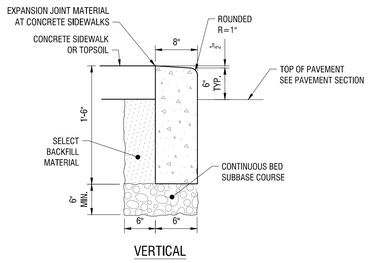
ELEVATION AT EXPANSION JOINT



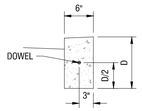
TERMINAL/TRANSITION CURB



ELEVATION AT CONSTRUCTION JOINT



VERTICAL

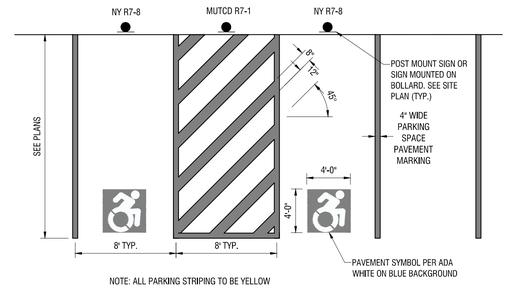


SECTION A-A

NOTES:

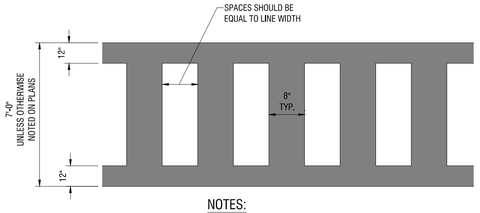
1. SLOPE TOP OF CURB 1/4" PER FOOT TOWARD PAVEMENT.
2. CONTRACTION JOINTS SHALL BE FORMED OR SAWCUT EVERY 10 FEET TO DEPTHS SLIGHTLY BELOW THE PAVEMENT SURFACE.
3. EXPANSION JOINTS 1/2" IN WIDTH SHALL BE FORMED WITH A PREMOULDED BITUMINOUS JOINT FILLER EVERY 40 FEET.
4. EXPANSIONS JOINTS AND FORMED CONTRACTION JOINTS ARE TO BE EDGED WITH CONCRETE FINISHING TOOLS.
5. CONCRETE SEALING AGENT SHALL BE APPLIED THE SAME DAY THAT CURBS ARE CONSTRUCTED.
6. CONCRETE CURBING WITHIN R.O.W. SHALL CONFORM WITH NYSS M609-2R1.
7. CURB THICKNESS T IS TO BE 5" OR AS INDICATED ON THE DRAWINGS.
8. PROVIDE 0" CURB REVEAL FOR HEADER CURB CURB AT SIDEWALK RAMPS AND 1" CURB REVEAL FOR HEADER CURB AT DRIVEWAYS.
9. ALL CURB, EXCEPT HEADER CURB USED FOR SIDEWALK ACCESS RAMPS, IS TO HAVE THE 1" RADIUS.
10. GRADED STONE BACKING IS TO BE PLACED WHEN SIDEWALK DOES NOT ABUT CURB.
11. USE 5000 PSI CONCRETE FOR CONVENTIONALLY FORMED CURB. AND 5000 PSI CONCRETE FOR MACHINE FORMED CURB.

10 C502 CONCRETE CURB
N.T.S.



NOTE: ALL PARKING STRIPING TO BE YELLOW

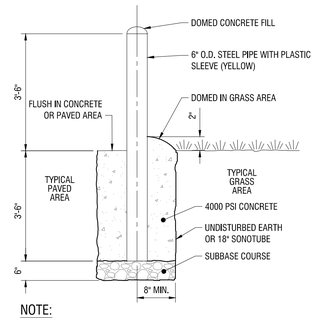
12 C502 ADA PARKING SPACE STRIPING
N.T.S.



NOTES:

1. ALL STRIPING SHALL BE WHITE

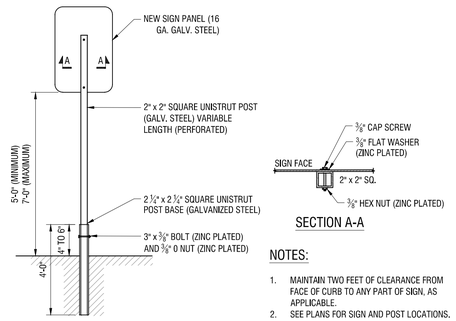
11 C502 CROSSWALK
N.T.S.



NOTE:

1. FINAL LOCATION OF BOLLARDS SHALL BE APPROVED BY THE OWNER OR ARCHITECT/ENGINEER.

9 C502 BOLLARD
N.T.S.

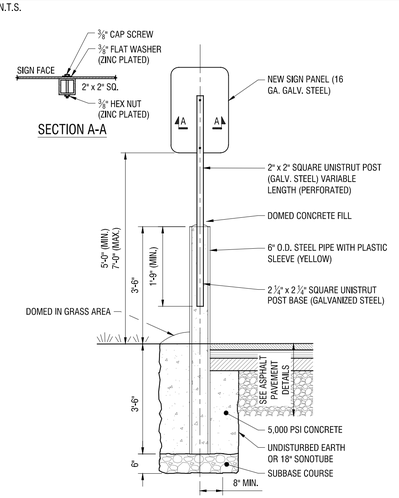


8 C502 POST MOUNT SIGN
N.T.S.

SECTION A-A

NOTES:

1. MAINTAIN TWO FEET OF CLEARANCE FROM FACE OF CURB TO ANY PART OF SIGN, AS APPLICABLE.
2. SEE PLANS FOR SIGN AND POST LOCATIONS.



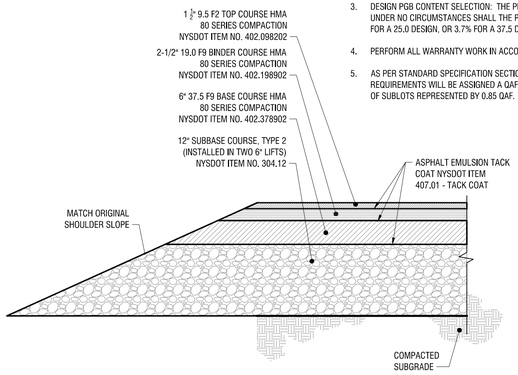
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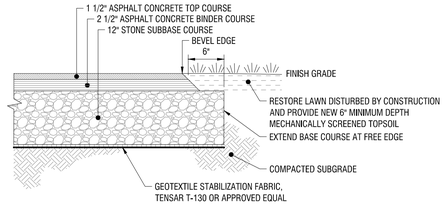
7 C502 BOLLARD MOUNTED SIGN
N.T.S.

ASPHALT PAVEMENT NOTES:

1. HMA ITEMS ARE BASED ON PG 64-22 BINDER, ESALs LESS THAN 30,000,000, TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF ASPHALT, USE OF POLYPHOSPHORIC ACID (PPA) TO MODIFY THE BINDER PROPERTIES IS PROHIBITED. THIS PROHIBITION ALSO APPLIES TO THE USE OF PPA AS A CROSS-LINKING AGENT FOR POLYMER MODIFICATION.
2. BUTT JOINTS, CREATED BY A FULL-DEPTH SAWCUT, SHALL BE USED BETWEEN NEW AND EXISTING PAVEMENTS. THE ASPHALT TOP COURSE SHALL BE LAID SUCH THAT IT UNIFORMLY OVERLAPS THE ADJACENT COLD MAT BY 2"-3". THE THICKNESS OF THE OVERLAP MATERIAL SHALL BE 1/4 THE COMPACTED THICKNESS OF THE COURSE, SO AS TO RESULT IN A SMOOTH AND WELL-COMPACTED JOINT AFTER ROLLING. BROADCASTING OF THE OVERLAP MATERIAL ONTO THE LANE IS NOT ALLOWED. IF THE OVERLAP IS EXCESSIVE, THE EXCESS MATERIAL SHALL BE TRIMMED OFF SO THAT THE MATERIAL ALONG THE JOINT IS UNIFORM. THE COARSE PARTICLES OF AGGREGATE IN THE OVERLAP MATERIAL SHALL BE REMOVED AND WASTED IF DEEMED NECESSARY BY THE INSPECTOR.
3. DESIGN PGB CONTENT SELECTION: THE PRODUCER SELECTS THE DESIGN PGB CONTENT THAT RESULTS IN A COMPACTED DENSITY OF 96.5% Gmm AT THE DESIGN NUMBER OF GYRATIONS (Ndesign), UNDER NO CIRCUMSTANCES SHALL THE PERFORMANCE GRADED BINDER CONTENT IN THE HMA MIXTURE BE LESS THAN 5.8% FOR A 9.5 DESIGN, 5.2% FOR A 12.5 DESIGN, 4.5% FOR A 19.0 DESIGN, 4.2% FOR A 25.0 DESIGN, OR 3.7% FOR A 37.5 DESIGN. ALL VOLUMETRIC AND MECHANICAL PROPERTIES ARE CHECKED AT THIS PGB CONTENT TO ENSURE THAT ALL REQUIREMENTS ARE MET.
4. PERFORM ALL WARRANTY WORK IN ACCORDANCE WITH MATERIALS PROCEDURE (MP) 402-01, WARRANTY REQUIREMENTS FOR HOT MIX ASPHALT (HMA) TOP COURSE.
5. AS PER STANDARD SPECIFICATION SECTION 401-4.01 CERTIFIED PRODUCTION, PRODUCTION LESS THAN 500 TONS, AND HIGHWAY PERMIT PRODUCTION, PRODUCTION MEETING THE SPECIFICATION REQUIREMENTS WILL BE ASSIGNED A QAF OF 1.00. PRODUCTION FAILING TO MEET THE SPECIFICATION REQUIREMENTS WILL BE SUBJECT TO EVALUATION ACCORDING TO SECTION 401-4.03, EVALUATION OF SUBLOTS REPRESENTED BY 0.85 QAF.



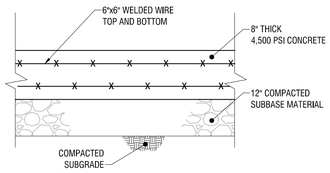
4 C502 PAVEMENT SECTION WITHIN R.O.W.
N.T.S.



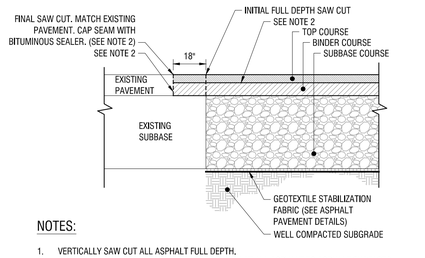
NOTES:

1. PROVIDE ADDITIONAL SUBBASE MATERIAL WHERE FILL IS REQUIRED TO OBTAIN PROPER SUBGRADE ELEVATION, OR TO REPLACE UNSUITABLE SUBGRADE MATERIAL.

3 C502 ASPHALT PAVEMENT SECTION
N.T.S.



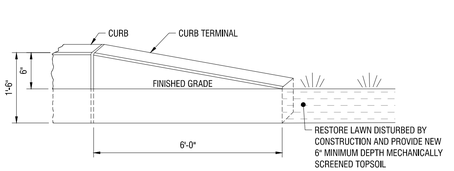
6 C502 CONCRETE PAD
N.T.S.



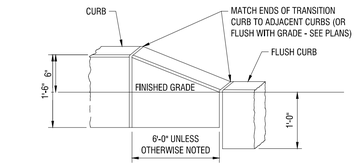
NOTES:

1. VERTICALLY SAW CUT ALL ASPHALT FULL DEPTH.
2. BLOW CLEAN AND APPLY TACK COAT 0.050 GAL/SY AT ALL ASPHALT TO ASPHALT SURFACES.
3. REFER TO STANDARD DUTY PAVEMENT SECTION DETAIL FOR COURSE THICKNESS.

5 C502 STANDARD DUTY PAVEMENT JOINT
N.T.S.



2 C502 CURB TERMINAL
N.T.S.



1 C502 CURB TRANSITION
N.T.S.

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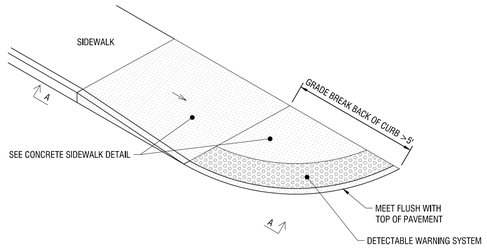
CONSTRUCTION DETAILS

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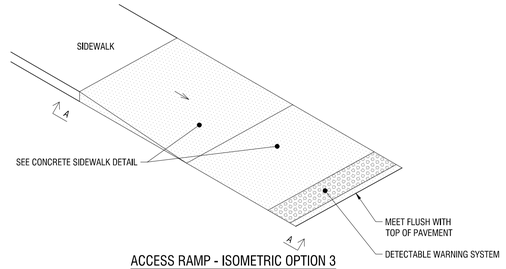
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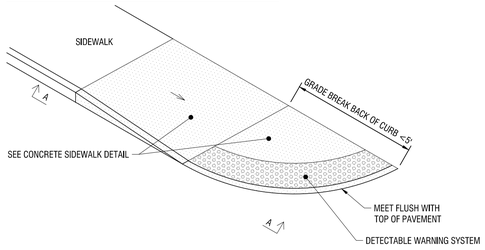
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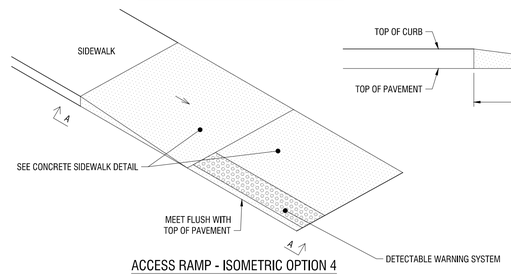
ACCESS RAMP AT CORNER - ISOMETRIC OPTION 1



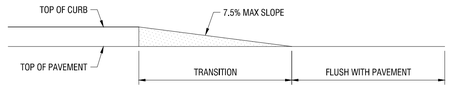
ACCESS RAMP - ISOMETRIC OPTION 3



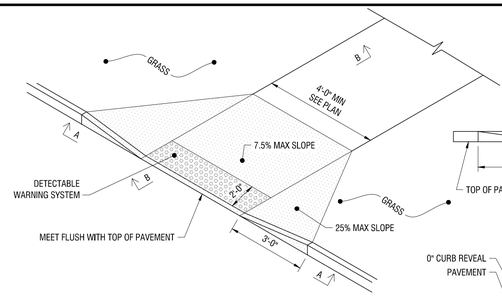
ACCESS RAMP AT CORNER - ISOMETRIC OPTION 2



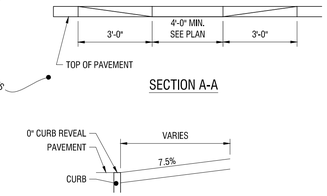
ACCESS RAMP - ISOMETRIC OPTION 4



SECTION A-A



TYPE "B" RAMP ISOMETRIC



SECTION A-A

SECTION B-B

NOTES:

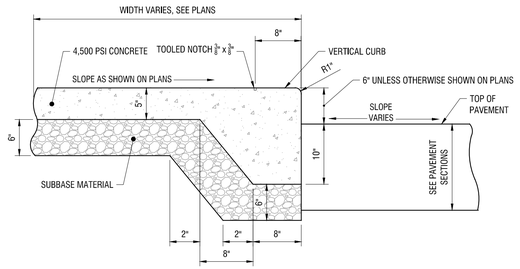
1. 7.5% IS MAXIMUM SLOPE OF ACCESS RAMP.
2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.
3. ENTIRE AREA OF ACCESS RAMP AND LANDING PAD IS TO BE 7 INCH THICK CONCRETE.

7 C503 SIDEWALK RAMP TYPE B

N.T.S.

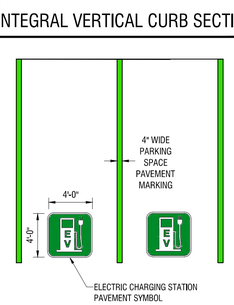
8 C503 SIDEWALK RAMP TYPE D

N.T.S.



6 C503 CONCRETE SIDEWALK AND INTEGRAL VERTICAL CURB SECTION

N.T.S.





ACCESSIBLE SYMBOL
COLOR WHITE ON BLUE BACKGROUND



12" X 18"
ELECTRIC VEHICLE CHARGING STATION



12" X 18"
NO PARKING
MUTCD R7-1
FEDERAL DESIGNATION



ELECTRIC CHARGING SYMBOL
4'x4', COLOR WHITE ON GREEN BACKGROUND

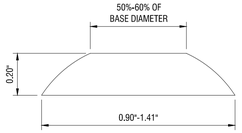


12" X 18"
RESERVED
NY R7-8
FEDERAL DESIGNATION

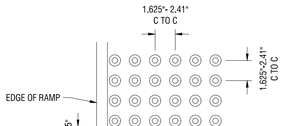
12" X 6"
VAN ACCESSIBLE
MUTCD R7-8a
FEDERAL DESIGNATION

3 C503 PAVEMENT MARKINGS AND SIGNAGE

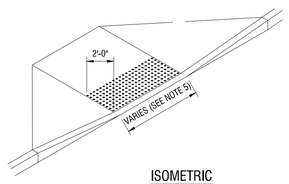
N.T.S.



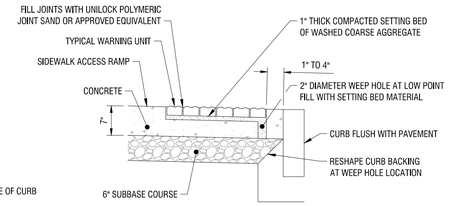
DOME SECTION



DOME SPACING



ISOMETRIC



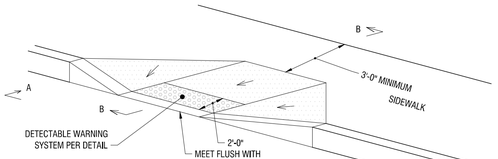
SECTION

NOTES:

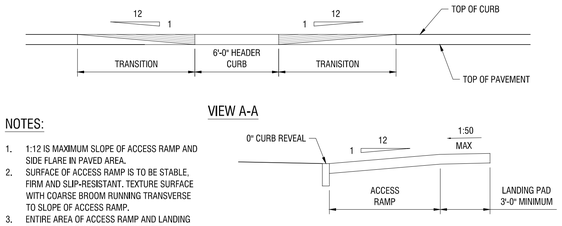
1. QUANTITY OF TRUNCATED DOMES SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND TO DEPICT REQUIRED SQUARE GRID PATTERN.
2. TRUNCATED DOMES ARE TO BE ALIGNED ON THE SQUARE GRID PATTERN IN THE PREDOMINANT DIRECTION OF TRAVEL.
3. ENTIRE DETECTABLE WARNING SYSTEM FIELD, INCLUDING TRUNCATED DOMES, IS TO BE DARK GRAY IN COLOR, N7 PER MUNSELL BOOK NOTATION, OR APPROVED EQUIVALENT.
4. OUTER EDGE OF THE DETECTABLE WARNING SYSTEM FIELD IS TO BE LOCATED SO THAT THE EDGE OF THE WARNING FIELD NEAREST TO THE STREET IS 1 TO 4 INCHES BEHIND THE BACK EDGE OF THE CURB SECTION.
5. DETECTABLE WARNING SYSTEM IS TO EXTEND ACROSS THE FULL WIDTH OF A SIDEWALK ACCESS RAMP, BUT NOT UP THE SIDE FLARES.

2 C503 BRICK DETECTABLE WARNING SYSTEM AT CURB

N.T.S.



SIDEWALK RAMP TYPE A ISOMETRIC



VIEW A-A

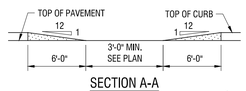
SECTION B-B

NOTES:

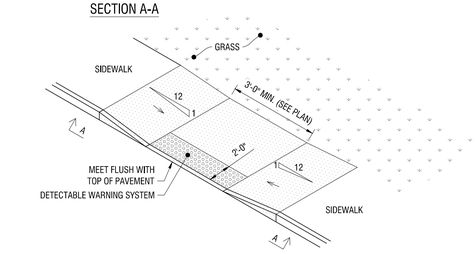
1. 1:12 IS MAXIMUM SLOPE OF ACCESS RAMP AND SIDE FLARE IN PAVED AREA.
2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.
3. ENTIRE AREA OF ACCESS RAMP AND LANDING PAD IS TO BE 7 INCH THICK CONCRETE.

5 C503 SIDEWALK RAMP TYPE A

N.T.S.



SECTION A-A



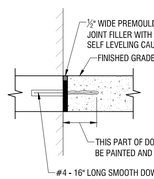
ACCESS RAMP - TYPE C ISOMETRIC

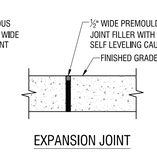
NOTES:

1. 1:12 IS MAXIMUM SLOPE OF ACCESS RAMP.
2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.
3. ENTIRE AREA OF ACCESS RAMP AND LANDING PAD IS TO BE 7 INCH THICK CONCRETE.

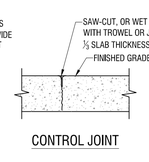
4 C503 SIDEWALK RAMP TYPE C

N.T.S.

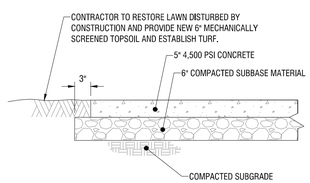




EXPANSION JOINT



CONTROL JOINT



SIDEWALK NOTES:

1. CONCRETE SHALL BE 4,500 PSI AIR ENTRAINED MIX AT 28 DAYS
2. COMPACTED SUBBASE MATERIAL SHALL COMPLY WITH NYSDOT ITEM 304.14, TYPE 4
3. CONCRETE SURFACE SHALL RECEIVE A BROOM FINISH AND TWO COATS OF A MEMBRANE FORMING SEALER AT RATES SPECIFIED BY THE PRODUCT MANUFACTURE.
4. EXPANSION JOINTS SHALL BE PROVIDED AT ALL FITTED STRUCTURES AND AT EVERY 25' ON CENTER.
5. CONTROL JOINTS SHALL BE EVERY 5' OR AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ACI 330-R92. THESE JOINTS SHALL BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT. SCORED JOINTS SHALL BE ¼-INCH WIDTH MINIMUM AND ¼ OF THE THICKNESS OF THE CONCRETE
6. SIDEWALK ADJACENT TO THE CURB SHALL HAVE A 2.00% CROSS-SLOPE TO THE CURB. OTHER AREA AS INDICATED ON THE GRADING PLAN.
7. ALL JOINTS AND EXPOSED EDGES SHALL BE ROUNDED WITH JOINT TOOL.

1 C503 CONCRETE SIDEWALK

N.T.S.

LaBella Powered by partnership.

300 Pearl Street, Suite 130
Buffalo, NY 14202
716-551-6281

labellapc.com

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec, 7209 & Art, 147 Sec, 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

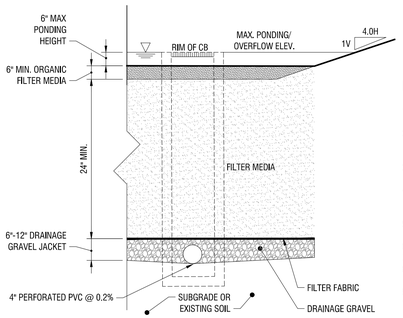
NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C503

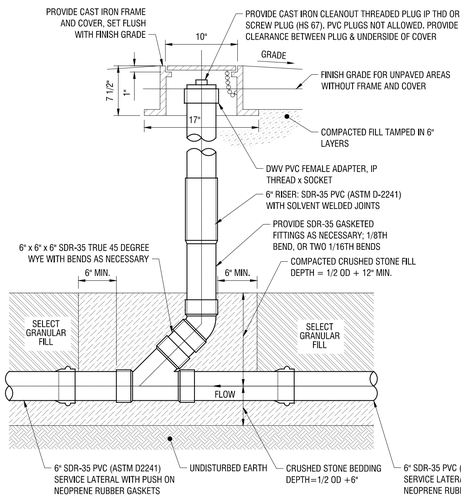


NOTES:

1. CONTRACTOR SHALL INSTALL FILTER MEDIA AFTER SITE HAS BEEN STABILIZED TO MINIMIZE POTENTIAL OF SEDIMENT CONTAMINATION OF MEDIA.
2. FILTER MEDIA SHALL BE LOAM/SAND MIX, NYSDOT BIO SOIL MIX ITEM #208.01030022, CONTAINING A MINIMUM OF 85% TO 88% COARSE/MEDIUM SAND BY VOLUME, 8% TO 12% SOIL FINES, AND 3% TO 5% ORGANIC MATTER.
3. ORGANIC FILTER MEDIA SHALL MEET SAME CRITERIA AS ABOVE WITH THE EXCEPTION OF CONTAINING 10% TO 12% ORGANIC MATTER.
4. SOIL SHOULD FALL WITHIN USCS TYPES SM OR ML WITH PERMEABILITY OF AT LEAST 1.0 FEET PER DAY. SOIL SHOULD BE FREE FROM STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER.
5. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED TO AT MOST 80% PROCTOR TEST. PH RANGE: 5.2 - 7.00.
6. FILTER FABRIC TO BE NON-WOVEN CLASS 'C', MIRAFI 180-N OR APPROVED EQUIVALENT
7. DRAINAGE GRAVEL TO MEET AASHTO M-43. NO.67, SIZE 0.25" TO 0.75"
8. CONTRACTOR TO PROVIDE PLANTING SOIL SUBMITTAL SPECIFICATION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
9. WETLAND SEED MIX SHALL BE USED AS INDICATED IN SPECIFICATIONS.
10. CONTRACTOR SHALL PROVIDE AT LEAST TWO PERMEABILITY TESTS FOR EACH FACILITY LOCATED AT OPPOSITE SIDES OF FACILITY.

8 C504 BIORETENTION

N.T.S.



STORM C.O.

LETTERING ON COVER

NOTES:

1. FRAME AND COVER TO BE USED ONLY IN PAVED AREAS.
2. CRUSHED STONE: NO. 1 WASHED STONE OR A MIX OF NO. 1 AND NO. 2 WASHED STONE

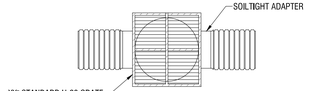
RECOMMENDED METHODS FOR JOINING OF SOLVENT WELD PIPE:

1. CLEAN DRY HUBS & SPIGOTS
2. APPLY PRIMER TO PARTS BEING CONNECTED
3. APPLY PVC SOLVENT WELD CEMENT DIRECTLY OVER PRIMER

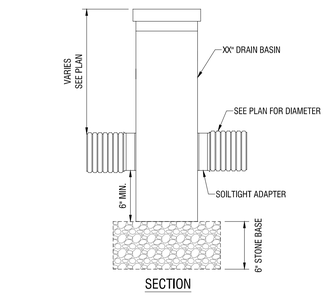
** PVC TYPE IS COMPATIBLE FOR SOLVENT WELDING TO SDR-35 OR ANY OTHER PVC TYPE I PIPE MADE TO STEEL PIPE OUTSIDE DIMENSIONS

6 C504 CLEANOUT FOR NEW STORM LATERAL

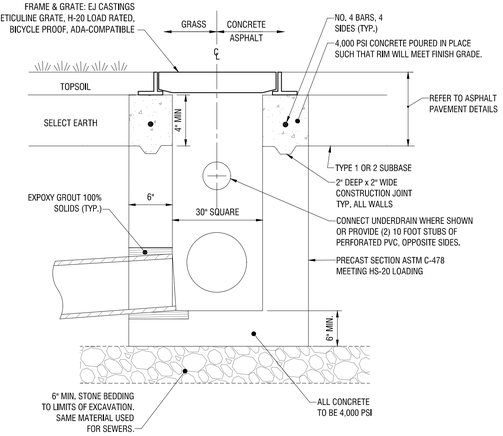
N.T.S.



PLAN



SECTION



NOTES:

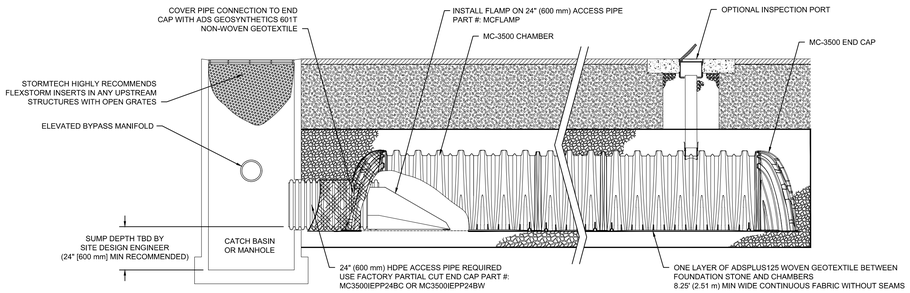
1. THE ENTIRE EXTERIOR & INTERIOR SURFACES OF THE CATCH BASIN SHALL BE PAINTED WITH TWO COATS OF BITUMASTIC COATING.
2. CATCH BASIN SHALL NOT BE CONNECTED TO ANY SANITARY SEWER.
3. PROVIDE FRAMES AND GRATES CONFORMING TO NYSDOT STANDARD SHEETS M655-10R3, M655-6.
4. FRAMES TO HAVE APPROPRIATE STRAP ANCHORS.

3 C504 DRAIN BASIN

N.T.S.

2 C504 CATCH BASIN

N.T.S.

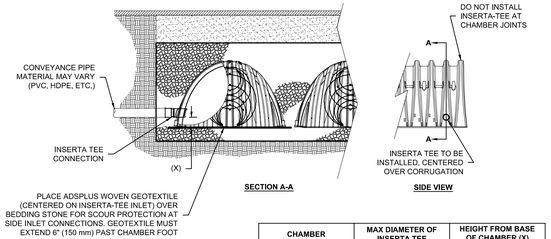


7 C504 MC-3500 ISOLATOR ROW PLUS DETAIL

N.T.S.

INSERTA TEE DETAIL

NTS



NOTES:

- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)

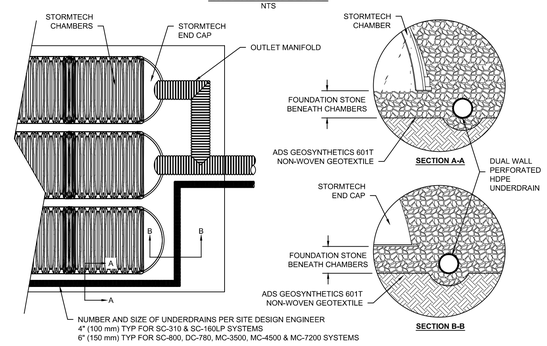
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

5 C504 MC-3500 INSERTA-TEE INLET

N.T.S.

UNDERDRAIN DETAIL

NTS



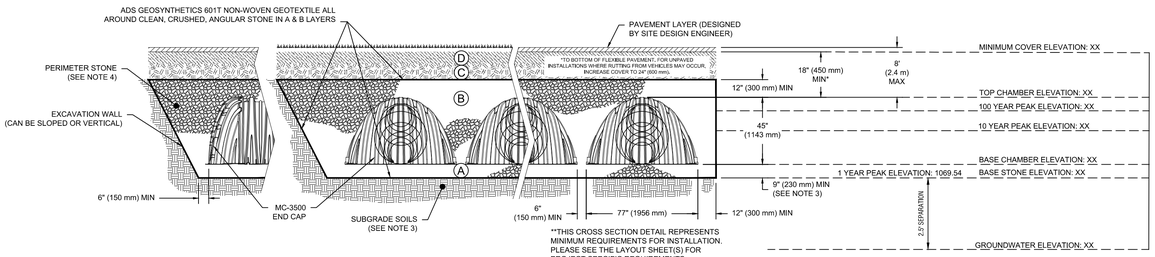
4 C504 MC-3500 UNDERDRAIN

N.T.S.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 18" (450 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



****THIS CROSS SECTION DETAIL REPRESENTS MINIMUM REQUIREMENTS FOR INSTALLATION. PLEASE SEE THE LAYOUT SHEET(S) FOR PROJECT SPECIFIC REQUIREMENTS.**

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3" (75 mm).
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 C504 MC-3500 CROSS SECTION

N.T.S.

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Buffalo, NY 14202
716-551-6281

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STATE OF NEW YORK — MICHAEL J. GRIECO — 084011 — LICENSED PROFESSIONAL ENGINEER

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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HOME LEASING
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ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067

DRAWN BY: EMM / SCB

REVIEWED BY: SRV / DPB

ISSUED FOR: SITE PLAN APPROVAL

DATE: 4/20/2026

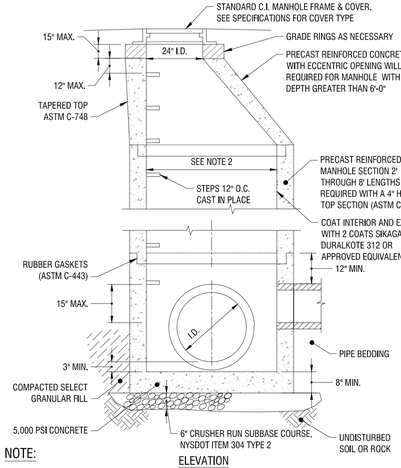
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CONSTRUCTION DETAILS

DRAWING NUMBER:

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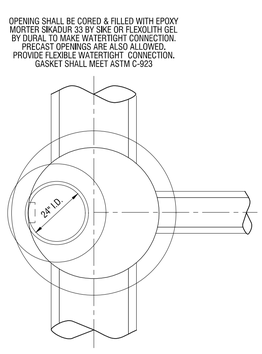
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ELEVATION

NOTE:

1. PRECAST REINFORCED CONCRETE BASE REQUIRED FOR MANHOLE WITH DEPTH GREATER THAN 6'-0".
2. REFER TO TABLE
3. MANHOLES ARE TO BE FLANGED AND WATER TIGHT IN HIGH WATER TABLE AREAS



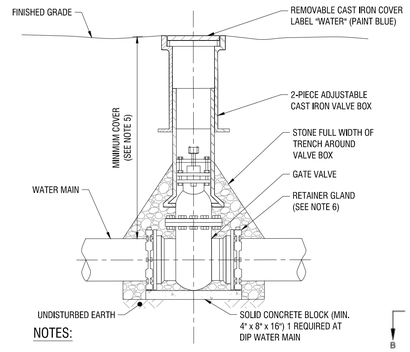
PLAN

MINIMUM MANHOLE DIAMETERS

# OF CONNECTIONS	PIPE DIAMETERS 8"	10"	12"	15"	16"	18"	21"	24"	30"	36"	42" & UP
ONE	4'	4'	4'	4'	4'	4'	4'	4'	5'	5'	REQUIRES SPECIAL MANHOLE
TWO	4'	4'	4'	4'	4'	4'	4'	4'	5'	5'	
THREE	4'	4'	4'	4'	4'	4'	5'	5'	5'	5'	
FOUR	4'	4'	4'	5'	5'	5'	5'	5'	5'	5'	

8 C505 CONCENTRIC STORM MANHOLE

N.T.S.

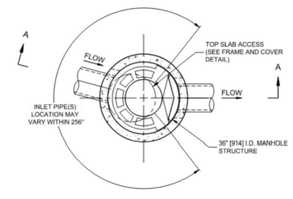


NOTES:

1. VALVE BOXES SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. BODY AND BONNET BOLTS SHALL BE STAINLESS STEEL.
4. VALVES SHALL BE OPEN RIGHT.
5. MINIMUM COVER SHALL BE AS SHOWN ON WATER MAIN TRENCH DETAIL.
6. RETAINER GLANDS NOT REQUIRED AT HYDRANT GUARD VALVES. GUARD VALVES SHALL BE RESTRAINED WITH ANCHOR PIPE.
7. REFER TO PLANS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

7 C505 MJ GATE VALVE

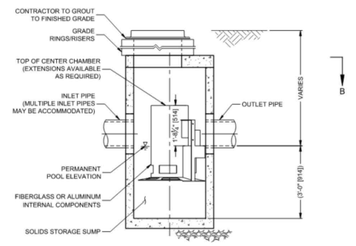
N.T.S.



PLAN VIEW B-B
NOT TO SCALE



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-3 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION, ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

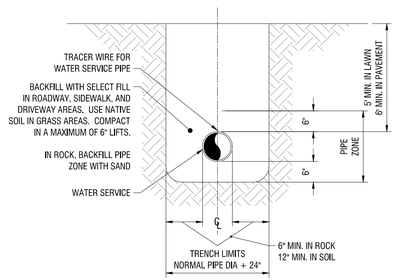
CASCADE separator™

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-3
CASCADE SEPARATOR
STANDARD DETAIL

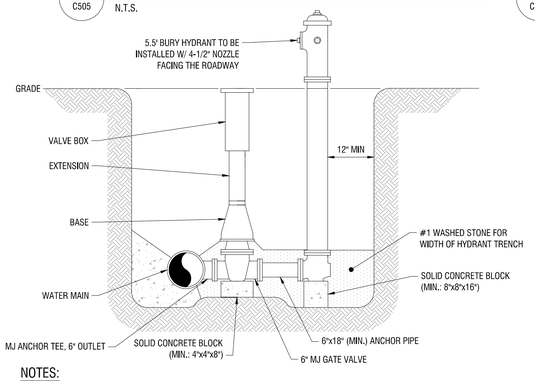
6 C505 WATER QUALITY UNIT

N.T.S.



5 C505 WATER SERVICE TRENCH

N.T.S.

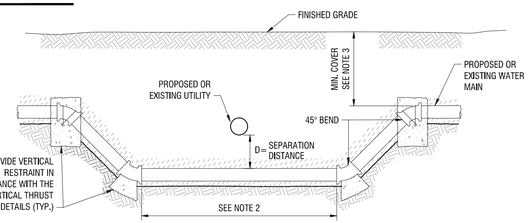


NOTES:

1. HYDRANT TO BE MUELLER SUPER CENTURION 250 - MODEL A-423 OR APPROVED EQUAL.
2. HYDRANT TO BE PAINTED RED.
3. HYDRANT MAIN VALVE SEAT SHALL BE 4 1/2" IN DIAMETER.
4. HYDRANT VALVE TO TURN LEFT.

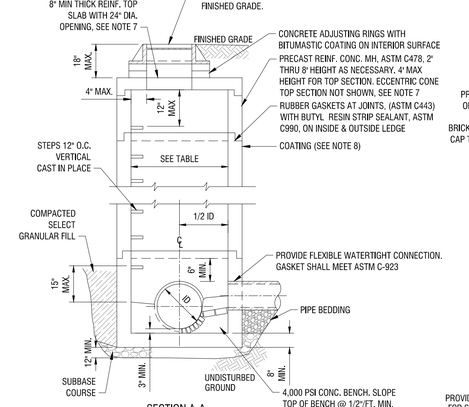
4 C505 TYPICAL WATER MAIN VERTICAL TRANSITION

N.T.S.

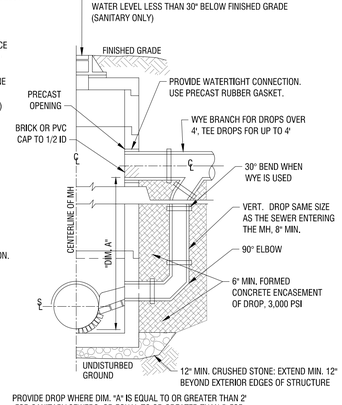


NOTES:

1. SEPARATION DISTANCE DIMENSION D, (OUTSIDE EDGE TO OUTSIDE EDGE) SHALL BE PROVIDED AS FOLLOWS: GAS AND WATER LINES D = 12" MIN, SANITARY FORCEMAINS, STORM SEWERS, AND SANITARY SEWERS D = 18" MIN.
2. ONE STANDARD FULL LENGTH OF WATER MAIN SHALL BE CENTERED UNDER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
3. MIN. COVER DEPTH - SEE WATER MAIN TRENCH DETAIL.



SECTION A-A



PROVIDE DROP WHERE DIM. "A" IS EQUAL TO OR GREATER THAN 2' FOR SANITARY SEWERS, OR EQUAL TO OR GREATER THAN 5' FOR STORM SEWERS, UNLESS NOTED OTHERWISE ON PLANS.

SECTION A-A
(FOR OUTSIDE DROP CONNECTION & WATERTIGHT MH FRAME & COVER)

NOTES:

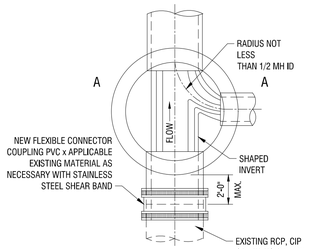
1. IF AN INVERT IS NOT GIVEN, THE CROWN OF THE INFLUENT SEWER(S) SHOULD BE AT THE SAME LEVEL OR ABOVE THE CROWN OF THE OUTLET SEWER.
2. PIPE CONNECTIONS 6" DIAMETER AND SMALLER MAY BE FIELD CORED. CORED OPENINGS IN MANHOLE RISER SECTIONS SHALL BE NOT LESS THAN 6" FROM A RISER JOINT.
3. ALL RISER JOINTS SHALL BE RUBBER RING GASKETS CONFORMING TO ASTM C443 WITH FLEXIBLE JOINT SEALER ON OUTSIDE OF JOINTS.
4. PRECAST BASES, RISER SECTIONS & TOP SLABS SHALL CONFORM WITH ASTM C478, W/ HS-20 LOADING AND 30% IMPACT LOADING DESIGN.
5. CONCRETE FOR STRUCTURE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
6. INVERT AND BENCH MAY BE CONSTRUCTED WITH BRICK OR POURED CONCRETE. PVC AND/OR ABS PIPE SHALL NOT BE USED WITHIN THE MANHOLE.
7. ECCENTRIC CONE TYPE TOP SECTIONS FOR MANHOLES SHALL BE USED WHERE THE INSIDE HEIGHT DIMENSION FROM THE BENCH WALL TO THE BOTTOM OF THE ECCENTRIC SECTION EXCEEDS 8', OTHERWISE PROVIDE FLAT SLAB TOP SECTIONS.
8. INSIDE AND OUTSIDE OF MANHOLE TO BE EPOXY COATED TO ONE FOOT ABOVE THE HIGHEST PIPE CROWN. AREAS OUTSIDE OF ONE FOOT ABOVE HIGHEST PIPE CROWN TO RECEIVE TWO COATS OF BITUMASTIC COATING ON BOTH THE INSIDE AND OUTSIDE OF MANHOLE.

MINIMUM MANHOLE DIAMETERS

# OF CONNECTIONS	PIPE DIAMETERS 8"	10"	12"	15"	16"	18"	21"	24"	30"	36"	42" & UP
ONE	4'	4'	4'	4'	4'	4'	4'	4'	5'	5'	REQUIRES SPECIAL MANHOLE
TWO	4'	4'	4'	4'	4'	4'	4'	4'	5'	5'	
THREE	4'	4'	4'	4'	4'	4'	5'	5'	5'	5'	
FOUR	4'	4'	4'	5'	5'	5'	5'	5'	5'	5'	



LETTERING ON COVER



3 C505 SANITARY MANHOLE

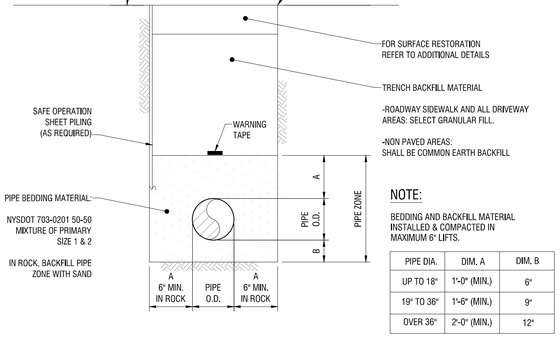
N.T.S.

2 C505 HYDRANT ASSEMBLY

N.T.S.

1 C505 STORM/SANITARY SEWER TRENCH AND PIPE BEDDING

N.T.S.



NOTE:

BEDDING AND BACKFILL MATERIAL INSTALLED & COMPACTED IN MAXIMUM 6" LIFTS.

PIPE DIA.	DIM. A	DIM. B
UP TO 18"	1'-0" (MIN.)	6"
19" TO 36"	1'-6" (MIN.)	9"
OVER 36"	2'-0" (MIN.)	12"

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WEST SENECA APARTMENTS
2544 CLINTON ST,
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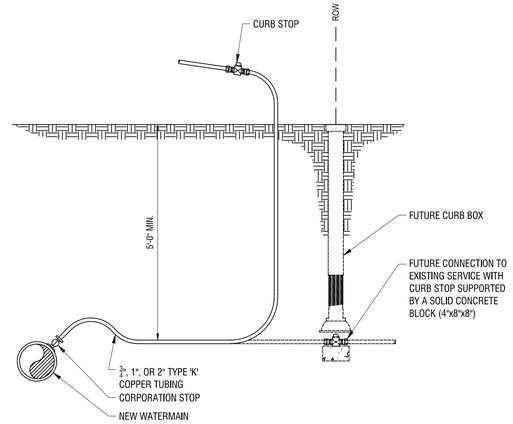
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DRAWING NUMBER:

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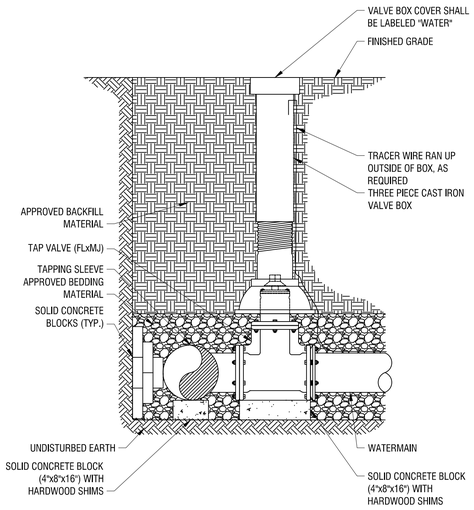


NOTES:

1. AFTER COMPLETION OF TESTING, THE SAMPLE POINT SHALL BE UTILIZED FOR A SERVICE CONNECTION. IF UNABLE TO UTILIZE FOR A SERVICE REPLACE THE CORPORATION STOP IN PIPE WITH A THREADED BRASS PLUG.

5 C506 TEMPORARY BLOW-OFF / SAMPLE POINT

ECWA STANDARD DETAIL

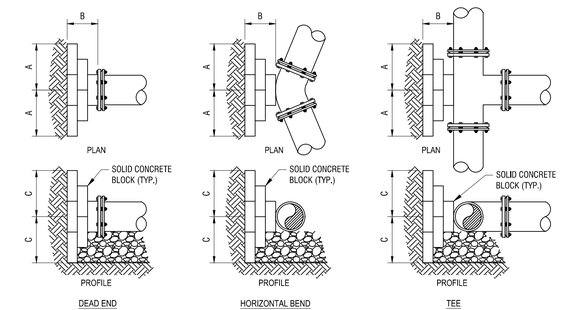


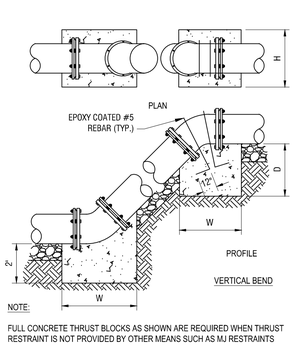
NOTES:

1. VALVE SHALL NOT SUPPORT VALVE BOX.
2. TAP VALVE SHALL BE INSTALLED LEVEL AND VERTICALLY PLUMB.
3. VALVE BOX SHALL BE PLUMB TO GRADE, WITH OPERATING NUT CENTERED IN BOX.

4 C506 TAPPING SLEEVE AND VALVE

ECWA STANDARD DETAIL





PIPE SIZE	90° BEND, TEE, OR DEAD END			45° BEND		
	A	B	C	A	B	C
6"	1.5'	1.0'	0.5'	0.75'	1.0'	0.5'
8"	1.5'	1.0'	0.75'	1.5'	1.0'	0.5'
10"	1.5'	1.5'	1.0'	1.5'	1.5'	0.75'
12"	2.0'	2.0'	1.0'	1.75'	1.75'	0.75'

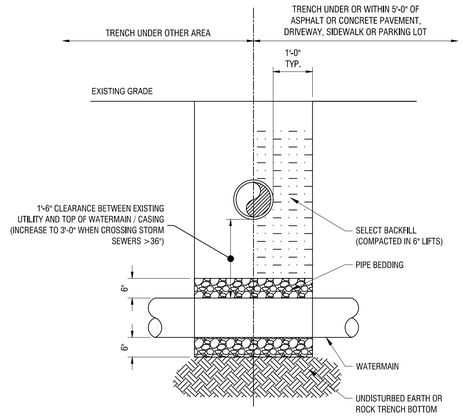
PIPE SIZE	22.5° BEND			11.25° BEND		
	A	B	C	A	B	C
6"	0.5'	1.0'	0.5	0.5'	1.0'	0.5
8"	0.75'	1.0'	0.5'	0.5'	1.0'	0.5'
10"	1.0'	1.5'	0.75'	1.0'	1.0'	0.75'
12"	1.25'	1.75'	0.75'	1.25'	1.25'	0.75'

PIPE SIZE	VERTICAL BEND UP			VERTICAL BEND DOWN		
	D	H	W	D	H	W
6"	2.0'	5.0'	3.0'	3.5'	3.5'	3.0'
8"	2.0'	6.0'	4.0'	4.5'	4.5'	4.0'
10"	2.0'	6.25'	4.5'	4.75'	4.75'	4.5'
12"	2.0'	6.5'	5.0'	5.0'	5.0'	5.0'

*LENGTHS SHOWN ARE MINIMUM REQUIREMENTS

3 C506 THRUST BLOCKS

ECWA STANDARD DETAIL

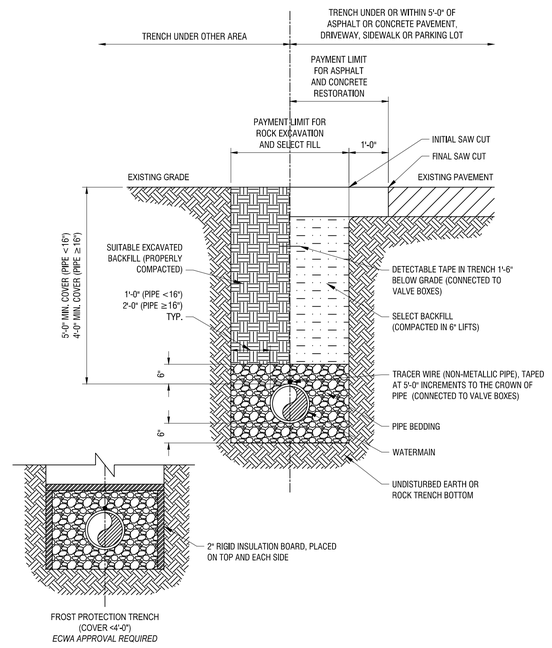


NOTES:

1. ALL EXISTING UTILITIES MUST BE SUPPORTED WITH APPROPRIATE CHAINS / STRAPS DURING CONSTRUCTION OF THE NEW WATERMAIN. CONTRACTOR IS REQUIRED TO COORDINATE WITH THE OWNER FOR THEIR PREFERRED SUPPORT REQUIREMENTS.
2. WHEN CROSSING A SEWER LINE WITH NEW WATERMAIN (AND WITHOUT A CASING PIPE), ONE FULL LENGTH (18'-0" MIN.) SHALL BE USED AT THE POINT OF CROSSING. THE WATERMAIN SHALL BE PLACED SO THAT BOTH JOINT ENDS ARE AS FAR AS POSSIBLE FROM THE EXISTING SEWER.
3. IF CASING PIPE IS USED, IT SHALL EXTEND 5'-0" BEYOND THE EXISTING PIPE OUTER EDGE IN EACH DIRECTION, AND NO WATERMAIN JOINTS OR FITTINGS SHALL BE LOCATED WITHIN 4'-0" FROM THE CASING PIPE EDGE.

2 C506 PIPE CROSSING DETAIL

ECWA STANDARD DETAIL



1 C506 TYPICAL TRENCH DETAIL

ECWA STANDARD DETAIL

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716-551-6281

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STATE OF NEW YORK — PETER J. GALLI — 084011 — LICENSED PROFESSIONAL ENGINEER

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STANDARD FRAME AND COVER (PRIVATE SEWER)
(NOVEMBER 2023)

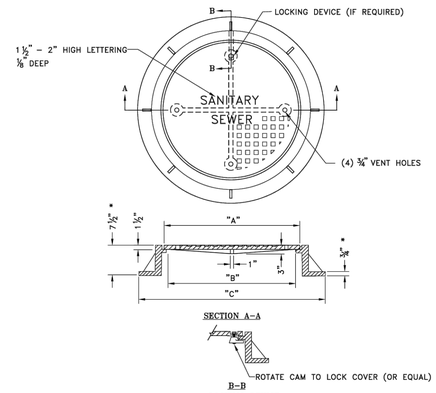


TABLE				
PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	35"(MAX.)	150 LBS. ± 5%
OVER 18"	32"	30"	46"(MAX.)	200 LBS. ± 5%

STANDARD FRAME AND COVER NOTES

1. MATERIAL: ASTM A48 CLASS 30B CAST IRON CONFORMING TO AASHTO DESIGNATION M105–06.
2. UNIT MUST WITHSTAND H–20 WHEEL LOADING, AND CONFORM TO AASHTO DESIGNATION M306–10.
3. ALL DIMENSIONS ARE TO BE CONSIDERED MINIMUM WITH THE EXCEPTION OF THE COVER, WHICH MUST CONFORM EXACTLY TO MAINTAIN INTERCHANGEABILITY WITHIN THE COUNTY.
4. COVER WEIGHT 210 LBS. (MAX)
5. COATING NOT REQUIRED.
6. FRAMES AND COVERS SHALL HAVE MACHINED BEARING SURFACES.
7. LOCKING DEVICE MUST BE SITUATED TO ALLOW EASY REMOVAL OF COVER.
8. NO COMMERCIAL "BRAND NAME" LETTERING WILL BE ALLOWED ON THE EXPOSED SURFACE OF THE COVER.
9. * 1/2" FLANGE THICKNESS AND 7" HEIGHT ACCEPTABLE IF CLASS 35 CAST IRON MATERIAL PROVIDED.

ERIE COUNTY
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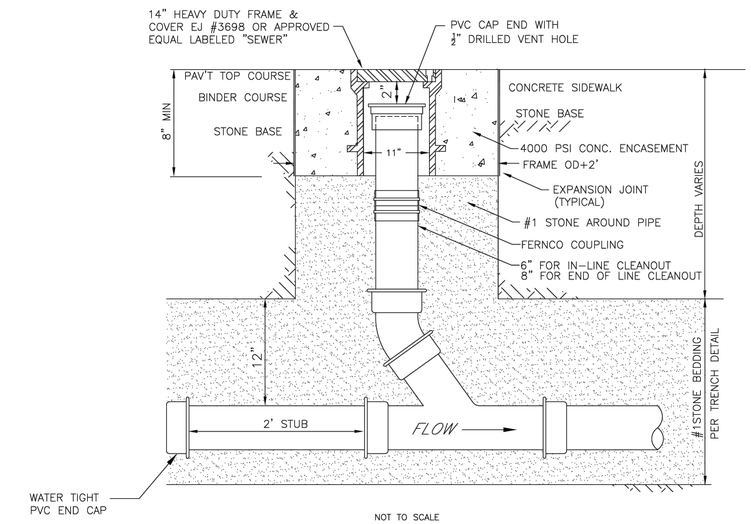
Rev. 1	11/28/18	REVISED NOTES 1 & 2 TO REFERENCE AASHTO STANDARDS & ADDED NOTE 9
Rev. 2		
Rev. 3		
Rev. 4		
File: D–13P	Date: 2/05	

STD.DETAIL
13P

File: V:\DSA\Engineering\CAD\Details\Details November 2023\D–28.dwg, Last saved: 12/5/2023, Plot Date: 2/2/2015, Plot Style: DETAILS.CTB

4 C507 STANDARD FRAME AND COVER DETAIL
ERIE COUNTY SEWER STANDARD DETAIL

Cleanout in Pavement/Sidewalks
(NOVEMBER 2023)



NOT TO SCALE

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

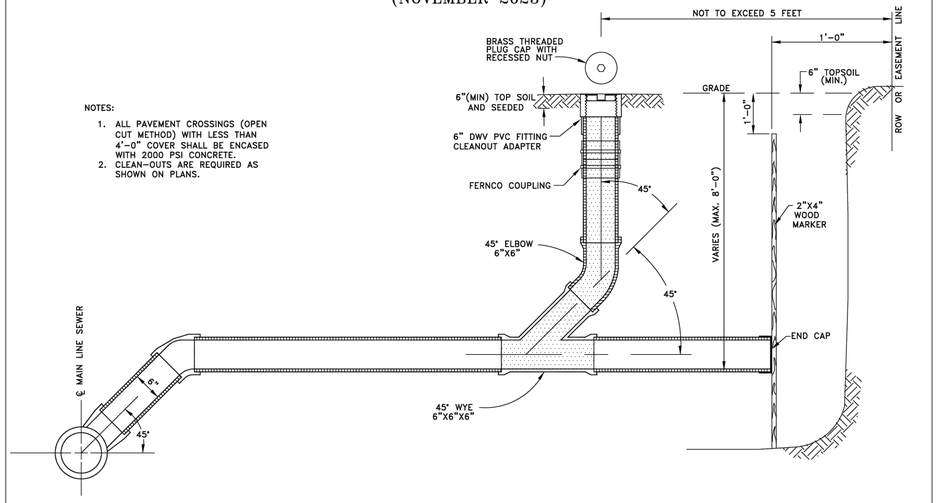
REV 07/99	ADD MIN. DISTANCE AND MARKER	
REV 12/01	ADDED #1 STONE AROUND PIPE	
REV 01/12	REMOVED 2X4 MARKER	
REV 11/23	ADD FERNCO COUPLING & EJ 3698	
File: D–53	Date: 5/13/97	

STD. DETAIL
53

File: V:\DSA\Engineering\CAD\Details\Details November 2023\D–53.dwg, Last saved: 12/13/2023, Plot Date: 12/14/2023, Plot Style: DETAILS.CTB

3 C507 CLEANOUT IN PAVEMENT/SIDEWALK DETAIL
ERIE COUNTY SEWER STANDARD DETAIL

CLEAN–OUT DETAIL FOR SERVICE CONNECTION
(NOVEMBER 2023)



ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

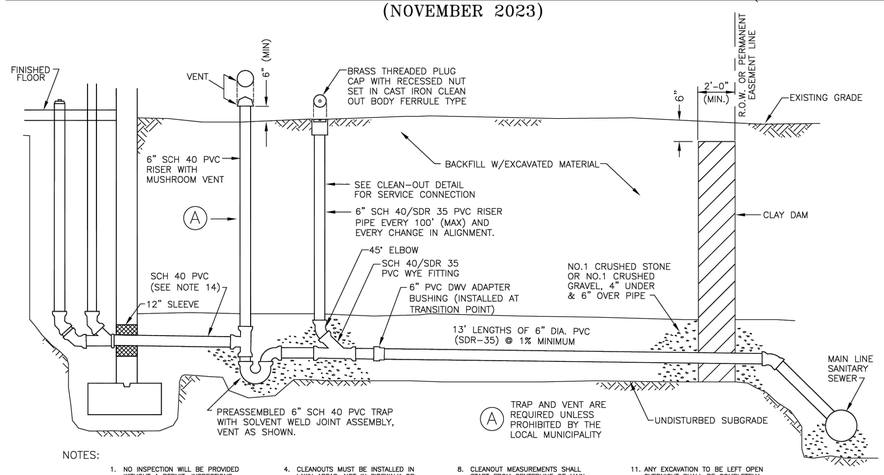
Rev. 1	2/94	CHANGED DIM LINE FOR MAX. DEPTH
Rev. 2	12/01	ADDED NOTE 7
Rev. 3	5/02	CHANGED C.I. CAP TO BRASS
Rev. 4	6/05	1' MIN. FROM EDGE OF WALK NOTE
Rev. 5	1/12	CHANGED C.I. TO BRASS NOTES 1 & 3
Rev. 5	3/24	REVISED NOTES & REMOVED CAST IRON
File: D–28	Date: 3/1/91	

STD. DETAIL
28

File: V:\DSA\Engineering\CAD\Details\Details November 2023\D–28.dwg, Last saved: 3/15/2024, Plot Date: 3/15/2024, Plot Style: DETAILS.CTB

2 C507 CLEANOUT DETAIL FOR SERVICE CONNECTION
ERIE COUNTY SEWER STANDARD DETAIL

TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL (NEW BUILDS)
(NOVEMBER 2023)



NOTES:

1. NO INSPECTION WILL BE PROVIDED WITHOUT A PERMIT. INSPECTIONS REQUIRE 48 HR. ADVANCE NOTICE FOR SCHEDULING.
2. ALL WORK MUST BE INSPECTED BY A COUNTY INSPECTOR.
3. PVC PIPE MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ASTM SPECIFICATION D–3033/D–3034.
4. CLEANOUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS, PREFERABLY BETWEEN THE CURB OR EDGE OF PAVEMENT AND THE SIDEWALK.
5. SELECT BACKFILL REQUIRED UNDER PAVED AREAS.
6. CONCRETE ENCASEMENT IF COVER DEPTH IS LESS THAN 4'–0" UNDER PAVED AREAS.
7. MIN. DEPTH OF COVER 3'–0".
8. CLEANOUT MEASUREMENTS SHALL START FROM CENTERLINE OF MAIN SEWER FOR NEARSIDE LATERALS AND FROM THE 6" CLEANOUT FOR FAR SIDE CONNECTIONS. A CLEANOUT MAY BE REQUIRED FOR ANY ABRUPT CHANGES IN LATERAL DIRECTION FLOW.
9. A 6" CLEANOUT IS REQUIRED AT R.O.W. WHENEVER THE MAIN SEWER IS UNDER THE PAVEMENT LIMITS OR AT FAR SIDE OF PAVEMENT.
10. SEPTIC TANKS MUST BE ABANDONED PER NYSDEC APPROVED METHODS.
11. ANY EXCAVATION TO BE LEFT OPEN OVERNIGHT SHALL BE COMPLETELY ENCLOSED IN FENCING, OR WHERE NECESSARY, COVERED WITH STEEL PLATES.
12. DOWN SPOUTS, SUMP PUMPS, AND FOOTING DRAINS ARE NOT PERMITTED TO BE CONNECTED TO THE LATERAL.
13. NO CONNECTION SHALL BE MADE UNTIL BUILDING ROOF IS ERECTED.
14. IF CAST IRON IS USED EXITING THE BUILDING, A MISSION COUPLING IS REQUIRED BEFORE THE TRAP.

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DIVISION OF SEWERAGE MANAGEMENT

Rev. 1/07	REMOVED OLD NOTES 2 AND 18 ADDED 1% MIN. TO SERVICE PIPE DETAIL	
Rev. 11/08	ADDED SLEEVE AND PVC–SDR 35	
Rev. 1/12	REVISED 6" CAST IRON TRAP NOTE	
Rev. 10/21	REMOVED VENT, RISER, AND TRAP ASSEMBLY	
Rev. 11/23	ADDED VENT, RISER, TRAP ASSEMBLY & Ⓐ	
Rev. 3/24	CHANGED VENT, RISER, TRAP ASSEMBLY SCH 40	
File: D–22	Date: 3/1/91	

STD. DETAIL
22

File: V:\DSA\Engineering\CAD\Details\Details November 2023\D–22.dwg, Last saved: 3/15/2024, Plot Date: 3/15/2024, Plot Style: DETAILS.CTB

1 C507 TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL
ERIE COUNTY SEWER STANDARD DETAIL

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EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec. 7209 & Art, 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

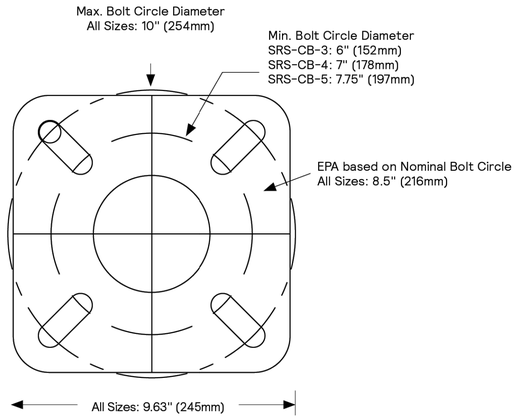
PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

CONSTRUCTION DETAILS

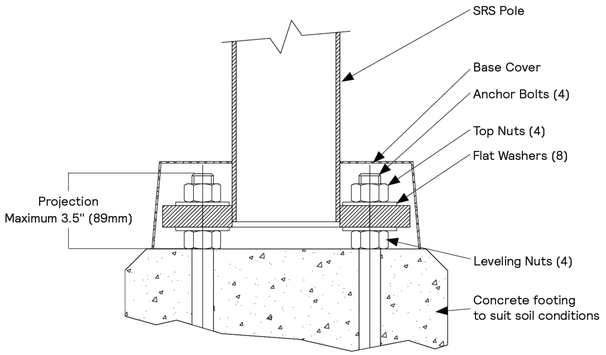
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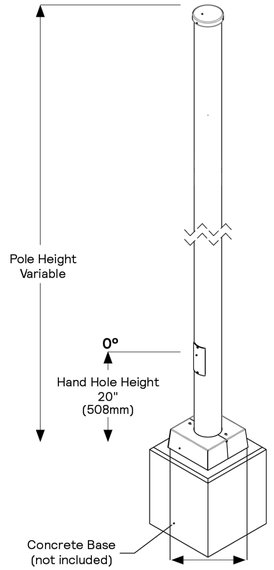
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\\cabi.lab\PGLOBAL\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\06_Drawings\Civil\C500 CONSTRUCTION DETAILS.dwg



Legacy Model: Round 10.5" Diameter Base
with 8.5" Nominal Bolt Circle (not shown)



Section Base



Base Cover Dimensions (L x W x H)
All Sizes: 10.32" x 10.32" x 4.08"
(262mm x 262mm x 104mm)

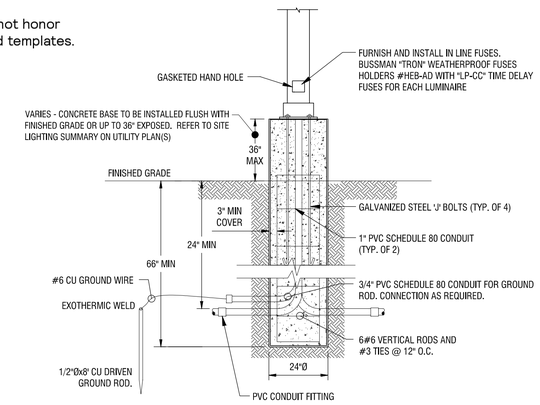
SRS Legacy Design not shown.
Legacy Base Cover: Round - 10.7" Diameter x 4.5" Height
Hand Hole: 12" Above Base

* Anchor Bolt Lock Washers are not normally required and are not included in standard anchor bolt sets. They are available upon request at additional cost.

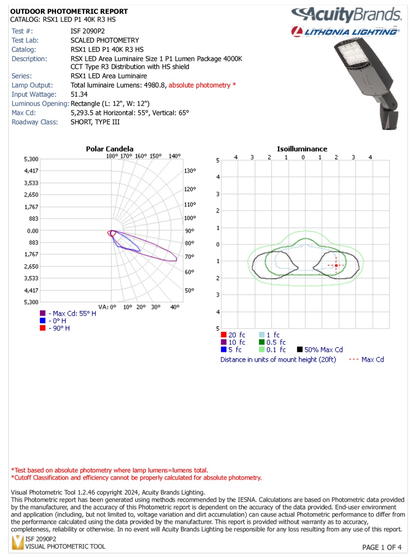
** Grouting should include a drainage slot or tube (by others) to permit water to drain from the base of the pole. Failure to provide drainage may weaken the pole base structure over time and may result in pole base failure, for which Gardco is not responsible.

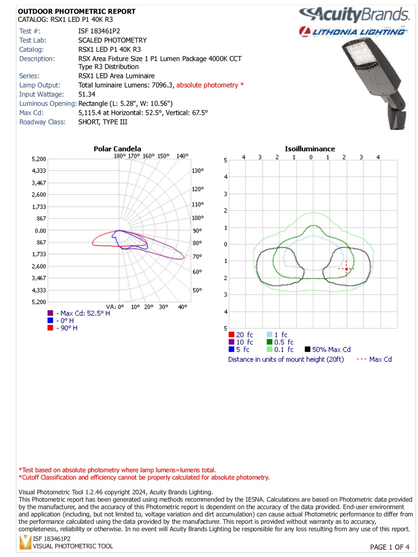
NOTE: Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

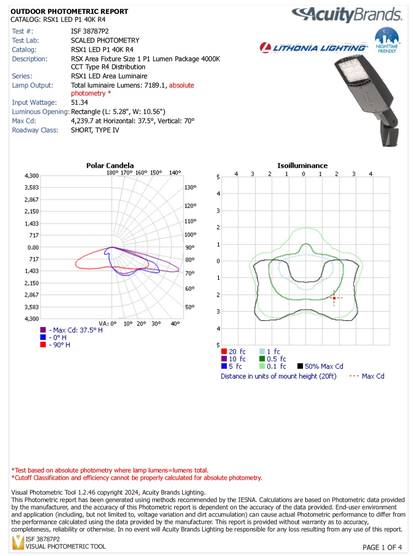
3 / C508 PARKING LOT STEEL POLE (MC-01 POLE)
N.T.S.

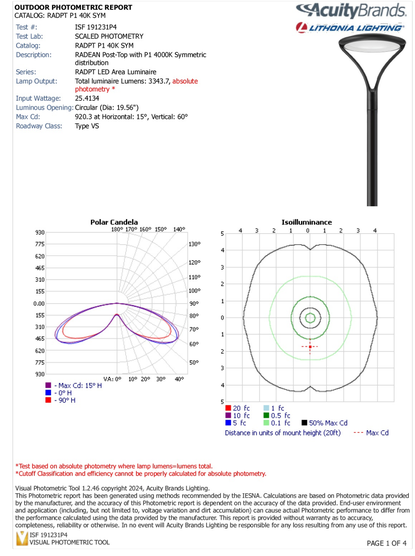


2 / C508 TYPICAL SITE LIGHTING POLE BASE DETAIL
N.T.S.









1 / C508 LIGHTING FIXTURES / PHOTO METRICS
N.T.S.

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LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
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DRAWING NAME:

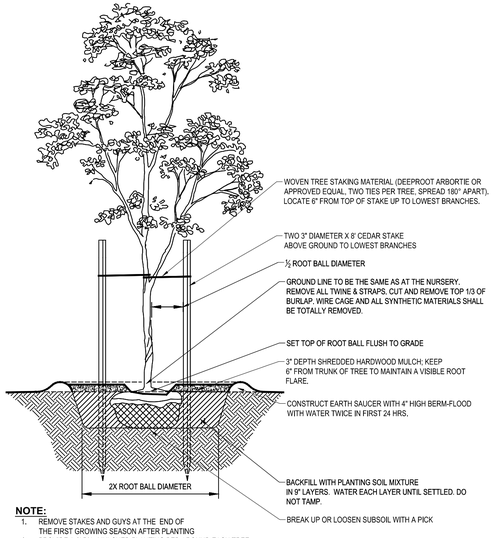
CONSTRUCTION DETAILS

DRAWING NUMBER:

C508

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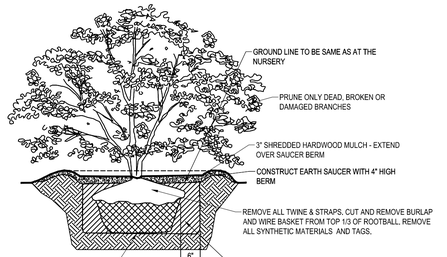
NOT FOR CONSTRUCTION



NOTE:
1. REMOVE STAKES AND GUYS AT THE END OF THE FIRST GROWING SEASON AFTER PLANTING
2. PROVIDE A 6' DIA. MULCHED PLANTING BED AROUND EACH TREE.
3. DO NOT OVERSEED TREE PLANTING PITS IN MAINTAINED LAWN AREAS.

4 / L501 DECIDUOUS TREE PLANTING

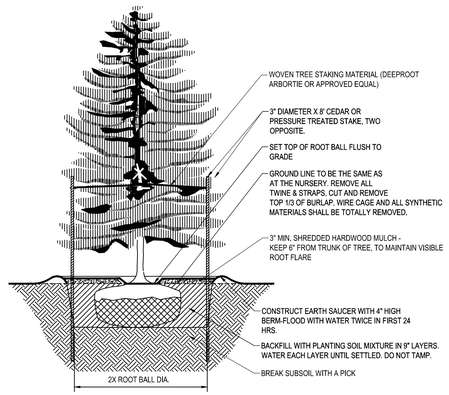
N.T.S.



NOTE:
1. PROVIDE A CONTINUOUS MULCHED PLANTING BED FOR ALL SHRUB PLANTINGS.
2. DO NOT OVERSEED SHRUBS IN PLANTING BEDS OR PITS IN MAINTAINED LAWN AREAS

3 / L501 SHRUB PLANTING

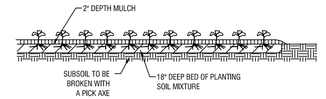
N.T.S.



NOTE:
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2. PROVIDE A 6' DIA. MULCHED PLANTING BED AROUND EACH TREE.
3. DO NOT OVERSEED TREE PLANTING PITS IN MAINTAINED LAWN AREAS.

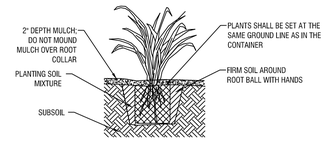
2 / L501 EVERGREEN TREE PLANTING

N.T.S.



NOTE: GROUND COVERS SHALL BE POT OR CONTAINER GROWN.

GROUNDCOVER SECTION



PERENNIAL SECTION

NOTES:
1. PROVIDE 18" DEPTH PLANTING SOIL MIX , ADD FERTILIZER WHEN MIXING. DO NOT COMPACT AFTER PLANTING.
2. WATER THOROUGHLY AFTER PLANTING.
3. PROVIDE WELL DRAINING SUBSOIL WHEN SOIL IS HEAVY OR COMPACTED.
4. PLANTS SHALL BE REMOVED FROM ALL CONTAINERS WHEN PLANTED, UNLESS OTHERWISE STATED IN THE PLANT SCHEDULE.

1 / L501 PERENNIAL - GROUNDCOVER PLANTING

N.T.S.

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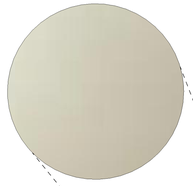
PROJECT NUMBER: 2241067
DRAWN BY: EMM / SCB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

LANDSCAPE DETAILS

DRAWING NUMBER:

L501

FIBER CEMENT PANEL -
HARDIE "COBBLESTONE"



BRICK -
WATSONTOWN "ELK"

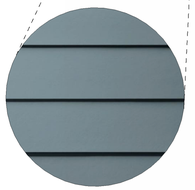




FIBER CEMENT BOARD
AND BATTEN -
HARDIE "IRON GRAY"

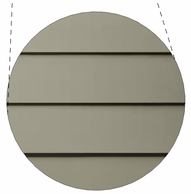


ALTERNATE MATERIAL:
FIBER CEMENT SIDING
- HARDIE "BOOTHBAY BLUE"



VINYL SIDING - VYTEC
PRESTIGE "LAKESHORE BLUE"

VINYL SIDING - VTEC
PRESTIGE "SPRING MEADOW"



ALTERNATE MATERIAL:
FIBER CEMENT SIDING
- HARDIE "MONTEREY TAUPE"

3D View and Material Palette

Home Leasing - West Seneca

SWBR



4 EXTERIOR ELEVATION - WEST
1/16" = 1'-0"



3 EXTERIOR ELEVATION - NORTH
1/16" = 1'-0"



2 EXTERIOR ELEVATION - EAST
1/16" = 1'-0"



1 EXTERIOR ELEVATION - SOUTH
1/16" = 1'-0"

ELEVATION KEY NOTES

NO.	DESCRIPTION
E1	MASONRY VENEER. COLOR AND PATTERN TBD.
E2	FIBER CEMENT PANEL SYSTEM. COLOR TBD
E3	FIBER CEMENT BOARD AND BATTEN SYSTEM. COLOR TBD
E4	VINYL LAP SIDING, 7" EXPOSURE. COLOR TBD. (ALTERNATE MATERIAL: FIBER CEMENT SIDING)
E5	ALUMINUM STOREFRONT SYSTEM. COLOR AND FINISH TBD.
E6	EXTERIOR WALL SCONCE. FIXTURE TBD.
E7	FRAMED CANOPY W/ GFRC CORNICE
E8	ROOF PARAPET W/ GFRC CORNICE
E9	6" TRIM BOARD
E10	12" TRIM BOARD AND ALUMINUM PARAPET COPING
E11	VINYL DOUBLE HUNG WINDOW. COLOR AND TRIM TBD

Exterior Elevations

Home Leasing - West Seneca

SWBR

3-STORY BLDG - UNIT COUNTS

1 BR = 15 UNITS
2 BR = 25 UNITS
3 BR = 20 UNITS

60 UNITS TOTAL

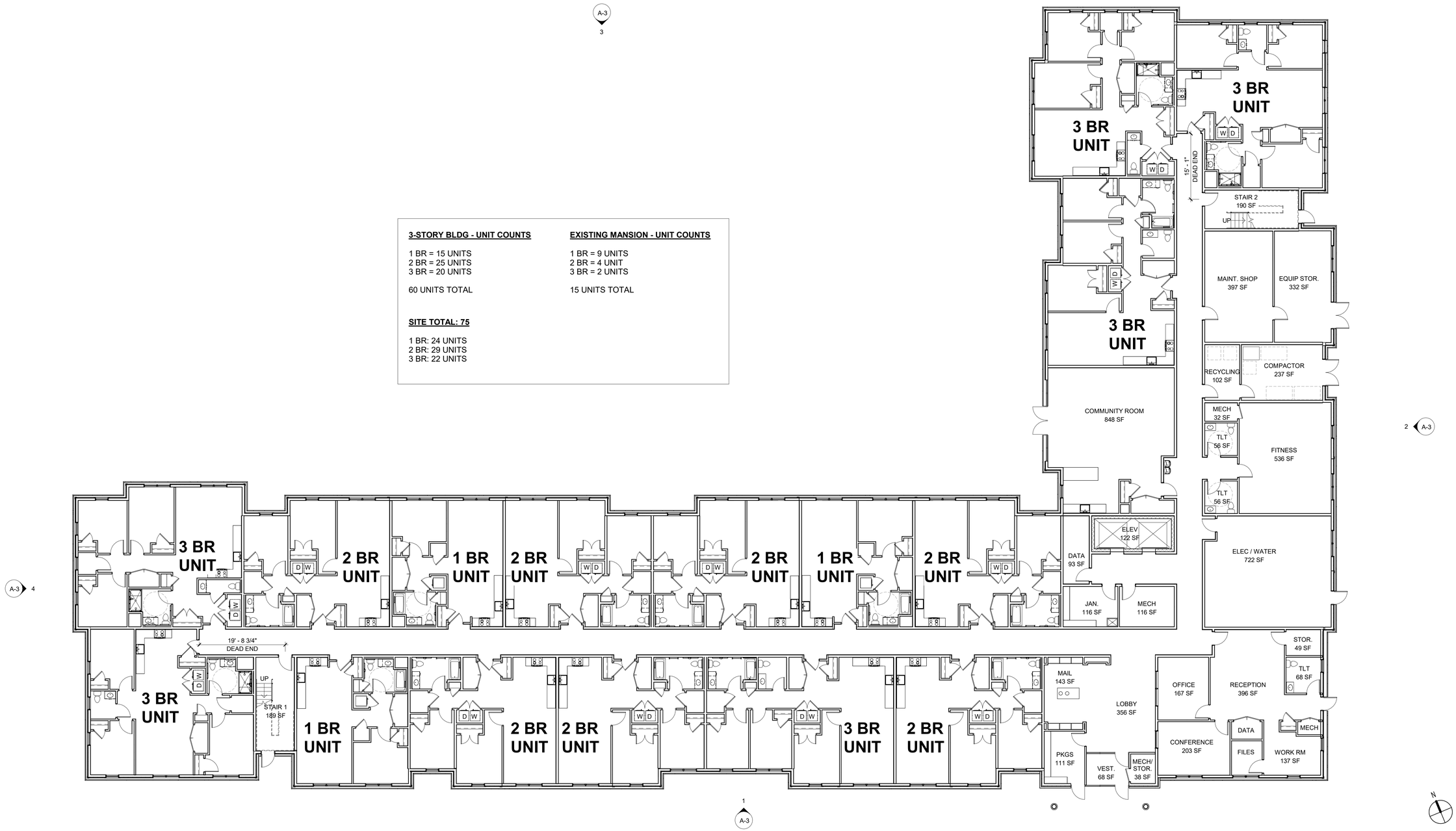
EXISTING MANSION - UNIT COUNTS

1 BR = 9 UNITS
2 BR = 4 UNIT
3 BR = 2 UNITS

15 UNITS TOTAL

SITE TOTAL: 75

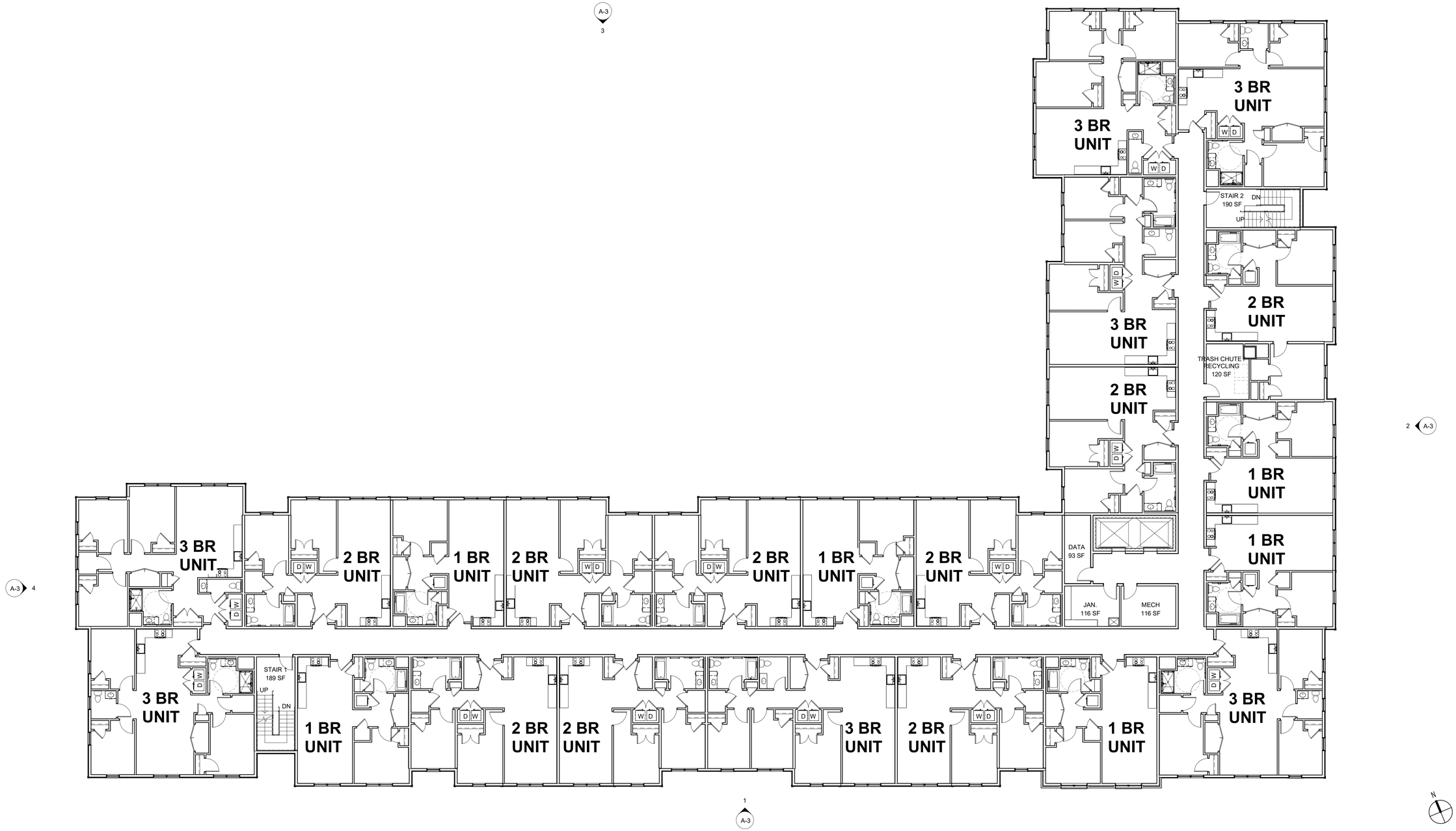
1 BR: 24 UNITS
2 BR: 29 UNITS
3 BR: 22 UNITS



First Floor Plan

Home Leasing - West Seneca

SWBR



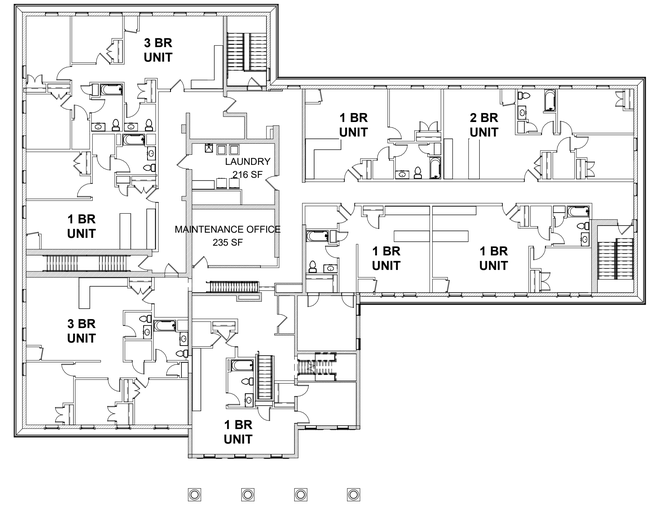
Second and Third Floor Plans

Home Leasing - West Seneca

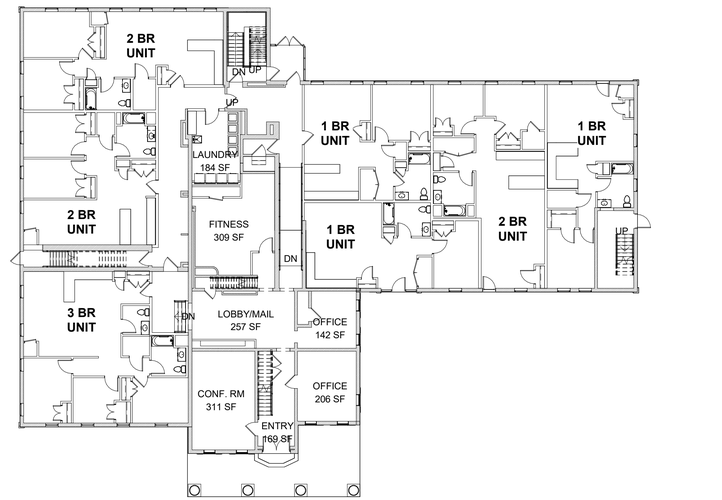
SWBR



CONCEPTUAL RENDERING



2 SECOND FLOOR PLAN
1/16" = 1'-0"



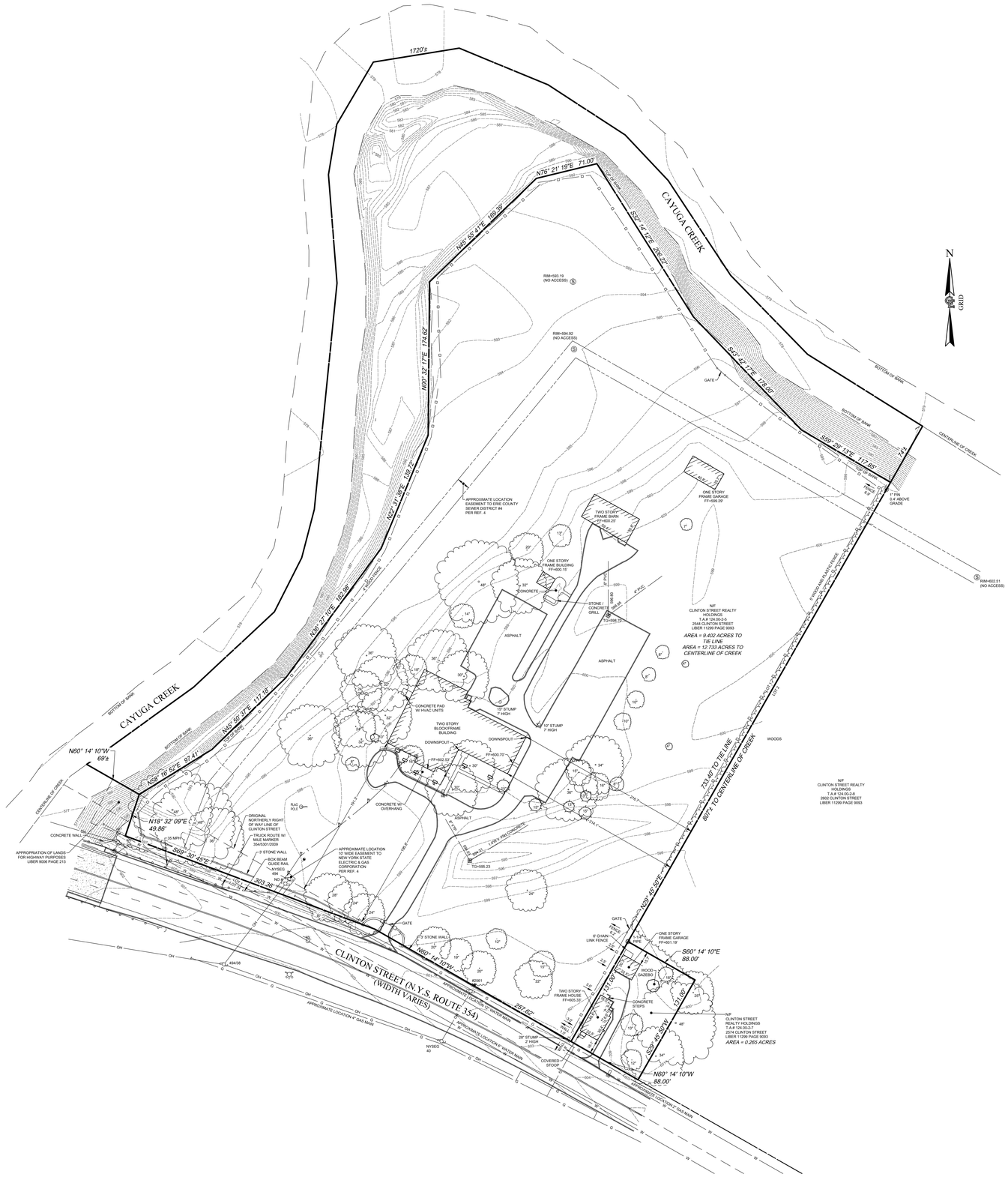
1 FIRST FLOOR PLAN
1/16" = 1'-0"

N

Existing Building Plans and Rendering

Home Leasing - West Seneca

SWBR

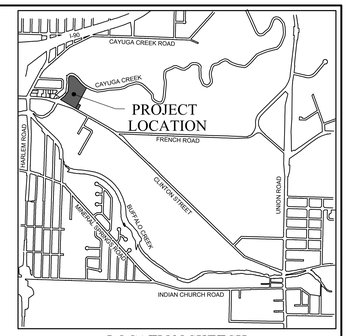


LINE LEGEND

- SECTION/PARCEL BOUNDARY
- MIN. BUILDING SETBACK
- CENTER LINE
- EXIST. EASEMENT LINE
- EXIST. RIGHT-OF-WAY LINE
- EXIST. EDGE OF PAVEMENT
- EXISTING WATER MAIN, VALVE, & HYDRANT.
- EXISTING SANITARY SEWER, & MANHOLE.
- EXISTING DRAINAGE SEWER, FIELD INLET, INLET MANHOLE, MANHOLE, & END SECTION.
- EXISTING OVERHEAD UTILITIES
- EXISTING TELEPHONE
- EXISTING UNDERGROUND UTILITIES
- EXISTING GAS
- EXISTING ELECTRIC
- EXISTING GUARD RAIL
- TREE,HEDGE,EDGE OF WOODS
- EXISTING SWALE
- BARBED WIRE,STOCKADE,CHAIN LINKED FENCE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION @ X
- CONCRETE PAD/ CONCRETE SIDEWALK

SYMBOL LEGEND

- DRAINAGE MANHOLE
- INLET DRAINAGE MANHOLE
- CATCH BASIN
- END SECTION
- END OF PIPE
- MANHOLE
- SANITARY MANHOLE
- CLEAN OUT
- GAS VALVE
- GAS SERVICE
- GAS METER
- SPRINKLER VALVE
- SPRINKLER HEAD
- WATER VALVE
- WATER SERVICE
- HYDRANT
- WATER METER
- WELL
- BORE
- CABLE TV PEDESTAL
- SIGNAL POLE
- UTILITY POLE
- GUY WIRE
- PULL BOX
- ELECTRIC PULL BOX
- TELEPHONE PULL BOX
- TRAFFIC PULL BOX
- TRANSFORMER
- ELECTRIC MANHOLE
- ELECTRIC METER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- PEDESTRIAN POLE
- TRAFFIC CONTROL CABINET
- LAMP POST
- LIGHT POLE
- UTILITY POLE WITH LIGHT
- FLAG POLE
- MAILBOX
- BOLLARD
- POST
- SIGN
- TURNING ARROW
- HANDICAP
- STOP BAR
- TREE DECIDUOUS
- TREE CONIFEROUS
- BUSH
- AIR CONDITIONING UNIT
- SANITARY UTILITY LATH
- GAS UTILITY LATH
- WATER UTILITY LATH
- TELEPHONE UTILITY LATH
- ELECTRIC UTILITY LATH
- CABLE UTILITY LATH



LOCATION SKETCH

NOT TO SCALE

UTILITY INFORMATION

UTILITY INFORMATION PER UFPO DESIGN TICKET # 10313-000-071-00
DATED OCTOBER 31, 2023

1.	BUCKEYE PIPELINE COMPANY	610-904-4475
2.	CHARTER COM NORTHEAST WESTERN NY	317-575-7800 x2
3.	ERIE COUNTY DIVISION OF SEWER MANAGEMENT	716-858-8760
4.	ERIE COUNTY WATER AUTHORITY	716-685-8207
5.	NATIONAL FUEL GAS | BUFFALO - NFG101	716-857-7431
6.	NYS THRUWAY AUTHORITY | BUFFALO	716-635-6224
7.	NYSEG LANCASTER ELECTRIC	585-484-5115
8.	TOWN OF CHEEKTOWAGA	716-686-3450
9.	TOWN OF WEST SENECA HIGHWAY	716-674-5600 x261
10.	VERIZON | BUFFALO	315-937-2515

SURVEY NOTES

1. TOPOGRAPHY SHOWN FROM A FIELD SURVEY BY COSTICH ENGINEERING ON 12/8/2023 HORIZONTAL AND VERTICAL DATA OBTAINED THROUGH NYSDOT CORS NETWORK REFERENCED TO THE FOLLOWING MONUMENT

   HAMBURG CORS STATION
   -LATITUDE: 42-43-02.66326 (N) NAD 83 (CORS)
   -LONGITUDE: 078-50-47.27326 (W)
   -ELLIP HEIGHT: 212.494 METERS NAVD 88 (CORS)

SITE DATA

1. EXISTING ZONING: M-1 (MANUFACTURING DISTRICT)
2. BULK REQUIREMENTS:

	REQUIRED
MIN. LOT AREA (SF)	20,000
MAX LOT COVERAGE	N/A
MIN. LOT WIDTH (FT)	100
MAX. BUILDING HEIGHT (FT)	40
MIN. FRONT YARD SETBACK (FT)	50
MIN. SIDE YARD SETBACK (FT)	50
MIN. REAR YARD SETBACK (FT)	10

REFERENCES

1. DEEDS AS SHOWN ON FILE AT THE ERIE COUNTY CLERK'S OFFICE.
2. MAP OF THE EBENEZER LANDS FILED IN THE ERIE COUNTY CLERK'S OFFICE UNDER COVER NO. 58.
3. NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP, CLINTON STREET, PART I, S.H. NO. 371, ERIE COUNTY, MAP NO. 44, PARCEL NO. 37., FILED AT LIBER 9006 OF DEEDS, PAGE 213.
4. MAP ENTITLED "BOUNDARY SURVEY OF 2544 CLINTON STREET", PREPARED BY NUSSBAUMER & CLARKE, INC., HAVING JOB NO 15J2-0079, DRAWING NO. SB-2535, DATED 2/4/2015.
5. MAP ENTITLED "BOUNDARY SURVEY OF 2602 CLINTON STREET", PREPARED BY NUSSBAUMER & CLARKE, INC., HAVING JOB NO 15J2-0080, DRAWING NO. SB-2534, DATED 2/4/2015.

CERTIFICATION

WE, COSTICH ENGINEERING, D.P.C., HEREBY CERTIFY TO:

THIS MAP WAS PREPARED FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED ON DECEMBER 8, 2023 AND FROM THE REFERENCE(S) LISTED HEREON. NO SEARCH OF RECORDS, OTHER THAN THOSE REFERENCED, WAS MADE FOR EASEMENTS OR ENCUMBRANCES AFFECTING THIS PARCEL.

PRELIMINARY

By: _____ Date: _____
Daniel T. Hickok, N.Y.S. L.S., No. 050449

FLOOD NOTE:
By graphic plotting only, this property is in Zone X & Zone AE of the Flood Insurance Rate Map No. 36029C0331H Community Panel No. 360262, Town of West Seneca, which bears an effective date of 6/7/2019 and Zone X & Zone AE of the Flood Insurance Rate Map No. 36029C0332H Community Panel No. 360262, Town of West Seneca, which bears an effective date of 6/7/2019, No field surveying was performed to determine this zone and an elevation certificate may be needed to verify this determination or apply for a variance from the Federal Emergency Management Agency.

UDIG-NY | 811

EXISTING UTILITIES (LOCATION, SIZES AND INVERTS) SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT CERTIFIED AS TO THE ACCURACY OF THEIR LOCATION OR COMPLETENESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES AND STRUCTURES IN THE PATH OF, OR CLOSELY PARALLEL TO, OR UNDER, THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DELAYS OR DAMAGES OCCURRING AS A RESULT OF INCORRECTLY LOCATED UTILITIES. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITY OWNERS IN AMPLE TIME FOR THEM TO LOCATE AND MARK THEIR FACILITIES. THE CONTRACTOR SHALL ALSO NOTIFY UNDERGROUND UTILITY LOCATION SERVICE AT LEAST 48 HOURS IN ADVANCE OF COMMENCING ANY WORK.

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

NO.	DATE	REVISION	BY	CHKD.	APVLS.

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COSTICH ENGINEERING, D.P.C.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR, ARCHITECT OR LANDSCAPE ARCHITECT, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY. IF ANY LICENSEE WHO ALTERS THIS DOCUMENT IS REQUIRED BY LAW TO AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY", FOLLOWED BY HIS/HER SIGNATURE AND SPECIFIC DESCRIPTION OF THE ALTERATION. TO THE DOCUMENT.

STATE OF NEW YORK · DANIEL T. HICKOK · L.S. NO. 050449 · LICENSED LAND SURVEYOR

PROJECT MANAGER	D.T.H.
DRAWN BY	K.E.L.
BOUNDARY	G.M.S.
TOPOGRAPHY	M.G.
DATE	12/18/2023
SCALE	1"=50'

COSTICH ENGINEERING
• CIVIL ENGINEERING
• LAND SURVEYING
• LANDSCAPE ARCHITECTURE
217 LAKE AVENUE
ROCHESTER, NY 14608
(585) 458-3020

TITLE OF PROJECT	2544 & 2574 CLINTON STREET PROPERTIES WEST SENECA
TITLE OF DRAWING	EXISTING FEATURES
LOCATION OF PROJECT	TAX PARCEL NO'S 124.00-2-5 & 124.00-2-7 PART OF LOTS 1,2, & 34 OF THE EBENEZER LANDS, LOT 123, TOWNSHIP 10, RANGE 7, BUFFALO CREEK RESERVATION, TOWN OF WEST SENECA, COUNTY OF ERIE, STATE OF NEW YORK
CLIENT	LABELLA ASSOCIATES 300 STATE STREET - SUITE 201 ROCHESTER, NEW YORK 14614
DWG #	9263 VA100 SHEET 1 OF 1

Prepared For:
Home Leasing, LLC
75 South Clinton Avenue, Suite 700
Rochester, NY 14604

Submitted by:
LaBella Associates
300 State Street, Suite 201
Rochester, NY 14614
(716) 551-6281



LaBella
Powered by partnership.

ENGINEERING REPORT FOR WEST SENECA

Date: October 2024

Last Revised: April 2026

LBA Project No. 2241067

Table of Contents

Section 1 – Introduction 2
Section 2 – General 2
Section 3 – Proposed Sanitary Facilities 2
Section 4 – Propsoed Stormwater Facilities 6
Section 5 – Proposed Water Facilities 9

Appendices

Attachment A – Site Location Map

Section 1 – Introduction

Home Leasing is proposing the development of a new affordable housing complex on a +/- 12.7-acre parcel in West Seneca, NY. Home Leasing is also seeking Site Plan Approval from West Seneca and HCR 9% funding from New York State. The proposed development includes 75 units split between a repurposing of the existing mansion on site to and a new 3-story apartment building in the rear of the property. The project includes a private road accessing the apartments, parking, sidewalks, playground, landscaping and stormwater management facilities.

1.1 Site Location

The 12.7-acre site is nestled between Clinton Street (State Route 354) to the south and Cayuga Creek to the North and West. Within a quarter mile of the development there are multiple commercial uses and Interstate 90. The neighborhood is predominately comprised of agricultural land, single- and two-family homes and industrial/manufacturing facilities. See appendix A for location site map.

Section 2 – General

2.1 Existing Site Conditions

The existing site includes the above-mentioned mansion, two barns, a stone wall along Clinton Street and parking areas. The barns and parking areas will be demolished, while the existing stone wall will remain, with the entrance being widened to allow for emergency vehicle access to the site.

The site topography is relatively flat with elevations generally ranging from 600 to 580. Storm water runoff from site drains either via sheet flow directly to Cayuga Street, or to drainage inlets that drain to Cayuga Creek. The existing drainage system on site is minimal and consists of a small swale and dry detention basis which collects and re-directs off-site drainage from the east. Drainage is then conveyed to Cayuga Creek via storm pipes and open drainage swales.

2.2 Proposed Site Conditions

The proposed development includes 75 units split between a repurposing of the existing mansion on site to now include apartments and one apartment building in the rear of the property.

Project Data:

Facility Type:	Affordable Housing
No. of Buildings:	2 (Including one existing)

Section 3 – Proposed Sanitary Facilities

3.1 Building Utility Services – Sanitary

The following summarizes the sanitary sewer service sizes for each building.

Table 1: Sanitary Lateral Sizes

Building #	Description	Sanitary Lateral Size
1	Existing Mansion	6"
2	Proposed Building	6"

3.2 Sanitary Sewer

The project requires a Down Stream Sewer Capacity analysis (DSCA) to conform with NYSDEC regulations considering proposed sanitary flows are intended to convey a flow greater than 2,500 gallons per day.

In accordance with Erie County policy a downstream, dry weather sanitary capacity analysis is included. The monitoring report is included in the appendices.

Based on the flow depth measurements recorded the following conclusions are reached:

- At no time did the flow depth exceed pipe diameter at any of the downstream monitoring points during the wet weather events monitored.
- One time during the monitoring period the depth of flow exceeded the diameter of the pipe.

3.3 DSCA Summary

Erie County provided three (3) nodes, described below:

- Flow Monitoring Period: August 13, 2024, to September 18, 2024
- Dry Week Days Monitored: Aug 13-15, Aug 20-23, Aug 26-30, Sept 2-5, Sept 10-13, and Sept 16-18.
- Dry Weekend Days Monitored: Aug 24-25, Sept 8, and Sept 14-15.

Nodes (manholes):

- Node 1 MH BAA8A – 48" RCP (Matthews Cemetery NW Corner)
- Node 2 MH BAA9A – 60" RCP (Casimer Street)
- Node 3 MH BAAA8 – 66" RCP (8 Cable Street)

Design Parameters:

Hydraulic Loading rates per NYS Design Standards for Intermediate Wastewater Treatment Systems, March 5, 2014. Calculations included below:

Apartments – Bedroom Units = 110 gpd/unit
Office Space= 15 gpd / employee

Average Daily Design Flow:

One Bdrm Units:(24 units) x (1 bdrm/unit)x 110gpd/bdrm=2,640 gpd
Two Bdrm Units:(29 units) x (2 bdrm/unit)x110gpd/bdrm=6,380 gpd

Three Bdrm Units:(22 units) x (3 bdrm/unit)x110gpd/bdrm=7,260 gpd
Office Space: 4 Employees x 15 gpd = 60 gpd
Total = 16,340 gpd

Peak Hourly Flow (Sanitary): 16,340 gpd x Peak Factor
Total Population=[(24x1)+(29x2)+(22x3)]x2 people per bedroom=
=148x2= 296People (assume 2 people per bedroom)+4 office employees=300. P = 0.300 (in thousands)
Peaking Factor = (18 + √P) / (4+√P) = (18+0.548)/(4+0.548)=4.08
Peak Sanitary Demand =16,340x 4.08 = 66,667 gpd
0.06667 MGD
(0.10 CFS)

Sanitary Demand Calculations:
Node 1 – Average 16,340 gpd (0.016 MGD)

Entire Site:
110-gal/d/unit x 1bdrmx24 units=2,640 gpd
+ 110-gal/d/unit x 2bdrmx29 units=6,380 gpd
+110-gal/d/unitx3bdrmx22 units=7,260 gpd
4 employees x 15 gpd=60 gpd
Site total= 16,340 gpd

Ave. Total = 16,340 gpd (0.016 MGD)
Assume 2 people per bedroom. 2 x 148 bedrooms = 296 people + 4 office employees = 300 people. P = 0.300 (in thousands)
Peaking Factor = (18 + √P) / (4+√P) = 4.08
Peak Sanitary Demand = 16,340 x 4.08 = 66,667 gpd
0.06667 MGD
(0.10 CFS)

Node 2 – Average 16,340 gpd (0.016 MGD)

Entire Site:
110-gal/d/unit x 1bdrmx24 units=2,640 gpd
+ 110-gal/d/unit x 2bdrmx29 units=6,380 gpd
+110-gal/d/unitx3bdrmx22 units=7,260 gpd
4 employees x 15 gpd=60 gpd
Site total= 16,340 gpd
Ave. Total = 16,340 gpd (0.016 MGD)
Assume 2 people per bedroom. 2 x 148 bedrooms = 296 people + 4 office employees = 300 people. P = 0.300 (in thousands)
Peaking Factor = (18 + √P) / (4+√P) = 4.08
Peak Sanitary Demand = 16,340 x 4.08 = 66,667 gpd
0.06667 MGD
(0.10 CFS)

Node 3 – Average 16,340 gpd (0.016 MGD)

Entire Site:
110-gal/d/unit x 1bdrmx24 units=2,640 gpd
+ 110-gal/d/unit x 2bdrmx29 units=6,380 gpd
+110-gal/d/unitx3bdrmx22 units=7,260 gpd
4 employees x 15 gpd=60 gpd
Site total= 16,340 gpd

Ave. Total = 16,340 gpd (0.017 MGD)
Assume 2 people per bedroom. 2 x 148 bedrooms = 296 people + 4 office employees = 300 people. P = 0.300 (in thousands)
Peaking Factor = (18 + √P) / (4+√P) = 4.08
Peak Sanitary Demand = 16,340 x 4.08 = 66,667 gpd
0.06667 MGD
(0.10 CFS)

Table 2: Dry Weather Peak Weekday

Node	Sewer	Ave. Daily Flow (mgd)	Existing Peak Flow (mgd)	Proposed Peak Sanitary Flow (mgd)	Total Peak Flow (mgd)	Theoretical Capacity (mgd)	Available Capacity (Y/N)
1-MH BAA8A	48" RCP @ 0.41% (Matthews Cemetery NW Corner)	0.016	7.953*	0.067	8.020	59.6	Y
2-MH BAA9A	60" RCP @ 0.042% (Casimer Street)	0.016	11.619**	0.067	11.686	34.6	Y
3-MH BAAA8	66" RCP @ 0.026% (8 Cable Street)	0.016	10.614***	0.067	10.614	35.1	Y

Notes:
***Peak Dry Week Day for Nodes 1 on Aug 27,2024**
****Peak Dry Week Day for Node 2 on Aug 21,2024**
*****Peak Dry Week Day for Node 3 on Aug 21,2024**

Table 3: Dry Weather Peak Weekend Day

Node	Sewer	Ave. Daily Flow (mgd)	Existing Peak Flow (mgd)	Proposed Peak Sanitary Flow (mgd)	Total Peak Flow (mgd)	Theoretical Capacity (mgd)	Available Capacity (Y/N)
1-MH BAA8A	48" RCP @ 0.41% (Matthews Cemetery NW Corner)	0.016	6.070*	0.067	6.137	59.6	Y

2-MH BAA9A	60" RCP @ 0.042% (Casimer Street)	0.016	11.972**	0.067	12.039	34.6	Y
3-MH BAAA8	66" RCP @ 0.026% (8 Cable Street)	0.016	11.615***	0.067	11.682	35.1	Y

Notes:
***Peak Dry Weekend Day for Nodes 1 on Aug 25,2024**
****Peak Dry Weekend Day for Node 2 on Sept 14,2024**
*****Peak Dry Weekend Day for Node 3 on Sept 14,2024**

3.5 DSCA CONCLUSION

Based on the analysis and flow monitoring results the flow depth peak increases are described below. The combined sewer has sufficient capacity to handle projected peak flows.

- Node 1 projected peak 0.067 MGD flow (0.10 CFS) result in approximately a 1.6 inch water level increase within the 48" RCP sewer.
- Node 2 projected peak 0.067 MGD flow (0.10 CFS) result in approximately 2.6 inch water level increase within the 60" RCP sewer.
- Node 3 projected peak 0.067 MGD flow (0.10 CFS) result in approximately 2.9 inch water level increase within the 66" RCP sewer.

Full sewer calculations including – TECsmith Flow Monitoring Data, TECsmith Time Tables, Eire County Flow Monitoring and Erie County Time Tables are included in the Full Sewer Report which was previously provided to the town as a part of the Special Use Permit review process.

Section 4 – Proposed Stormwater Facilities

4.1 Proposed Stormwater Loading

A Stormwater Pollution Prevention Plan (SWPPP) has been developed as part of this project and is included under a separate cover. The proposed on-site storm system will outlet to Cayuga Creek. The stormwater design meets the Town of West Seneca Town Code (2025-09-08) - Chapter 102A Stormwater Management and Erosion and Sediment Control and the NYSDEC 2024 Stormwater Design Manual Regulations. However, pertinent information pertaining to existing and proposed stormwater loading has been included for analysis in the table below.

4.2 Required WQv

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of receiving water bodies. Therefore, treatment of stormwater runoff is important since most runoff related water quality contaminants are

transported from land, particularly the impervious surfaces, during the initial stages of storm events.

The Design Manual requires that water quality treatment be provided for the initial flush of runoff from every storm. The NYSDEC refers to the amount of runoff to be treated as the "Water Quality Volume" (WQv). Section 4.2 of the Design Manual defines the Water Quality Volume as follows:

$$WQv = \frac{[(P)(R_v)(A)]}{12}$$

Where: P = 90% Rainfall Event Number
R_v = 0.05 + 0.009 (I)
I = Impervious Cover (Percent)
A = Contributing Area in Acres

This definition ensures that, all other things being equal, the Water Quality Volume will increase along with the impervious cover percentage. This redevelopment project is proposing a combination of WQv treatment by standard practice(s) and alternative practice(s) as shown in the following tables:

Table 4: Required WQv Summary

P (inches)	A (Ac)	I (Ac)	Rv	WQv Required (cf)
1.00	5.68	2.98	0.29	8,672

4.3 RRv Requirements

Land use change and development in the watershed increases the volume of runoff. As such, reductions in the amount of runoff from new development, accomplished through the implementation of a stormwater management plan for the site, will play an important role in the success or failure of the watershed-wide stormwater management plan. Runoff reduction techniques can be applied to manage, reduce, and treat stormwater, while maintaining and restoring natural hydrology through infiltration, evapo-transpiration, and the capture and reuse of stormwater. Volume reduction techniques by themselves typically are not sufficient to provide adequate attenuation of stormwater runoff, but they can decrease the size of the peak runoff rate reduction facilities.

Section 9.2.1.B of the 2024 NYSDEC Design Manual indicates, "Although encouraged, meeting the RRv criteria is not required for the redevelopment activity portion of a project. The need to provide RRv shall be considered separately for each design point. For design points with a net increase in impervious area, RRv is required for the increase in impervious area only."
As such, bioretentions and a water quality unit have been applied to the project to meet the WQv objective for the redevelopment activity of the project. The increase in impervious cover will be treated as new development and both the WQv criteria and RRv criteria are met. The table below indicates the required RRv for the site.

Table 5: Required RRv

Total Increase in Impervious Area (Ac)	Soil Group A (%)	Soil Group B (%)	Soil Group C (%)	Soil Group D (%)	Rv	Weighted S Factor	Minimum RRv Required (cf)
1.92	0	0	0	100	0.95	0.20	1,324

4.4 Provided WQv and RRv

The following table summarizes both the water quality volume and reduced runoff volume provided by each practice:

Stormwater Practice	WQv Treated (cf)	RRv Provided (cf)
Bioretention (3 total areas)	3,338	1,337
Water Quality Unit	6,627	0
Total	9,965	1,337

Based on the above table, the WQv and RRv requirements are being met.

4.5 Discharge Rates

A comparison of the pre- and post-development watershed conditions was performed for all Design Points and storm events evaluated. For all Design Points and design storms, this comparison demonstrates that the peak rate of runoff will not be increased. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties or receiving water courses.

The results of the computer modeling used to analyze the pre- and post-development watersheds are presented in the following table below:

Table 6: Summary of Pre-Development and Post-Development Peak Discharge Rates

Analysis Point (AP)	10-year 24-hour storm event		100-year 24-hour storm event	
	Pre	Post	Pre	Post
1	16.3	13.9	36.8	31.7

Based on the table above, the proposed stormwater flows have been reduced for all storm events to below pre-development conditions.

A full stormwater pollution prevention plan per NYS Stormwater Design Manual, NYSDEC SPDES General Permit for Stormwater Discharge from Construction Activity and NYSDEC

Standards and Specifications for Erosion and Sediment Control has been prepared for this project. The SWPPP is included in the Site Plan Application Package.

Section 5 – Proposed Water Facilities

5.1 Proposed Water Connections

The project is proposing a new water connection to the Eire County Water Authority (EWCA) 12" water main on the north side of Clinton Street.

5.2 Existing Flow Test Data

Existing hydrant flow test data was provided for hydrant J11F55 and completed on 7/15/2019. The existing water line is a 6" cast iron pipe on the south side of Clinton Street. The residual pressure was 54 psi at 872 gpm.

5.3 Proposed Water Demand

The anticipated average daily water demand from the proposed development was calculated using Table B-3 of the NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems, dated March 5, 2014. For apartments constructed after 1994, the average daily water demand per bedroom is 110-gallons per day. The proposed project includes updating all water fixtures to modern energy efficient fixtures. Based on this, the anticipated average daily water demand for the proposed development is as follows:

Table 7: Anticipated Water Demand

No. of Bedrooms	No. of Units	Water Demand Per Unit (GPD)	Average Daily Demand (GPD)
1 Bedroom	24	110	2,640
2 Bedroom	29	220	6,380
3 Bedroom	22	330	7,260
		Total Average Daily Demand	16,340
		Maximum Day (2x Average Daily)	32,680
		Peak Hourly (4x Average Daily)	35,360

5.4 Proposed Fire Protection and Backflow

The project is proposing one combined service from Clinton Street, which will split into combined services feeding the existing mansion and new building respectively. New backflow prevention devices are proposed for each of the buildings, splitting into separate domestic and fire services after the backflows. The domestic services will be metered within each building. The private hydrants on site will be fed after the backflow within each building. Refer to the MEP and FP plans for detailed design.

Stormwater Pollution Prevention Plan

Prepared for:
Home Leasing
75 South Clinton Avenue, Suite 700,
Rochester, NY 14604

Submitted by:
LaBella Associates
300 Pearl Street, Suite 130
Buffalo, NY 14202
(716) 551-6281

LaBella
Powered by partnership.

West Seneca Apartments

Town of West Seneca, Erie County, New York

DATE: APRIL 2026
LAST REVISED: APRIL 2026
PROJECT NO. 2241067

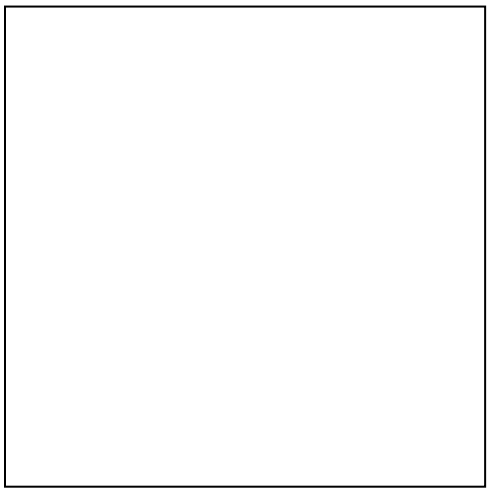
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PREPARER OF THE SWPPP

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and Title[1]: Kristopher Winkler, PE

Date: Issued: April 2026



[1] *This is a signature of a New York State licensed Professional Engineer employed by LaBella Associates that is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision. Refer to Appendix B for the SWPPP Preparer Certification Form, and Appendix I for the LaBella Certifying Professionals Letter.*

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1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for major activities associated with construction of a 75-unit affordable housing complex and related site work in the Town of West Seneca. This SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. This SWPPP must be executed, and permit coverage must be obtained prior to the commencement of construction activity.

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity," Permit No. GP-0-25-001, effective January 29, 2025 through January 28, 2030. The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of construction.

This SWPPP and the accompanying plans entitled "West Seneca Apartments" have been submitted as a set. These engineering drawings are considered an integral part of this SWPPP. Therefore, this SWPPP is not considered complete without them. References made herein to "the plans" or to a specific "sheet" refer to these drawings.

This report considers the impacts associated with the intended development with the purpose of:

1. Maintaining existing drainage patterns as much as possible while continuing the conveyance of upland watershed runoff;
2. Controlling increases in the rate of stormwater runoff resulting from the proposed development so as not to adversely alter downstream conditions; and
3. Mitigating potential stormwater quality impacts and preventing soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

The analysis and design completed and documented in this report is intended to be part of the application made for a multi-family residential redevelopment project with an increase in impervious area completed on behalf of the Owner/Operator.

1.1 Project Description

Home Leasing is proposing redevelopment project with an increase in impervious area, to include: 75-unit affordable housing building, associated parking, sidewalks, and landscaping. The total project area of disturbance proposed is 5.7 acres. The project will disturb one (1) or more acres and as such, preparation of this SWPPP is required under GP-0-25-001. A Site Location Map has been provided in Appendix A, as Figure A-1.

This type of project is included in Table 2 of Appendix B of GP-0-25-001; and the project site is not located in one of the watersheds listed in Appendix C of GP-0-25-001. Therefore, this SWPPP includes post-construction stormwater management practices, as well as erosion and sediment controls.

project is located within the Town Of West Seneca regulated, traditional land use control Municipal Separate Stormwater Sewer System (MS4). Therefore, an MS4 SWPPP Acceptance Form is required to accompany NOIs submitted to the NYSDEC.

Runoff from the project site will discharge to the Cayuga Creek, which is not included in the list of Section 303(d) water bodies included in Appendix D of GP-0-25-001.

Project construction activities will consist primarily of site grading, paving, building construction, and the installation of storm drainage, water supply, sanitary sewer, and public utility infrastructure necessary to support the proposed redevelopment project with an increase in impervious area. Construction phase pollutant sources anticipated at the site are disturbed (exposed) soil, vehicle fuels and lubricants, chemicals associated with building construction, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater.

1.2 Stormwater Pollution Controls

The stormwater pollution controls outlined herein have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Stormwater Management Design Manual, dated July 31, 2024 (Design Manual).
- New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016 (SSESC).
- Town of West Seneca Town Code (2025-09-08) - Chapter 102A Stormwater Management and Erosion and Sediment Control

Stormwater quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures, the proposed stormwater management practice(s), and other construction-phase pollution controls outlined herein.

The proposed stormwater management approach consisting of pipes, open drainage ways, and on-site stormwater management practices will adequately collect, treat, and convey the stormwater runoff.

Bioretentions and a water quality unit will be used to manage and treat stormwater runoff generated by the proposed redevelopment project with an increase in impervious area.

Pre- and post-development surface runoff rates have been evaluated for the 1-, 10-, and 100-year 24-hour storm events. Comparison of pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the project site will not be increased.

The pollutant loading analysis indicates stormwater quality will be enhanced through the implementation of the proposed stormwater management practices outlined herein.

The post-construction stormwater management practice(s) will be privately owned by Home Leasing. Deed restrictions will be in place, which require operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

2.0 SITE CHARACTERISTICS

2.1 State Environmental Quality Review

The construction activity is subject to State Environmental Quality Review (SEQR). The project is considered a Unlisted action. As such, SEQR coordination has been completed. Negative Declaration issued on 1/27/2025, amended on 2/9/2026. A copy of the SEQR documentation, in accordance with Part I.A.5. of GP-0-25-001, is provided in Appendix A, as Figure A-5 upon receipt.

2.2 Land Use and Topography

The project site is located within the R-50 zoning district. Multiple-family dwellings is a permitted use subject to a special use permit within this district. Special Use Permit was obtained on 2/9/2026.

The overall site is slightly sloping, with slopes ranging from 1 to 10 percent. Site elevations range from approximately 580 feet above mean sea level (MSL) to 600 feet MSL. The site generally slopes to the north and the west towards Cayuga Creek.

2.3 Soils and Groundwater

The US Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) was used to obtain surficial soil conditions for the study area, as follows:

Table 1: USDA Soil Data

Map Symbol & Description	Hydrologic Soil Group	Erosion Factor K	Depth to Water Table (feet)	Depth to Bedrock (feet)
Fu - Fluvaquents and Udifluvents, frequently flooded	A/D	0.17	0.50	>6.0
GaA - Galen very fine sandy loam, 0 to 3 percent slopes	A/D	0.37	1.75	>6.0
GaB - Galen very fine sandy loam, 3 to 8 percent slopes	A/D	0.37	1.75	>6.0
Te – Teel silt loam	B/D	0.37	1.75	>6.0

Upon review of the soil data presented in Table 1, the project site does not contain soils with a soil slope phase of D with a map unit name that inclusive of slopes greater than 25%, and does not contain soils with a soil slope phase of E or F.

The project site is composed of HSG A soils, HSG B soils, and HSG D soils, as shown in the table below. For the purposes of this report, HSG X/D soils were modeled as HSG D soils to reflect the undrained condition.

Table 2: Project Site HSG Data

HSG A	HSG B	HSG C	HSG D
0%	0%	0%	100%

The Soil Conservation Service defines the hydrologic soil groups as follows:

- Type A Soils: Soils having a high infiltration rate and low runoff potential when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a moderate rate of water transmission.
- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consisting mainly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately course textures. These soils have a moderate rate of water transmission.
- Type D Soils: Soils having a very low infiltration rate and high runoff potential when thoroughly wet. These soils consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very low rate of water transmission.

The soils map for the study area is presented in Appendix A, as Figure A-2.

2.4 Watershed Designation

The project site is not located in a restricted watershed identified in Appendix C of GP-0-25-001.

2.5 Receiving Water Bodies

The nearest natural classified water course into which runoff from the project site will discharge is Cayuga Creek. Cayuga Creek is classified by NYSDEC as a Class C water course, and is not included in the Section 303(d) list of impaired waters found in Appendix D of GP-0-25-001.

2.6 Aquifer Designation

The project site is not located over a US EPA designated Sole Source aquifer; nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

2.7 Wetlands

A search on the NYSDEC Environmental Resource Mapper on April 16, 2026, and a review of GIS data, determined that there are no known regulated wetlands located on or in the vicinity of the project site. A wetland delineation is scheduled for Spring 2026 to field verify if there are any wetland on site.

2.8 Flood Plains

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM), Town of West Seneca, New York, Community, the project site lies within Flood Zone X, areas determined to be outside 500-year floodplain The FEMA Flood Map has been provided in Appendix A, as Figure A-5.

2.9 Listed, Endangered, or Threatened Species

A search was performed on the NYSDEC Environmental Resource Mapper on April 16, 2026, and determined that the project site may contain threatened or endangered species, or critical habitat. An Environmental Resource Map has been provided in Appendix A, as Figure A-4.

2.10 Historic Places

A search on the New York State Cultural Resource Information System (CRIS) database, performed on April 16, 2026, revealed the construction activity is located within an archeologically sensitive area A printout of the historic places screening map is presented in Appendix A, as Figure A-3. As such, NYSOPRHP coordination has been completed and a Phase 1 Archeological Survey was conducted on June 22, 2023 by archeologist. A copy of the NYSOPRHP documentation, in accordance with Part I.A.4. of GP-0-25-001, is provided in Appendix A, as Figure A-3A upon receipt.

2.11 Rainfall Data

Rainfall data utilized in the modeling and analysis was obtained from the Cornell University online Extreme Precipitation in New York & New England website (http://precip.eas.cornell.edu/). A local IDF file was imported, and specific mass curves were generated, in HydroCAD to evaluate the pre- and post-development stormwater runoff characteristics. Rainfall data specific to the portion of Erie County under consideration, for various 24-hour storm events, is presented in the following Table:

Table 3: Rainfall Data

Storm Event Return Period	24-Hour Rainfall (inches)
1-year	1.82
10-year	3.14
100-year	5.22

2.12 Pre-development Watershed Conditions

The pre-development project site is covered predominantly by buildings, pavement, grass, and woods. Analysis of pre-development conditions considered existing drainage patterns, soil types, ground cover, and topography. The Pre-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-5.

The results of the computer modeling used to analyze the overall watershed under pre-development conditions are presented in Appendix D. A summary of the pre-development watershed runoff rates at each Design Point is presented in Table 10.

Subcatchment one is a 3.38± acre watershed consisting of grass and pavement. Runoff flows south overland via sheet and shallow concentrated flow toward a swale and catch basin at the southeast corner of the site. This subcatchment is tributary to Design Point (AP) 1.

Subcatchment two is a 7.74± acre watershed consisting of grass, pavement, and multiple buildings. Runoff flows west overland via sheet and shallow concentrated flow toward Cayuga Creek west of the site. This subcatchment is tributary to Design Point (AP) 1.

2.13 Post-development Watershed Conditions

The post-development project site is covered predominantly by buildings, pavement, sidewalks, grass, and woods. The analysis of post-development conditions considered existing drainage patterns, soil types, ground cover to remain, planned site development, site grading, and stormwater management facilities proposed as part of site improvements. The Post-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-6.

The results of the computer modeling used to analyze the overall watershed under post-development conditions are presented in Appendix D. A summary of the post-development watershed runoff rates at each Design Point is presented in Table 11.

There are numerous locations and methods for providing controls of off-site discharge of stormwater from the project site. Each has been designed to provide the above quantity controls by attenuating stormwater runoff and releasing runoff to off-site locations at a rate equal to or less than that which existed prior to development of the site. Each device is detailed on the accompanying plans. A Post-Development Watershed Delineation Map, with the tributary areas to each stormwater management practice proposed, has been provided in Appendix A, as Figure A-6.

2.14 Description of Design Points

The study area consists of the 11.2 acre project site and 5.7 acre area of disturbance. The overall watershed was broken down into smaller watersheds, or subcatchments, to allow for analysis of runoff conditions at several locations throughout the study area. Each of these locations was defined as a Design Point (DP) in order to compare the effects resulting from stormwater management facilities proposed as part of the project. Descriptions of each of the selected Design Points are provided below.

- Design Point 1: Off-site discharge to Cayuga Creek

3.0 STORMWATER MANAGEMENT PLANNING

Chapter 3 of the Design Manual outlines a six-step planning process for site planning and selection of stormwater management practices that must be implemented for both new development and redevelopment projects. This process is intended to develop a design that maintains pre-construction hydrologic conditions through the application of environmentally sound development principles, as well as treatment and control of runoff discharges from the site. The following sections outline the step-by-step process and how it has been applied to this project.

The goals of this Stormwater Management Plan are to analyze the peak rate of runoff under pre- and post-development conditions, to maintain the pre-development rate of runoff in order to minimize impacts to adjacent or downstream properties, and to minimize the impact to the quality of runoff exiting the site.

The Design Manual provides both water quality and water quantity objectives to be met by projects requiring a “Full SWPPP”. These objectives will be met by applying stormwater control practices to limit peak runoff rates and improve the quality of runoff leaving the developed site.

3.1 STEP 1 – Site Planning

During the Site Planning process, the project site is evaluated for implementation of the green infrastructure planning measures identified in Table 3.1 of the Design Manual, in order to preserve natural resources and reduce impervious cover. Appendix C provides a description of each green infrastructure planning measure, along with a project specific evaluation.

3.2 STEP 2 – Calculate Water Quality Treatment Volume (WQv)

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of receiving water bodies. Therefore, treatment of stormwater runoff is important since most runoff related water quality contaminants are transported from land, particularly the impervious surfaces, during the initial stages of storm events.

3.2.1 NYSDEC Requirements for Water Quality Volume

The Design Manual requires that water quality treatment be provided for the initial flush of runoff from every storm. The NYSDEC refers to the amount of runoff to be treated as the "Water Quality Volume" (WQv). Section 4.2 of the Design Manual defines the Water Quality Volume as follows:

$$WQv = \frac{[(P)(R_v)(A)]}{12}$$

Where: P = 90% Rainfall Event Number
R_v = 0.05 + 0.009 (I)
I = Impervious Cover (Percent)
A = Contributing Area in Acres

This definition ensures that, all other things being equal, the Water Quality Volume will increase along with the impervious cover percentage.

3.2.2 Methodology for Redevelopment Projects

Chapter 9 of the Design Manual outlines alternative WQv treatment objectives for redevelopment projects.

According to Section 9.2.1.B.IV, redevelopment activities can achieve the water quality treatment objective through a combination of impervious cover reduction, standard SMPs, and alternative SMPs that provide a weighted average of at least two of the above methods, calculated as shown below. In this case, 100% of any new increase in impervious area to a given design point must be treated by approved alternate SMPs, standard SMPs, or RR techniques.

$$\%ALT = [25-(\% IC_{RED} + \%SMP + \%RR)] \times 3$$

Where:
%ALT = Percent of redevelopment impervious area treated by alternative SMP(s)
$\%IC_{RED}$ = Percent reduction in existing disturbed impervious area
%SMP = Percent of redevelopment impervious area treated by standard SMP(s)
%RR = Percent of redevelopment impervious area treated by runoff reduction techniques(s)

This redevelopment project is proposing a combination of WQv treatment by standard practice(s) and alternative practice(s) as shown in the following tables:

Table 4: Required WQv Treatment by Alternative Practice

WQv Treatment by Alternative Practice		Impervious Cover Reduction (IC)		WQv Treatment by Standard Practice		Runoff Reduction	
%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)
38	2.13	0	0	34	1.96	0	0

Table 5: WQv Required Summary

P (inches)	A (ac)	I (ac)	Rv	WQv Required	
1.00	5.68	2.98	0.29	8,672 cf	0.20 AF

The Water Quality Volume equation has been applied to the drainage area tributary to each of the stormwater quality practices proposed for this project. The practices have been sized to accommodate the Water Quality Volume, as per the performance criteria presented in Chapter 6 and/or Chapter 9 of the Design Manual. Water quality volume calculations for each of the proposed practices are presented in Appendix C.

3.3 STEP 3 – Apply RR Techniques and Standard SMPs with RRv Capacity to Reduce Total WQv

Land use change and development in the watershed increases the volume of runoff. As such, reductions in the amount of runoff from new development, accomplished through the implementation of a stormwater management plan for the site, will play an important role in the success or failure of the watershed-wide stormwater management plan. Runoff reduction techniques can be applied to manage, reduce, and treat stormwater, while maintaining and restoring natural hydrology through infiltration, evapo-transpiration, and the capture and reuse of stormwater. Volume reduction techniques by themselves typically are not sufficient to provide adequate attenuation of stormwater runoff, but they can decrease the size of the peak runoff rate reduction facilities.

3.3.1 NYSDEC Requirements for Redevelopment

Section 9.2.1.B of the Design Manual indicates, "Although encouraged, meeting the RRv criteria is not required for the redevelopment activity portion of a project. The need to provide RRv shall be considered separately for each design point. For design points with a net increase in impervious area, RRv is required for the increase in impervious area only."

As such, bioretentions and a water quality unit have been applied to the project to meet the WQv objective for the redevelopment activity of the project. The increase in impervious cover will be treated as new development and both the WQv criteria and RRv criteria are met.

3.3.2 Application of Standard Stormwater Management Practices (SMPs) with RRv Capacity

The following Table demonstrates a summary of the standard SMP(s) with RRv capacity that have been incorporated into the stormwater management plan for this project. The standard SMP(s) with RRv capacity have been designed in accordance with Chapter 6 of the Design Manual. Refer to the contract drawings for practice dimensions, material specifications, and installation details. Practice specific calculations are presented in Appendix C.

Table 6: Summary of Standard SMPs with RRv Capacity being Applied

Standard SMP with RRv Capacity	Design Variant	Pretreatment Volume Required (% of WQv)	Pretreatment Volume Provided (CF)	RRv Capacity	WQv Required (CF)	WQv Reduced /RRv Provided (CF)	WQv Treated[1] (CF)	Total WQv Provided[2] (CF)
Filtration Bioretention	F-5	25	835	40%	8,672	1,337	2,001	3,338

Footnotes:
[1]*WQv Treated = WQV Required - RRv Provided*
[2]*Total WQv Provided = WQV Treated + RRv Provided*

3.3.3 RRv Performance Summary

A summary of the RRv provided is presented in the following table:

Table 7: RRv Summary

WQv Required (CF)	RRv Provided WQv Reduced (CF)	% RRv Provided/ WQv Reduced
8,672	1,337	>100%

As indicated in the above table, the RRv provided is greater than the RRv required for the project site. As such, the RRv criteria has been met and the designer can proceed to Step 6.

3.4 STEP 4 – Calculate the Minimum RRv Required

As indicated above, Section 9.2.1.B of the Design Manual indicates, "Although encouraged, meeting the RRv criteria is not required for the redevelopment activity portion of a project."

3.5 STEP 5 – Apply Standard SMPs to Address Remaining Water Quality Volume

If the entire Water Quality Volume is not treated through implementation of RR techniques and standard SMPs with RRv capacity, then the design must achieve the remaining WQv through the standard SMPs listed in Table 3.3 of the Design Manual or the Alternative Practices outlined in Section 9.4 of the Design Manual.

Table 8: Summary of WQv Provided

Step 2 WQv Required (CF)	Step 3 WQv Reduction by Standard SMPs w/ RRv Capacity (CF)[1]	Step 5 Reduced WQv to be Treated by Standard SMPs or Alternative Practices (CF)[2]
8,672	3,338	6,627
Footnotes: *[1]Step 3: WQv Reduction = RRv Provided + WQv Treated by Standard SMP with RRv Capacity* *[2]Step 5: Reduced WQv to be Treated = WQv Required – WQv Reduced*		

Based upon the results listed in the above Table, the entire WQv has not been treated by application of RR techniques and standard SMPs with RRv capacity. As such, the standard SMPs or the Alternative Practices (without RRv capacity) described in the following sections, have been incorporated into the stormwater management plan for this project, to meet the WQv objective. Practice-specific calculations are presented in Appendix C.

3.5.1 Underground Stormwater Detention System

Underground stormwater detention systems store and detain stormwater runoff in order to meet water quantity control requirements. Stormwater is stored in subsurface vaults and/or a system of large diameter interconnected storage pipes. Stored water is then released at rates designed to reduce peak run-off flows during post-development storms. Underground stormwater storage provides minimal stormwater quality benefits, but can be an effective component of a development's overall stormwater management plan.

3.5.2 Hydrodynamic Separators

Hydrodynamic separators accelerate the separation of floating and settling pollutants from stormwater through the use of a vortex. These pre-fabricated devices come in the form of an underground manhole or vault. The devices have no moving parts and are typically fabricated from concrete and marine grade aluminum.

During operation, stormwater runoff enters the unit tangentially to promote a gentle swirling motion in a treatment chamber. As stormwater circles within the chamber, settable solids fall into a sump and are retained. Buoyant debris, oil, and grease rise to the surface and are separated from the water as it flows under a baffle wall. Finally, treated water exits the treatment chamber through a flow control orifice located behind the baffle wall.

During low-flow conditions all runoff is diverted into the treatment chamber by a flow partition. At higher flow rates, a portion of the runoff spills over the flow partition and is diverted around the treatment chamber to prevent re-suspension and washout of previously trapped pollutants. Water that spills over the partition flows into a head equalization chamber above the treatment chamber outlet. As the head equalization chamber fills, the head differential driving flow through the treatment chamber collapses. The result is that flow rates in the treatment chamber remain relatively constant even as total flow rates increase substantially. This configuration further reduces the potential for re-suspension or washout.

According to Chapter 9 of the Design Manual, hydrodynamic separators of the type proposed for this project have been approved for use as a pretreatment system in new and redevelopment projects or as a primary treatment system on redevelopment projects.

According to Chapter 9 of the Design Manual, membrane filtration, of the type proposed for this project, has been approved for use as a primary treatment system on redevelopment projects.

The following Table summarizes both the Water Quality Volume requirements and the treatment volumes provided.

Table 9: Summary of Hydrodynamic Unit(s)

SWM Practice ID	NYSDEC Design Variant	Required WQv (CF)	Required WQv Flow Rate (CFS)	Approved Manufactured Treatment Flow Rate (MTFR) (CFS)	Product Name and Manufacturer
HYD-1	ALT	6,627	1.88	2.00	Contech Cascade CS4

3.6 STEP 6 - Apply Volume and Peak Rate Control

This report presents the pre-development and post-development features and conditions associated with the rate of surface water runoff within the study area. For both cases, the drainage patterns, drainage structures, soil types, and ground cover types are considered in this study.

3.6.1 NYSDEC Requirements for New Development

Chapter 4 of the Design Manual requires that projects meet three separate stormwater quantity criteria:

1. The Channel Protection (CPv) requirement is designed to protect stream channels from erosion. This is accomplished by providing 24 hours of extended detention for the 1-year, 24-hour storm event. The Manual defines the CPv detention time as the center of mass detention time through each stormwater management practice.

2. The Overbank Flood Control (Qp) requirement is designed to prevent an increase in the frequency and magnitude of flow events that exceed the bank-full capacity of a channel, and therefore must spill over into the floodplain. This is accomplished by providing detention storage to ensure that, at each Design Point, the post-development 10-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

3. The Extreme Flood Control (Qf) requirement is designed to prevent the increased risk of flood damage from large storm events, to maintain the boundaries of the pre-development 100-year floodplain, and to protect the physical integrity of stormwater management practices. This is accomplished by providing detention storage to ensure that, at each Design Point, the post-development 100-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

3.6.2 Methodology

In order to demonstrate that the NYSDEC detention requirements are being met, the Design Manual requires that a hydrologic and hydraulic analysis of the pre- and post-development conditions be performed using the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD, developed by HydroCAD Software Solutions LLC of Tamworth, New Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. HydroCAD uses the TR-20 algorithms and TR-55 methods to create and route runoff hydrographs.

HydroCAD has the capability of computing hydrographs (which represent discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. HydroCAD can also calculate the center of mass detention time for various hydraulic features. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

For this analysis, the watershed and drainage system was broken down into a network consisting of three types of components as described below:

1. Subcatchment: A relatively homogeneous area of land, which produces a volume and rate of runoff unique to that area.
2. Reach: Uniform streams, channels, or pipes that convey stormwater from one point to another.
3. Pond: Natural or man-made impoundment, which temporarily stores stormwater runoff and empties in a manner determined by its geometry and the hydraulic structure located at its outlets.

Subcatchments, reaches, and ponds are represented by hexagons, squares, and triangles, respectively, on the watershed routing diagrams provided with the computations included in Appendix D and Appendix E.

The analysis of hydrologic and hydraulic conditions and proposed stormwater management facilities, servicing the study area, was performed by dividing the tributary watershed into relatively homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps.

Proposed stormwater management practices were designed and evaluated in accordance with the Design Manual and local regulatory requirements. A local IDF file was imported, and specific mass curves were generated, in HydroCAD to evaluate the pre- and post-development stormwater runoff characteristics for various 24-hour storm events identified in the following Table.

Table 10: Design Events

Facility	24-hour Storm Event
Storm Sewer	10-year
Stormwater Management Practice(s)	1-year
	10-year
	100-year
Flood Conditions	100-year

3.6.3 Performance Summary

A comparison of the total required and provided CPv for the 1-year 24-hour storm event is shown in the following table:

Table 11: CPv Summary

Design Point (DP)	Required CPv (af)	Provided CPv (af)
1	0.20	0.36

A comparison of the pre- and post-development watershed conditions was performed for all Design Points and storm events evaluated herein. For all Design Points and design storms, this comparison demonstrates that the peak rate of runoff will not be increased. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties or receiving water courses.

The results of the computer modeling used to analyze the pre- and post-development watersheds are presented in Appendix D and Appendix E, respectively. The following Table summarizes the results of this analysis.

Table 12: Summary of Pre- and Post-Development Peak Discharge Rates

Pre- vs. Post-Development Discharge Rate (cfs)				
Design Point (DP)	10-year 24-hour storm event		100-year 24-hour storm event	
	Pre	Post	Pre	Post
1	16.3	13.9	36.8	31.7

3.7 Climate Change Consideration

This report presents the consideration for future physical risks due to climate change, in accordance with Part III.A.2 of the permit. Overall site planning, control measures and practices, conveyance systems and detention systems were evaluated against the seven (7) physical risks identified by NYSDEC due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR 490, and associated guidance. Appendix C provides a description of each consideration, specific to the project.

4.0 CONSTRUCTION SEQUENCE

This project has not received written approval from the Town of West Seneca allowing the disturbance of more than five acres of land at any one time. Therefore, if the Contractor's construction sequence requires the disturbance of more than five acres at any one time, written approval must be obtained from written approval from the Town of West Seneca prior to disturbing more than five acres at once.

The "Erosion and Sediment Control Plan" and the "Erosion and Sediment Control Plan Prior to Construction" in the accompanying drawings and waiver request identifies the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to begin is presented on the accompanying drawings, though each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner's/Operator's Engineer overseeing the implementation of the SWPPP.

The Contractor will be responsible for implementing the erosion and sediment control measures identified on the plans. The Contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the Contractor.

In accordance with Part III.B.c.iv. a phasing plan for the project and sequencing plans for all phases have been provided. The plans address clearing and grubbing, excavation and grading, utility and infrastructure installation, final stabilization, and any other construction activity at the site that will result in soil disturbance. Refer to the plans for further information on the project phasing and sequencing.

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

The SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-25-001 (effective January 29, 2025 through January 28, 2030)
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)

The SWPPP and accompanying plans outline the construction scheduling for implementing the erosion and sediment control measures. These documents include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures.

Temporary and permanent erosion and sediment control measures that shall be applied during construction generally include:

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges.
2. Preservation of existing vegetation to the greatest extent practical. Following the completion of construction activities in any portion of the site, permanent vegetation shall be established on all exposed soils.
3. Site preparation activities to minimize the area and duration of soil disruption.
4. Establishment of permanent traffic corridors to ensure that "routes of convenience" are avoided.

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access(es) will be installed, per accompanying plans, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access(es). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

The access(es) shall be maintained in a condition, which will control tracking of sediment onto public rights-of-way or streets. When necessary, additional aggregate will be placed atop the filter fabric to assure the minimum thickness is maintained. All sediment and/or soil spilled, dropped, or washed onto public rights-of-way must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

Water trucks shall be used as needed during construction to reduce dust generated on-site. Dust control must be provided by the Contractor(s) to a degree that is acceptable to the Owner, and in compliance with the applicable local and state dust control requirements.

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s). Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

For areas undergoing clearing, grading, and disturbance as part of construction activities, where work has temporarily ceased, temporary soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has temporarily ceased.

5.1.6 Manufactured Insert Inlet Protection

Install insert inlet protection beneath the grate of all catch basins, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace insert as necessary to ensure proper function.

5.1.7 Filter Fabric Drop Inlet Protection

Install filter fabric or silt fence with wooden stakes at the perimeter of existing or proposed catch basins located in lawn areas, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace fabric as necessary to ensure proper function.

5.1.8 Erosion Control Blanket

Erosion control blankets shall be installed in accordance with manufacturer's requirements on all slopes exceeding 3:1. Erosion control blankets provide temporary erosion protection, rapid vegetative establishment, and long-term erosion resistance to shear stresses generated by high runoff flow velocities associated with steep slopes.

5.1.9 Stone Check Dams

Stone check dams will be installed within drainage ditches to reduce the velocity of stormwater runoff, promote settling of sediment, and reduce sediment transport off-site.

Sediment accumulated behind the stone check dam will be removed as needed to maintain flow through the stone check dam and prevent large flows from carrying sediment over or around the dam. Stones shall be replaced as needed to maintain the design cross section of the structures.

5.1.10 Temporary Sediment Trap

Temporary sediment traps shall be constructed to intercept sediment-laden runoff, reduce the amount of sediment leaving the disturbed areas, and protect drainage ways, properties, and rights-of-way.

Accumulated sediment shall be removed from the trap when it reaches no greater than 50 percent of the design capacity. Sediment shall not be placed downstream from the embankment, adjacent to a stream, or floodplain.

Temporary sediment traps depicted on the accompanying plans have been designed to provide 3,600 CF of storage per acre of tributary watershed.

5.1.11 Temporary Diversion Swales

Temporary diversion swales shall be used to divert off-site runoff around the construction site and divert runoff from stabilized areas around disturbed areas.

5.1.12 Dewatering Operations

Dewatering will be used to intercept sediment-laden stormwater or pumped groundwater and allow it to settle out of the pumped discharge prior to being discharged from the site. Water from dewatering

operations shall be treated to eliminate the discharge of sediment and other pollutants. Water resulting from dewatering operations shall be directed to temporary sediment traps or dewatering devices. Temporary sediment traps and dewatering bags will be provided, installed, and maintained at downgradient locations to control sediment deposits to downstream surfaces.

5.1.13 Fiber Roll

Prior to the initiation of and during construction activities, fiber rolls (12" minimum diameter) will be established downgradient of all disturbed areas to reduce sheet flow on slopes. These rolls may extend into non-impact areas to provide adequate protection of adjacent lands. Spacing will conform to NYSDEC specification for straw bale dike.

Clearing and grubbing will be performed only as necessary for the installation of the fiber rolls. To facilitate effectiveness, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s) and maintenance will be performed as needed.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased.

Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

5.2.2 Rock Outlet Protection

Rock outlet protection shall be installed at the locations as indicated and detailed on the accompanying plans. The installation of rock outlet protection will reduce the velocity and energy of water, such that the flow will not erode downstream surfaces.

5.3 Implementation Schedule for Erosion and Sediment Control Measures

Proper implementation of the outlined erosion and sediment control measures is critical to minimizing soil erosion and controlling off-site sediment transport during construction, as well as controlling the quality and quantity of stormwater runoff from the developed site after construction. The following table outlines the implementation schedule for initial placement of these measures, and the duration for which they should remain in place.

Table 13: Implementation Schedule for Erosion and Sediment Control Measures

Erosion and Sediment Control Measure	Initial Placement	Duration to Remain In-Place
Stabilized Construction Access	Upon mobilizing to site	Until construction is complete
Dust Control	As needed	As needed
Temporary Soil Stockpile	Upon delivery of materials to the site or excavation of on-site materials for reuse	Until materials have been placed or removed from the site
Silt Fencing	Prior to upgradient soil disturbance	Until upgradient area has achieved permanent stabilization
Temporary Seeding	Apply to any disturbed soil that will remain exposed for more than 14 days	Apply additional seed as needed for temporary stabilization
Manufactured Insert Inlet Protection	*Existing structures:* prior to upgradient soil disturbance *New structures:* upon installation of structure/grate	Until upgradient area has achieved permanent stabilization
Erosion Control Blanket	Upon completion of slope grading operations	Prior to final grading, or kept in place permanently
Stone Check Dams	*Existing swales:* upon completion of swale reshaping *New swales:* upon completion of swale excavation	Permanent
Temporary Sediment Trap	As needed during grading operations	Until final grading of tributary area is complete
Temporary Diversion Swales	As needed to divert flow around work area	Until permanent drainage methods are established (i.e. closed storm sewer, open conveyance swales, etc.)
Dewatering Operations	As needed during excavation	Until excavation/backfilling is complete
Fiber Roll	Prior to upgradient soil disturbance	Until upgradient area has achieved permanent stabilization
Establishment of Permanent Vegetation	As soon as possible after completion of final grading	Permanent, apply additional seed as needed to achieve 80% minimum uniform coverage
Rock Outlet Protection	During installation of tributary culverts/pipes	Permanent

5.4 Other Pollutant Controls

Part I.C.1 of GP-0-25-001 prohibits discharges from construction material wastewater, pollutants used in vehicle and equipment operation and maintenance, vehicle and equipment washing and toxic or hazardous substances.

The following table identifies materials and/or chemicals commonly used and/or stored on construction sites and should be addressed in the site-specific spill prevention and response plan:

Table 14: Common Construction Pollutants

Material/Chemical	Physical Description	Stormwater Pollutants	Location*
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment / staging area
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment / staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment / staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging area
Construction materials			
Granular fill	Various colored solids	Sediment	Stockpile / fill areas
Subbase course	Gray/brown solid	Sediment, dust	Stockpile
Topsoil	Brown solid	Sediment	Stockpile
Mulch	Various colored solid	Sediment, debris	Staging area
Seed	Brown/yellow solid	Nutrients, debris	Staging area
HDPE Storm Pipe	Black solid		Staging area
SDR-35, SDR-21 PVC Pipe	Various colored solid		Staging area
Metals Frames and Grates	Gray solid		Staging area
Joint Sealant	Light gray viscous solid	Polyurethane	Staging area

*(Area where material/chemical is used on-site)

5.5 Construction Housekeeping Practices

During the construction phase, the Contractor(s) will implement the following measures:

5.5.1 Sediment Sweeping/Vacuuming

Any sediment that is tracked by construction vehicles or erosion onto adjacent public or private impervious surfaces must be swept or vacuumed, utilizing self-propelled and/or walk-behind equipment, and removed on a daily basis. Kick brooms and sweeper attachments are not an acceptable means of sweeping. Sweeping or vacuuming should not take place while tracked sediment is wet. If tracked sediment is compacted, the sediment must be scraped loose prior to sweeping or vacuuming.

5.5.2 Material Stockpiles

Material resulting from clearing and grubbing operations that will be stockpiled on-site, must be adequately protected with downgradient erosion and sediment controls.

5.5.3 Equipment Cleaning and Maintenance

The Contractor(s) will designate areas for equipment cleaning, maintenance, and repair. The Contractor(s) and subcontractor(s) will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.5.4 Detergents

The use of detergents for large-scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.)

5.5.5 Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed, for the pollutants identified in Section 5.3, for the site by the Contractor(s) that addresses the following:

1. Reducing chance of spills
2. Stopping the source of spills
3. Containing and cleaning up spills
4. Disposing of materials contaminated by spills
5. Training personnel responsible for spill prevention/response
6. Material handling procedures
7. Material storage requirements

The plan shall detail the steps required in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Safety Data Sheets (SDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.5.6 Concrete Washout Areas

A temporary concrete washout area shall be provided for every project where concrete will be poured or otherwise formed on-site and shall consist of an excavated or above-ground lined construction pit

where concrete trucks or equipment can be washed out after their loads have been discharged. Waste generated from concrete wash water that shall not be allowed to flow into drainage ways, inlets, receiving waters, highway right-of-way, or any location other than the designated concrete washout area(s). Proper signage shall be placed adjacent to the facility to designate the "Concrete Washout Area". Locate the facility a minimum of 100-feet from drainage swales, storm drain inlets, wetlands, streams, and other surface waters. Prevent surface water from entering the washout area.

The hardened residue from the concrete wash areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the washout area shall include removal of hardened material when 75% of the storage capacity is filled, and a minimum freeboard of 12 inches shall be maintained. The Contractor will be responsible for seeing that these procedures are followed. The project may require the use of multiple concrete washout areas based on the frequency of concrete pours.

5.5.7 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that prevents negative impacts of construction materials on stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

6.0 INSPECTIONS, MAINTENANCE, AND REPORTING

6.1 Inspection and Maintenance Requirements

6.1.1 Pre-Construction Inspection and Certification

Prior to the commencement of construction, the Qualified Inspector/Qualified Professional shall conduct an assessment of the site and certify that the appropriate erosion and sediment control measures have been adequately installed and implemented. The Contractor shall contact the Qualified Inspector/Qualified Professional once the erosion and sediment control measures have been installed.

6.1.2 Construction Phase Inspections and Maintenance

A Qualified Inspector/Qualified Professional, as defined in Appendix A of the General Permit GP-0-25-001, shall conduct regular site inspections between the time this SWPPP is implemented and final site stabilization. Site inspections shall occur at an interval of at least once every seven (7) calendar days.

The purpose of site inspections is to assess performance of pollutant controls. Based on these inspections, the Qualified Inspector/Qualified Professional will decide whether it is necessary to modify this SWPPP, add or relocate sediment barriers, or whatever else may be needed in order to prevent pollutants from leaving the site via stormwater runoff. The general contractor has the duty to cause pollutant control measures to be repaired, modified, maintained, supplemented, or whatever else is necessary in order to achieve effective pollutant control.

Examples of particular items to evaluate during site inspections are listed below. This list is not intended to be comprehensive. During each inspection the inspector must evaluate overall pollutant

control system performance as well as particular details of individual system components. Additional factors should be considered as appropriate to the circumstances.

1. Locations where vehicles enter and exit the site must be inspected for evidence of off-site sediment tracking. A stabilized construction access will be constructed where vehicles enter and exit. This access will be maintained or supplemented as necessary to prevent sediment from leaving the site on vehicles.
2. Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned in order to provide additional capacity. All material from behind sediment barriers will be stockpiled on the up slope side. Additional sediment barriers must be constructed as needed.
3. Inspections will evaluate disturbed areas and areas used for storing materials that are exposed to rainfall for evidence of, or the potential for, pollutants entering the drainage system. If necessary, the materials must be covered or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas.
4. Grassed areas will be inspected to confirm that a healthy stand of grass is maintained. The site has achieved final stabilization once all areas are covered with building foundation or pavement, or have a stand of grass with at least 80 percent density. The density of 80 percent or greater must be maintained to be considered as stabilized. Areas must be watered, fertilized, and reseeded as needed to achieve this goal.
5. All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

The inspection reports must be completed entirely and additional remarks should be included if needed to fully describe a situation. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance.

Within one (1) business day of the completion of an inspection, the *Qualified Inspector/Qualified Professional* shall notify the Owner/Operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

In addition to the inspections performed by the *Qualified Inspector/Qualified Professional*, the Contractor shall perform routine inspections that include a visual check of all erosion and sediment control measures. All inspections and maintenance shall be performed in accordance with the inspection and maintenance schedule provided on the accompanying plans. Sediment removed from erosion and sediment control measures will be exported from the site, stockpiled for later use, or used immediately for general non-structural fill.

It is the responsibility of the general contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more structural controls than are shown on the accompanying plans. (For example, localized concentrations of runoff could make it necessary to install additional sediment barriers, sediment traps, etc.) Assessing the need for additional controls and implementing them or adjusting existing controls will be a continuing aspect of this SWPPP until the site achieves final stabilization.

6.1.3 Temporary Suspension of Construction Activities

For construction sites where soil disturbance activities have been temporarily suspended (e.g. Winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the frequency of Qualified Inspector/Qualified Professional inspections can be reduced to once every 30 calendar days. Prior to reducing the frequency of inspections, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the Town of West Seneca in writing.

6.1.4 Partial Project Completion

For construction sites where soil disturbance activities have been shut down with partial project completion, all areas disturbed as of the project shutdown date have achieved final stabilization, and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational, the inspections by the Qualified Inspector/Qualified Professional can stop. Prior to the shutdown, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the Town of West Seneca in writing.

If soil disturbance activities have not resumed within two years from the date of shutdown, a Notice of Termination (NOT) shall be properly completed and submitted to the NYSDEC.

6.1.5 Post-Construction Inspections and Maintenance

Inspections and maintenance of final stabilization measures and post-construction stormwater management practices shall be performed in accordance with Appendix G, once all disturbed areas are stabilized and all stormwater management systems are in place and operable.

6.2 Reporting Requirements

6.2.1 Inspection Reports

Pursuant to Part IV.C of GP-0-25-001, inspection reports shall be prepared for the duration of construction, as outlined herein, and shall be signed by the *Qualified Inspector* or *Qualified Professional*. A sample inspection form is provided in Appendix F.

At a minimum, each inspection report shall record the following information:

1. Permit identification number; and
2. Date and time of inspection; and
3. Name and title of person(s) performing inspection; and
4. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and
5. A description of the condition of the runoff at all points of discharge from the construction site. This must include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and
6. A description of the condition of all surface waters of the State located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This must include identification of any discharges of sediment to the surface waters of the State; and

7. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and
8. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and
9. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and
10. Estimates, in square feet or acres, of the following areas:
    a. Total area with active soil disturbance (not requiring either temporary stabilization or final stabilization); and
    b. Total area with inactive soil disturbance (requiring either temporary stabilization or final stabilization); and
    c. Total area that has achieved temporary stabilization; and
    d. Total area that has achieved final stabilization; and
11. Current stage of construction of all SMPs and identification of all construction activity on site that is not in conformance with the SWPPP and technical standards; and
12. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and
13. Identification and status of all corrective actions that were required by previous inspection; and
14. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified inspector must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

6.2.2 Site Log Book

Pursuant to Part I.E.3 of GP-0-25-001, the Owner/Operator shall retain a copy of the General Permit, NOI, NOI Acknowledgment Letter, MS4 SWPPP Acceptance Form (if applicable), inspection reports, contractor and subcontractor certification forms, and all documentation necessary to demonstrate eligibility under the permit, at the construction site from commencement of construction activity until the date that all areas of disturbance have achieved final stabilization and the Notice of Termination has been submitted to the NYSDEC.

The Site Log Book shall be maintained on-site in a secure location (i.e. job trailer, on-site construction office, or mailbox with lock) and must be accessible during normal business hours to an individual performing a compliance inspection.

6.2.3 Post Construction Records and Archiving

Following construction, the Owner/Operator shall retain copies of the SWPPP, the complete construction Site Log Book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least five years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, at its sole discretion, at any time upon written notification.

Records shall be maintained of all post construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix G.

7.0 SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved with compliance with the NYSDEC SPDES General Permit GP-0-25-001 conditions is outlined in the subsequent sections. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-25-001 presented in Appendix J.

7.1 Owner's/Operator's Responsibilities

1. Ensure that control measures are selected, designed, installed, implemented and maintained to minimize the discharge of pollutants and prevent a violation of the water quality standards, meeting the non-numeric effluent limitations in Part II.B.1.(a)-(e) of the SPDES General Permit and in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

2. Ensure that practices are selected, designed, installed, and maintained to meet the performance criteria in the Design Manual. Practices must be designed to meet the applicable sizing criteria in Part II.C.2.a., b., c. or d. of GP-0-25-001.

3. Retain the services of a "Qualified Inspector" or "Qualified Professional" as defined under GP-0-25-001, to provide the services outlined in Section 7.5 "Qualified Inspector's/Qualified Professional's Responsibilities."

4. Retain the services of a "Qualified Professional," as defined under GP-0-25-001, to provide the services outlined in Section 2.3 "Owner's/Operator's Engineers Responsibilities."

5. Have an authorized corporate officer sign the Owner/Operator Certification Form to accompany the eNOI. A copy of the completed NOI is included in Appendix B.

6. Submit the electronic version of the NOI (eNOI) along with the MS4 SWPPP acceptance form using the NYSDEC's website (http://www.dec.ny.gov/chemical/43133.html).

7. Pay the required initial and annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The initial fee is calculated as $110.00 per acre disturbed plus $675.00 per acre of net increase in impervious cover, and the annual fee is $110.00.

8. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion control practices included in the SWPPP and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the SWPPP. Each of the contractors and subcontractors must identify at least one person from their company to be the trained contractor that will be responsible for implementation of the SWPPP. Ensure that at least one trained contractor is on site daily when soil disturbance activities are being performed.

9. Schedule a pre-construction meeting which shall include the Town of West Seneca representative, Owner's/Operator's Engineer, Qualified Inspector, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

10. Retain the services of an independent certified materials testing and inspection firm operating under the direction of a licensed Professional Engineer to perform regular tests, inspections, and certifications of the construction materials used in the construction of all post-construction stormwater management practices.

11. Retain the services of a NYS licensed land surveyor to perform an as-built topographic survey of the completed post-construction stormwater management facilities.

12. Require the Contractor to fully implement the SWPPP prepared for the site by the Owner/Operator's Engineer to ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the NYSDEC.

13. The Owner/Operator is authorized to commence construction activity as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

14. Within five (5) business days of receipt of the LOA, send an electronic copy of the LOA to the MS4 operator(s) with review authority.

15. Forward a copy of the LOA received from DEC to the Owner's/Operator's Engineer for project records, and to the Contractor for display at the construction site.

16. As of the date the LOA is received, the Owner/Operator must make the eNOI, SWPPP and LOA available for review and copying in accordance with the requirements in Part VII.H. of GP-0-25-001. When applicable, as of the date an updated LOA is received, the Owner/Operator must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

17. The Owner/Operator must ensure compliance with all requirements of GP-0-25-001 and that the provisions of the SWPPP, including any changes made to the SWPPP in accordance with Part III.A.5., are properly implemented and maintained from the commencement of construction activity until all area of disturbance have achieved final stabilization; and the Owner/Operator's coverage under the permit is terminated in accordance with Part V.A.5.a.

18. As of the date of the commencement of construction activities until Part I.E.2.a. and b. have been met, the Owner/Operator must maintain at the construction site, a copy of all documentation necessary to demonstrate eligibility with GP-0-25-001, a copy of GP-0-25-001, the SWPPP, the signed SWPPP Preparer Certification Form, the signed MS4 SWPPP Acceptance Form, signed Owner/Operator Certification Form, eNOI, and LOA, and LOA transmittal to the MS4 Operator in accordance with Part I.D.3.c.

19. The Owner/Operator must maintain at the construction site, until Part I.E.2.a and b. have been met, as of the date the documents become final or are received, a copy of the responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7, and inspection reports in accordance with Part IV.C.4. and 6.

20. The Owner/Operator must maintain the documents in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the Owner/Operator must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

21. Upon finding a significant non-compliance with the practices described in the SWPPP or violation of GP-0-25-001, NYSDEC may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the Owner/Operator. Forward a copy of any stop work order received immediately to the Owner's/Operator's Engineer and to the Contractor.

22. If any human remains or archaeological remains are encountered during excavation, the Owner/Operator must immediately cease, or cause to cease, all construction activity in the area of the remains and notify the appropriate Regional Water Engineer (RWE). Construction activity shall not resume until written permission to do so has been received from the RWE.

23. To be authorized to implement modifications to the information previously submitted in the eNOI, the Owner/Operator must notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI, update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D., and receive an updated LOA.

24. The eNOI, SWPPP, LOA, updated LOAs, and inspection reports required by GP-0-25-001 are public documents that the Owner/Operator must make available for review and copying by any person within five (5) business days of the Owner/Operator receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

25. The Owner/Operator must terminate coverage when the project reaches total project completion, has a planned shutdown with partial project completion, is changing Owner/Operator or has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

26. Have a qualified inspector perform a final site inspection prior to submitting the eNOT.

27. Have the MS4 sign the MS4 Acceptance statement on the eNOT in accordance with the requirements in Part VII.J.

28. Prior to submitting a Notice of Termination, ensure for SMP(s) that are privately owned, the Owner/Operator has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the Owner/Operator's deed of record.

29. Submit a complete Notice of Termination form electronically using the NYSDEC eNOT. Coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

30. Request and receive all SWPPP records from the Owner's/Operator's Engineer and archive those records, along with the LOT, for a period of at least five (5) years from the date that NYSDEC accepts a complete NOT submitted.

31. Implement the Post-Construction Inspections and Maintenance procedures outlined in Appendix G.

32. The Owner/Operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the Owner/Operator shall amend the SWPPP, including construction drawings:

    a) Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the project site;

    b) Whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and

    c) To address issues or deficiencies identified during an inspection by the "Qualified Inspector," the Department, or other Regulatory Authority.

    d) To document the final construction conditions.

33. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department, in conformance with Part I.G.. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

7.2 Owner's/Operator's Engineer's Responsibilities

1. Prepare the SWPPP using good engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.

2. Prepare the electronic Notice of Intent (eNOI) (see Appendix B) and sign the "SWPPP Preparer Certification Form." Forward the Owner/Operator Certification Form to the Owner/Operator for signature.

3. Provide copies of the SWPPP to the Town of West Seneca once all signatures and attachments are complete.

4. Enter Contractor's information in Section 7.5 "SWPPP Participants" once a Contractor is selected by the Owner/Operator.

5. Participate in a pre-construction meeting which shall include the Town of West Seneca representative, Owner/Operator, Qualified Inspector, Contractor, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. Update the SWPPP each time there is a significant modification to the pollution prevention measures or a change of the principal Contractor working on the project who may disturb site soil.

7.3 Contractor's Responsibilities

1. Sign the SWPPP Contractor's Certification Form contained within Appendix B and forward to the Owner's/Operator's Engineer for inclusion in the Site Log Book.

2. Identify at least one Trained Contractor that will be responsible for implementation of this SWPPP. Ensure that at least one Trained Contractor is on site on a daily basis when soil disturbance activities are being performed. The Trained Contractor shall inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating conditions at all times. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

3. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with construction activities that will result in soil disturbance to identify at least one Trained Contractor that will be on site on a daily basis when soil disturbance activities are being performed; and to sign a copy of the Subcontractor's Certification Form contained within Appendix B, then forward to the Owner's/Operator's Engineer for inclusion into the Site Log Book. This information must be retained as part of the Site Log Book.

4. Maintain a Spill Prevention and Response Plan in accordance with requirements outlined in Section 5 of this SWPPP. This plan shall be provided to the Owner's/Operator's Engineer for inclusion in the Site Log Book, prior to mobilization on-site.

5. Participate in a pre-construction meeting which shall include the Town of West Seneca representative, Owner/Operator, Owner's/Operator's Engineer, Qualified Inspector, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. If Contractor plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if Contractor plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site, Contractor shall submit appropriate documentation to the Owner's/Operator's Engineer so that the SWPPP can be modified accordingly.

7. Implement site stabilization, erosion and sediment control measures, and other requirements of the SWPPP.

8. In accordance with the requirements in the most current version of the NYS Standards and Specifications for Erosion and Sediment Control, conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare and retain written documentation of inspections as well as of

all repairs/maintenance activities performed. This information must be retained as part of the Site Log Book.

9. Begin implementing corrective actions within one (1) business day of receipt of notification by the Qualified Inspector/Qualified Professional of any corrective actions. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

10. Maintain a record of the date(s) and location(s) that soil restoration is performed in accordance with the accompanying plans and NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," dated April 2008. A copy of this publication is provided in Appendix H. The record that is to be maintained shall be a copy of the overall site grading plan delineating the area(s) and date(s) that the soil was restored.

11. Upon completion of all construction at the site, the contractor responsible for overall SWPPP Compliance shall sign the certification on their Contractor Certification Form indicating that: a.) all temporary erosion and sediment control measures have been removed from the site, b.) the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," and c.) all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents.

7.4 Qualified Inspector's/Qualified Professional's Responsibilities

1. Participate in a pre-construction meeting with the Town of West Seneca representative, Owner/Operator, Owner/Operator's Engineer, Contractor, and their subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

2. Conduct an initial assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment control measures described within this SWPPP have been adequately installed and implemented to ensure overall preparedness of the site.

3. Provide on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Owner/Operator and general contractor within one business day of the completion of the inspection, with any deficiencies identified. A sample inspection form is provided in Appendix F.

4. Prepare an inspection report subsequent to each and every inspection that shall include/address the items listed in Part IV.C.4 of GP-0-25-001. Sign all inspection reports and maintain on site with the SWPPP.

5. Notify the owner/operator and appropriate contractor or subcontractor of any corrective actions that need to be taken.

6. Prepare a construction Site Log Book to be used as a record of all inspection reports generated throughout the duration of construction. Ensure that the construction Site Log Book is maintained and kept up-to-date throughout the duration of construction.

7. Review the Contractor's SWPPP records on a periodic basis to ensure compliance with the requirements for daily reports, soil restoration, inspections, and maintenance logs.

8. Based on the as-built survey and material testing certifications performed by others, the Qualified Professional shall perform evaluations of the completed stormwater management practices to determine whether they were constructed in accordance with this SWPPP.

9. The Qualified Professional shall conduct a final site assessment and prepare a certification letter to the Owner/Operator indicating that, upon review of the material testing and inspection reports prepared by the firm retained by the Owner/Operator, review of the completed topographic survey, and evaluation of the completed stormwater management facilities, the stormwater management facilities have been constructed substantially in accordance with the contract documents and should function as designed.

10. Prepare the Notice of Termination (NOT). The Qualified Professional shall sign the NOT Certifications VI (Final Stabilization) and VII (Post-construction Stormwater Management Practices) and forward the NOT to the Owner/Operator for signature on Certification VIII (Owner/Operator Certification).

11. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

12. Transfer the SWPPP documents, along with all NOI's, LOA, permit certificates, NOT's, LOT, construction Site Log Book, and written records required by the General Permit to the Owner/Operator for archiving.

7.5 SWPPP Participants

1. Owner's/Operator's Engineer [3]: Kristopher Winkler, PE
   LaBella Associates, DPC
   300 Pearl Street, Suite 130
   Buffalo, NY 14202
   Phone: (716) 483-3153

2. Owner/Operator [4]: Home Leasing
   75 South Clinton Avenue, Suite 700,
   Rochester, NY 14604
   Phone: 585-262-6210

3. Contractor[5,6]:
   Name and Title: _____
   Company Name: _____
   Mailing Address: _____
   _____
   Phone: _____
   Fax: _____

[3] *Refer to Appendix B for the SWPPP Preparer Certification Form.*
[4] *Refer to Appendix B for the Owner/Operator Certification Form.*
[5] *Refer to Appendix B for Contractor and Subcontractor Certification Form.*
[6] *Contractor's information to be entered once the Contractor has been selected.*

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APPENDIX A:
FIGURES

A-1: Site Location Map
A-2: Soils Map
A-3: Historic Places Screening Map
A-4: Environmental Resource Map
A-5: Environmental Review Documentation
A-6: FEMA Firm Map
A-7: Pre-Development Watershed Delineation Map
A-8: Post-Development Watershed Delineation Map

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **SITE LOCATION MAP**

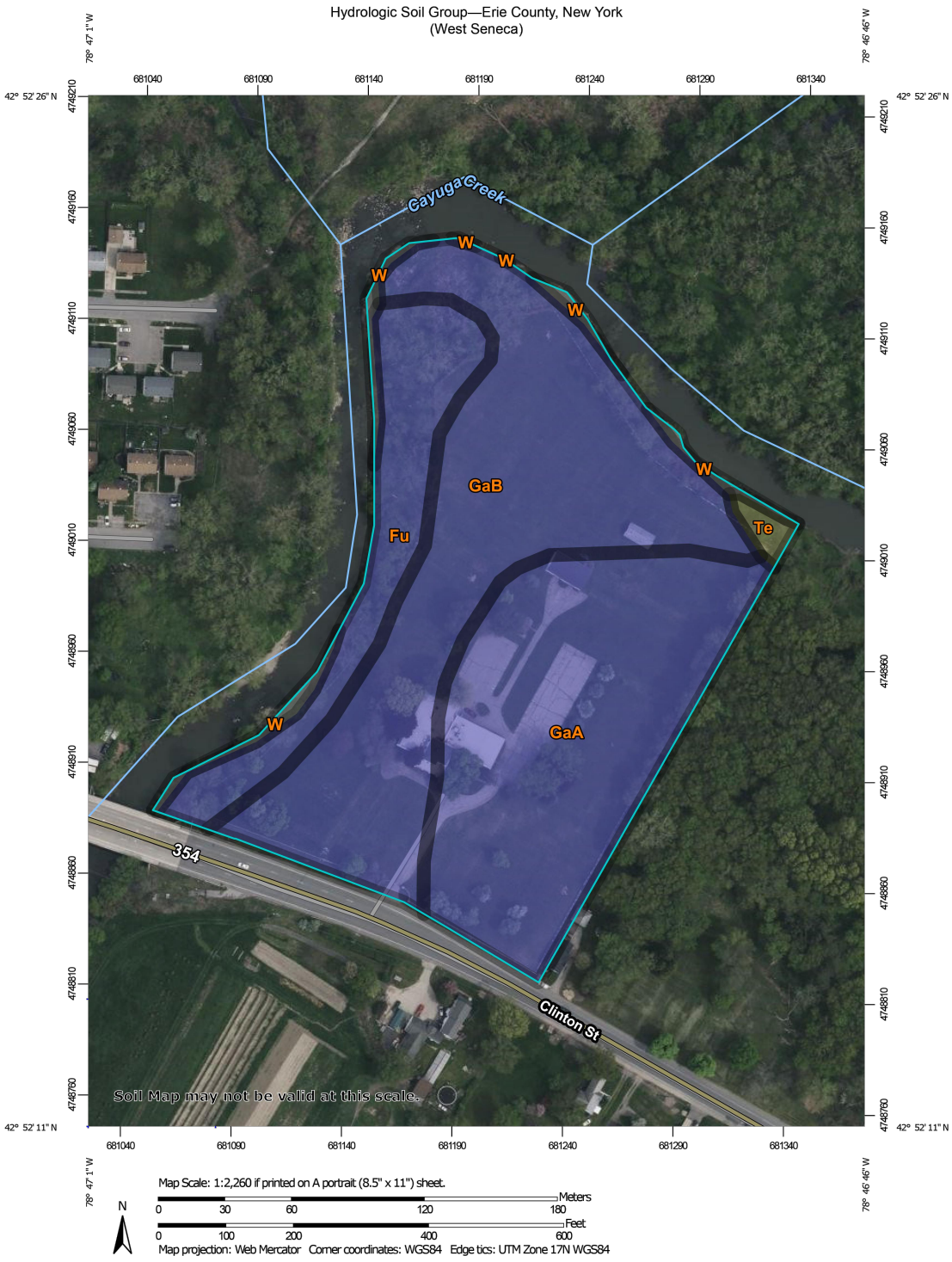
DRAWN BY:	DATE:	PROJECT NO.:
--	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-1**

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Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/13/2026
Page 1 of 4

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SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME:
SOILS MAP

DRAWN BY:	DATE:	PROJECT NO.:
	04/20/2026	2241067

PROJECT NAME:
WEST SENECA APARTMENTS
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER:
A-2a

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 25, Sep 4, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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DRAWING NAME: **SOILS LEGEND**

DRAWN BY: --

DATE: 04/20/2026

PROJECT NO.: 2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-2b**

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Fu	Fluvaquents and Udifluvents, frequently flooded	A/D	1.7	14.7%
GaA	Galen very fine sandy loam, 0 to 3 percent slopes	A/D	4.4	37.9%
GaB	Galen very fine sandy loam, 3 to 8 percent slopes	A/D	5.2	44.5%
Te	Teel silt loam	B/D	0.1	1.1%
W	Water		0.2	1.8%
Totals for Area of Interest			**11.7**	**100.0%**

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DRAWING NAME: SOILS TABLE

DRAWN BY: -- DATE: 04/20/2026 PROJECT NO.: 2241067

PROJECT NAME: WEST SENECA APARTMENTS
2544 CLINTON ST, WEST SENECA, NY 14224

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Consultation Projects (View)

Survey Archaeology Areas (View)

Survey Building Areas (View)

LPC Historic Districts

Archeologically Sensitive Areas

National Register Building Sites (View)

USN Building Districts (View)

LPC Landmarks

USN Building Points (View)

- Eligible
- Listed
- Not Eligible
- Not Eligible - Demolished
- Undetermined

Cemeteries

Missing or invalid reference

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DRAWING NAME: **HISTORIC PLACES SCREENING MAP**

DRAWN BY:	DATE:	PROJECT NO.:
--	04/20/2026	2241067

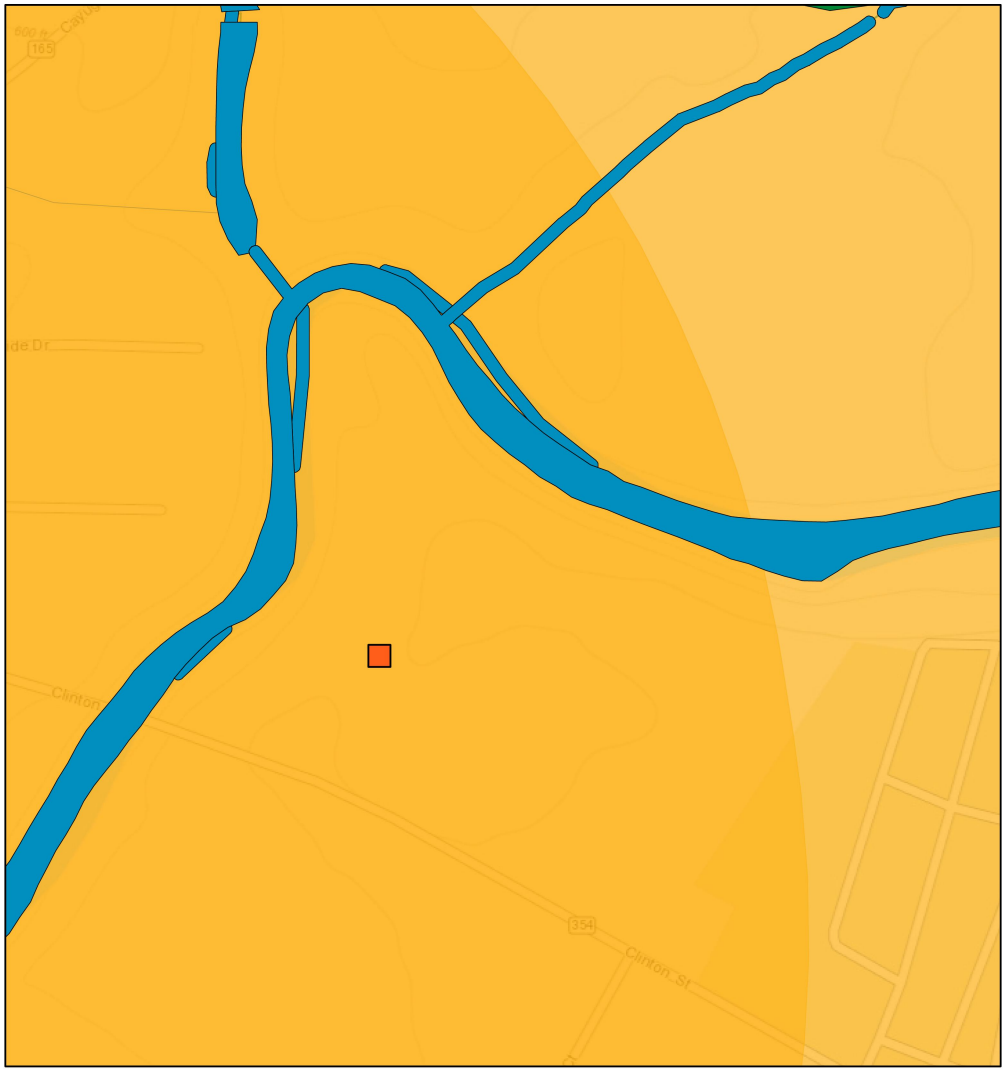
PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-3**

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Environmental Resource Mapper



April 16, 2026

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes

Waterbody Inventory/Priority Waterbodies List
- Lakes and Reservoirs
- Estuaries
- Rivers and Streams
- Shorelines

- State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals

National Wetlands Inventory
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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DRAWING NAME: **ENVIRONMENTAL RESOURCE MAP**

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--	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

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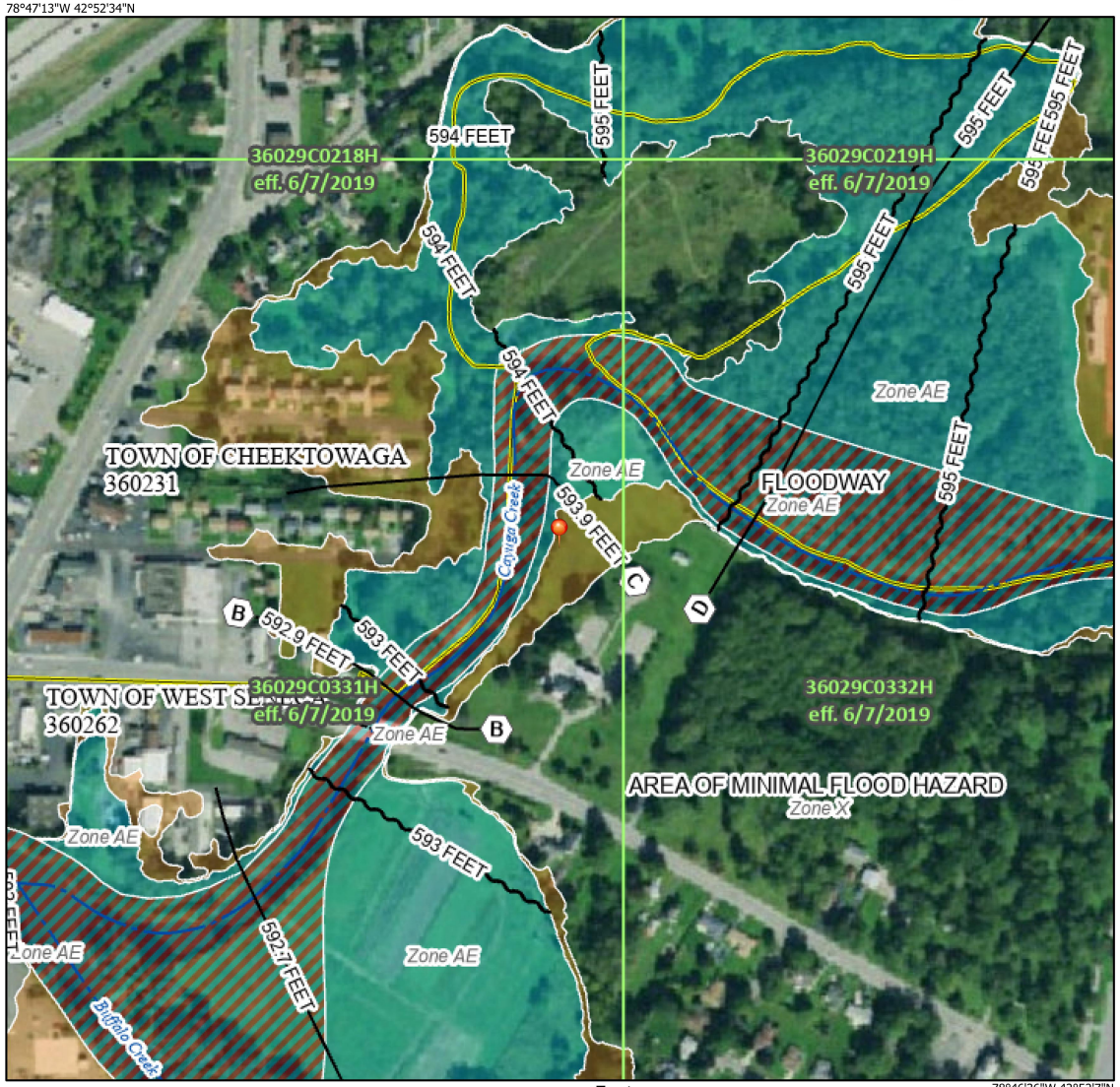
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National Flood Hazard Layer FIRMette

FEMA

78°47'13"W 42°52'34"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

78°46'36"W 42°52'7"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- OTHER AREAS
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- GENERAL STRUCTURES
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES
  - 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/6/2026 at 2:34 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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It is a violation of New York Education Law Article 145 Sec.7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION			
DRAWING NAME: **FEMA FIRM MAP**	DRAWN BY: --	DATE: 04/20/2026	PROJECT NO.: 2241067
PROJECT NAME: **WEST SENECA APARTMENTS** 2544 CLINTON ST, WEST SENECA, NY 14224	DRAWING NUMBER: **A-5**		

\\cash.lab\u\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\05_Design\Civil\LD-LA\Stormwater\Parts\Appendix A_FIGURES.dwg
4/20/2026 10:29:50 AM

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ROLL CALL: Present Supervisor Dickson
Councilmember Breidenstein
Councilmember Kims
Councilmember Piekarec
Councilmember Robertson

Absent None

Supervisor Dickson read the Fire Prevention Code instructing the public where to exit in case of a fire, or an emergency was stated.

APPROVAL OF AGENDA

1. Town Clerk re Approval of Agenda as submitted

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to approve the agenda with the additional item from the Director of Senior Services.

Ayes: All Noes: None Motion Carried

MINUTES TO BE APPROVED

1. Town Clerk Newton re Reorganizational Meeting Minutes from January 13, 2025

Motion by Supervisor Dickson, seconded by Councilmember Robertson, to approve the Reorganizational Meeting Minutes from January 13, 2025.

Ayes: All Noes: None Motion Carried

2. Town Clerk re Meeting Minutes 2025-01 of January 13, 2025

Motion by Supervisor Dickson, seconded by Councilmember Kims, to approve Meeting Minutes 2025-01 of January 13, 2025.

Ayes: All Noes: None Motion Carried

PUBLIC COMMENTS

Courtney Fallon, Treehaven Road, referred to Communications Item No. 10, Summer employee bonus:

- ✓ Requested the Town Board not to approve the item and in her opinion the bonus should be higher for water safety instructors
- ✓ Recommended terms to better accommodate pool staff, specifically college students
- ✓ Qualification 4.d in her opinion does not accommodate employees' scheduling challenges, for example, summer school

Mary Jane Held, 1442 Orchard Park Road, referred to the proposed project at 1425 Orchard Park Road:

- ✓ Is opposed to the project and suggested a dog park instead – Supervisor Dickson stated the town is reviewing adding a dog park and NYS is planning to add sidewalks along Orchard Park Road.
- ✓ Is concerned about additional traffic

TABLED ITEM

1. Code Enforcement re Request for special use permit – 1850 Union Road

The item remained tabled.

OLD BUSINESS

1. Code Enforcement re Rezone & Special Use Permit – 1425 Orchard Park Road

Code Enforcement Officer Schieber stated the following information has been received:

- ✓ Fully coordinated SEQR
- ✓ SHPO clearance regarding a full investigation of the archeologically sensitive area near cemetery
- ✓ NYSDOT have no objections to the traffic generated by the project

Town Engineer Foote stated the lining of the trunk sewers is reducing overflow occurrences.

Councilmember Breidenstein questioned Mr. Foote on the completion date of the Phase 8 project. Mr. Foote stated he anticipates the project will be completed this summer noting the lining will be completed this spring.

Councilmember Piekarec stated he is in favor of the project and noted he does not agree with the Town Board having tabled the project last year.

Councilmember Kims stated in her opinion it was prudent of the town to address the downstream sewer problems before approving the project.

Motion by Supervisor Dickson, seconded by Councilmember Breidenstein, to approve the request for rezoning and special use permit for property located at 1425 Orchard Park Road, changing its classification from C- 1 and R-75 to C-1(S) for construction of a multi-unit residential development.

On the question, Councilmember Breidenstein recognized the Engineering Departments efforts to clear the sewer lines and acknowledged the concerns of residents whose basements have flooded on a routine basis. Furthermore, Councilmember Breidenstein stated that sometimes government takes time, however we have a responsibility to the residents and developers to get it right.

Supervisor Dickson further advised there is a playground for children at the school and would support a town shared playground for the neighborhood.

Ayes: All Noes: None Motion Carried

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to adopt the following resolution:

WHEREAS, the Town Board of the Town of West Seneca, as lead agency acting pursuant to the State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law, has reviewed Part I of the Short Environmental Assessment Form ("EAF") prepared by the applicant for property located at 1425 Orchard Park Road ("Subject Property"), for construction of a new 30 unit multi-family residential development and associated site work and parking (the "Project"), and reviewed the draft completed Part II and Part III of the EAF analyzing the potential for the Project to result in any significant adverse environmental impacts and has otherwise taken a hard look at the identified potential environmental impacts utilizing the criteria specified in 6 NYCRR 617.7(c); and

WHEREAS, the Erie County Division of Planning, after carefully and fully reviewing a description of the proposed project, along with the application and other documents as submitted to the Town of West Seneca, replied in writing that the project was to be of local concern; and

WHEREAS, the Town Board held a public hearing which was properly noticed to the public wherein the project was discussed; and

WHEREAS, the Town Board herein determines that it shall act as lead agency for such purposes and there has been no opposition thereto by any other interested agency; and

WHEREAS, the Town Board, carefully and fully reviewed the application including the following documents submitted by the applicant and other interested entities: Response from DEC, SHPO, NYSDOT, Army Corp of Engineers, and the reports of Powers Archaeology, LLC; and

WHEREAS, the Town Board, upon taking an independent hard look and reasoned evaluation of all of the above-referenced information, comments and written documentation with regard to the project;

WHEREAS, upon review of Parts I, II, and III of the EAF and documentation and plans submitted by the applicant in connection with the review of the Project, the Town Board has not identified any potentially significant adverse environmental impacts associated with the proposed use of the Subject Property, has determined that this is an unlisted action and preparation of a Full Environmental Impact Statement is not necessary and that the issuance of a Negative Declaration is therefore appropriate; now, therefore, be it

RESOLVED that pursuant to 6 NYCRR 617.7(a) the Town Board hereby accepts its designation as lead agency and does hereby adopt a Negative Declaration with respect to the Project based on its determination that the Project will not result in any potentially significant adverse environmental impacts.

Ayes: All Noes: None Motion Carried

2. Code Enforcement re Rezone & Special Use Permit – 2544 Clinton Street

Mr. Schieber stated the applicant has provided the following:

- ✓ Adjusted conceptual plan for the addition of parking spaces
- ✓ Information and schematics for the existing mansion building to temporarily house residents in the event of emergencies
- ✓ Cover letter

Town Attorney Trapp stated he sent letters to the Seneca Nation and received no response which can be interpreted as agreement with SHPO. The West Seneca Central School District indicated that they have sufficient capacity for the program. The SEQR documents are in front of the Town Board and a full EAF for the site was completed.

Supervisor Dickson stated he received a letter from the West Seneca Superintendent indicating her full support of the project.

Councilmember Breidenstein addressed the concerns he expressed about the project:

- ✓ Lack of a response from Seneca Nation – Councilmember Breidenstein's own correspondence went unanswered
- ✓ Parking spaces – Questioned the number of handicapped spaces required in the town code. Mr. Schieber stated the number is determined by the overall quantity of the site and 2-3 handicapped spaces are required per 100; the applicant exceeds this amount.

- ✓ Sidewalks – NYS has indicated sidewalks will not be added to Clinton Street and questioned if sidewalks have been added by the developer. Mr. Schieber referred to the drawing and stated sidewalks are included in the interior of the development. Additionally, NYS requested the development carry the sidewalk out of the property west on Clinton Street up to the bridge area.
- ✓ Did not see elevators or lifts in the plans of the 3-story buildings and questioned how individuals with mobility issues will be accommodated – Mr. Schieber stated the applicant will address the question.
- ✓ Concerned that the dumpster site is inadequate for the property – Supervisor Dickson stated he understands the Planning Board can review and recommend changes or additions.
- ✓ How many electric car charging stations will be installed accommodated – Mr. Schieber stated the applicant will address the question.
- ✓ Is the entire parcel being rezoned – Mr. Schieber stated the entire parcel and noted the remainder is not suitable for development.

Councilmember Piekarec questioned if the current M-1 zoning allows manufacturing businesses. Mr. Schieber confirmed this. Councilmember Piekarec questioned if the town requires any new projects to include electric car charging stations. Mr. Schieber stated the requirement is not in the town code but is regularly discussed at the Planning Board meetings. Councilmember Piekarec stated in his opinion most of the residents will have gasoline powered vehicles.

Dan Brock of LaBella Associates made the following comments:

- ✓ Handicap parking spaces were addressed
- ✓ ADA compliant units are located on the ground floors of buildings and the plans meet all NYS requirements
- ✓ Dumpsters are for garbage overflow, each unit will have a tote – Councilmember Breidenstein questioned what party will be responsible for garbage collection and mentioned a concern with the garbage generated by parties moving in and out of the development. Mr. Brock understands it will be the developer's responsibility and will investigate the particulars of collection.
- ✓ NYS guidelines require a certain number of electric vehicle charging stations and the plans accommodate 5 stations

Councilmember Piekarec asked if the sidewalks are ADA compliant along the length of the property. Mr. Brock confirmed the development must be ADA compliant. Councilmember Piekarec asked if the community mansion can accommodate all residents. Mr. Brock stated that there will be enough room to accommodate 200 people and noted there are office spaces that will be on a generator and can accommodate additional people.

Councilmember Robertson asked which power company will service the development. Mr. Brock stated NYSEG will supply electricity. Councilmember Robertson stated he does not believe the location is right for an all-electric community and added the condition that the applicant must provide the development plans to NYSEG for the utility company's review and approval. NYSEG's report will be submitted to the town.

Councilmember Piekarec asked Mr. Schieber and Mr. Foote if the applicant is required as a part of the site plan process to obtain approval from the electric company for hook-ups. Mr. Schieber stated in this instance, he will reach out to his contacts to facilitate this request.

Councilmember Breidenstein questioned if school buses will be able to navigate the site. Mr. Brock stated buses are generally provided with a central loop and accessible areas for the students.

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to approve the request for rezoning and special use permit for property located at 2544 Clinton Street changing its classification from M-1 to R-

50(S) for construction of multiple family dwelling with all related site improvements with the condition that the applicant contact NYSEG and receive approval for the electrical development and that the report will be sent to the Town Board and Planning Board.

Ayes: All Noes: None Motion Carried

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to adopt the following resolution:

WHEREAS, the Town Board of the Town of West Seneca, as lead agency acting pursuant to the State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law, has reviewed Part I of the Full Environmental Assessment Form ("FEAF") prepared by the applicant for property located at 2544 Clinton Street ("Subject Property"), for development of affordable housing multi-family residential units and associated site work and parking (the "Project"), and reviewed the draft completed Part II and Part III of the EAF analyzing the potential for the Project to result in any significant adverse environmental impacts and has otherwise taken a hard look at the identified potential environmental impacts utilizing the criteria specified in 6 NYCRR 617.7(c); and

WHEREAS, the Erie County Division of Planning, after carefully and fully reviewing a description of the proposed project, along with the application and other documents as submitted to the Town of West Seneca, replied in writing that the project was to be of local concern; and

WHEREAS, the Town Board held a public hearing which was properly noticed to the public wherein the project was discussed; and

WHEREAS, the Town Board herein determines that it shall act as lead agency for such purposes and there has been no opposition thereto by any other interested agency; and

WHEREAS, the Town Board, carefully and fully reviewed the application including the following documents submitted by the applicant and other interested entities: Response from DEC, SHPO, NYSDOT, West Seneca Central School District, and the reports and submissions from LaBella, PC; and

WHEREAS, the Town Board, upon taking an independent hard look and reasoned evaluation of all of the above-referenced information, comments and written documentation with regard to the project;

WHEREAS, upon review of Parts I, II, and III of the FEAF and documentation and plans submitted by the applicant in connection with the review of the Project, the Town Board has not identified any potentially significant adverse environmental impacts associated with the proposed use of the Subject Property, has determined that this is an unlisted action and preparation of a Full Environmental Impact Statement is not necessary and that the issuance of a Negative Declaration is therefore appropriate; now, therefore, be it

RESOLVED that pursuant to 6 NYCRR 617.7(a) the Town Board hereby accepts its designation as lead agency and does hereby adopt a Negative Declaration with respect to the Project based on its determination that the Project will not result in any potentially significant adverse environmental impacts.

Councilmember Breidenstein noted that he experienced internet issues today and was unable to download and view the materials that were sent to him today and will be abstaining for that reason.

Ayes: 4 (Dickson, Kims, Piekarec, Robertson) Abstain: 1 (Breidenstein) Noes: None Motion Carried

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LEGEND

- SUBCATCHMENT BOUNDARY
- Tc PATH
- # SUBCATCHMENT
- # REACH

N

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **PRE-DEVELOPMENT WATERSHED DELINEATION MAP**

DRAWN BY:	DATE:	PROJECT NO.:
	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON STREET, BUFFALO, NY 14224

DRAWING NUMBER: **A-6**

VERSION 21.1
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LEGEND

- SUBCATCHMENT BOUNDARY
- Tc PATH
- # SUBCATCHMENT
- # REACH
- # POND

N

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **POST-DEVELOPMENT WATERSHED DELINEATION MAP**

DRAWN BY:

DATE: 04/20/2026

PROJECT NO.: 2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON STREET, BUFFALO, NY 14224

DRAWING NUMBER: **A-7**

VERSION 21.1
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APPENDIX B: FORMS

Notice of Intent (NOI) Draft
MS4 SWPPP Acceptance Form
SWPPP Preparer Certification Form
Owner/Operator Certification Form
Contractor and Subcontractor Certification Forms
Notice of Termination (NOT)

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MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

(NYSDEC - MS4 SWPPP Acceptance Form - January 2025)

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

Stormwater Pollution Prevention Plan
Contractor Certification Statement
(Responsible for overall SWPPP Compliance)

West Seneca
Town of West Seneca, Erie County, New York

This is to certify that the following contracting firm will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices required by the SWPPP.

Contracting Firm Information

Name: _____

Address: _____

Telephone & Fax: _____

Trained Contractor(s)[1] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activity, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

Upon completion of construction activities, the following certification shall be issued, prior to issuance of the NOT:

I hereby certify that that all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents. I further certify that all temporary erosion and sediment control measures have been removed from the site, and that the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[1] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

Stormwater Pollution Prevention Plan
Subcontractor Certification Statement
(whose work involves soil disturbance)

West Seneca
Town of West Seneca, Erie County, New York

Each Subcontractor whose work will involve soil disturbance of any kind is required to complete and sign this Certification Statement before commencing any construction activity at the site. This completed Certification Statement(s) shall be maintained at the construction site in the Site Log Book.

Subcontracting Firm Information

Name: _____

Address: _____

_____

Telephone & Fax: _____

Trained Contractor(s)[2] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activities, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[2] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

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APPENDIX C:
PROJECT EVALUATION AND DESIGN CALCULATIONS

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P=	1.00	*inch*

AREA	Total Area *(Acres)*	Existing Imperv *(Acres)*	Proposed Imperv *(Acres)*	Existing Disturbed Imperv Area *(Acres)*	Imperv Reduction *(Acres)*
TO ALTERNATIVE PRACTICES	2.13	0.47	1.91	0.47	0%
TO AREA REDUCTION SMPS					
SITE REMAINING AREA	3.55	0.59	1.07	0.35	0%
TOTAL SITE	5.68	1.06	2.98	0.82	0%

Water Quality Volume Calculation

New Development / Redevelopment	WQv Treatment %	Total Area *(Acres)*	Exist Disturbed Imperv Area (REDEVELOPMENT) (Acres)	Imperv Area (NEW DEVELOPMENT) *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	WQv Adjusted *(ft^3)*	TOTAL WQV REQUIRED *(ft^3)*	System Generated Notes
REDEVELOPMENT ALTERNATIVE	75%	0.47	0.47	-	100%	0.95	1,621	1,216	8,672	
NEW DEVELOPMENT ALTERNATIVE	100%	1.66	-	1.44	87%	0.83	5,006	5,006		
REDEVELOPMENT REMAINING AREA	25%	0.35	0.35	-	100%	0.95	1,207	302		
NEW DEVELOPMENT REMAINING AREA	100%	3.20	-	0.48	15%	0.19	2,149	2,149		

Minimum Runoff Reduction Volume Calculation

AREA	Total Impervious Area Added (NEW DEVELOPMENT) *(Acres)*	Soil Group A *%*	Soil Group B *%*	Soil Group C *%*	Soil Group D *%*	Percent Impervious *%*	Rv	Weighted S Factor	MINIMUM RRv REQUIRED *(ft^3)*	System Generated Notes
TOTAL SITE	1.92	0%	0%	0%	100%	100%	0.95	0.20	1,324	

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?	No
What is the nature of this construction project?	Redevelopment with increase in impervious area

Design Point:	1		
P=	1.00	inches	*Enter 90% Rainfall Event as P*

Calculate Required WQv

Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	0.63	0.22	34	0.36	817	Filtration Bioretention
2	1.70	1.48	87	0.83	5,144	Flow Based Alternative Practice
3	0.65	0.22	33	0.35	829	Filtration Bioretention
4	0.68	0.48	71	0.69	1,692	Filtration Bioretention
5	0.43	0.43	100	0.95	1,483	Flow Based Alternative Practice
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	4.09	2.82	69	0.67	**9964**	**Required WQv**

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Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	0.63	0.22	34	0.36	817	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	340	sf	
Enter Provided Filter Area	Af	340	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	816	cf	

Calculate Runoff Reduction			
RRv Provided	**326**	***cf***	
WQv Treated	491	cf	This is the portion of the WQv that is not reduced in the practice.

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Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
3	0.65	0.22	33	0.35	829	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	345	sf	
Enter Provided Filter Area	Af	348	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	835.2	cf	

Calculate Runoff Reduction			
RRv Provided	**334**	***cf***	
WQv Treated	495	cf	This is the portion of the WQv that is not reduced in the practice.

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Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
4	0.68	0.48	71	0.69	1,692	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	705	sf	
Enter Provided Filter Area	Af	705	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	1692	cf	

Calculate Runoff Reduction			
RRv Provided	**677**	***cf***	
WQv Treated	1015	cf	This is the portion of the WQv that is not reduced in the practice.

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Water Quality Peak Flow Calclations

NYSDEC Water Quality Volume (WQv) & Water Quality Peak Flow (Qp) Calculation Worksheet (REQUIRED Qp)

PROJECT INFORMATION

Total Drainage Area	**A:**	2.09	**ac**
Impervious Area	**I:**	1.90	**ac**
Percent Impervious		90.9	**%**
NYSDEC 90% Rainfall	**P:**	1.00	**in.**
Time of Concentration	**T_c:**	0.27	**hrs**
	Rv:	0.87	

WATER QUALITY VOLUME

Water Quality Volume $WQ_v=([(P)*(Rv)*(A)]/12)*43560$	WQv:	6,587	cf

WATER QUALITY PEAK FLOW (NEW DEVELOPMENT)

Runoff Volume $Q=WQ_v/(A*3600)$	Q:	0.87	in.
$CN=1000/(10+5*P+10*Q-10(Q^2+1.25*Q*P)^{½})$	CN:	98.80	
CN Rounded	CN:	99	
CN < or = 98	CN:	98	
Initial Abstraction ($I_a=200/CN-2$)	Ia:	0.04	in.
RATIO $R=I_a/P$	R:	0.04	
$C_0 = A*R^2 +B*R +C$	C_0:	2.54	
$C_1 = A*R^2 +B*R +C$	C_1:	-0.58	
$C_2 = A*R^2 +B*R +C$	C_2:	-0.17	
Unit Peak Discharge $qu=10^{(C_0+C_1*Log(T_c)+C_2*(log(T_c))^2)}$	qu:	663.03	$cfs/mi^2/in$
Water Quality Peak Flow $Q_p=qu*A*Q/640$ (100%)	**Qp:**	**1.88**	**cfs**

REDVELOPMENT

Impeverious Area Reduction	IC	0.00	%
WQv Treatment by Standard Practice	SP	0.00	%
Runoff Reduction	RR	0.00	%
Req. WQv% By Alt. Practice AP=(25-(% IC+%SP+%RR))*3:	AP	75.0	%
Required Water Quality Peak Flow RD QP=(Qp*AP):	**RD Qp:**	**1.41**	**cfs**

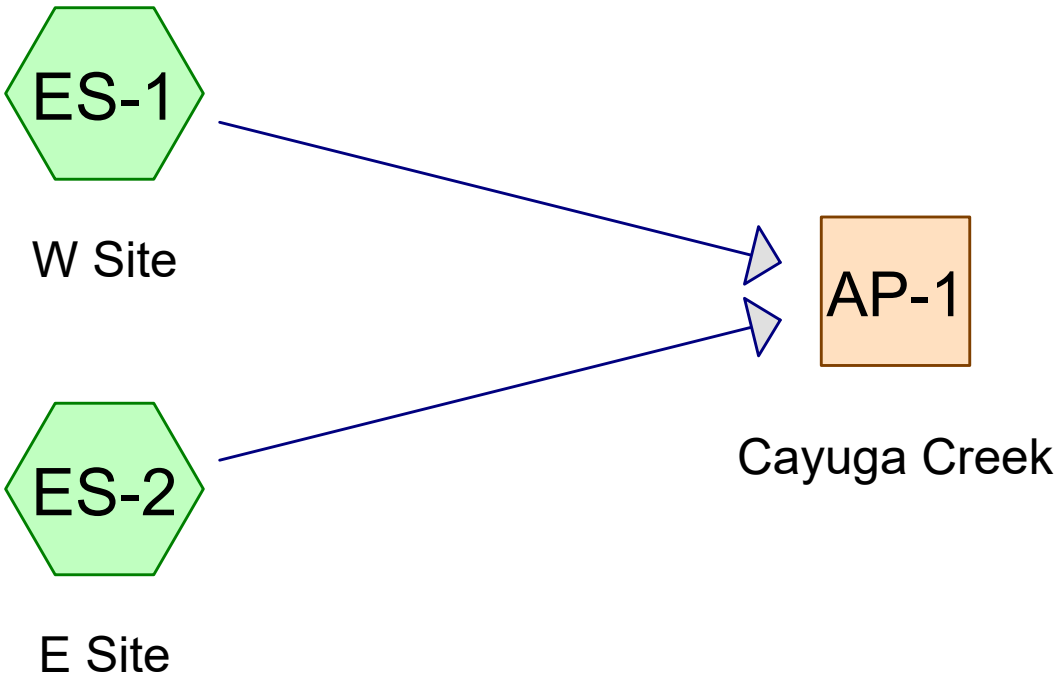
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APPENDIX D:
PRE-DEVELOPMENT STORMWATER MODELING

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Subcat Reach Pond Link

Routing Diagram for D_App D_Pre-Development Model
Prepared by Labella Associates, Printed 4/17/2026
HydroCAD® 10.20-7a s/n 09581 © 2025 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-West Seneca 24-hr S1	1-yr	Default	24.00	1	1.82	2
2	10-yr	NY-West Seneca 24-hr S1	10-yr	Default	24.00	1	3.14	2
3	100-yr	NY-West Seneca 24-hr S1	100-yr	Default	24.00	1	5.22	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
10.061	80	>75% Grass cover, Good, HSG D (ES-1, ES-2)
1.056	98	Paved parking, HSG D (ES-1, ES-2)
11.117	**82**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
11.117	HSG D	ES-1, ES-2
0.000	Other	
11.117		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=0.53"
Flow Length=391' Tc=14.0 min CN=82 Runoff=4.22 cfs 0.344 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=0.49"
Flow Length=390' Tc=19.4 min CN=81 Runoff=1.42 cfs 0.139 af

Reach AP-1: Cayuga Creek Inflow=5.48 cfs 0.483 af
Outflow=5.48 cfs 0.483 af

Total Runoff Area = 11.117 ac Runoff Volume = 0.483 af Average Runoff Depth = 0.52"
90.50% Pervious = 10.061 ac 9.50% Impervious = 1.056 ac

Summary for Subcatchment ES-1: W Site

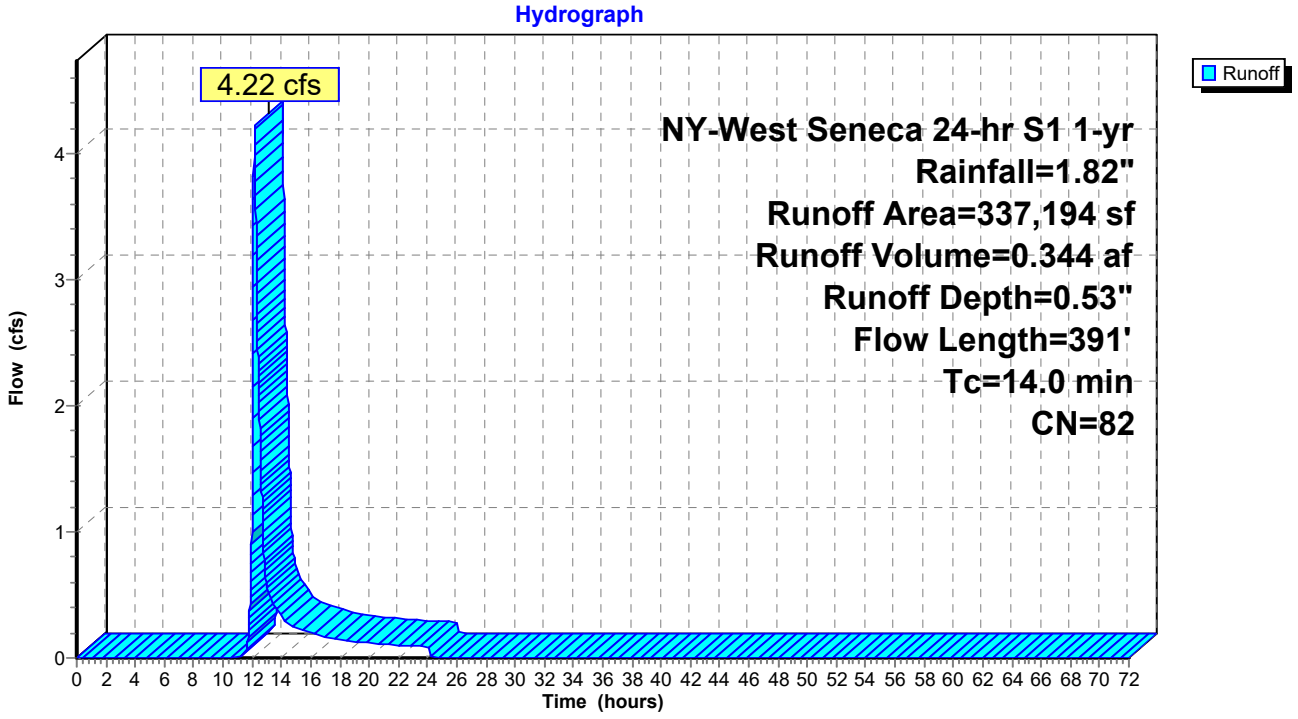
Runoff = 4.22 cfs @ 12.16 hrs, Volume= 0.344 af, Depth= 0.53"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

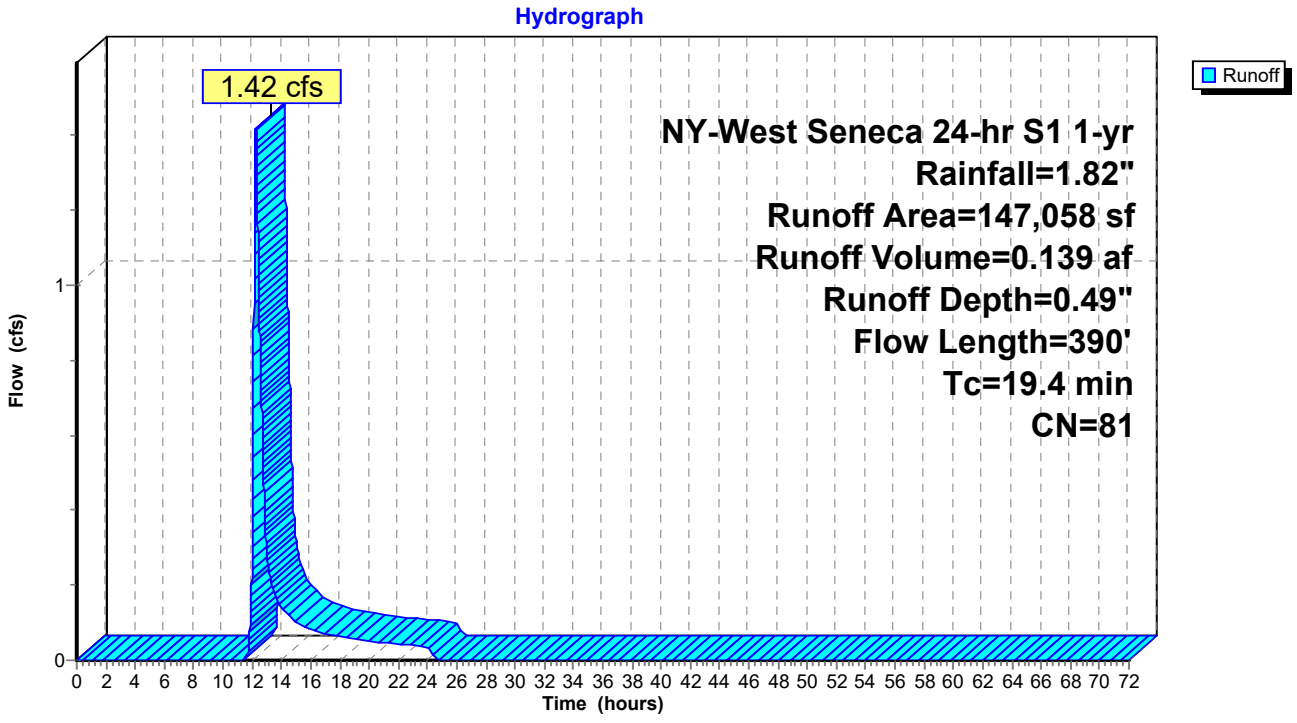
Runoff = 1.42 cfs @ 12.25 hrs, Volume= 0.139 af, Depth= 0.49"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site

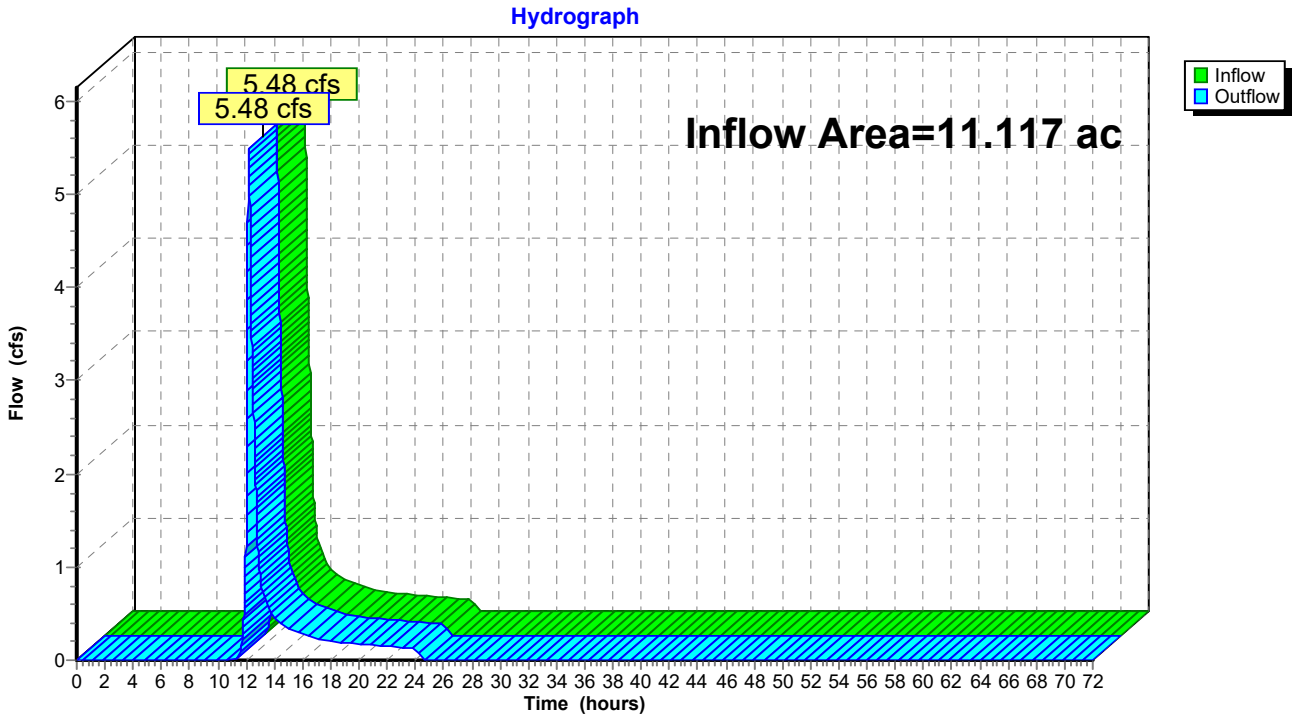


Summary for Reach AP-1: Cayuga Creek

Inflow Area = 11.117 ac, 9.50% Impervious, Inflow Depth = 0.52" for 1-yr event
Inflow = 5.48 cfs @ 12.18 hrs, Volume= 0.483 af
Outflow = 5.48 cfs @ 12.18 hrs, Volume= 0.483 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=1.49"
Flow Length=391' Tc=14.0 min CN=82 Runoff=12.32 cfs 0.961 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=1.42"
Flow Length=390' Tc=19.4 min CN=81 Runoff=4.40 cfs 0.400 af

Reach AP-1: Cayuga Creek Inflow=16.27 cfs 1.361 af
Outflow=16.27 cfs 1.361 af

Total Runoff Area = 11.117 ac Runoff Volume = 1.361 af Average Runoff Depth = 1.47"
90.50% Pervious = 10.061 ac 9.50% Impervious = 1.056 ac

Summary for Subcatchment ES-1: W Site

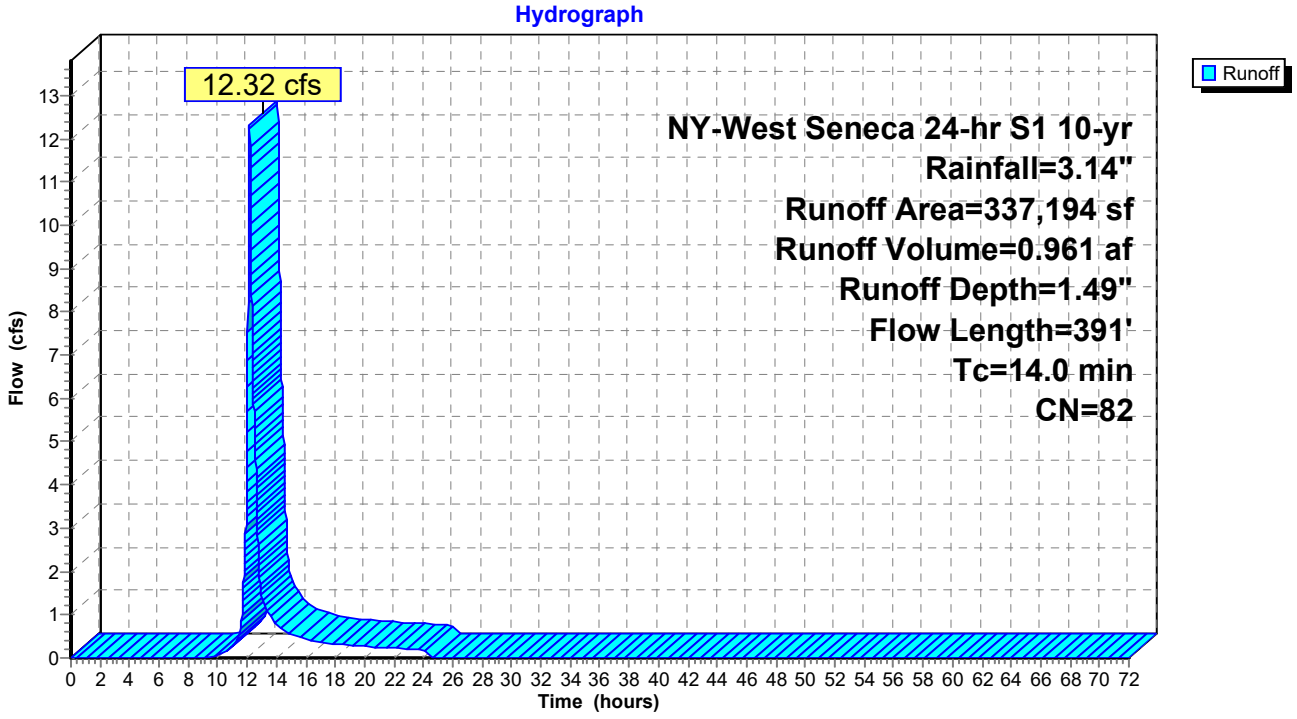
Runoff = 12.32 cfs @ 12.15 hrs, Volume= 0.961 af, Depth= 1.49"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

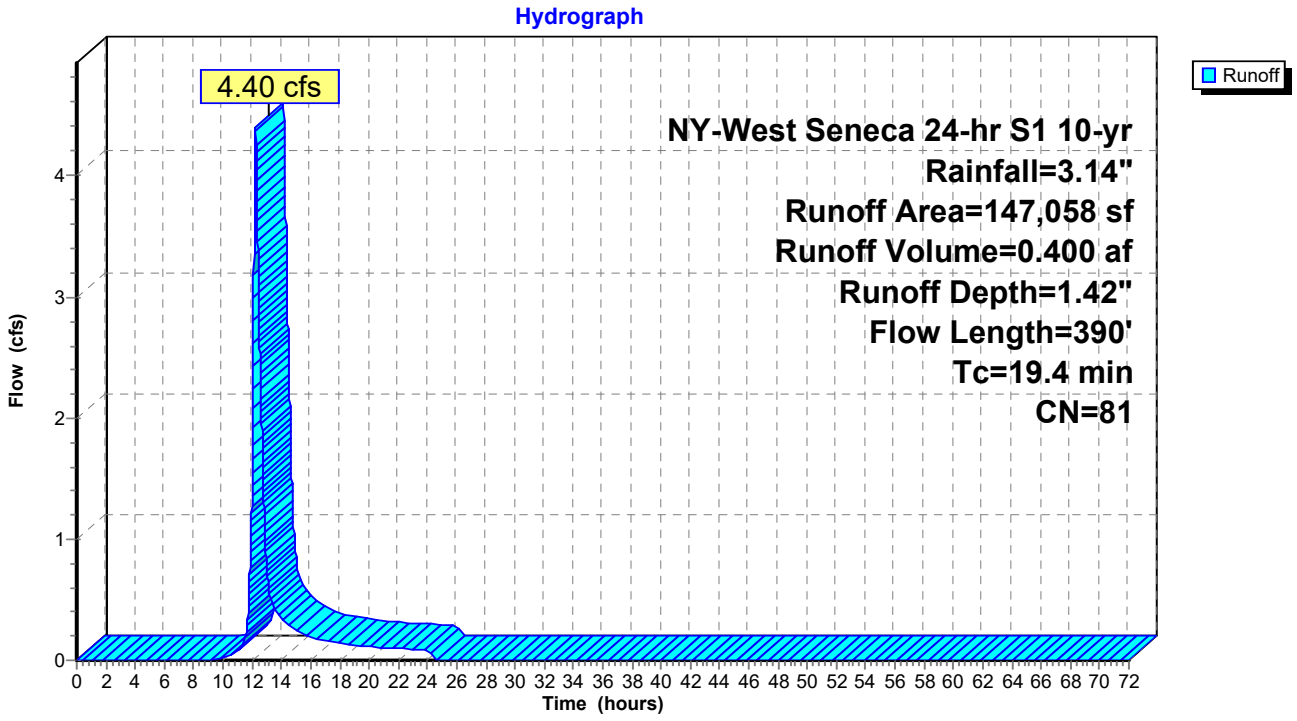
Runoff = 4.40 cfs @ 12.23 hrs, Volume= 0.400 af, Depth= 1.42"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site

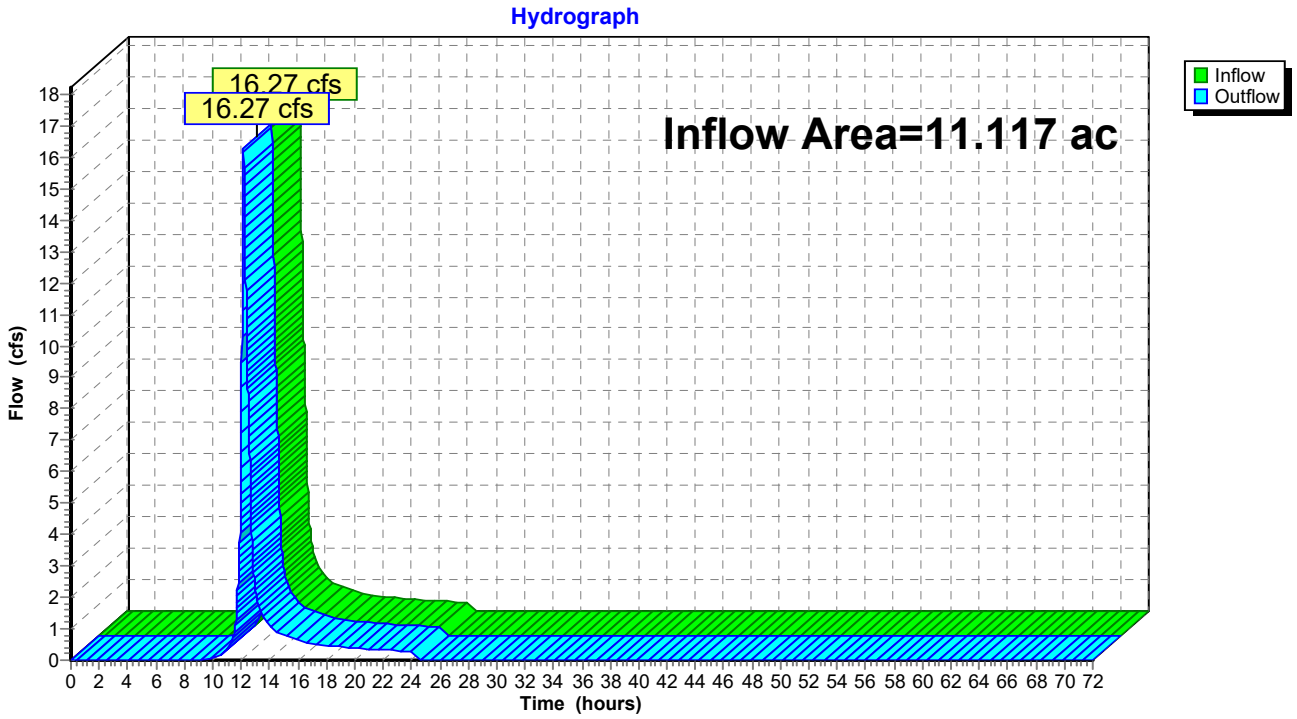


Summary for Reach AP-1: Cayuga Creek

Inflow Area = 11.117 ac, 9.50% Impervious, Inflow Depth = 1.47" for 10-yr event
Inflow = 16.27 cfs @ 12.17 hrs, Volume= 1.361 af
Outflow = 16.27 cfs @ 12.17 hrs, Volume= 1.361 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=3.28"
Flow Length=391' Tc=14.0 min CN=82 Runoff=27.59 cfs 2.114 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=3.18"
Flow Length=390' Tc=19.4 min CN=81 Runoff=10.17 cfs 0.895 af

Reach AP-1: Cayuga Creek Inflow=36.80 cfs 3.008 af
Outflow=36.80 cfs 3.008 af

Total Runoff Area = 11.117 ac Runoff Volume = 3.008 af Average Runoff Depth = 3.25"
90.50% Pervious = 10.061 ac 9.50% Impervious = 1.056 ac

Summary for Subcatchment ES-1: W Site

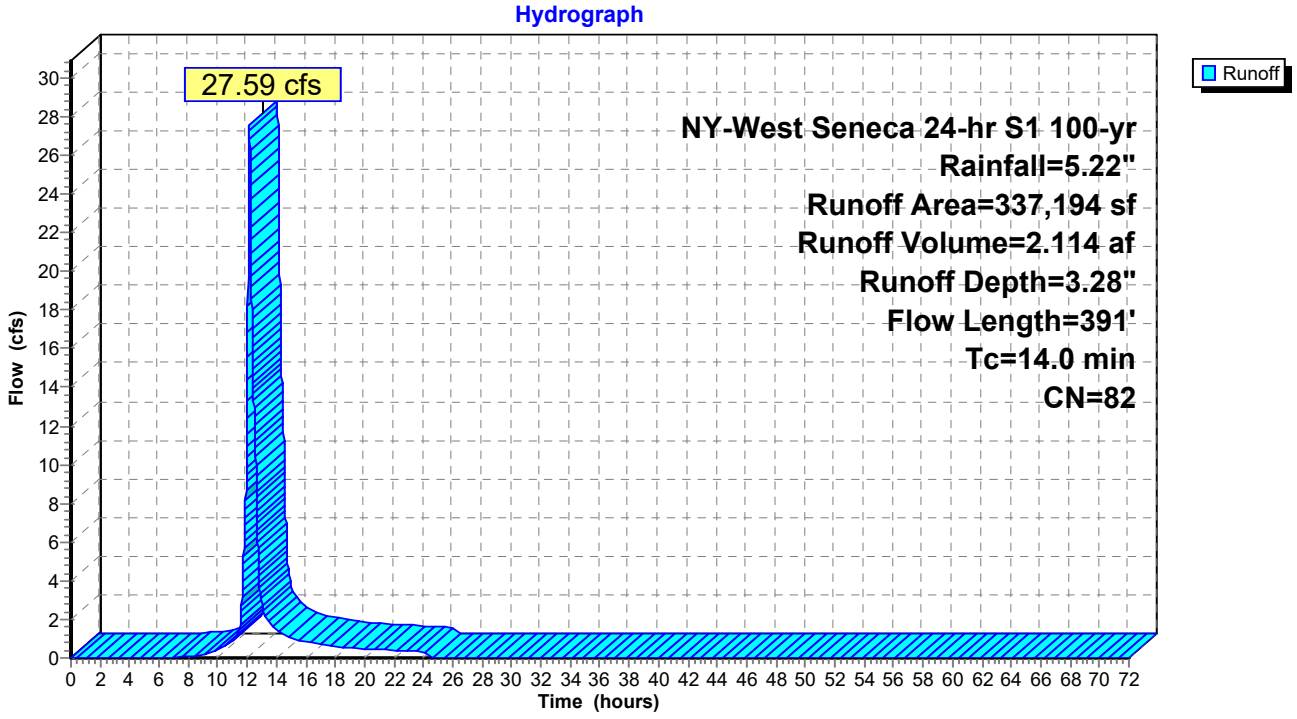
Runoff = 27.59 cfs @ 12.15 hrs, Volume= 2.114 af, Depth= 3.28"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

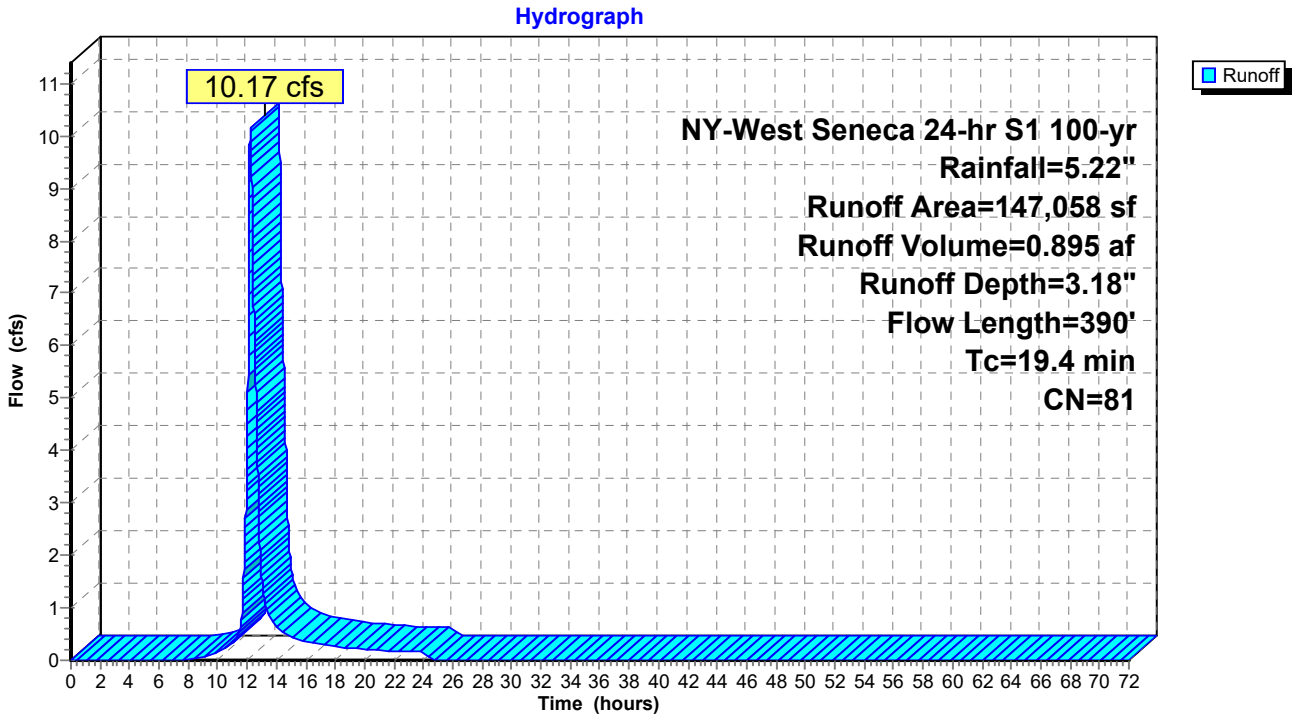
Runoff = 10.17 cfs @ 12.22 hrs, Volume= 0.895 af, Depth= 3.18"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site

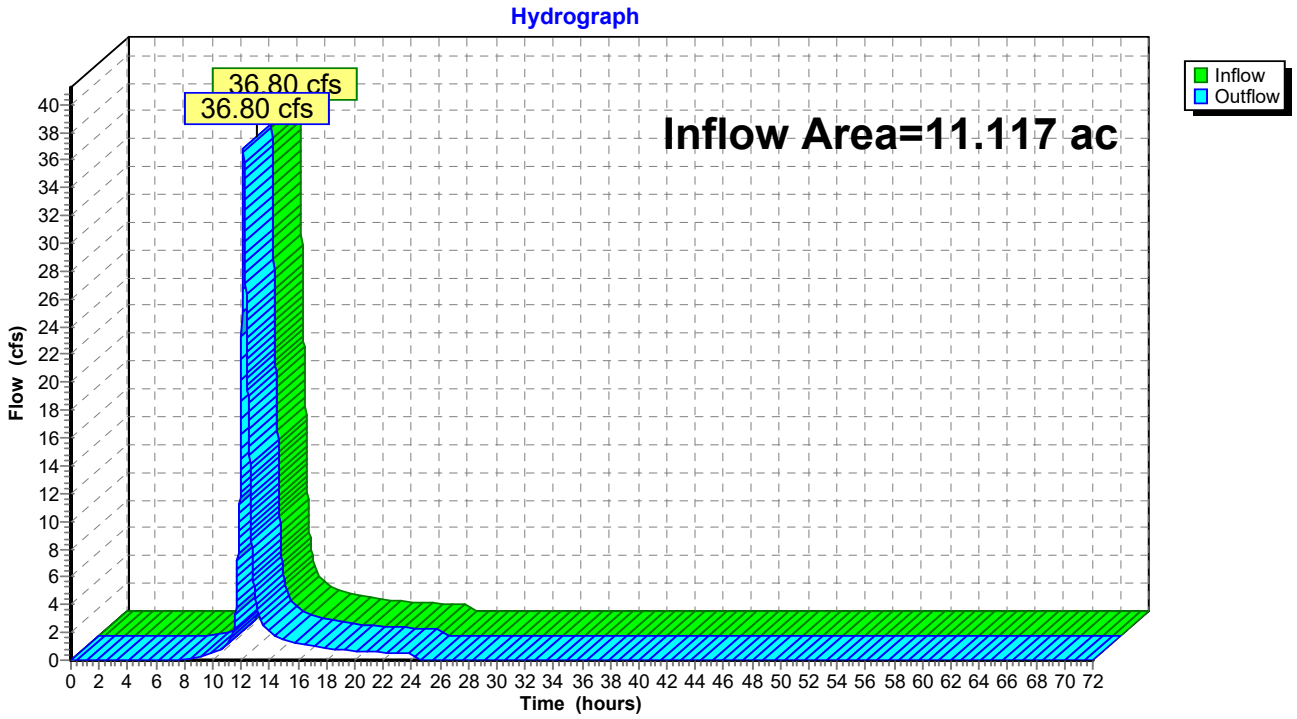


Summary for Reach AP-1: Cayuga Creek

Inflow Area = 11.117 ac, 9.50% Impervious, Inflow Depth = 3.25" for 100-yr event
Inflow = 36.80 cfs @ 12.16 hrs, Volume= 3.008 af
Outflow = 36.80 cfs @ 12.16 hrs, Volume= 3.008 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



Events for Subcatchment ES-1: W Site

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	4.22	0.344	0.53
10-yr	3.14	12.32	0.961	1.49
100-yr	**5.22**	**27.59**	**2.114**	**3.28**

Events for Subcatchment ES-2: E Site

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	1.42	0.139	0.49
10-yr	3.14	4.40	0.400	1.42
100-yr	**5.22**	**10.17**	**0.895**	**3.18**

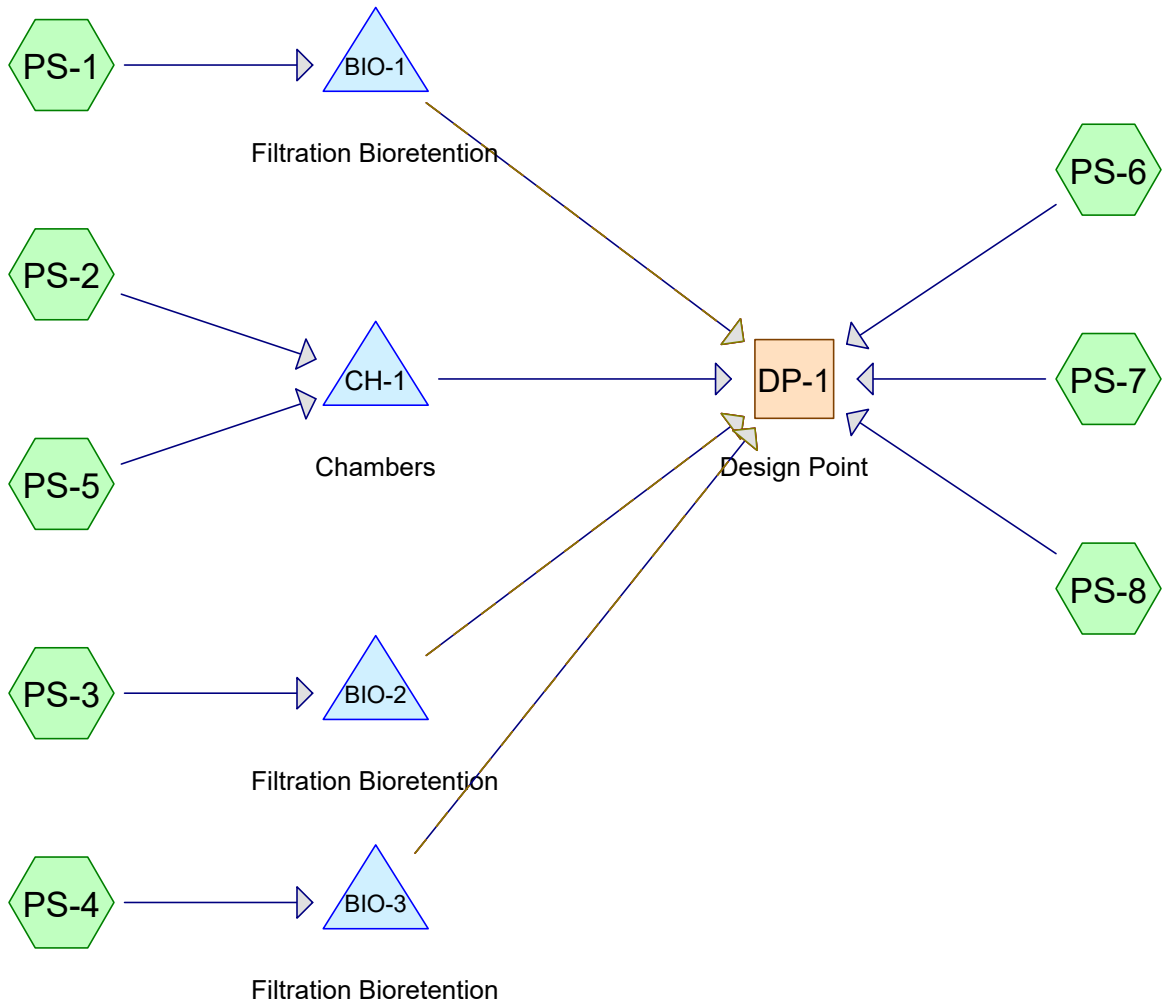
Events for Reach AP-1: Cayuga Creek

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	5.48	5.48	**0.00**	**0**
10-yr	16.27	16.27	0.00	0
100-yr	**36.80**	**36.80**	0.00	0

APPENDIX E:
POST DEVELOPMENT STORMWATER MODELING

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Subcat Reach Pond Link

Routing Diagram for E_App E_Post-Development Model
Prepared by Labella Associates, Printed 4/20/2026
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-West Seneca 24-hr S1	1-yr	Default	24.00	1	1.82	2
2	10-yr	NY-West Seneca 24-hr S1	10-yr	Default	24.00	1	3.14	2
3	100-yr	NY-West Seneca 24-hr S1	100-yr	Default	24.00	1	5.22	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.107	80	>75% Grass cover, Good, HSG D (PS-1, PS-2, PS-3, PS-4, PS-7, PS-8)
2.967	98	Paved parking, HSG D (PS-1, PS-2, PS-3, PS-4, PS-5, PS-6)
11.074	**85**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
11.074	HSG D	PS-1, PS-2, PS-3, PS-4, PS-5, PS-6, PS-7, PS-8
0.000	Other	
11.074		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: Runoff Area=27,596 sf 33.98% Impervious Runoff Depth=0.72"
Tc=6.0 min CN=86 Runoff=0.72 cfs 0.038 af

Subcatchment PS-2: Runoff Area=72,316 sf 88.61% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=96 Runoff=3.74 cfs 0.194 af

Subcatchment PS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=0.72"
Tc=6.0 min CN=86 Runoff=0.74 cfs 0.039 af

Subcatchment PS-4: Runoff Area=29,485 sf 70.98% Impervious Runoff Depth=1.15"
Tc=6.0 min CN=93 Runoff=1.28 cfs 0.065 af

Subcatchment PS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=98 Runoff=1.06 cfs 0.057 af

Subcatchment PS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=98 Runoff=0.37 cfs 0.020 af

Subcatchment PS-7: Runoff Area=245,856 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=391' Tc=14.0 min CN=80 Runoff=2.49 cfs 0.215 af

Subcatchment PS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=0.40 cfs 0.047 af

Reach DP-1: Design Point Inflow=4.12 cfs 0.674 af
Outflow=4.12 cfs 0.674 af

Pond BIO-1: Filtration Bioretention Peak Elev=598.98' Storage=994 cf Inflow=0.72 cfs 0.038 af
Primary=0.02 cfs 0.038 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.038 af

Pond BIO-2: Filtration Bioretention Peak Elev=596.95' Storage=1,010 cf Inflow=0.74 cfs 0.039 af
Primary=0.02 cfs 0.039 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.039 af

Pond BIO-3: Filtration Bioretention Peak Elev=595.92' Storage=1,729 cf Inflow=1.28 cfs 0.065 af
Primary=0.04 cfs 0.065 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.065 af

Pond CH-1: Chambers Peak Elev=592.38' Storage=0.079 af Inflow=4.80 cfs 0.251 af
8.0" Round Culvert n=0.013 L=25.0' S=0.0100 '/' Outflow=1.18 cfs 0.251 af

Total Runoff Area = 11.074 ac Runoff Volume = 0.674 af Average Runoff Depth = 0.73"
73.21% Pervious = 8.107 ac 26.79% Impervious = 2.967 ac

Summary for Subcatchment PS-1:

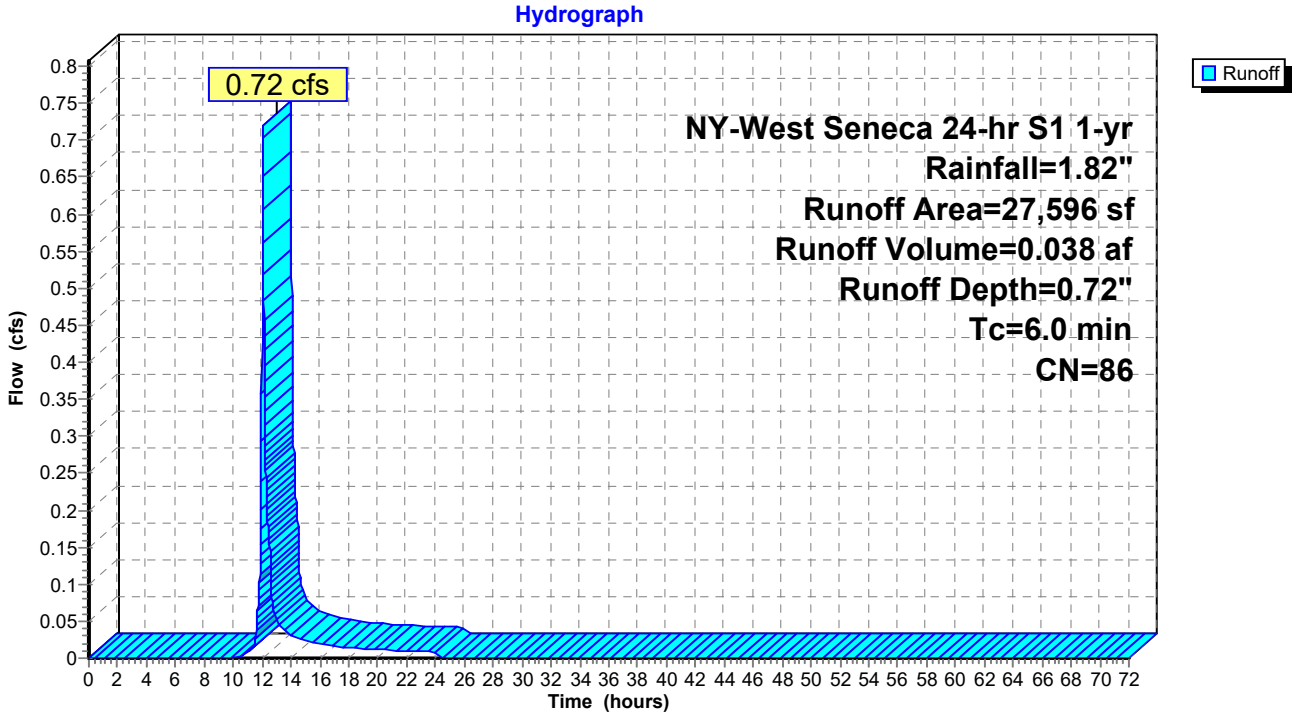
Runoff = 0.72 cfs @ 12.04 hrs, Volume= 0.038 af, Depth= 0.72"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
9,376	98	Paved parking, HSG D
18,220	80	>75% Grass cover, Good, HSG D
27,596	86	Weighted Average
18,220		66.02% Pervious Area
9,376		33.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-2:

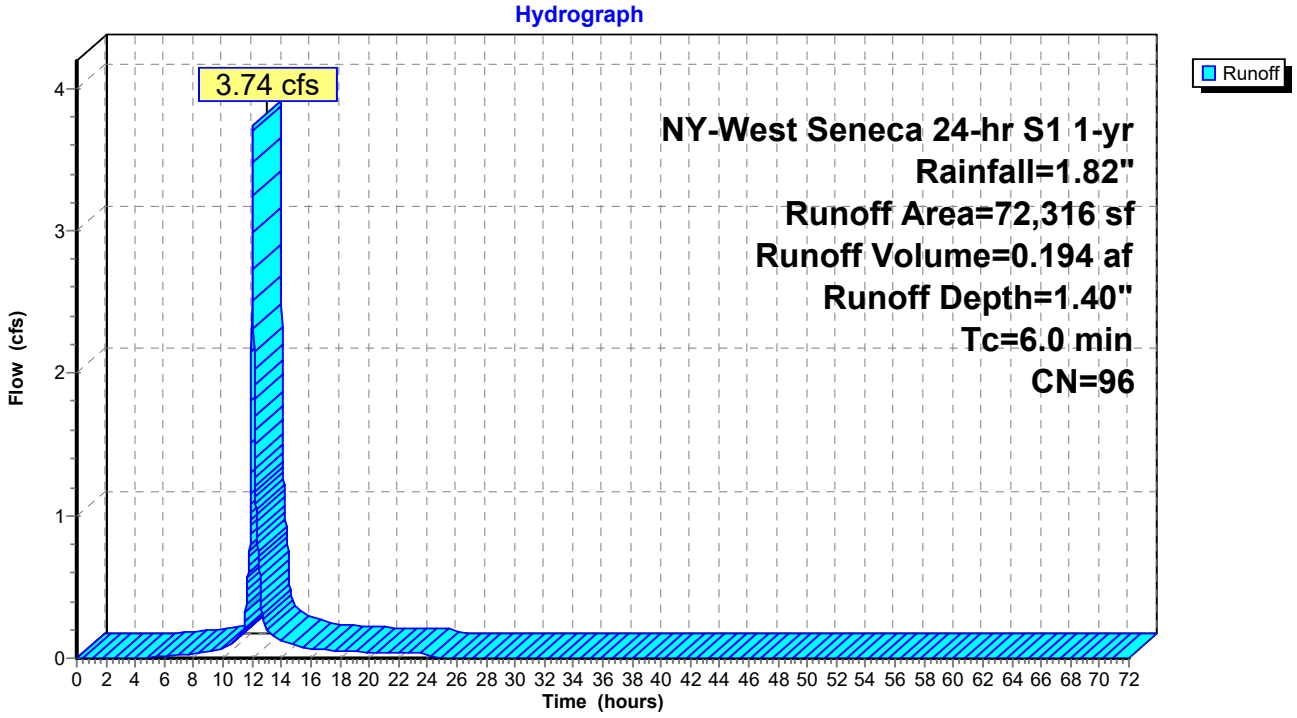
Runoff = 3.74 cfs @ 12.04 hrs, Volume= 0.194 af, Depth= 1.40"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
64,081	98	Paved parking, HSG D
8,235	80	>75% Grass cover, Good, HSG D
72,316	96	Weighted Average
8,235		11.39% Pervious Area
64,081		88.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

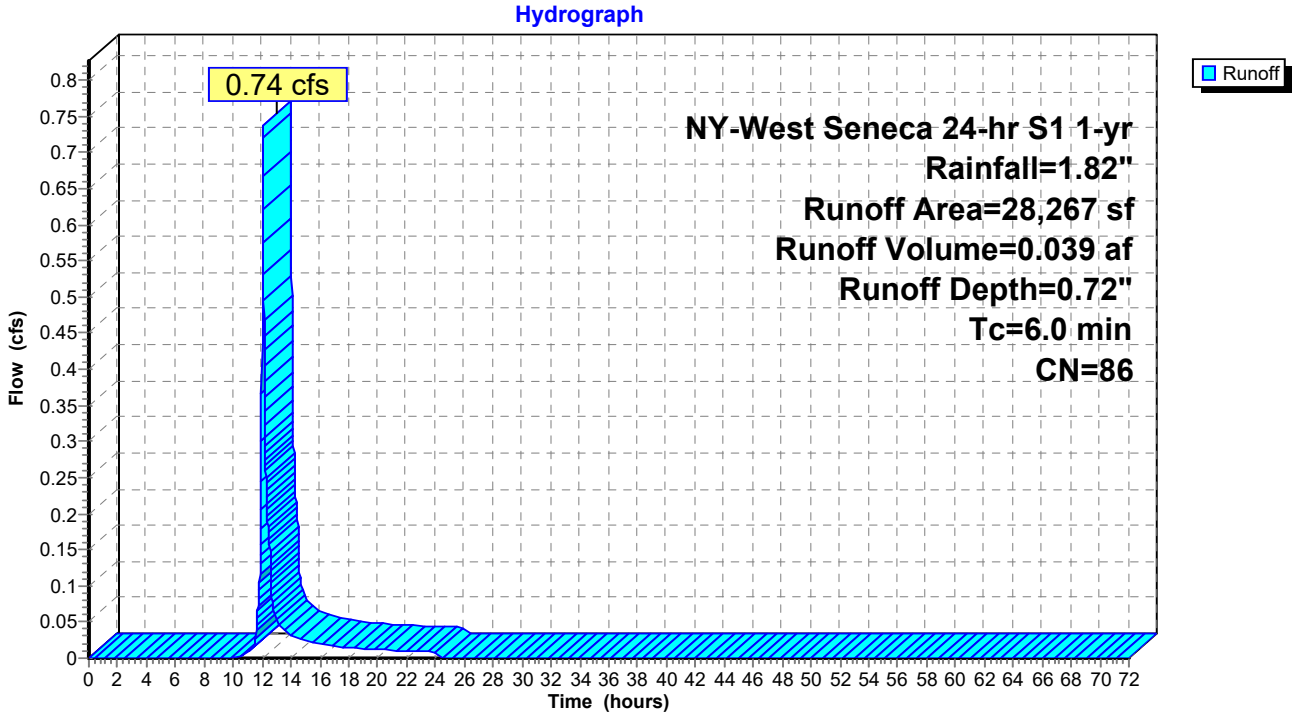
Runoff = 0.74 cfs @ 12.04 hrs, Volume= 0.039 af, Depth= 0.72"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

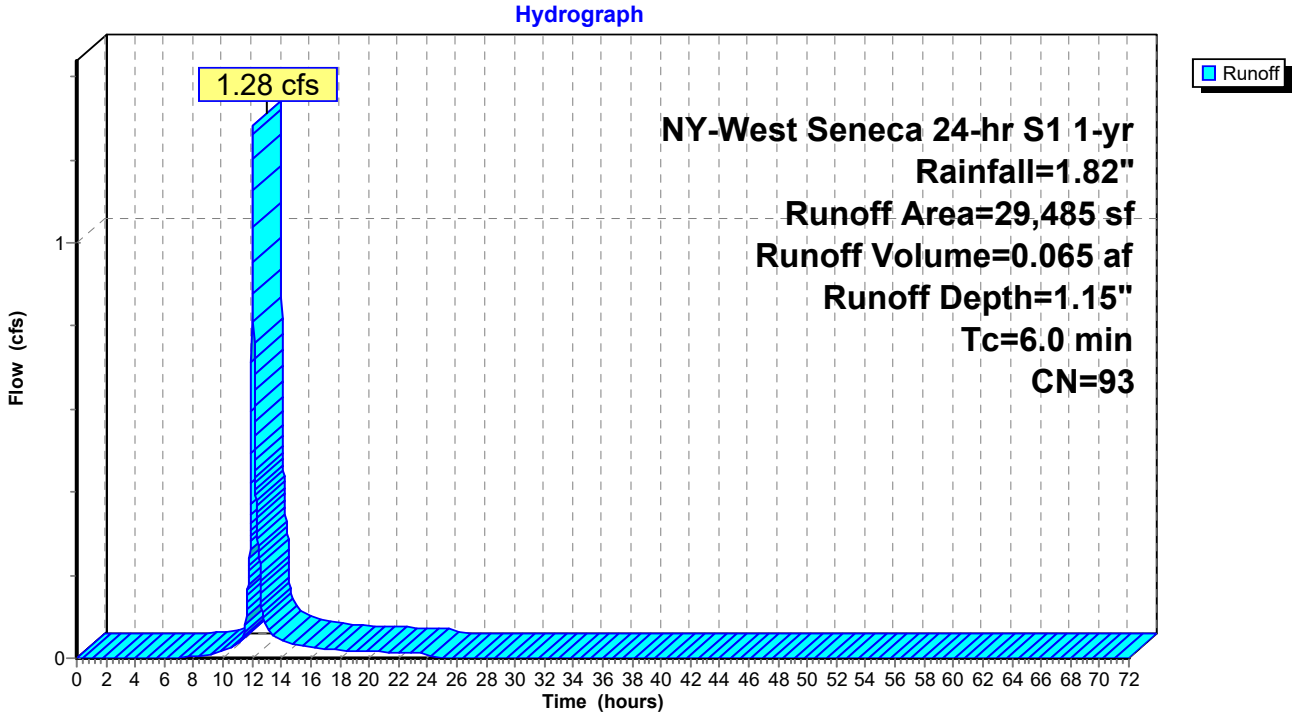
Runoff = 1.28 cfs @ 12.04 hrs, Volume= 0.065 af, Depth= 1.15"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
8,557	80	>75% Grass cover, Good, HSG D
29,485	93	Weighted Average
8,557		29.02% Pervious Area
20,928		70.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

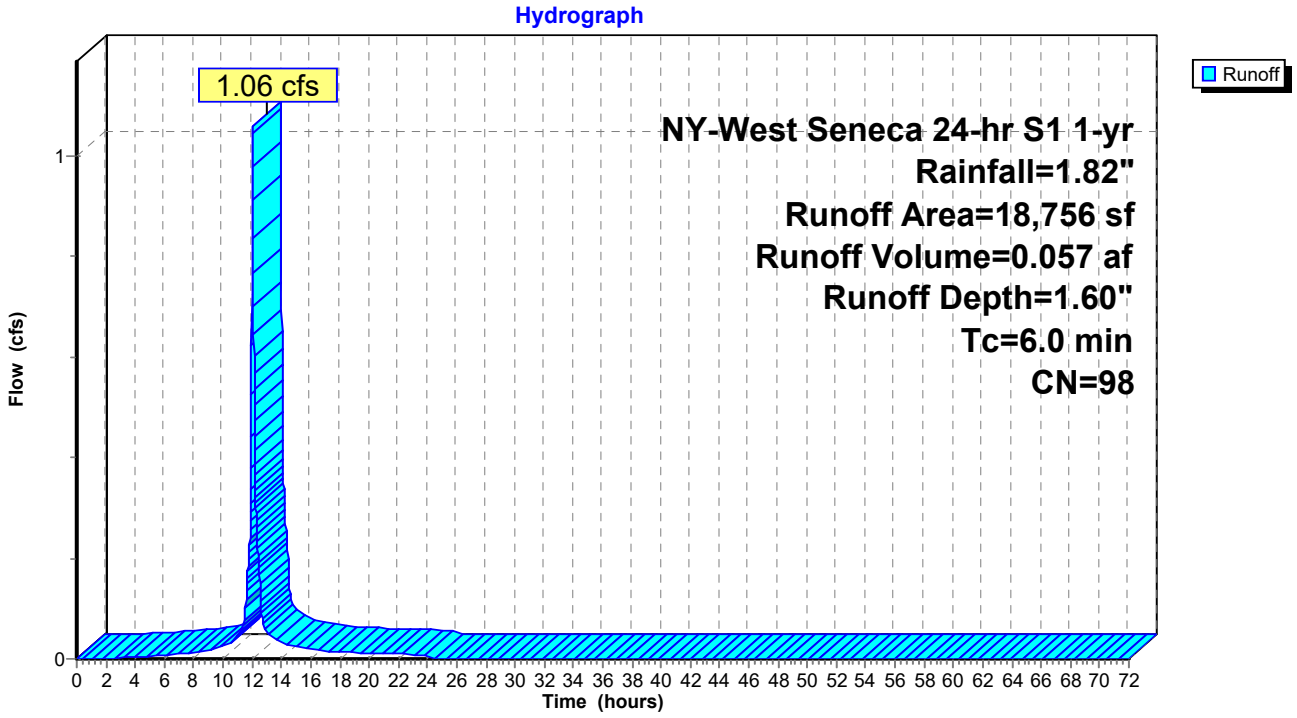
Runoff = 1.06 cfs @ 12.04 hrs, Volume= 0.057 af, Depth= 1.60"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

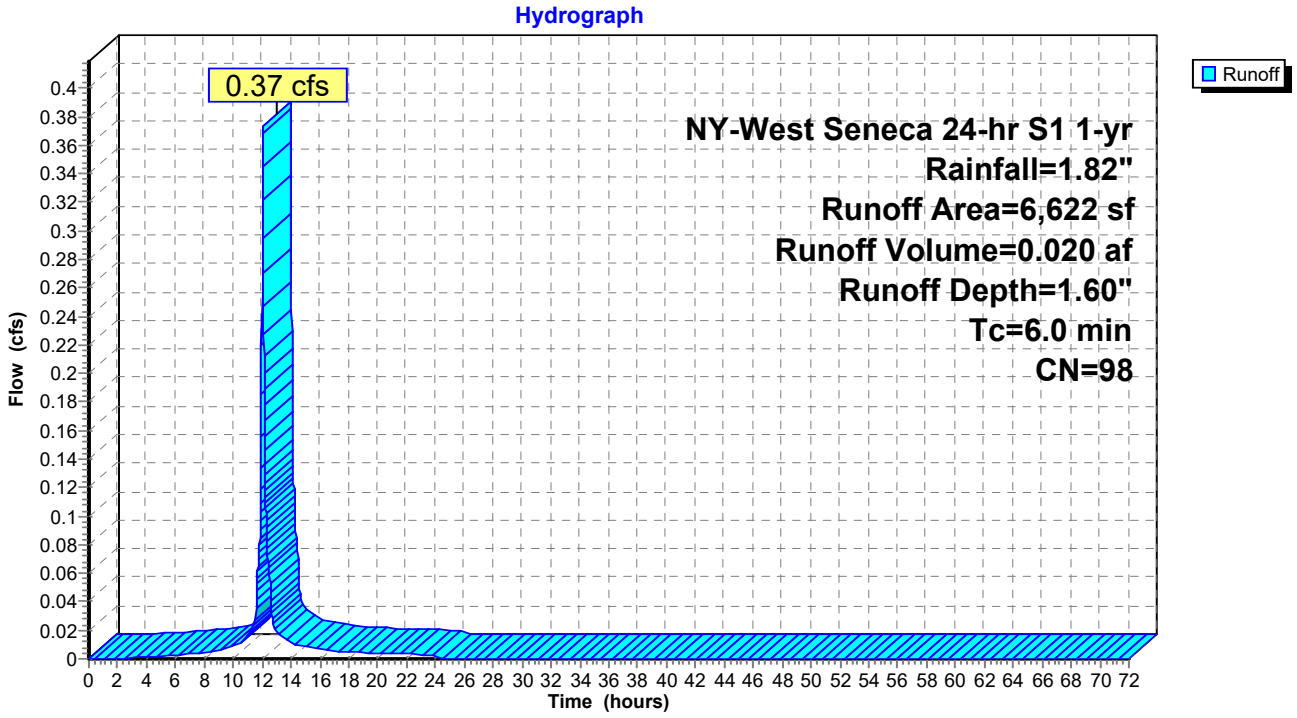
Runoff = 0.37 cfs @ 12.04 hrs, Volume= 0.020 af, Depth= 1.60"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

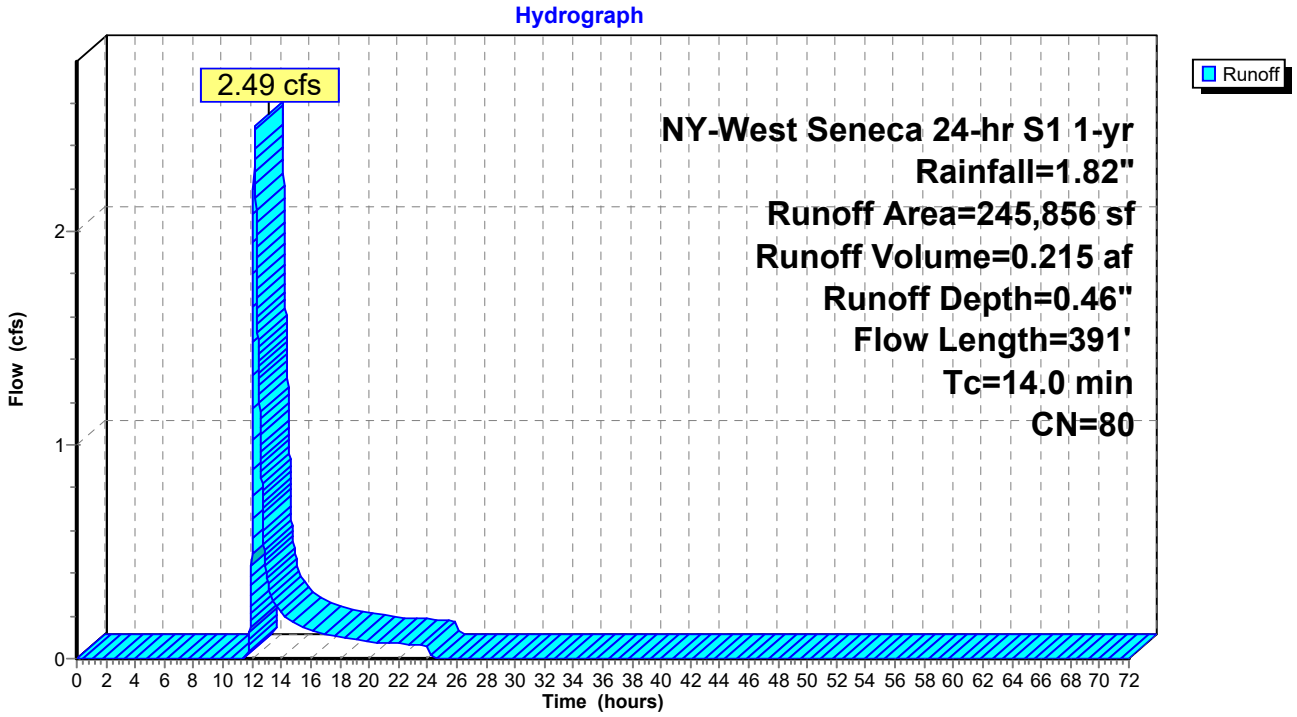
Runoff = 2.49 cfs @ 12.17 hrs, Volume= 0.215 af, Depth= 0.46"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
245,856	80	>75% Grass cover, Good, HSG D
245,856		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

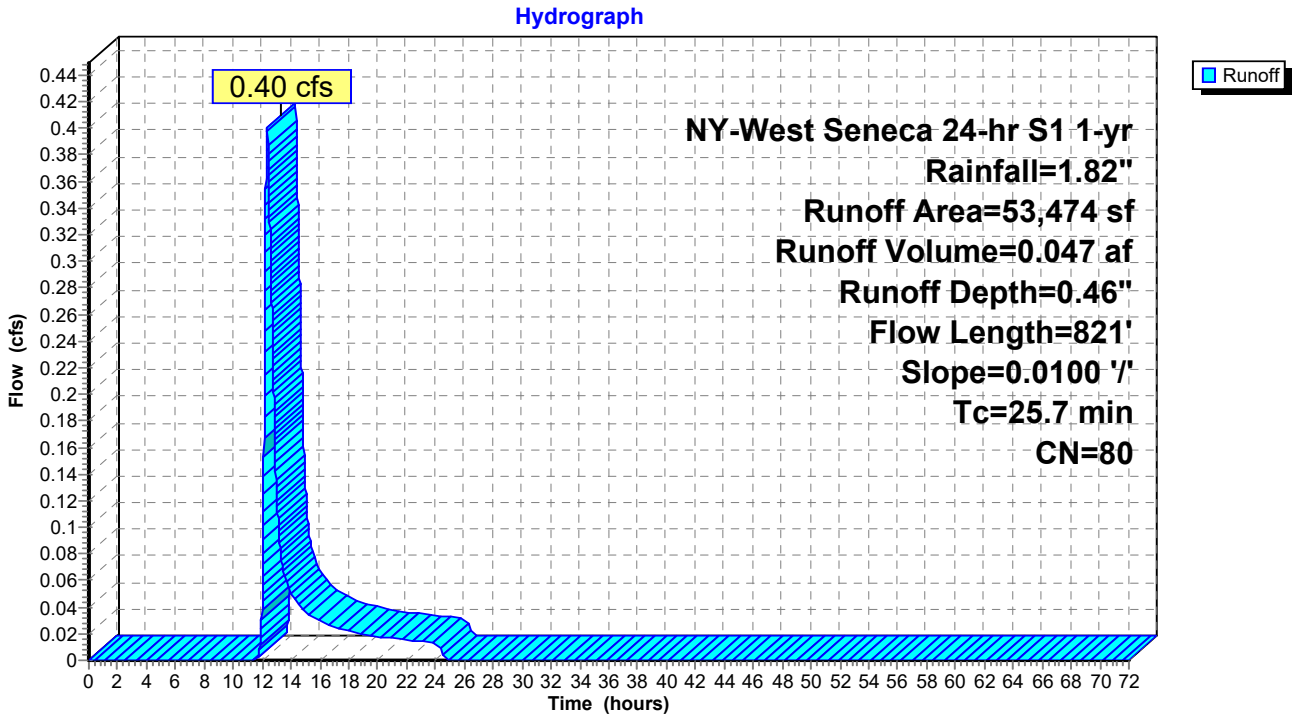
Runoff = 0.40 cfs @ 12.36 hrs, Volume= 0.047 af, Depth= 0.46"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:

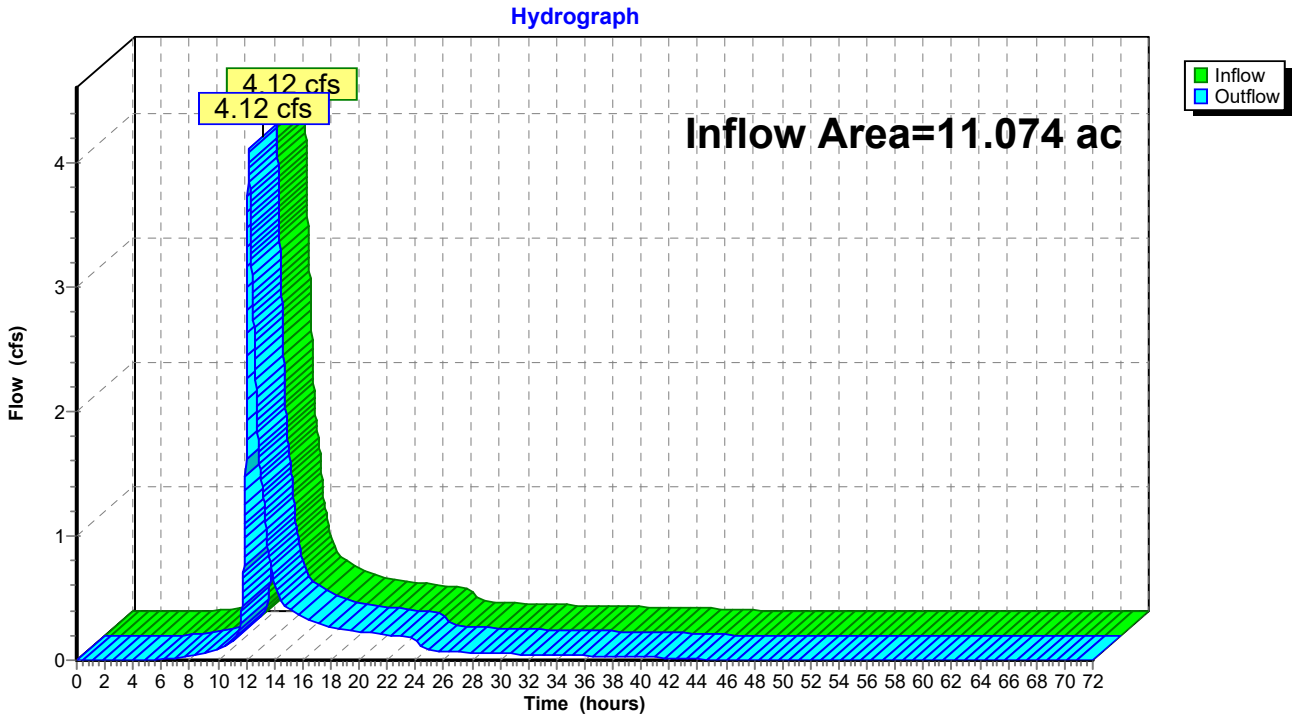


Summary for Reach DP-1: Design Point

Inflow Area = 11.074 ac, 26.79% Impervious, Inflow Depth = 0.73" for 1-yr event
Inflow = 4.12 cfs @ 12.18 hrs, Volume= 0.674 af
Outflow = 4.12 cfs @ 12.18 hrs, Volume= 0.674 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.634 ac, 33.98% Impervious, Inflow Depth = 0.72" for 1-yr event
Inflow = 0.72 cfs @ 12.04 hrs, Volume= 0.038 af
Outflow = 0.02 cfs @ 15.87 hrs, Volume= 0.038 af, Atten= 97%, Lag= 229.9 min
Primary = 0.02 cfs @ 15.87 hrs, Volume= 0.038 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 598.98' @ 15.87 hrs Surf.Area= 1,679 sf Storage= 994 cf
Flood Elev= 600.00' Surf.Area= 2,500 sf Storage= 3,120 cf

Plug-Flow detention time= 645.9 min calculated for 0.038 af (100% of inflow)
Center-of-Mass det. time= 646.0 min (1,495.6 - 849.7)

Volume	Invert	Avail.Storage	Storage Description
#1	598.00'	3,120 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
598.00	340	0	0
599.00	1,700	1,020	1,020
600.00	2,500	2,100	3,120

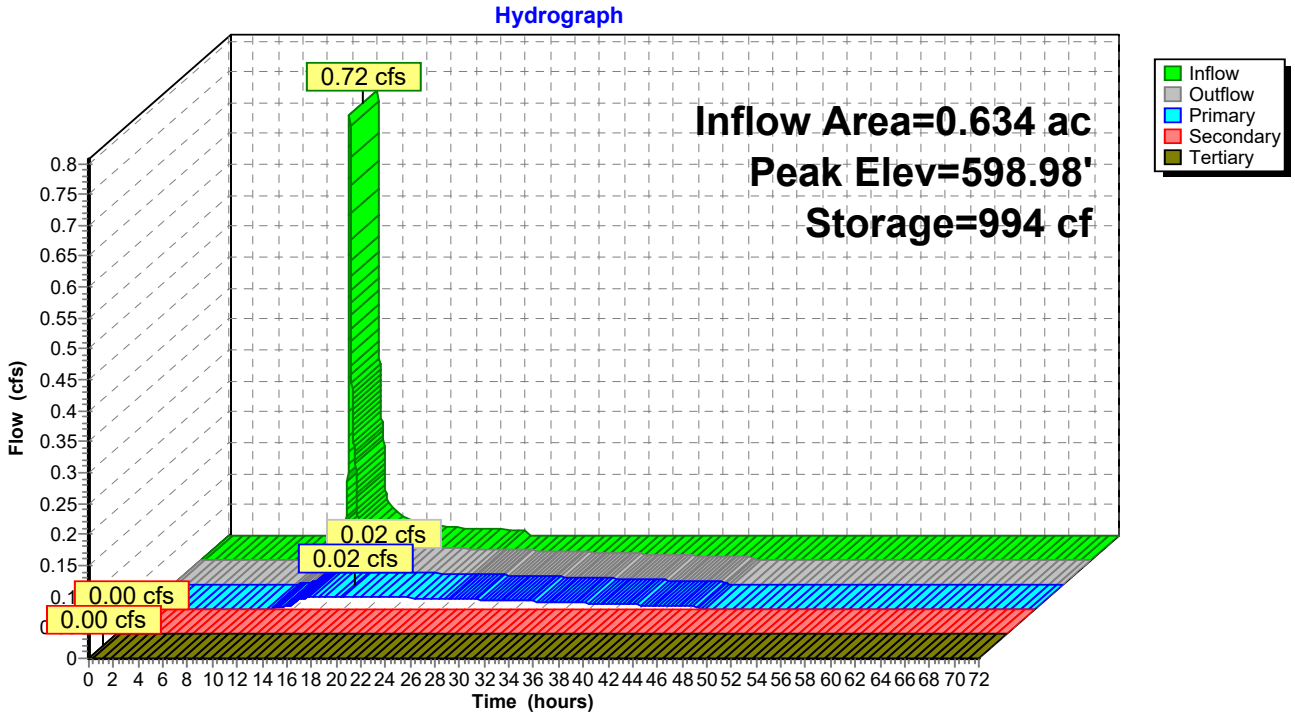
Device	Routing	Invert	Outlet Devices
#1	Primary	598.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 15.87 hrs HW=598.98' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=598.00' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.00 cfs of 5.10 cfs potential flow)
└─**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=598.00' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 0.72" for 1-yr event
Inflow = 0.74 cfs @ 12.04 hrs, Volume= 0.039 af
Outflow = 0.02 cfs @ 15.70 hrs, Volume= 0.039 af, Atten= 97%, Lag= 219.6 min
Primary = 0.02 cfs @ 15.70 hrs, Volume= 0.039 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.95' @ 15.70 hrs Surf.Area= 1,776 sf Storage= 1,010 cf
Flood Elev= 598.00' Surf.Area= 2,630 sf Storage= 3,339 cf

Plug-Flow detention time= 621.3 min calculated for 0.039 af (100% of inflow)
Center-of-Mass det. time= 621.4 min (1,471.1 - 849.7)

Volume	Invert	Avail.Storage	Storage Description
#1	596.00'	3,339 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	348	0	0
597.00	1,850	1,099	1,099
598.00	2,630	2,240	3,339

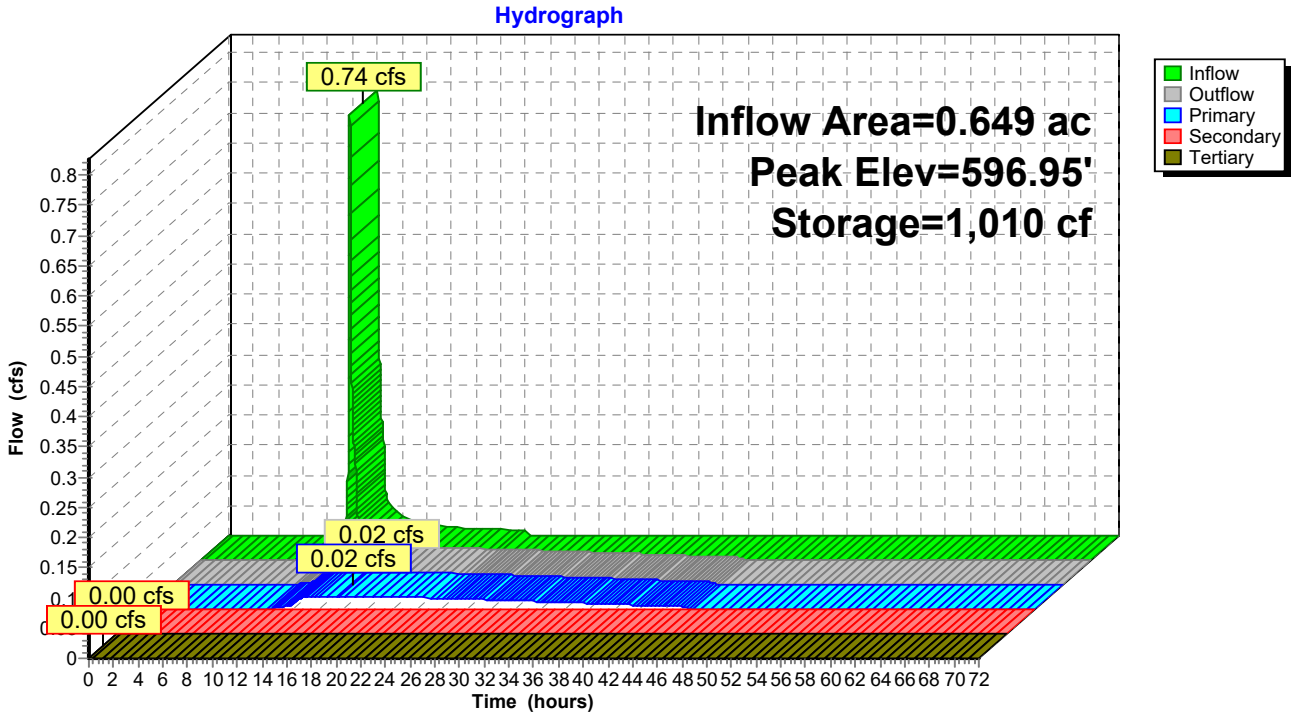
Device	Routing	Invert	Outlet Devices
#1	Primary	596.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 15.70 hrs HW=596.95' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=596.00' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 0.00 cfs of 4.75 cfs potential flow)
└**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=596.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.677 ac, 70.98% Impervious, Inflow Depth = 1.15" for 1-yr event
Inflow = 1.28 cfs @ 12.04 hrs, Volume= 0.065 af
Outflow = 0.04 cfs @ 14.68 hrs, Volume= 0.065 af, Atten= 97%, Lag= 158.5 min
Primary = 0.04 cfs @ 14.68 hrs, Volume= 0.065 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 595.92' @ 14.68 hrs Surf.Area= 3,049 sf Storage= 1,729 cf
Flood Elev= 597.00' Surf.Area= 3,978 sf Storage= 5,592 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 587.3 min (1,401.4 - 814.2)

Volume	Invert	Avail.Storage	Storage Description
#1	595.00'	5,592 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
595.00	705	0	0
596.00	3,250	1,978	1,978
597.00	3,978	3,614	5,592

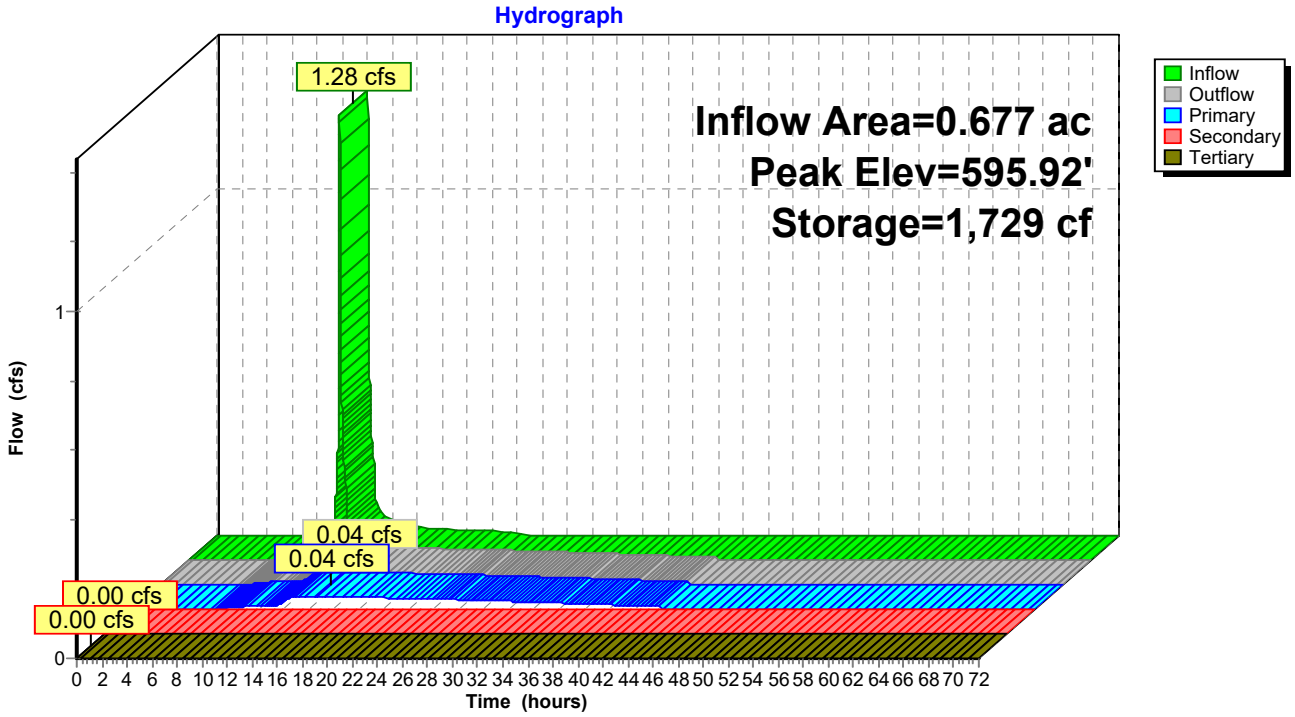
Device	Routing	Invert	Outlet Devices
#1	Primary	595.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.04 cfs @ 14.68 hrs HW=595.92' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.04 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=595.00' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 0.00 cfs of 5.10 cfs potential flow)
└**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=595.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.091 ac, 90.96% Impervious, Inflow Depth = 1.44" for 1-yr event
Inflow = 4.80 cfs @ 12.04 hrs, Volume= 0.251 af
Outflow = 1.18 cfs @ 12.29 hrs, Volume= 0.251 af, Atten= 75%, Lag= 15.4 min
Primary = 1.18 cfs @ 12.29 hrs, Volume= 0.251 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 592.38' @ 12.29 hrs Surf.Area= 0.127 ac Storage= 0.079 af
Flood Elev= 598.32' Surf.Area= 0.127 ac Storage= 0.433 af

Plug-Flow detention time= 60.5 min calculated for 0.251 af (100% of inflow)
Center-of-Mass det. time= 60.2 min (847.2 - 787.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	591.25'	0.177 af	**37.08'W x 149.10'L x 5.50'H Field A** 0.698 af Overall - 0.256 af Embedded = 0.442 af x 40.0% Voids
#2A	592.00'	0.256 af	**ADS_StormTech MC-3500 d +Cap**x 100 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 100 Chambers in 5 Rows Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf
		0.433 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	591.25'	**8.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.25' / 591.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.18 cfs @ 12.29 hrs HW=592.38' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.18 cfs @ 3.38 fps)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

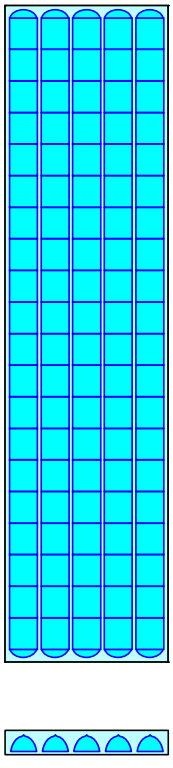
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
5 Rows x 77.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 37.08' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

100 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 5 Rows = 11,144.2 cf Chamber Storage

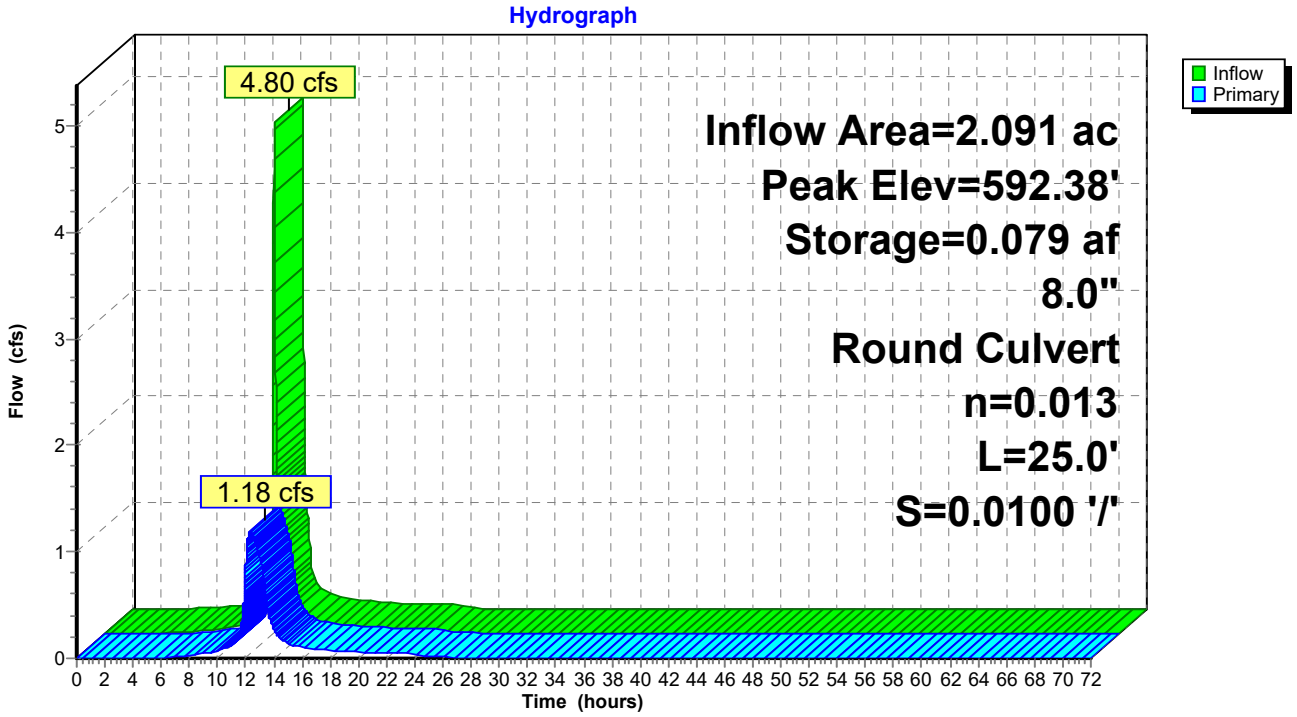
30,410.2 cf Field - 11,144.2 cf Chambers = 19,266.0 cf Stone x 40.0% Voids = 7,706.4 cf Stone Storage

Chamber Storage + Stone Storage = 18,850.6 cf = 0.433 af
Overall Storage Efficiency = 62.0%
Overall System Size = 149.10' x 37.08' x 5.50'

100 Chambers
1,126.3 cy Field
713.6 cy Stone



Pond CH-1: Chambers



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: Runoff Area=27,596 sf 33.98% Impervious Runoff Depth=1.78"
Tc=6.0 min CN=86 Runoff=1.71 cfs 0.094 af

Subcatchment PS-2: Runoff Area=72,316 sf 88.61% Impervious Runoff Depth=2.69"
Tc=6.0 min CN=96 Runoff=6.39 cfs 0.372 af

Subcatchment PS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=1.78"
Tc=6.0 min CN=86 Runoff=1.75 cfs 0.096 af

Subcatchment PS-4: Runoff Area=29,485 sf 70.98% Impervious Runoff Depth=2.39"
Tc=6.0 min CN=93 Runoff=2.39 cfs 0.135 af

Subcatchment PS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=98 Runoff=1.72 cfs 0.104 af

Subcatchment PS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=98 Runoff=0.61 cfs 0.037 af

Subcatchment PS-7: Runoff Area=245,856 sf 0.00% Impervious Runoff Depth=1.36"
Flow Length=391' Tc=14.0 min CN=80 Runoff=8.08 cfs 0.638 af

Subcatchment PS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=1.36"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=1.32 cfs 0.139 af

Reach DP-1: Design Point Inflow=13.96 cfs 1.615 af
Outflow=13.96 cfs 1.615 af

Pond BIO-1: Filtration Bioretention Peak Elev=599.12' Storage=1,232 cf Inflow=1.71 cfs 0.094 af
Primary=0.02 cfs 0.045 af Secondary=1.10 cfs 0.049 af Tertiary=0.00 cfs 0.000 af Outflow=1.12 cfs 0.094 af

Pond BIO-2: Filtration Bioretention Peak Elev=597.12' Storage=1,319 cf Inflow=1.75 cfs 0.096 af
Primary=0.02 cfs 0.048 af Secondary=1.04 cfs 0.048 af Tertiary=0.00 cfs 0.000 af Outflow=1.06 cfs 0.096 af

Pond BIO-3: Filtration Bioretention Peak Elev=596.12' Storage=2,359 cf Inflow=2.39 cfs 0.135 af
Primary=0.04 cfs 0.084 af Secondary=1.03 cfs 0.050 af Tertiary=0.00 cfs 0.000 af Outflow=1.07 cfs 0.135 af

Pond CH-1: Chambers Peak Elev=593.15' Storage=0.161 af Inflow=8.11 cfs 0.476 af
8.0" Round Culvert n=0.013 L=25.0' S=0.0100 '/' Outflow=1.66 cfs 0.476 af

Total Runoff Area = 11.074 ac Runoff Volume = 1.615 af Average Runoff Depth = 1.75"
73.21% Pervious = 8.107 ac 26.79% Impervious = 2.967 ac

Summary for Subcatchment PS-1:

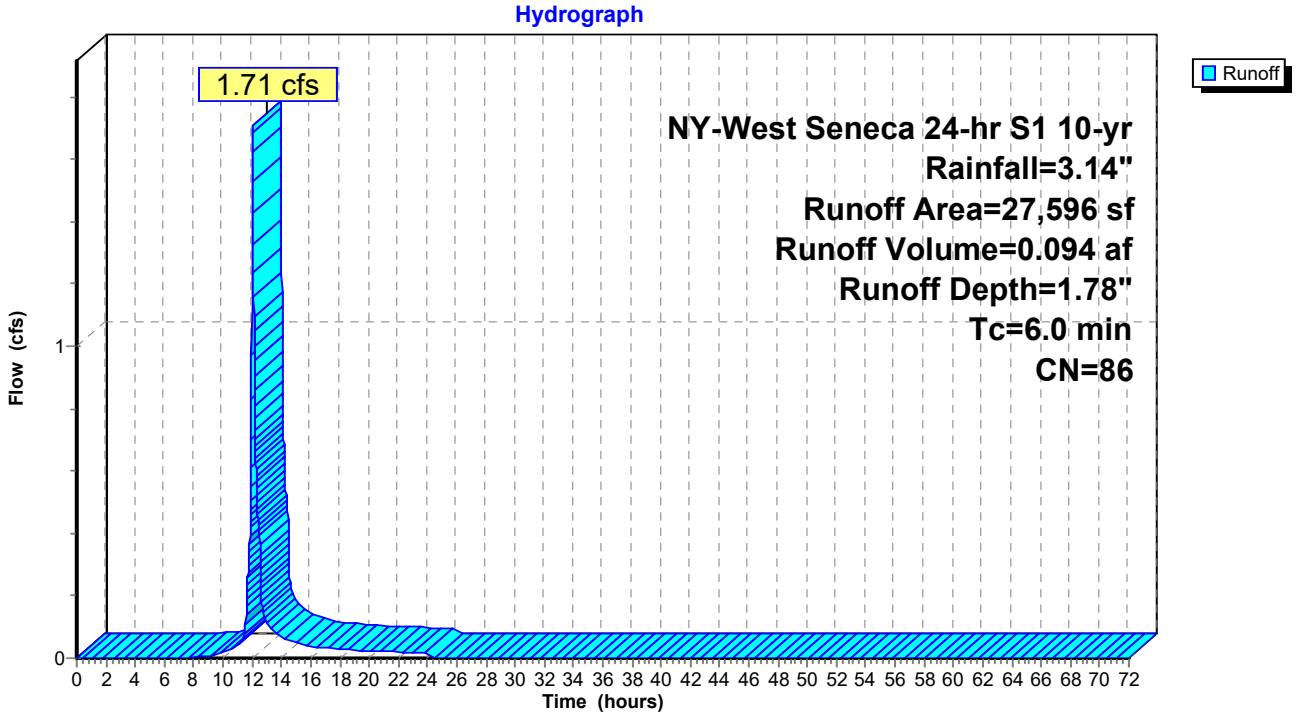
Runoff = 1.71 cfs @ 12.04 hrs, Volume= 0.094 af, Depth= 1.78"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
9,376	98	Paved parking, HSG D
18,220	80	>75% Grass cover, Good, HSG D
27,596	86	Weighted Average
18,220		66.02% Pervious Area
9,376		33.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-2:

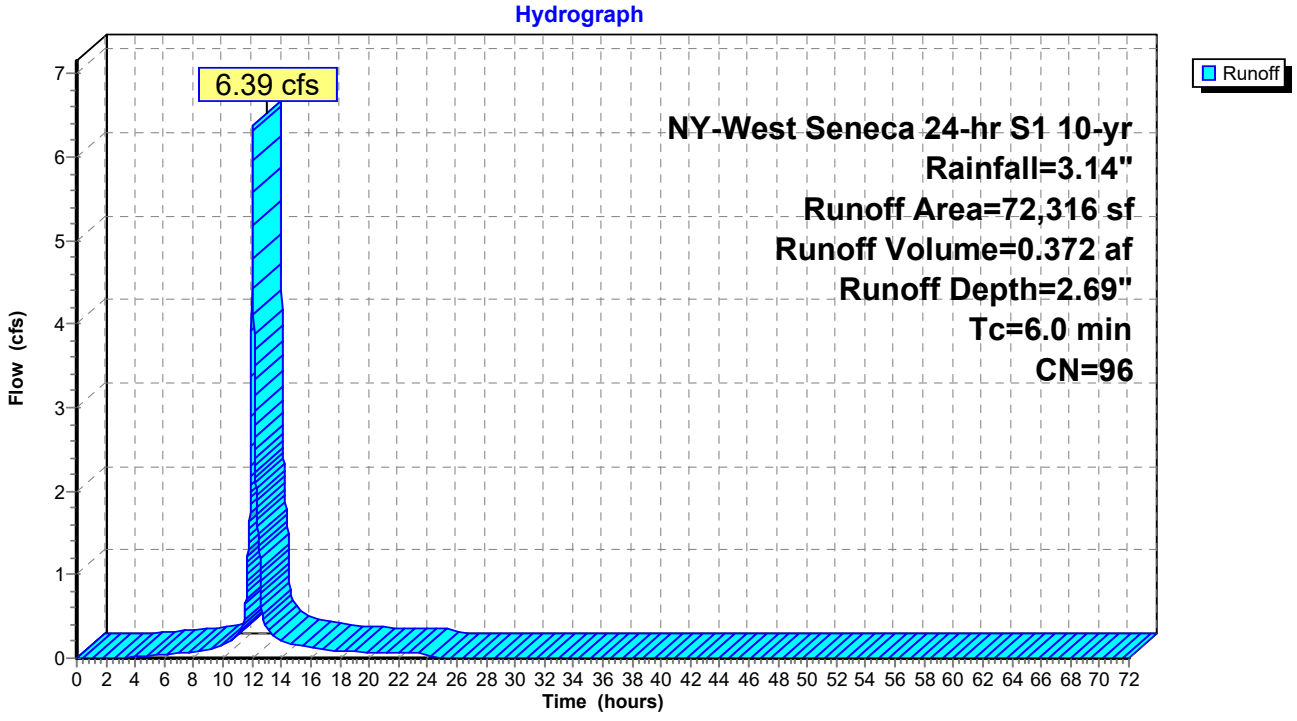
Runoff = 6.39 cfs @ 12.04 hrs, Volume= 0.372 af, Depth= 2.69"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
64,081	98	Paved parking, HSG D
8,235	80	>75% Grass cover, Good, HSG D
72,316	96	Weighted Average
8,235		11.39% Pervious Area
64,081		88.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

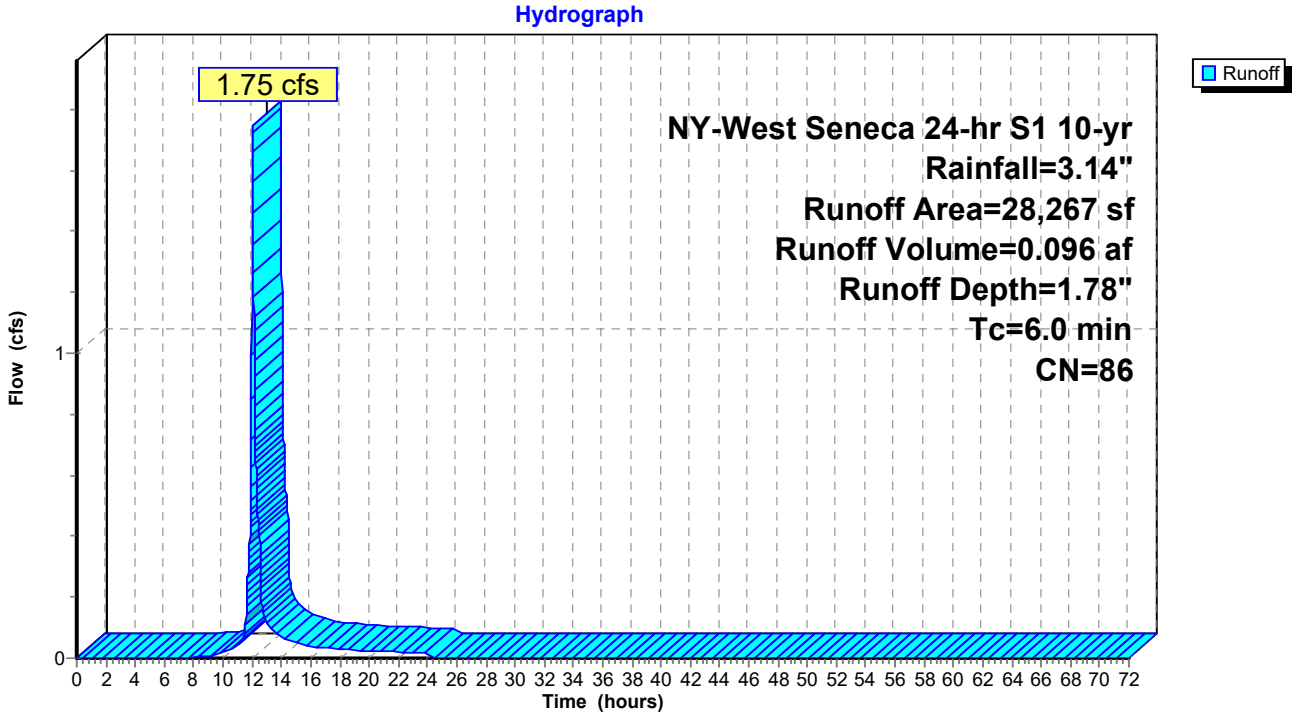
Runoff = 1.75 cfs @ 12.04 hrs, Volume= 0.096 af, Depth= 1.78"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

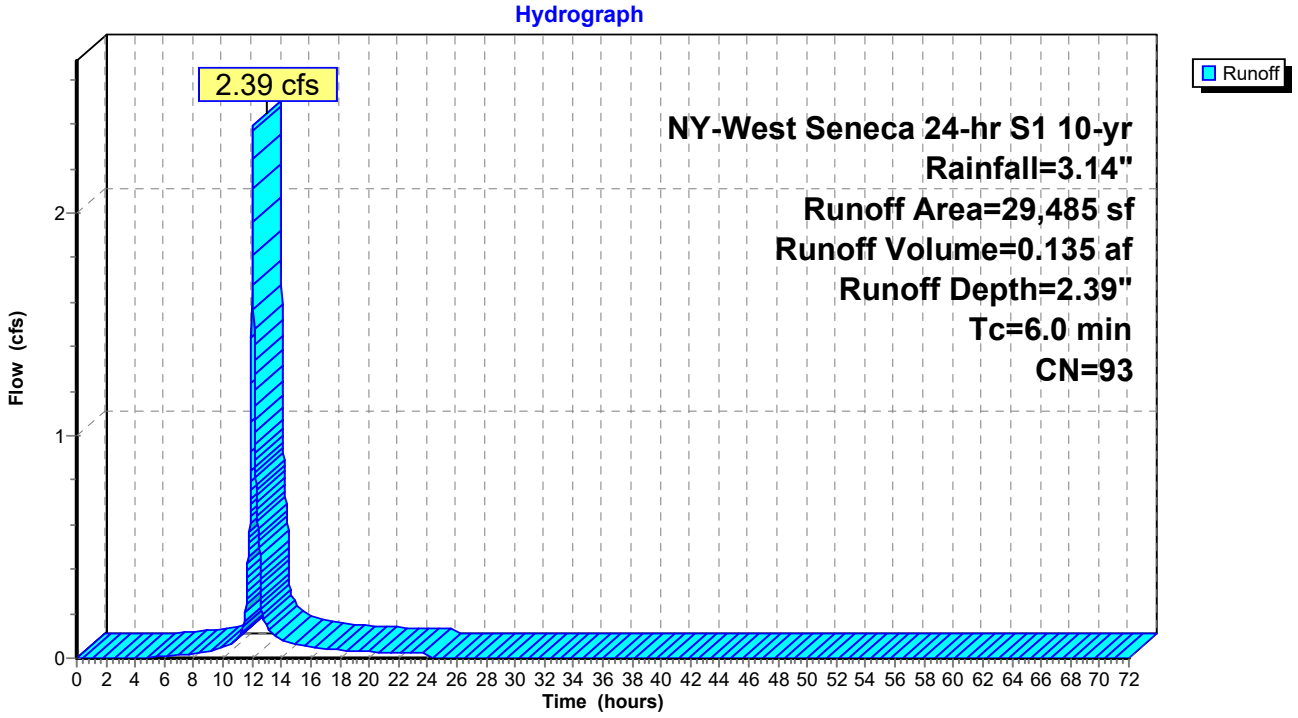
Runoff = 2.39 cfs @ 12.04 hrs, Volume= 0.135 af, Depth= 2.39"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
8,557	80	>75% Grass cover, Good, HSG D
29,485	93	Weighted Average
8,557		29.02% Pervious Area
20,928		70.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

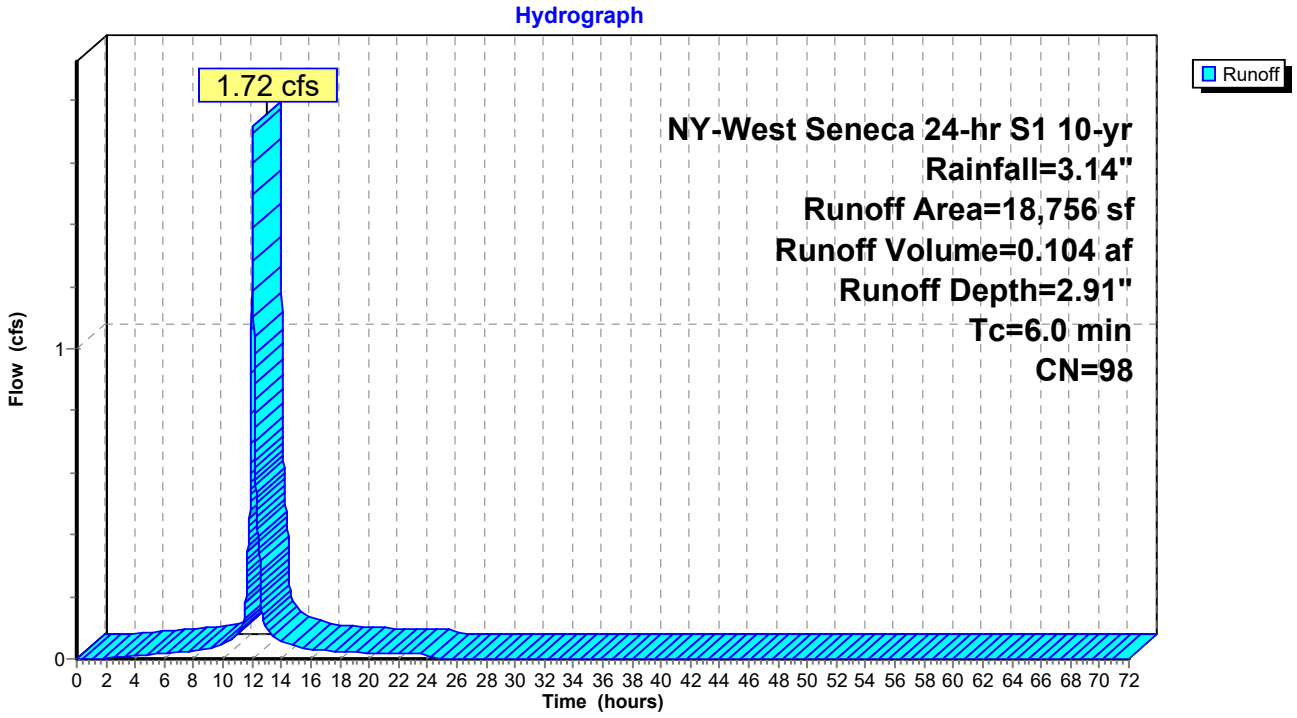
Runoff = 1.72 cfs @ 12.04 hrs, Volume= 0.104 af, Depth= 2.91"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

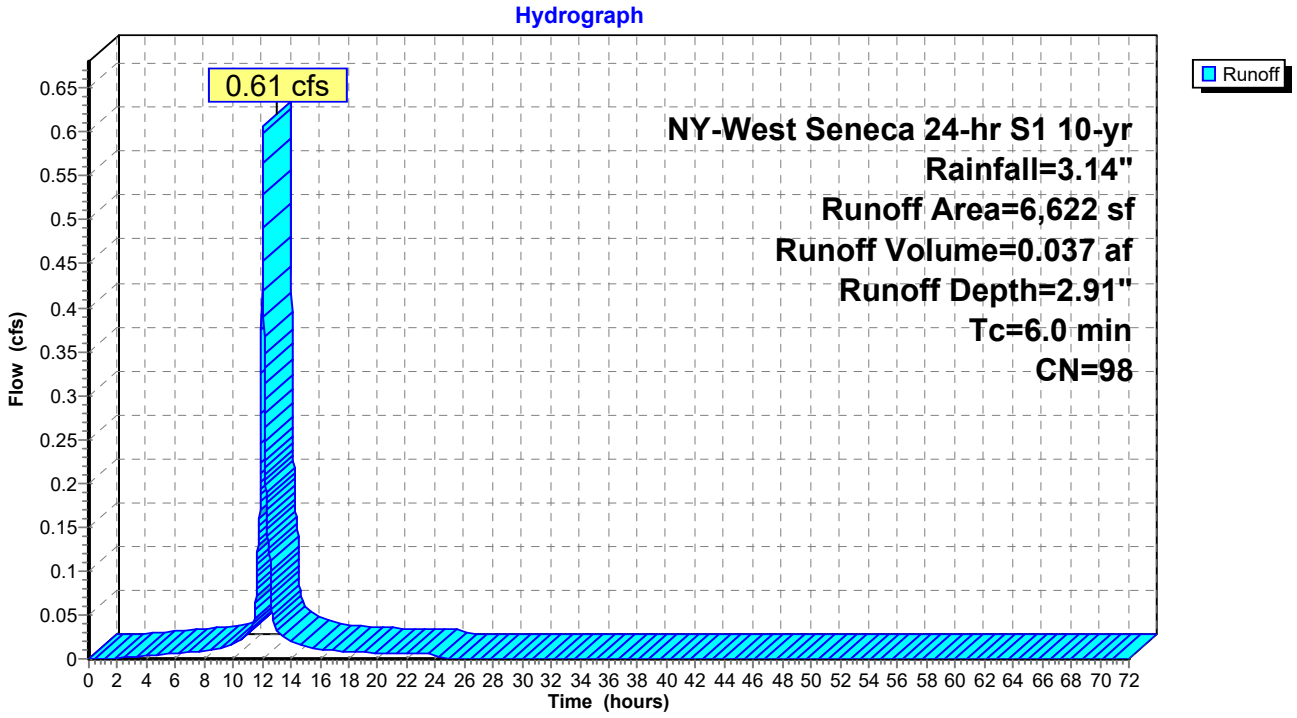
Runoff = 0.61 cfs @ 12.04 hrs, Volume= 0.037 af, Depth= 2.91"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

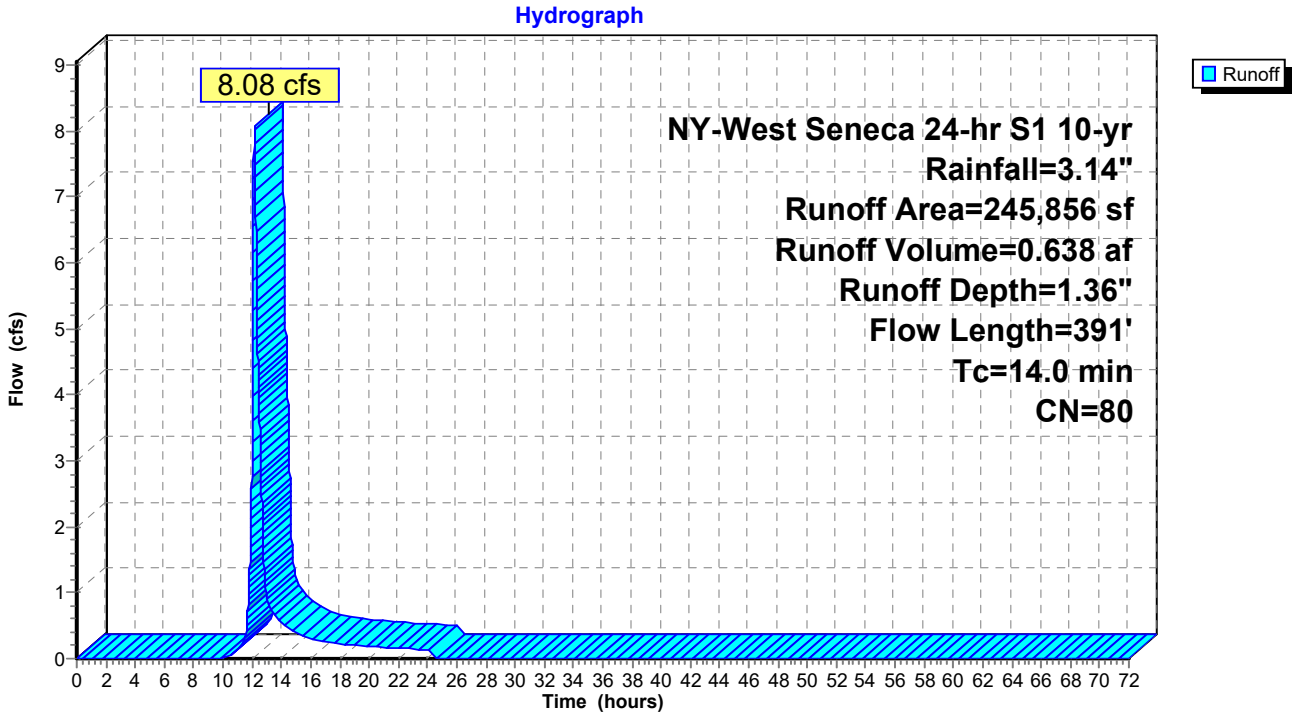
Runoff = 8.08 cfs @ 12.15 hrs, Volume= 0.638 af, Depth= 1.36"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
245,856	80	>75% Grass cover, Good, HSG D
245,856		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

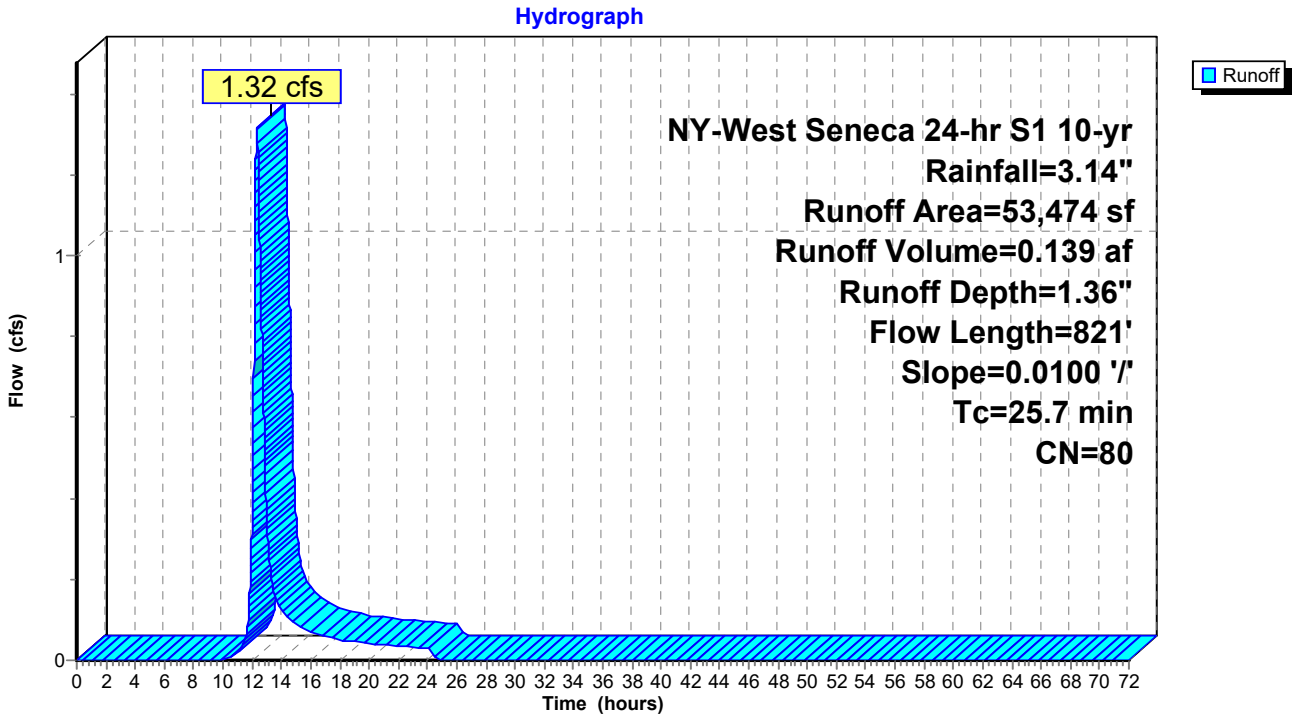
Runoff = 1.32 cfs @ 12.32 hrs, Volume= 0.139 af, Depth= 1.36"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:

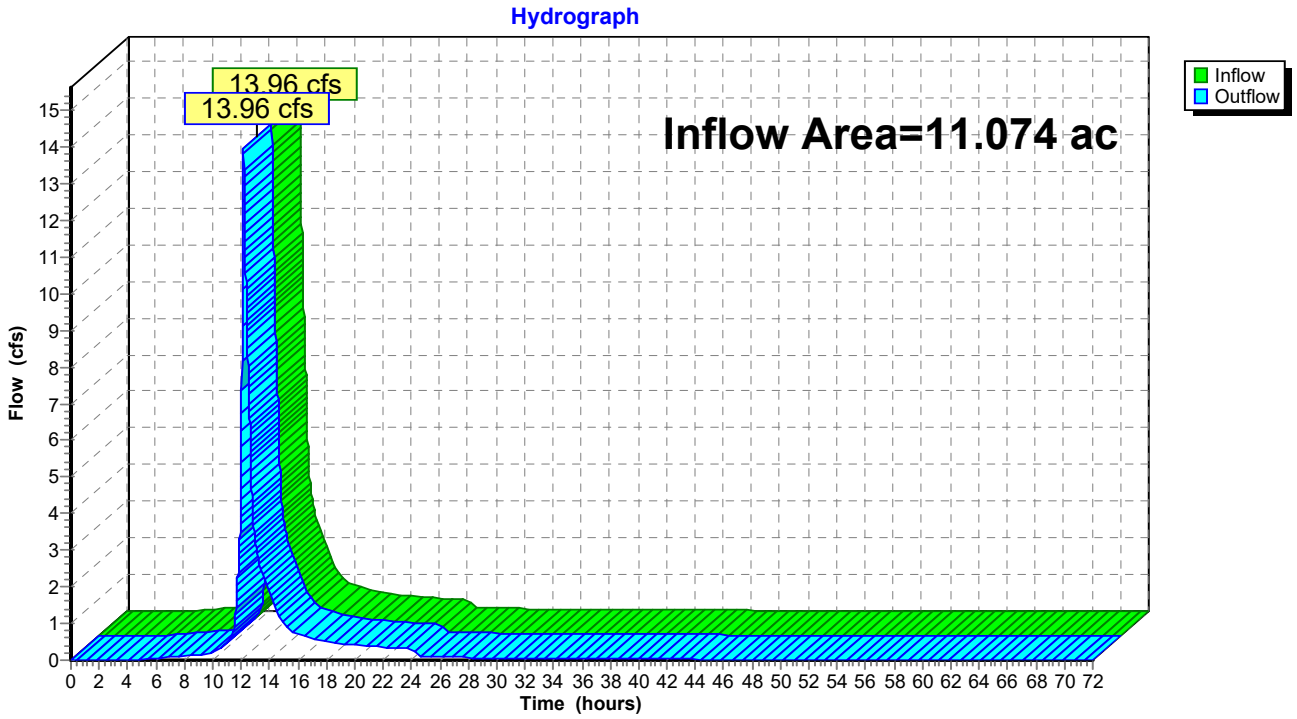


Summary for Reach DP-1: Design Point

Inflow Area = 11.074 ac, 26.79% Impervious, Inflow Depth = 1.75" for 10-yr event
Inflow = 13.96 cfs @ 12.15 hrs, Volume= 1.615 af
Outflow = 13.96 cfs @ 12.15 hrs, Volume= 1.615 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.634 ac, 33.98% Impervious, Inflow Depth = 1.78" for 10-yr event
Inflow = 1.71 cfs @ 12.04 hrs, Volume= 0.094 af
Outflow = 1.12 cfs @ 12.12 hrs, Volume= 0.094 af, Atten= 34%, Lag= 4.6 min
Primary = 0.02 cfs @ 12.12 hrs, Volume= 0.045 af
Routed to Reach DP-1 : Design Point
Secondary = 1.10 cfs @ 12.12 hrs, Volume= 0.049 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.12' @ 12.12 hrs Surf.Area= 1,797 sf Storage= 1,232 cf
Flood Elev= 600.00' Surf.Area= 2,500 sf Storage= 3,120 cf

Plug-Flow detention time= 326.2 min calculated for 0.094 af (100% of inflow)
Center-of-Mass det. time= 326.4 min (1,148.5 - 822.1)

Volume	Invert	Avail.Storage	Storage Description
#1	598.00'	3,120 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
598.00	340	0	0
599.00	1,700	1,020	1,020
600.00	2,500	2,100	3,120

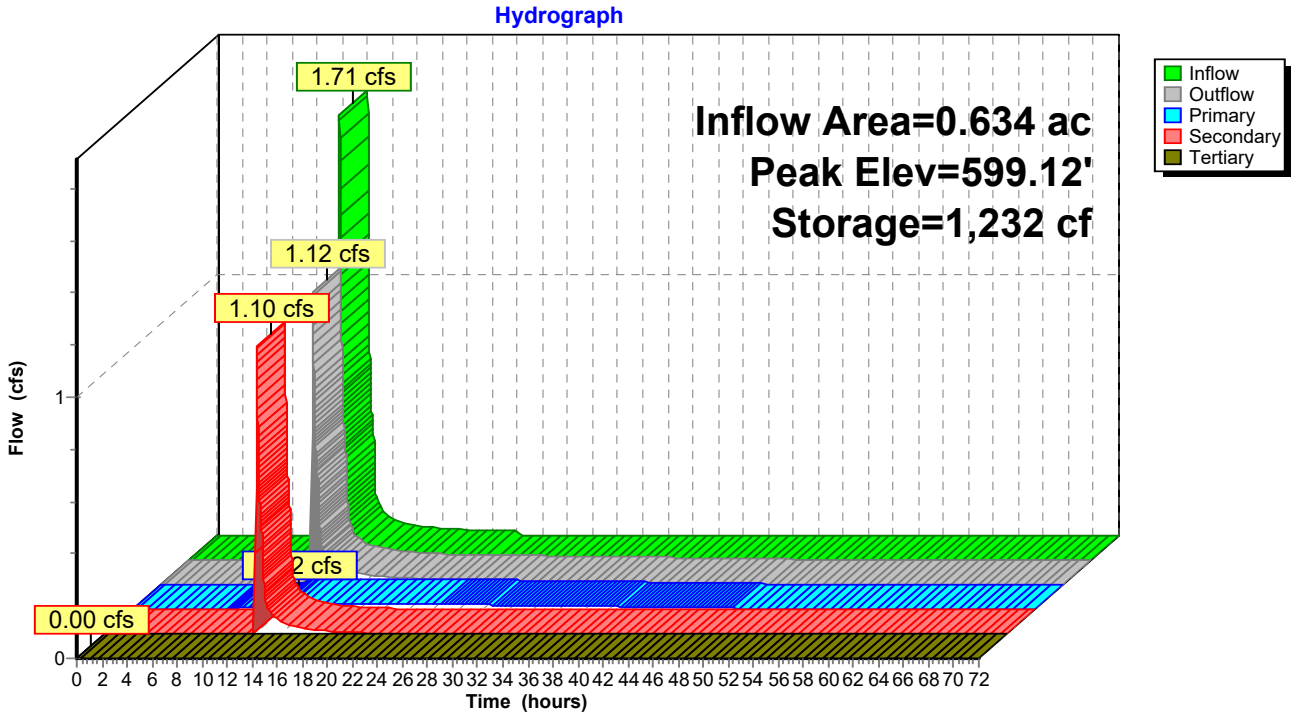
Device	Routing	Invert	Outlet Devices
#1	Primary	598.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.12 hrs HW=599.12' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=1.10 cfs @ 12.12 hrs HW=599.12' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 1.10 cfs of 6.00 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 1.10 cfs @ 1.14 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=598.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 1.78" for 10-yr event
Inflow = 1.75 cfs @ 12.04 hrs, Volume= 0.096 af
Outflow = 1.06 cfs @ 12.13 hrs, Volume= 0.096 af, Atten= 39%, Lag= 5.6 min
Primary = 0.02 cfs @ 12.13 hrs, Volume= 0.048 af
Routed to Reach DP-1 : Design Point
Secondary = 1.04 cfs @ 12.13 hrs, Volume= 0.048 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 597.12' @ 12.13 hrs Surf.Area= 1,941 sf Storage= 1,319 cf
Flood Elev= 598.00' Surf.Area= 2,630 sf Storage= 3,339 cf

Plug-Flow detention time= 339.7 min calculated for 0.096 af (100% of inflow)
Center-of-Mass det. time= 339.9 min (1,162.0 - 822.1)

Volume	Invert	Avail.Storage	Storage Description
#1	596.00'	3,339 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	348	0	0
597.00	1,850	1,099	1,099
598.00	2,630	2,240	3,339

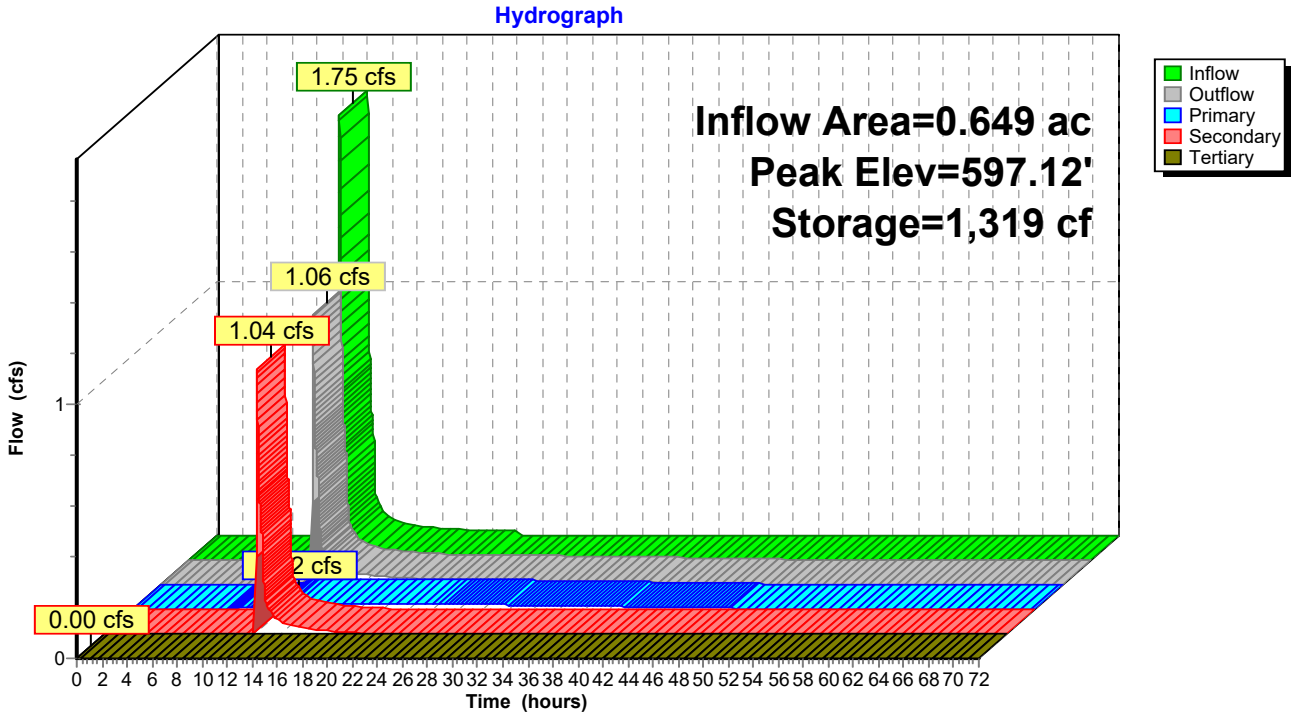
Device	Routing	Invert	Outlet Devices
#1	Primary	596.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.13 hrs HW=597.12' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=1.04 cfs @ 12.13 hrs HW=597.12' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 1.04 cfs of 5.54 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 1.04 cfs @ 1.11 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=596.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.677 ac, 70.98% Impervious, Inflow Depth = 2.39" for 10-yr event
Inflow = 2.39 cfs @ 12.04 hrs, Volume= 0.135 af
Outflow = 1.07 cfs @ 12.18 hrs, Volume= 0.135 af, Atten= 55%, Lag= 8.6 min
Primary = 0.04 cfs @ 12.18 hrs, Volume= 0.084 af
Routed to Reach DP-1 : Design Point
Secondary = 1.03 cfs @ 12.18 hrs, Volume= 0.050 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.12' @ 12.18 hrs Surf.Area= 3,334 sf Storage= 2,359 cf
Flood Elev= 597.00' Surf.Area= 3,978 sf Storage= 5,592 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 411.1 min (1,203.9 - 792.8)

Volume	Invert	Avail.Storage	Storage Description
#1	595.00'	5,592 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
595.00	705	0	0
596.00	3,250	1,978	1,978
597.00	3,978	3,614	5,592

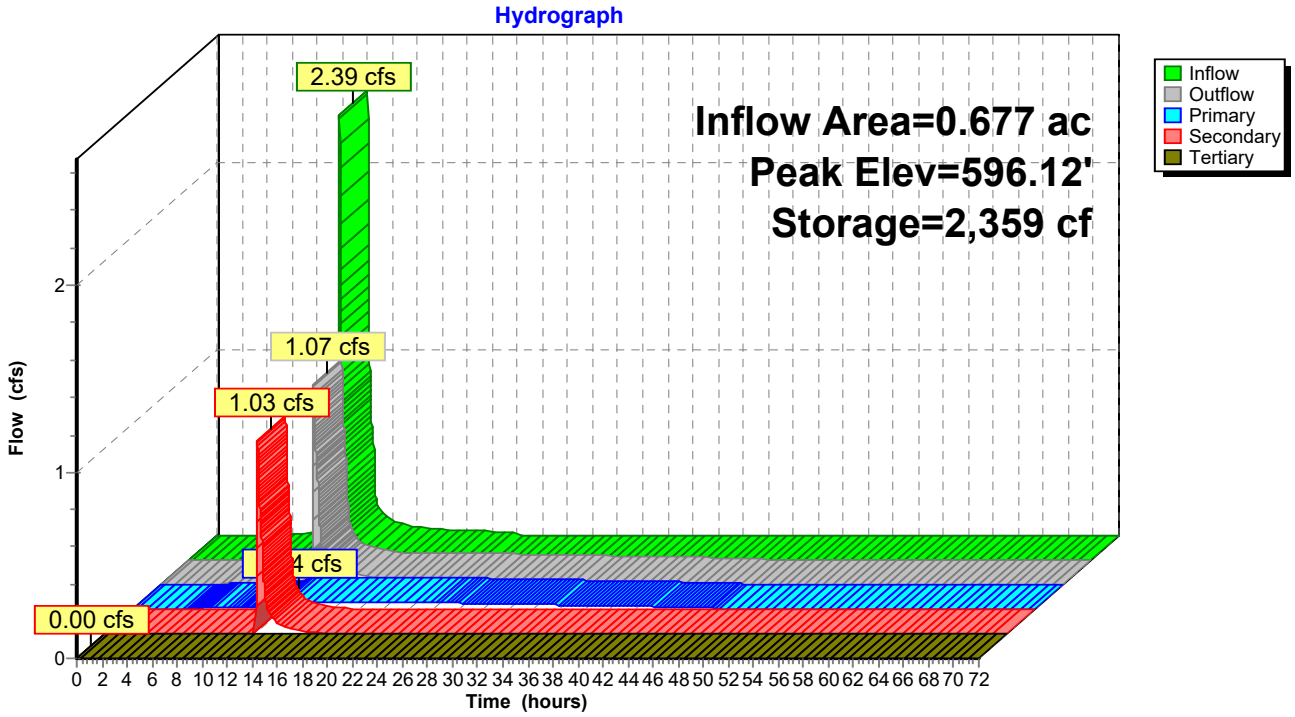
Device	Routing	Invert	Outlet Devices
#1	Primary	595.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.04 cfs @ 12.18 hrs HW=596.12' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.04 cfs)

Secondary OutFlow Max=1.03 cfs @ 12.18 hrs HW=596.12' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 1.03 cfs of 6.00 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 1.03 cfs @ 1.11 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=595.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.091 ac, 90.96% Impervious, Inflow Depth = 2.73" for 10-yr event
Inflow = 8.11 cfs @ 12.04 hrs, Volume= 0.476 af
Outflow = 1.66 cfs @ 12.48 hrs, Volume= 0.476 af, Atten= 80%, Lag= 26.9 min
Primary = 1.66 cfs @ 12.48 hrs, Volume= 0.476 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 593.15' @ 12.48 hrs Surf.Area= 0.127 ac Storage= 0.161 af
Flood Elev= 598.32' Surf.Area= 0.127 ac Storage= 0.433 af

Plug-Flow detention time= 60.0 min calculated for 0.476 af (100% of inflow)
Center-of-Mass det. time= 59.7 min (829.9 - 770.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	591.25'	0.177 af	**37.08'W x 149.10'L x 5.50'H Field A** 0.698 af Overall - 0.256 af Embedded = 0.442 af x 40.0% Voids
#2A	592.00'	0.256 af	**ADS_StormTech MC-3500 d +Cap**x 100 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 100 Chambers in 5 Rows Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf
		0.433 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	591.25'	**8.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.25' / 591.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.66 cfs @ 12.48 hrs HW=593.15' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.66 cfs @ 4.75 fps)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

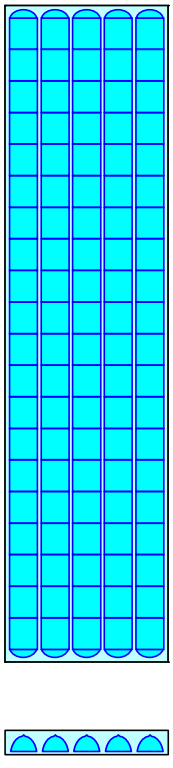
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
5 Rows x 77.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 37.08' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

100 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 5 Rows = 11,144.2 cf Chamber Storage

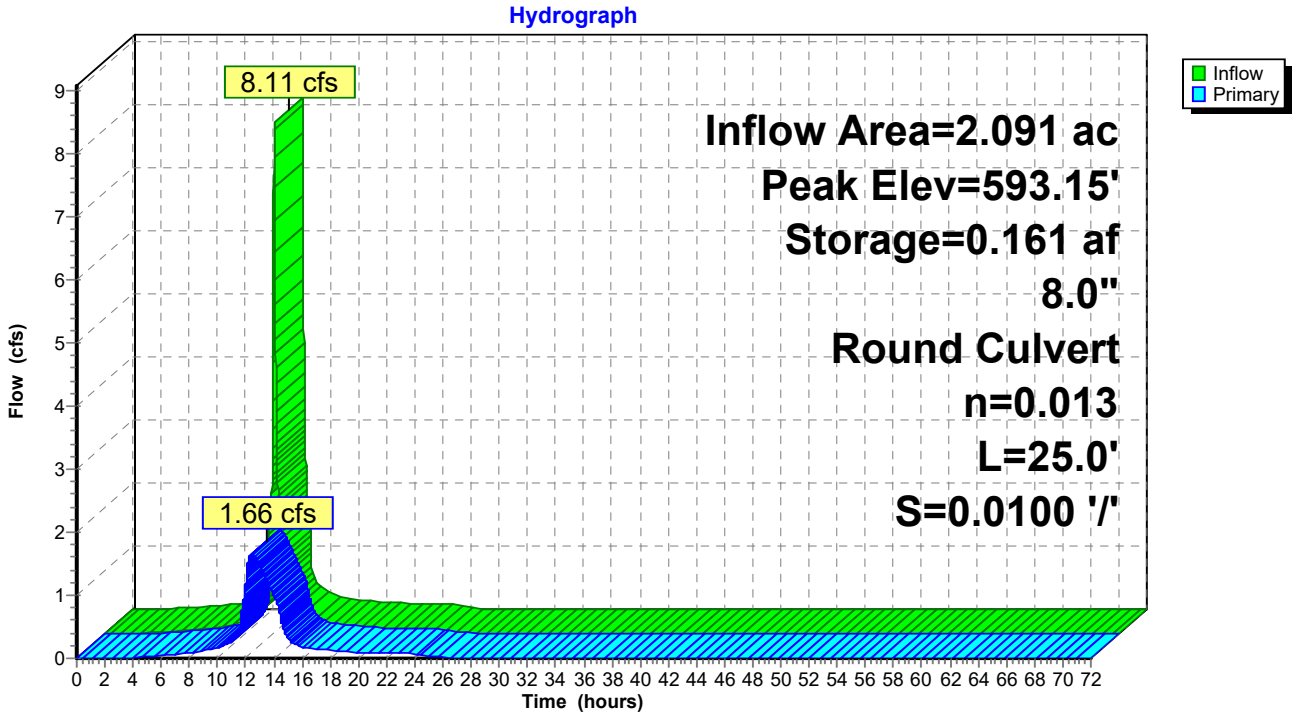
30,410.2 cf Field - 11,144.2 cf Chambers = 19,266.0 cf Stone x 40.0% Voids = 7,706.4 cf Stone Storage

Chamber Storage + Stone Storage = 18,850.6 cf = 0.433 af
Overall Storage Efficiency = 62.0%
Overall System Size = 149.10' x 37.08' x 5.50'

100 Chambers
1,126.3 cy Field
713.6 cy Stone



Pond CH-1: Chambers



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: Runoff Area=27,596 sf 33.98% Impervious Runoff Depth=3.67"
Tc=6.0 min CN=86 Runoff=3.44 cfs 0.194 af

Subcatchment PS-2: Runoff Area=72,316 sf 88.61% Impervious Runoff Depth=4.75"
Tc=6.0 min CN=96 Runoff=10.80 cfs 0.657 af

Subcatchment PS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=3.67"
Tc=6.0 min CN=86 Runoff=3.52 cfs 0.199 af

Subcatchment PS-4: Runoff Area=29,485 sf 70.98% Impervious Runoff Depth=4.41"
Tc=6.0 min CN=93 Runoff=4.23 cfs 0.249 af

Subcatchment PS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=4.98"
Tc=6.0 min CN=98 Runoff=2.85 cfs 0.179 af

Subcatchment PS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=4.98"
Tc=6.0 min CN=98 Runoff=1.01 cfs 0.063 af

Subcatchment PS-7: Runoff Area=245,856 sf 0.00% Impervious Runoff Depth=3.09"
Flow Length=391' Tc=14.0 min CN=80 Runoff=18.94 cfs 1.451 af

Subcatchment PS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=3.09"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=3.15 cfs 0.316 af

Reach DP-1: Design Point Inflow=31.66 cfs 3.307 af
Outflow=31.66 cfs 3.307 af

Pond BIO-1: Filtration Bioretention Peak Elev=599.25' Storage=1,462 cf Inflow=3.44 cfs 0.194 af
Primary=0.02 cfs 0.048 af Secondary=3.18 cfs 0.146 af Tertiary=0.00 cfs 0.000 af Outflow=3.21 cfs 0.194 af

Pond BIO-2: Filtration Bioretention Peak Elev=597.25' Storage=1,582 cf Inflow=3.52 cfs 0.199 af
Primary=0.02 cfs 0.052 af Secondary=3.23 cfs 0.147 af Tertiary=0.00 cfs 0.000 af Outflow=3.26 cfs 0.199 af

Pond BIO-3: Filtration Bioretention Peak Elev=596.27' Storage=2,865 cf Inflow=4.23 cfs 0.249 af
Primary=0.04 cfs 0.094 af Secondary=3.57 cfs 0.155 af Tertiary=0.00 cfs 0.000 af Outflow=3.61 cfs 0.249 af

Pond CH-1: Chambers Peak Elev=594.85' Storage=0.322 af Inflow=13.65 cfs 0.836 af
8.0" Round Culvert n=0.013 L=25.0' S=0.0100 '/' Outflow=2.40 cfs 0.836 af

Total Runoff Area = 11.074 ac Runoff Volume = 3.308 af Average Runoff Depth = 3.58"
73.21% Pervious = 8.107 ac 26.79% Impervious = 2.967 ac

Summary for Subcatchment PS-1:

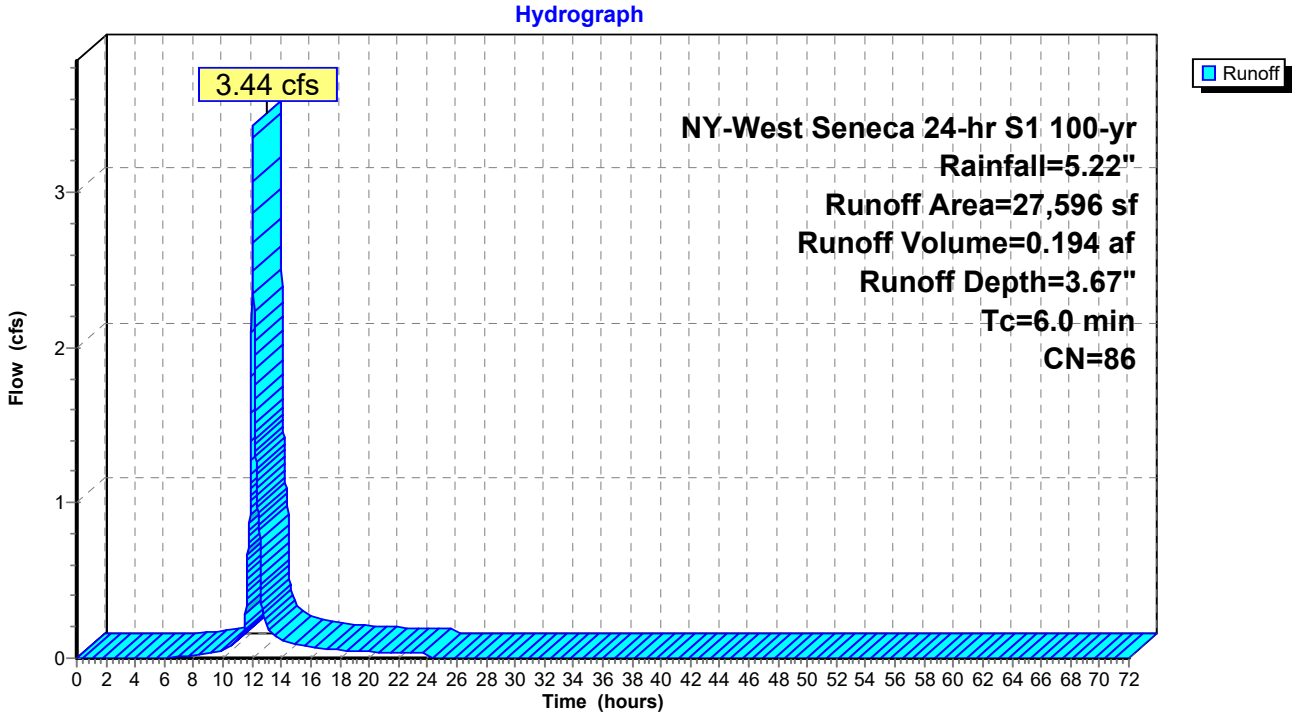
Runoff = 3.44 cfs @ 12.04 hrs, Volume= 0.194 af, Depth= 3.67"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
9,376	98	Paved parking, HSG D
18,220	80	>75% Grass cover, Good, HSG D
27,596	86	Weighted Average
18,220		66.02% Pervious Area
9,376		33.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-2:

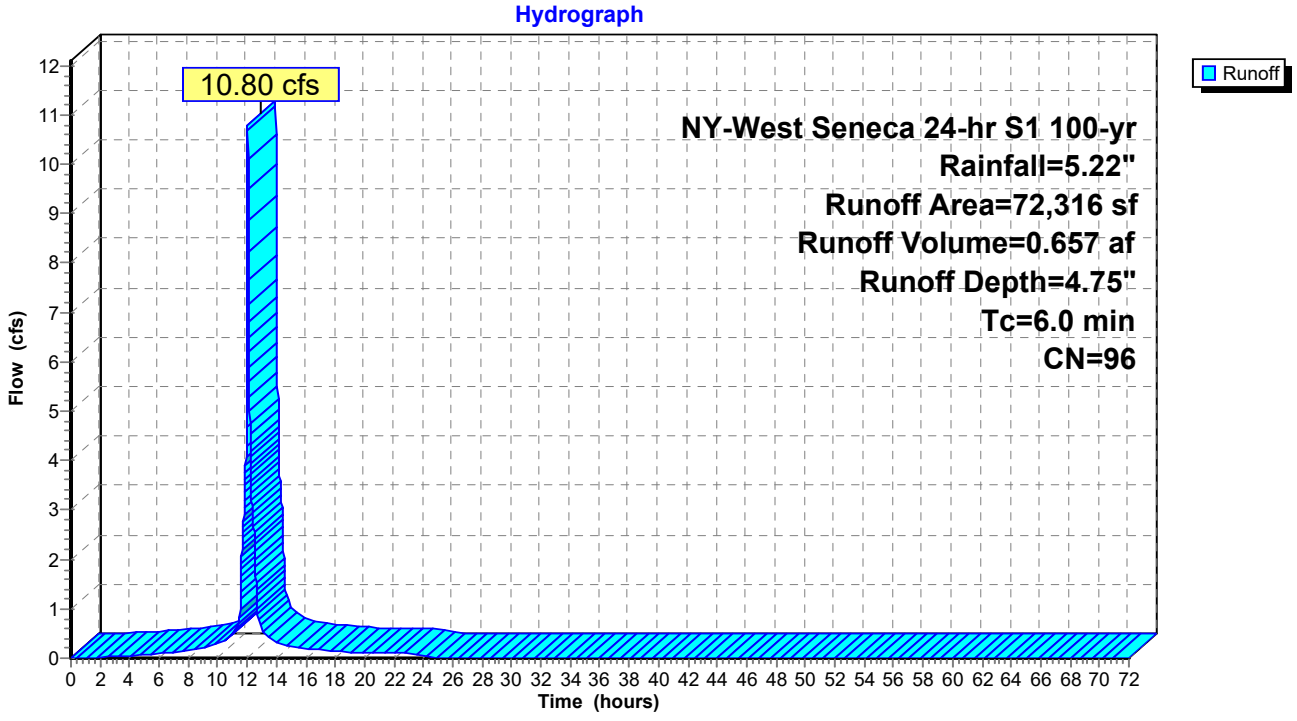
Runoff = 10.80 cfs @ 12.04 hrs, Volume= 0.657 af, Depth= 4.75"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
64,081	98	Paved parking, HSG D
8,235	80	>75% Grass cover, Good, HSG D
72,316	96	Weighted Average
8,235		11.39% Pervious Area
64,081		88.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

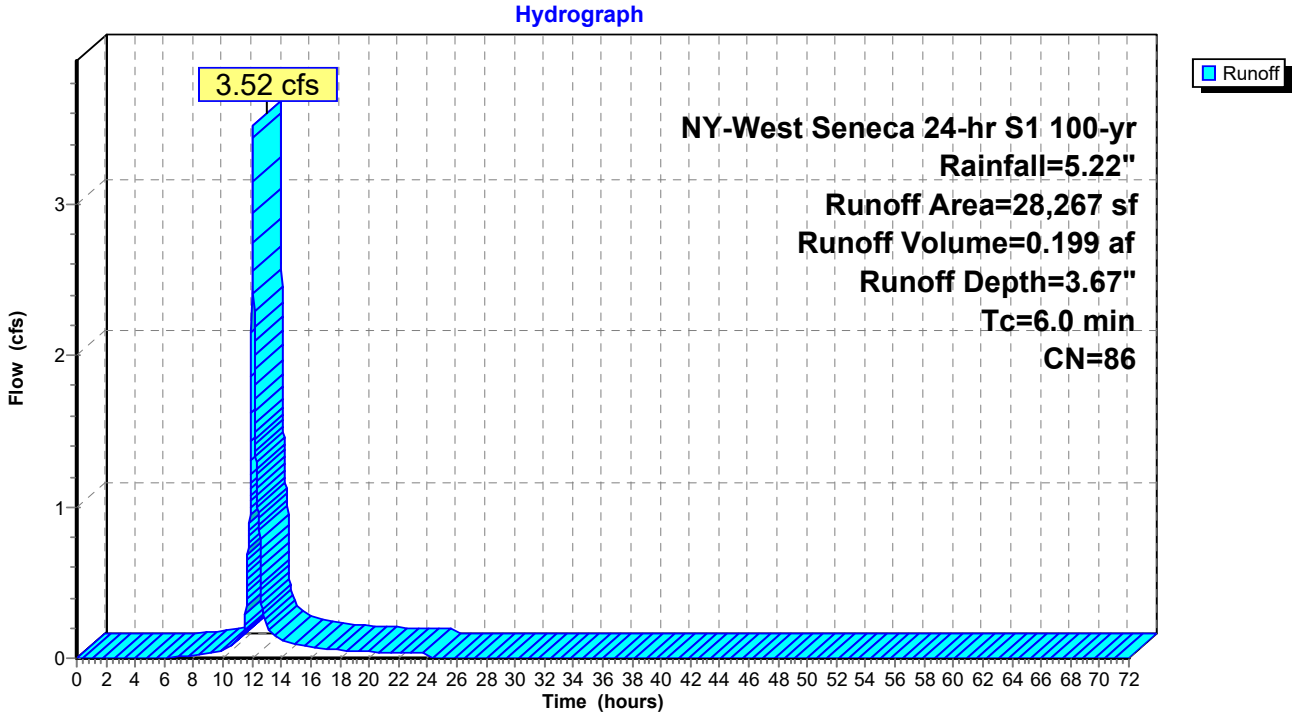
Runoff = 3.52 cfs @ 12.04 hrs, Volume= 0.199 af, Depth= 3.67"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

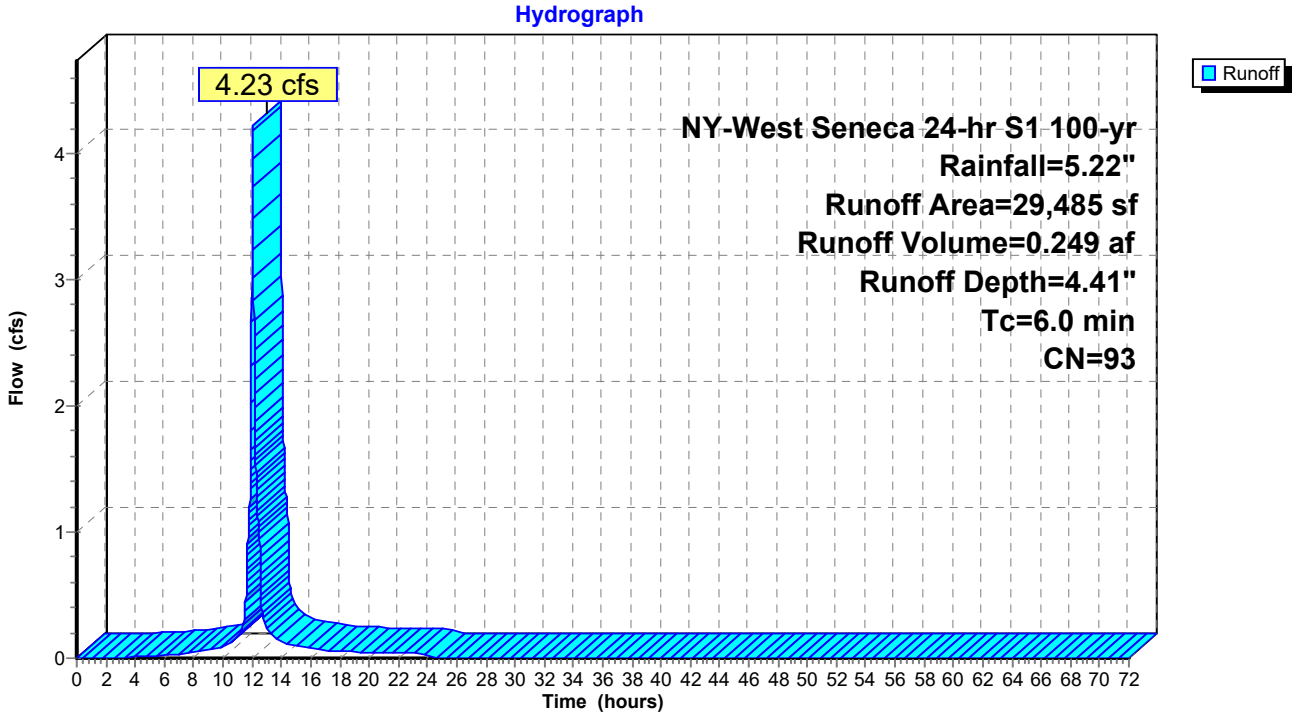
Runoff = 4.23 cfs @ 12.04 hrs, Volume= 0.249 af, Depth= 4.41"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
8,557	80	>75% Grass cover, Good, HSG D
29,485	93	Weighted Average
8,557		29.02% Pervious Area
20,928		70.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

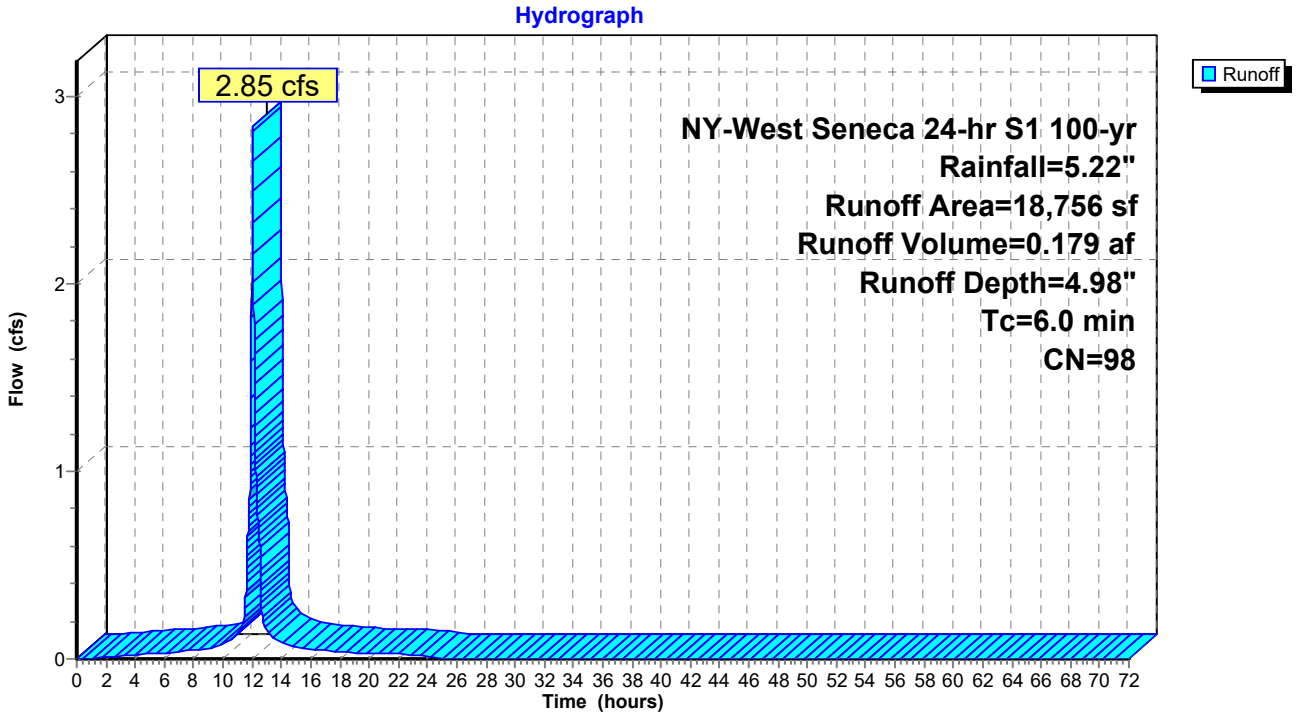
Runoff = 2.85 cfs @ 12.04 hrs, Volume= 0.179 af, Depth= 4.98"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

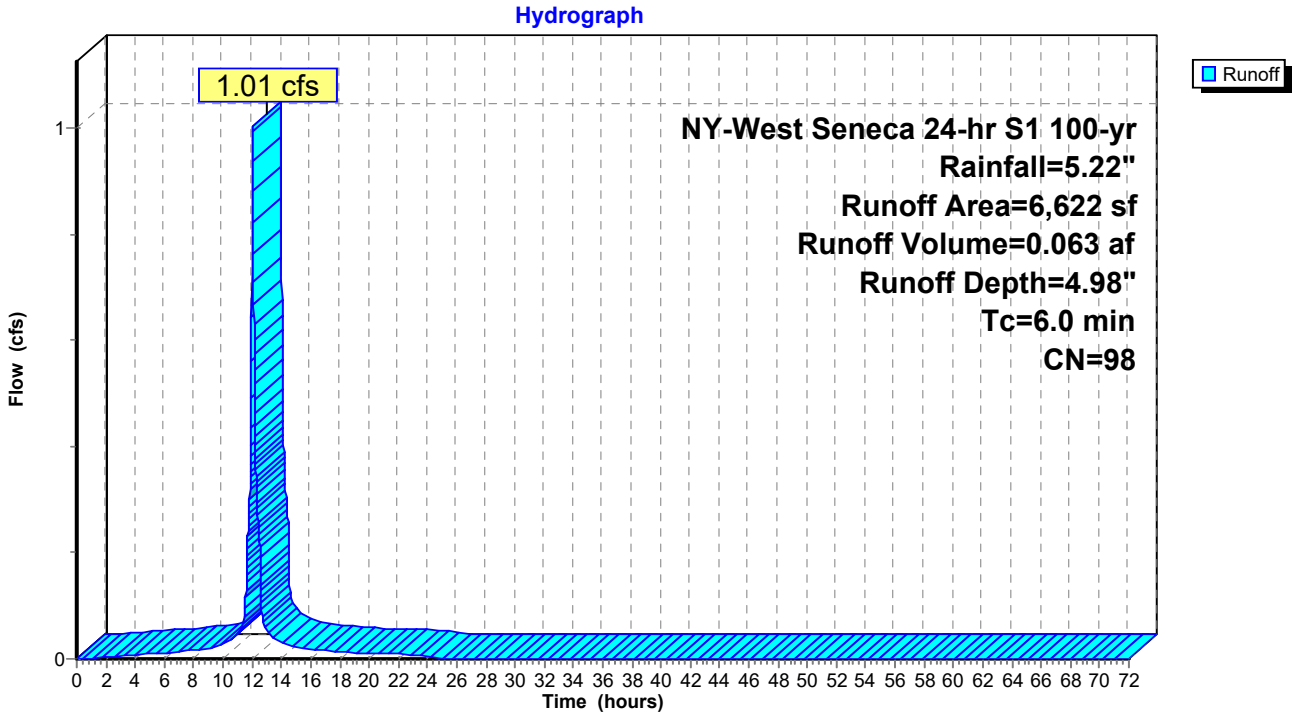
Runoff = 1.01 cfs @ 12.04 hrs, Volume= 0.063 af, Depth= 4.98"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

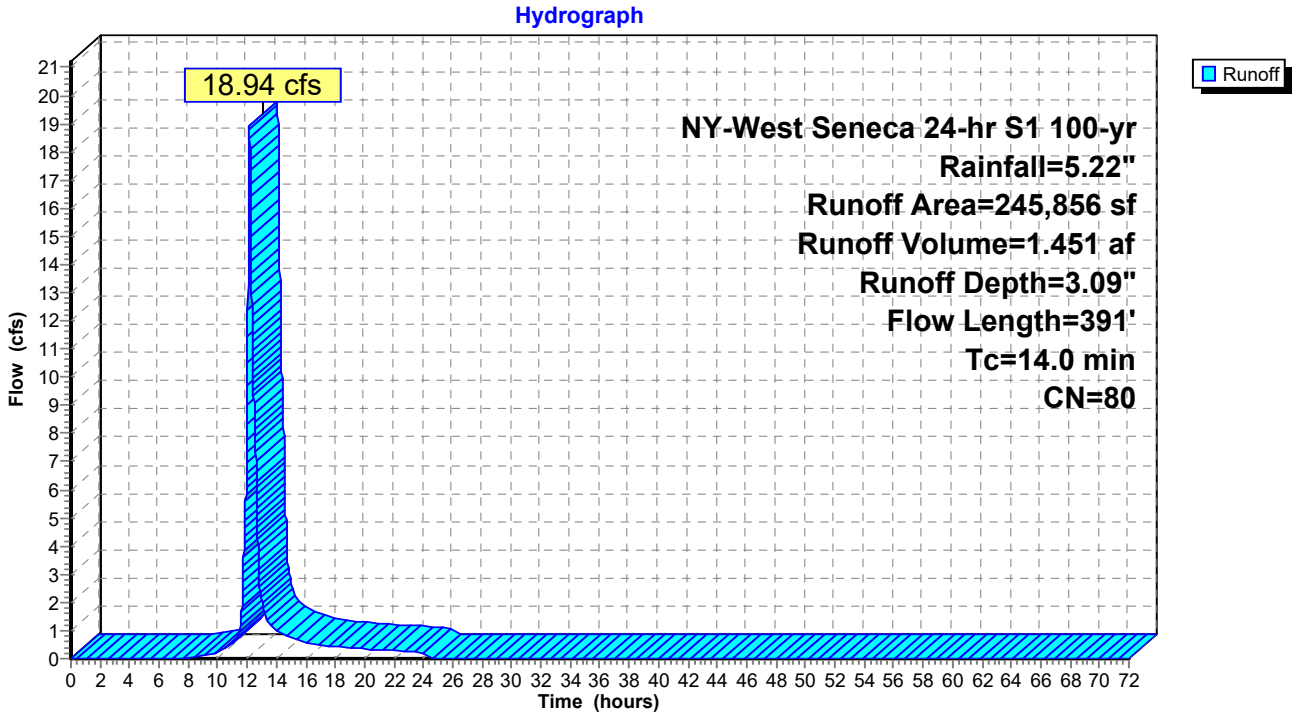
Runoff = 18.94 cfs @ 12.15 hrs, Volume= 1.451 af, Depth= 3.09"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
245,856	80	>75% Grass cover, Good, HSG D
245,856		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

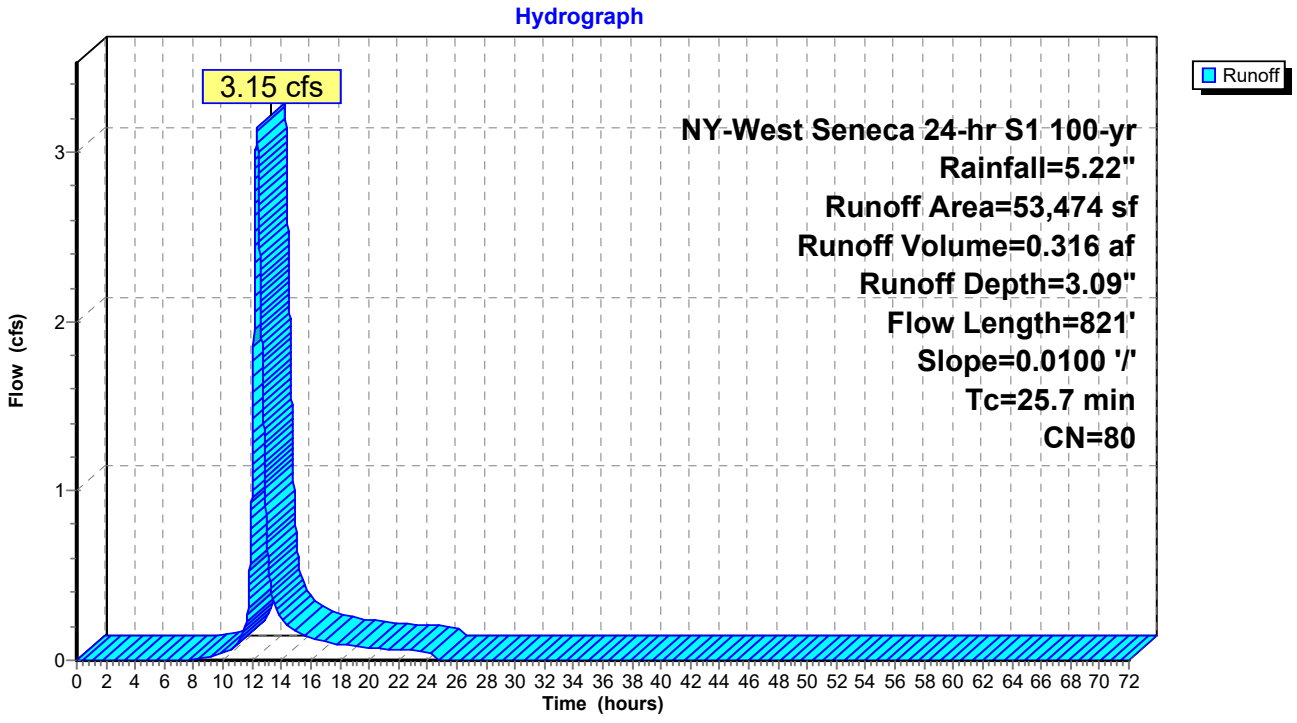
Runoff = 3.15 cfs @ 12.31 hrs, Volume= 0.316 af, Depth= 3.09"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:

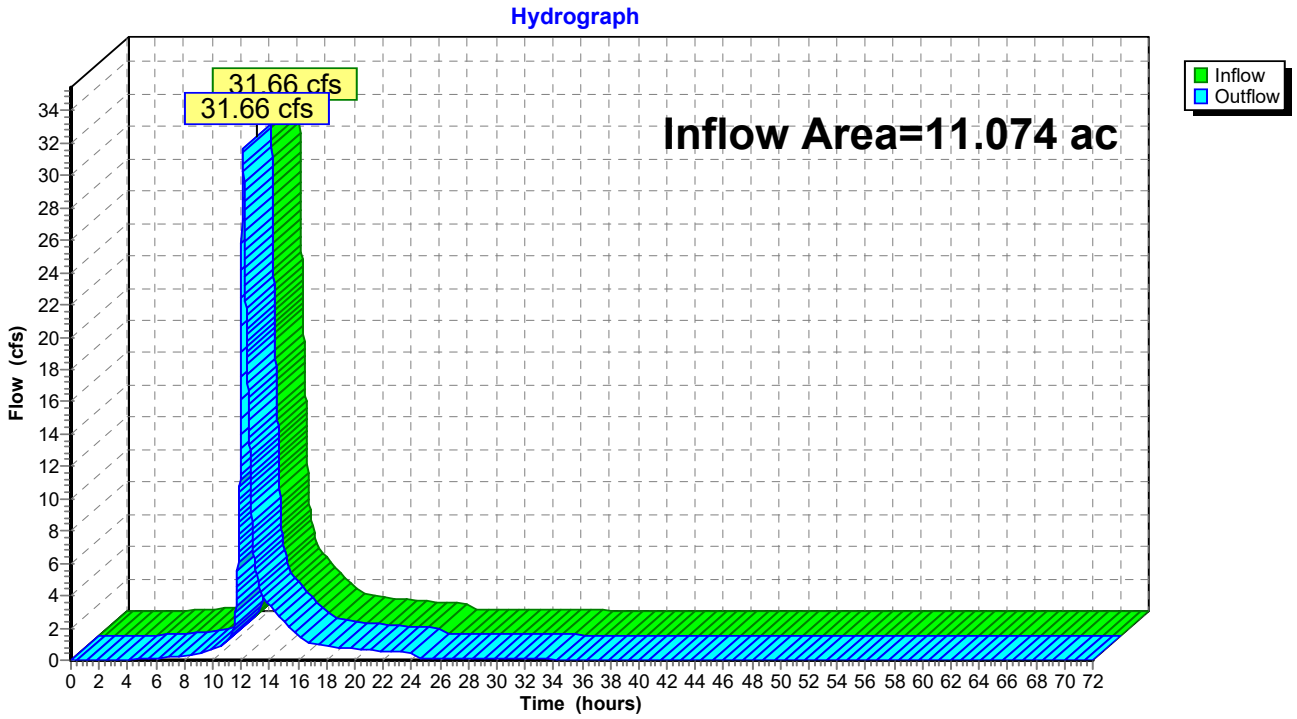


Summary for Reach DP-1: Design Point

Inflow Area = 11.074 ac, 26.79% Impervious, Inflow Depth = 3.58" for 100-yr event
Inflow = 31.66 cfs @ 12.12 hrs, Volume= 3.307 af
Outflow = 31.66 cfs @ 12.12 hrs, Volume= 3.307 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.634 ac, 33.98% Impervious, Inflow Depth = 3.67" for 100-yr event
Inflow = 3.44 cfs @ 12.04 hrs, Volume= 0.194 af
Outflow = 3.21 cfs @ 12.06 hrs, Volume= 0.194 af, Atten= 7%, Lag= 1.5 min
Primary = 0.02 cfs @ 12.06 hrs, Volume= 0.048 af
Routed to Reach DP-1 : Design Point
Secondary = 3.18 cfs @ 12.06 hrs, Volume= 0.146 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.25' @ 12.06 hrs Surf.Area= 1,896 sf Storage= 1,462 cf
Flood Elev= 600.00' Surf.Area= 2,500 sf Storage= 3,120 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 168.5 min (967.4 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1	598.00'	3,120 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
598.00	340	0	0
599.00	1,700	1,020	1,020
600.00	2,500	2,100	3,120

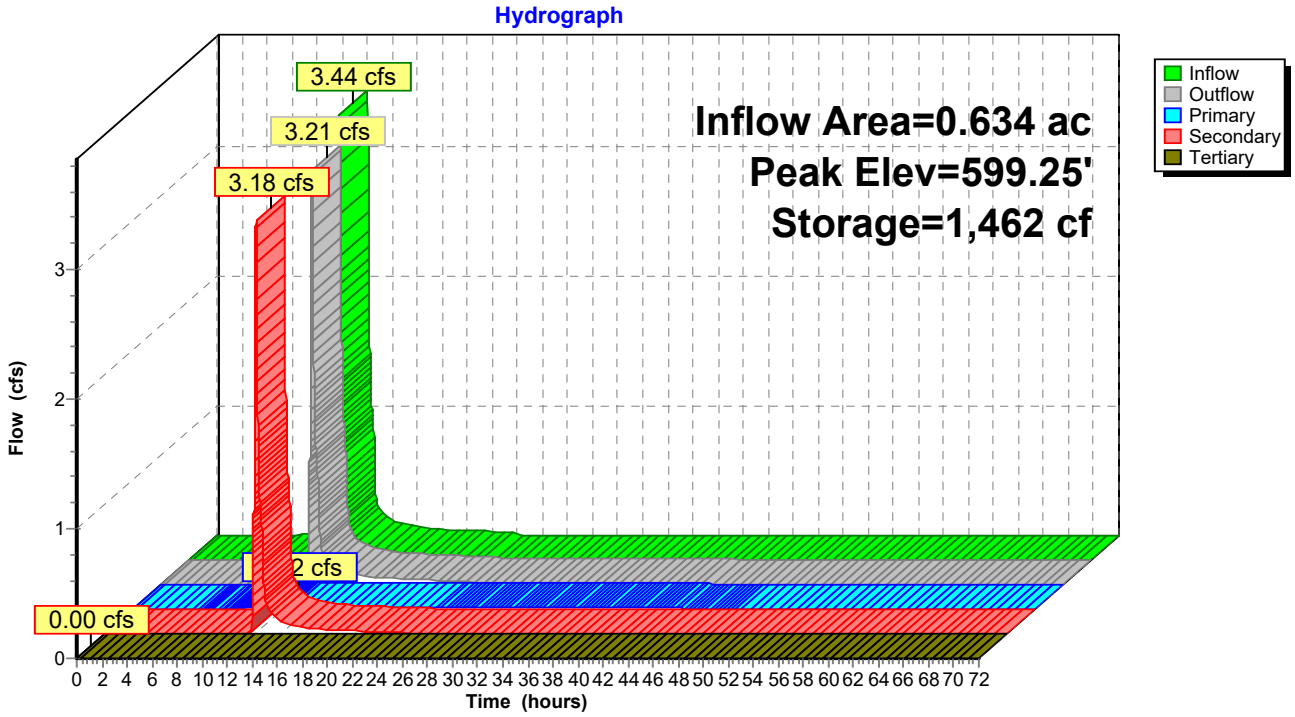
Device	Routing	Invert	Outlet Devices
#1	Primary	598.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.06 hrs HW=599.25' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=3.18 cfs @ 12.06 hrs HW=599.25' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 3.18 cfs of 6.09 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 3.18 cfs @ 1.62 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=598.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 3.67" for 100-yr event
Inflow = 3.52 cfs @ 12.04 hrs, Volume= 0.199 af
Outflow = 3.26 cfs @ 12.06 hrs, Volume= 0.199 af, Atten= 8%, Lag= 1.6 min
Primary = 0.02 cfs @ 12.06 hrs, Volume= 0.052 af
Routed to Reach DP-1 : Design Point
Secondary = 3.23 cfs @ 12.06 hrs, Volume= 0.147 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 597.25' @ 12.06 hrs Surf.Area= 2,044 sf Storage= 1,582 cf
Flood Elev= 598.00' Surf.Area= 2,630 sf Storage= 3,339 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 176.3 min (975.2 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1	596.00'	3,339 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	348	0	0
597.00	1,850	1,099	1,099
598.00	2,630	2,240	3,339

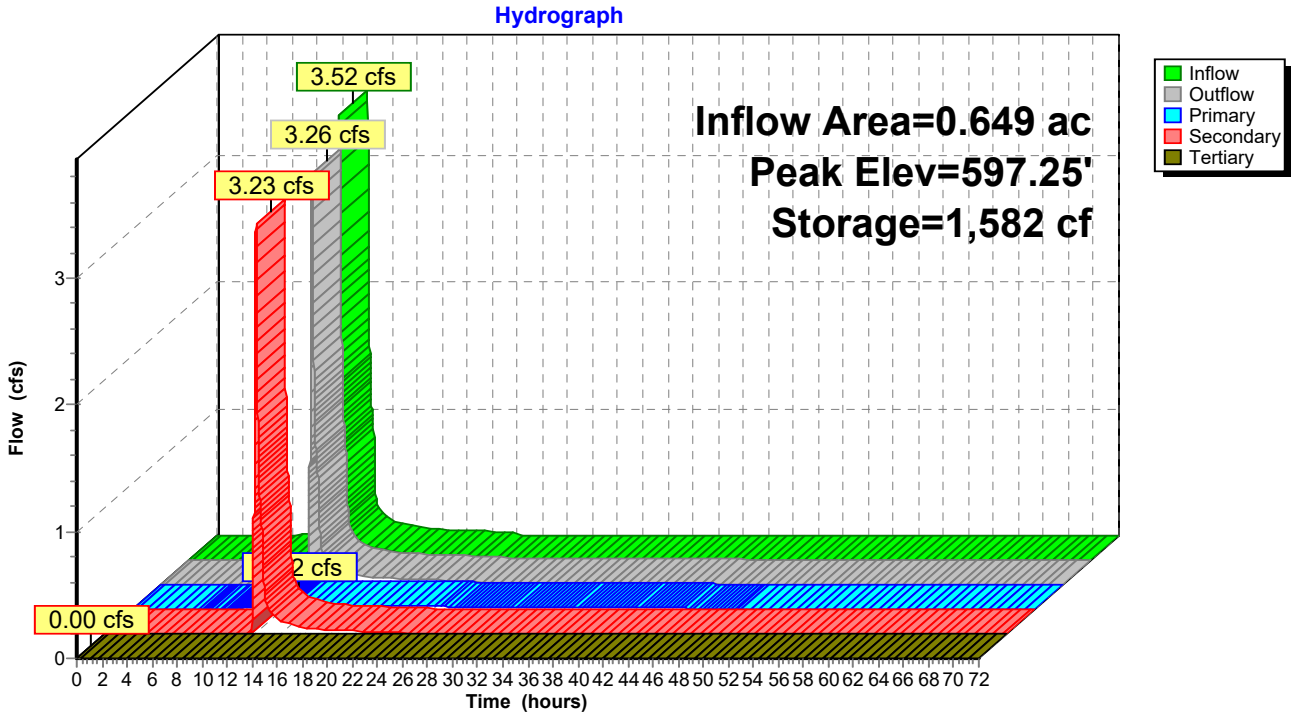
Device	Routing	Invert	Outlet Devices
#1	Primary	596.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.06 hrs HW=597.25' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=3.22 cfs @ 12.06 hrs HW=597.25' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 3.22 cfs of 5.63 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 3.22 cfs @ 1.63 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=596.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.677 ac, 70.98% Impervious, Inflow Depth = 4.41" for 100-yr event
Inflow = 4.23 cfs @ 12.04 hrs, Volume= 0.249 af
Outflow = 3.61 cfs @ 12.08 hrs, Volume= 0.249 af, Atten= 15%, Lag= 2.3 min
Primary = 0.04 cfs @ 12.08 hrs, Volume= 0.094 af
Routed to Reach DP-1 : Design Point
Secondary = 3.57 cfs @ 12.08 hrs, Volume= 0.155 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.27' @ 12.08 hrs Surf.Area= 3,443 sf Storage= 2,865 cf
Flood Elev= 597.00' Surf.Area= 3,978 sf Storage= 5,592 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 255.7 min (1,030.5 - 774.9)

Volume	Invert	Avail.Storage	Storage Description
#1	595.00'	5,592 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
595.00	705	0	0
596.00	3,250	1,978	1,978
597.00	3,978	3,614	5,592

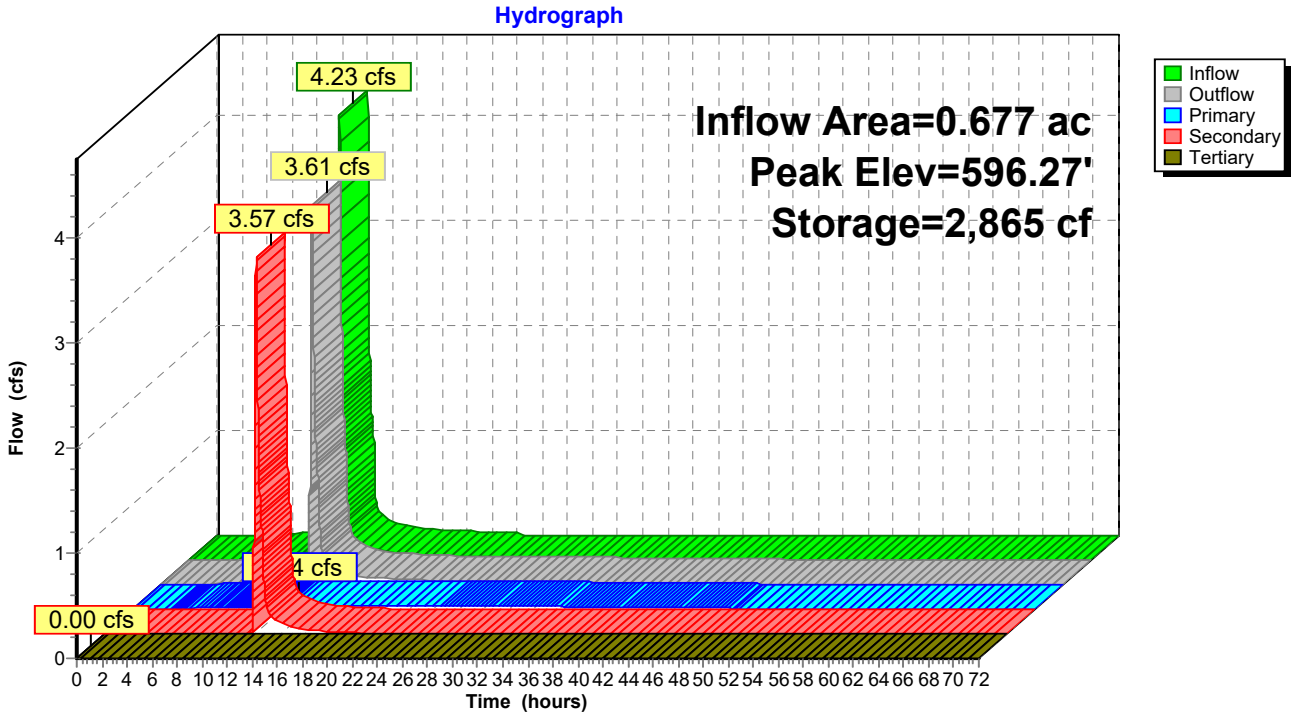
Device	Routing	Invert	Outlet Devices
#1	Primary	595.00'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.04 cfs @ 12.08 hrs HW=596.26' TW=0.00' (Dynamic Tailwater)
└**1=Exfiltration Through Media** (Exfiltration Controls 0.04 cfs)

Secondary OutFlow Max=3.57 cfs @ 12.08 hrs HW=596.26' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 3.57 cfs of 6.11 cfs potential flow)
└**2=Overflow Grate** (Weir Controls 3.57 cfs @ 1.68 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=595.00' TW=0.00' (Dynamic Tailwater)
└**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.091 ac, 90.96% Impervious, Inflow Depth = 4.80" for 100-yr event
Inflow = 13.65 cfs @ 12.04 hrs, Volume= 0.836 af
Outflow = 2.40 cfs @ 12.57 hrs, Volume= 0.836 af, Atten= 82%, Lag= 31.8 min
Primary = 2.40 cfs @ 12.57 hrs, Volume= 0.836 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 594.85' @ 12.57 hrs Surf.Area= 0.127 ac Storage= 0.322 af
Flood Elev= 598.32' Surf.Area= 0.127 ac Storage= 0.433 af

Plug-Flow detention time= 68.0 min calculated for 0.836 af (100% of inflow)
Center-of-Mass det. time= 68.1 min (825.0 - 757.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	591.25'	0.177 af	**37.08'W x 149.10'L x 5.50'H Field A** 0.698 af Overall - 0.256 af Embedded = 0.442 af x 40.0% Voids
#2A	592.00'	0.256 af	**ADS_StormTech MC-3500 d +Cap**x 100 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 100 Chambers in 5 Rows Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf
		0.433 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	591.25'	**8.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.25' / 591.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.40 cfs @ 12.57 hrs HW=594.85' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.40 cfs @ 6.87 fps)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 5 rows = 149.0 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

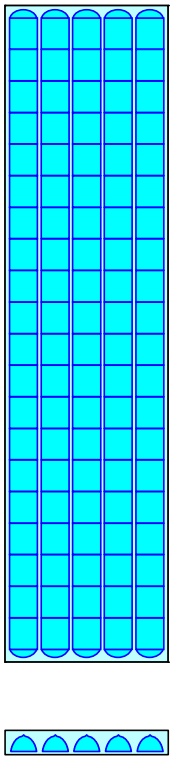
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
5 Rows x 77.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 37.08' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

100 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 5 Rows = 11,144.2 cf Chamber Storage

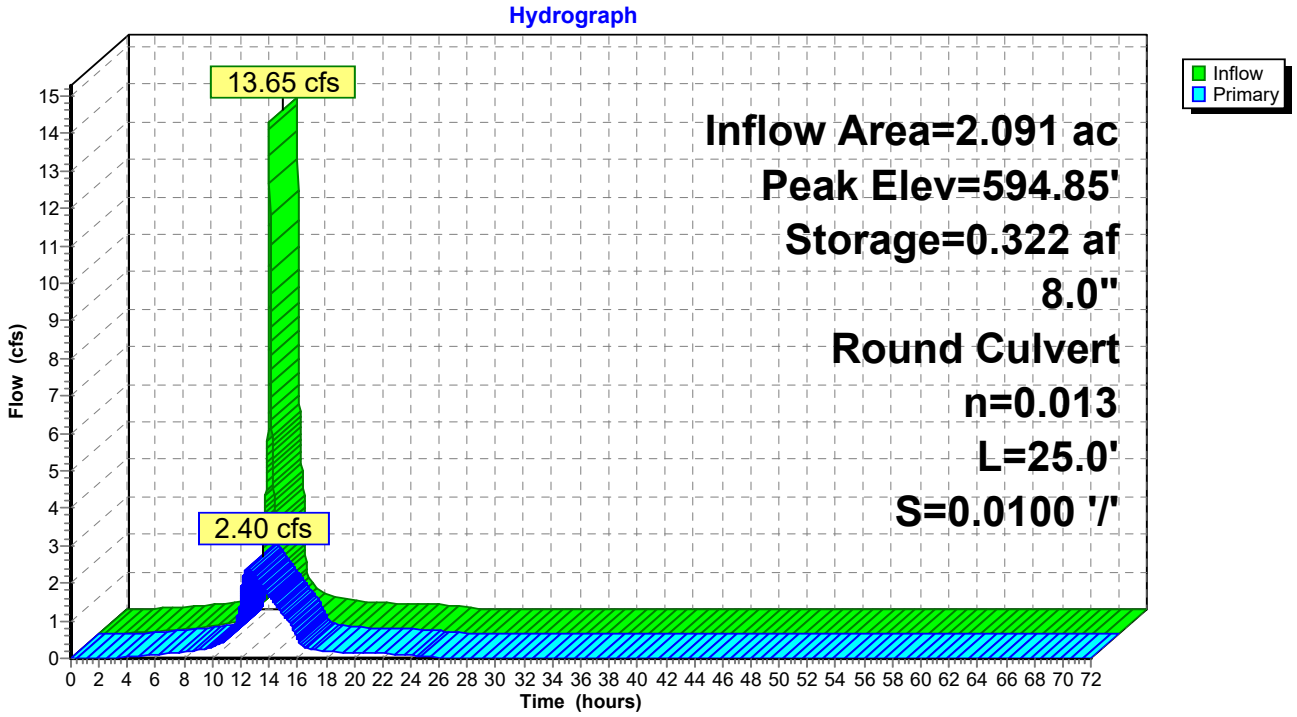
30,410.2 cf Field - 11,144.2 cf Chambers = 19,266.0 cf Stone x 40.0% Voids = 7,706.4 cf Stone Storage

Chamber Storage + Stone Storage = 18,850.6 cf = 0.433 af
Overall Storage Efficiency = 62.0%
Overall System Size = 149.10' x 37.08' x 5.50'

100 Chambers
1,126.3 cy Field
713.6 cy Stone



Pond CH-1: Chambers



Events for Subcatchment PS-1:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	0.72	0.038	0.72
10-yr	3.14	1.71	0.094	1.78
100-yr	**5.22**	**3.44**	**0.194**	**3.67**

Events for Subcatchment PS-2:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	3.74	0.194	1.40
10-yr	3.14	6.39	0.372	2.69
100-yr	**5.22**	**10.80**	**0.657**	**4.75**

Events for Subcatchment PS-3:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	0.74	0.039	0.72
10-yr	3.14	1.75	0.096	1.78
100-yr	**5.22**	**3.52**	**0.199**	**3.67**

Events for Subcatchment PS-4:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	1.28	0.065	1.15
10-yr	3.14	2.39	0.135	2.39
100-yr	**5.22**	**4.23**	**0.249**	**4.41**

Events for Subcatchment PS-5:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	1.06	0.057	1.60
10-yr	3.14	1.72	0.104	2.91
100-yr	**5.22**	**2.85**	**0.179**	**4.98**

Events for Subcatchment PS-6:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	0.37	0.020	1.60
10-yr	3.14	0.61	0.037	2.91
100-yr	**5.22**	**1.01**	**0.063**	**4.98**

Events for Subcatchment PS-7:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	2.49	0.215	0.46
10-yr	3.14	8.08	0.638	1.36
100-yr	**5.22**	**18.94**	**1.451**	**3.09**

Events for Subcatchment PS-8:

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-yr	1.82	0.40	0.047	0.46
10-yr	3.14	1.32	0.139	1.36
100-yr	**5.22**	**3.15**	**0.316**	**3.09**

Events for Reach DP-1: Design Point

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	4.12	4.12	**0.00**	**0**
10-yr	13.96	13.96	0.00	0
100-yr	**31.66**	**31.66**	0.00	0

Events for Pond BIO-1: Filtration Bioretention

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Tertiary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	0.72	0.02	0.02	0.00	**0.00**	598.98	994
10-yr	1.71	1.12	0.02	1.10	0.00	599.12	1,232
100-yr	**3.44**	**3.21**	**0.02**	**3.18**	0.00	**599.25**	**1,462**

Events for Pond BIO-2: Filtration Bioretention

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Tertiary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	0.74	0.02	0.02	0.00	**0.00**	596.95	1,010
10-yr	1.75	1.06	0.02	1.04	0.00	597.12	1,319
100-yr	**3.52**	**3.26**	**0.02**	**3.23**	0.00	**597.25**	**1,582**

Events for Pond BIO-3: Filtration Bioretention

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Tertiary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	1.28	0.04	0.04	0.00	**0.00**	595.92	1,729
10-yr	2.39	1.07	0.04	1.03	0.00	596.12	2,359
100-yr	**4.23**	**3.61**	**0.04**	**3.57**	0.00	**596.27**	**2,865**

Events for Pond CH-1: Chambers

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1-yr	4.80	1.18	592.38	0.079
10-yr	8.11	1.66	593.15	0.161
100-yr	**13.65**	**2.40**	**594.85**	**0.322**

APPENDIX F:
SWPPP INSPECTION REPORT
(SAMPLE FORM)

LaBella
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Prepared by:
LaBella Associates
Choose an item.
Choose an item.
Choose an item.

SWPPP INSPECTION REPORT NUMBER XX
CLIENT NAME
PROJECT NAME
PROJECT ADDRESS, TOWN OF X, X COUNTY, NY
PERMIT NUMBER

Performed: 2/1/2025 @ 12:00 AM
Report Issued: 2/1/2025

Status: SATISFACTORY (All erosion control measures are installed and in working order)

Qualified Inspector (name and title)	Qualified Professional (name and title)
Click or tap to enter a date.	Click or tap to enter a date.
Date	Date
Signature	Signature

NYSDEC Documentation and SWPPP Forms

The project has received a Letter of Authorization (LOA) from NYSDEC	Choose an item.
The project has received a five acre waiver approved by NYSDEC or MS4	Choose an item.
The project currently has disturbance greater than five acres	Choose an item.
The project directly discharges to a 303d waterbody/course	Choose an item.
The project is within a phosphorus enhanced watershed	Choose an item.
Number of inspections required per week	Choose an item.

Included in Site Log Book

Preconstruction Assessment	Choose an item.
Copy of Notice of Intent (NOI)	Choose an item.
Letter of Authorization (LOA)	Choose an item.
SWPPP Preparer Certification Form	Choose an item.
Owner/Operator Certification Form	Choose an item.
MS4 SWPPP Acceptance Form	Choose an item.
NYCDEP SWPPP Acceptance/Approval Form	Choose an item.
MS4 No Jurisdiction Form	Choose an item.
Contractor and Subcontractor Certifications	Choose an item.
SPDES General Permit	Choose an item.
Five Acre Waiver Authorization	Choose an item.
Notice of Termination (NOT)	Choose an item.

Site Conditions

Total area (acres) with active soil disturbance (not requiring temporary or final stabilization)	
Total area (acres) with inactive soil disturbance (requiring temporary or final stabilization)	
Total area (acres) that has achieved temporary stabilization	
Total area (acres) that has achieved final stabilization	
Allowable disturbed area (acres) per NOI and/or five acre waiver	

Provide a general description of construction activities ongoing during inspection:

Weather Conditions	Choose an item.
Temperature at time of inspection	XX degrees F
Soil conditions at time of inspection	Choose an item.

Description of Discharge Point/Surface Waters of the State	Condition of Runoff	Sediment Discharge Noted	Corrective Action(s)
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	

Erosion and Sediment Control Deficiencies and Corrective Actions

In the following table, provide marks in the appropriate columns to indicate the conditions of all erosion and sediment control practices at the site.

Erosion & Sediment Control Practice	Not Applicable	Functioning as Designed	Needs Repair or Maintenance	Not Installed Properly
Temporary Erosion & Sediment Control Practices				
General Site Conditions	☐	☐	☐	☐
Stabilized Construction Access	☐	☐	☐	☐
Silt Fence	☐	☐	☐	☐
Inlet Protection Measures	☐	☐	☐	☐
Soil Stockpiles	☐	☐	☐	☐
Dust Control Measures	☐	☐	☐	☐
Pavement Sweeping	☐	☐	☐	☐
Temporary Stabilization	☐	☐	☐	☐
Dewatering Operations	☐	☐	☐	☐
Slope Protection Measures	☐	☐	☐	☐
Temporary Parking Areas	☐	☐	☐	☐
Concrete Washout	☐	☐	☐	☐
Temporary Swales and Berms	☐	☐	☐	☐
Stone Check Dams	☐	☐	☐	☐
Sediment Traps/Basins	☐	☐	☐	☐
Compost Filter Sock	☐	☐	☐	☐
Temporary Stream Crossing	☐	☐	☐	☐
Fiber Roll	☐	☐	☐	☐
Water Bars	☐	☐	☐	☐
Flow Diffusers	☐	☐	☐	☐
Other:	☐	☐	☐	☐
Permanent Erosion & Sediment Control Practices				
Rock Outlet Protection	☐	☐	☐	☐
Permanent Turf Reinforcement	☐	☐	☐	☐
Permanent Stabilization	☐	☐	☐	☐
Other:	☐	☐	☐	☐
Refer to the following page for deficiencies and corrective actions				

Corrective Actions

For all erosion and sediment control practices identified in the above table as “needs repair or maintenance” or “not installed properly,” provide detailed corrective actions that are required.

ESC Practice ID	Deficiency and Corrective Action	Date Deficiency First Reported	Deficiency Corrected?	Date Deficiency Corrected
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
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Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap

Stormwater Management Practices

For all stormwater management practices proposed on the project, indicate the status of each practice at the time of inspection, any deficiencies (if applicable) and corresponding corrective actions.

SMP Practice ID	Sign Installed	Status	Deficiency and Corrective Action (if Applicable)	Deficiency Date	Corrected Action Date
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.
	Choose an item.	Choose an item.		Click or tap to enter a date.	Click or tap to enter a date.

Deficiencies and Corrective Action Photo Log

Deficiency Photo 1 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 1*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 2 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 2*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 3 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 3*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.

Deficiencies and Corrective Action Photo Log (continued)

Deficiency Photo 4	***Corrective Action Photo 4***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 5	***Corrective Action Photo 5***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 6	***Corrective Action Photo 6***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.

Disturbance / Photo Location Map

Replace this page to include an 11x17 erosion control plan sketch to scale showing:

1. Areas with active soil disturbance activity
2. Areas with inactive soil disturbance activity
3. Areas that have achieved temporary stabilization
4. Areas that have achieved final stabilization
5. Photo locations for deficiencies
6. Photo locations for corrective actions
7. Location of erosion and sediment control practices installed

Use Bluebeam template with standard colors to indicate limits

APPENDIX G:
POST-CONSTRUCTION INSPECTIONS AND MAINTENANCE

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Bioretention Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	**Follow-Up Actions**
 ☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
	☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
 ☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR Inlets

Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice.

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell . ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell , bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell . If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR Outlets

Examine outlets that release water out of the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell . ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

Additional Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

Bioretention Stormwater Management Practices Level 2 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
☐ Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have bad soil media, try scraping off top 3 inches of media and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. ☐ Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: • Clogged underdrain? • Filter fabric between soil media and underdrain stone? • Need to install underdrain if not present? • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper soil media?	• Soil media is clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice. ☐ Level 3 inspection necessary
Observed Condition: Vegetation is sparse or out of control	
☐ Condition 1: Original design planting plan seems good but has not been maintained, so there are many invasives and/or dead plants Will require some horticultural experience to restore vegetation to intended condition by weeding, pruning, removing plants, and adding new plants. ☐ Condition 2: Original design planting plan is unknown or cannot be actualized A landscape architect or horticulturalist will be needed to redo the planting plan. Will likely require analysis of soil pH, moisture, organic content, sun/shade, and other conditions to make sure plants match conditions. Plan should include invasive plant management and maintenance plan to include mulching, watering, disease intervention, periodic thinning/pruning, etc.	• Vegetation deviates significantly from original planting plan; Bioretention has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice. ☐ Level 3 inspection necessary
Observed Condition: Bioretention does not conform to original design plan in surface area or storage	
☐ Condition 1: Level 2 Inspection reveals that practice is too small based on design dimension, does not have adequate storage (e.g., ponding depth) based on the plan, and/or does not treat the drainage area runoff as indicated on the plan Small areas of deviation can be corrected by the property owner or responsible party, but it is likely that a Qualified Professional will have to revisit the design and attempt a redesign that meets original objectives or that can be resubmitted to the municipality for approval.	• More than a 25% departure from the approved plan in surface area, storage, or drainage area; sometimes less than this threshold at the discretion of the Level 2 inspector. ☐ Level 3 inspection necessary

Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Severe erosion of filter bed, inlets, or around outlets	
☐ Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a more non-erosive lining and/or to extend the lining further down to where inlet slopes meet the Bioretention surface. If problem persists, analysis by a Qualified Professional is warranted. ☐ Condition 2: Erosion of Bioretention filter bed This is often caused by "preferential flow paths" through and along the Bioretention surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads). ☐ Condition 3: Erosion on side slopes Again, the issue is likely linked with unanticipated flow paths down the side slopes (probably overland flow that concentrates as it hits the edge of the slope). For small or isolated areas, try filling, compacting, and re-establishing healthy ground cover vegetation. If the problem is more widespread, further analysis is required to determine how to redirect the flow.	• Erosion (rills, gullies) is more than 12 inches deep at inlets or the filter bed or more than 3 inches deep on side slopes. • If the issue is not caused by moving water but some sort of subsurface defect. This may manifest as a sinkhole or linear depression and be associated with problems with the underdrain stone or pipe or underlying soil. ☐ Level 3 inspection necessary
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
☐ Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of Bioretention soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. ☐ Condition 2: Majority of the surface is caked with "hard pan" (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of Bioretention soil media) or another chronic source of sediment in the drainage area. Augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long as the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the Bioretention surface area. • "Hard pan" of thin, crusty layer covers majority of Bioretention surface area and seems to be impeding flow of water down through the soil media. • New sources of sediment seem to be accumulating with each significant rainfall event. ☐ Level 3 inspection necessary

Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

APPENDIX E:
NYSDEC "DEEP-RIPPING AND DECOMPACTION," APRIL 2008

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New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

Document Prepared by:

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Land Resource Consultant and Environmental Compliance Monitor
(Formerly with the Division of Agricultural Protection and Development Services,
NYS Dept. of Agriculture & Markets)

New York State
Department of Environmental Conservation

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) “Deep Ripping;” and 2) “Decompaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

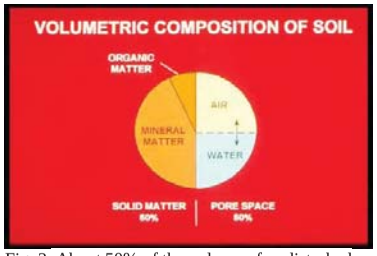


Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice



Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the “two-phase” practice of Deep Ripping and Decompaction first became established as a “best management practice” through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive “deep ripping” through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by “decompaction,” i.e.: “sub-soiling,” through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area’s direct surface infiltration of rainfall by providing the open site’s mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility/Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil
In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

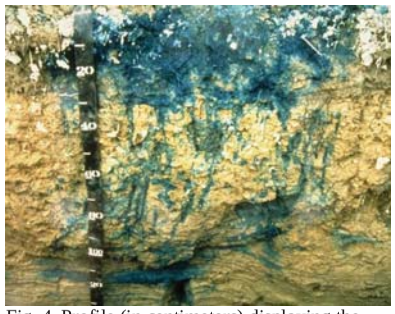


Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope
The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture
Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a “plastic” or “liquid” state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the “slicing and smearing” of the material or added “squeezing and compression” instead of the necessary fracturing. Ample drying time is needed for a “rippable” soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The “poor man’s Atterberg field test” for soil plasticity is a simple “hand-roll” method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a “plastic” state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.



Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, “decompaction,” mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area’s soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only “scarify” the uppermost surface portion of the mass of compacted subsoil material. The term “chisel plow” is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).



Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.



Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a “heavy duty” agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like “lifting and shattering” action up through the soil layers as it is pulled.

Pulling-Power of Equipment
Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.


Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.


Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement
As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.


Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.


Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas
For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)



Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.



Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors
In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

- A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor.

- The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.



Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

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- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. *Soil Survey of (various names) County, New York.* USDA.

Internet Access:

- Examples of implements:

V-Rippers. Access by internet search of *John Deere Ag -New Equipment for 915* (larger-frame model) *V-Rippe*; and, *for 913* (smaller-frame model) *V-Ripper*. Deep, angled-leg subsoiler. Access by internet search of: B*igham Brothers Shear Bolt Paratill-Subsoiler.* http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_tillage/2008/feature/rippers/915v_pattern_frame.html?sbu=ag&link=prodcat Last visited March 08.

- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*
- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester.* http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

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APPENDIX F: LABELLA CERTIFYING PROFESSIONALS LETTER

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February 21, 2025

RE: LaBella Certifying Professionals for NYSDEC SPDES GP-0-25-001

To Whom it May Concern:

In accordance with the NYSDEC SPDES General Permit GP-0-25-001, Part VII.J.2, Kristopher Winkler, PE, a New York State Qualified Professional employed by LaBella Associates, is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), Notice of Intents (NOIs) and Notice of Terminations (NOTs).

Respectfully submitted,

LaBella Associates

Timothy Webber
Vice President, Civil Division Director

Kristopher Winkler, PE
Senior Civil Engineer
Team Leader

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APPENDIX G:
NYSDEC SPDES GENERAL PERMIT GP-0-25-001

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NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

Construction activities constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:
    a. one or more acres; or
    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:
    a. already covered by a different SPDES permit; or
    b. covered under a different SPDES permit that was denied, terminated, or revoked; or
    c. identified in an expired individual SPDES permit that was not renewed; or
    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.
3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:
    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or
    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.
4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:
    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
        i. 1-5 acres of disturbance - 20 feet; or
        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

a. obtain all such necessary permits; or

b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

a. For linear transportation and linear utility project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb two or more acres of *steep slope*.

b. For all other project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

   a. Wastewater from washout of concrete; and

   b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

   c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

   d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

   e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

   a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

i. meets all other eligibility requirements of Part I.A.; and

ii. will occur in NYSDEC's Regions 3-9; and

iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

i. for all eNOIs:

1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 "Governmental Immunity from Zoning and Other Legislation"; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

a. all areas of disturbance have achieved *final stabilization;* and

b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

a. all documentation necessary to demonstrate eligibility with this permit; and

b. this permit; and

c. the *SWPPP*; and

d. the signed SWPPP Preparer Certification Form; and

e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

   i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

   ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

   iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

   b. The written Request to Disturb Greater Than Five Acres must include:

      i. The SPDES permit identification number (Permit ID); and

      ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

      iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

      iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

      v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

      vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

   c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

   a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

   b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

   c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

   d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

   e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

   f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

      i. the revised area of disturbance and/or *impervious area(s)*; and

      ii. the revised SMP information, if applicable; and

      iii. a narrative description of what has changed; and

      iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

   Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

   a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*; and

      ii. Control *stormwater discharges*, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

      iii. *Minimize* the amount of soil exposed during *construction activity*; and

      iv. *Minimize* the disturbance of *steep slope*; and

      v. *Minimize* sediment *discharges* from the site; and

      vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharges*, unless *infeasible*; and

      vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

      where the intended function of a specific area of the site dictates that it be compacted; and

      viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

      ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

   b. **Soil Stabilization.** In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

   c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

   d. **Pollution Prevention Measures.** Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

      ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

   a. The owner or operator must consider:

      i. the following physical risks due to climate change:

         (i) increasing temperature; and

         (ii) increasing precipitation; and

         (iii) increasing variability in precipitation, including chance of drought; and

         (iv) increasing frequency and severity of flooding; and

         (v) rising sea level; and

         (vi) increasing storm surge; and

         (vii) shifting ecology.

      ii. for each of the following:

         (i) overall site planning; and

         (ii) location, elevation, and sizing of:

            a. control measures and practices; and

            b. conveyance system(s); and

            c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

    a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

    b. SMPs must be designed in conformance with the *performance criteria*:

        i. in the DM; or

        ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

        iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

    (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

    (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

    (iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

    (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

    (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

    (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

   i. begin implementing corrective actions within one business day; and

   ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

   i. begin the engineering design process within five business days; and

   ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

   a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

c. all areas of disturbance that have not achieved *final stabilization*; and

d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

      i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

      ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

      iii. Total area that has achieved *temporary stabilization*; and

      iv. Total area that has achieved *final stabilization*; and

   k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

   l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

   m. Identification and status of all corrective actions that were required by previous inspection; and

   n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

   a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

i. all soil disturbance activities have ceased; and

ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

   a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

   b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

   c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

   d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

   a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

   a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

   b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

   c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

   d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

   e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

   f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

   g. the *discharge* is in violation of section 17-0501 of the ECL; and

   h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

      i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

      ii. the size of the *discharge(s)*; and

      iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

      iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

   a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

      (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

      Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

   b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

   1. the chief executive officer of the agency; or

   2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint sources*, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Construction of a barn or other *agricultural building*, silo, stock yard or pen. • Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: • All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
Within the municipal boundaries of NYC: • Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.
The following *construction activities*: • Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover* • Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot • Dam rehabilitation (the structure of the dam itself) • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development; • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES**
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)**

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

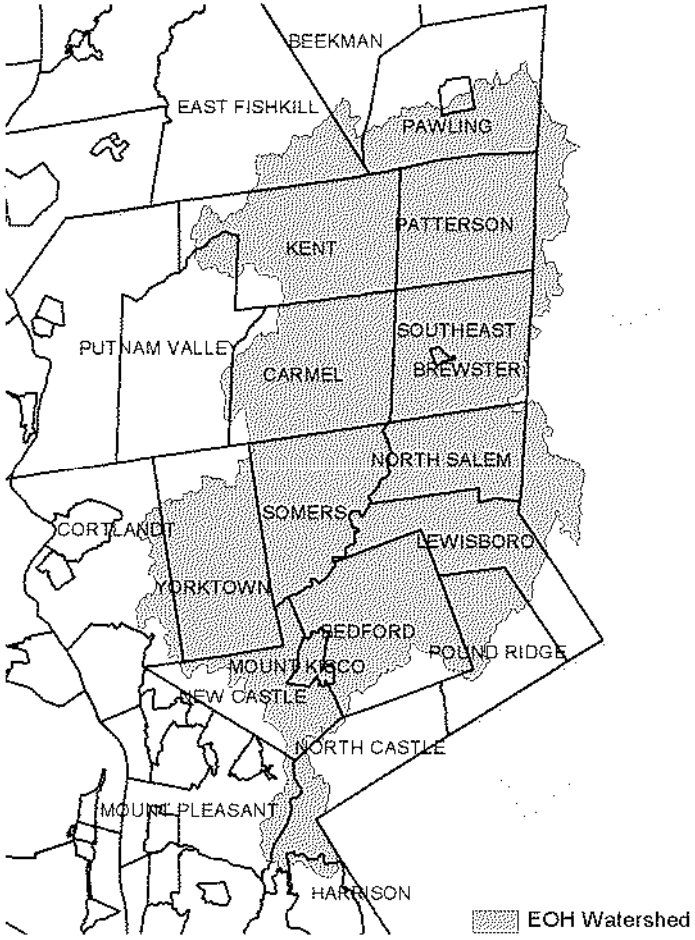


Figure 2 - Onondaga Lake Watershed

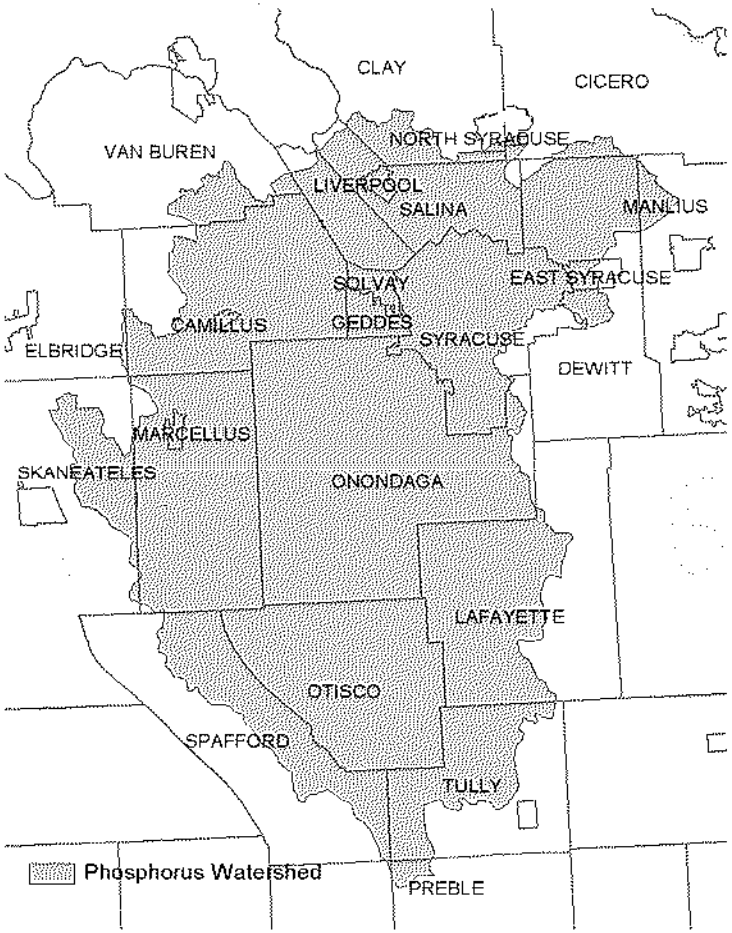


Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

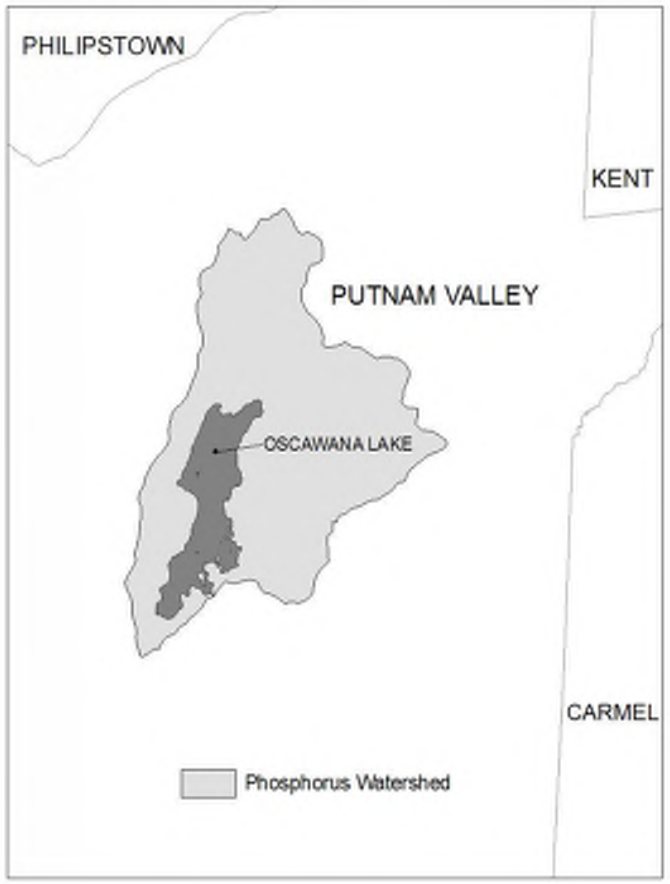
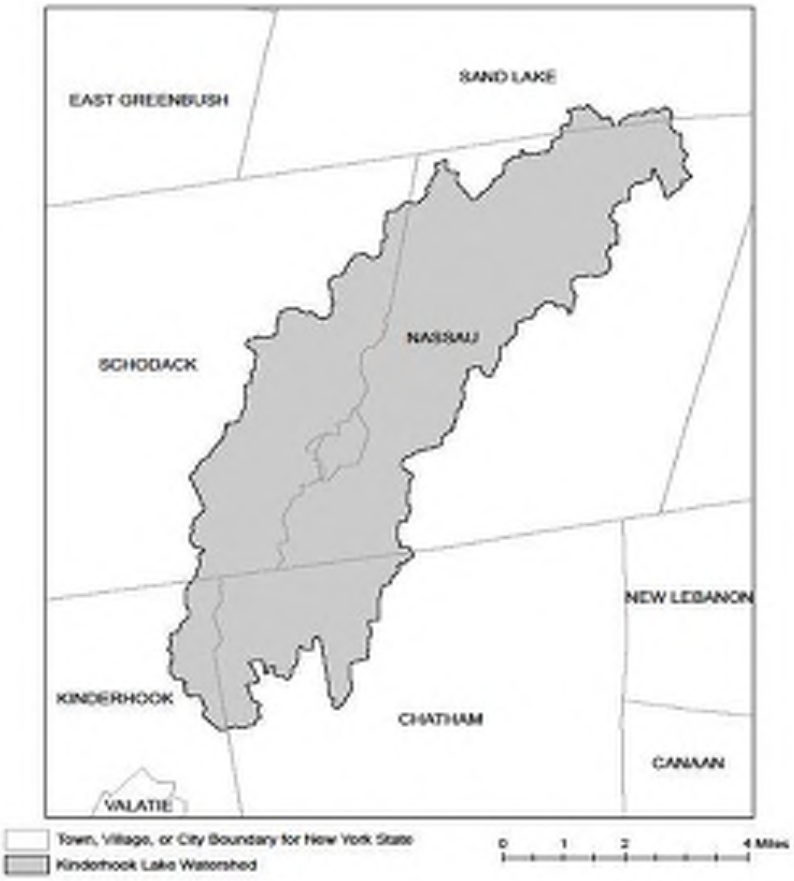


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	Division of Environmental Permits (DEP) Permit Administrators	Division of Water (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued
V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name[1]:
Title/Position:
Signature:
Date:
VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval
8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:
IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity
12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name:
Title/Position:
Signature:
Date:
VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

July 27, 2026

Jeffery Schieber
Code Enforcement Officer
1250 Union Road – Room 210
West Seneca, New York 14224

RE: 2544 Clinton Street – Home Leasing – West Seneca Apartments
Planning Board Submission – Additional Items for Review

Mr. Schieber:

On behalf of Home Leasing, we offer the following responses, supplemental information and drawings based on the Site Plan Submission Review letter dated July 9th 2026.

1. Coordinate with the New York State Department of Environmental Conservation (NYSDEC) to determine whether any permits or approvals are required for the proposed work within or adjacent to the Buffalo Creek streambank.

   Response: *Fieldwork for the wetland and stream delineation was performed on 7/22/2026. No wetlands were found on site, the delineation report is forthcoming. Top of Stream bank was also delineated and added to the plans (shown in red on C301 and C302). There is no work proposed below the Top of Bank, all proposed storm outlet pipes are above the delineation limits.*

2. Provide documentation of NYSDEC's determination and obtain any required permits or approvals prior to Planning Board approval.

   Response: *Wetland delineation report is forthcoming. Based on the outcome of the delineation, we do not anticipate that any permits related to the project's proximity to the creek are required. A DEC SPDES permit will be obtained for the SWPPP.*

3. Revise the stormwater calculations to account for the off-site drainage area that enters the property through the existing swale along the front of the site. Based on field observations, it appears that a significant upstream watershed, estimated to exceed five (5) acres, contributes runoff to the site's drainage system.

   Response: *The additional 5-acres of off-site drainage have been added as a standalone drainage area to the stormwater calculations, SWPPP, and pipe sizing worksheet. The proposed diversion drainage swale accommodates the additional runoff without any sizing changes. The outlet pipe from the swale to Cayuga Creek has been increased to 15". See revised pipe sizing calculations, C301 and C302.*

4. The revised drainage analysis shall evaluate the impact of this contributing watershed on the proposed stormwater management facilities and include any necessary modifications to the design.

Response: *After including the additional 5-acres of off-site drainage, the stormwater calculations were updated accordingly. The compiled revised SWPPP in is included for review. An overview of the resulting revisions:*

- *Updated redevelopment worksheet to include the additional 5-acres which increased the required WQv for the site (Appendix C).*
- *Treatment for the additional water quality is achieved via a new bioretention area – "Bio – 1A" to treat drainage area PS-1A. (SWPPP narrative, Appendix C, Figure A-7, Sheets C301 and C401).*
- *The total WQv and RRv for the site are achieved through 4 bioretention areas and 1 water quality unit (Appendix C).*
- *HydroCAD – The pre-development and post-development models were updated to include the 5-acre off-site drainage area. Bio-1A was added to the post-development model. Per Town code the calculations were checked to ensure that the post-development 25-yr storm runoff is less than the pre-development 10-year storm (SWPPP narrative, Appendix D, Appendix E)*
- *eNOI was updated to reflect the above mentioned SWPPP revisions (Appendix B)*

5. The submitted photometric plan indicates minor increases in light levels on the adjacent parcel to the west. While these increases appear to be minimal and are expected to be mitigated by existing or proposed screening, the applicant should verify that the lighting design complies with applicable Town requirements.

   Response: *Per Town Code Section 79-2 – The design meets listed code requirements. Existing vegetation will remain along the creek on the western side of the property to provide screening, should light spillage extend to the property line (center of creek). All lights fixtures will be downward facing and dark sky compliant.*

6. Additional investigation of existing utilities is required. Updated information identifying the location, size, and status of existing utilities shall be provided and incorporated into the construction plans.

   Response: *Additional fieldwork and site investigation to location the existing mansion utilities will be performed prior to issuance of the final construction documents. The project is proposing all new utility connections for property. Existing utility connections will abandoned and/or removed as directed by the Town staff.*

7. Provide additional geotechnical investigation and supporting documentation to evaluate existing soil conditions and groundwater elevations. The investigation shall demonstrate that the proposed stormwater treatment practices and underground stormwater storage system are feasible and will function as intended given the potential for a high groundwater table.

   Response: *Acknowledged, groundwater elevation testing will be completed to verify that the proposed stormwater practices have sufficient separation. Should the results*

come back with a higher water table than expected, an impermeable liner will be installed in stormwater practices within that area(s).

Attached with this submission are the following revised items:

- C301 – Utility Plan
- C302 - Utility Plan
- C401 – Grading Plan
- Compiled SWPPP – Revised July 2026
- Pipe Sizing Calculations – Revised July 2026

We look forward to presenting this project to the Planning Board on August 13th, 2026. If you have any questions or need any additional information, please feel free to contact me at 585-770-2525 or svakiener@labellapc.com.

Respectfully submitted,

LaBella Associates



Shelby Vakiener
Civil Engineer

NOT FOR CONSTRUCTION

MATCH TO INSET

MATCH TO SHEET: C302

2 INSET
C301
SCALE: 1"=20'

1 UTILITY PLAN
C301
SCALE: 1" = 20'

0' 20' 40' 60'

PROPOSED 3-STORY BUILDING ± 25,000 SF FOOTPRINT FFE=600.75'

PROPOSED PLAYGROUND

ARCHAEOLOGICAL BUFFER AREA

ZONE X

ZONE LIMIT

LIMITS OF ARCHAEOLOGICAL BUFFER AREA

FLOODWAY ZONE LIMIT

N/F
CLINTON STREET REALTY HOLDINGS
T.A./# 124.00-2-5
2544 CLINTON STREET
LIBER 11299 PAGE 9093
AREA = 9.402 ACRES TO TIE LINE
AREA = 12.7± ACRES TO CENTERLINE OF CREEK

15' WIDE EASEMENT PER LIBER 8927 PAGE 407

TOP OF BANK PER DELINEATION (1/22/2026)

RIPRAP OUTLET CONTROL (TYP.)

END SECTION INV= 593.50

75LF 12" SICPP @ 1.33%

EX STORM 0+85

NEW 2' WIDE GRAVEL DIAPHRAGM

ST-4.1
24"X24" CB
RIM=599.00
E INV=595.08
SW INV=595.08

± 57LF 6" HDPE @ 1.00%

NEW BIORETENTION AREA #1A (± 160 SF)

NEW PLAYGROUND DRAIN @ 15 O.C.

± 68LF 6" PCPP @ 0.00%

± 68LF 6" HDPE @ 0.25%

CLEANOUT
SE INV=594.51
W INV=594.51

63LF 6" PCPP @ 0.00%

NEW BIORETENTION AREA #1 (± 375 SF)

73LF 12" SICPP @ 1.33%

ST-4.0
24"X24" CB
RIM=599.00
NE INV=594.51
NW INV=594.51

E STORM 1+00

NEW 2' WIDE GRAVEL DIAPHRAGM

NEW PRIVATE FIRE HYDRANT

ST-3.4
24"X24" CB
RIM=599.62
SW INV=597.32

± 44LF 18" SICPP @ 0.89%

CLEANOUT
SE INV=597.26

± 28LF 10" SICPP @ 1.00%

NEW 6" FIRE SERVICE (AFTER BACKFLOW PREVENTOR)

NEW BACKFLOW PREVENTOR (IN MECHANICAL ROOM) FOR COMBINED SERVICE. DOMESTIC SERVICE WILL BE METERED AFTER THE BACKFLOW.

CLEANOUT
SE INV=596.51

± 26LF 8" SICPP @ 3.38%

± 27LF 18" SICPP @ 0.89%

ST-3.3
24"X24" CB
RIM=599.74
SW INV=595.86
NE INV=595.96

A SANITARY 0+00

BLDG INV=
SW INV=595.75

CLEANOUT
NW INV=594.85

± 25' 6" PVC SDR-21 @ 1.00%

SAN CO TYP.

A SANITARY 1+00

± 70LF 10" SICPP @ 1.00%

ST-3.0
4' DIA. MH
RIM=599.33
NW INV=593.00
S INV=593.10
NE INV=593.20

A STORM 4+00

± 5LF 18" SICPP @ 2.02%

± 38LF 10" SICPP @ 1.00%

ST-3.1
24"X24" CB
RIM=598.89
N INV=593.46
SE INV=593.56

± 86LF 18" SICPP @ 1.56%

A STORM 3+00

ST-3.2
24"X24" CB
RIM=598.47
NW INV=594.90
NE INV=595.00

NEW 6" COMBINED WATER SERVICE

ADS STORMTECH CHAMBER SYSTEM SC-3500 (120 CHAMBERS)
STONE INV=590.50
CHAMBER ELEVATION=591.25

± 104LF 18" SICPP @ 0.89%

A STORM 2+00

± 91LF 10" SICPP @ 1.04%

± 48LF 10" SICPP @ 1.00%

CLEANOUT
SW INV=593.90
NW INV=593.90
SE INV=593.90

CLEANOUT
NW INV=593.50

CLEANOUT
SE INV=594.38

± 50LF 10" SICPP @ 1.51%

± 93LF 12" SICPP @ 1.34%

CLEANOUT
SW INV=592.75
NW INV=592.75
SE INV=592.75

BLDG INV=
SW INV=595.08

CLEANOUT
SE INV=594.00

CONNECT INTO EXISTING SANITARY MAIN A SANITARY 3+58

±45' 6" PVC SDR-21 @ 2.88%

±38' 6" PVC SDR-21 @ 1.00%

A SANITARY 3+00

SAN 1.0 4' DIA.
RIM=594.70
NW INV=587.00
SE INV=592.72
S INV=593.99

CLEANOUT
RIM=593.62
WYE THRU NW INV=593.08
SE INV=593.08
E INV=593.08

SAN CO TYP.

±22' 6" PVC SDR-21 @ 2.00%

±12' 6" PVC SDR-21 @ 12.59%

SAN CO TYP.

A SANITARY 2+00

±242' 6" PVC SDR-21 @ 1.00%

SAN CO TYP.

± 64LF 10" SICPP @ 1.25%

B SANITARY 1+00

B SANITARY 0+00

ST-2.0
4' DIA. MH
RIM=599.29
SE INV=593.10
W INV=593.20

B STORM 1+00

B STORM 1+06

± 5LF 12" SICPP @ 2.01%

±123' 4" PVC SDR-21 @ 2.00%

± 51LF 12" SICPP @ 2.48%

ST-1.1
4' DIA. MH
RIM=599.04
NW INV=590.30
SE INV=590.40

A STORM 5+00

± 5LF 12" SICPP @ 2.01%

± 9LF 12" SICPP @ 1.15%

± 31LF 18" SICPP @ 0.65%

ST-2.2
24"X24" CB
RIM=598.62
SE INV=594.77

RM 0+80

± 122LF 12" SICPP @ 0.37%

A STORM 6+00

ST-2.1
24"X24" CB
RIM=598.87
E INV=593.40
NW INV=593.50

ST-1.0
ADS BARRACUDA MAX S6 WQU
RIM=599.00
E INV=590.20
W INV=590.20

RIPRAP OUTLET CONTROL (TYP.)

END SECTION INV= 589.75

A STORM 6+89

±12' 4" PVC SDR-21 @ 2.00%

NEW PRIVATE FIRE HYDRANT

UTILITY PLAN NOTES:
1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

7/27/2026 8:57:03 AM
B:\GLOBAL\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\06_Drawings\Civil\C300\ UTILITY PLAN.dwg

LaBella
Powered by partnership.

300 Pearl Street, Suite 130
Buffalo, NY 14202
716-551-6281

labellapc.com

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec, 7209 & Art, 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
2	7/27/2026	PLANNING BOARD COMMENTS
1	06/23/2026	PLANNING BOARD COMMENTS
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: EMM / JBB
REVIEWED BY: SRV / DPB
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

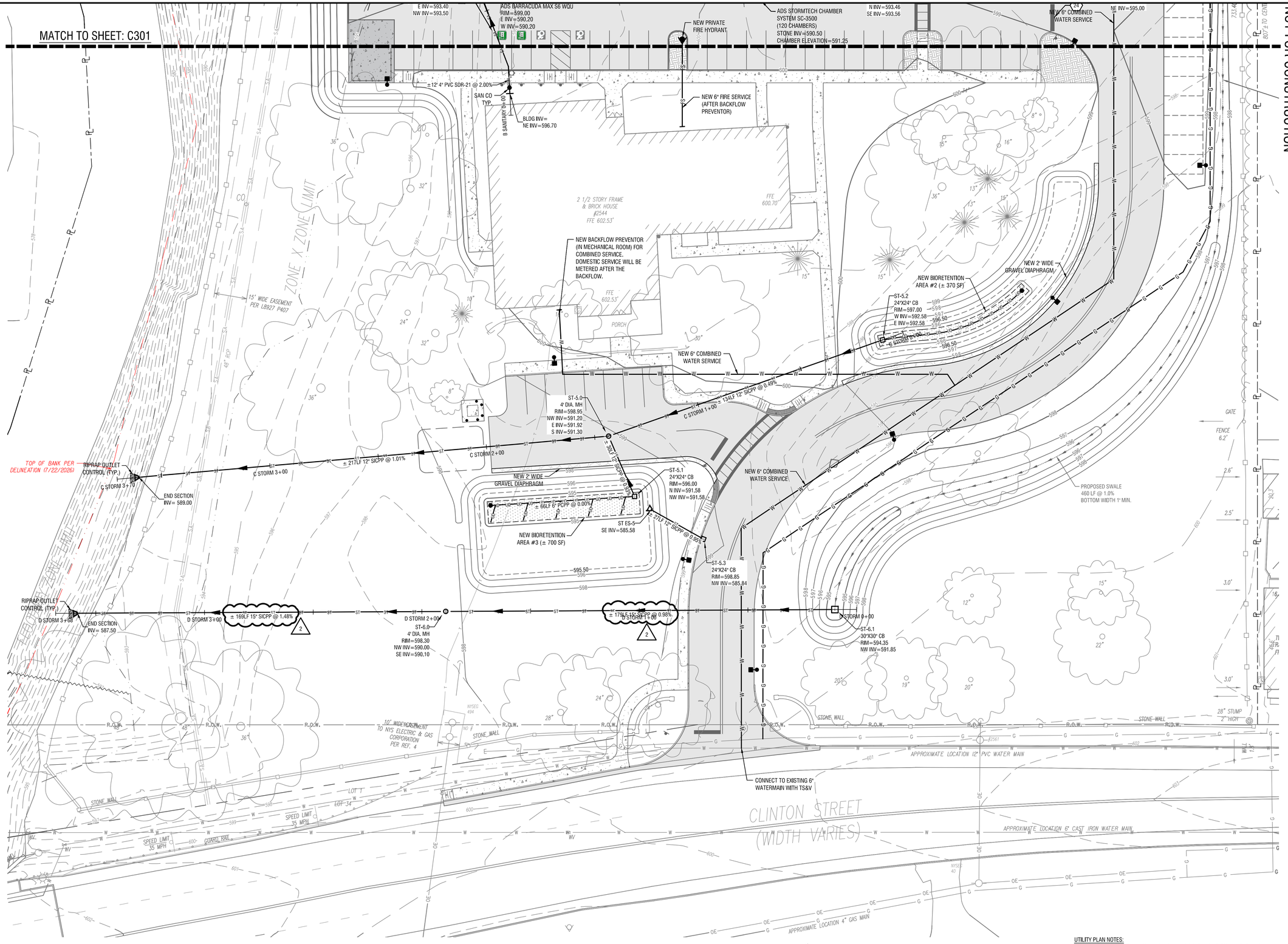
UTILITY PLAN

DRAWING NUMBER:

C301

NOT FOR CONSTRUCTION

MATCH TO SHEET: C301



1 C302 UTILITY PLAN

SCALE: 1" = 20'

N

0' 20' 40' 60'

UTILITY PLAN NOTES:

1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

7/27/2026 8:56:39 AM
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LaBella Powered by partnership.

300 Pearl Street, Suite 130
Buffalo, NY 14202
716-551-6281

labellapc.com

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
2	7/27/2026	PLANNING BOARD COMMENTS
1	06/23/2026	PLANNING BOARD COMMENTS
Revisions		

PROJECT NUMBER: 2241067

DRAWN BY: EMM / JBB

REVIEWED BY: SRV / DPB

ISSUED FOR: SITE PLAN APPROVAL

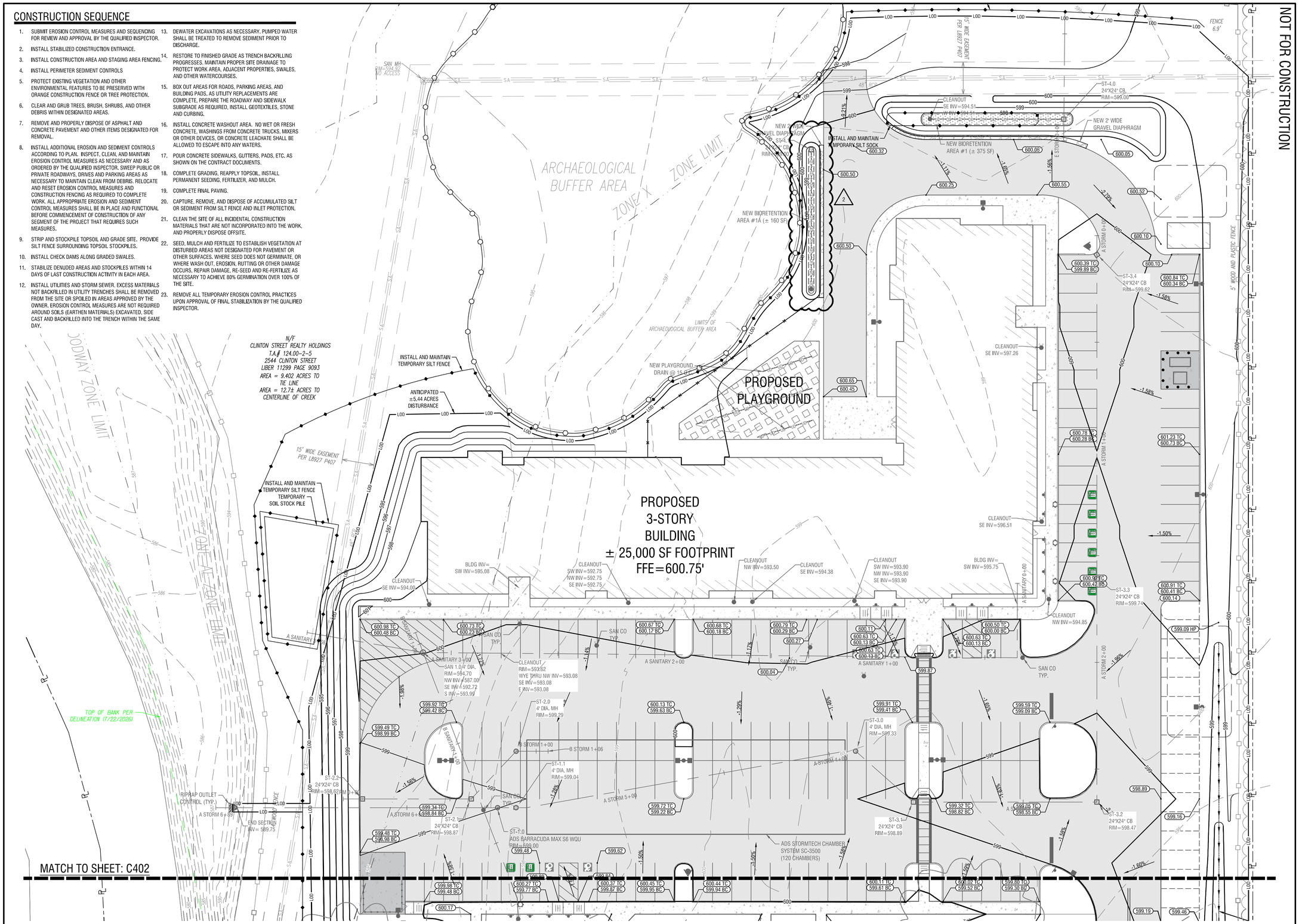
DATE: 4/20/2026

DRAWING NAME: UTILITY PLAN

DRAWING NUMBER: C302

CONSTRUCTION SEQUENCE

1. SUBMIT EROSION CONTROL MEASURES AND SEQUENCING FOR REVIEW AND APPROVAL BY THE QUALIFIED INSPECTOR.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
3. INSTALL CONSTRUCTION AREA AND STAGING AREA FENCING.
4. INSTALL PERIMETER SEDIMENT CONTROLS
5. PROTECT EXISTING VEGETATION AND OTHER ENVIRONMENTAL FEATURES TO BE PRESERVED WITH ORANGE CONSTRUCTION FENCE OR TREE PROTECTION.
6. CLEAR AND GRUB TREES, BRUSH, SHRUBS, AND OTHER DEBRIS WITHIN DESIGNATED AREAS.
7. REMOVE AND PROPERLY DISPOSE OF ASPHALT AND CONCRETE PAVEMENT AND OTHER ITEMS DESIGNATED FOR REMOVAL.
8. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROLS ACCORDING TO PLAN. INSPECT, CLEAN, AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY AND AS ORDERED BY THE QUALIFIED INSPECTOR. SWEEP PUBLIC OR PRIVATE ROADWAYS, DRIVES AND PARKING AREAS AS NECESSARY TO MAINTAIN CLEAN FROM DEBRIS. RELOCATE AND RESET EROSION CONTROL MEASURES AND CONSTRUCTION FENCING AS REQUIRED TO COMPLETE WORK. ALL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE COMMENCEMENT OF CONSTRUCTION OF ANY SEGMENT OF THE PROJECT THAT REQUIRES SUCH MEASURES.
9. STRIP AND STOCKPILE TOPSOIL AND GRADE SITE. PROVIDE SILT FENCE SURROUNDING TOPSOIL STOCKPILES.
10. INSTALL CHECK DAMS ALONG GRADED SWALES.
11. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY IN EACH AREA.
12. INSTALL UTILITIES AND STORM SEWER. EXCESS MATERIALS NOT BACKFILLED IN UTILITY TRENCHES SHALL BE REMOVED FROM THE SITE OR SPOILED IN AREAS APPROVED BY THE OWNER. EROSION CONTROL MEASURES ARE NOT REQUIRED AROUND SOILS (EARTHEN MATERIALS) EXCAVATED, SIDE CAST AND BACKFILLED INTO THE TRENCH WITHIN THE SAME DAY.
13. DEWATER EXCAVATIONS AS NECESSARY. PUMPED WATER SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGE.
14. RESTORE TO FINISHED GRADE AS TRENCH BACKFILLING PROGRESSES. MAINTAIN PROPER SITE DRAINAGE TO PROTECT WORK AREA, ADJACENT PROPERTIES, SWALES, AND OTHER WATERCOURSES.
15. BOX OUT AREAS FOR ROADS, PARKING AREAS, AND BUILDING PADS, AS UTILITY REPLACEMENTS ARE COMPLETE, PREPARE THE ROADWAY AND SIDEWALK SUBGRADE AS REQUIRED, INSTALL GEOTEXTILES, STONE AND CURBING.
16. INSTALL CONCRETE WASHOUT AREA. NO WET OR FRESH CONCRETE, WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES, OR CONCRETE LEACHATE SHALL BE ALLOWED TO ESCAPE INTO ANY WATERS.
17. POUR CONCRETE SIDEWALKS, GUTTERS, PADS, ETC. AS SHOWN ON THE CONTRACT DOCUMENTS.
18. COMPLETE GRADING, REAPPLY TOPSOIL, INSTALL PERMANENT SEEDING, FERTILIZER, AND MULCH.
19. COMPLETE FINAL PAVING.
20. CAPTURE, REMOVE, AND DISPOSE OF ACCUMULATED SILT OR SEDIMENT FROM SILT FENCE AND INLET PROTECTION.
21. CLEAN THE SITE OF ALL INCIDENTAL CONSTRUCTION MATERIALS THAT ARE NOT INCORPORATED INTO THE WORK, AND PROPERLY DISPOSE OFFSITE.
22. SEED, MULCH AND FERTILIZE TO ESTABLISH VEGETATION AT DISTURBED AREAS NOT DESIGNATED FOR PAVEMENT OR OTHER SURFACES. WHERE SEED DOES NOT GERMINATE, OR WHERE WASH OUT, EROSION, RUTTING OR OTHER DAMAGE OCCURS, REPAIR DAMAGE, RE-SEED AND RE-FERTILIZE AS NECESSARY TO ACHIEVE 80% GERMINATION OVER 100% OF THE SITE.
23. REMOVE ALL TEMPORARY EROSION CONTROL PRACTICES UPON APPROVAL OF FINAL STABILIZATION BY THE QUALIFIED INSPECTOR.


NOT FOR CONSTRUCTION
ARCHAEOLOGICAL BUFFER AREA
ZONE X
ZONE LIMIT
LIMITS OF ARCHAEOLOGICAL BUFFER AREA
PROPOSED PLAYGROUND
PROPOSED 3-STORY BUILDING ± 25,000 SF FOOTPRINT FFE=600.75'
N/F CLINTON STREET REALTY HOLDINGS T.A./# 124.00-2-5 2544 CLINTON STREET LIBER 11299 PAGE 9093 AREA = 9.402 ACRES TO TIE LINE AREA = 12.7± ACRES TO CENTERLINE OF CREEK
INSTALL AND MAINTAIN TEMPORARY SILT FENCE
ANTICIPATED ±5.44 ACRES DISTURBANCE
15' WIDE EASEMENT PER L8927 P407
INSTALL AND MAINTAIN TEMPORARY SILT FENCE
TEMPORARY SOIL STOCK PILE
TOP OF BANK PER DELINEATION (1/22/2026)
MATCH TO SHEET: C402
NEW BIORETENTION AREA #1 (± 375 SF)
NEW BIORETENTION AREA #1A (± 160 SF)
NEW 2' WIDE GRAVEL DIAPHRAGM
NEW PLAYGROUND DRAIN @ 15.6%
INSTALL AND MAINTAIN TEMPORARY SILT SOCK
CLEANOUT SE INV=594.51 W INV=594.51
ST-4.0 24"X24" CB RIM=595.00
CLEANOUT SE INV=597.26
CLEANOUT SE INV=596.51
CLEANOUT SE INV=594.00
CLEANOUT SW INV=592.75 NW INV=592.75 SE INV=592.75
CLEANOUT NW INV=593.50
CLEANOUT SE INV=594.38
CLEANOUT SW INV=593.90 NW INV=593.90 SE INV=593.90
CLEANOUT NW INV=594.85
CLEANOUT RIM=593.62 WYE THRU INV INV=593.08 SE INV=593.08 E INV=593.08
BLDG INV= SW INV=595.08
BLDG INV= SW INV=595.75
SAN MH RIM=594.97 NO ACCESS
FENCE 6.9'
5' WOOD AND PLASTIC FENCE
A SANITARY 3+00 SAN 1 1.0/4 DIA. RIM=594.70 NW INV=587.00 SE INV=592.72 S INV=593.99
A SANITARY 2+00
A SANITARY 1+00
A SANITARY 0+00
A STORM 0+00
A STORM 1+00
A STORM 2+00
A STORM 3+00
A STORM 4+00
A STORM 5+00
A STORM 6+00
B STORM 1+00
B STORM 1+06
B SANITARY 1+00
ST-2.0 4' DIA. MH RIM=599.29
ST-1.1 4' DIA. MH RIM=599.04
ST-2.2 24"X24" CB RIM=598.62
ST-2.1 24"X24" CB RIM=598.87
ST-1.0 ADS BARRACUDA MAX S6 WQU RIM=599.00
ST-3.0 4' DIA. MH RIM=596.33
ST-3.1 24"X24" CB RIM=598.89
ST-3.2 24"X24" CB RIM=598.47
ST-3.3 24"X24" CB RIM=599.74
ST-3.4 24"X24" CB RIM=599.62
ADS STORMTECH CHAMBER SYSTEM SC-3500 (120 CHAMBERS)
RIPRAP OUTLET CONTROL (TYP.)
END SECTION INV= 589.75
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Stormwater Pollution Prevention Plan

Prepared for:
Home Leasing
75 South Clinton Avenue, Suite 700,
Rochester, NY 14604

Submitted by:
LaBella Associates
300 Pearl Street, Suite 130
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LaBella
Powered by partnership.

West Seneca Apartments

Town of West Seneca, Erie County, New York

DATE: APRIL 2026
LAST REVISED: JULY 2026
PROJECT NO. 2241067

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PREPARER OF THE SWPPP

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and Title[1]: Kristopher Winkler, PE

Date: Issued: April 2026



[1] *This is a signature of a New York State licensed Professional Engineer employed by LaBella Associates that is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision. Refer to Appendix B for the SWPPP Preparer Certification Form, and Appendix I for the LaBella Certifying Professionals Letter.*

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1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for major activities associated with construction of a 75-unit affordable housing complex and related site work in the Town of West Seneca. This SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. This SWPPP must be executed, and permit coverage must be obtained prior to the commencement of construction activity.

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity," Permit No. GP-0-25-001, effective January 29, 2025 through January 28, 2030. The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of construction.

This SWPPP and the accompanying plans entitled "West Seneca Apartments" have been submitted as a set. These engineering drawings are considered an integral part of this SWPPP. Therefore, this SWPPP is not considered complete without them. References made herein to "the plans" or to a specific "sheet" refer to these drawings.

This report considers the impacts associated with the intended development with the purpose of:

1. Maintaining existing drainage patterns as much as possible while continuing the conveyance of upland watershed runoff;
2. Controlling increases in the rate of stormwater runoff resulting from the proposed development so as not to adversely alter downstream conditions; and
3. Mitigating potential stormwater quality impacts and preventing soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

The analysis and design completed and documented in this report is intended to be part of the application made for a multi-family residential redevelopment project with an increase in impervious area completed on behalf of the Owner/Operator.

1.1 Project Description

Home Leasing is proposing redevelopment project with an increase in impervious area, to include: 75-unit affordable housing building, associated parking, sidewalks, and landscaping. The total project area of disturbance proposed is 5.44 acres. The project will disturb one (1) or more acres and as such, preparation of this SWPPP is required under GP-0-25-001. A Site Location Map has been provided in Appendix A, as Figure A-1.

This type of project is included in Table 2 of Appendix B of GP-0-25-001; and the project site is not located in one of the watersheds listed in Appendix C of GP-0-25-001. Therefore, this SWPPP includes post-construction stormwater management practices, as well as erosion and sediment controls.

project is located within the Town Of West Seneca regulated, traditional land use control Municipal Separate Stormwater Sewer System (MS4). Therefore, an MS4 SWPPP Acceptance Form is required to accompany NOIs submitted to the NYSDEC.

Runoff from the project site will discharge to the Cayuga Creek, which is not included in the list of Section 303(d) water bodies included in Appendix D of GP-0-25-001.

Project construction activities will consist primarily of site grading, paving, building construction, and the installation of storm drainage, water supply, sanitary sewer, and public utility infrastructure necessary to support the proposed redevelopment project with an increase in impervious area. Construction phase pollutant sources anticipated at the site are disturbed (exposed) soil, vehicle fuels and lubricants, chemicals associated with building construction, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater.

1.2 Stormwater Pollution Controls

The stormwater pollution controls outlined herein have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Stormwater Management Design Manual, dated July 31, 2024 (Design Manual).
- New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016 (SSESC).
- Town of West Seneca Town Code (2025-09-08) - Chapter 102A Stormwater Management and Erosion and Sediment Control

Stormwater quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures, the proposed stormwater management practice(s), and other construction-phase pollution controls outlined herein.

The proposed stormwater management approach consisting of pipes, open drainage ways, and on-site stormwater management practices will adequately collect, treat, and convey the stormwater runoff.

Bioretentions and a water quality unit will be used to manage and treat stormwater runoff generated by the proposed redevelopment project with an increase in impervious area.

Pre- and post-development surface runoff rates have been evaluated for the 1-, 10-, 25-, and 100-year 24-hour storm events. Comparison of pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the project site will not be increased.

The pollutant loading analysis indicates stormwater quality will be enhanced through the implementation of the proposed stormwater management practices outlined herein.

The post-construction stormwater management practice(s) will be privately owned by Home Leasing. Deed restrictions will be in place, which require operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

2.0 SITE CHARACTERISTICS

2.1 State Environmental Quality Review

The construction activity is subject to State Environmental Quality Review (SEQR). The project is considered a Unlisted action. As such, SEQR coordination has been completed. Negative Declaration issued on 1/27/2025, amended on 2/9/2026. A copy of the SEQR documentation, in accordance with Part I.A.5. of GP-0-25-001, is provided in Appendix A, as Figure A-5 upon receipt.

2.2 Land Use and Topography

The project site is located within the R-50 zoning district. Multiple-family dwellings is a permitted use subject to a special use permit within this district. Special Use Permit was obtained on 2/9/2026.

The overall site is slightly sloping, with slopes ranging from 1 to 10 percent. Site elevations range from approximately 580 feet above mean sea level (MSL) to 600 feet MSL. The site generally slopes to the north and the west towards Cayuga Creek.

2.3 Soils and Groundwater

The US Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) was used to obtain surficial soil conditions for the study area, as follows:

Table 1: USDA Soil Data

Map Symbol & Description	Hydrologic Soil Group	Erosion Factor K	Depth to Water Table (feet)	Depth to Bedrock (feet)
Fu - Fluvaquents and Udifluvents, frequently flooded	A/D	0.17	0.50	>6.0
GaA - Galen very fine sandy loam, 0 to 3 percent slopes	A/D	0.37	1.75	>6.0
GaB - Galen very fine sandy loam, 3 to 8 percent slopes	A/D	0.37	1.75	>6.0
Te – Teel silt loam	B/D	0.37	1.75	>6.0

Upon review of the soil data presented in Table 1, the project site does not contain soils with a soil slope phase of D with a map unit name that inclusive of slopes greater than 25%, and does not contain soils with a soil slope phase of E or F.

The project site is composed of HSG A soils, HSG B soils, and HSG D soils, as shown in the table below. For the purposes of this report, HSG X/D soils were modeled as HSG D soils to reflect the undrained condition.

Table 2: Project Site HSG Data

HSG A	HSG B	HSG C	HSG D
0%	0%	0%	100%

The Soil Conservation Service defines the hydrologic soil groups as follows:

- Type A Soils: Soils having a high infiltration rate and low runoff potential when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a moderate rate of water transmission.
- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consisting mainly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately course textures. These soils have a moderate rate of water transmission.
- Type D Soils: Soils having a very low infiltration rate and high runoff potential when thoroughly wet. These soils consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very low rate of water transmission.

The soils map for the study area is presented in Appendix A, as Figure A-2.

2.4 Watershed Designation

The project site is not located in a restricted watershed identified in Appendix C of GP-0-25-001.

2.5 Receiving Water Bodies

The nearest natural classified water course into which runoff from the project site will discharge is Cayuga Creek. Cayuga Creek is classified by NYSDEC as a Class C water course, and is not included in the Section 303(d) list of impaired waters found in Appendix D of GP-0-25-001.

2.6 Aquifer Designation

The project site is not located over a US EPA designated Sole Source aquifer; nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

2.7 Wetlands

A search on the NYSDEC Environmental Resource Mapper on April 16, 2026, and a review of GIS data, determined that there are no known regulated wetlands located on or in the vicinity of the project site. A wetland delineation is scheduled for Spring 2026 to field verify if there are any wetland on site.

2.8 Flood Plains

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM), Town of West Seneca, New York. The project site lies within Flood Zone AE, areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood, and Flood Zone X, areas determined to be outside 500-year floodplain. No development is proposed to take place within the 100-year floodplain, therefore no floodplain development permit will be required. The FEMA Flood Map has been provided in Appendix A, as Figure A-5.

2.9 Listed, Endangered, or Threatened Species

A search was performed on the NYSDEC Environmental Resource Mapper on April 16, 2026, and determined that the project site may contain threatened or endangered species, or critical habitat. An Environmental Resource Map has been provided in Appendix A, as Figure A-4.

2.10 Historic Places

A search on the New York State Cultural Resource Information System (CRIS) database, performed on April 16, 2026, revealed the construction activity is located within an archeologically sensitive area A printout of the historic places screening map is presented in Appendix A, as Figure A-3. As such, NYSOPRHP coordination has been completed and a Phase 1 Archeological Survey was conducted on June 22, 2023 by archeologist. A copy of the NYSOPRHP documentation, in accordance with Part I.A.4. of GP-0-25-001, is provided in Appendix A, as Figure A-3A upon receipt.

2.11 Rainfall Data

Rainfall data utilized in the modeling and analysis was obtained from the Cornell University online Extreme Precipitation in New York & New England website (http://precip.eas.cornell.edu/). A local IDF file was imported, and specific mass curves were generated, in HydroCAD to evaluate the pre- and post-development stormwater runoff characteristics. Rainfall data specific to the portion of Erie County under consideration, for various 24-hour storm events, is presented in the following Table:

Table 3: Rainfall Data

Storm Event Return Period	24-Hour Rainfall (inches)
1-year	1.82
10-year	3.14
100-year	5.22

2.12 Pre-development Watershed Conditions

The pre-development project site is covered predominantly by buildings, pavement, grass, and woods. Analysis of pre-development conditions considered existing drainage patterns, soil types, ground cover, and topography. The Pre-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-5.

The results of the computer modeling used to analyze the overall watershed under pre-development conditions are presented in Appendix D. A summary of the pre-development watershed runoff rates at each Design Point is presented in Table 10.

Subcatchment one is a 7.74± acre watershed consisting of grass, pavement, and multiple buildings. Runoff flows west overland via sheet and shallow concentrated flow toward Cayuga Creek west of the site. This subcatchment is tributary to Design Point (AP) 1.

Subcatchment two is a 3.38± acre watershed consisting of grass and pavement. Runoff flows south overland via sheet and shallow concentrated flow toward a swale and catch basin at the southeast corner of the site. This subcatchment is tributary to Design Point (AP) 1.

Subcatchment three is a 5.00± acre watershed consisting of off-site drainage including a forresed area and grass. Runoff flows west overland via sheet and shallow concentrated flow toward a swale and catch basin at the southeast corner of the site. This subcatchment is tributary to Design Point (AP) 1

2.13 Post-development Watershed Conditions

The post-development project site is covered predominantly by buildings, pavement, sidewalks, grass, and woods. The analysis of post-development conditions considered existing drainage patterns, soil types, ground cover to remain, planned site development, site grading, and stormwater management facilities proposed as part of site improvements. The Post-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-6.

The results of the computer modeling used to analyze the overall watershed under post-development conditions are presented in Appendix D. A summary of the post-development watershed runoff rates at each Design Point is presented in Table 11.

There are numerous locations and methods for providing controls of off-site discharge of stormwater from the project site. Each has been designed to provide the above quantity controls by attenuating stormwater runoff and releasing runoff to off-site locations at a rate equal to or less than that which existed prior to development of the site. Each device is detailed on the accompanying plans. A Post-Development Watershed Delineation Map, with the tributary areas to each stormwater management practice proposed, has been provided in Appendix A, as Figure A-6.

2.14 Description of Design Points

The study area consists of the 16.2 acre project site and 5.44 acre area of disturbance. The overall watershed was broken down into smaller watersheds, or subcatchments, to allow for analysis of runoff conditions at several locations throughout the study area. Each of these locations was defined as a Design Point (DP) in order to compare the effects resulting from stormwater management facilities proposed as part of the project. Descriptions of each of the selected Design Points are provided below.

- Design Point 1: Off-site discharge to Cayuga Creek

3.0 STORMWATER MANAGEMENT PLANNING

Chapter 3 of the Design Manual outlines a six-step planning process for site planning and selection of stormwater management practices that must be implemented for both new development and redevelopment projects. This process is intended to develop a design that maintains pre-construction hydrologic conditions through the application of environmentally sound development principles, as well as treatment and control of runoff discharges from the site. The following sections outline the step-by-step process and how it has been applied to this project.

The goals of this Stormwater Management Plan are to analyze the peak rate of runoff under pre- and post-development conditions, to maintain the pre-development rate of runoff in order to minimize impacts to adjacent or downstream properties, and to minimize the impact to the quality of runoff exiting the site.

The Design Manual provides both water quality and water quantity objectives to be met by projects requiring a "Full SWPPP". These objectives will be met by applying stormwater control practices to limit peak runoff rates and improve the quality of runoff leaving the developed site.

3.1 STEP 1 – Site Planning

During the Site Planning process, the project site is evaluated for implementation of the green infrastructure planning measures identified in Table 3.1 of the Design Manual, in order to preserve natural resources and reduce impervious cover. Appendix C provides a description of each green infrastructure planning measure, along with a project specific evaluation.

3.2 STEP 2 – Calculate Water Quality Treatment Volume (WQv)

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of receiving water bodies. Therefore, treatment of stormwater runoff is important since most runoff related water quality contaminants are transported from land, particularly the impervious surfaces, during the initial stages of storm events.

3.2.1 NYSDEC Requirements for Water Quality Volume

The Design Manual requires that water quality treatment be provided for the initial flush of runoff from every storm. The NYSDEC refers to the amount of runoff to be treated as the "Water Quality Volume" (WQv). Section 4.2 of the Design Manual defines the Water Quality Volume as follows:

$$WQv = \frac{[(P)(R_v)(A)]}{12}$$

Where: P = 90% Rainfall Event Number
R_v = 0.05 + 0.009 (I)
I = Impervious Cover (Percent)
A = Contributing Area in Acres

This definition ensures that, all other things being equal, the Water Quality Volume will increase along with the impervious cover percentage.

3.2.2 Methodology for Redevelopment Projects

Chapter 9 of the Design Manual outlines alternative WQv treatment objectives for redevelopment projects.

According to Section 9.2.1.B.IV, redevelopment activities can achieve the water quality treatment objective through a combination of impervious cover reduction, standard SMPs, and alternative SMPs that provide a weighted average of at least two of the above methods, calculated as shown below. In this case, 100% of any new increase in impervious area to a given design point must be treated by approved alternate SMPs, standard SMPs, or RR techniques.

$$\%ALT = [25-(\% IC_{RED} + \%SMP + \%RR)] \times 3$$

Where:
%ALT = Percent of redevelopment impervious area treated by alternative SMP(s)

$\%IC_{RED}$ = Percent reduction in existing disturbed impervious area
%SMP = Percent of redevelopment impervious area treated by standard SMP(s)
%RR = Percent of redevelopment impervious area treated by runoff reduction techniques(s)

This redevelopment project is proposing a combination of WQv treatment by standard practice(s) and alternative practice(s) as shown in the following tables:

Table 4: Required WQv Treatment by Alternative Practice

WQv Treatment by Alternative Practice		Impervious Cover Reduction (IC)		WQv Treatment by Standard Practice		Runoff Reduction	
%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)
55%	2.28	0	0	45%	1.86	0	0

Table 5: WQv Required Summary

P (inches)	A (ac)	I (ac)	Rv	WQv Required	
1.00	16.62	3.01	0.29	10,567 cf	0.24 AF

The Water Quality Volume equation has been applied to the drainage area tributary to each of the stormwater quality practices proposed for this project. The practices have been sized to accommodate the Water Quality Volume, as per the performance criteria presented in Chapter 6 and/or Chapter 9 of the Design Manual. Water quality volume calculations for each of the proposed practices are presented in Appendix C.

3.3 STEP 3 – Apply RR Techniques and Standard SMPs with RRv Capacity to Reduce Total WQv

Land use change and development in the watershed increases the volume of runoff. As such, reductions in the amount of runoff from new development, accomplished through the implementation of a stormwater management plan for the site, will play an important role in the success or failure of the watershed-wide stormwater management plan. Runoff reduction techniques can be applied to manage, reduce, and treat stormwater, while maintaining and restoring natural hydrology through infiltration, evapo-transpiration, and the capture and reuse of stormwater. Volume reduction techniques by themselves typically are not sufficient to provide adequate attenuation of stormwater runoff, but they can decrease the size of the peak runoff rate reduction facilities.

3.3.1 NYSDEC Requirements for Redevelopment

Section 9.2.1.B of the Design Manual indicates, “Although encouraged, meeting the RRv criteria is not required for the redevelopment activity portion of a project. The need to provide RRv shall be considered separately for each design point. For design points with a net increase in impervious area, RRv is required for the increase in impervious area only.”

As such, bioretentions and a water quality unit have been applied to the project to meet the WQv objective for the redevelopment activity of the project. The increase in impervious cover will be treated as new development and both the WQv criteria and RRv criteria are met.

3.3.2

3.3.2 Application of Standard Stormwater Management Practices (SMPs) with RRv Capacity

The following Table demonstrates a summary of the standard SMP(s) with RRv capacity that have been incorporated into the stormwater management plan for this project. The standard SMP(s) with RRv capacity have been designed in accordance with Chapter 6 of the Design Manual. Refer to the contract drawings for practice dimensions, material specifications, and installation details. Practice specific calculations are presented in Appendix C.

Table 6: Summary of Standard SMPs with RRv Capacity being Applied

Standard SMP with RRv Capacity	Design Variant	Pretreatment Volume Required (% of WQv)	Pretreatment Volume Provided (CF)	RRv Capacity	WQv Required (CF)	WQv Reduced /RRv Provided (CF)	WQv Treated[1] (CF)	Total WQv Provided[2] (CF)
Filtration Bioretention	F-5	25	875	40%	3,499	1,500	1,999	3,499

Footnotes:
[1]*WQv Treated = WQV Required - RRv Provided*
[2]*Total WQv Provided = WQV Treated + RRv Provided*

3.3.3 RRv Performance Summary

A summary of the RRv provided is presented in the following table:

Table 7: RRv Summary

WQv Required (CF)	RRv Provided WQv Reduced (CF)	% RRv Provided/ WQv Reduced
10,567	1,500	>100%

As indicated in the above table, the RRv provided is greater than the RRv required for the project site. As such, the RRv criteria has been met and the designer can proceed to Step 6.

3.4 STEP 4 – Calculate the Minimum RRv Required

As indicated above, Section 9.2.1.B of the Design Manual indicates, "Although encouraged, meeting the RRv criteria is not required for the redevelopment activity portion of a project."

3.5 STEP 5 – Apply Standard SMPs to Address Remaining Water Quality Volume

If the entire Water Quality Volume is not treated through implementation of RR techniques and standard SMPs with RRv capacity, then the design must achieve the remaining WQv through the standard SMPs listed in Table 3.3 of the Design Manual or the Alternative Practices outlined in Section 9.4 of the Design Manual.

Table 8: Summary of WQv Provided

Step 2 WQv Required (CF)	Step 3 WQv Reduction by Standard SMPs w/ RRv Capacity (CF)[1]	Step 5 Reduced WQv to be Treated by Standard SMPs or Alternative Practices (CF)[2]
10,567	3,499	7,144
Footnotes: *[1]Step 3: WQv Reduction = RRv Provided + WQv Treated by Standard SMP with RRv Capacity* *[2]Step 5: Reduced WQv to be Treated = WQv Required – WQv Reduced*		

Based upon the results listed in the above Table, the entire WQv has not been treated by application of RR techniques and standard SMPs with RRv capacity. As such, the standard SMPs or the Alternative Practices (without RRv capacity) described in the following sections, have been incorporated into the stormwater management plan for this project, to meet the WQv objective. Practice-specific calculations are presented in Appendix C.

3.5.1 Underground Stormwater Detention System

Underground stormwater detention systems store and detain stormwater runoff in order to meet water quantity control requirements. Stormwater is stored in subsurface vaults and/or a system of large diameter interconnected storage pipes. Stored water is then released at rates designed to reduce peak run-off flows during post-development storms. Underground stormwater storage provides minimal stormwater quality benefits, but can be an effective component of a development's overall stormwater management plan.

3.5.2 Hydrodynamic Separators

Hydrodynamic separators accelerate the separation of floating and settling pollutants from stormwater through the use of a vortex. These pre-fabricated devices come in the form of an underground manhole or vault. The devices have no moving parts and are typically fabricated from concrete and marine grade aluminum.

During operation, stormwater runoff enters the unit tangentially to promote a gentle swirling motion in a treatment chamber. As stormwater circles within the chamber, settable solids fall into a sump and are retained. Buoyant debris, oil, and grease rise to the surface and are separated from the water as it flows under a baffle wall. Finally, treated water exits the treatment chamber through a flow control orifice located behind the baffle wall.

During low-flow conditions all runoff is diverted into the treatment chamber by a flow partition. At higher flow rates, a portion of the runoff spills over the flow partition and is diverted around the treatment chamber to prevent re-suspension and washout of previously trapped pollutants. Water that spills over the partition flows into a head equalization chamber above the treatment chamber outlet. As the head equalization chamber fills, the head differential driving flow through the treatment chamber collapses. The result is that flow rates in the treatment chamber remain relatively constant even as total flow rates increase substantially. This configuration further reduces the potential for re-suspension or washout.

According to Chapter 9 of the Design Manual, hydrodynamic separators of the type proposed for this project have been approved for use as a pretreatment system in new and redevelopment projects or as a primary treatment system on redevelopment projects.

According to Chapter 9 of the Design Manual, membrane filtration, of the type proposed for this project, has been approved for use as a primary treatment system on redevelopment projects.

The following Table summarizes both the Water Quality Volume requirements and the treatment volumes provided.

Table 9: Summary of Hydrodynamic Unit(s)

SWM Practice ID	NYSDEC Design Variant	Required WQv (CF)	Required WQv Flow Rate (CFS)	Approved Manufactured Treatment Flow Rate (MTFR) (CFS)	Product Name and Manufacturer
HYD-1	ALT	7,144	2.08	3.08	ADS Barracuda Max S6

3.6 STEP 6 - Apply Volume and Peak Rate Control

This report presents the pre-development and post-development features and conditions associated with the rate of surface water runoff within the study area. For both cases, the drainage patterns, drainage structures, soil types, and ground cover types are considered in this study.

3.6.1 NYSDEC Requirements for New Development

Chapter 4 of the Design Manual requires that projects meet three separate stormwater quantity criteria:

1. The Channel Protection (CPv) requirement is designed to protect stream channels from erosion. This is accomplished by providing 24 hours of extended detention for the 1-year, 24-hour storm event. The Manual defines the CPv detention time as the center of mass detention time through each stormwater management practice.

2. The Overbank Flood Control (Qp) requirement is designed to prevent an increase in the frequency and magnitude of flow events that exceed the bank-full capacity of a channel, and therefore must spill over into the floodplain. This is accomplished by providing detention storage to ensure that, at each Design Point, the post-development 10-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

3. The Extreme Flood Control (Qf) requirement is designed to prevent the increased risk of flood damage from large storm events, to maintain the boundaries of the pre-development 100-year floodplain, and to protect the physical integrity of stormwater management practices. This is accomplished by providing detention storage to ensure that, at each Design Point, the post-development 100-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

3.6.2 Methodology

In order to demonstrate that the NYSDEC detention requirements are being met, the Design Manual requires that a hydrologic and hydraulic analysis of the pre- and post-development conditions be performed using the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD, developed by HydroCAD Software Solutions LLC of Tamworth, New Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. HydroCAD uses the TR-20 algorithms and TR-55 methods to create and route runoff hydrographs.

HydroCAD has the capability of computing hydrographs (which represent discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. HydroCAD can also calculate the center of mass detention time for various hydraulic features. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

For this analysis, the watershed and drainage system was broken down into a network consisting of three types of components as described below:

1. Subcatchment: A relatively homogeneous area of land, which produces a volume and rate of runoff unique to that area.
2. Reach: Uniform streams, channels, or pipes that convey stormwater from one point to another.
3. Pond: Natural or man-made impoundment, which temporarily stores stormwater runoff and empties in a manner determined by its geometry and the hydraulic structure located at its outlets.

Subcatchments, reaches, and ponds are represented by hexagons, squares, and triangles, respectively, on the watershed routing diagrams provided with the computations included in Appendix D and Appendix E.

The analysis of hydrologic and hydraulic conditions and proposed stormwater management facilities, servicing the study area, was performed by dividing the tributary watershed into relatively homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps.

Proposed stormwater management practices were designed and evaluated in accordance with the Design Manual and local regulatory requirements. A local IDF file was imported, and specific mass curves were generated, in HydroCAD to evaluate the pre- and post-development stormwater runoff characteristics for various 24-hour storm events identified in the following Table.

Table 10: Design Events

Facility	24-hour Storm Event
Storm Sewer	10-year
Stormwater Management Practice(s)	1-year
	10-year
	100-year
Flood Conditions	100-year

3.6.3 Performance Summary

A comparison of the total required and provided CPv for the 1-year 24-hour storm event is shown in the following table:

Table 11: CPv Summary

Design Point (DP)	Required CPv (af)	Provided CPv (af)
1	0.20	0.36

A comparison of the pre- and post-development watershed conditions was performed for all Design Points and storm events evaluated herein. For all Design Points and design storms, this comparison demonstrates that the peak rate of runoff will not be increased. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties or receiving water courses.

The results of the computer modeling used to analyze the pre- and post-development watersheds are presented in Appendix D and Appendix E, respectively. The following Table summarizes the results of this analysis.

Table 12: Summary of Pre- and Post-Development Peak Discharge Rates

Pre- vs. Post-Development Discharge Rate (cfs)								
Design Point	1-year 24-hour storm event		10-year 24-hour storm event		25-year 24-hour storm event		100-year 24-hour storm event	
(DP)	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	5.58	2.94	17.02	9.76	NA	16.38	39.07	31.21

3.7 Climate Change Consideration

This report presents the consideration for future physical risks due to climate change, in accordance with Part III.A.2 of the permit. Overall site planning, control measures and practices, conveyance systems and detention systems were evaluated against the seven (7) physical risks identified by NYSDEC due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR 490, and associated guidance. Appendix C provides a description of each consideration, specific to the project.

4.0 CONSTRUCTION SEQUENCE

This project has not received written approval from the Town of West Seneca allowing the disturbance of more than five acres of land at any one time. Therefore, if the Contractor's construction sequence requires the disturbance of more than five acres at any one time, written approval must be obtained from written approval from the Town of West Seneca prior to disturbing more than five acres at once.

The "Erosion and Sediment Control Plan" and the "Erosion and Sediment Control Plan Prior to Construction" in the accompanying drawings and waiver request identifies the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to begin is presented on the accompanying drawings, though each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner's/Operator's Engineer overseeing the implementation of the SWPPP.

The Contractor will be responsible for implementing the erosion and sediment control measures identified on the plans. The Contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the Contractor.

In accordance with Part III.B.c.iv. a phasing plan for the project and sequencing plans for all phases have been provided. The plans address clearing and grubbing, excavation and grading, utility and infrastructure installation, final stabilization, and any other construction activity at the site that will result in soil disturbance. Refer to the plans for further information on the project phasing and sequencing.

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

The SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-25-001 (effective January 29, 2025 through January 28, 2030)
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)

The SWPPP and accompanying plans outline the construction scheduling for implementing the erosion and sediment control measures. These documents include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures.

Temporary and permanent erosion and sediment control measures that shall be applied during construction generally include:

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges.
2. Preservation of existing vegetation to the greatest extent practical. Following the completion of construction activities in any portion of the site, permanent vegetation shall be established on all exposed soils.
3. Site preparation activities to minimize the area and duration of soil disruption.
4. Establishment of permanent traffic corridors to ensure that "routes of convenience" are avoided.

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access(es) will be installed, per accompanying plans, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access(es). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

The access(es) shall be maintained in a condition, which will control tracking of sediment onto public rights-of-way or streets. When necessary, additional aggregate will be placed atop the filter fabric to assure the minimum thickness is maintained. All sediment and/or soil spilled, dropped, or washed onto public rights-of-way must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

Water trucks shall be used as needed during construction to reduce dust generated on-site. Dust control must be provided by the Contractor(s) to a degree that is acceptable to the Owner, and in compliance with the applicable local and state dust control requirements.

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s). Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

For areas undergoing clearing, grading, and disturbance as part of construction activities, where work has temporarily ceased, temporary soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has temporarily ceased.

5.1.6 Manufactured Insert Inlet Protection

Install insert inlet protection beneath the grate of all catch basins, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace insert as necessary to ensure proper function.

5.1.7 Filter Fabric Drop Inlet Protection

Install filter fabric or silt fence with wooden stakes at the perimeter of existing or proposed catch basins located in lawn areas, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace fabric as necessary to ensure proper function.

5.1.8 Erosion Control Blanket

Erosion control blankets shall be installed in accordance with manufacturer's requirements on all slopes exceeding 3:1. Erosion control blankets provide temporary erosion protection, rapid vegetative establishment, and long-term erosion resistance to shear stresses generated by high runoff flow velocities associated with steep slopes.

5.1.9 Stone Check Dams

Stone check dams will be installed within drainage ditches to reduce the velocity of stormwater runoff, promote settling of sediment, and reduce sediment transport off-site.

Sediment accumulated behind the stone check dam will be removed as needed to maintain flow through the stone check dam and prevent large flows from carrying sediment over or around the dam. Stones shall be replaced as needed to maintain the design cross section of the structures.

5.1.10 Temporary Sediment Trap

Temporary sediment traps shall be constructed to intercept sediment-laden runoff, reduce the amount of sediment leaving the disturbed areas, and protect drainage ways, properties, and rights-of-way.

Accumulated sediment shall be removed from the trap when it reaches no greater than 50 percent of the design capacity. Sediment shall not be placed downstream from the embankment, adjacent to a stream, or floodplain.

Temporary sediment traps depicted on the accompanying plans have been designed to provide 3,600 CF of storage per acre of tributary watershed.

5.1.11 Temporary Diversion Swales

Temporary diversion swales shall be used to divert off-site runoff around the construction site and divert runoff from stabilized areas around disturbed areas.

5.1.12 Dewatering Operations

Dewatering will be used to intercept sediment-laden stormwater or pumped groundwater and allow it to settle out of the pumped discharge prior to being discharged from the site. Water from dewatering

operations shall be treated to eliminate the discharge of sediment and other pollutants. Water resulting from dewatering operations shall be directed to temporary sediment traps or dewatering devices. Temporary sediment traps and dewatering bags will be provided, installed, and maintained at downgradient locations to control sediment deposits to downstream surfaces.

5.1.13 Fiber Roll

Prior to the initiation of and during construction activities, fiber rolls (12" minimum diameter) will be established downgradient of all disturbed areas to reduce sheet flow on slopes. These rolls may extend into non-impact areas to provide adequate protection of adjacent lands. Spacing will conform to NYSDEC specification for straw bale dike.

Clearing and grubbing will be performed only as necessary for the installation of the fiber rolls. To facilitate effectiveness, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s) and maintenance will be performed as needed.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased.

Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

5.2.2 Rock Outlet Protection

Rock outlet protection shall be installed at the locations as indicated and detailed on the accompanying plans. The installation of rock outlet protection will reduce the velocity and energy of water, such that the flow will not erode downstream surfaces.

5.3 Implementation Schedule for Erosion and Sediment Control Measures

Proper implementation of the outlined erosion and sediment control measures is critical to minimizing soil erosion and controlling off-site sediment transport during construction, as well as controlling the quality and quantity of stormwater runoff from the developed site after construction. The following table outlines the implementation schedule for initial placement of these measures, and the duration for which they should remain in place.

Table 13: Implementation Schedule for Erosion and Sediment Control Measures

Erosion and Sediment Control Measure	Initial Placement	Duration to Remain In-Place
Stabilized Construction Access	Upon mobilizing to site	Until construction is complete
Dust Control	As needed	As needed
Temporary Soil Stockpile	Upon delivery of materials to the site or excavation of on-site materials for reuse	Until materials have been placed or removed from the site
Silt Fencing	Prior to upgradient soil disturbance	Until upgradient area has achieved permanent stabilization
Temporary Seeding	Apply to any disturbed soil that will remain exposed for more than 14 days	Apply additional seed as needed for temporary stabilization
Manufactured Insert Inlet Protection	*Existing structures:* prior to upgradient soil disturbance *New structures:* upon installation of structure/grate	Until upgradient area has achieved permanent stabilization
Erosion Control Blanket	Upon completion of slope grading operations	Prior to final grading, or kept in place permanently
Stone Check Dams	*Existing swales:* upon completion of swale reshaping *New swales:* upon completion of swale excavation	Permanent
Temporary Sediment Trap	As needed during grading operations	Until final grading of tributary area is complete
Temporary Diversion Swales	As needed to divert flow around work area	Until permanent drainage methods are established (i.e. closed storm sewer, open conveyance swales, etc.)
Dewatering Operations	As needed during excavation	Until excavation/backfilling is complete
Fiber Roll	Prior to upgradient soil disturbance	Until upgradient area has achieved permanent stabilization
Establishment of Permanent Vegetation	As soon as possible after completion of final grading	Permanent, apply additional seed as needed to achieve 80% minimum uniform coverage
Rock Outlet Protection	During installation of tributary culverts/pipes	Permanent

5.4 Other Pollutant Controls

Part I.C.1 of GP-0-25-001 prohibits discharges from construction material wastewater, pollutants used in vehicle and equipment operation and maintenance, vehicle and equipment washing and toxic or hazardous substances.

The following table identifies materials and/or chemicals commonly used and/or stored on construction sites and should be addressed in the site-specific spill prevention and response plan:

Table 14: Common Construction Pollutants

Material/Chemical	Physical Description	Stormwater Pollutants	Location*
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment / staging area
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment / staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment / staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging area
Construction materials			
Granular fill	Various colored solids	Sediment	Stockpile / fill areas
Subbase course	Gray/brown solid	Sediment, dust	Stockpile
Topsoil	Brown solid	Sediment	Stockpile
Mulch	Various colored solid	Sediment, debris	Staging area
Seed	Brown/yellow solid	Nutrients, debris	Staging area
HDPE Storm Pipe	Black solid		Staging area
SDR-35, SDR-21 PVC Pipe	Various colored solid		Staging area
Metals Frames and Grates	Gray solid		Staging area
Joint Sealant	Light gray viscous solid	Polyurethane	Staging area

*(Area where material/chemical is used on-site)

5.5 Construction Housekeeping Practices

During the construction phase, the Contractor(s) will implement the following measures:

5.5.1 Sediment Sweeping/Vacuuming

Any sediment that is tracked by construction vehicles or erosion onto adjacent public or private impervious surfaces must be swept or vacuumed, utilizing self-propelled and/or walk-behind equipment, and removed on a daily basis. Kick brooms and sweeper attachments are not an acceptable means of sweeping. Sweeping or vacuuming should not take place while tracked sediment is wet. If tracked sediment is compacted, the sediment must be scraped loose prior to sweeping or vacuuming.

5.5.2 Material Stockpiles

Material resulting from clearing and grubbing operations that will be stockpiled on-site, must be adequately protected with downgradient erosion and sediment controls.

5.5.3 Equipment Cleaning and Maintenance

The Contractor(s) will designate areas for equipment cleaning, maintenance, and repair. The Contractor(s) and subcontractor(s) will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.5.4 Detergents

The use of detergents for large-scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.)

5.5.5 Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed, for the pollutants identified in Section 5.3, for the site by the Contractor(s) that addresses the following:

1. Reducing chance of spills
2. Stopping the source of spills
3. Containing and cleaning up spills
4. Disposing of materials contaminated by spills
5. Training personnel responsible for spill prevention/response
6. Material handling procedures
7. Material storage requirements

The plan shall detail the steps required in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Safety Data Sheets (SDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.5.6 Concrete Washout Areas

A temporary concrete washout area shall be provided for every project where concrete will be poured or otherwise formed on-site and shall consist of an excavated or above-ground lined construction pit

where concrete trucks or equipment can be washed out after their loads have been discharged. Waste generated from concrete wash water that shall not be allowed to flow into drainage ways, inlets, receiving waters, highway right-of-way, or any location other than the designated concrete washout area(s). Proper signage shall be placed adjacent to the facility to designate the "Concrete Washout Area". Locate the facility a minimum of 100-feet from drainage swales, storm drain inlets, wetlands, streams, and other surface waters. Prevent surface water from entering the washout area.

The hardened residue from the concrete wash areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the washout area shall include removal of hardened material when 75% of the storage capacity is filled, and a minimum freeboard of 12 inches shall be maintained. The Contractor will be responsible for seeing that these procedures are followed. The project may require the use of multiple concrete washout areas based on the frequency of concrete pours.

5.5.7 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that prevents negative impacts of construction materials on stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

6.0 INSPECTIONS, MAINTENANCE, AND REPORTING

6.1 Inspection and Maintenance Requirements

6.1.1 Pre-Construction Inspection and Certification

Prior to the commencement of construction, the Qualified Inspector/Qualified Professional shall conduct an assessment of the site and certify that the appropriate erosion and sediment control measures have been adequately installed and implemented. The Contractor shall contact the Qualified Inspector/Qualified Professional once the erosion and sediment control measures have been installed.

6.1.2 Construction Phase Inspections and Maintenance

A Qualified Inspector/Qualified Professional, as defined in Appendix A of the General Permit GP-0-25-001, shall conduct regular site inspections between the time this SWPPP is implemented and final site stabilization. Site inspections shall occur at an interval of at least once every seven (7) calendar days.

The purpose of site inspections is to assess performance of pollutant controls. Based on these inspections, the Qualified Inspector/Qualified Professional will decide whether it is necessary to modify this SWPPP, add or relocate sediment barriers, or whatever else may be needed in order to prevent pollutants from leaving the site via stormwater runoff. The general contractor has the duty to cause pollutant control measures to be repaired, modified, maintained, supplemented, or whatever else is necessary in order to achieve effective pollutant control.

Examples of particular items to evaluate during site inspections are listed below. This list is not intended to be comprehensive. During each inspection the inspector must evaluate overall pollutant

control system performance as well as particular details of individual system components. Additional factors should be considered as appropriate to the circumstances.

1. Locations where vehicles enter and exit the site must be inspected for evidence of off-site sediment tracking. A stabilized construction access will be constructed where vehicles enter and exit. This access will be maintained or supplemented as necessary to prevent sediment from leaving the site on vehicles.
2. Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned in order to provide additional capacity. All material from behind sediment barriers will be stockpiled on the up slope side. Additional sediment barriers must be constructed as needed.
3. Inspections will evaluate disturbed areas and areas used for storing materials that are exposed to rainfall for evidence of, or the potential for, pollutants entering the drainage system. If necessary, the materials must be covered or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas.
4. Grassed areas will be inspected to confirm that a healthy stand of grass is maintained. The site has achieved final stabilization once all areas are covered with building foundation or pavement, or have a stand of grass with at least 80 percent density. The density of 80 percent or greater must be maintained to be considered as stabilized. Areas must be watered, fertilized, and reseeded as needed to achieve this goal.
5. All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

The inspection reports must be completed entirely and additional remarks should be included if needed to fully describe a situation. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance.

Within one (1) business day of the completion of an inspection, the *Qualified Inspector/Qualified Professional* shall notify the Owner/Operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

In addition to the inspections performed by the *Qualified Inspector/Qualified Professional*, the Contractor shall perform routine inspections that include a visual check of all erosion and sediment control measures. All inspections and maintenance shall be performed in accordance with the inspection and maintenance schedule provided on the accompanying plans. Sediment removed from erosion and sediment control measures will be exported from the site, stockpiled for later use, or used immediately for general non-structural fill.

It is the responsibility of the general contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more structural controls than are shown on the accompanying plans. (For example, localized concentrations of runoff could make it necessary to install additional sediment barriers, sediment traps, etc.) Assessing the need for additional controls and implementing them or adjusting existing controls will be a continuing aspect of this SWPPP until the site achieves final stabilization.

6.1.3 Temporary Suspension of Construction Activities

For construction sites where soil disturbance activities have been temporarily suspended (e.g. Winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the frequency of Qualified Inspector/Qualified Professional inspections can be reduced to once every 30 calendar days. Prior to reducing the frequency of inspections, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the Town of West Seneca in writing.

6.1.4 Partial Project Completion

For construction sites where soil disturbance activities have been shut down with partial project completion, all areas disturbed as of the project shutdown date have achieved final stabilization, and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational, the inspections by the Qualified Inspector/Qualified Professional can stop. Prior to the shutdown, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the Town of West Seneca in writing.

If soil disturbance activities have not resumed within two years from the date of shutdown, a Notice of Termination (NOT) shall be properly completed and submitted to the NYSDEC.

6.1.5 Post-Construction Inspections and Maintenance

Inspections and maintenance of final stabilization measures and post-construction stormwater management practices shall be performed in accordance with Appendix G, once all disturbed areas are stabilized and all stormwater management systems are in place and operable.

6.2 Reporting Requirements

6.2.1 Inspection Reports

Pursuant to Part IV.C of GP-0-25-001, inspection reports shall be prepared for the duration of construction, as outlined herein, and shall be signed by the *Qualified Inspector* or *Qualified Professional*. A sample inspection form is provided in Appendix F.

At a minimum, each inspection report shall record the following information:

1. Permit identification number; and
2. Date and time of inspection; and
3. Name and title of person(s) performing inspection; and
4. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and
5. A description of the condition of the runoff at all points of discharge from the construction site. This must include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and
6. A description of the condition of all surface waters of the State located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This must include identification of any discharges of sediment to the surface waters of the State; and

7. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and
8. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and
9. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and
10. Estimates, in square feet or acres, of the following areas:
    a. Total area with active soil disturbance (not requiring either temporary stabilization or final stabilization); and
    b. Total area with inactive soil disturbance (requiring either temporary stabilization or final stabilization); and
    c. Total area that has achieved temporary stabilization; and
    d. Total area that has achieved final stabilization; and
11. Current stage of construction of all SMPs and identification of all construction activity on site that is not in conformance with the SWPPP and technical standards; and
12. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and
13. Identification and status of all corrective actions that were required by previous inspection; and
14. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified inspector must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

6.2.2 Site Log Book

Pursuant to Part I.E.3 of GP-0-25-001, the Owner/Operator shall retain a copy of the General Permit, NOI, NOI Acknowledgment Letter, MS4 SWPPP Acceptance Form (if applicable), inspection reports, contractor and subcontractor certification forms, and all documentation necessary to demonstrate eligibility under the permit, at the construction site from commencement of construction activity until the date that all areas of disturbance have achieved final stabilization and the Notice of Termination has been submitted to the NYSDEC.

The Site Log Book shall be maintained on-site in a secure location (i.e. job trailer, on-site construction office, or mailbox with lock) and must be accessible during normal business hours to an individual performing a compliance inspection.

6.2.3 Post Construction Records and Archiving

Following construction, the Owner/Operator shall retain copies of the SWPPP, the complete construction Site Log Book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least five years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, at its sole discretion, at any time upon written notification.

Records shall be maintained of all post construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix G.

7.0 SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved with compliance with the NYSDEC SPDES General Permit GP-0-25-001 conditions is outlined in the subsequent sections. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-25-001 presented in Appendix J.

7.1 Owner's/Operator's Responsibilities

1. Ensure that control measures are selected, designed, installed, implemented and maintained to minimize the discharge of pollutants and prevent a violation of the water quality standards, meeting the non-numeric effluent limitations in Part II.B.1.(a)-(e) of the SPDES General Permit and in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

2. Ensure that practices are selected, designed, installed, and maintained to meet the performance criteria in the Design Manual. Practices must be designed to meet the applicable sizing criteria in Part II.C.2.a., b., c. or d. of GP-0-25-001.

3. Retain the services of a "Qualified Inspector" or "Qualified Professional" as defined under GP-0-25-001, to provide the services outlined in Section 7.5 "Qualified Inspector's/Qualified Professional's Responsibilities."

4. Retain the services of a "Qualified Professional," as defined under GP-0-25-001, to provide the services outlined in Section 2.3 "Owner's/Operator's Engineers Responsibilities."

5. Have an authorized corporate officer sign the Owner/Operator Certification Form to accompany the eNOI. A copy of the completed NOI is included in Appendix B.

6. Submit the electronic version of the NOI (eNOI) along with the MS4 SWPPP acceptance form using the NYSDEC's website (http://www.dec.ny.gov/chemical/43133.html).

7. Pay the required initial and annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The initial fee is calculated as $110.00 per acre disturbed plus $675.00 per acre of net increase in impervious cover, and the annual fee is $110.00.

8. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion control practices included in the SWPPP and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the SWPPP. Each of the contractors and subcontractors must identify at least one person from their company to be the trained contractor that will be responsible for implementation of the SWPPP. Ensure that at least one trained contractor is on site daily when soil disturbance activities are being performed.

9. Schedule a pre-construction meeting which shall include the Town of West Seneca representative, Owner's/Operator's Engineer, Qualified Inspector, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

10. Retain the services of an independent certified materials testing and inspection firm operating under the direction of a licensed Professional Engineer to perform regular tests, inspections, and certifications of the construction materials used in the construction of all post-construction stormwater management practices.

11. Retain the services of a NYS licensed land surveyor to perform an as-built topographic survey of the completed post-construction stormwater management facilities.

12. Require the Contractor to fully implement the SWPPP prepared for the site by the Owner/Operator's Engineer to ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the NYSDEC.

13. The Owner/Operator is authorized to commence construction activity as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

14. Within five (5) business days of receipt of the LOA, send an electronic copy of the LOA to the MS4 operator(s) with review authority.

15. Forward a copy of the LOA received from DEC to the Owner's/Operator's Engineer for project records, and to the Contractor for display at the construction site.

16. As of the date the LOA is received, the Owner/Operator must make the eNOI, SWPPP and LOA available for review and copying in accordance with the requirements in Part VII.H. of GP-0-25-001. When applicable, as of the date an updated LOA is received, the Owner/Operator must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

17. The Owner/Operator must ensure compliance with all requirements of GP-0-25-001 and that the provisions of the SWPPP, including any changes made to the SWPPP in accordance with Part III.A.5., are properly implemented and maintained from the commencement of construction activity until all area of disturbance have achieved final stabilization; and the Owner/Operator's coverage under the permit is terminated in accordance with Part V.A.5.a.

18. As of the date of the commencement of construction activities until Part I.E.2.a. and b. have been met, the Owner/Operator must maintain at the construction site, a copy of all documentation necessary to demonstrate eligibility with GP-0-25-001, a copy of GP-0-25-001, the SWPPP, the signed SWPPP Preparer Certification Form, the signed MS4 SWPPP Acceptance Form, signed Owner/Operator Certification Form, eNOI, and LOA, and LOA transmittal to the MS4 Operator in accordance with Part I.D.3.c.

19. The Owner/Operator must maintain at the construction site, until Part I.E.2.a and b. have been met, as of the date the documents become final or are received, a copy of the responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7, and inspection reports in accordance with Part IV.C.4. and 6.

20. The Owner/Operator must maintain the documents in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the Owner/Operator must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

21. Upon finding a significant non-compliance with the practices described in the SWPPP or violation of GP-0-25-001, NYSDEC may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the Owner/Operator. Forward a copy of any stop work order received immediately to the Owner's/Operator's Engineer and to the Contractor.

22. If any human remains or archaeological remains are encountered during excavation, the Owner/Operator must immediately cease, or cause to cease, all construction activity in the area of the remains and notify the appropriate Regional Water Engineer (RWE). Construction activity shall not resume until written permission to do so has been received from the RWE.

23. To be authorized to implement modifications to the information previously submitted in the eNOI, the Owner/Operator must notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI, update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D., and receive an updated LOA.

24. The eNOI, SWPPP, LOA, updated LOAs, and inspection reports required by GP-0-25-001 are public documents that the Owner/Operator must make available for review and copying by any person within five (5) business days of the Owner/Operator receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

25. The Owner/Operator must terminate coverage when the project reaches total project completion, has a planned shutdown with partial project completion, is changing Owner/Operator or has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

26. Have a qualified inspector perform a final site inspection prior to submitting the eNOT.

27. Have the MS4 sign the MS4 Acceptance statement on the eNOT in accordance with the requirements in Part VII.J.

28. Prior to submitting a Notice of Termination, ensure for SMP(s) that are privately owned, the Owner/Operator has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the Owner/Operator's deed of record.

29. Submit a complete Notice of Termination form electronically using the NYSDEC eNOT. Coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

30. Request and receive all SWPPP records from the Owner's/Operator's Engineer and archive those records, along with the LOT, for a period of at least five (5) years from the date that NYSDEC accepts a complete NOT submitted.

31. Implement the Post-Construction Inspections and Maintenance procedures outlined in Appendix G.

32. The Owner/Operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the Owner/Operator shall amend the SWPPP, including construction drawings:
    a) Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the project site;
    b) Whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and
    c) To address issues or deficiencies identified during an inspection by the "Qualified Inspector," the Department, or other Regulatory Authority.
    d) To document the final construction conditions.

33. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department, in conformance with Part I.G.. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

7.2 Owner's/Operator's Engineer's Responsibilities

1. Prepare the SWPPP using good engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.

2. Prepare the electronic Notice of Intent (eNOI) (see Appendix B) and sign the "SWPPP Preparer Certification Form." Forward the Owner/Operator Certification Form to the Owner/Operator for signature.

3. Provide copies of the SWPPP to the Town of West Seneca once all signatures and attachments are complete.

4. Enter Contractor's information in Section 7.5 "SWPPP Participants" once a Contractor is selected by the Owner/Operator.

5. Participate in a pre-construction meeting which shall include the Town of West Seneca representative, Owner/Operator, Qualified Inspector, Contractor, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. Update the SWPPP each time there is a significant modification to the pollution prevention measures or a change of the principal Contractor working on the project who may disturb site soil.

7.3 Contractor's Responsibilities

1. Sign the SWPPP Contractor's Certification Form contained within Appendix B and forward to the Owner's/Operator's Engineer for inclusion in the Site Log Book.

2. Identify at least one Trained Contractor that will be responsible for implementation of this SWPPP. Ensure that at least one Trained Contractor is on site on a daily basis when soil disturbance activities are being performed. The Trained Contractor shall inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating conditions at all times. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

3. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with construction activities that will result in soil disturbance to identify at least one Trained Contractor that will be on site on a daily basis when soil disturbance activities are being performed; and to sign a copy of the Subcontractor's Certification Form contained within Appendix B, then forward to the Owner's/Operator's Engineer for inclusion into the Site Log Book. This information must be retained as part of the Site Log Book.

4. Maintain a Spill Prevention and Response Plan in accordance with requirements outlined in Section 5 of this SWPPP. This plan shall be provided to the Owner's/Operator's Engineer for inclusion in the Site Log Book, prior to mobilization on-site.

5. Participate in a pre-construction meeting which shall include the Town of West Seneca representative, Owner/Operator, Owner's/Operator's Engineer, Qualified Inspector, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. If Contractor plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if Contractor plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site, Contractor shall submit appropriate documentation to the Owner's/Operator's Engineer so that the SWPPP can be modified accordingly.

7. Implement site stabilization, erosion and sediment control measures, and other requirements of the SWPPP.

8. In accordance with the requirements in the most current version of the NYS Standards and Specifications for Erosion and Sediment Control, conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare and retain written documentation of inspections as well as of

all repairs/maintenance activities performed. This information must be retained as part of the Site Log Book.

9. Begin implementing corrective actions within one (1) business day of receipt of notification by the Qualified Inspector/Qualified Professional of any corrective actions. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

10. Maintain a record of the date(s) and location(s) that soil restoration is performed in accordance with the accompanying plans and NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," dated April 2008. A copy of this publication is provided in Appendix H. The record that is to be maintained shall be a copy of the overall site grading plan delineating the area(s) and date(s) that the soil was restored.

11. Upon completion of all construction at the site, the contractor responsible for overall SWPPP Compliance shall sign the certification on their Contractor Certification Form indicating that: a.) all temporary erosion and sediment control measures have been removed from the site, b.) the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," and c.) all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents.

7.4 Qualified Inspector's/Qualified Professional's Responsibilities

1. Participate in a pre-construction meeting with the Town of West Seneca representative, Owner/Operator, Owner/Operator's Engineer, Contractor, and their subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

2. Conduct an initial assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment control measures described within this SWPPP have been adequately installed and implemented to ensure overall preparedness of the site.

3. Provide on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Owner/Operator and general contractor within one business day of the completion of the inspection, with any deficiencies identified. A sample inspection form is provided in Appendix F.

4. Prepare an inspection report subsequent to each and every inspection that shall include/address the items listed in Part IV.C.4 of GP-0-25-001. Sign all inspection reports and maintain on site with the SWPPP.

5. Notify the owner/operator and appropriate contractor or subcontractor of any corrective actions that need to be taken.

6. Prepare a construction Site Log Book to be used as a record of all inspection reports generated throughout the duration of construction. Ensure that the construction Site Log Book is maintained and kept up-to-date throughout the duration of construction.

7. Review the Contractor's SWPPP records on a periodic basis to ensure compliance with the requirements for daily reports, soil restoration, inspections, and maintenance logs.

8. Based on the as-built survey and material testing certifications performed by others, the Qualified Professional shall perform evaluations of the completed stormwater management practices to determine whether they were constructed in accordance with this SWPPP.

9. The Qualified Professional shall conduct a final site assessment and prepare a certification letter to the Owner/Operator indicating that, upon review of the material testing and inspection reports prepared by the firm retained by the Owner/Operator, review of the completed topographic survey, and evaluation of the completed stormwater management facilities, the stormwater management facilities have been constructed substantially in accordance with the contract documents and should function as designed.

10. Prepare the Notice of Termination (NOT). The Qualified Professional shall sign the NOT Certifications VI (Final Stabilization) and VII (Post-construction Stormwater Management Practices) and forward the NOT to the Owner/Operator for signature on Certification VIII (Owner/Operator Certification).

11. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

12. Transfer the SWPPP documents, along with all NOI's, LOA, permit certificates, NOT's, LOT, construction Site Log Book, and written records required by the General Permit to the Owner/Operator for archiving.

7.5 SWPPP Participants

1. Owner's/Operator's Engineer [3]: Kristopher Winkler, PE
   LaBella Associates, DPC
   300 Pearl Street, Suite 130
   Buffalo, NY 14202
   Phone: (716) 483-3153

2. Owner/Operator [4]: Home Leasing
   75 South Clinton Avenue, Suite 700,
   Rochester, NY 14604
   Phone: 585-262-6210

3. Contractor[5,6]:

   Name and Title: _____

   Company Name: _____

   Mailing Address: _____

   _____

   Phone: _____

   Fax: _____

[3] Refer to Appendix B for the SWPPP Preparer Certification Form.
[4] Refer to Appendix B for the Owner/Operator Certification Form.
[5] Refer to Appendix B for Contractor and Subcontractor Certification Form.
[6] Contractor's information to be entered once the Contractor has been selected.

APPENDIX A: FIGURES

A-1: Site Location Map
A-2: Soils Map
A-3: Historic Places Screening Map
A-4: Environmental Resource Map
A-5: FEMA Firm Map
A-6: Special Use Permit and SEQR Negative Declaration
A-7: Pre-Development Watershed Delineation Map
A-8: Post-Development Watershed Delineation Map

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **SITE LOCATION MAP**

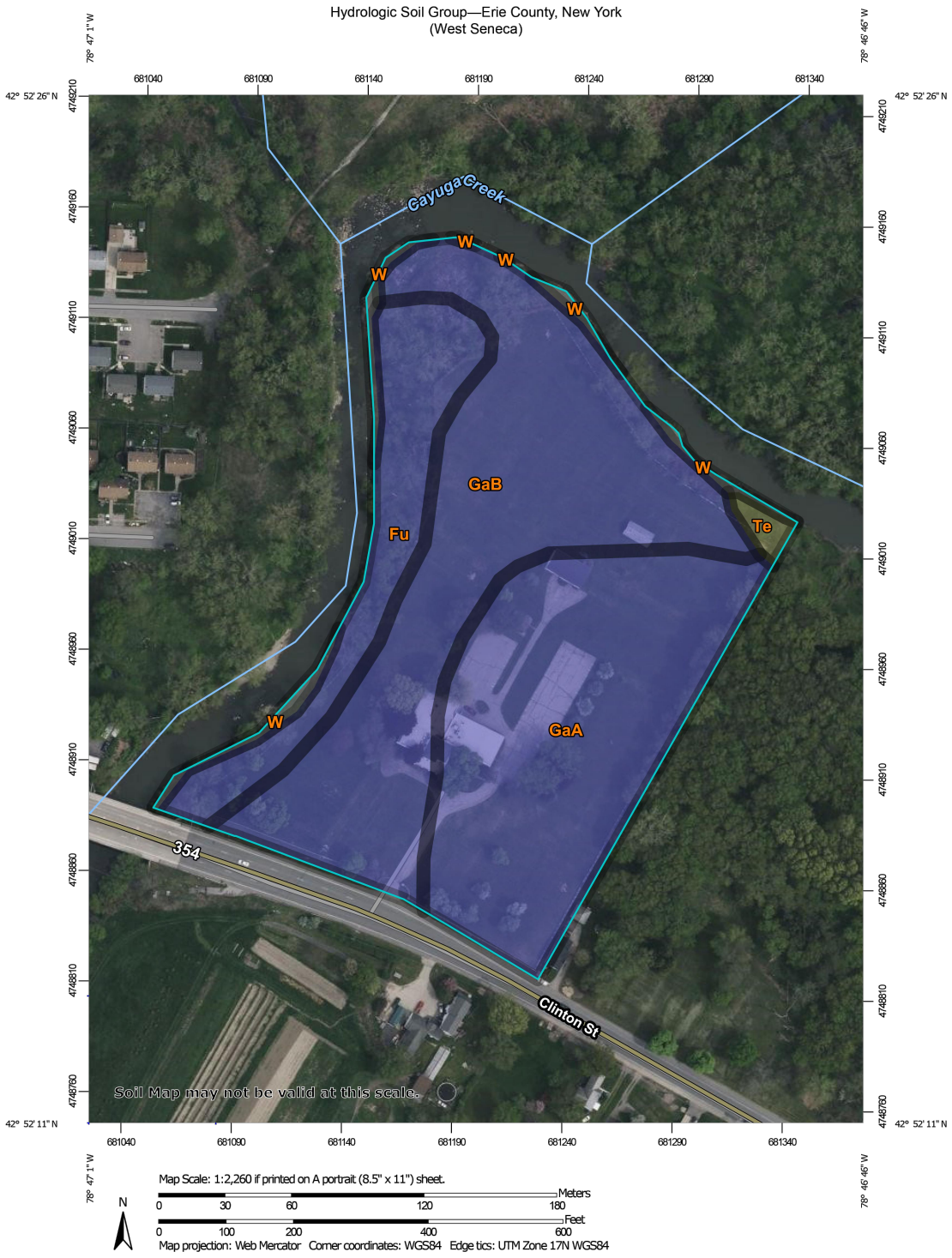
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--	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
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DRAWING NUMBER: **A-1**

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Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/13/2026
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SWPPP FIGURE - NOT FOR CONSTRUCTION

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SOILS MAP

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	04/20/2026	2241067

PROJECT NAME:
WEST SENECA APARTMENTS
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DRAWING NUMBER:
A-2a

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 25, Sep 4, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Fu	Fluvaquents and Udifluvents, frequently flooded	A/D	1.7	14.7%
GaA	Galen very fine sandy loam, 0 to 3 percent slopes	A/D	4.4	37.9%
GaB	Galen very fine sandy loam, 3 to 8 percent slopes	A/D	5.2	44.5%
Te	Teel silt loam	B/D	0.1	1.1%
W	Water		0.2	1.8%
Totals for Area of Interest			**11.7**	**100.0%**

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PROJECT NAME: WEST SENECA APARTMENTS
2544 CLINTON ST, WEST SENECA, NY 14224

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Consultation Projects (View)

Survey Archaeology Areas (View)

Survey Building Areas (View)

LPC Historic Districts

Archeologically Sensitive Areas

National Register Building Sites (View)

USN Building Districts (View)

LPC Landmarks

USN Building Points (View)

- Eligible
- Listed
- Not Eligible
- Not Eligible - Demolished
- Undetermined

Cemeteries

Missing or invalid reference

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DRAWING NAME: **HISTORIC PLACES SCREENING MAP**

DRAWN BY:	DATE:	PROJECT NO.:
--	04/20/2026	2241067

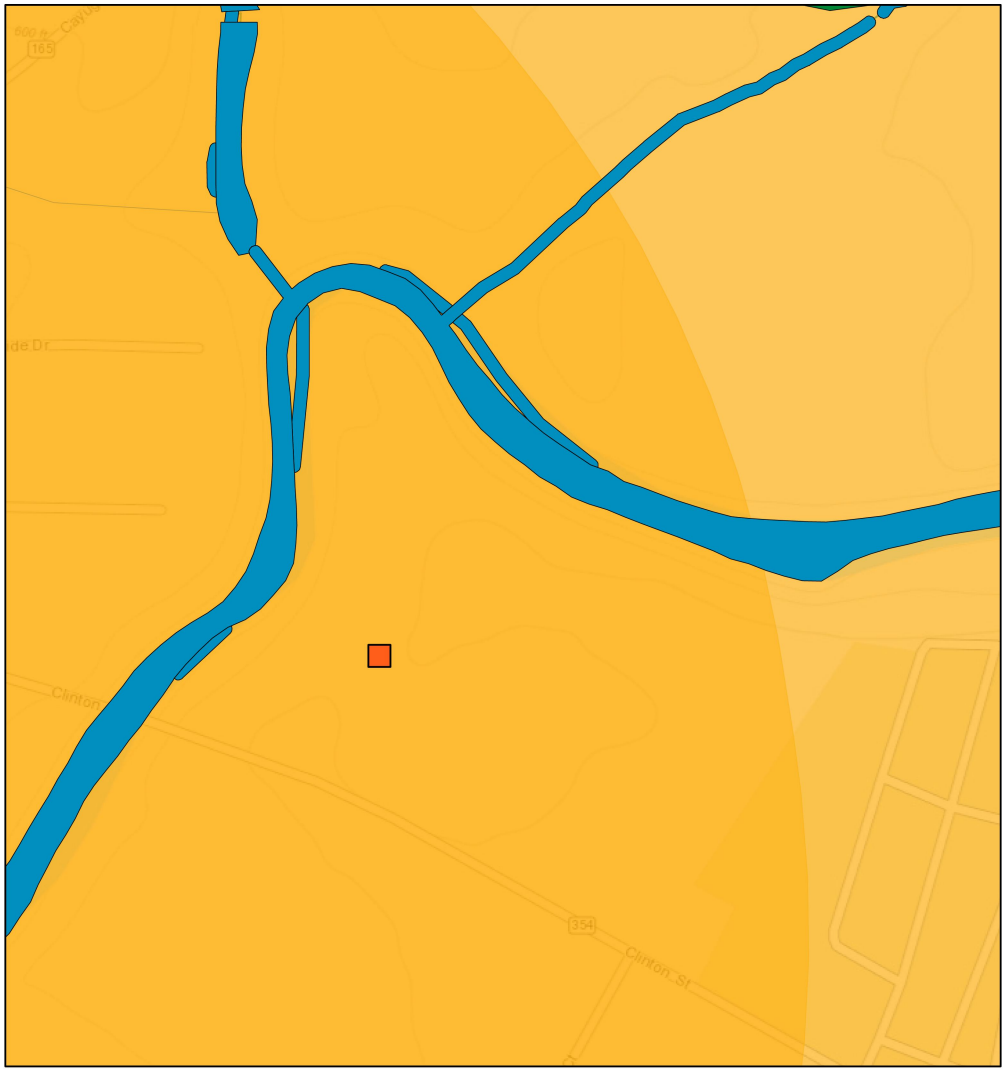
PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-3**

\\cash.lab\u\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\05_Design\Civil\LD-LA\Stormwater\Parts\Appendix A\A_Appendix A\A_FIGURES.dwg
4/20/2026 10:29:45 AM

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Environmental Resource Mapper



April 16, 2026

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes

Waterbody Inventory/Priority Waterbodies List
- Lakes and Reservoirs
- Estuaries
- Rivers and Streams
- Shorelines

- State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals

National Wetlands Inventory
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **ENVIRONMENTAL RESOURCE MAP**

DRAWN BY:	DATE:	PROJECT NO.:
--	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-4**

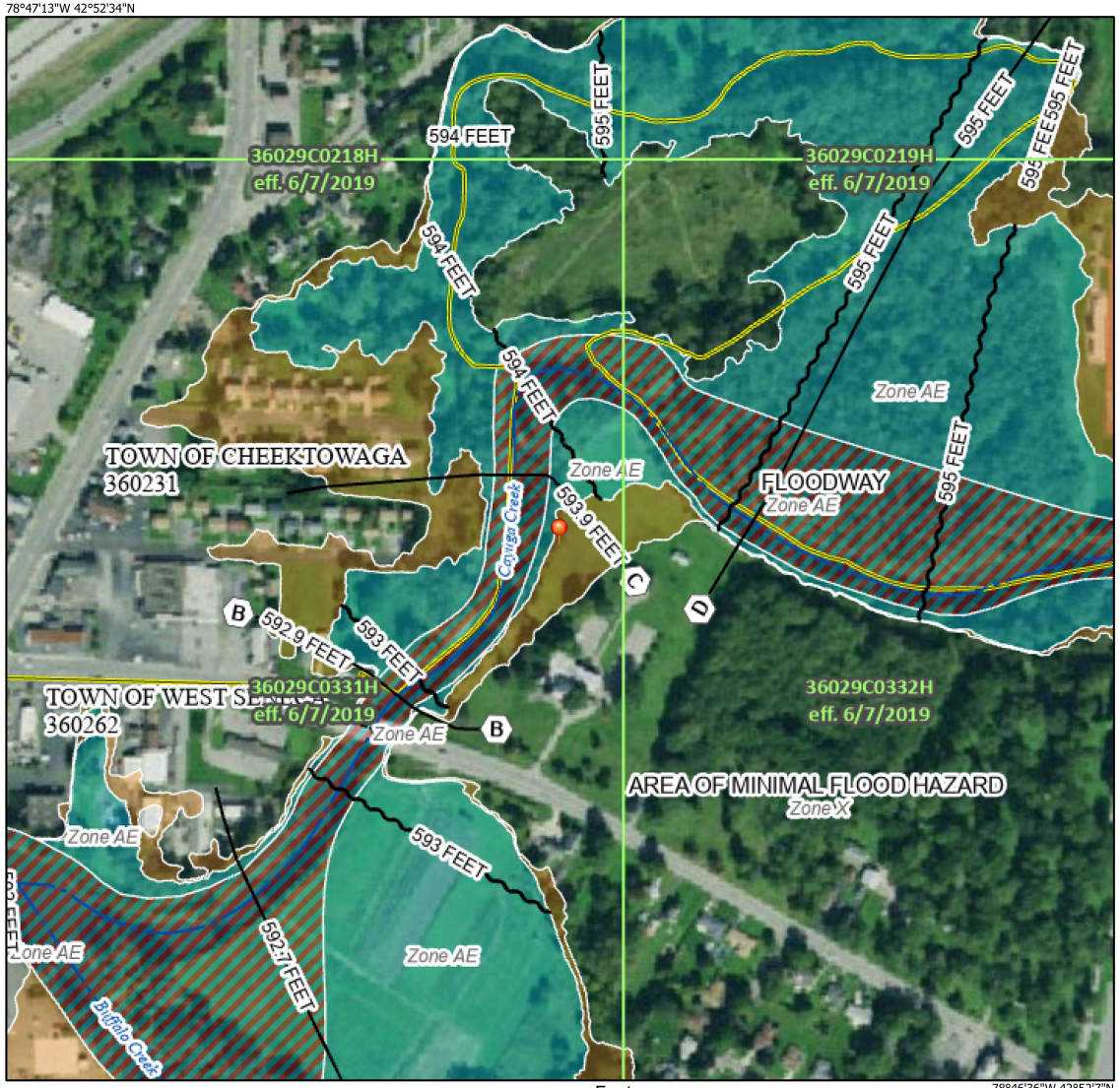
\\cash.lab\u\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\05_Design\Civil\LD-LA\Stormwater\Parts\Appendix A\A_App A_FIGURES.dwg
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National Flood Hazard Layer FIRMette

FEMA

78°47'13"W 42°52'34"N



78°46'36"W 42°52'7"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- OTHER AREAS
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- GENERAL STRUCTURES
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES
  - 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/6/2026 at 2:34 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME:	DRAWN BY:	DATE:	PROJECT NO.:
FEMA FIRM MAP	--	04/20/2026	2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON ST, WEST SENECA, NY 14224

DRAWING NUMBER: **A-5**

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ROLL CALL: Present Supervisor Dickson
Councilmember Breidenstein
Councilmember Kims
Councilmember Piekarec
Councilmember Robertson

Absent None

Supervisor Dickson read the Fire Prevention Code instructing the public where to exit in case of a fire, or an emergency was stated.

APPROVAL OF AGENDA

1. Town Clerk re Approval of Agenda as submitted

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to approve the agenda with the additional item from the Director of Senior Services.

Ayes: All Noes: None Motion Carried

MINUTES TO BE APPROVED

1. Town Clerk Newton re Reorganizational Meeting Minutes from January 13, 2025

Motion by Supervisor Dickson, seconded by Councilmember Robertson, to approve the Reorganizational Meeting Minutes from January 13, 2025.

Ayes: All Noes: None Motion Carried

2. Town Clerk re Meeting Minutes 2025-01 of January 13, 2025

Motion by Supervisor Dickson, seconded by Councilmember Kims, to approve Meeting Minutes 2025-01 of January 13, 2025.

Ayes: All Noes: None Motion Carried

PUBLIC COMMENTS

Courtney Fallon, Treehaven Road, referred to Communications Item No. 10, Summer employee bonus:

- ✓ Requested the Town Board not to approve the item and in her opinion the bonus should be higher for water safety instructors
- ✓ Recommended terms to better accommodate pool staff, specifically college students
- ✓ Qualification 4.d in her opinion does not accommodate employees' scheduling challenges, for example, summer school

Mary Jane Held, 1442 Orchard Park Road, referred to the proposed project at 1425 Orchard Park Road:

- ✓ Is opposed to the project and suggested a dog park instead – Supervisor Dickson stated the town is reviewing adding a dog park and NYS is planning to add sidewalks along Orchard Park Road.
- ✓ Is concerned about additional traffic

TABLED ITEM

1. Code Enforcement re Request for special use permit – 1850 Union Road

The item remained tabled.

OLD BUSINESS

1. Code Enforcement re Rezone & Special Use Permit – 1425 Orchard Park Road

Code Enforcement Officer Schieber stated the following information has been received:

- ✓ Fully coordinated SEQR
- ✓ SHPO clearance regarding a full investigation of the archeologically sensitive area near cemetery
- ✓ NYSDOT have no objections to the traffic generated by the project

Town Engineer Foote stated the lining of the trunk sewers is reducing overflow occurrences.

Councilmember Breidenstein questioned Mr. Foote on the completion date of the Phase 8 project. Mr. Foote stated he anticipates the project will be completed this summer noting the lining will be completed this spring.

Councilmember Piekarec stated he is in favor of the project and noted he does not agree with the Town Board having tabled the project last year.

Councilmember Kims stated in her opinion it was prudent of the town to address the downstream sewer problems before approving the project.

Motion by Supervisor Dickson, seconded by Councilmember Breidenstein, to approve the request for rezoning and special use permit for property located at 1425 Orchard Park Road, changing its classification from C- 1 and R-75 to C-1(S) for construction of a multi-unit residential development.

On the question, Councilmember Breidenstein recognized the Engineering Departments efforts to clear the sewer lines and acknowledged the concerns of residents whose basements have flooded on a routine basis. Furthermore, Councilmember Breidenstein stated that sometimes government takes time, however we have a responsibility to the residents and developers to get it right.

Supervisor Dickson further advised there is a playground for children at the school and would support a town shared playground for the neighborhood.

Ayes: All Noes: None Motion Carried

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to adopt the following resolution:

WHEREAS, the Town Board of the Town of West Seneca, as lead agency acting pursuant to the State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law, has reviewed Part I of the Short Environmental Assessment Form ("EAF") prepared by the applicant for property located at 1425 Orchard Park Road ("Subject Property"), for construction of a new 30 unit multi-family residential development and associated site work and parking (the "Project"), and reviewed the draft completed Part II and Part III of the EAF analyzing the potential for the Project to result in any significant adverse environmental impacts and has otherwise taken a hard look at the identified potential environmental impacts utilizing the criteria specified in 6 NYCRR 617.7(c); and

WHEREAS, the Erie County Division of Planning, after carefully and fully reviewing a description of the proposed project, along with the application and other documents as submitted to the Town of West Seneca, replied in writing that the project was to be of local concern; and

WHEREAS, the Town Board held a public hearing which was properly noticed to the public wherein the project was discussed; and

WHEREAS, the Town Board herein determines that it shall act as lead agency for such purposes and there has been no opposition thereto by any other interested agency; and

WHEREAS, the Town Board, carefully and fully reviewed the application including the following documents submitted by the applicant and other interested entities: Response from DEC, SHPO, NYSDOT, Army Corp of Engineers, and the reports of Powers Archaeology, LLC; and

WHEREAS, the Town Board, upon taking an independent hard look and reasoned evaluation of all of the above-referenced information, comments and written documentation with regard to the project;

WHEREAS, upon review of Parts I, II, and III of the EAF and documentation and plans submitted by the applicant in connection with the review of the Project, the Town Board has not identified any potentially significant adverse environmental impacts associated with the proposed use of the Subject Property, has determined that this is an unlisted action and preparation of a Full Environmental Impact Statement is not necessary and that the issuance of a Negative Declaration is therefore appropriate; now, therefore, be it

RESOLVED that pursuant to 6 NYCRR 617.7(a) the Town Board hereby accepts its designation as lead agency and does hereby adopt a Negative Declaration with respect to the Project based on its determination that the Project will not result in any potentially significant adverse environmental impacts.

Ayes: All Noes: None Motion Carried

2. Code Enforcement re Rezone & Special Use Permit – 2544 Clinton Street

Mr. Schieber stated the applicant has provided the following:

- ✓ Adjusted conceptual plan for the addition of parking spaces
- ✓ Information and schematics for the existing mansion building to temporarily house residents in the event of emergencies
- ✓ Cover letter

Town Attorney Trapp stated he sent letters to the Seneca Nation and received no response which can be interpreted as agreement with SHPO. The West Seneca Central School District indicated that they have sufficient capacity for the program. The SEQR documents are in front of the Town Board and a full EAF for the site was completed.

Supervisor Dickson stated he received a letter from the West Seneca Superintendent indicating her full support of the project.

Councilmember Breidenstein addressed the concerns he expressed about the project:

- ✓ Lack of a response from Seneca Nation – Councilmember Breidenstein's own correspondence went unanswered
- ✓ Parking spaces – Questioned the number of handicapped spaces required in the town code. Mr. Schieber stated the number is determined by the overall quantity of the site and 2-3 handicapped spaces are required per 100; the applicant exceeds this amount.

- ✓ Sidewalks – NYS has indicated sidewalks will not be added to Clinton Street and questioned if sidewalks have been added by the developer. Mr. Schieber referred to the drawing and stated sidewalks are included in the interior of the development. Additionally, NYS requested the development carry the sidewalk out of the property west on Clinton Street up to the bridge area.
- ✓ Did not see elevators or lifts in the plans of the 3-story buildings and questioned how individuals with mobility issues will be accommodated – Mr. Schieber stated the applicant will address the question.
- ✓ Concerned that the dumpster site is inadequate for the property – Supervisor Dickson stated he understands the Planning Board can review and recommend changes or additions.
- ✓ How many electric car charging stations will be installed accommodated – Mr. Schieber stated the applicant will address the question.
- ✓ Is the entire parcel being rezoned – Mr. Schieber stated the entire parcel and noted the remainder is not suitable for development.

Councilmember Piekarec questioned if the current M-1 zoning allows manufacturing businesses. Mr. Schieber confirmed this. Councilmember Piekarec questioned if the town requires any new projects to include electric car charging stations. Mr. Schieber stated the requirement is not in the town code but is regularly discussed at the Planning Board meetings. Councilmember Piekarec stated in his opinion most of the residents will have gasoline powered vehicles.

Dan Brock of LaBella Associates made the following comments:

- ✓ Handicap parking spaces were addressed
- ✓ ADA compliant units are located on the ground floors of buildings and the plans meet all NYS requirements
- ✓ Dumpsters are for garbage overflow, each unit will have a tote – Councilmember Breidenstein questioned what party will be responsible for garbage collection and mentioned a concern with the garbage generated by parties moving in and out of the development. Mr. Brock understands it will be the developer's responsibility and will investigate the particulars of collection.
- ✓ NYS guidelines require a certain number of electric vehicle charging stations and the plans accommodate 5 stations

Councilmember Piekarec asked if the sidewalks are ADA compliant along the length of the property. Mr. Brock confirmed the development must be ADA compliant. Councilmember Piekarec asked if the community mansion can accommodate all residents. Mr. Brock stated that there will be enough room to accommodate 200 people and noted there are office spaces that will be on a generator and can accommodate additional people.

Councilmember Robertson asked which power company will service the development. Mr. Brock stated NYSEG will supply electricity. Councilmember Robertson stated he does not believe the location is right for an all-electric community and added the condition that the applicant must provide the development plans to NYSEG for the utility company's review and approval. NYSEG's report will be submitted to the town.

Councilmember Piekarec asked Mr. Schieber and Mr. Foote if the applicant is required as a part of the site plan process to obtain approval from the electric company for hook-ups. Mr. Schieber stated in this instance, he will reach out to his contacts to facilitate this request.

Councilmember Breidenstein questioned if school buses will be able to navigate the site. Mr. Brock stated buses are generally provided with a central loop and accessible areas for the students.

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to approve the request for rezoning and special use permit for property located at 2544 Clinton Street changing its classification from M-1 to R-

50(S) for construction of multiple family dwelling with all related site improvements with the condition that the applicant contact NYSEG and receive approval for the electrical development and that the report will be sent to the Town Board and Planning Board.

Ayes: All Noes: None Motion Carried

Motion by Supervisor Dickson, seconded by Councilmember Piekarec, to adopt the following resolution:

WHEREAS, the Town Board of the Town of West Seneca, as lead agency acting pursuant to the State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law, has reviewed Part I of the Full Environmental Assessment Form ("FEAF") prepared by the applicant for property located at 2544 Clinton Street ("Subject Property"), for development of affordable housing multi-family residential units and associated site work and parking (the "Project"), and reviewed the draft completed Part II and Part III of the EAF analyzing the potential for the Project to result in any significant adverse environmental impacts and has otherwise taken a hard look at the identified potential environmental impacts utilizing the criteria specified in 6 NYCRR 617.7(c); and

WHEREAS, the Erie County Division of Planning, after carefully and fully reviewing a description of the proposed project, along with the application and other documents as submitted to the Town of West Seneca, replied in writing that the project was to be of local concern; and

WHEREAS, the Town Board held a public hearing which was properly noticed to the public wherein the project was discussed; and

WHEREAS, the Town Board herein determines that it shall act as lead agency for such purposes and there has been no opposition thereto by any other interested agency; and

WHEREAS, the Town Board, carefully and fully reviewed the application including the following documents submitted by the applicant and other interested entities: Response from DEC, SHPO, NYSDOT, West Seneca Central School District, and the reports and submissions from LaBella, PC; and

WHEREAS, the Town Board, upon taking an independent hard look and reasoned evaluation of all of the above-referenced information, comments and written documentation with regard to the project;

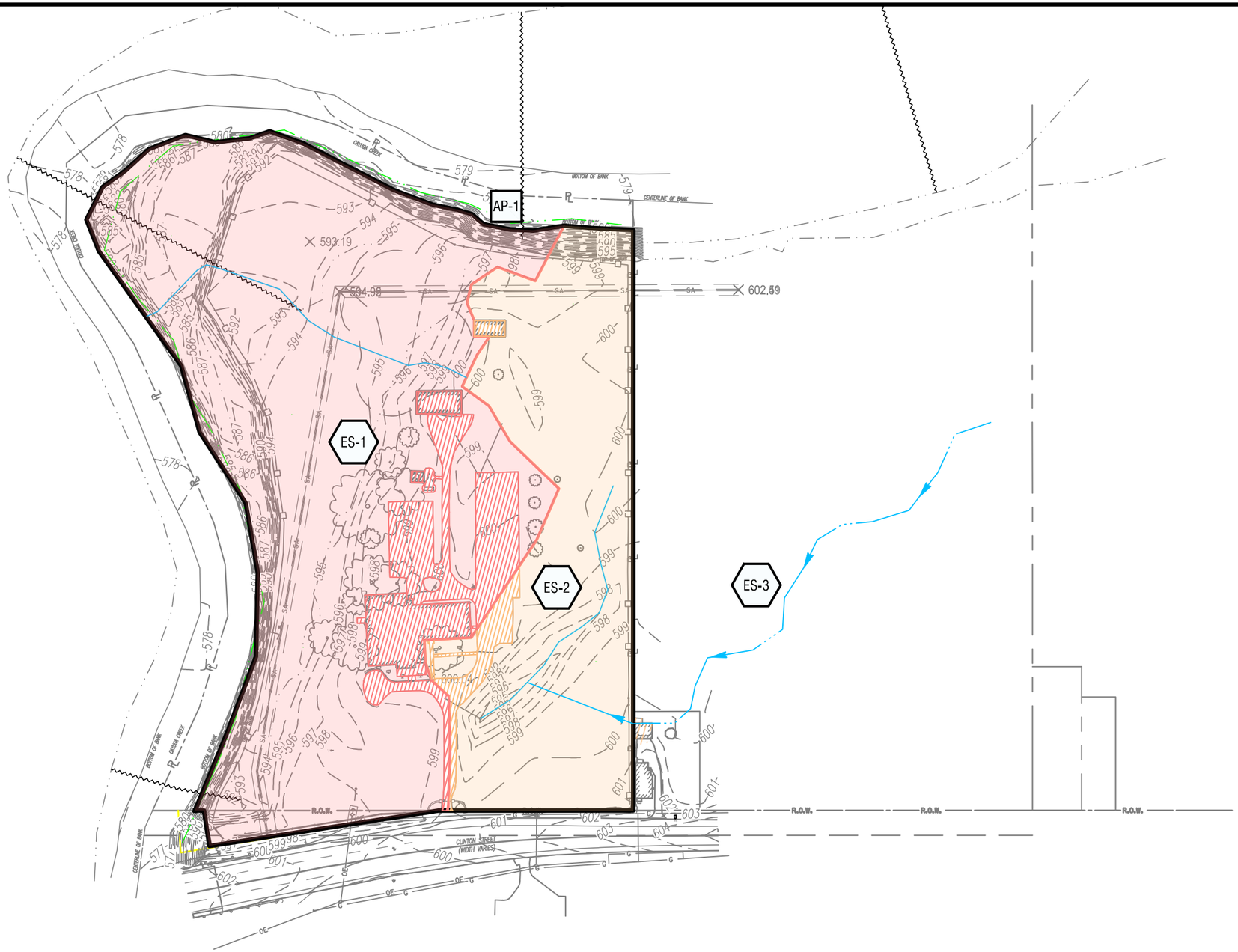
WHEREAS, upon review of Parts I, II, and III of the FEAF and documentation and plans submitted by the applicant in connection with the review of the Project, the Town Board has not identified any potentially significant adverse environmental impacts associated with the proposed use of the Subject Property, has determined that this is an unlisted action and preparation of a Full Environmental Impact Statement is not necessary and that the issuance of a Negative Declaration is therefore appropriate; now, therefore, be it

RESOLVED that pursuant to 6 NYCRR 617.7(a) the Town Board hereby accepts its designation as lead agency and does hereby adopt a Negative Declaration with respect to the Project based on its determination that the Project will not result in any potentially significant adverse environmental impacts.

Councilmember Breidenstein noted that he experienced internet issues today and was unable to download and view the materials that were sent to him today and will be abstaining for that reason.

Ayes: 4 (Dickson, Kims, Piekarec, Robertson) Abstain: 1 (Breidenstein) Noes: None Motion Carried

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LEGEND

- SUBCATCHMENT BOUNDARY
- Tc PATH
- # SUBCATCHMENT
- # REACH

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **PRE-DEVELOPMENT WATERSHED DELINEATION MAP**

DRAWN BY:

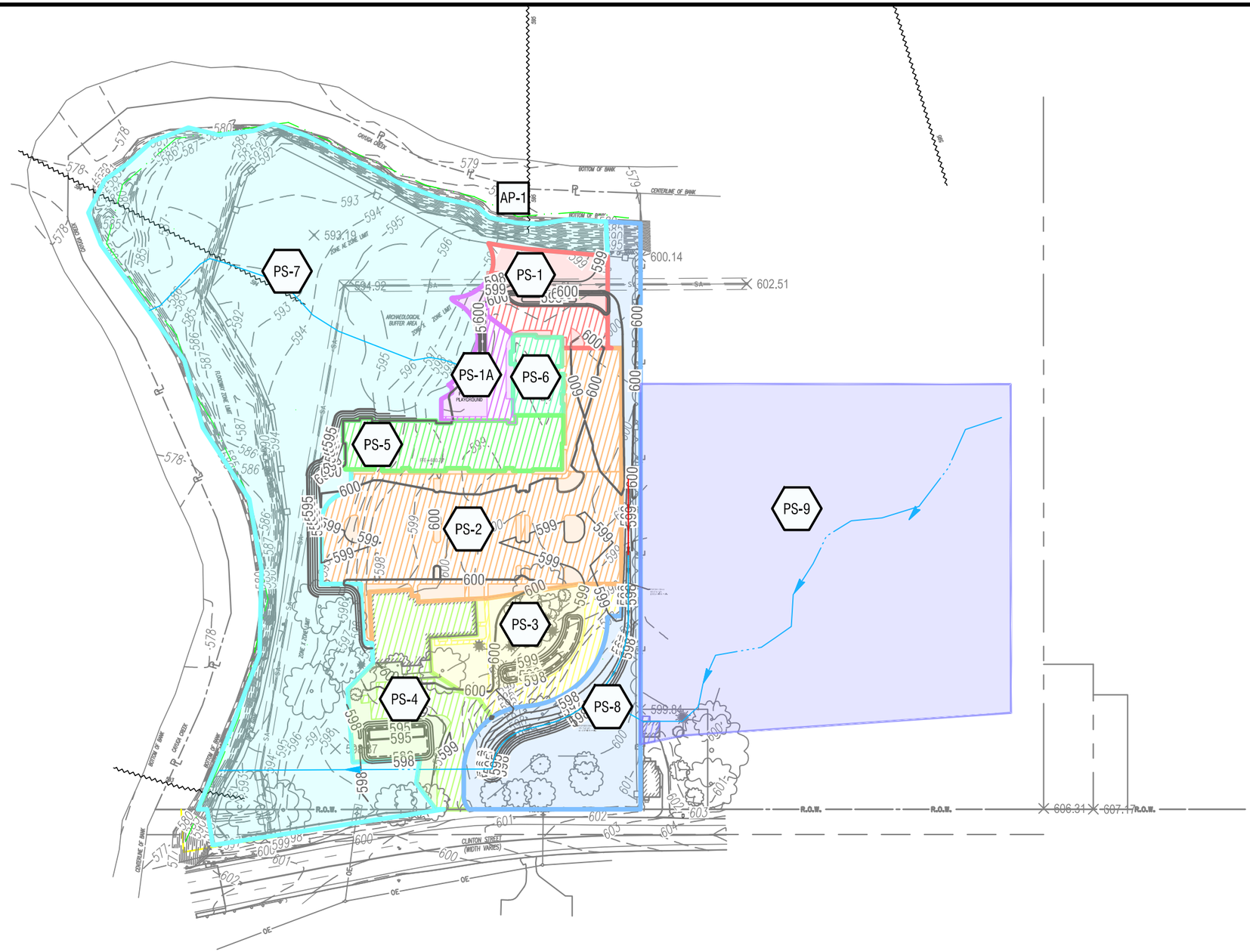
DATE: 04/20/2026

PROJECT NO.: 2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON STREET, BUFFALO, NY 14224

DRAWING NUMBER: **A-6 (REV 1)**

VERSION 21.1
7/26/2026 3:59:54 PM



LEGEND

- SUBCATCHMENT BOUNDARY
- Tc PATH
- # SUBCATCHMENT
- # REACH
- # POND

N

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ISSUED FOR: SWPPP FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **POST-DEVELOPMENT WATERSHED DELINEATION MAP**

DRAWN BY:

DATE: 04/20/2026

PROJECT NO.: 2241067

PROJECT NAME: **WEST SENECA APARTMENTS**
2544 CLINTON STREET, BUFFALO, NY 14224

DRAWING NUMBER: **A-7 (REV 1)**

VERSION 21.1
7/27/2026 7:46:34 AM

APPENDIX B: FORMS

Notice of Intent (NOI) Draft eNOI
MS4 SWPPP Acceptance Form
SWPPP Preparer Certification Form
Owner/Operator Certification Form
Contractor and Subcontractor Certification Forms
Notice of Termination (NOT)

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Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.18

(Submission #: HQN-WSKP-J4899, version 1)

Details

Originally Started By	Joseph Bognanno
Alternate Identifier	West Seneca Apartments—Region 9
Submission ID	HQN-WSKP-J4899
Status	Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?
Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?
No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?
No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?
No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?
Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?
No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?
NONE PROVIDED

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?
Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?
Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001? Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.
Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?
No

Owner/Operator Information

8. Owner/Operator Name
Home Leasing

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Angela Eicholtz	2489784420	ameicholtz@pennrose.com

10. Owner/Operator Mailing Address

75 South Clinton Avenue, Suite 700
Rochester, NY 14604
USA

11. Is the billing contact different from the Owner/Operator Contact?
No

12. What type of organization is the owner/operator?
Corporation

12.b. Is the owner/operator registered with the Department of State to do business in New York State?
Yes

12.b.i. Department of State ID #
207792

The Department of State ID can be found using the following link:
Department of State | Division of Corporations

Site Information

13. Project/Site Name
West Seneca Apartments

14. Site Address

2544 Clinton Street
West Seneca, NY 14224
Erie

DEC Region
9

15. Site Latitude & Longitude
42.871757741927205,-78.78125301461476

Project Details

16. This eNOI submission is for:
A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".
Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.
The project proposes a redevelopment project with a 3-story 25,000 SF footprint multi-family residence. There is an existing mansion on site that will be renovated to include additional multi-family units. Additionally, there will be parking lots, new utility connections, stormwater management systems, and overall site grading involved in this project

---

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)
16.2

20. Total Area to be Disturbed (acres)
5.4

21. Existing Impervious Area to be Disturbed (acres)
0.8

22. Future Impervious Area Within Disturbed Area (acres)
3.0

Nature of the project:
Redevelopment with increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?
No

24. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)
0

B (%)
0

C (%)
0

D (%)
100

25. Enter the planned start and end dates of the disturbance activities.

Start Date
09/01/2027

End Date
03/01/2028

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Cayuga Creek, Lower, and tribs - 0103-0007

27. Type of waterbody identified in question 26?
River Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?
No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?
No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
No

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?
No

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

36. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

37. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

37.a. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Kristopher Winkler

41. SWPPP Preparer Organization Name
LaBella Associates

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Kristopher Winkler	7167683411	kwinkler@labellapc.com

43. SWPPP Preparer Address

300 Pearl Street
Suite 130
Buffalo, NY 14202

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form
3) Upload the completed form
Download SWPPP Preparer Certification Form

44. Please upload the SWPPP Preparer Certification

NONE PROVIDED

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?

NONE PROVIDED

Erosion & Sediment Control Criteria

45. Has a construction sequence schedule for the planned management practices been prepared?

Yes

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

Building Footprint Reduction
Sidewalk Reduction
Preservation of Undisturbed Area
Preservation of Buffers
Reduction of Clearing and Grading

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.

All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRv provided (acre-feet)	Minimum RRv (acre-feet)	Total WQv provided (acre-feet)	Sum of RRv and WQv provided
0.24	0.03	0.03	0.21	0.24

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?
Yes

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.
Property Owner

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Filtration Bioretention (F-5)	1.0	

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
Hydrodynamic	ADS	Barracuda Max S6	2.28

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
None

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
Yes

59.a. Which form is required per Part I.D.2.b.ii.?
MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.
MS4 SWPPP Acceptance Form

60. MS4 Acceptance or No Jurisdiction Form Upload
NONE PROVIDED
Comment
NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?
No

All forms submitted with the eNOI must be signed in accordance with Part VII.J. per Part I.D.2.b. of GP-0-25-001.

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
Owner/Operator Certification Form

61. Upload Owner/Operator Certification Form
NONE PROVIDED
Comment
NONE PROVIDED

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?
No

All forms submitted with the eNOI must be signed in accordance with Part VII.J. per Part I.D.2.b. of GP-0-25-001.

Additional Project Information

62. Enter any additional pertinent project information in the text box below.

NONE PROVIDED

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

(NYSDEC - MS4 SWPPP Acceptance Form - January 2025)

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

Stormwater Pollution Prevention Plan
Contractor Certification Statement
(Responsible for overall SWPPP Compliance)

West Seneca
Town of West Seneca, Erie County, New York

This is to certify that the following contracting firm will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices required by the SWPPP.

Contracting Firm Information

Name: _____

Address: _____

Telephone & Fax: _____

Trained Contractor(s)[1] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activity, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

Upon completion of construction activities, the following certification shall be issued, prior to issuance of the NOT:

I hereby certify that that all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents. I further certify that all temporary erosion and sediment control measures have been removed from the site, and that the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[1] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

Stormwater Pollution Prevention Plan
Subcontractor Certification Statement
(whose work involves soil disturbance)

West Seneca
Town of West Seneca, Erie County, New York

Each Subcontractor whose work will involve soil disturbance of any kind is required to complete and sign this Certification Statement before commencing any construction activity at the site. This completed Certification Statement(s) shall be maintained at the construction site in the Site Log Book.

Subcontracting Firm Information

Name: _____

Address: _____

_____

Telephone & Fax: _____

Trained Contractor(s)[2] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activities, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[2] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

APPENDIX C:
PROJECT EVALUATIONS AND DESIGN CALCULATIONS

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P=	1.00	*inch*

AREA	Total Area *(Acres)*	Existing Imperv *(Acres)*	Proposed Imperv *(Acres)*	Existing Disturbed Imperv Area *(Acres)*	Imperv Reduction *(Acres)*
TO ALTERNATIVE PRACTICES	2.28	0.47	2.06	0.47	0%
TO AREA REDUCTION SMPS					
SITE REMAINING AREA	13.84	0.62	0.95	0.35	0%
TOTAL SITE	16.12	1.09	3.01	0.82	0%

Water Quality Volume Calculation

New Development / Redevelopment	WQv Treatment %	Total Area *(Acres)*	Exist Disturbed Imperv Area (REDEVELOPMENT) (Acres)	Imperv Area (NEW DEVELOPMENT) *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	WQv Adjusted *(ft^3)*	TOTAL WQV REQUIRED *(ft^3)*	System Generated Notes
REDEVELOPMENT ALTERNATIVE	75%	0.47	0.47	-	100%	0.95	1,621	1,216	10,567	
NEW DEVELOPMENT ALTERNATIVE	100%	1.81	-	1.59	88%	0.84	5,523	5,523		
REDEVELOPMENT REMAINING AREA	25%	0.35	0.35	-	100%	0.95	1,207	302		
NEW DEVELOPMENT REMAINING AREA	100%	13.49	-	0.33	2%	0.07	3,527	3,527		

Minimum Runoff Reduction Volume Calculation

AREA	Total Impervious Area Added (NEW DEVELOPMENT) *(Acres)*	Soil Group A *%*	Soil Group B *%*	Soil Group C *%*	Soil Group D *%*	Percent Impervious *%*	Rv	Weighted S Factor	MINIMUM RRv REQUIRED *(ft^3)*	System Generated Notes
TOTAL SITE	1.92	0%	0%	0%	100%	100%	0.95	0.20	1,324	

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?	No
What is the nature of this construction project?	Redevelopment with increase in impervious area

Design Point:	1	
P=	1.00	inches

Enter 90% Rainfall Event as P

Calculate Required WQv

Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	0.42	0.16	38	0.39	599	Filtration Bioretention
2	1.70	1.48	87	0.83	5,144	Flow Based Alternative Practice
3	0.65	0.22	33	0.35	829	Filtration Bioretention
4	0.68	0.48	71	0.69	1,692	Filtration Bioretention
5	0.43	0.43	100	0.95	1,483	Flow Based Alternative Practice
6	0.15	0.15	100	0.95	517	Flow Based Alternative Practice
7	0.11	0.11	100	0.95	379	Filtration Bioretention
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	4.14	3.03	73	0.71	**10642**	**Required WQv**

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	0.42	0.16	38	0.39	599	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	250	sf	
Enter Provided Filter Area	Af	350	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	840	cf	

Calculate Runoff Reduction			
RRv Provided	**336**	***cf***	
WQv Treated	263	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
3	0.65	0.22	33	0.35	829	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	345	sf	
Enter Provided Filter Area	Af	348	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	835.2	cf	

Calculate Runoff Reduction			
RRv Provided	**334**	***cf***	
WQv Treated	495	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
4	0.68	0.48	71	0.69	1,692	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	705	sf	
Enter Provided Filter Area	Af	705	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	1692	cf	

Calculate Runoff Reduction			
RRv Provided	**677**	***cf***	
WQv Treated	1015	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
7	0.11	0.11	100	0.95	379	1.00	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	6	
Enter depth to bedrock (ft)	6	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	1	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	158	sf	
Enter Provided Filter Area	Af	160	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	384	cf	

Calculate Runoff Reduction			
RRv Provided	**154**	***cf***	
WQv Treated	225	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Total Area	1.86	acres
Total Impervious	1	acres
Total RRv Provided	1,500	cf
Total WQv Provided	1,999	cf

Water Quality Peak Flow Calclations

NYSDEC Water Quality Volume (WQv) & Water Quality Peak Flow (Qp) Calculation Worksheet (REQUIRED Qp)

PROJECT INFORMATION

Total Drainage Area	**A:**	2.28	**ac**
Impervious Area	**I:**	2.06	**ac**
Percent Impervious		90.4	**%**
NYSDEC 90% Rainfall	**P:**	1.00	**in.**
Time of Concentration	**T_c:**	0.10	**hrs**
	Rv:	0.86	

WATER QUALITY VOLUME

Water Quality Volume $WQ_v=([(P)*(Rv)*(A)]/12)*43560$	WQv:	7,144	cf

WATER QUALITY PEAK FLOW (NEW DEVELOPMENT)

Runoff Volume $Q=WQ_v/(A*3600)$	Q:	0.86	in.
$CN=1000/(10+5*P+10*Q-10(Q^2+1.25*Q*P)^{½})$	CN:	98.76	
CN Rounded	CN:	99	
CN < or = 98	CN:	98	
Initial Abstraction ($I_a=200/CN-2$)	Ia:	0.04	in.
RATIO $R=I_a/P$	R:	0.04	
$C_0 = A*R^2 +B*R +C$	C_0:	2.54	
$C_1 = A*R^2 +B*R +C$	C_1:	-0.58	
$C_2 = A*R^2 +B*R +C$	C_2:	-0.17	
Unit Peak Discharge $qu=10^(C_0+C_1*Log(T_c)+C_2*(log(T_c))^2)$	qu:	900.33	$cfs/mi^2/in$
Water Quality Peak Flow $Q_p=qu*A*Q/640$ (100%)	**Qp:**	**2.77**	**cfs**

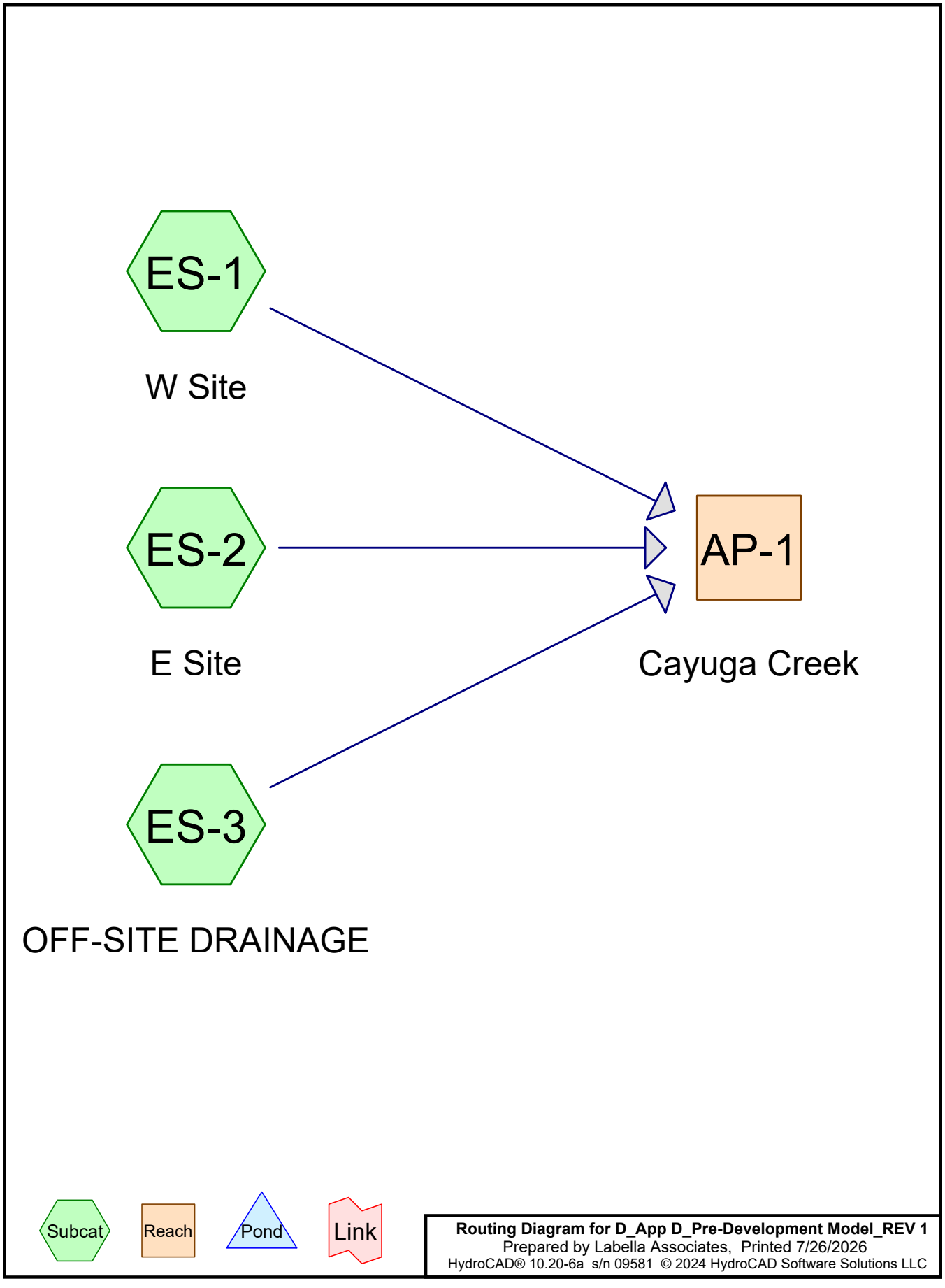
REDVELOPMENT

Impeverious Area Reduction	IC	0.00	%
WQv Treatment by Standard Practice	SP	0.00	%
Runoff Reduction	RR	0.00	%
Req. WQv% By Alt. Practice AP=(25-(% IC+%SP+%RR))*3:	AP	75.0	%
Required Water Quality Peak Flow RD QP=(Qp*AP):	**RD Qp:**	**2.08**	**cfs**

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APPENDIX D:
PRE-DEVELOPMENT STORMWATER MODELING

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ES-1
W Site
ES-2
E Site
ES-3
OFF-SITE DRAINAGE
AP-1
Cayuga Creek
Subcat
Reach
Pond
Link
Routing Diagram for D_App D_Pre-Development Model_REV 1
Prepared by Labella Associates, Printed 7/26/2026
HydroCAD® 10.20-6a s/n 09581 © 2024 HydroCAD Software Solutions LLC

Project Notes

Defined 9 rainfall events from NY-West Seneca IDF
Copied 9 events from NY-West Seneca 24-hr S1 storm

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-West Seneca 24-hr S1	1-yr	Default	24.00	1	1.82	2
2	10-yr	NY-West Seneca 24-hr S1	10-yr	Default	24.00	1	3.14	2
3	100-yr	NY-West Seneca 24-hr S1	100-yr	Default	24.00	1	5.22	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
10.112	80	>75% Grass cover, Good, HSG D (ES-1, ES-2, ES-3)
1.069	98	Paved parking, HSG D (ES-1, ES-2, ES-3)
4.941	79	Woods, Fair, HSG D (ES-3)
16.122	**81**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
16.122	HSG D	ES-1, ES-2, ES-3
0.000	Other	
16.122		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	10.112	0.000	10.112	>75% Grass cover, Good	ES-1, ES-2, ES-3
0.000	0.000	0.000	1.069	0.000	1.069	Paved parking	ES-1, ES-2, ES-3
0.000	0.000	0.000	4.941	0.000	4.941	Woods, Fair	ES-3
0.000	**0.000**	**0.000**	**16.122**	**0.000**	**16.122**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=0.53"
Flow Length=391' Tc=14.0 min CN=82 Runoff=4.22 cfs 0.344 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=0.49"
Flow Length=390' Tc=19.4 min CN=81 Runoff=1.42 cfs 0.139 af

Subcatchment ES-3: OFF-SITE DRAINAGE Runoff Area=218,018 sf 0.26% Impervious Runoff Depth=0.42"
Flow Length=832' Slope=0.0100 '/' Tc=58.6 min CN=79 Runoff=0.93 cfs 0.175 af

Reach AP-1: Cayuga Creek Inflow=5.58 cfs 0.658 af
Outflow=5.58 cfs 0.658 af

Total Runoff Area = 16.122 ac Runoff Volume = 0.658 af Average Runoff Depth = 0.49"
93.37% Pervious = 15.053 ac 6.63% Impervious = 1.069 ac

Summary for Subcatchment ES-1: W Site

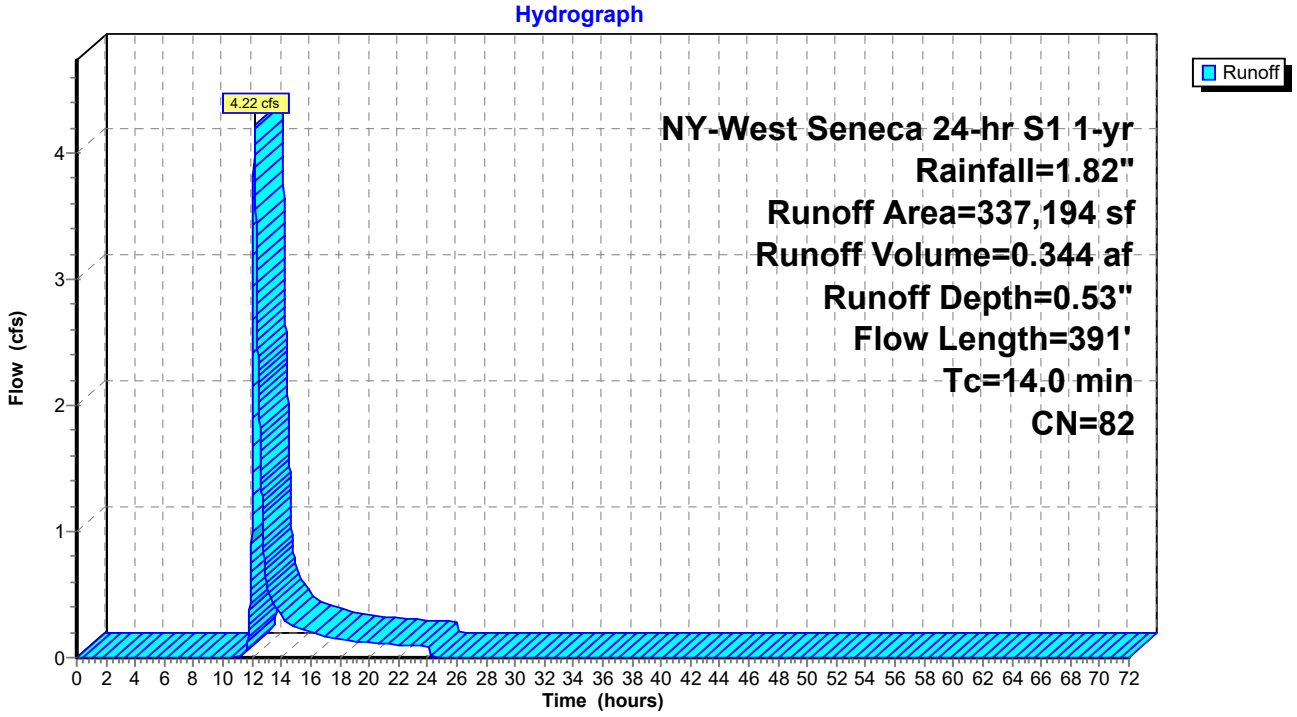
Runoff = 4.22 cfs @ 12.16 hrs, Volume= 0.344 af, Depth= 0.53"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

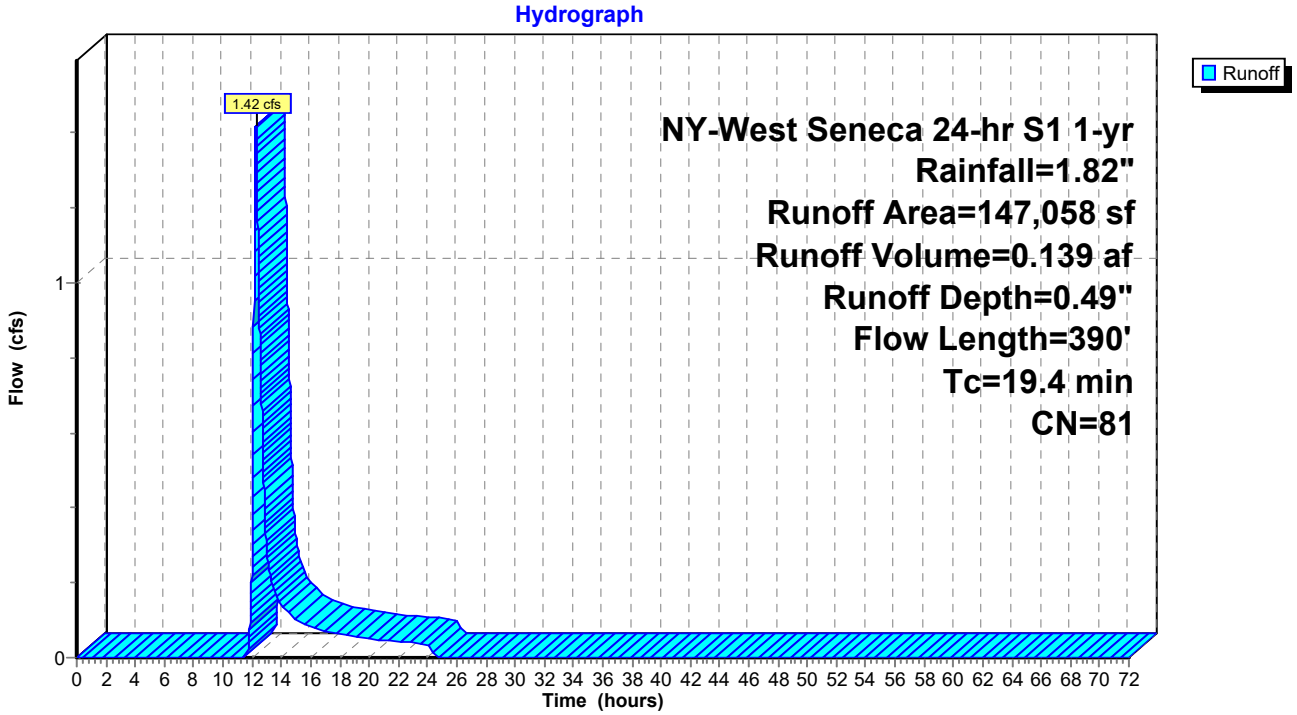
Runoff = 1.42 cfs @ 12.25 hrs, Volume= 0.139 af, Depth= 0.49"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site



Summary for Subcatchment ES-3: OFF-SITE DRAINAGE

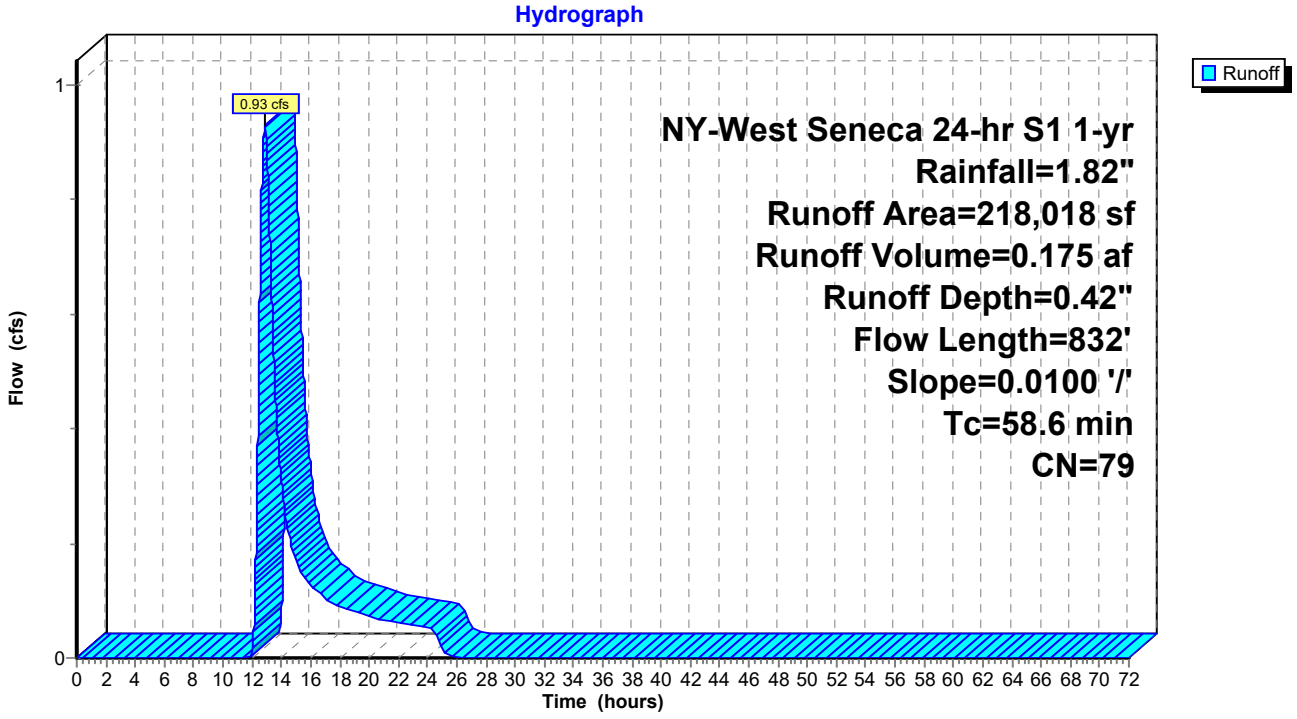
Runoff = 0.93 cfs @ 12.89 hrs, Volume= 0.175 af, Depth= 0.42"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
2,218	80	>75% Grass cover, Good, HSG D
570	98	Paved parking, HSG D
215,230	79	Woods, Fair, HSG D
218,018	79	Weighted Average
217,448		99.74% Pervious Area
570		0.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
24.4	732	0.0100	0.50		**Shallow Concentrated Flow, REMAINING** Woodland Kv= 5.0 fps
58.6	832	Total			

Subcatchment ES-3: OFF-SITE DRAINAGE



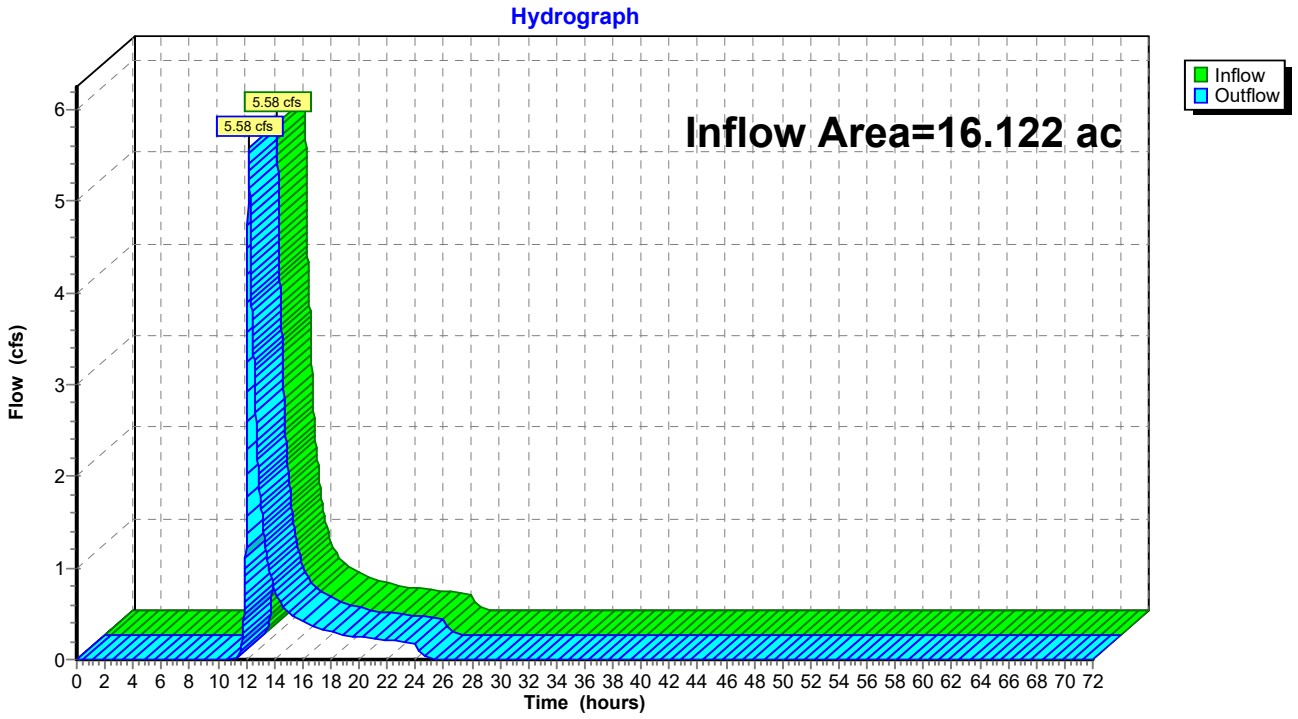
Summary for Reach AP-1: Cayuga Creek

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 6.63% Impervious, Inflow Depth = 0.49" for 1-yr event
Inflow = 5.58 cfs @ 12.18 hrs, Volume= 0.658 af
Outflow = 5.58 cfs @ 12.18 hrs, Volume= 0.658 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=1.49"
Flow Length=391' Tc=14.0 min CN=82 Runoff=12.32 cfs 0.961 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=1.42"
Flow Length=390' Tc=19.4 min CN=81 Runoff=4.40 cfs 0.400 af

Subcatchment ES-3: OFF-SITE DRAINAGE Runoff Area=218,018 sf 0.26% Impervious Runoff Depth=1.29"
Flow Length=832' Slope=0.0100 '/' Tc=58.6 min CN=79 Runoff=3.29 cfs 0.539 af

Reach AP-1: Cayuga Creek Inflow=17.02 cfs 1.900 af
Outflow=17.02 cfs 1.900 af

Total Runoff Area = 16.122 ac Runoff Volume = 1.900 af Average Runoff Depth = 1.41"
93.37% Pervious = 15.053 ac 6.63% Impervious = 1.069 ac

Summary for Subcatchment ES-1: W Site

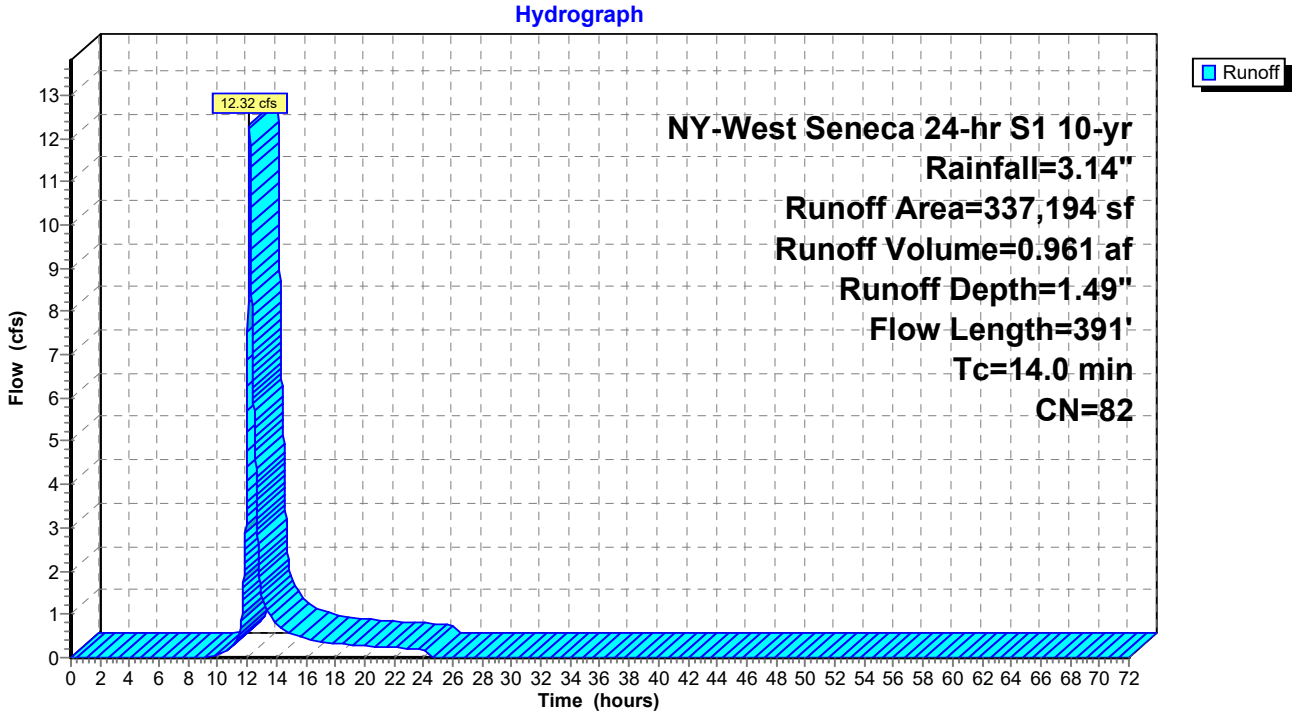
Runoff = 12.32 cfs @ 12.15 hrs, Volume= 0.961 af, Depth= 1.49"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

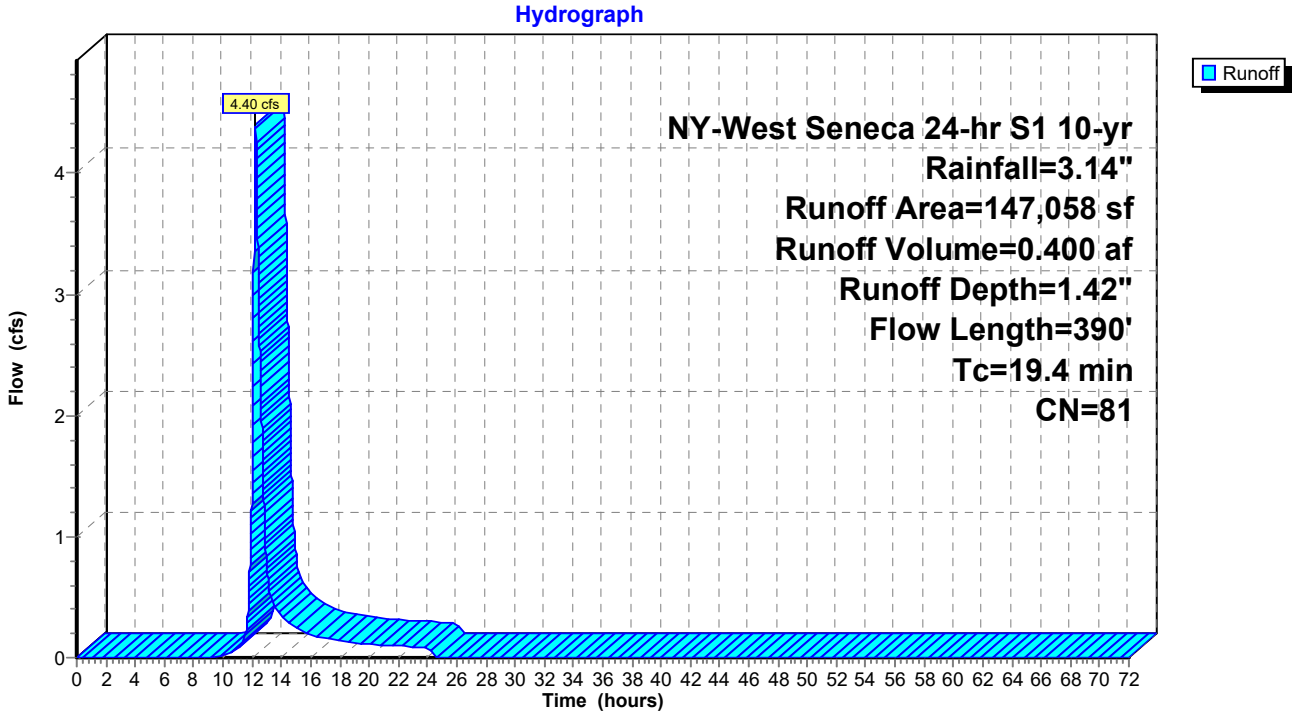
Runoff = 4.40 cfs @ 12.23 hrs, Volume= 0.400 af, Depth= 1.42"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site



Summary for Subcatchment ES-3: OFF-SITE DRAINAGE

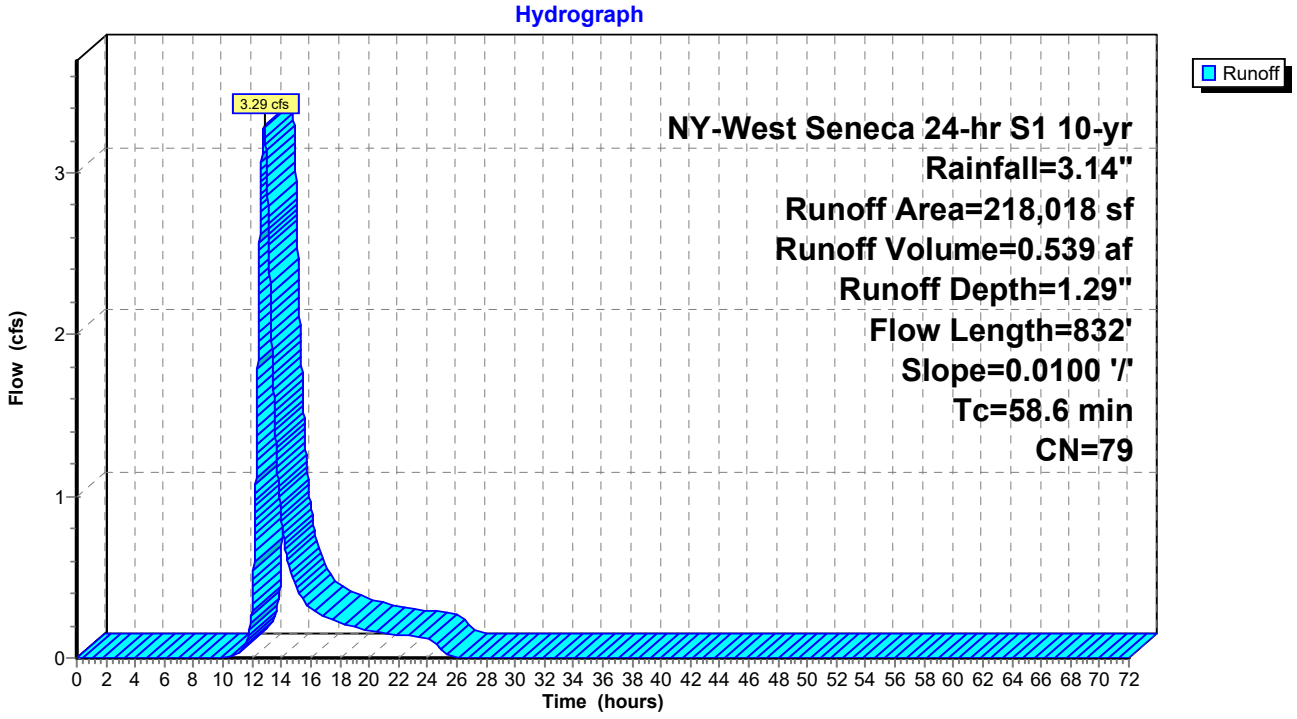
Runoff = 3.29 cfs @ 12.82 hrs, Volume= 0.539 af, Depth= 1.29"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 10-yr Rainfall=3.14"

Area (sf)	CN	Description
2,218	80	>75% Grass cover, Good, HSG D
570	98	Paved parking, HSG D
215,230	79	Woods, Fair, HSG D
218,018	79	Weighted Average
217,448		99.74% Pervious Area
570		0.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
24.4	732	0.0100	0.50		**Shallow Concentrated Flow, REMAINING** Woodland Kv= 5.0 fps
58.6	832	Total			

Subcatchment ES-3: OFF-SITE DRAINAGE



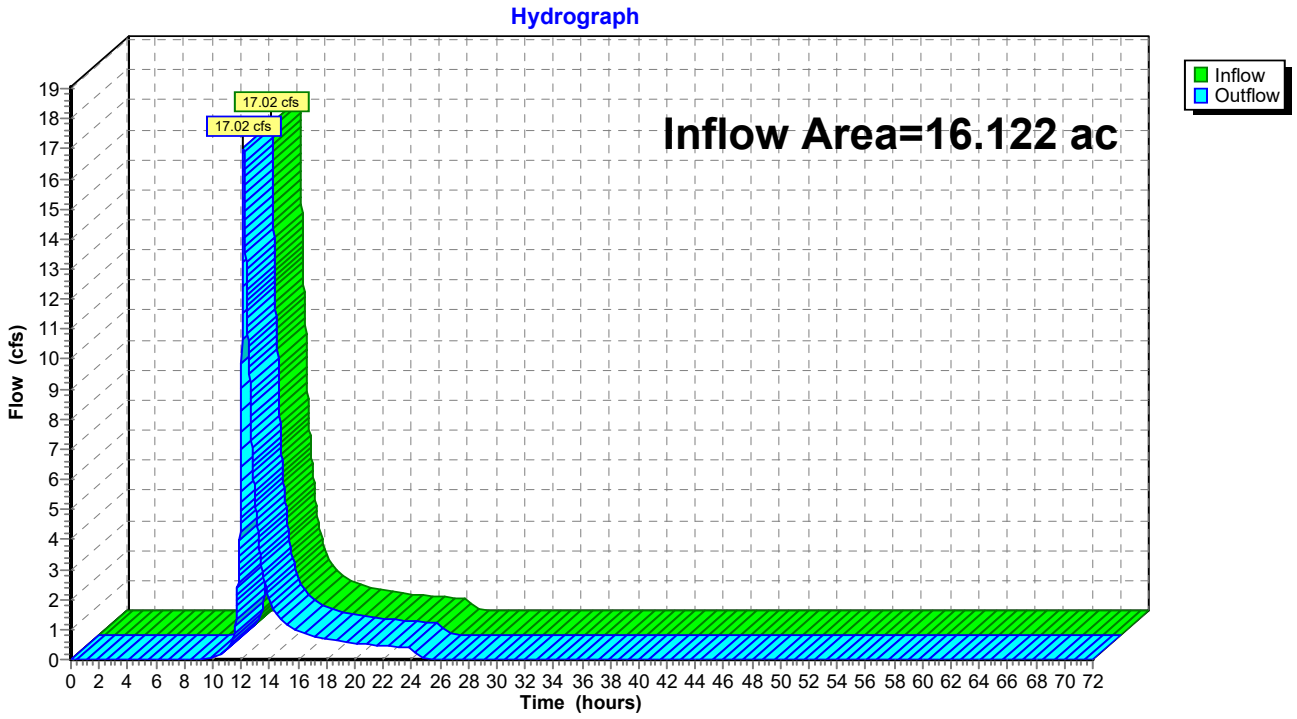
Summary for Reach AP-1: Cayuga Creek

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 6.63% Impervious, Inflow Depth = 1.41" for 10-yr event
Inflow = 17.02 cfs @ 12.18 hrs, Volume= 1.900 af
Outflow = 17.02 cfs @ 12.18 hrs, Volume= 1.900 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: W Site Runoff Area=337,194 sf 11.34% Impervious Runoff Depth=3.28"
Flow Length=391' Tc=14.0 min CN=82 Runoff=27.59 cfs 2.114 af

Subcatchment ES-2: E Site Runoff Area=147,058 sf 5.28% Impervious Runoff Depth=3.18"
Flow Length=390' Tc=19.4 min CN=81 Runoff=10.17 cfs 0.895 af

Subcatchment ES-3: OFF-SITE DRAINAGE Runoff Area=218,018 sf 0.26% Impervious Runoff Depth=2.99"
Flow Length=832' Slope=0.0100 '/' Tc=58.6 min CN=79 Runoff=8.11 cfs 1.248 af

Reach AP-1: Cayuga Creek Inflow=39.07 cfs 4.256 af
Outflow=39.07 cfs 4.256 af

Total Runoff Area = 16.122 ac Runoff Volume = 4.256 af Average Runoff Depth = 3.17"
93.37% Pervious = 15.053 ac 6.63% Impervious = 1.069 ac

Summary for Subcatchment ES-1: W Site

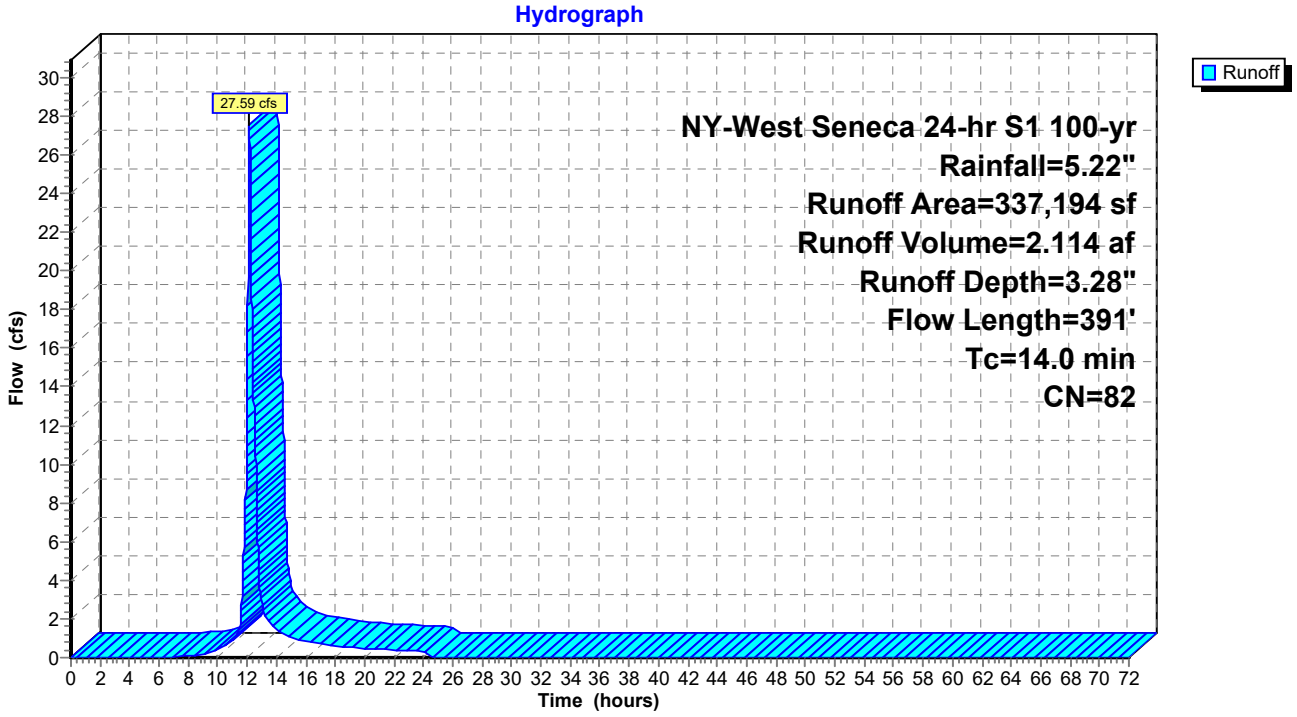
Runoff = 27.59 cfs @ 12.15 hrs, Volume= 2.114 af, Depth= 3.28"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
38,223	98	Paved parking, HSG D
298,971	80	>75% Grass cover, Good, HSG D
337,194	82	Weighted Average
298,971		88.66% Pervious Area
38,223		11.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment ES-1: W Site



Summary for Subcatchment ES-2: E Site

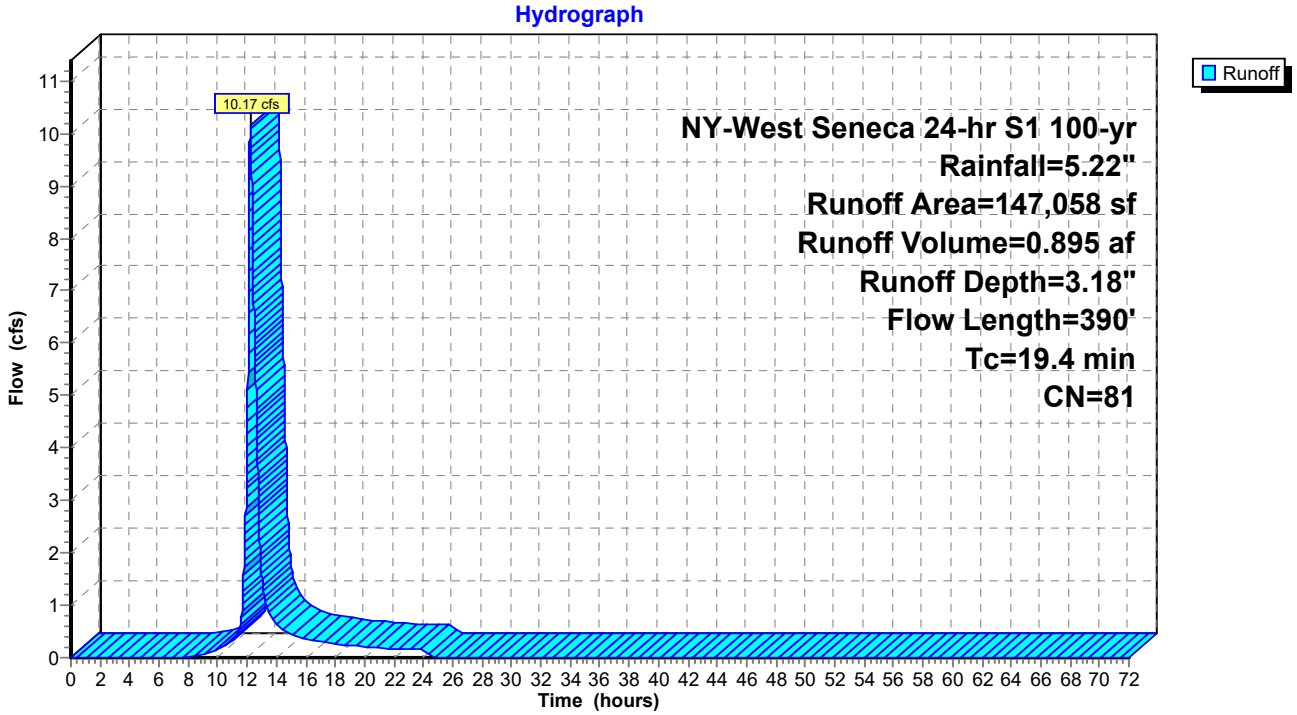
Runoff = 10.17 cfs @ 12.22 hrs, Volume= 0.895 af, Depth= 3.18"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
7,764	98	Paved parking, HSG D
139,294	80	>75% Grass cover, Good, HSG D
147,058	81	Weighted Average
139,294		94.72% Pervious Area
7,764		5.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	100	0.0150	0.13		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
6.1	290	0.0130	0.80		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
19.4	390	Total			

Subcatchment ES-2: E Site



Summary for Subcatchment ES-3: OFF-SITE DRAINAGE

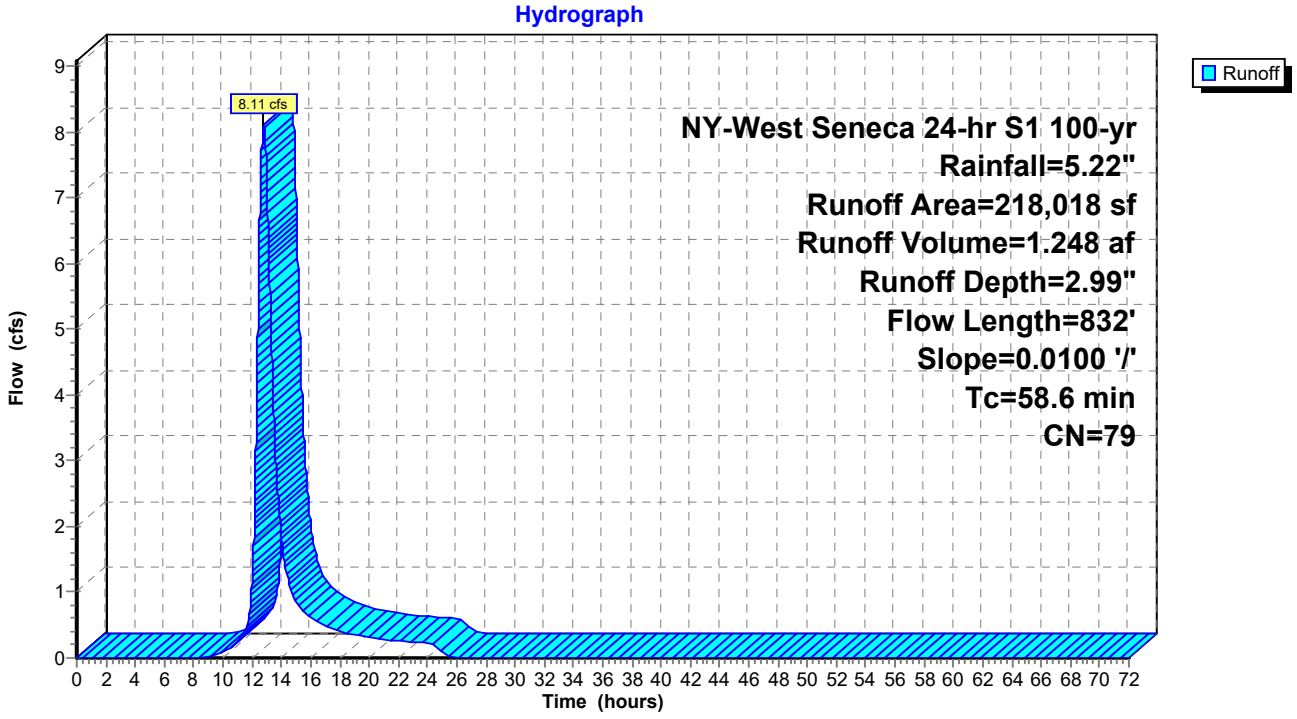
Runoff = 8.11 cfs @ 12.77 hrs, Volume= 1.248 af, Depth= 2.99"
Routed to Reach AP-1 : Cayuga Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
2,218	80	>75% Grass cover, Good, HSG D
570	98	Paved parking, HSG D
215,230	79	Woods, Fair, HSG D
218,018	79	Weighted Average
217,448		99.74% Pervious Area
570		0.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
24.4	732	0.0100	0.50		**Shallow Concentrated Flow, REMAINING** Woodland Kv= 5.0 fps
58.6	832	Total			

Subcatchment ES-3: OFF-SITE DRAINAGE



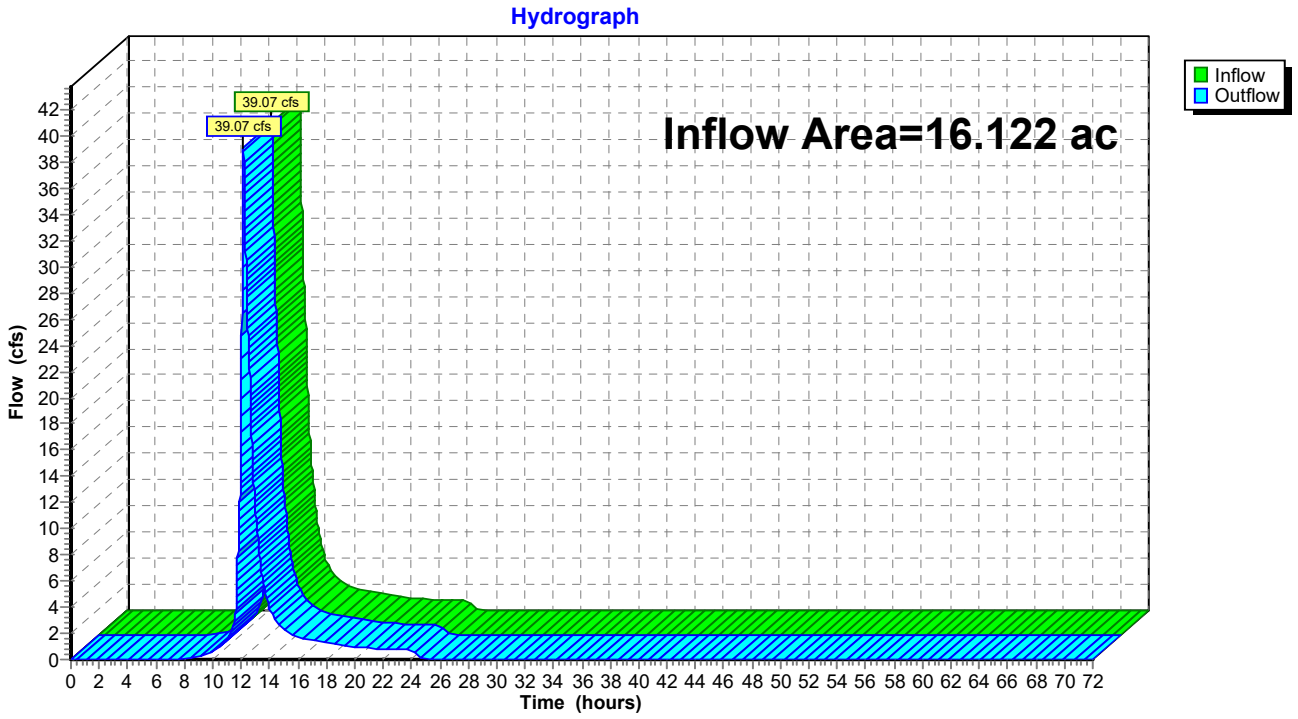
Summary for Reach AP-1: Cayuga Creek

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 6.63% Impervious, Inflow Depth = 3.17" for 100-yr event
Inflow = 39.07 cfs @ 12.17 hrs, Volume= 4.256 af
Outflow = 39.07 cfs @ 12.17 hrs, Volume= 4.256 af, Atten= 0%, Lag= 0.0 min

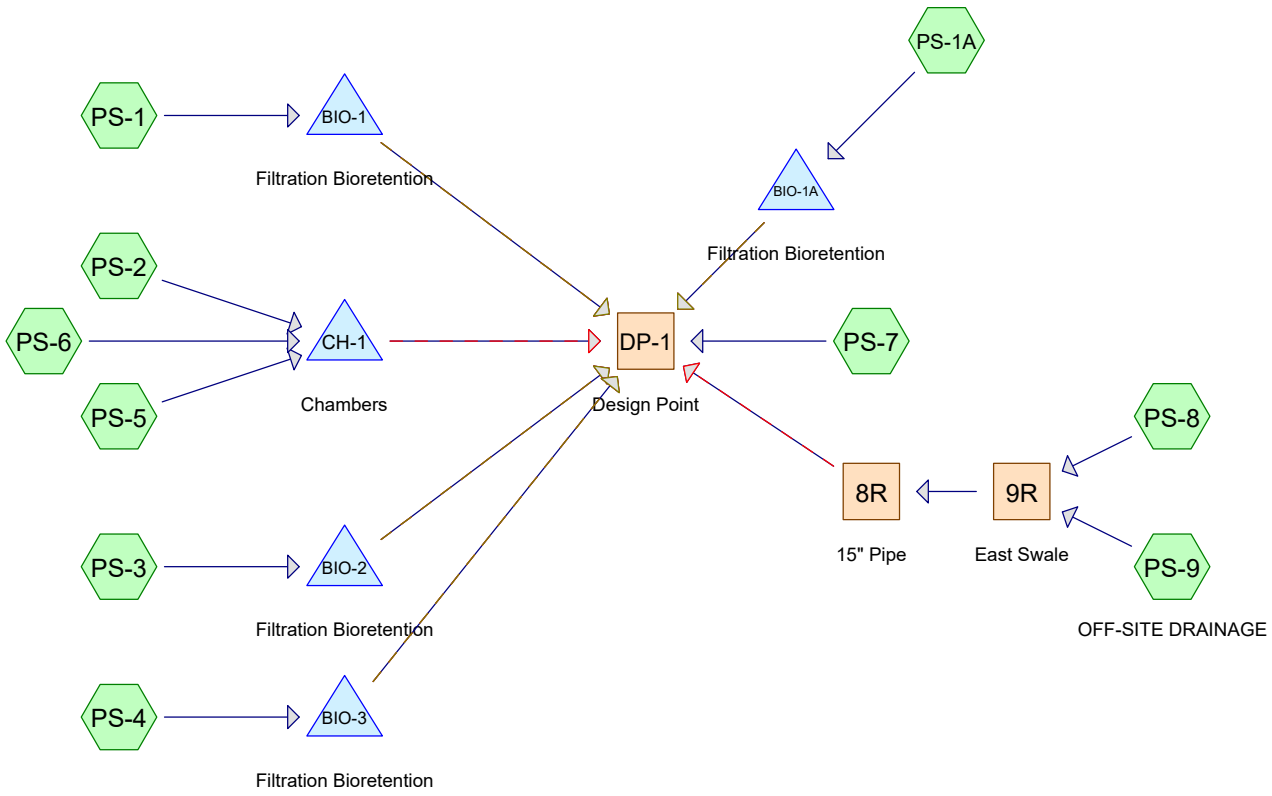
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach AP-1: Cayuga Creek



APPENDIX E:
POST-DEVELOPMENT STORMWATER MODELING

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Subcat Reach Pond Link

Routing Diagram for E_App E_Post-Development Model_REV 2
Prepared by Labella Associates, Printed 7/26/2026
HydroCAD® 10.20-6a s/n 09581 © 2024 HydroCAD Software Solutions LLC

Project Notes

Copied 9 events from NY-West Seneca 24-hr S1 storm

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-West Seneca 24-hr S1	1-yr	Default	24.00	1	1.82	2
2	25-yr	NY-West Seneca 24-hr S1	25-yr	Default	24.00	1	3.84	2
3	100-yr	NY-West Seneca 24-hr S1	100-yr	Default	24.00	1	5.22	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.136	80	>75% Grass cover, Good, HSG D (PS-1, PS-1A, PS-2, PS-3, PS-4, PS-7, PS-8, PS-9)
3.052	98	Paved parking, HSG D (PS-1, PS-1A, PS-2, PS-3, PS-4, PS-5, PS-6, PS-9)
4.935	79	Woods, Fair, HSG D (PS-9)
16.122	**83**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
16.122	HSG D	PS-1, PS-1A, PS-2, PS-3, PS-4, PS-5, PS-6, PS-7, PS-8, PS-9
0.000	Other	
16.122		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	8.136	0.000	8.136	>75% Grass cover, Good	PS-1, PS-1A, PS-2, PS-3, PS-4, PS-7, PS-8, PS-9
0.000	0.000	0.000	3.052	0.000	3.052	Paved parking	PS-1, PS-1A, PS-2, PS-3, PS-4, PS-5, PS-6, PS-9
0.000	0.000	0.000	4.935	0.000	4.935	Woods, Fair	PS-9
0.000	**0.000**	**0.000**	**16.122**	**0.000**	**16.122**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	PS-8	0.00	0.00	350.0	0.0100	0.013	0.0	12.0	0.0	
2	8R	591.85	588.49	350.0	0.0096	0.013	0.0	15.0	0.0	
3	BIO-1	594.58	594.33	25.0	0.0100	0.012	0.0	12.0	0.0	
4	BIO-1A	594.58	594.33	25.0	0.0100	0.012	0.0	6.0	0.0	
5	BIO-2	592.58	591.92	132.0	0.0050	0.012	0.0	12.0	0.0	
6	BIO-3	591.58	591.30	28.0	0.0100	0.012	0.0	12.0	0.0	
7	CH-1	590.50	589.25	120.0	0.0104	0.013	0.0	8.0	0.0	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS-1: Runoff Area=18,210 sf 38.59% Impervious Runoff Depth=0.77"
Tc=6.0 min CN=87 Runoff=0.52 cfs 0.027 af

SubcatchmentPS-1A: Runoff Area=10,120 sf 38.46% Impervious Runoff Depth=0.77"
Tc=6.0 min CN=87 Runoff=0.29 cfs 0.015 af

SubcatchmentPS-2: Runoff Area=74,205 sf 86.99% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=96 Runoff=3.84 cfs 0.199 af

SubcatchmentPS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=0.72"
Tc=6.0 min CN=86 Runoff=0.74 cfs 0.039 af

SubcatchmentPS-4: Runoff Area=32,374 sf 64.64% Impervious Runoff Depth=1.08"
Tc=6.0 min CN=92 Runoff=1.32 cfs 0.067 af

SubcatchmentPS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=98 Runoff=1.06 cfs 0.057 af

SubcatchmentPS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=98 Runoff=0.37 cfs 0.020 af

SubcatchmentPS-7: Runoff Area=242,510 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=391' Tc=14.0 min CN=80 Runoff=2.46 cfs 0.212 af

SubcatchmentPS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=0.40 cfs 0.047 af

SubcatchmentPS-9: OFF-SITE DRAINAGE Runoff Area=217,757 sf 0.78% Impervious Runoff Depth=0.42"
Flow Length=857' Slope=0.0100 '/' Tc=59.4 min CN=79 Runoff=0.92 cfs 0.175 af

Reach 8R: 15" Pipe Avg. Flow Depth=0.35' Max Vel=3.87 fps Inflow=1.10 cfs 0.222 af
0" Round Pipe n=0.013 L=350.0' S=0.0096 '/' Capacity=6.33 cfs Outflow=1.10 cfs 0.222 af Overflow=0.00 cfs 0.000 af

Reach 9R: East Swale Avg. Flow Depth=0.21' Max Vel=2.04 fps Inflow=1.11 cfs 0.222 af
n=0.022 L=460.0' S=0.0101 '/' Capacity=303.17 cfs Outflow=1.10 cfs 0.222 af

Reach DP-1: Design Point Inflow=2.94 cfs 0.810 af
Outflow=2.94 cfs 0.810 af

Pond BIO-1: Filtration Bioretention Peak Elev=598.47' Storage=780 cf Inflow=0.52 cfs 0.027 af
Primary=0.01 cfs 0.027 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.027 af

Pond BIO-1A: Filtration Bioretention Peak Elev=597.88' Storage=454 cf Inflow=0.29 cfs 0.015 af
Primary=0.00 cfs 0.015 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.015 af

Pond BIO-2: Filtration Bioretention Peak Elev=596.51' Storage=1,048 cf Inflow=0.74 cfs 0.039 af
Primary=0.02 cfs 0.039 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.039 af

Pond BIO-3: Filtration Bioretention Peak Elev=595.48' Storage=1,854 cf Inflow=1.32 cfs 0.067 af
Primary=0.03 cfs 0.067 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.067 af

Pond CH-1: Chambers Peak Elev=592.21' Storage=7,377 cf Inflow=5.27 cfs 0.276 af
Outflow=0.38 cfs 0.229 af

Total Runoff Area = 16.122 ac Runoff Volume = 0.857 af Average Runoff Depth = 0.64"
81.07% Pervious = 13.071 ac 18.93% Impervious = 3.052 ac

Summary for Subcatchment PS-1:

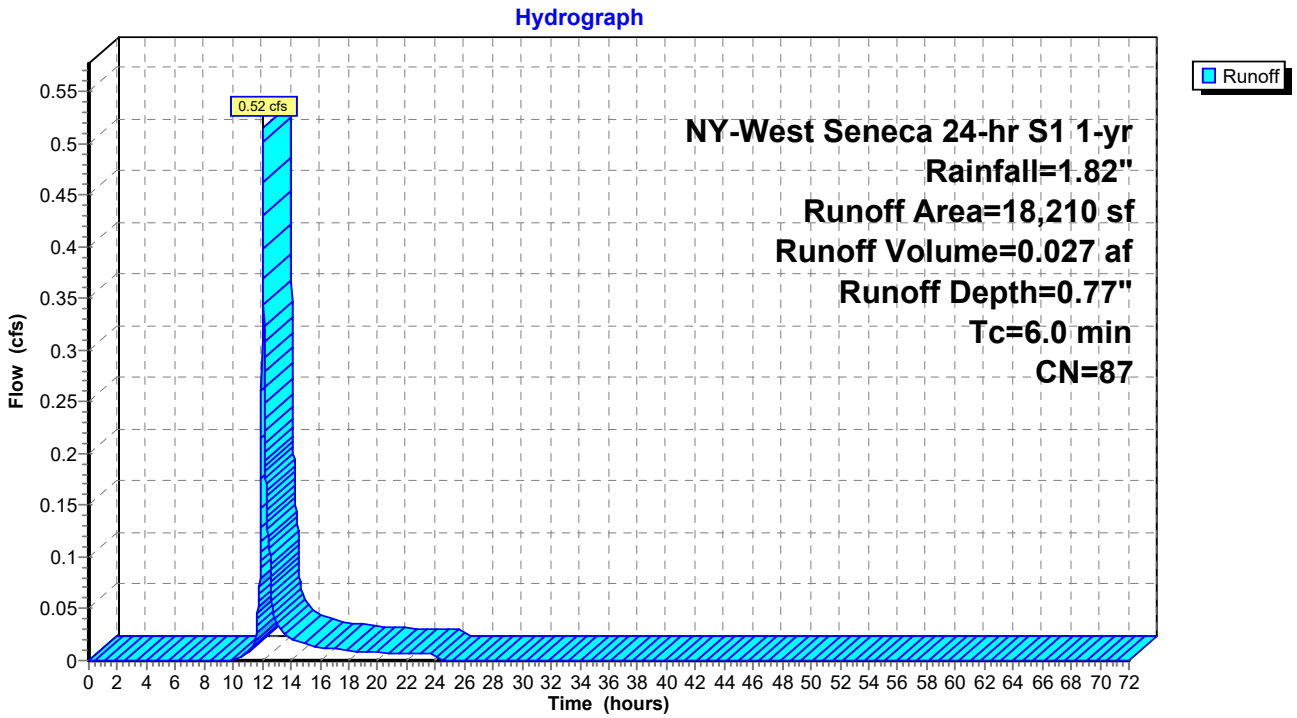
Runoff = 0.52 cfs @ 12.04 hrs, Volume= 0.027 af, Depth= 0.77"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
7,027	98	Paved parking, HSG D
11,183	80	>75% Grass cover, Good, HSG D
18,210	87	Weighted Average
11,183		61.41% Pervious Area
7,027		38.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-1A:

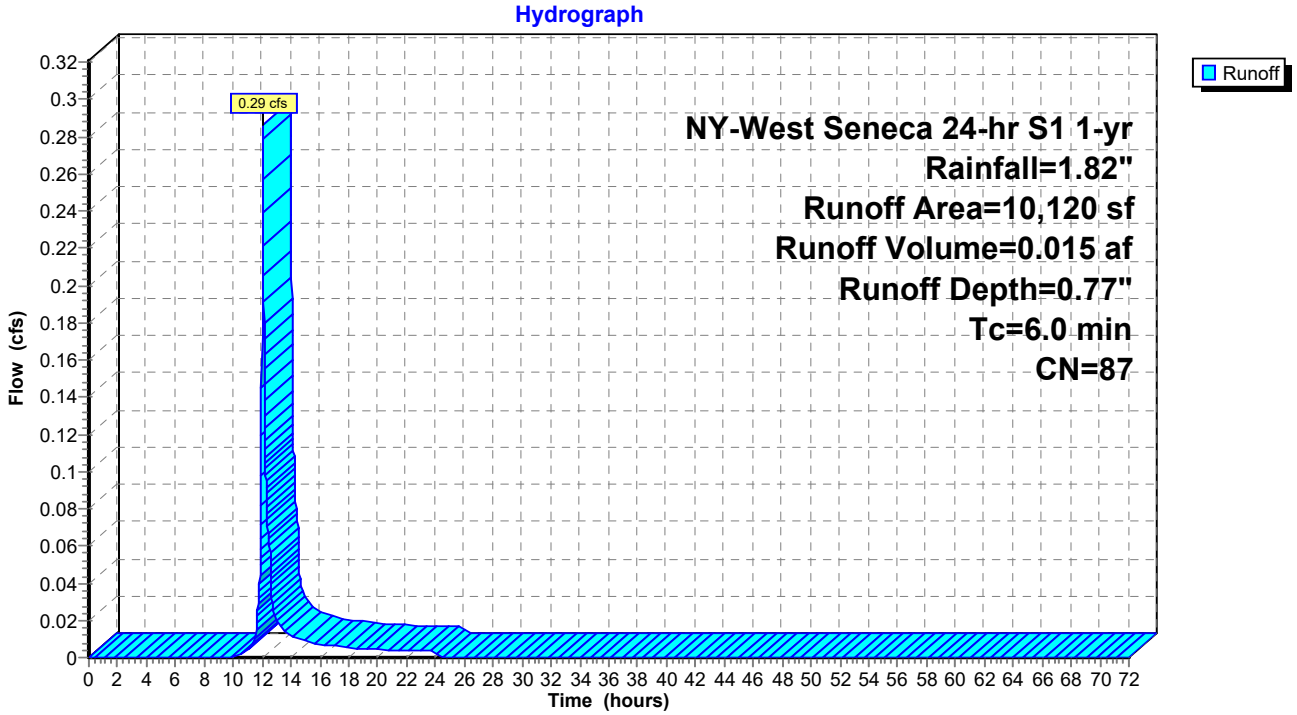
Runoff = 0.29 cfs @ 12.04 hrs, Volume= 0.015 af, Depth= 0.77"
Routed to Pond BIO-1A : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
3,892	98	Paved parking, HSG D
6,228	80	>75% Grass cover, Good, HSG D
10,120	87	Weighted Average
6,228		61.54% Pervious Area
3,892		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1A:



Summary for Subcatchment PS-2:

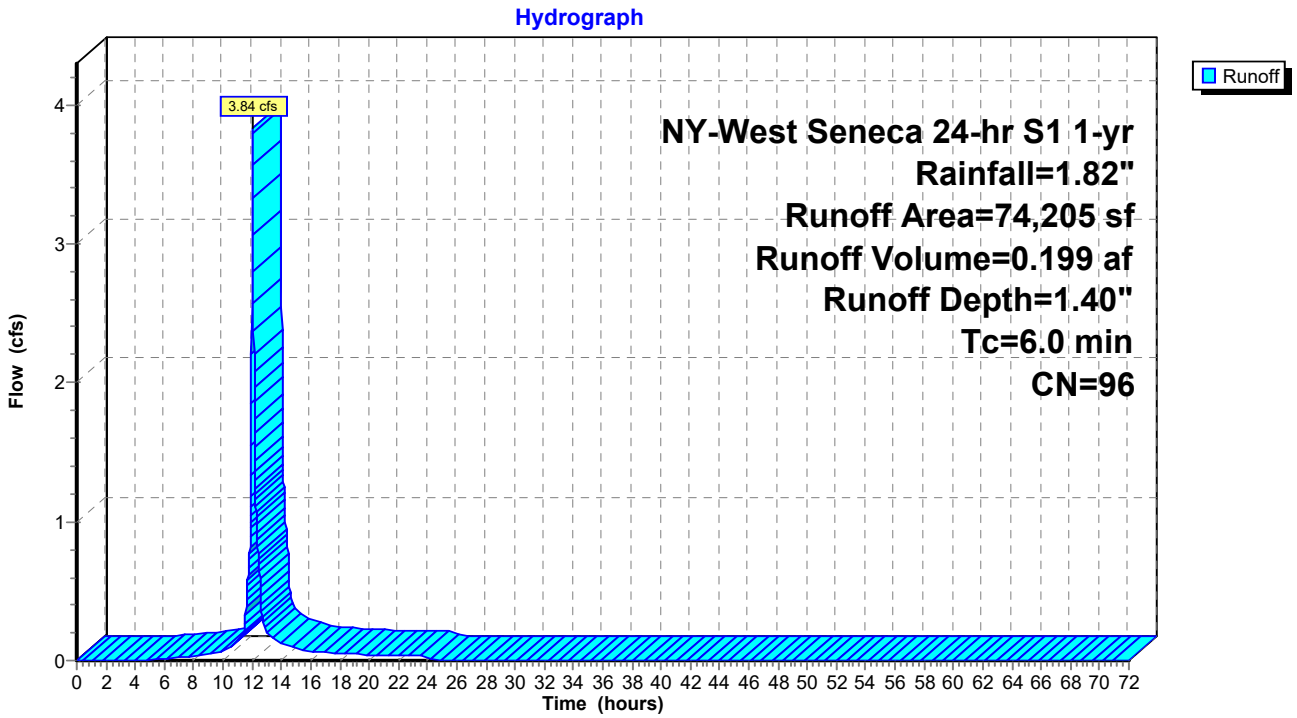
Runoff = 3.84 cfs @ 12.04 hrs, Volume= 0.199 af, Depth= 1.40"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
64,548	98	Paved parking, HSG D
9,657	80	>75% Grass cover, Good, HSG D
74,205	96	Weighted Average
9,657		13.01% Pervious Area
64,548		86.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

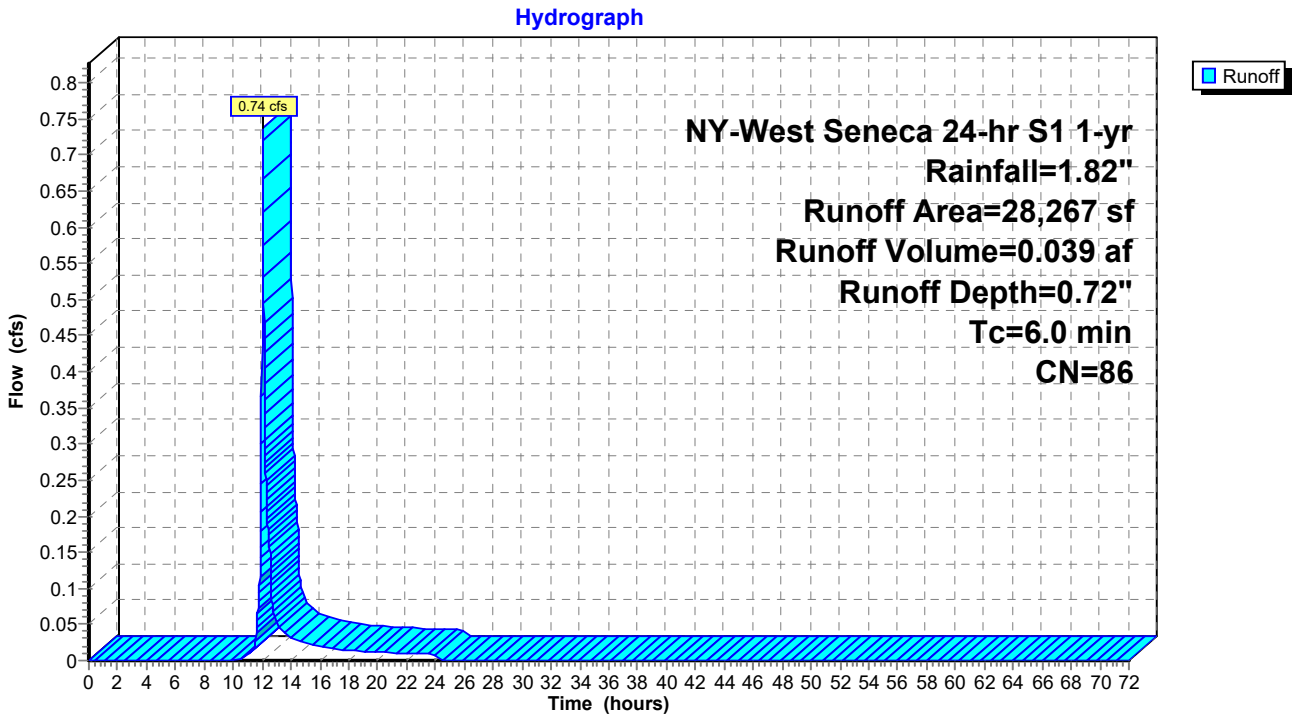
Runoff = 0.74 cfs @ 12.04 hrs, Volume= 0.039 af, Depth= 0.72"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

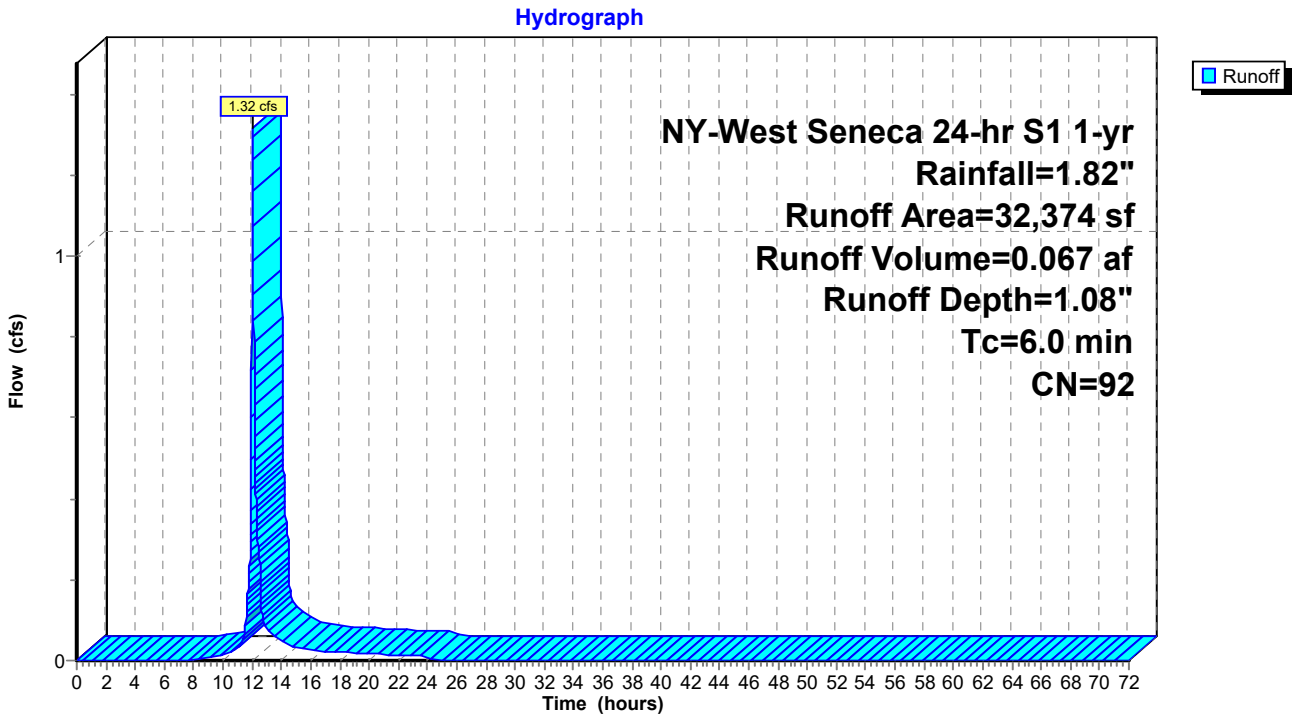
Runoff = 1.32 cfs @ 12.04 hrs, Volume= 0.067 af, Depth= 1.08"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
11,446	80	>75% Grass cover, Good, HSG D
32,374	92	Weighted Average
11,446		35.36% Pervious Area
20,928		64.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

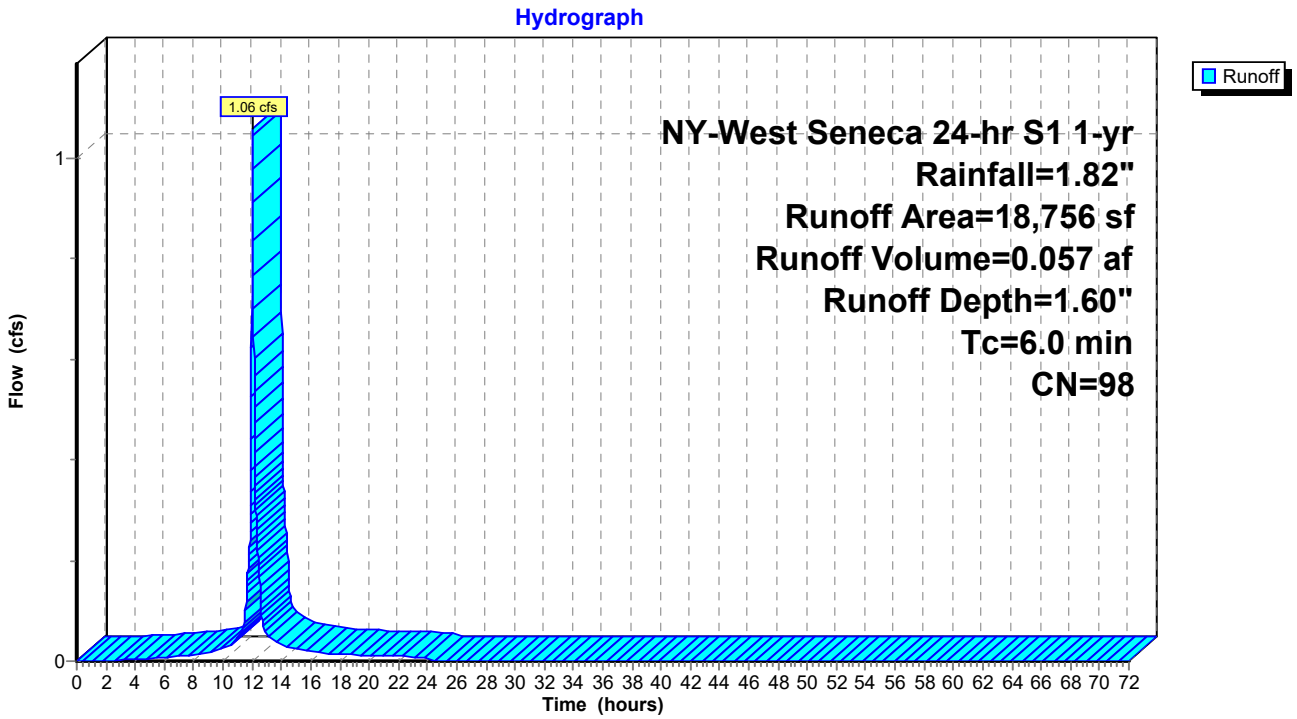
Runoff = 1.06 cfs @ 12.04 hrs, Volume= 0.057 af, Depth= 1.60"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

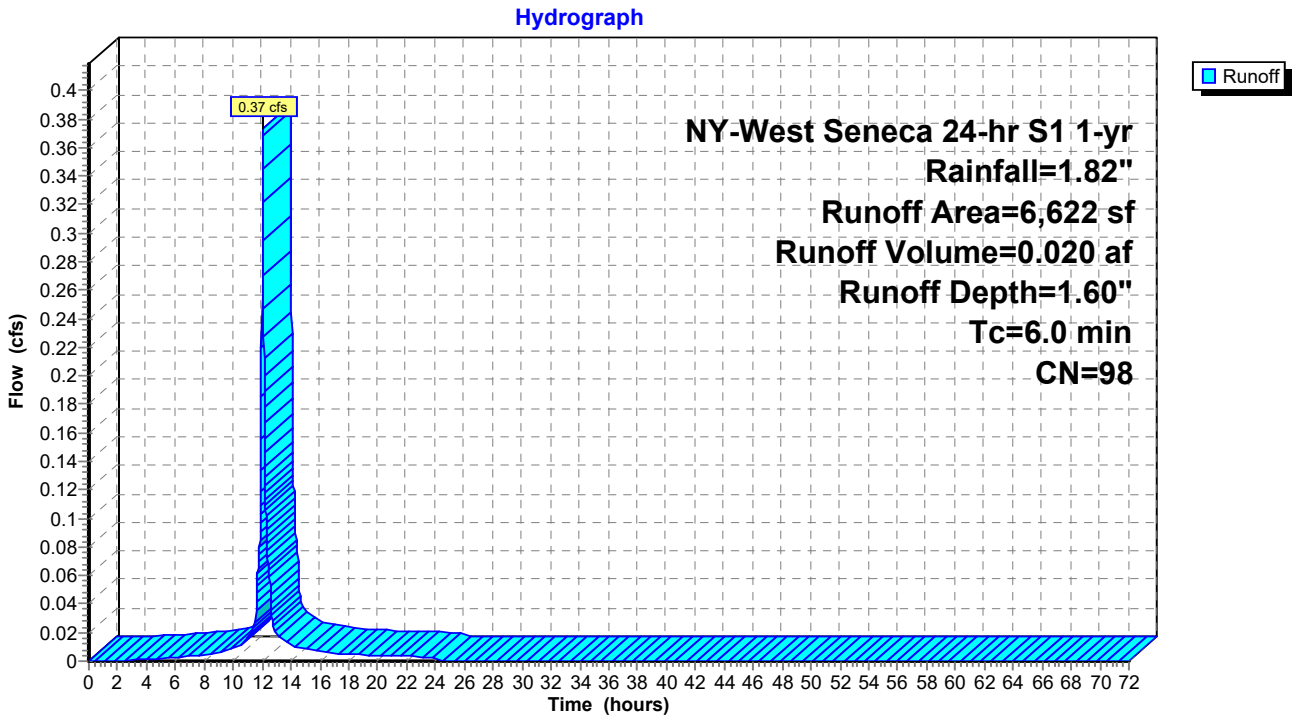
Runoff = 0.37 cfs @ 12.04 hrs, Volume= 0.020 af, Depth= 1.60"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

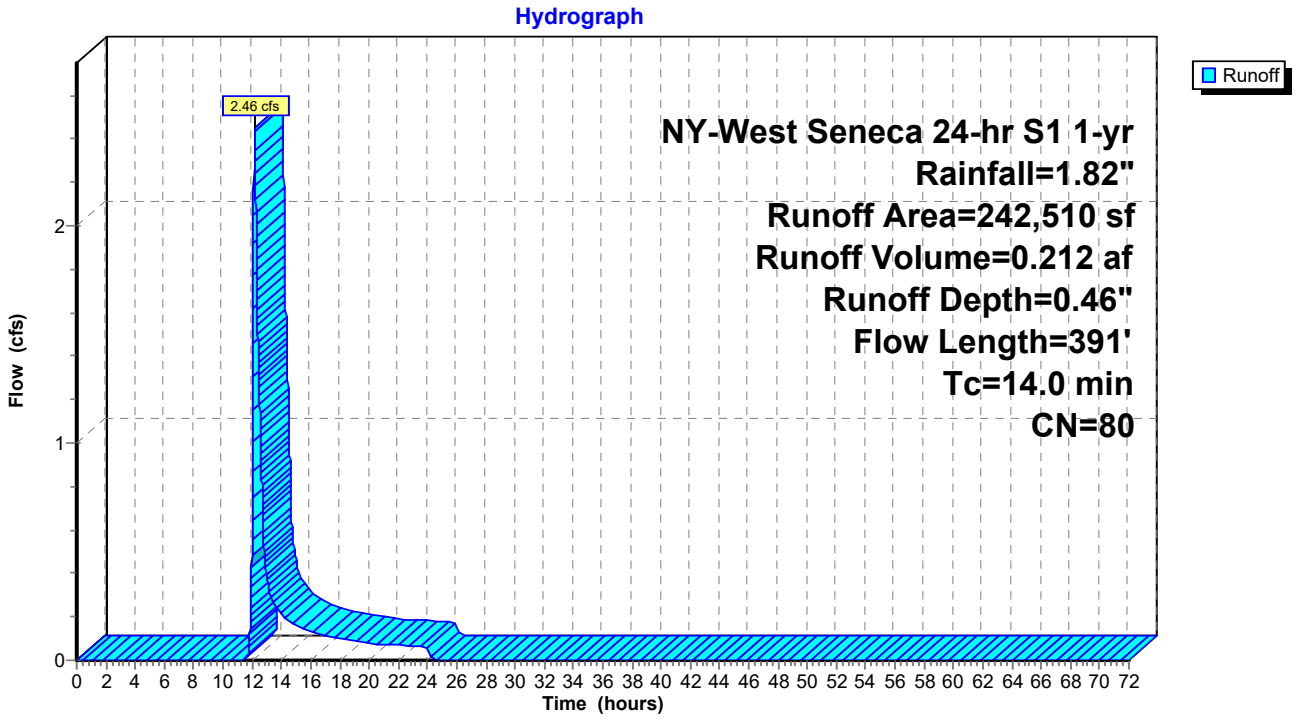
Runoff = 2.46 cfs @ 12.17 hrs, Volume= 0.212 af, Depth= 0.46"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
242,510	80	>75% Grass cover, Good, HSG D
242,510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

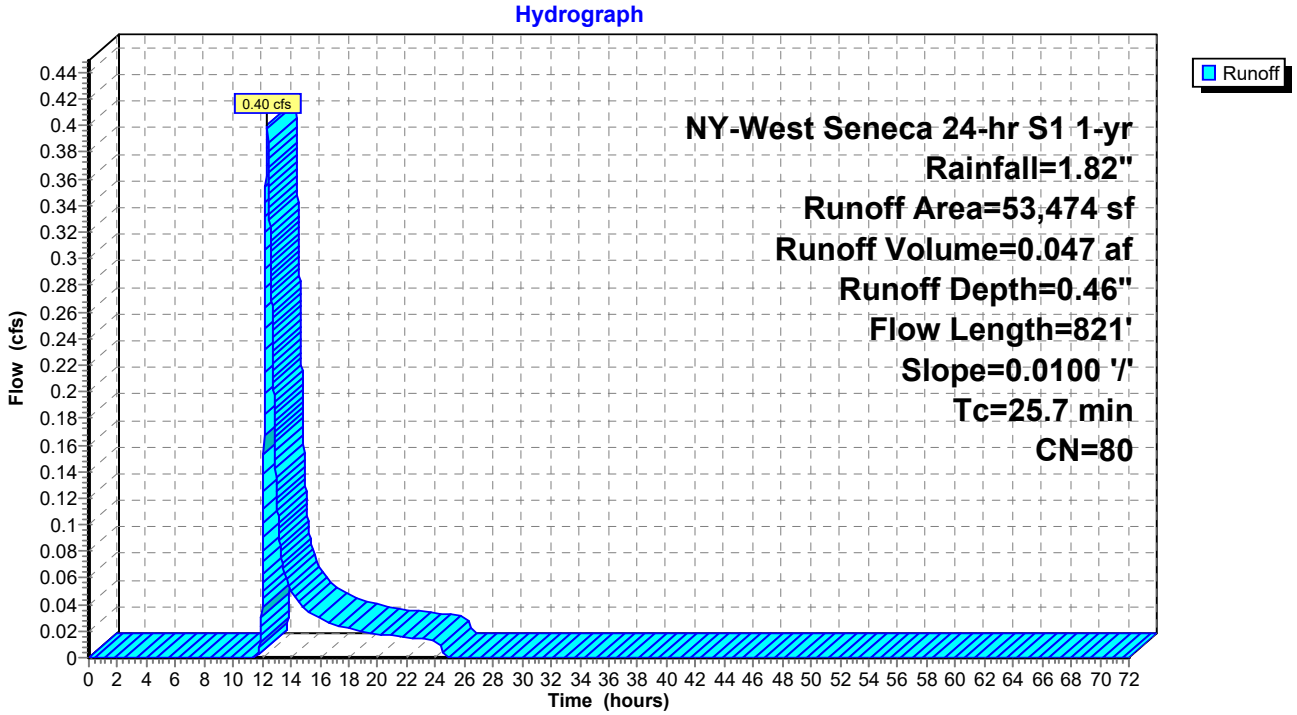
Runoff = 0.40 cfs @ 12.36 hrs, Volume= 0.047 af, Depth= 0.46"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:



Summary for Subcatchment PS-9: OFF-SITE DRAINAGE

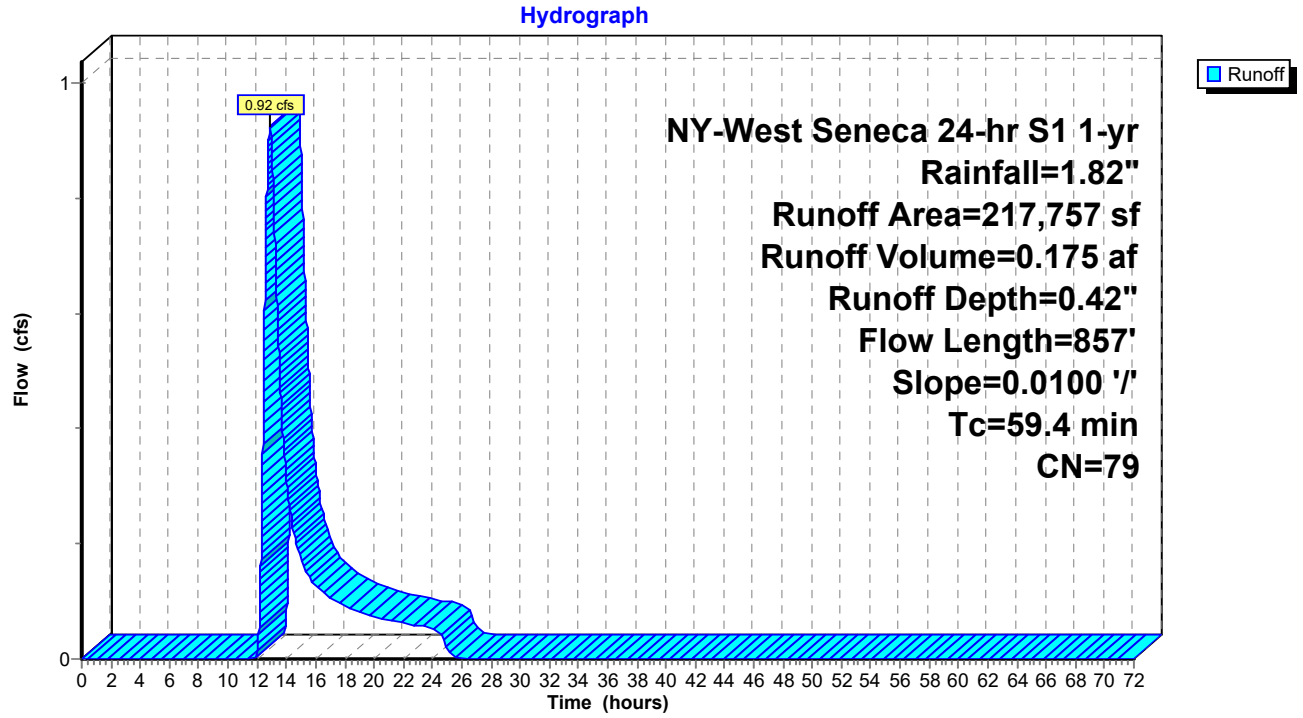
Runoff = 0.92 cfs @ 12.87 hrs, Volume= 0.175 af, Depth= 0.42"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 1-yr Rainfall=1.82"

Area (sf)	CN	Description
1,089	80	>75% Grass cover, Good, HSG D
1,699	98	Paved parking, HSG D
214,969	79	Woods, Fair, HSG D
217,757	79	Weighted Average
216,058		99.22% Pervious Area
1,699		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	600	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
5.2	157	0.0100	0.50		**Shallow Concentrated Flow, Swale** Woodland Kv= 5.0 fps
59.4	857	Total			

Subcatchment PS-9: OFF-SITE DRAINAGE



Summary for Reach 8R: 15" Pipe

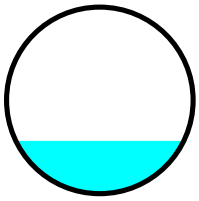
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 0.43" for 1-yr event
Inflow = 1.10 cfs @ 12.82 hrs, Volume= 0.222 af
Outflow = 1.10 cfs @ 12.84 hrs, Volume= 0.222 af, Atten= 0%, Lag= 1.1 min
Routed to Reach DP-1 : Design Point
Overflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

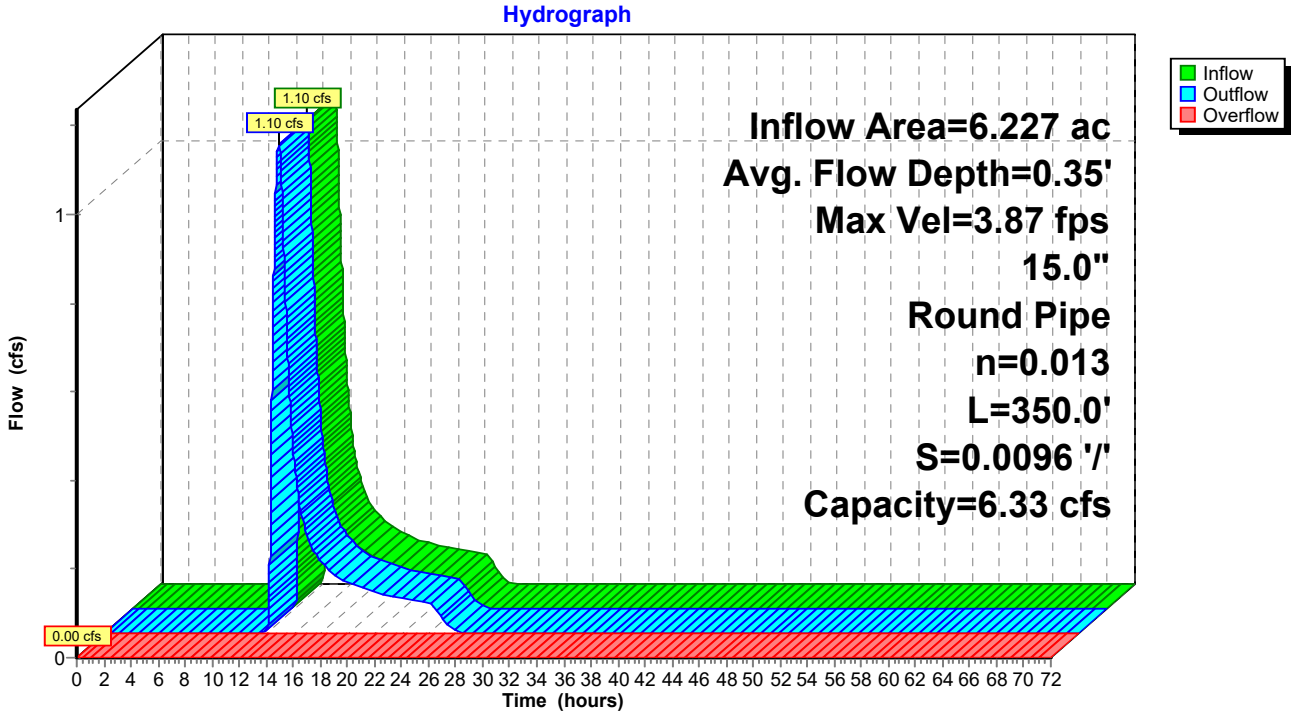
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.87 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 3.1 min

Peak Storage= 100 cf @ 12.84 hrs
Average Depth at Peak Storage= 0.35' , Surface Width= 1.13'
Defined Flood Depth= 598.00' Flow Area= 100.4 sf, Capacity= -12,672.78 cfs
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.33 cfs
Any excess flow will be diverted to the secondary overflow

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 350.0' Slope= 0.0096 '/'
Inlet Invert= 591.85', Outlet Invert= 588.49'



Reach 8R: 15" Pipe



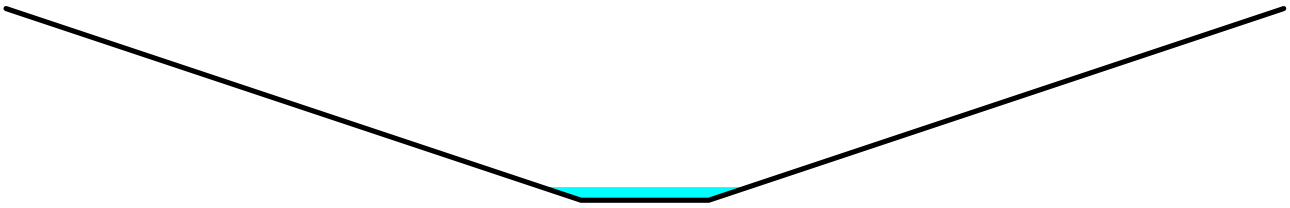
Summary for Reach 9R: East Swale

Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 0.43" for 1-yr event
Inflow = 1.11 cfs @ 12.75 hrs, Volume= 0.222 af
Outflow = 1.10 cfs @ 12.82 hrs, Volume= 0.222 af, Atten= 0%, Lag= 4.3 min
Routed to Reach 8R : 15" Pipe

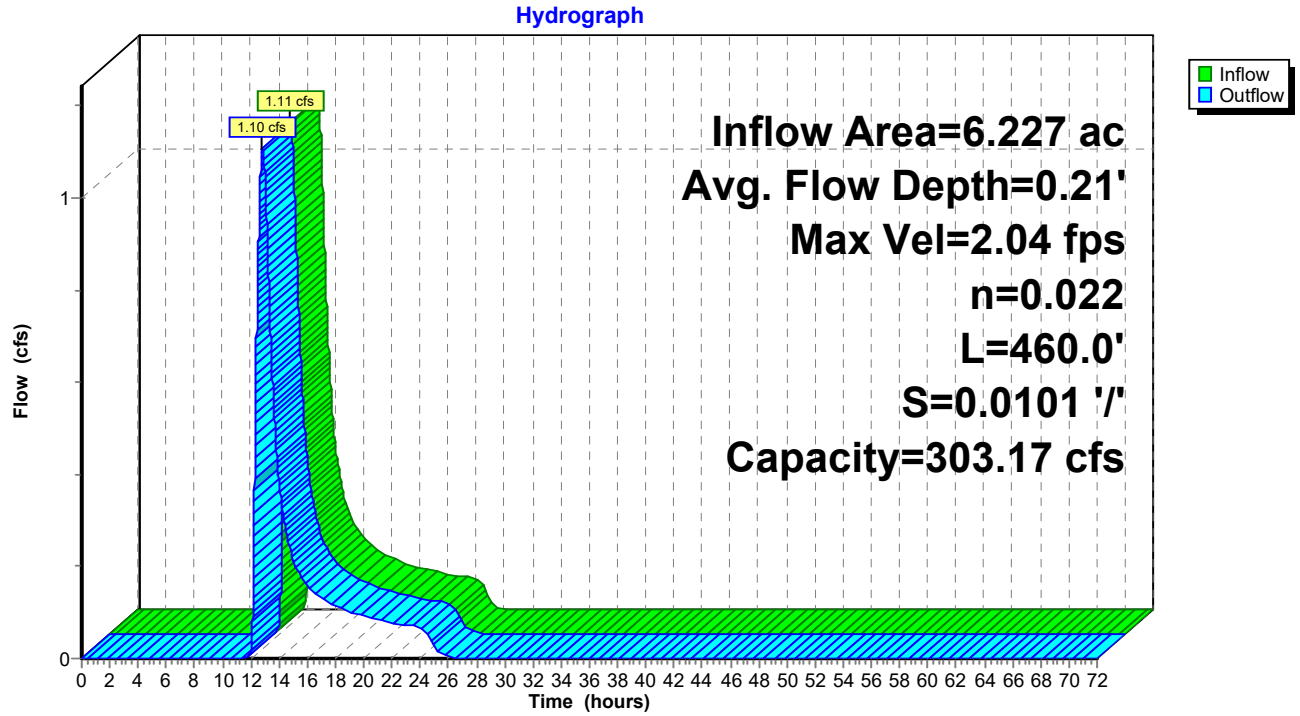
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.04 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.99 fps, Avg. Travel Time= 7.8 min

Peak Storage= 249 cf @ 12.82 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 3.24'
Bank-Full Depth= 3.00' Flow Area= 33.0 sf, Capacity= 303.17 cfs

2.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 20.00'
Length= 460.0' Slope= 0.0101 '/'
Inlet Invert= 599.00', Outlet Invert= 594.35'



Reach 9R: East Swale



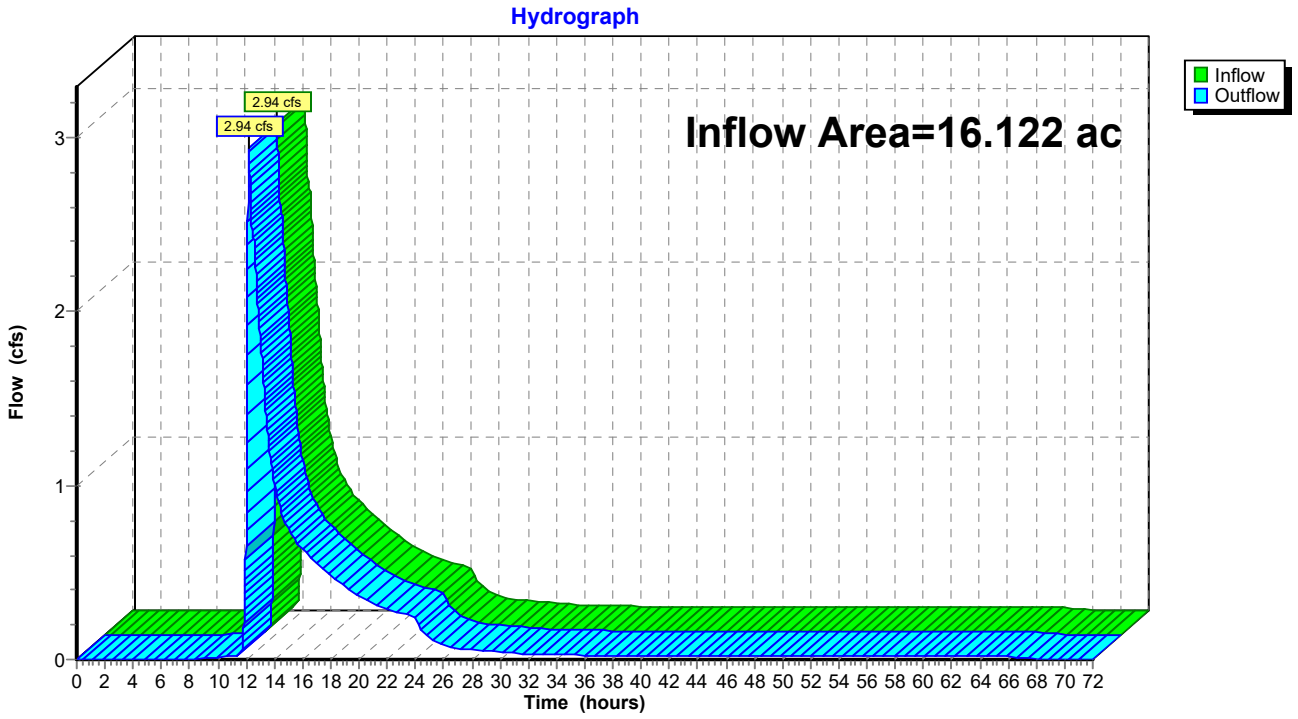
Summary for Reach DP-1: Design Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 18.93% Impervious, Inflow Depth > 0.60" for 1-yr event
Inflow = 2.94 cfs @ 12.18 hrs, Volume= 0.810 af
Outflow = 2.94 cfs @ 12.18 hrs, Volume= 0.810 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.418 ac, 38.59% Impervious, Inflow Depth = 0.77" for 1-yr event
Inflow = 0.52 cfs @ 12.04 hrs, Volume= 0.027 af
Outflow = 0.01 cfs @ 17.73 hrs, Volume= 0.027 af, Atten= 98%, Lag= 341.1 min
Primary = 0.01 cfs @ 17.73 hrs, Volume= 0.027 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 598.47' @ 17.73 hrs Surf.Area= 874 sf Storage= 780 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1,193.3 min (2,038.4 - 845.1)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

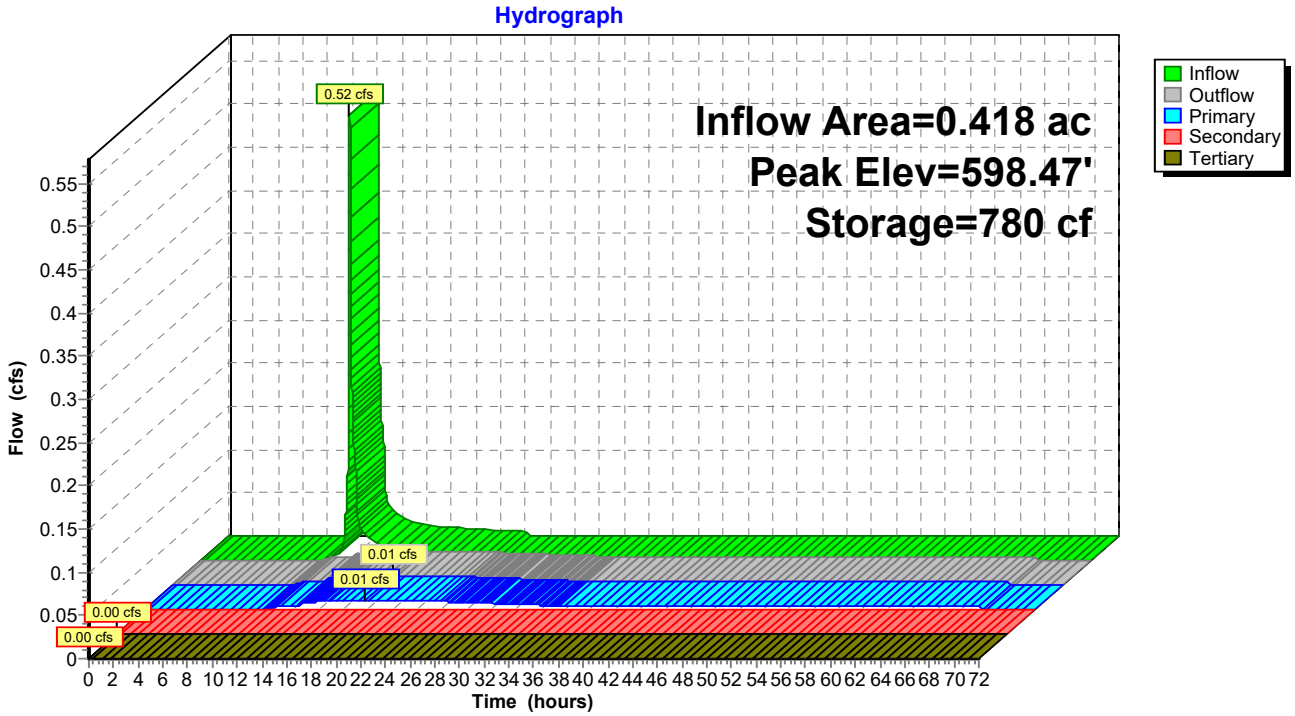
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.01 cfs @ 17.73 hrs HW=598.47' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Controls 0.00 cfs)
└─**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-1A: Filtration Bioretention

Inflow Area = 0.232 ac, 38.46% Impervious, Inflow Depth = 0.77" for 1-yr event
Inflow = 0.29 cfs @ 12.04 hrs, Volume= 0.015 af
Outflow = 0.00 cfs @ 11.29 hrs, Volume= 0.015 af, Atten= 99%, Lag= 0.0 min
Primary = 0.00 cfs @ 11.29 hrs, Volume= 0.015 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 597.88' @ 21.08 hrs Surf.Area= 350 sf Storage= 454 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1,120.1 min (1,965.2 - 845.1)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

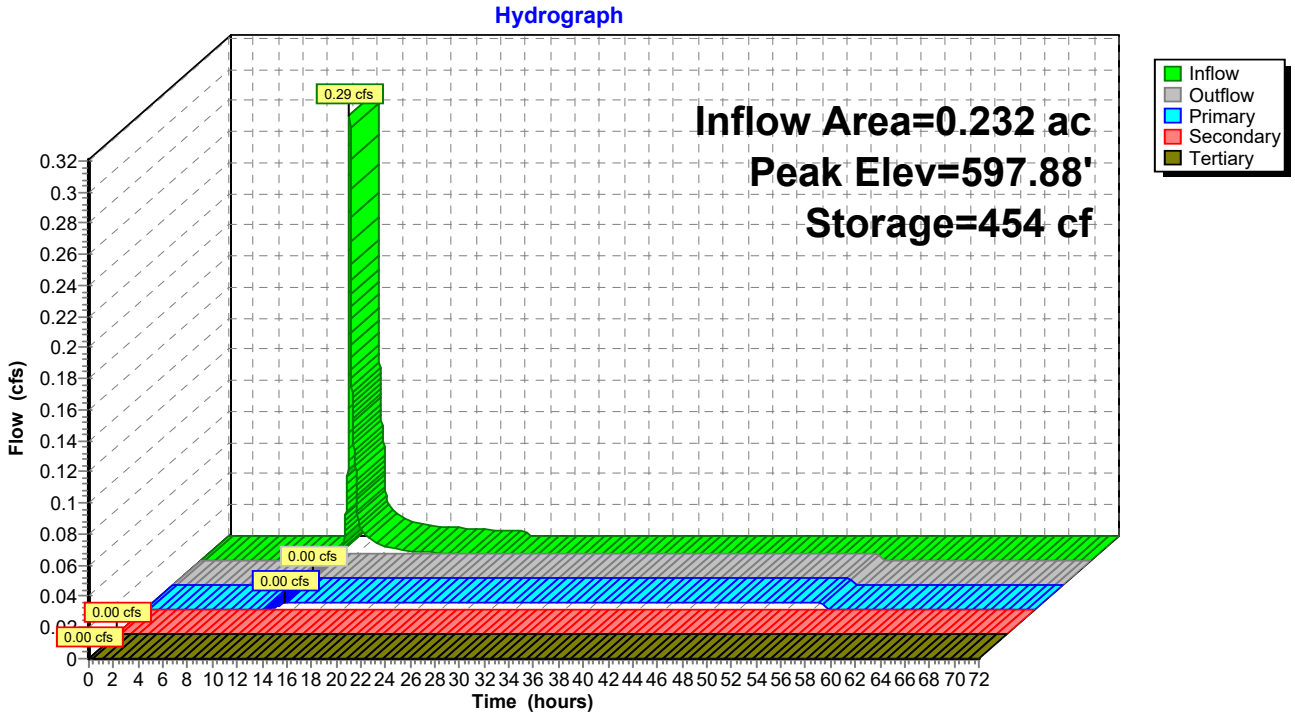
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**6.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 11.29 hrs HW=594.43' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Controls 0.00 cfs)
└─**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1A: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 0.72" for 1-yr event
Inflow = 0.74 cfs @ 12.04 hrs, Volume= 0.039 af
Outflow = 0.02 cfs @ 16.10 hrs, Volume= 0.039 af, Atten= 97%, Lag= 243.6 min
Primary = 0.02 cfs @ 16.10 hrs, Volume= 0.039 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.51' @ 16.10 hrs Surf.Area= 1,651 sf Storage= 1,048 cf
Flood Elev= 598.00' Surf.Area= 3,117 sf Storage= 4,754 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 972.2 min (1,821.9 - 849.7)

Volume	Invert	Avail.Storage	Storage Description
#1	592.42'	4,754 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
592.42	370	0.0	0	0
592.43	370	20.0	1	1
593.25	370	20.0	61	61
595.75	370	40.0	370	431
596.00	370	100.0	93	524
596.50	1,629	100.0	500	1,024
597.00	2,353	100.0	996	2,019
598.00	3,117	100.0	2,735	4,754

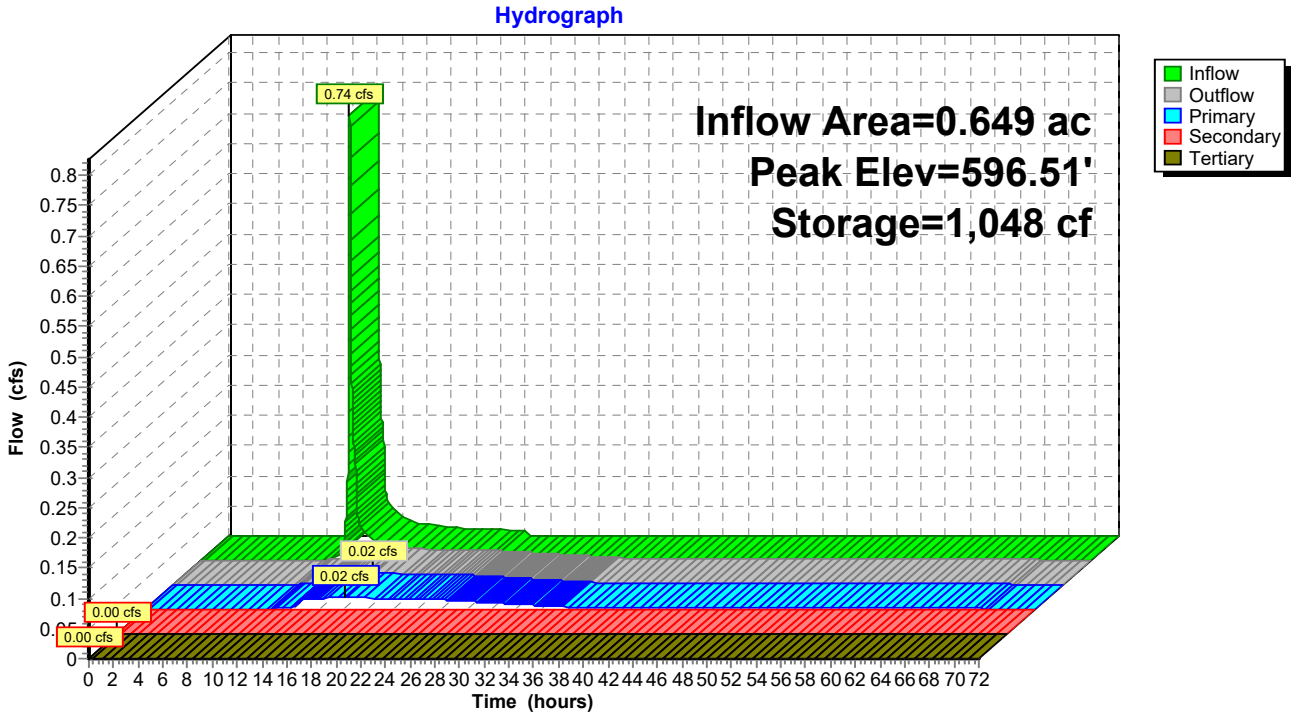
Device	Routing	Invert	Outlet Devices
#1	Primary	592.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 16.10 hrs HW=596.51' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=592.42' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Controls 0.00 cfs)
└─**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=592.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.743 ac, 64.64% Impervious, Inflow Depth = 1.08" for 1-yr event
Inflow = 1.32 cfs @ 12.04 hrs, Volume= 0.067 af
Outflow = 0.03 cfs @ 15.20 hrs, Volume= 0.067 af, Atten= 98%, Lag= 189.6 min
Primary = 0.03 cfs @ 15.20 hrs, Volume= 0.067 af
Routed to Reach DP-1 : Design Point
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 595.48' @ 15.20 hrs Surf.Area= 2,839 sf Storage= 1,854 cf
Flood Elev= 597.00' Surf.Area= 4,176 sf Storage= 7,294 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 984.1 min (1,804.3 - 820.1)

Volume	Invert	Avail.Storage	Storage Description
#1	591.42'	12,099 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.42	705	0.0	0	0
591.43	705	20.0	1	1
592.25	705	20.0	116	117
594.75	705	40.0	705	822
595.00	705	100.0	176	998
595.50	2,913	100.0	905	1,903
596.00	3,433	100.0	1,587	3,489
597.00	4,176	100.0	3,805	7,294
598.00	5,434	100.0	4,805	12,099

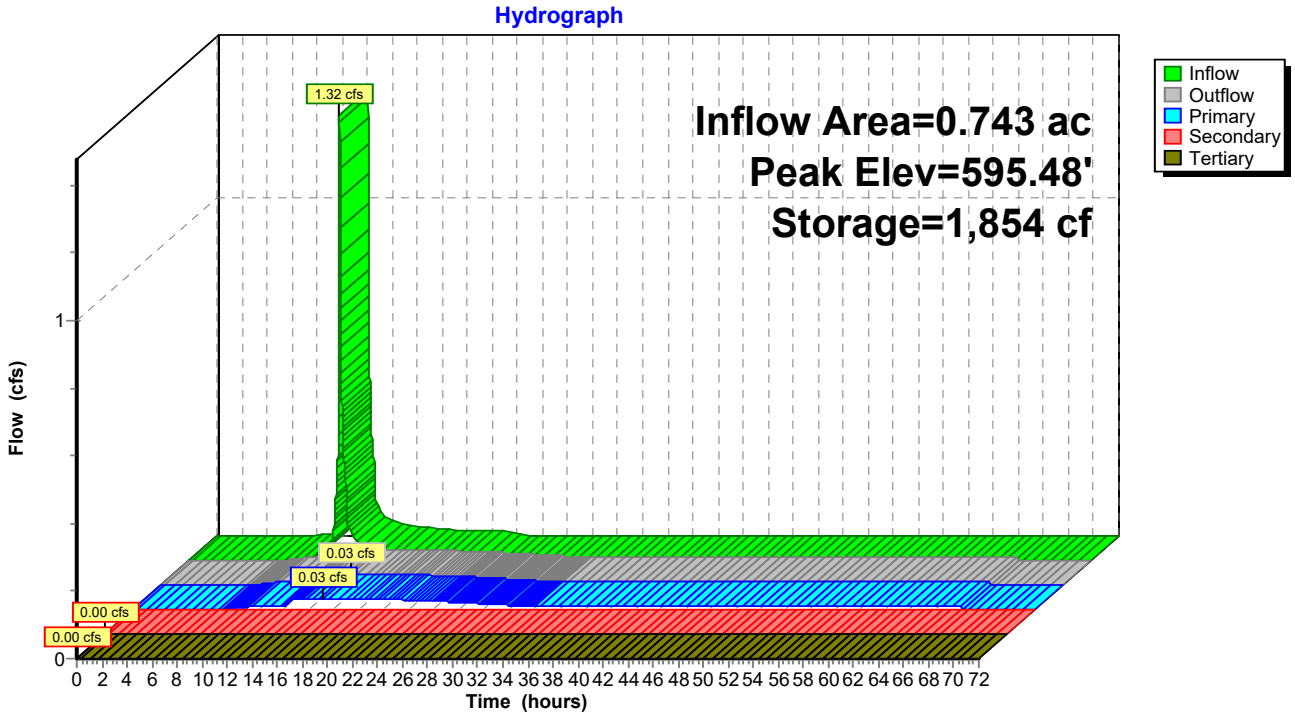
Device	Routing	Invert	Outlet Devices
#1	Primary	591.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.03 cfs @ 15.20 hrs HW=595.48' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.03 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=591.42' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Controls 0.00 cfs)
└─**2=Overflow Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=591.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.286 ac, 90.30% Impervious, Inflow Depth = 1.45" for 1-yr event
Inflow = 5.27 cfs @ 12.04 hrs, Volume= 0.276 af
Outflow = 0.38 cfs @ 12.72 hrs, Volume= 0.229 af, Atten= 93%, Lag= 41.0 min
Primary = 0.38 cfs @ 12.72 hrs, Volume= 0.229 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 592.21' @ 12.72 hrs Surf.Area= 6,598 sf Storage= 7,377 cf
Flood Elev= 598.32' Surf.Area= 13,198 sf Storage= 26,499 cf

Plug-Flow detention time= 341.3 min calculated for 0.229 af (83% of inflow)
Center-of-Mass det. time= 269.3 min (1,055.1 - 785.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	590.50'	9,166 cf	**44.25'W x 149.10'L x 5.50'H Field A** 36,287 cf Overall - 13,373 cf Embedded = 22,914 cf x 40.0% Voids
#2A	591.25'	13,373 cf	**ADS_StormTech MC-3500 d +Cap** x 120 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 120 Chambers in 6 Rows Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf
#3	596.00'	3,960 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		26,499 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	6,600	0.0	0	0
597.50	6,600	40.0	3,960	3,960

Device	Routing	Invert	Outlet Devices
#1	Primary	590.50'	**8.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 590.50' / 589.25' S= 0.0104 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	591.25'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	594.35'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.38 cfs @ 12.72 hrs HW=592.21' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.38 cfs of 1.47 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.38 cfs @ 4.30 fps)
└**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

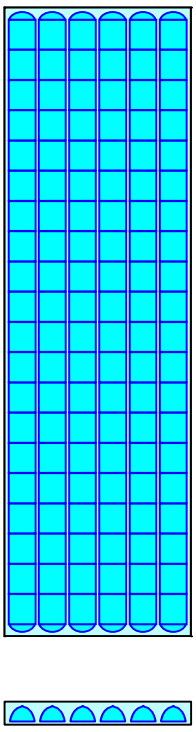
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
6 Rows x 77.0" Wide + 9.0" Spacing x 5 + 12.0" Side Stone x 2 = 44.25' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

120 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 6 Rows = 13,373.0 cf Chamber Storage

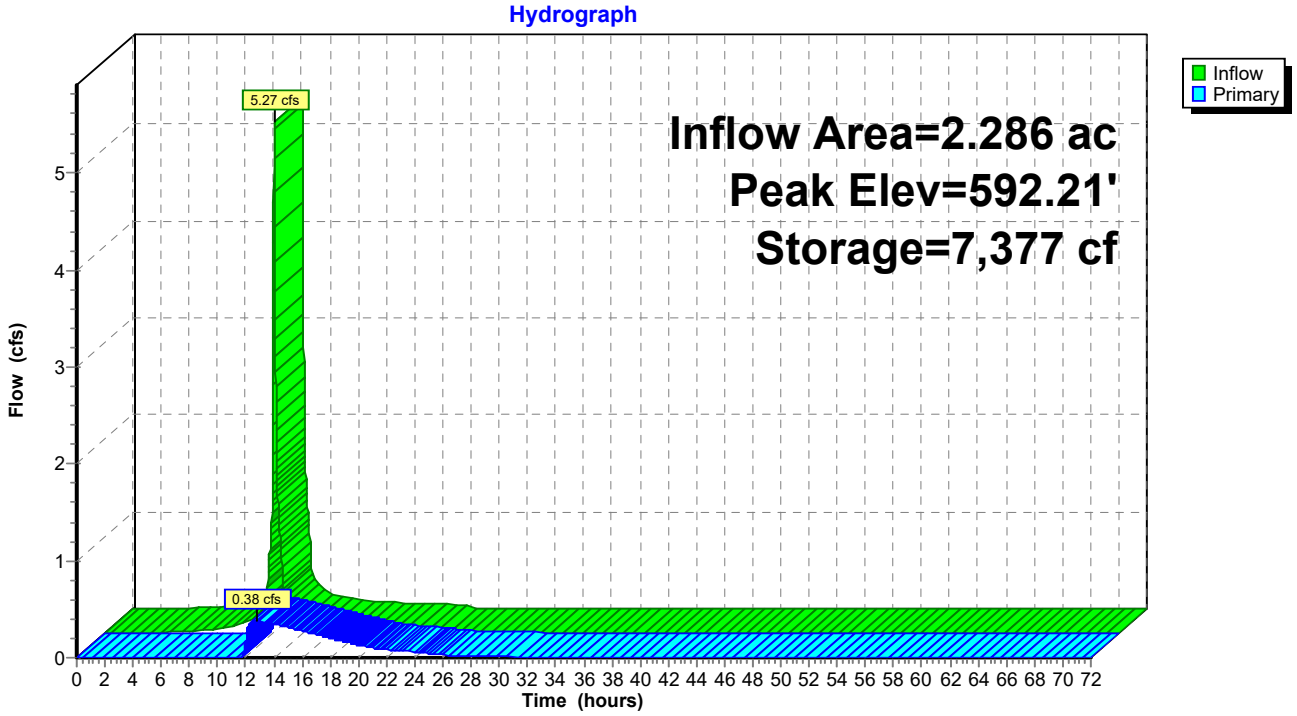
36,287.2 cf Field - 13,373.0 cf Chambers = 22,914.2 cf Stone x 40.0% Voids = 9,165.7 cf Stone Storage

Chamber Storage + Stone Storage = 22,538.7 cf = 0.517 af
Overall Storage Efficiency = 62.1%
Overall System Size = 149.10' x 44.25' x 5.50'

120 Chambers
1,344.0 cy Field
848.7 cy Stone



Pond CH-1: Chambers



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS-1: Runoff Area=18,210 sf 38.59% Impervious Runoff Depth=2.49"
Tc=6.0 min CN=87 Runoff=1.57 cfs 0.087 af

SubcatchmentPS-1A: Runoff Area=10,120 sf 38.46% Impervious Runoff Depth=2.49"
Tc=6.0 min CN=87 Runoff=0.87 cfs 0.048 af

SubcatchmentPS-2: Runoff Area=74,205 sf 86.99% Impervious Runoff Depth=3.38"
Tc=6.0 min CN=96 Runoff=8.11 cfs 0.480 af

SubcatchmentPS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=2.40"
Tc=6.0 min CN=86 Runoff=2.35 cfs 0.130 af

SubcatchmentPS-4: Runoff Area=32,374 sf 64.64% Impervious Runoff Depth=2.96"
Tc=6.0 min CN=92 Runoff=3.24 cfs 0.184 af

SubcatchmentPS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=3.61"
Tc=6.0 min CN=98 Runoff=2.11 cfs 0.129 af

SubcatchmentPS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=3.61"
Tc=6.0 min CN=98 Runoff=0.74 cfs 0.046 af

SubcatchmentPS-7: Runoff Area=242,510 sf 0.00% Impervious Runoff Depth=1.91"
Flow Length=391' Tc=14.0 min CN=80 Runoff=11.45 cfs 0.886 af

SubcatchmentPS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=1.91"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=1.91 cfs 0.195 af

SubcatchmentPS-9: OFF-SITE DRAINAGE Runoff Area=217,757 sf 0.78% Impervious Runoff Depth=1.83"
Flow Length=857' Slope=0.0100 '/' Tc=59.4 min CN=79 Runoff=4.77 cfs 0.764 af

Reach 8R: 15" Pipe Avg. Flow Depth=0.93' Max Vel=5.84 fps Inflow=5.71 cfs 0.960 af
0" Round Pipe n=0.013 L=350.0' S=0.0096 '/' Capacity=6.33 cfs Outflow=5.70 cfs 0.960 af Overflow=0.00 cfs 0.000 af

Reach 9R: East Swale Avg. Flow Depth=0.50' Max Vel=3.29 fps Inflow=5.72 cfs 0.960 af
n=0.022 L=460.0' S=0.0101 '/' Capacity=303.17 cfs Outflow=5.71 cfs 0.960 af

Reach DP-1: Design Point Inflow=16.38 cfs 2.887 af
Outflow=16.38 cfs 2.887 af

Pond BIO-1: Filtration Bioretention Peak Elev=599.09' Storage=1,543 cf Inflow=1.57 cfs 0.087 af
Primary=0.02 cfs 0.048 af Secondary=0.69 cfs 0.036 af Tertiary=0.00 cfs 0.000 af Outflow=0.71 cfs 0.083 af

Pond BIO-1A: Filtration Bioretention Peak Elev=599.01' Storage=1,417 cf Inflow=0.87 cfs 0.048 af
Primary=0.02 cfs 0.044 af Secondary=0.01 cfs 0.001 af Tertiary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.046 af

Pond BIO-2: Filtration Bioretention Peak Elev=597.11' Storage=2,288 cf Inflow=2.35 cfs 0.130 af
Primary=0.03 cfs 0.072 af Secondary=0.99 cfs 0.055 af Tertiary=0.00 cfs 0.000 af Outflow=1.01 cfs 0.126 af

Pond BIO-3: Filtration Bioretention Peak Elev=596.11' Storage=3,881 cf Inflow=3.24 cfs 0.184 af
Primary=0.04 cfs 0.116 af Secondary=0.99 cfs 0.061 af Tertiary=0.00 cfs 0.000 af Outflow=1.03 cfs 0.177 af

Pond CH-1: Chambers Peak Elev=594.31' Storage=17,647 cf Inflow=10.97 cfs 0.655 af
Outflow=0.71 cfs 0.608 af

Total Runoff Area = 16.122 ac Runoff Volume = 2.949 af Average Runoff Depth = 2.20"
81.07% Pervious = 13.071 ac 18.93% Impervious = 3.052 ac

Summary for Subcatchment PS-1:

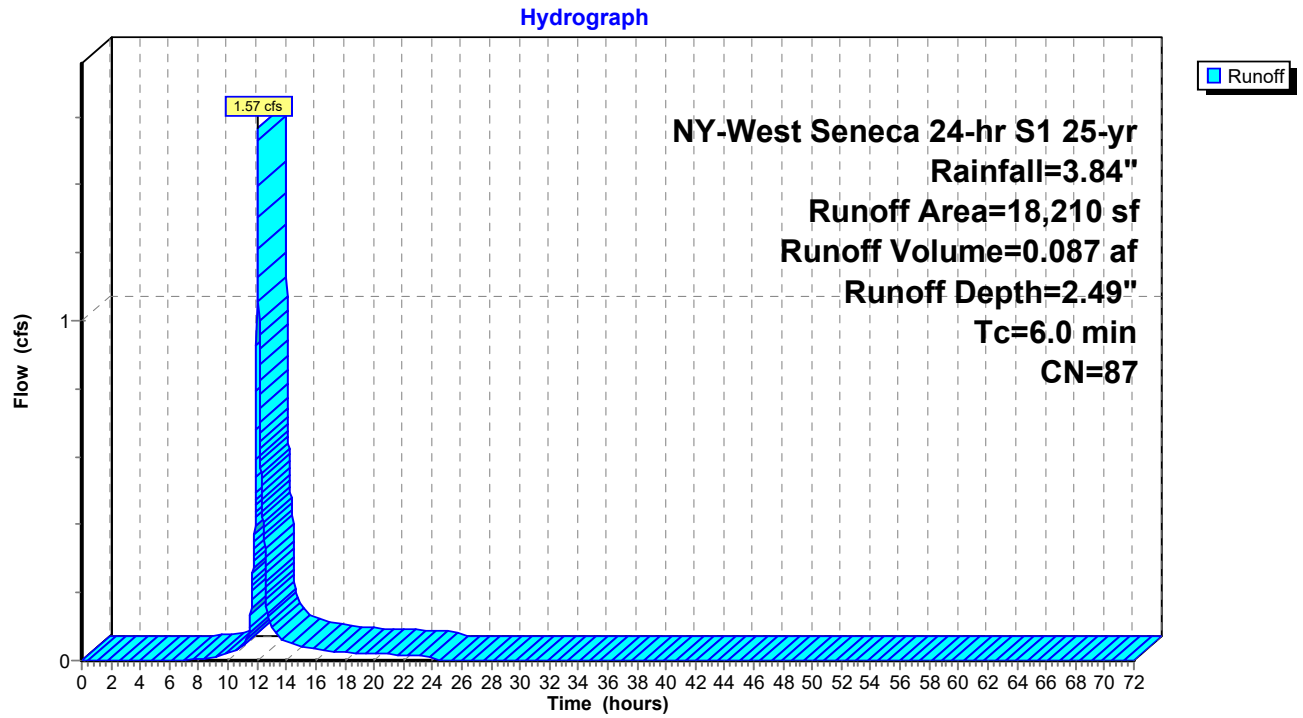
Runoff = 1.57 cfs @ 12.04 hrs, Volume= 0.087 af, Depth= 2.49"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
7,027	98	Paved parking, HSG D
11,183	80	>75% Grass cover, Good, HSG D
18,210	87	Weighted Average
11,183		61.41% Pervious Area
7,027		38.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-1A:

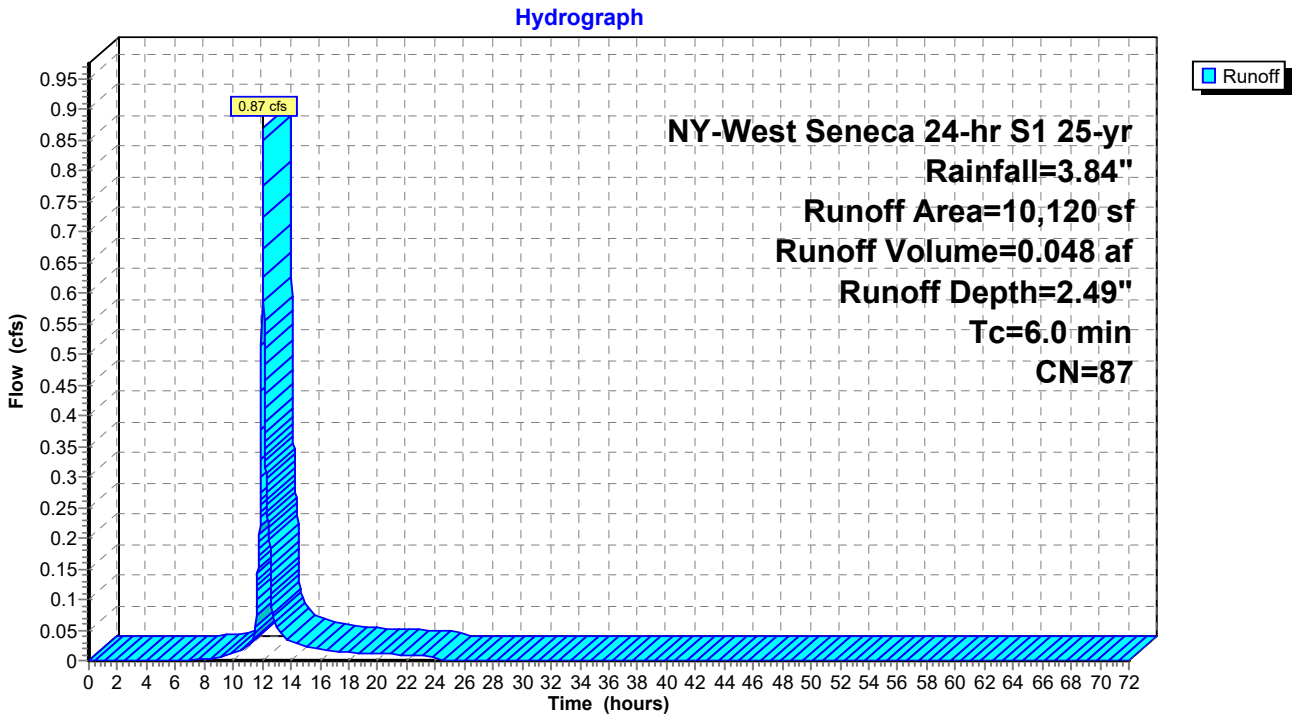
Runoff = 0.87 cfs @ 12.04 hrs, Volume= 0.048 af, Depth= 2.49"
Routed to Pond BIO-1A : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
3,892	98	Paved parking, HSG D
6,228	80	>75% Grass cover, Good, HSG D
10,120	87	Weighted Average
6,228		61.54% Pervious Area
3,892		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1A:



Summary for Subcatchment PS-2:

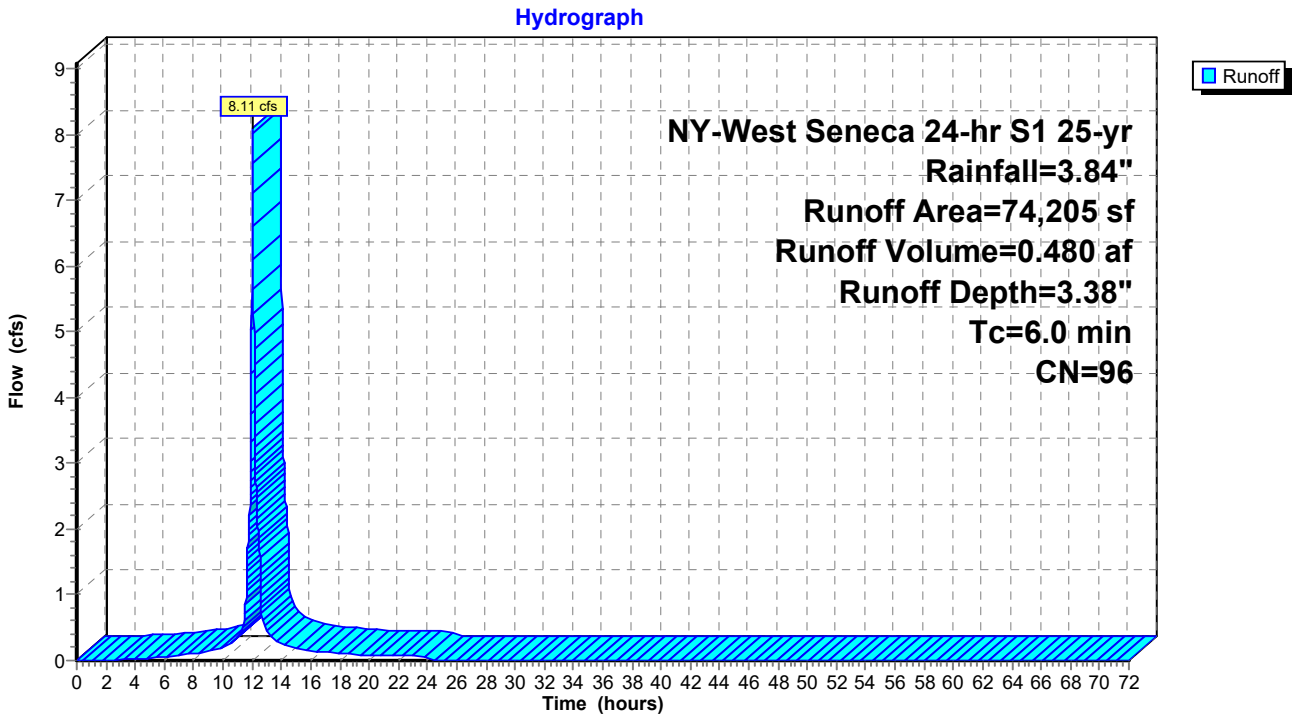
Runoff = 8.11 cfs @ 12.04 hrs, Volume= 0.480 af, Depth= 3.38"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
64,548	98	Paved parking, HSG D
9,657	80	>75% Grass cover, Good, HSG D
74,205	96	Weighted Average
9,657		13.01% Pervious Area
64,548		86.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

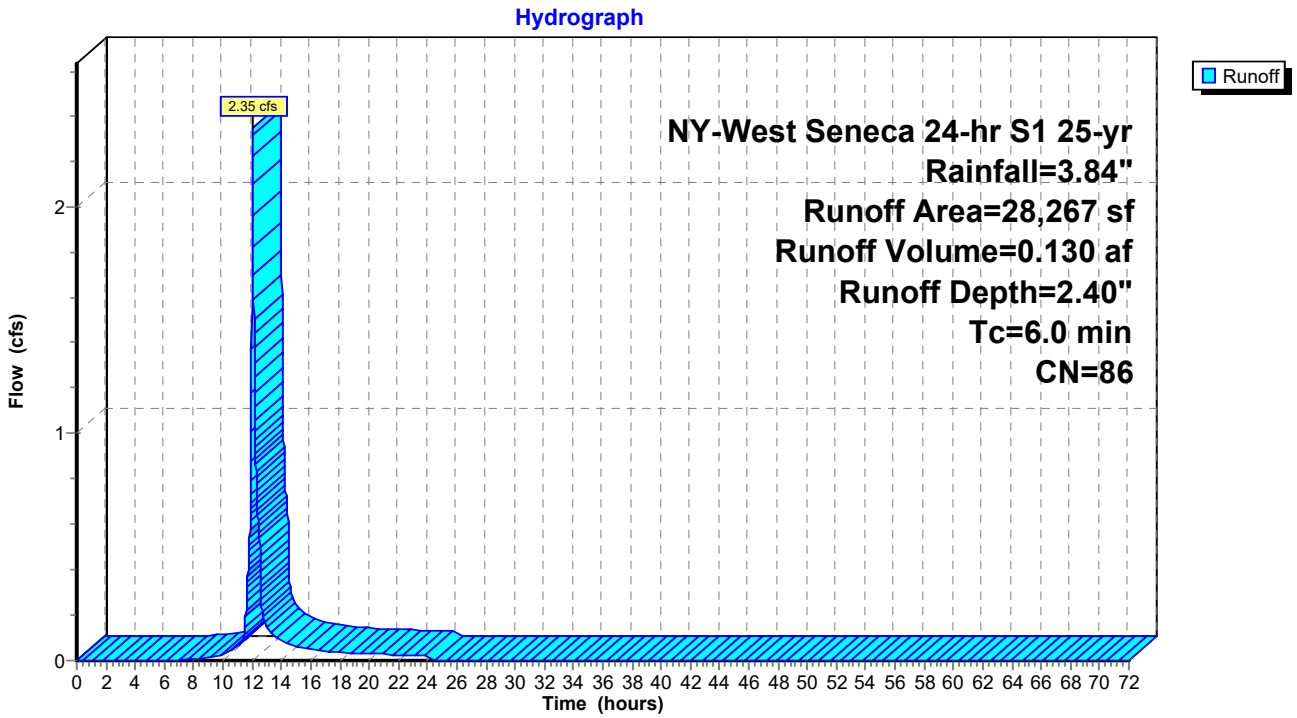
Runoff = 2.35 cfs @ 12.04 hrs, Volume= 0.130 af, Depth= 2.40"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

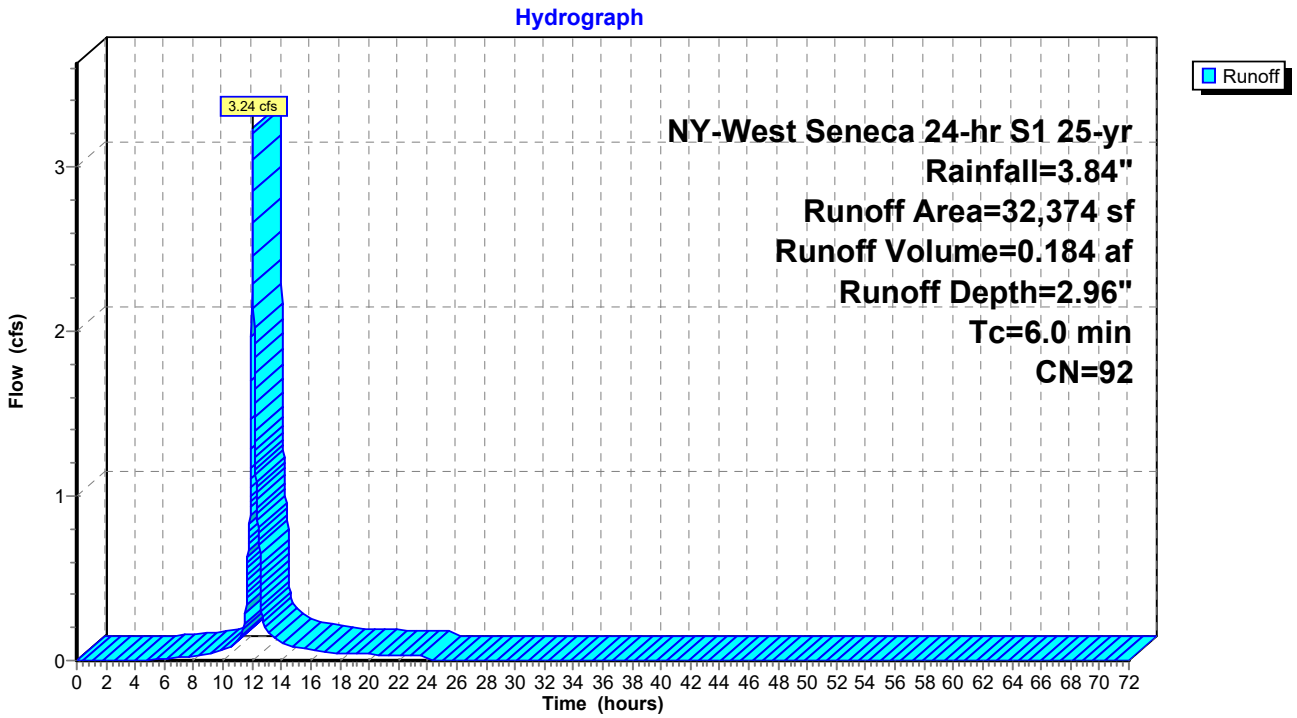
Runoff = 3.24 cfs @ 12.04 hrs, Volume= 0.184 af, Depth= 2.96"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
11,446	80	>75% Grass cover, Good, HSG D
32,374	92	Weighted Average
11,446		35.36% Pervious Area
20,928		64.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

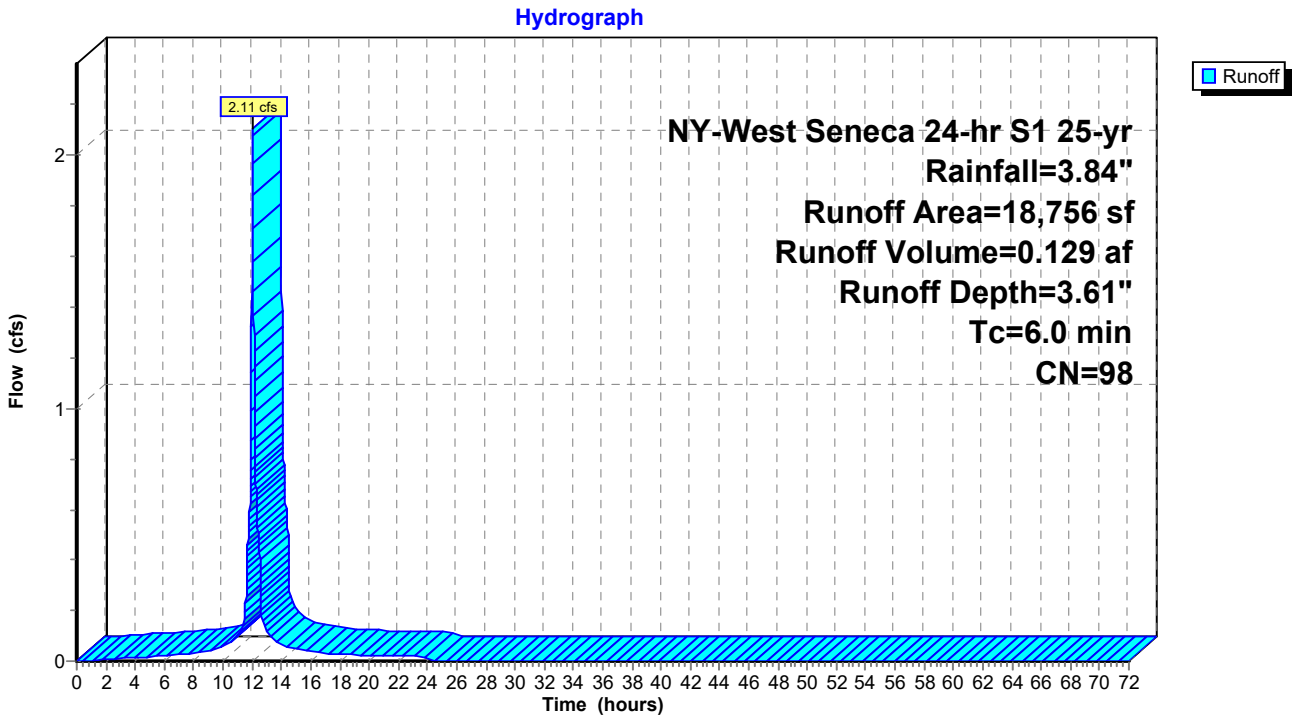
Runoff = 2.11 cfs @ 12.04 hrs, Volume= 0.129 af, Depth= 3.61"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

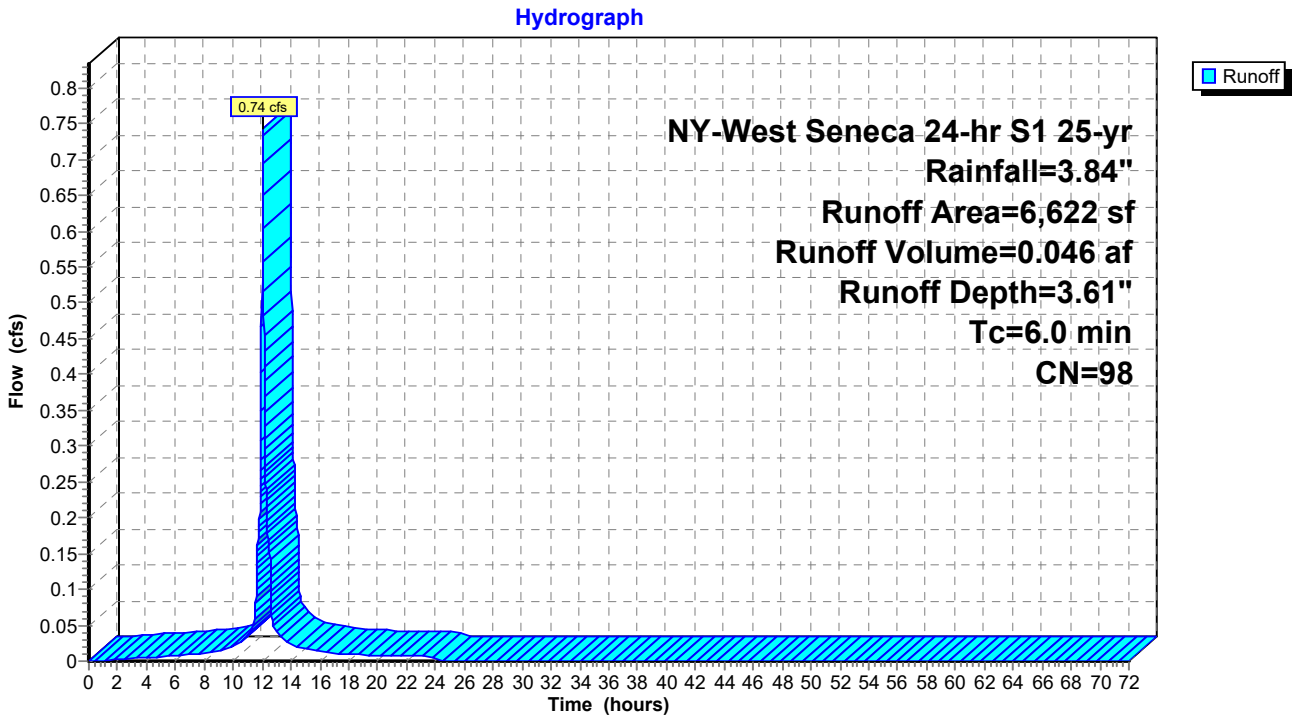
Runoff = 0.74 cfs @ 12.04 hrs, Volume= 0.046 af, Depth= 3.61"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

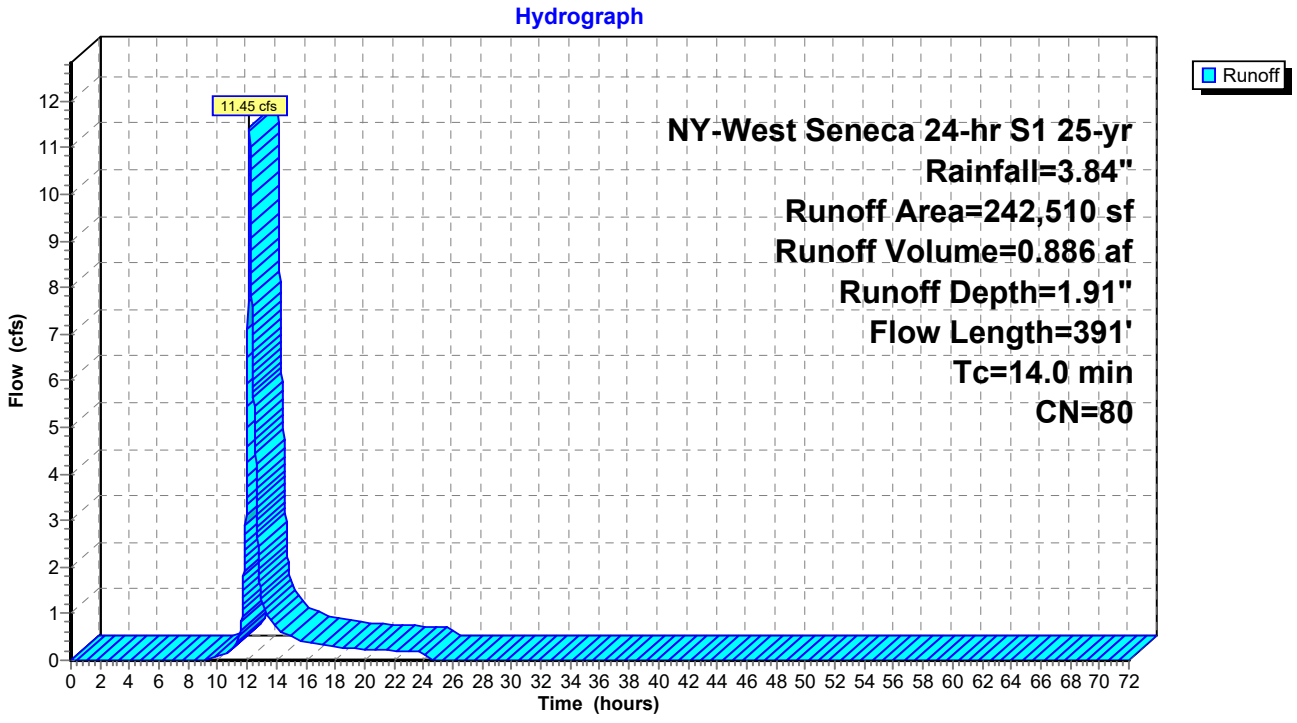
Runoff = 11.45 cfs @ 12.15 hrs, Volume= 0.886 af, Depth= 1.91"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
242,510	80	>75% Grass cover, Good, HSG D
242,510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

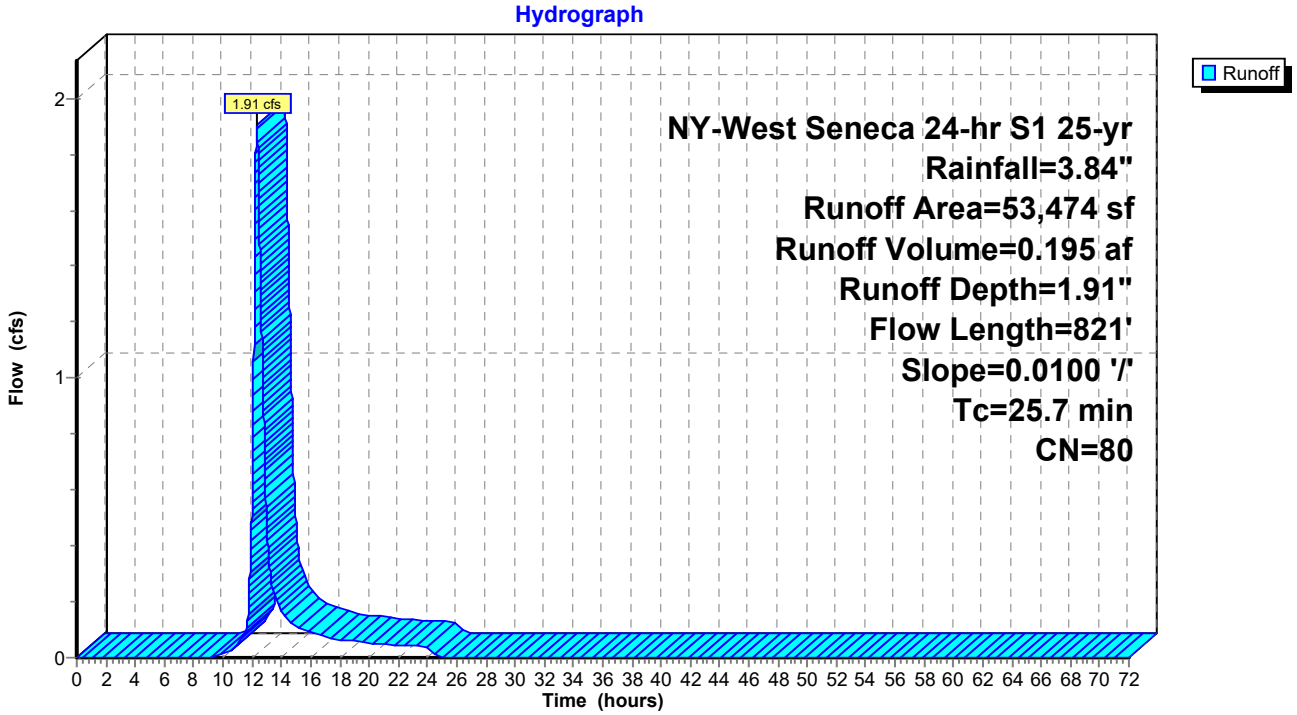
Runoff = 1.91 cfs @ 12.31 hrs, Volume= 0.195 af, Depth= 1.91"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:



Summary for Subcatchment PS-9: OFF-SITE DRAINAGE

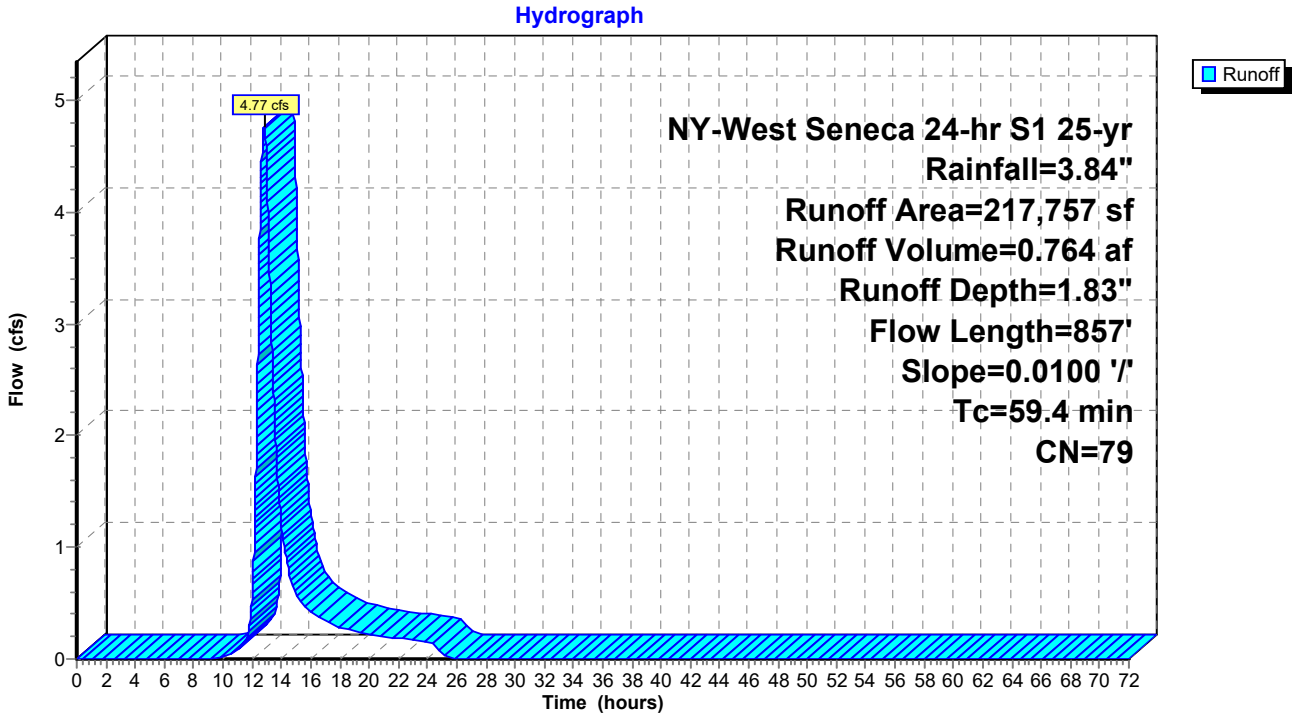
Runoff = 4.77 cfs @ 12.80 hrs, Volume= 0.764 af, Depth= 1.83"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 25-yr Rainfall=3.84"

Area (sf)	CN	Description
1,089	80	>75% Grass cover, Good, HSG D
1,699	98	Paved parking, HSG D
214,969	79	Woods, Fair, HSG D
217,757	79	Weighted Average
216,058		99.22% Pervious Area
1,699		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	600	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
5.2	157	0.0100	0.50		**Shallow Concentrated Flow, Swale** Woodland Kv= 5.0 fps
59.4	857	Total			

Subcatchment PS-9: OFF-SITE DRAINAGE



Summary for Reach 8R: 15" Pipe

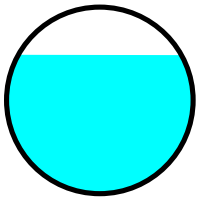
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 1.85" for 25-yr event
Inflow = 5.71 cfs @ 12.75 hrs, Volume= 0.960 af
Outflow = 5.70 cfs @ 12.76 hrs, Volume= 0.960 af, Atten= 0%, Lag= 0.7 min
Routed to Reach DP-1 : Design Point
Overflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

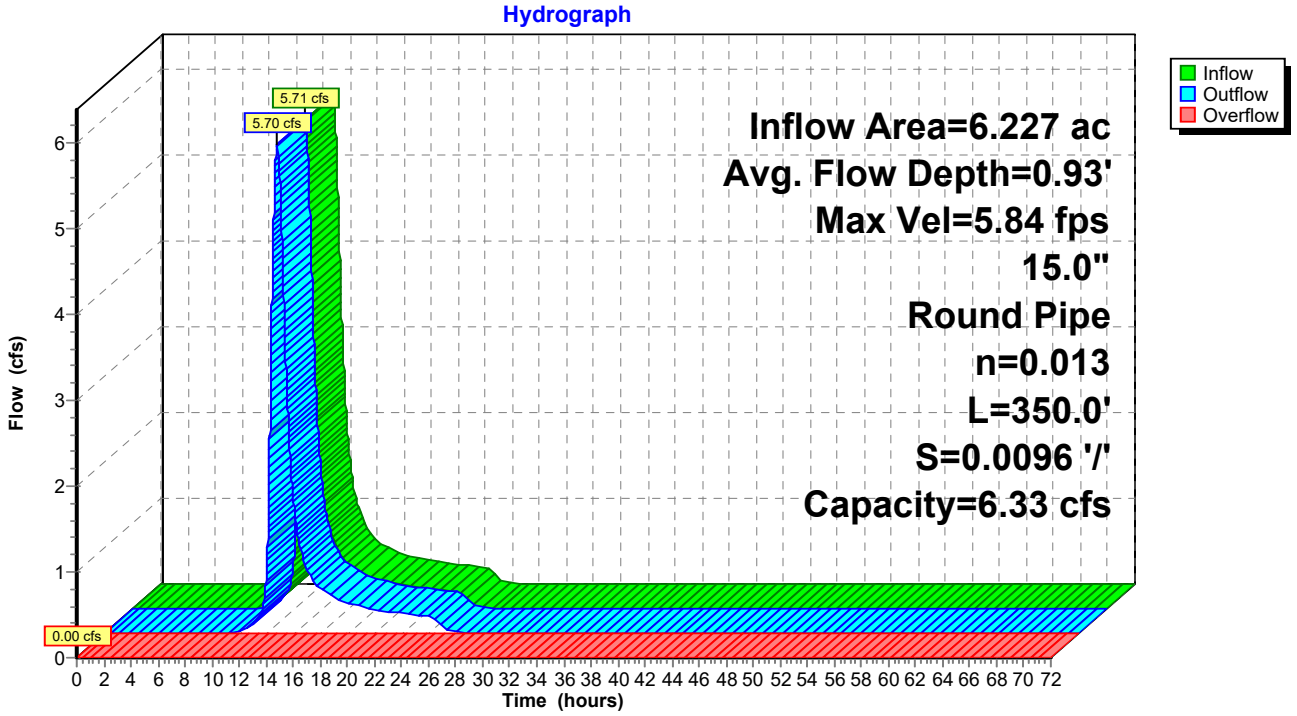
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.84 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 2.52 fps, Avg. Travel Time= 2.3 min

Peak Storage= 342 cf @ 12.76 hrs
Average Depth at Peak Storage= 0.93' , Surface Width= 1.09'
Defined Flood Depth= 598.00' Flow Area= 100.4 sf, Capacity= -12,672.78 cfs
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.33 cfs
Any excess flow will be diverted to the secondary overflow

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 350.0' Slope= 0.0096 '/'
Inlet Invert= 591.85', Outlet Invert= 588.49'



Reach 8R: 15" Pipe



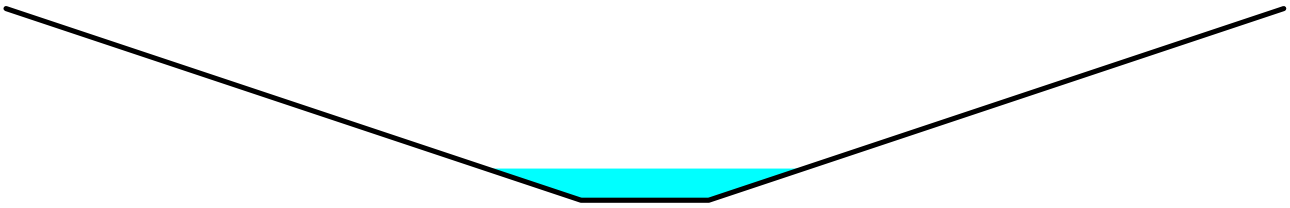
Summary for Reach 9R: East Swale

Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 1.85" for 25-yr event
Inflow = 5.72 cfs @ 12.73 hrs, Volume= 0.960 af
Outflow = 5.71 cfs @ 12.75 hrs, Volume= 0.960 af, Atten= 0%, Lag= 0.9 min
Routed to Reach 8R : 15" Pipe

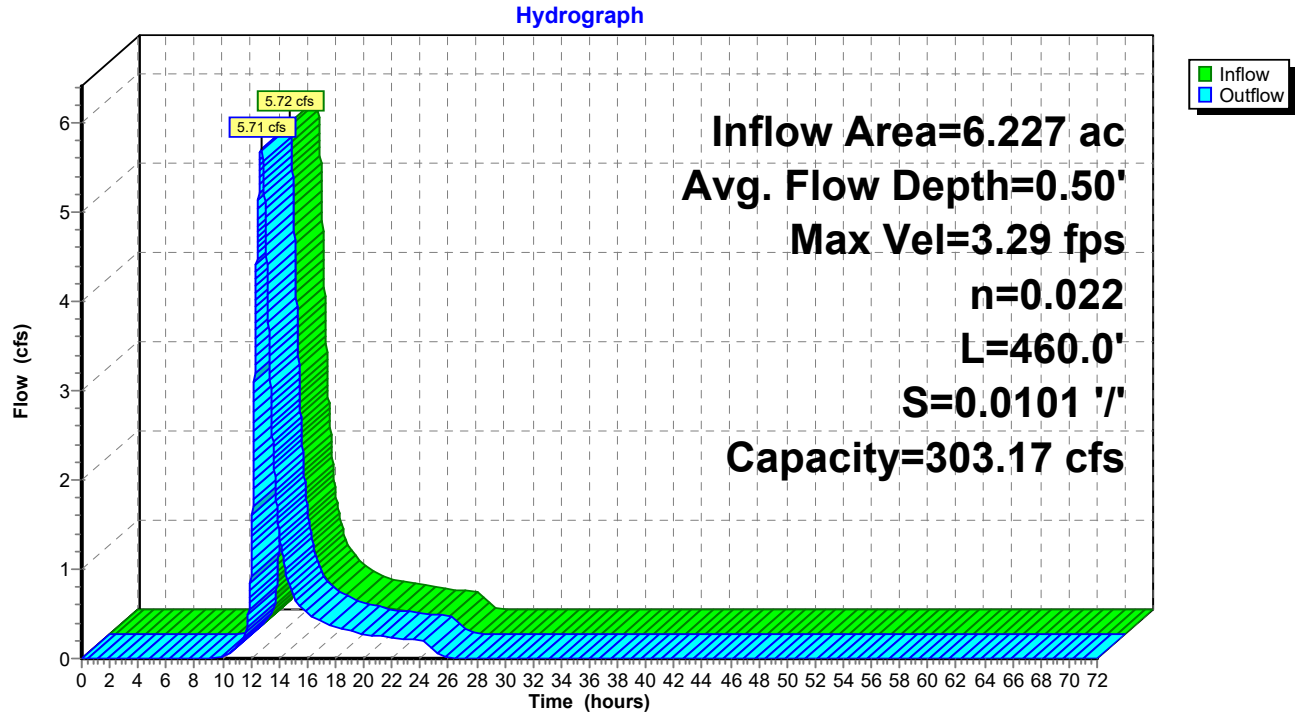
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.29 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 1.36 fps, Avg. Travel Time= 5.6 min

Peak Storage= 798 cf @ 12.75 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 4.98'
Bank-Full Depth= 3.00' Flow Area= 33.0 sf, Capacity= 303.17 cfs

2.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 20.00'
Length= 460.0' Slope= 0.0101 '/'
Inlet Invert= 599.00', Outlet Invert= 594.35'



Reach 9R: East Swale



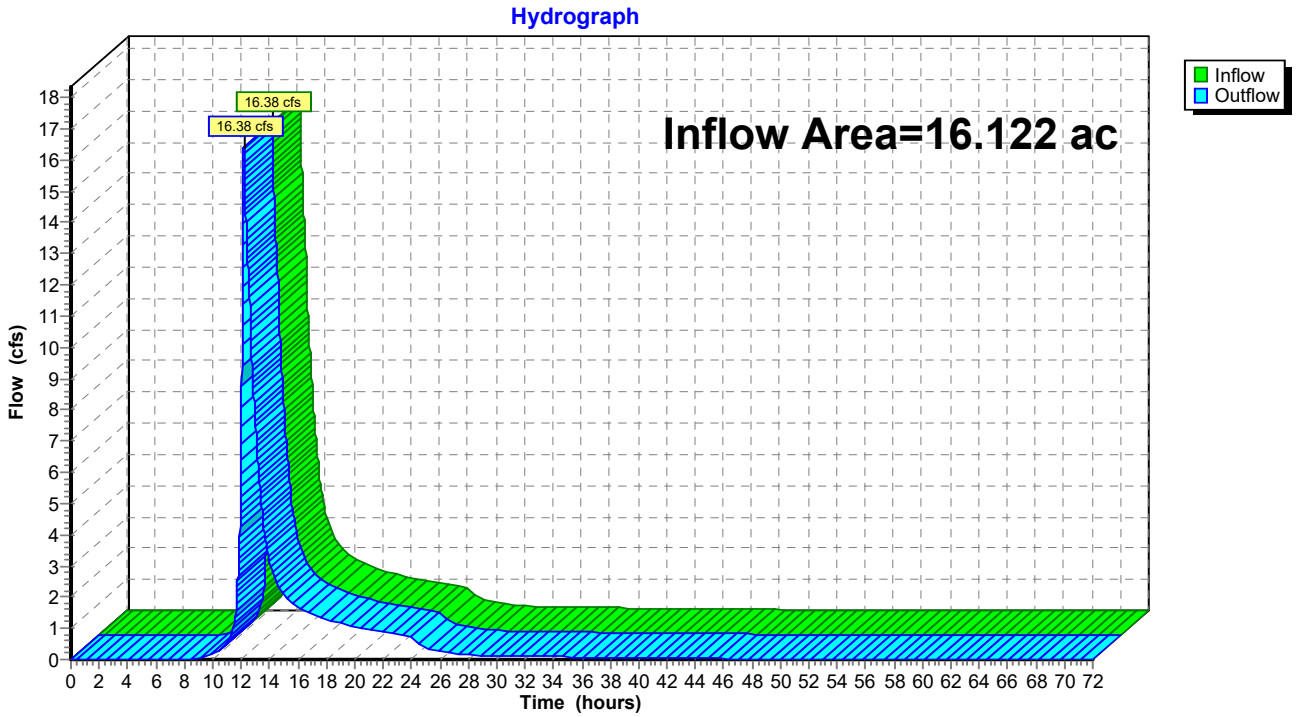
Summary for Reach DP-1: Design Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 18.93% Impervious, Inflow Depth > 2.15" for 25-yr event
Inflow = 16.38 cfs @ 12.19 hrs, Volume= 2.887 af
Outflow = 16.38 cfs @ 12.19 hrs, Volume= 2.887 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.418 ac, 38.59% Impervious, Inflow Depth = 2.49" for 25-yr event
Inflow = 1.57 cfs @ 12.04 hrs, Volume= 0.087 af
Outflow = 0.71 cfs @ 12.19 hrs, Volume= 0.083 af, Atten= 55%, Lag= 8.9 min
Primary = 0.02 cfs @ 12.19 hrs, Volume= 0.048 af
Routed to Reach DP-1 : Design Point
Secondary = 0.69 cfs @ 12.19 hrs, Volume= 0.036 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.09' @ 12.19 hrs Surf.Area= 1,541 sf Storage= 1,543 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 614.7 min (1,423.8 - 809.1)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

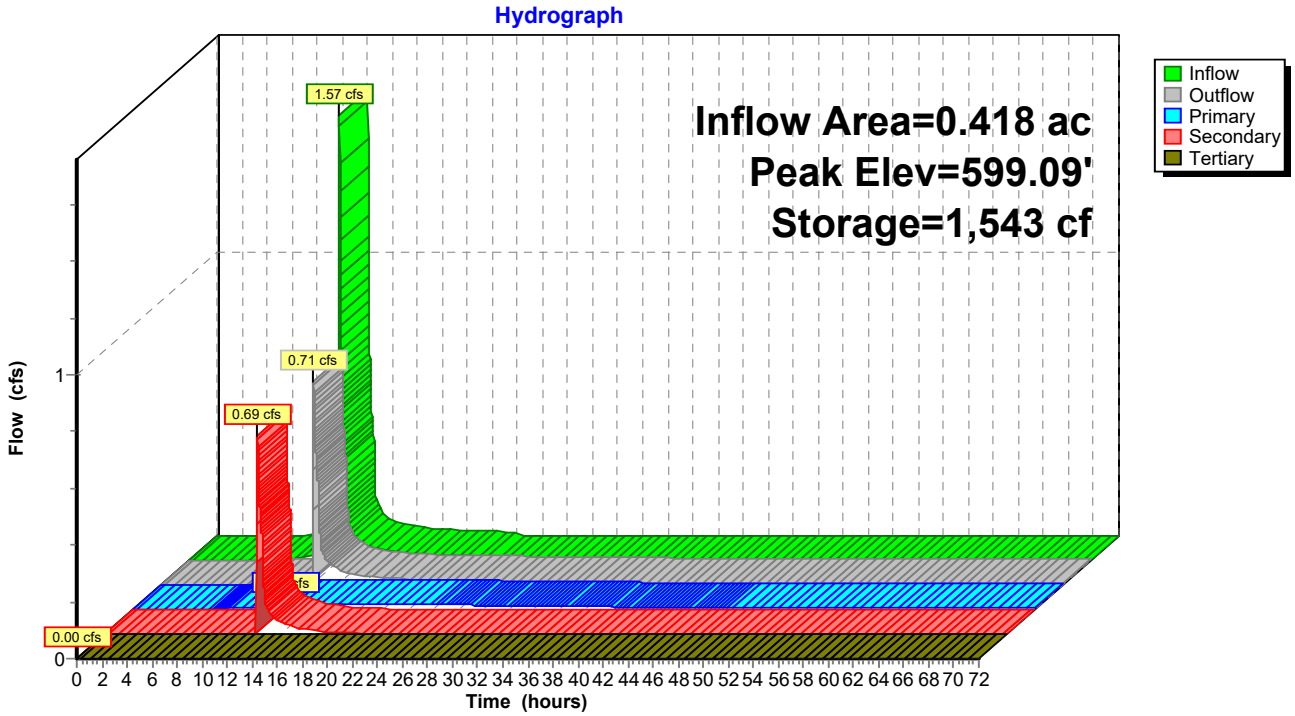
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.19 hrs HW=599.09' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.69 cfs @ 12.19 hrs HW=599.09' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.69 cfs of 5.98 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 0.69 cfs @ 0.98 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-1A: Filtration Bioretention

Inflow Area = 0.232 ac, 38.46% Impervious, Inflow Depth = 2.49" for 25-yr event
Inflow = 0.87 cfs @ 12.04 hrs, Volume= 0.048 af
Outflow = 0.03 cfs @ 14.29 hrs, Volume= 0.046 af, Atten= 97%, Lag= 134.9 min
Primary = 0.02 cfs @ 14.29 hrs, Volume= 0.044 af
Routed to Reach DP-1 : Design Point
Secondary = 0.01 cfs @ 14.29 hrs, Volume= 0.001 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.01' @ 14.29 hrs Surf.Area= 1,480 sf Storage= 1,417 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= 1,094.7 min calculated for 0.046 af (95% of inflow)
Center-of-Mass det. time= 1,065.2 min (1,874.3 - 809.1)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

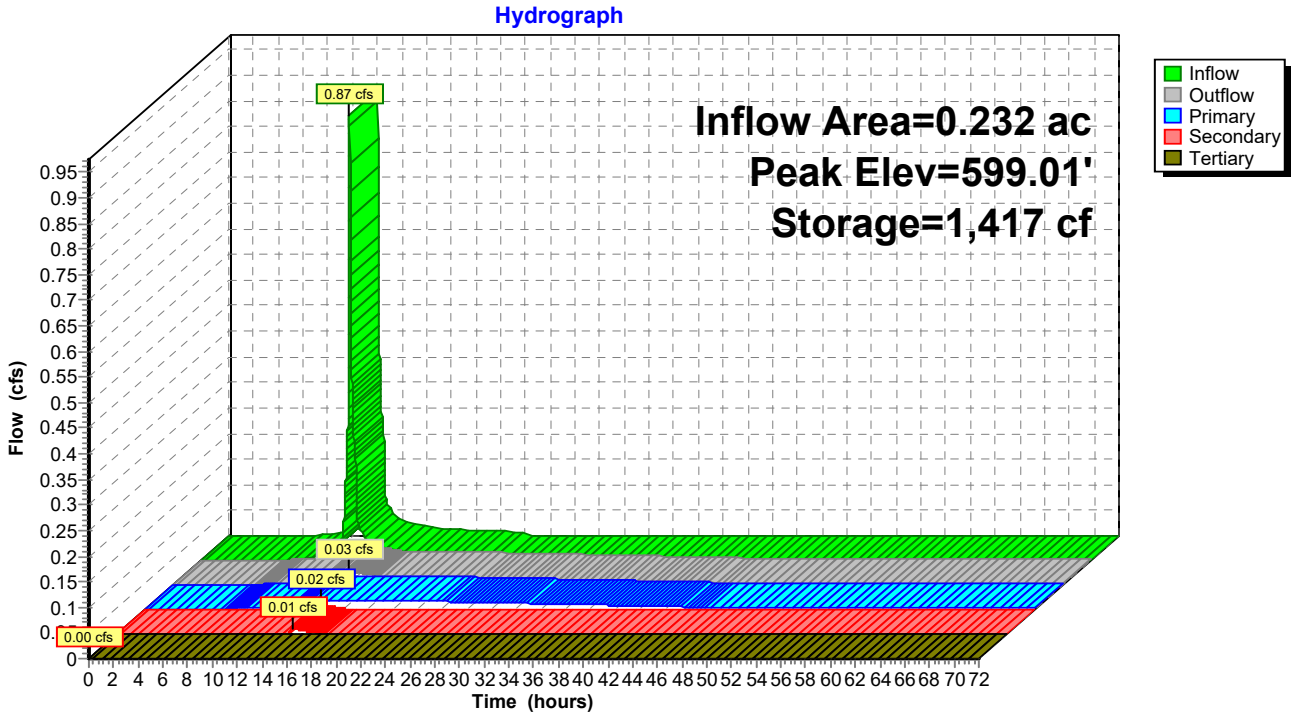
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**6.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 14.29 hrs HW=599.01' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.01 cfs @ 14.29 hrs HW=599.01' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.01 cfs of 1.53 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 0.01 cfs @ 0.25 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1A: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 2.40" for 25-yr event
Inflow = 2.35 cfs @ 12.04 hrs, Volume= 0.130 af
Outflow = 1.01 cfs @ 12.20 hrs, Volume= 0.126 af, Atten= 57%, Lag= 9.7 min
Primary = 0.03 cfs @ 12.20 hrs, Volume= 0.072 af
Routed to Reach DP-1 : Design Point
Secondary = 0.99 cfs @ 12.20 hrs, Volume= 0.055 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 597.11' @ 12.20 hrs Surf.Area= 2,439 sf Storage= 2,288 cf
Flood Elev= 598.00' Surf.Area= 3,117 sf Storage= 4,754 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 552.4 min (1,364.9 - 812.4)

Volume	Invert	Avail.Storage	Storage Description
#1	592.42'	4,754 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
592.42	370	0.0	0	0
592.43	370	20.0	1	1
593.25	370	20.0	61	61
595.75	370	40.0	370	431
596.00	370	100.0	93	524
596.50	1,629	100.0	500	1,024
597.00	2,353	100.0	996	2,019
598.00	3,117	100.0	2,735	4,754

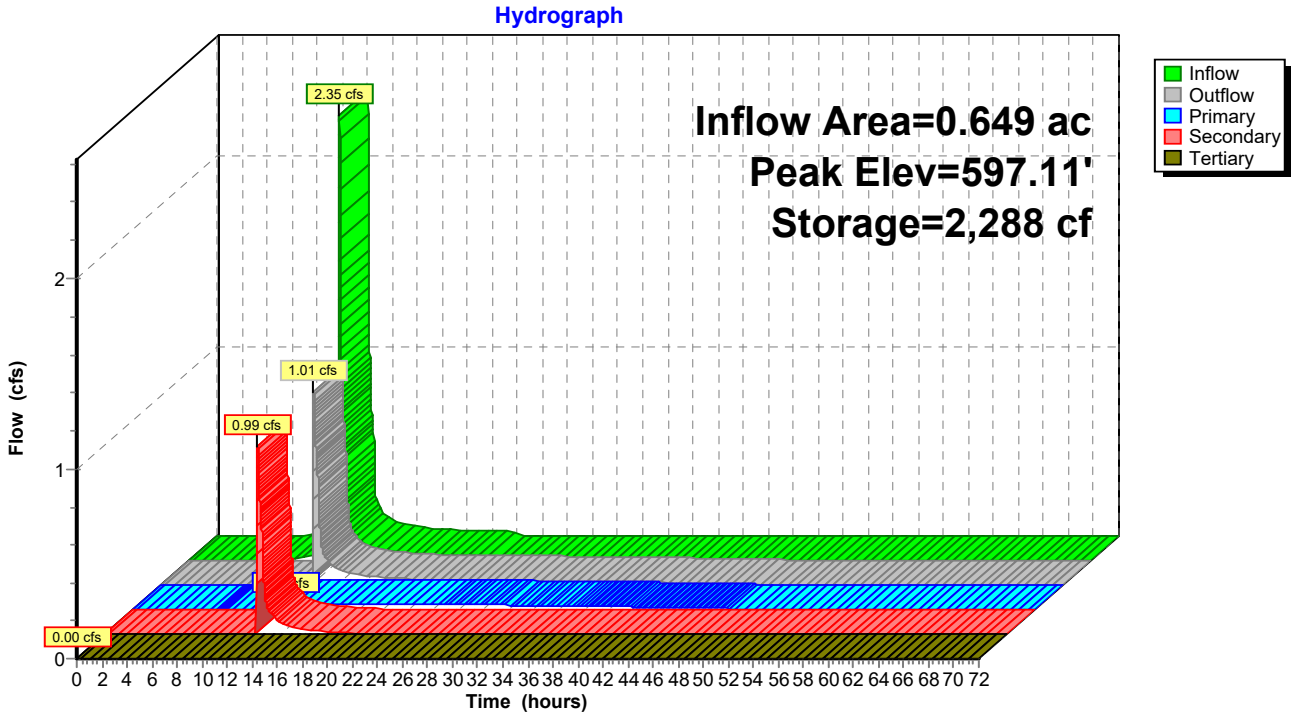
Device	Routing	Invert	Outlet Devices
#1	Primary	592.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.03 cfs @ 12.20 hrs HW=597.11' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.03 cfs)

Secondary OutFlow Max=0.99 cfs @ 12.20 hrs HW=597.11' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.99 cfs of 5.54 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 0.99 cfs @ 1.10 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=592.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.743 ac, 64.64% Impervious, Inflow Depth = 2.96" for 25-yr event
Inflow = 3.24 cfs @ 12.04 hrs, Volume= 0.184 af
Outflow = 1.03 cfs @ 12.28 hrs, Volume= 0.177 af, Atten= 68%, Lag= 14.3 min
Primary = 0.04 cfs @ 12.28 hrs, Volume= 0.116 af
Routed to Reach DP-1 : Design Point
Secondary = 0.99 cfs @ 12.28 hrs, Volume= 0.061 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.11' @ 12.28 hrs Surf.Area= 3,517 sf Storage= 3,881 cf
Flood Elev= 597.00' Surf.Area= 4,176 sf Storage= 7,294 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 695.6 min (1,485.5 - 790.0)

Volume	Invert	Avail.Storage	Storage Description
#1	591.42'	12,099 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.42	705	0.0	0	0
591.43	705	20.0	1	1
592.25	705	20.0	116	117
594.75	705	40.0	705	822
595.00	705	100.0	176	998
595.50	2,913	100.0	905	1,903
596.00	3,433	100.0	1,587	3,489
597.00	4,176	100.0	3,805	7,294
598.00	5,434	100.0	4,805	12,099

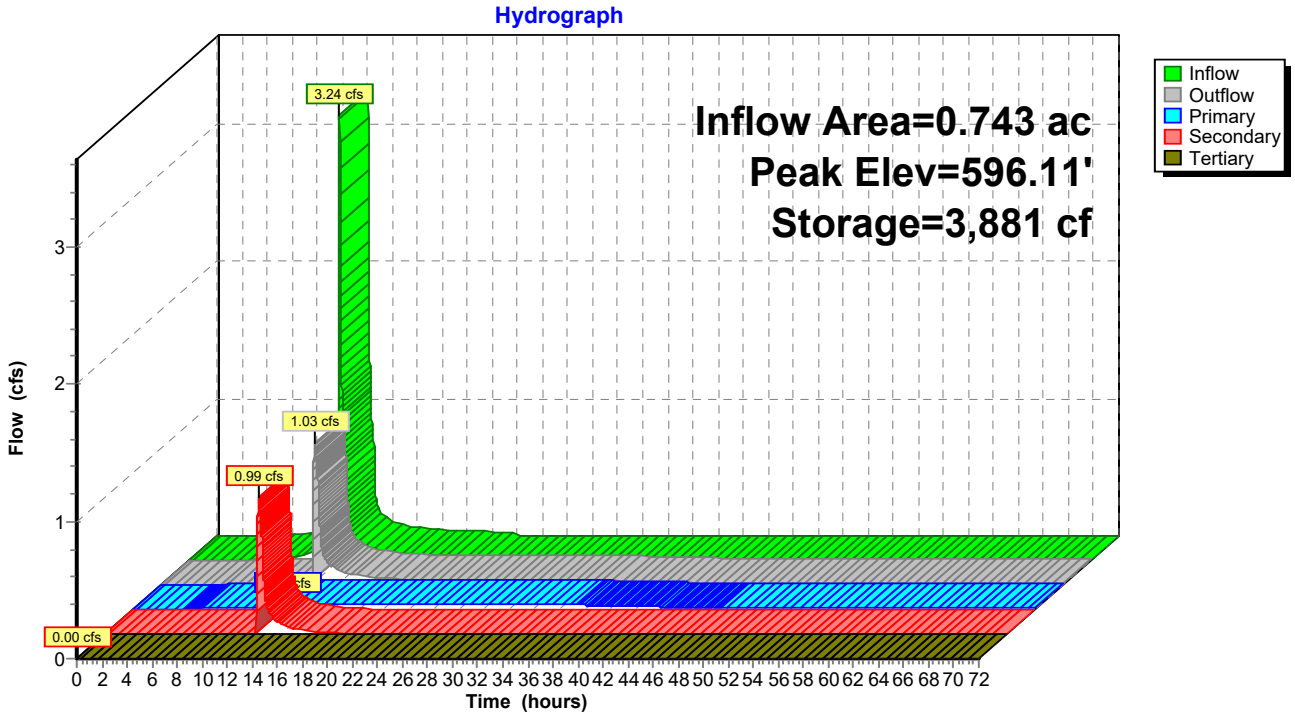
Device	Routing	Invert	Outlet Devices
#1	Primary	591.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.04 cfs @ 12.28 hrs HW=596.11' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.04 cfs)

Secondary OutFlow Max=0.99 cfs @ 12.28 hrs HW=596.11' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.99 cfs of 6.00 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 0.99 cfs @ 1.10 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=591.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.286 ac, 90.30% Impervious, Inflow Depth = 3.44" for 25-yr event
Inflow = 10.97 cfs @ 12.04 hrs, Volume= 0.655 af
Outflow = 0.71 cfs @ 12.82 hrs, Volume= 0.608 af, Atten= 93%, Lag= 47.0 min
Primary = 0.71 cfs @ 12.82 hrs, Volume= 0.608 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 594.31' @ 12.82 hrs Surf.Area= 6,598 sf Storage= 17,647 cf
Flood Elev= 598.32' Surf.Area= 13,198 sf Storage= 26,499 cf

Plug-Flow detention time= 360.4 min calculated for 0.608 af (93% of inflow)
Center-of-Mass det. time= 321.0 min (1,084.7 - 763.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	590.50'	9,166 cf	**44.25'W x 149.10'L x 5.50'H Field A** 36,287 cf Overall - 13,373 cf Embedded = 22,914 cf x 40.0% Voids
#2A	591.25'	13,373 cf	**ADS_StormTech MC-3500 d +Cap** x 120 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 120 Chambers in 6 Rows Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf
#3	596.00'	3,960 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		26,499 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	6,600	0.0	0	0
597.50	6,600	40.0	3,960	3,960

Device	Routing	Invert	Outlet Devices
#1	Primary	590.50'	**8.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 590.50' / 589.25' S= 0.0104 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	591.25'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	594.35'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.71 cfs @ 12.82 hrs HW=594.31' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.71 cfs of 2.03 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.71 cfs @ 8.19 fps)
└**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

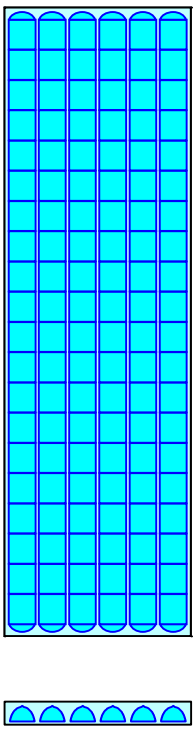
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
6 Rows x 77.0" Wide + 9.0" Spacing x 5 + 12.0" Side Stone x 2 = 44.25' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

120 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 6 Rows = 13,373.0 cf Chamber Storage

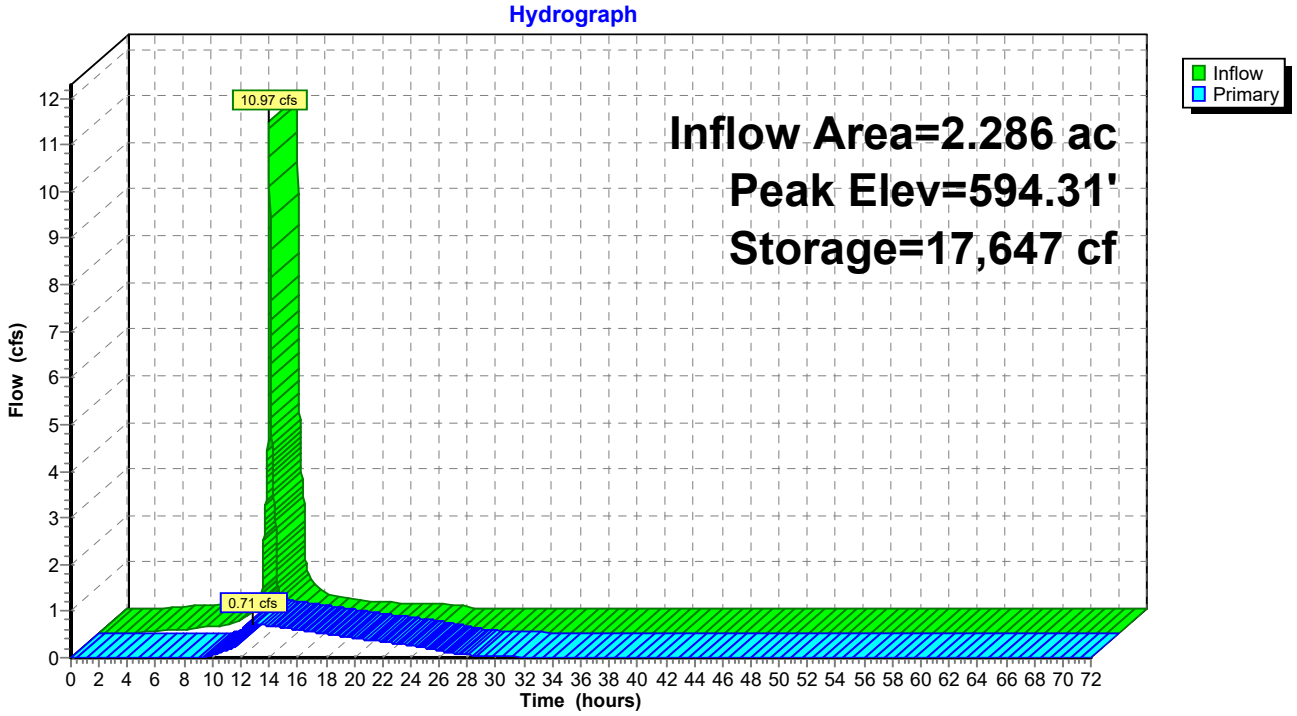
36,287.2 cf Field - 13,373.0 cf Chambers = 22,914.2 cf Stone x 40.0% Voids = 9,165.7 cf Stone Storage

Chamber Storage + Stone Storage = 22,538.7 cf = 0.517 af
Overall Storage Efficiency = 62.1%
Overall System Size = 149.10' x 44.25' x 5.50'

120 Chambers
1,344.0 cy Field
848.7 cy Stone



Pond CH-1: Chambers



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: Runoff Area=18,210 sf 38.59% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=87 Runoff=2.32 cfs 0.132 af

Subcatchment PS-1A: Runoff Area=10,120 sf 38.46% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=87 Runoff=1.29 cfs 0.073 af

Subcatchment PS-2: Runoff Area=74,205 sf 86.99% Impervious Runoff Depth=4.75"
Tc=6.0 min CN=96 Runoff=11.08 cfs 0.674 af

Subcatchment PS-3: Runoff Area=28,267 sf 33.49% Impervious Runoff Depth=3.67"
Tc=6.0 min CN=86 Runoff=3.52 cfs 0.199 af

Subcatchment PS-4: Runoff Area=32,374 sf 64.64% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=92 Runoff=4.57 cfs 0.267 af

Subcatchment PS-5: Runoff Area=18,756 sf 100.00% Impervious Runoff Depth=4.98"
Tc=6.0 min CN=98 Runoff=2.85 cfs 0.179 af

Subcatchment PS-6: Runoff Area=6,622 sf 100.00% Impervious Runoff Depth=4.98"
Tc=6.0 min CN=98 Runoff=1.01 cfs 0.063 af

Subcatchment PS-7: Runoff Area=242,510 sf 0.00% Impervious Runoff Depth=3.09"
Flow Length=391' Tc=14.0 min CN=80 Runoff=18.68 cfs 1.432 af

Subcatchment PS-8: Runoff Area=53,474 sf 0.00% Impervious Runoff Depth=3.09"
Flow Length=821' Slope=0.0100 '/' Tc=25.7 min CN=80 Runoff=3.15 cfs 0.316 af

Subcatchment PS-9: OFF-SITE DRAINAGE Runoff Area=217,757 sf 0.78% Impervious Runoff Depth=2.99"
Flow Length=857' Slope=0.0100 '/' Tc=59.4 min CN=79 Runoff=8.05 cfs 1.246 af

Reach 8R: 15" Pipe Avg. Flow Depth=1.02' Max Vel=5.88 fps Inflow=9.63 cfs 1.562 af
0" Round Pipe n=0.013 L=350.0' S=0.0096 '/' Capacity=6.33 cfs Outflow=6.33 cfs 1.405 af Overflow=3.30 cfs 0.157 af

Reach 9R: East Swale Avg. Flow Depth=0.64' Max Vel=3.79 fps Inflow=9.64 cfs 1.562 af
n=0.022 L=460.0' S=0.0101 '/' Capacity=303.17 cfs Outflow=9.63 cfs 1.562 af

Reach DP-1: Design Point Inflow=31.21 cfs 4.516 af
Outflow=31.21 cfs 4.516 af

Pond BIO-1: Filtration Bioretention Peak Elev=599.18' Storage=1,692 cf Inflow=2.32 cfs 0.132 af
Primary=0.02 cfs 0.049 af Secondary=2.06 cfs 0.080 af Tertiary=0.00 cfs 0.000 af Outflow=2.08 cfs 0.128 af

Pond BIO-1A: Filtration Bioretention Peak Elev=599.07' Storage=1,508 cf Inflow=1.29 cfs 0.073 af
Primary=0.02 cfs 0.047 af Secondary=0.45 cfs 0.023 af Tertiary=0.00 cfs 0.000 af Outflow=0.46 cfs 0.070 af

Pond BIO-2: Filtration Bioretention Peak Elev=597.23' Storage=2,585 cf Inflow=3.52 cfs 0.199 af
Primary=0.03 cfs 0.073 af Secondary=2.92 cfs 0.122 af Tertiary=0.00 cfs 0.000 af Outflow=2.95 cfs 0.195 af

Pond BIO-3: Filtration Bioretention Peak Elev=596.25' Storage=4,357 cf Inflow=4.57 cfs 0.267 af
Primary=0.04 cfs 0.120 af Secondary=3.20 cfs 0.140 af Tertiary=0.00 cfs 0.000 af Outflow=3.24 cfs 0.260 af

Pond CH-1: Chambers Peak Elev=595.88' Storage=22,228 cf Inflow=14.93 cfs 0.916 af
Outflow=2.37 cfs 0.869 af

Total Runoff Area = 16.122 ac Runoff Volume = 4.580 af Average Runoff Depth = 3.41"
81.07% Pervious = 13.071 ac 18.93% Impervious = 3.052 ac

Summary for Subcatchment PS-1:

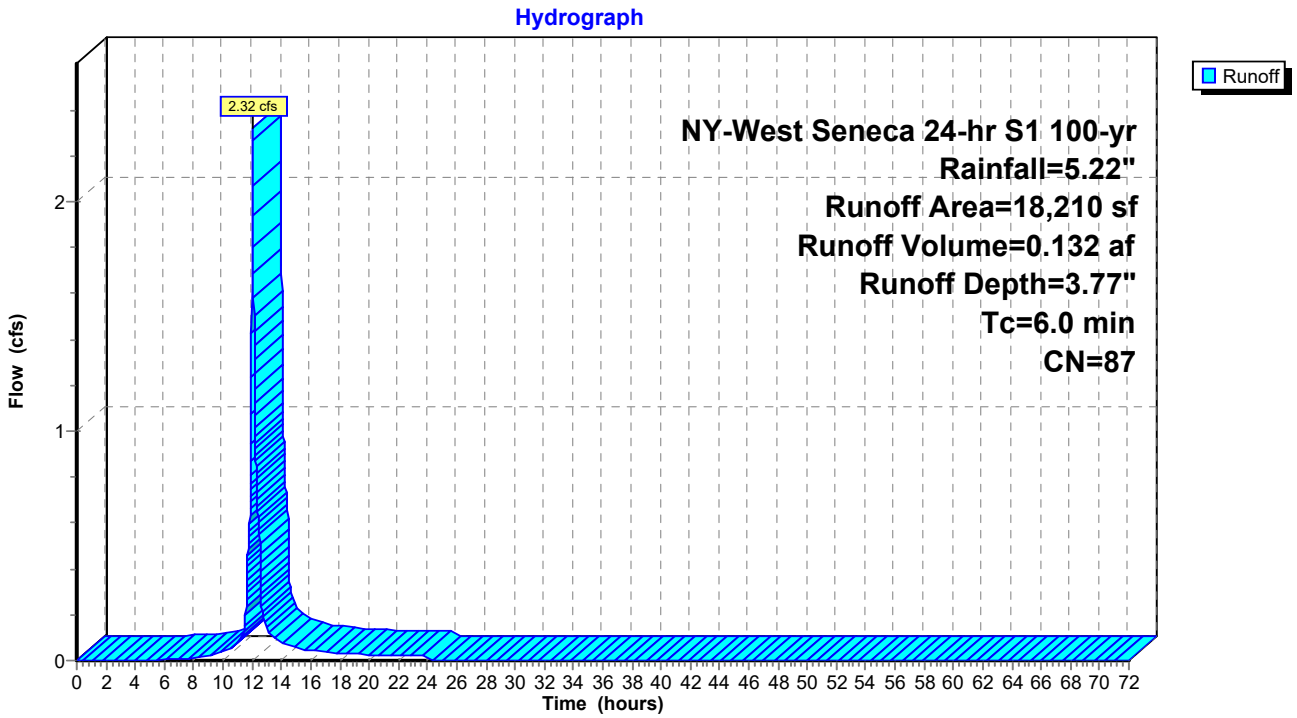
Runoff = 2.32 cfs @ 12.04 hrs, Volume= 0.132 af, Depth= 3.77"
Routed to Pond BIO-1 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
7,027	98	Paved parking, HSG D
11,183	80	>75% Grass cover, Good, HSG D
18,210	87	Weighted Average
11,183		61.41% Pervious Area
7,027		38.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1:



Summary for Subcatchment PS-1A:

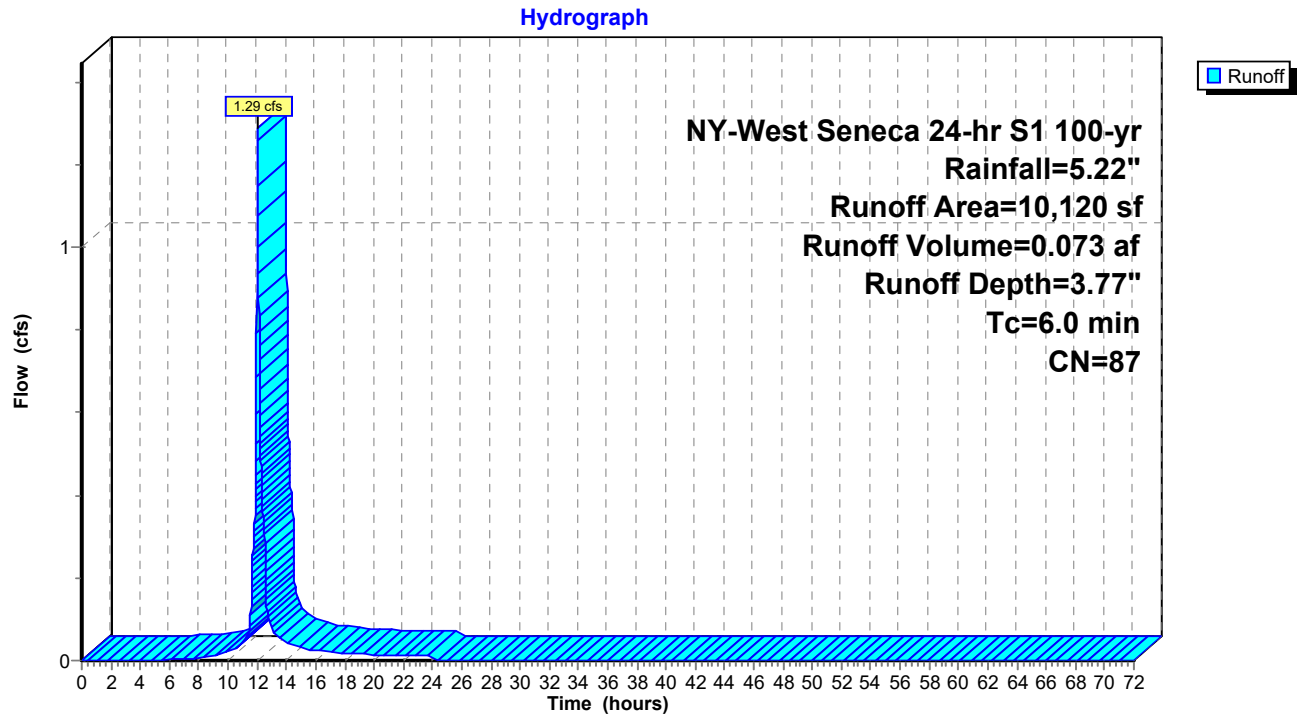
Runoff = 1.29 cfs @ 12.04 hrs, Volume= 0.073 af, Depth= 3.77"
Routed to Pond BIO-1A : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
3,892	98	Paved parking, HSG D
6,228	80	>75% Grass cover, Good, HSG D
10,120	87	Weighted Average
6,228		61.54% Pervious Area
3,892		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-1A:



Summary for Subcatchment PS-2:

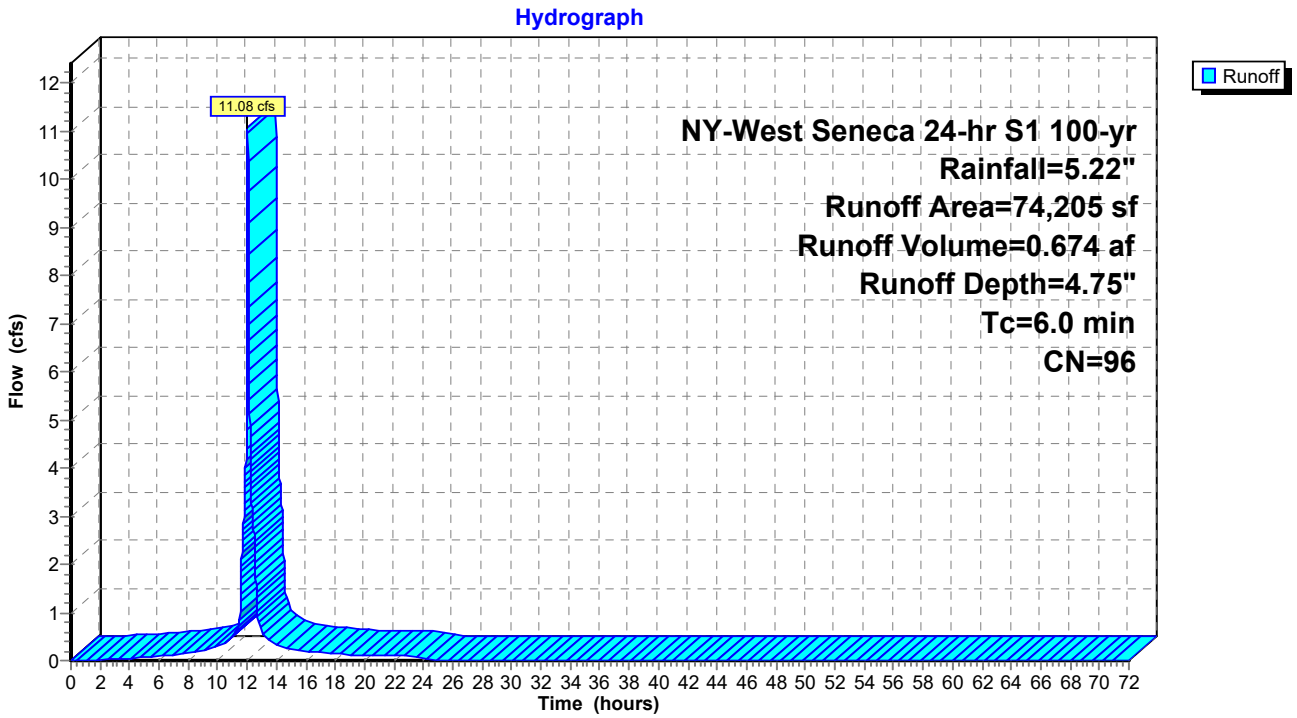
Runoff = 11.08 cfs @ 12.04 hrs, Volume= 0.674 af, Depth= 4.75"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
64,548	98	Paved parking, HSG D
9,657	80	>75% Grass cover, Good, HSG D
74,205	96	Weighted Average
9,657		13.01% Pervious Area
64,548		86.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-2:



Summary for Subcatchment PS-3:

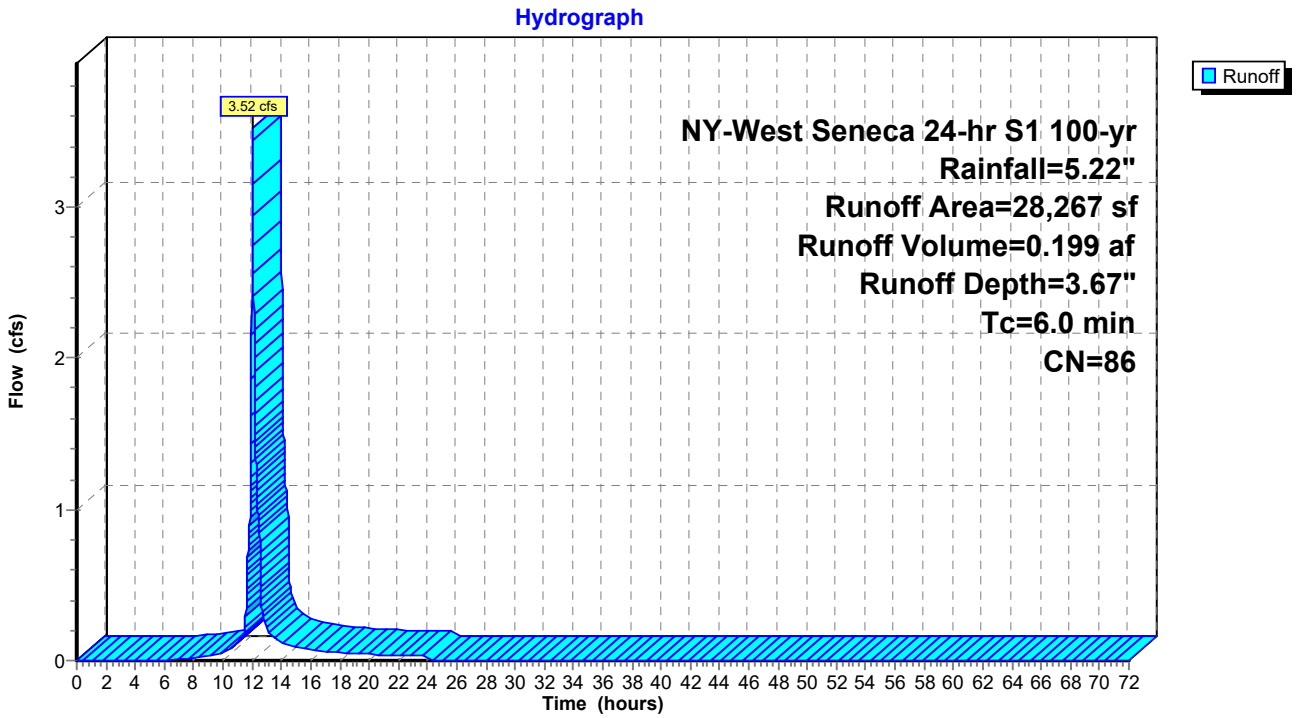
Runoff = 3.52 cfs @ 12.04 hrs, Volume= 0.199 af, Depth= 3.67"
Routed to Pond BIO-2 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
9,466	98	Paved parking, HSG D
18,801	80	>75% Grass cover, Good, HSG D
28,267	86	Weighted Average
18,801		66.51% Pervious Area
9,466		33.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-3:



Summary for Subcatchment PS-4:

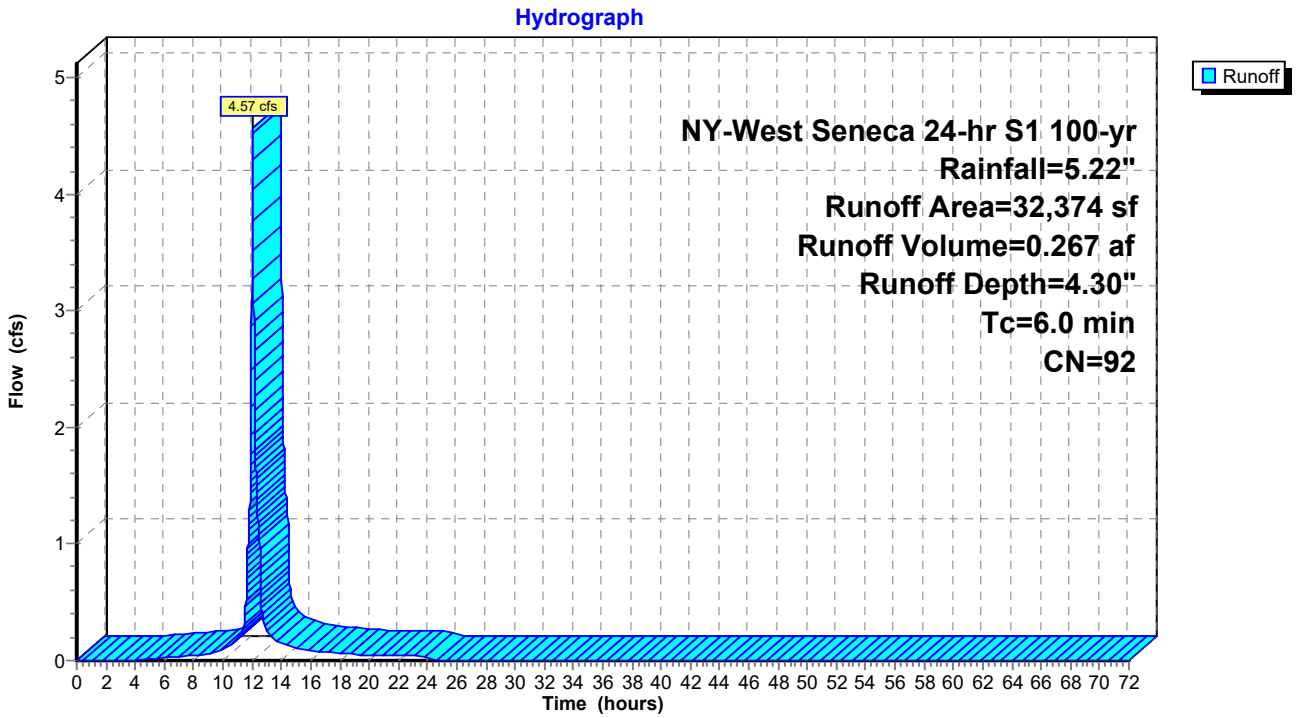
Runoff = 4.57 cfs @ 12.04 hrs, Volume= 0.267 af, Depth= 4.30"
Routed to Pond BIO-3 : Filtration Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
20,928	98	Paved parking, HSG D
11,446	80	>75% Grass cover, Good, HSG D
32,374	92	Weighted Average
11,446		35.36% Pervious Area
20,928		64.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-4:



Summary for Subcatchment PS-5:

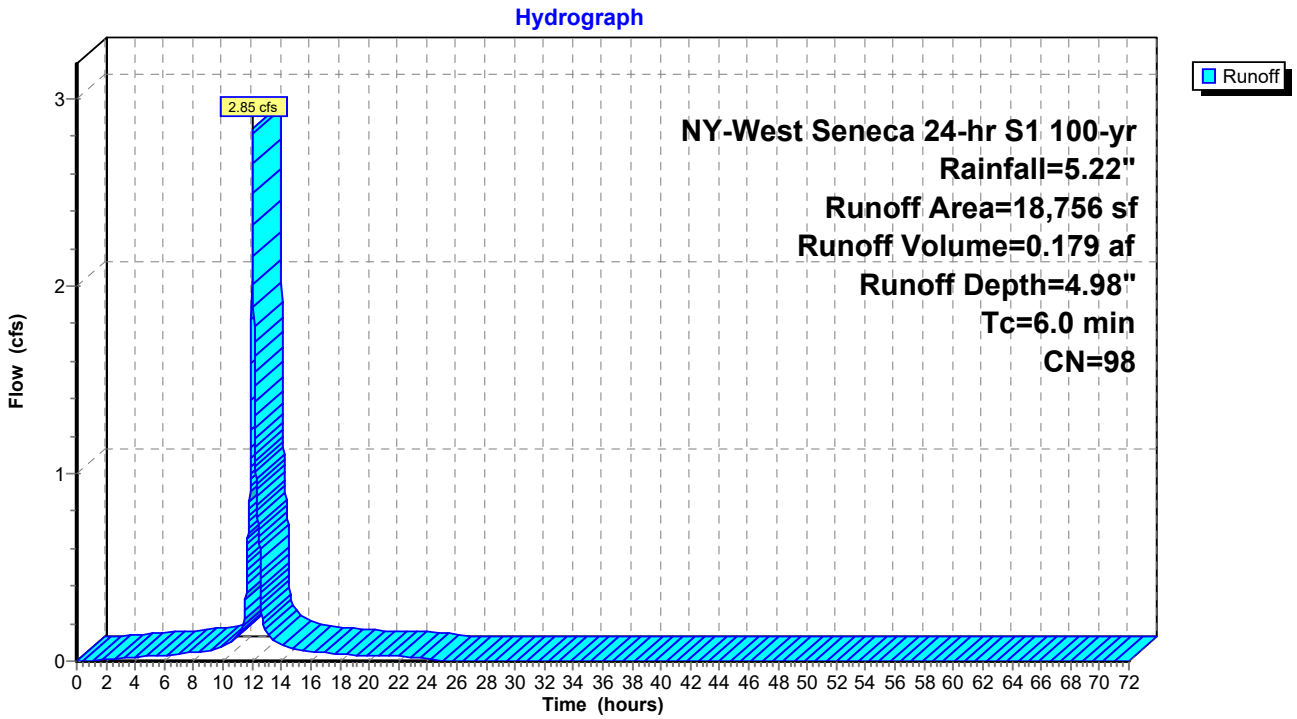
Runoff = 2.85 cfs @ 12.04 hrs, Volume= 0.179 af, Depth= 4.98"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
18,756	98	Paved parking, HSG D
18,756		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-5:



Summary for Subcatchment PS-6:

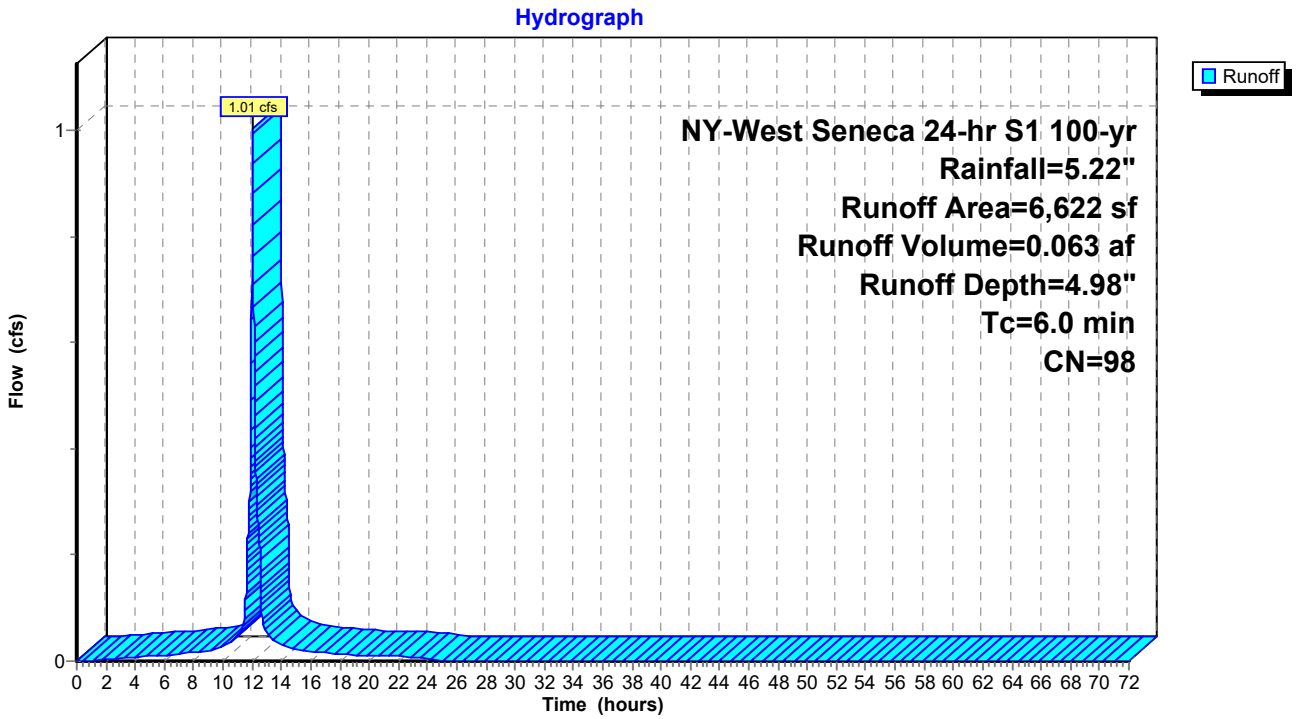
Runoff = 1.01 cfs @ 12.04 hrs, Volume= 0.063 af, Depth= 4.98"
Routed to Pond CH-1 : Chambers

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
6,622	98	Paved parking, HSG D
6,622		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment PS-6:



Summary for Subcatchment PS-7:

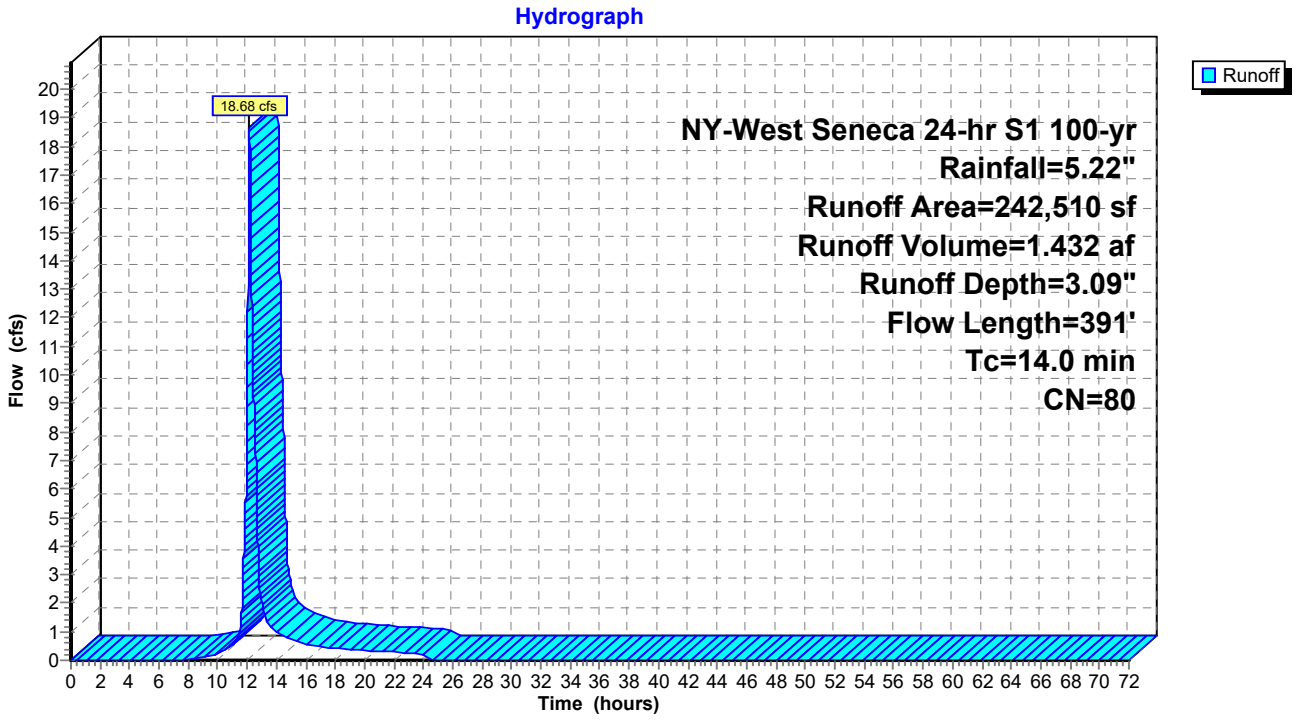
Runoff = 18.68 cfs @ 12.15 hrs, Volume= 1.432 af, Depth= 3.09"
Routed to Reach DP-1 : Design Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
242,510	80	>75% Grass cover, Good, HSG D
242,510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0450	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.20"
5.3	271	0.0148	0.85		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1500	1.94		**Shallow Concentrated Flow, SCF** Woodland Kv= 5.0 fps
14.0	391	Total			

Subcatchment PS-7:



Summary for Subcatchment PS-8:

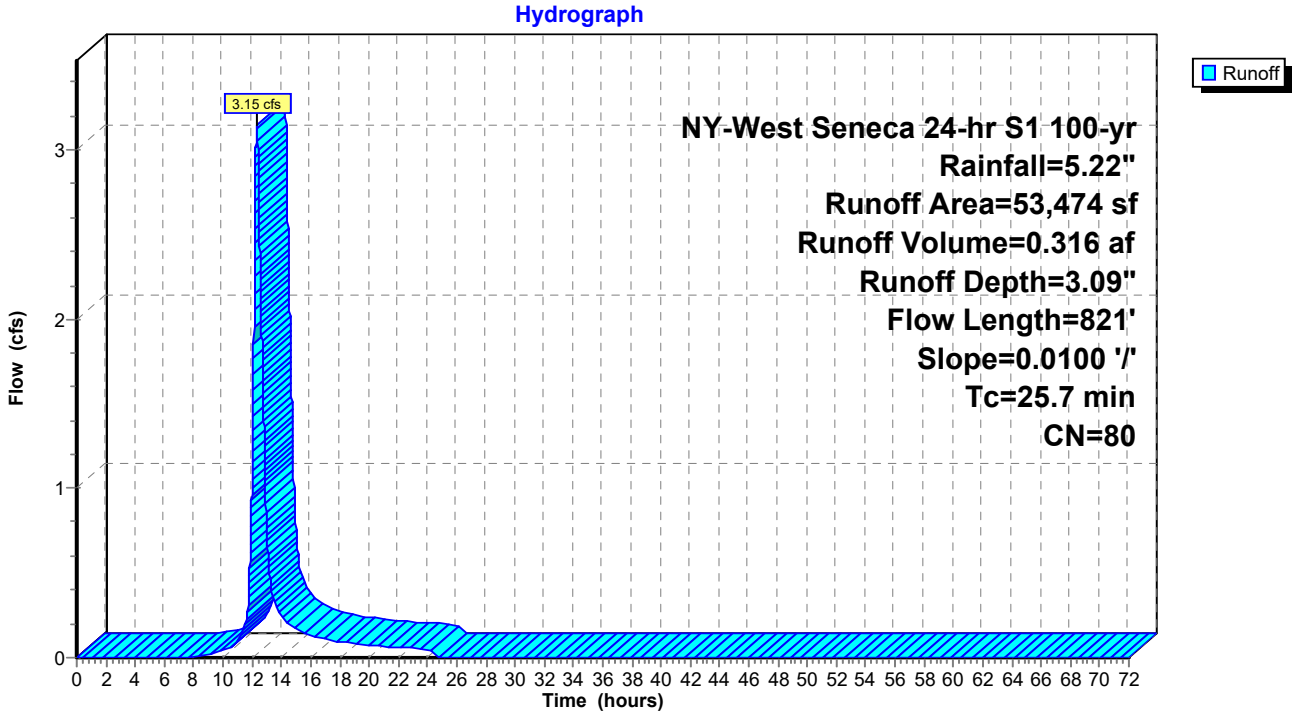
Runoff = 3.15 cfs @ 12.31 hrs, Volume= 0.316 af, Depth= 3.09"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
53,474	80	>75% Grass cover, Good, HSG D
53,474		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 2.20"
8.8	371	0.0100	0.70		**Shallow Concentrated Flow, SCF** Short Grass Pasture Kv= 7.0 fps
1.3	350	0.0100	4.54	3.56	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
25.7	821	Total			

Subcatchment PS-8:



Summary for Subcatchment PS-9: OFF-SITE DRAINAGE

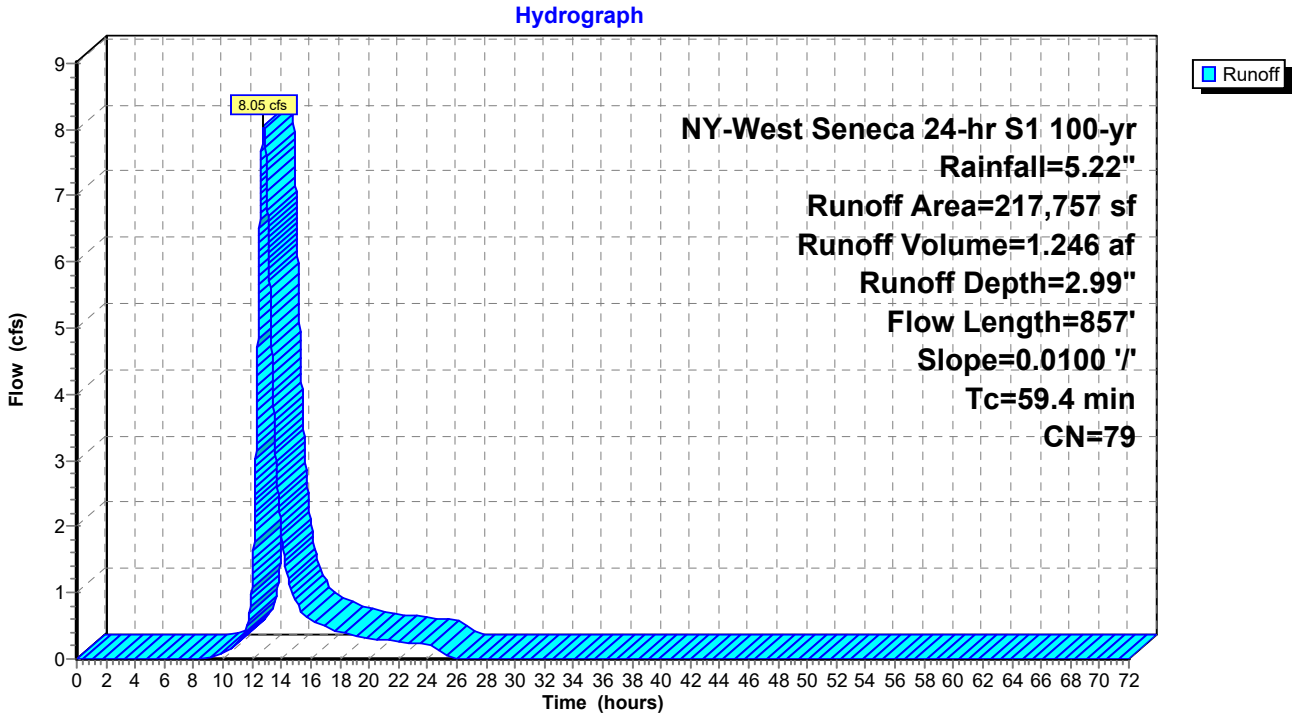
Runoff = 8.05 cfs @ 12.80 hrs, Volume= 1.246 af, Depth= 2.99"
Routed to Reach 9R : East Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-West Seneca 24-hr S1 100-yr Rainfall=5.22"

Area (sf)	CN	Description
1,089	80	>75% Grass cover, Good, HSG D
1,699	98	Paved parking, HSG D
214,969	79	Woods, Fair, HSG D
217,757	79	Weighted Average
216,058		99.22% Pervious Area
1,699		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	600	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
34.2	100	0.0100	0.05		**Sheet Flow, 100'** Woods: Light underbrush n= 0.400 P2= 2.20"
5.2	157	0.0100	0.50		**Shallow Concentrated Flow, Swale** Woodland Kv= 5.0 fps
59.4	857	Total			

Subcatchment PS-9: OFF-SITE DRAINAGE



Summary for Reach 8R: 15" Pipe

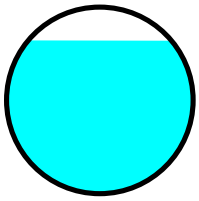
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 3.01" for 100-yr event
Inflow = 9.63 cfs @ 12.74 hrs, Volume= 1.562 af
Outflow = 6.33 cfs @ 12.83 hrs, Volume= 1.405 af, Atten= 34%, Lag= 5.6 min
Routed to Reach DP-1 : Design Point
Overflow = 3.30 cfs @ 12.74 hrs, Volume= 0.157 af
Routed to Reach DP-1 : Design Point

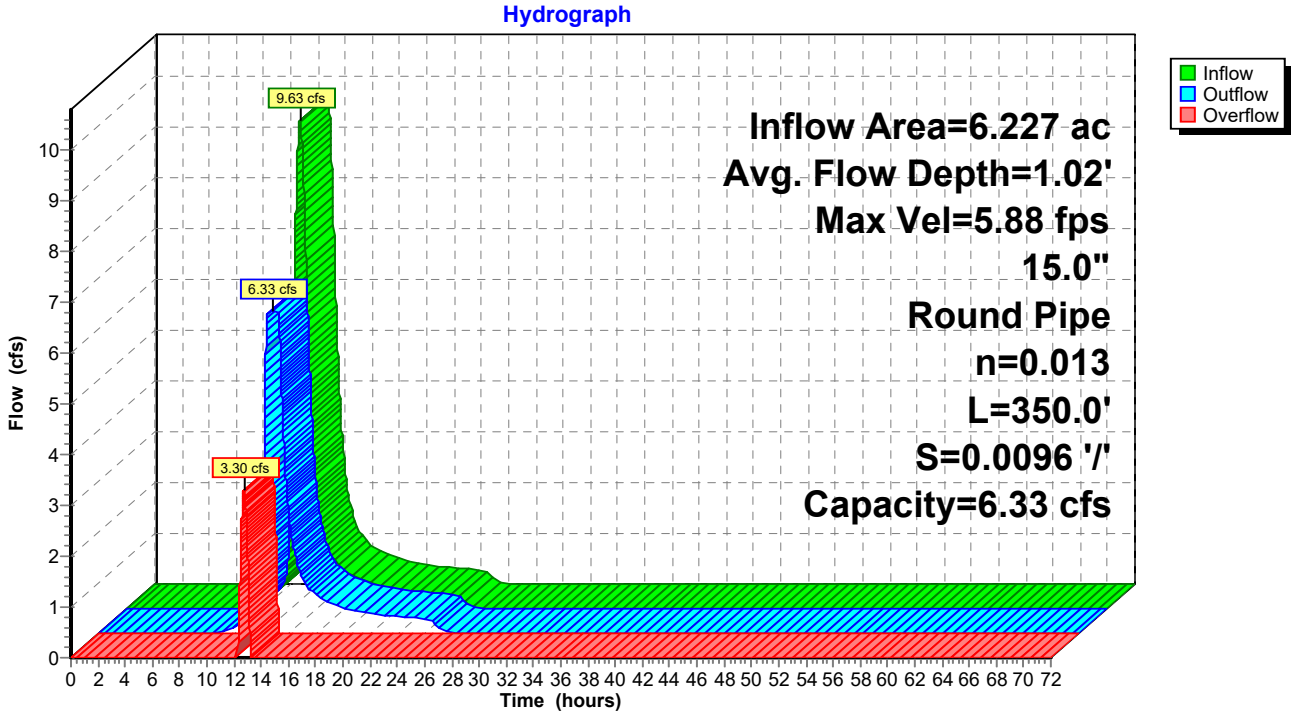
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.88 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 2.74 fps, Avg. Travel Time= 2.1 min

Peak Storage= 377 cf @ 12.83 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 0.96'
Defined Flood Depth= 598.00' Flow Area= 100.4 sf, Capacity= -12,672.78 cfs
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.33 cfs
Any excess flow will be diverted to the secondary overflow

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 350.0' Slope= 0.0096 '/'
Inlet Invert= 591.85', Outlet Invert= 588.49'



Reach 8R: 15" Pipe



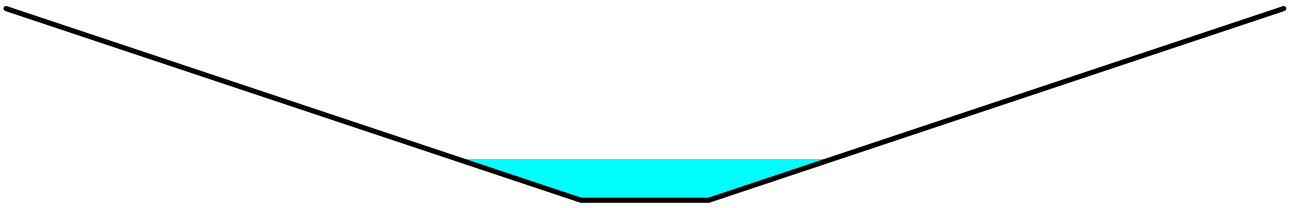
Summary for Reach 9R: East Swale

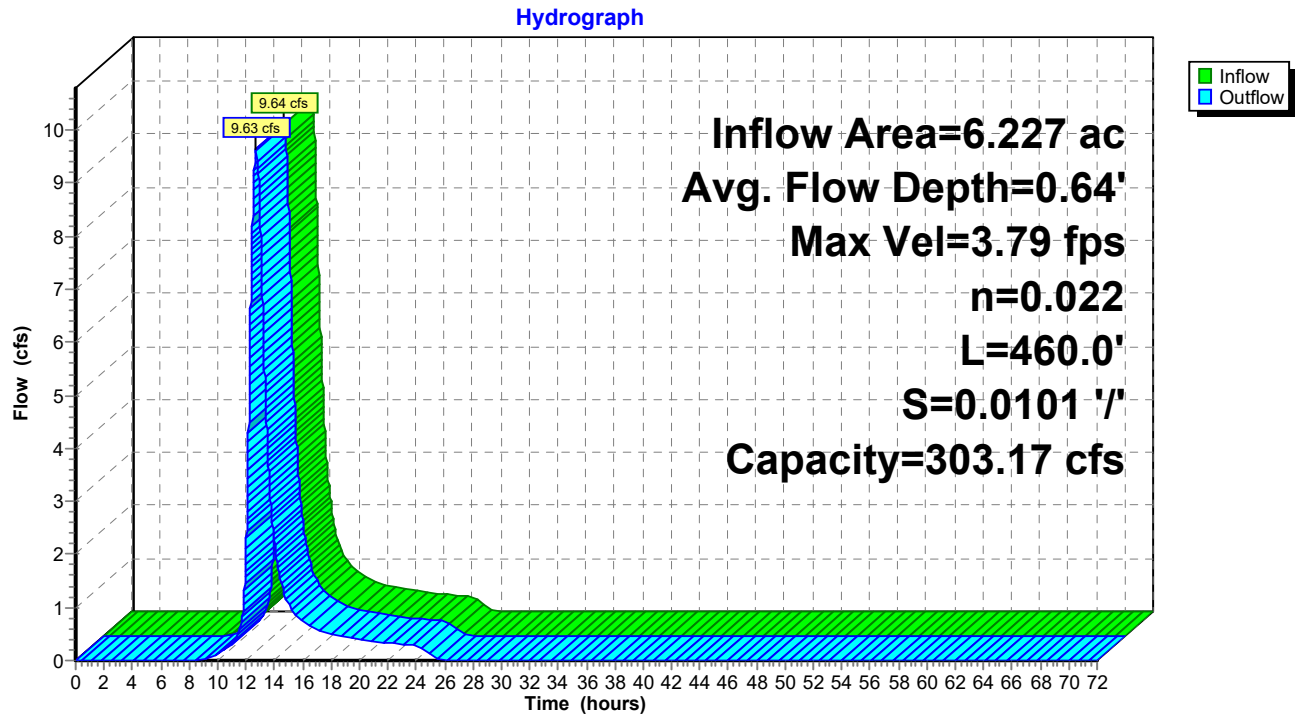
Inflow Area = 6.227 ac, 0.63% Impervious, Inflow Depth = 3.01" for 100-yr event
Inflow = 9.64 cfs @ 12.73 hrs, Volume= 1.562 af
Outflow = 9.63 cfs @ 12.74 hrs, Volume= 1.562 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 8R : 15" Pipe

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.79 fps, Min. Travel Time= 2.0 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 5.1 min

Peak Storage= 1,167 cf @ 12.74 hrs
Average Depth at Peak Storage= 0.64' , Surface Width= 5.87'
Bank-Full Depth= 3.00' Flow Area= 33.0 sf, Capacity= 303.17 cfs

2.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 20.00'
Length= 460.0' Slope= 0.0101 '/'
Inlet Invert= 599.00', Outlet Invert= 594.35'





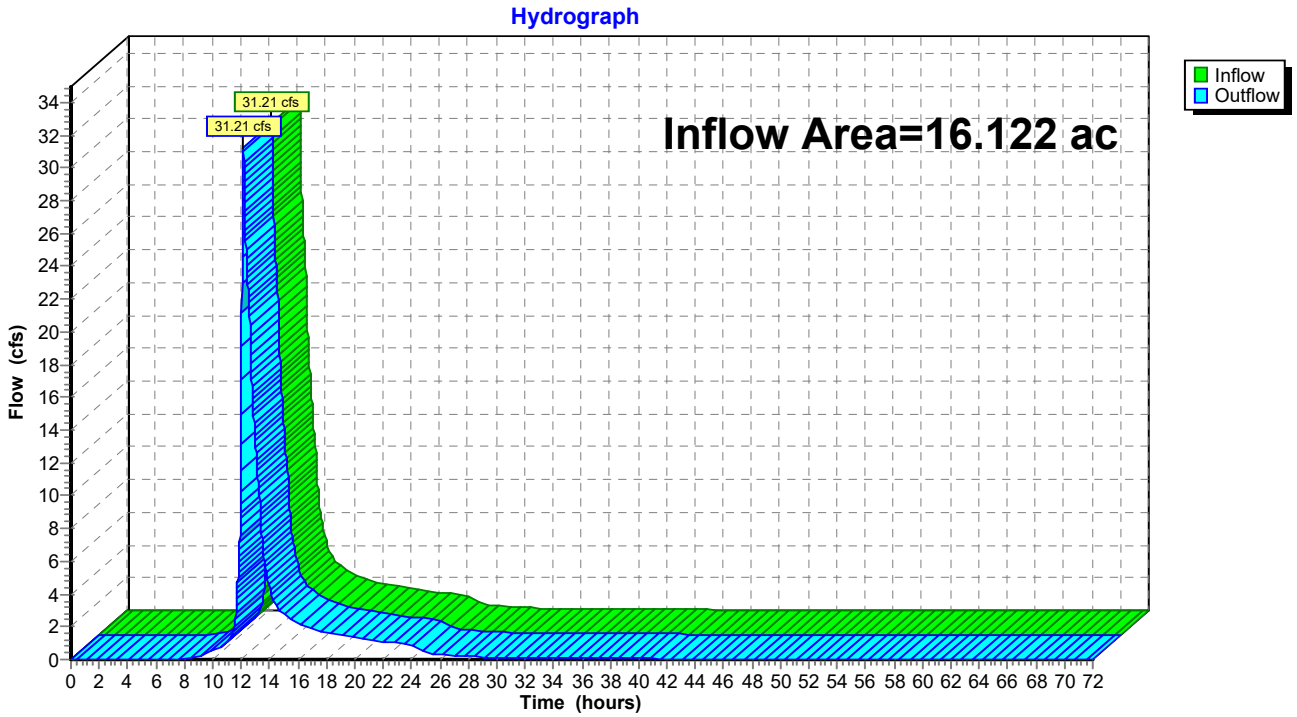
Summary for Reach DP-1: Design Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.122 ac, 18.93% Impervious, Inflow Depth > 3.36" for 100-yr event
Inflow = 31.21 cfs @ 12.15 hrs, Volume= 4.516 af
Outflow = 31.21 cfs @ 12.15 hrs, Volume= 4.516 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Design Point



Summary for Pond BIO-1: Filtration Bioretention

Inflow Area = 0.418 ac, 38.59% Impervious, Inflow Depth = 3.77" for 100-yr event
Inflow = 2.32 cfs @ 12.04 hrs, Volume= 0.132 af
Outflow = 2.08 cfs @ 12.07 hrs, Volume= 0.128 af, Atten= 10%, Lag= 1.9 min
Primary = 0.02 cfs @ 12.07 hrs, Volume= 0.049 af
Routed to Reach DP-1 : Design Point
Secondary = 2.06 cfs @ 12.07 hrs, Volume= 0.080 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.18' @ 12.07 hrs Surf.Area= 1,610 sf Storage= 1,692 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= 424.1 min calculated for 0.128 af (97% of inflow)
Center-of-Mass det. time= 408.9 min (1,204.9 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

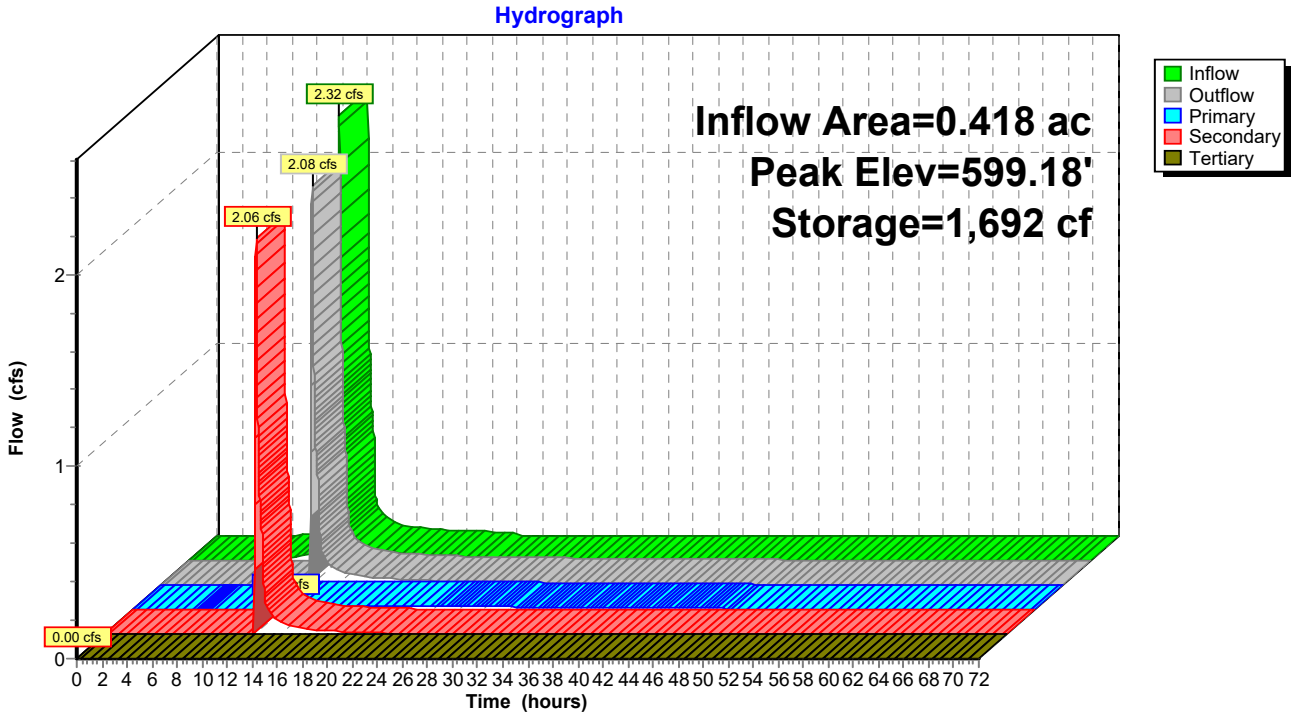
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**12.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.07 hrs HW=599.18' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=2.06 cfs @ 12.07 hrs HW=599.18' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 2.06 cfs of 6.05 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 2.06 cfs @ 1.40 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1: Filtration Bioretention



Summary for Pond BIO-1A: Filtration Bioretention

Inflow Area = 0.232 ac, 38.46% Impervious, Inflow Depth = 3.77" for 100-yr event
Inflow = 1.29 cfs @ 12.04 hrs, Volume= 0.073 af
Outflow = 0.46 cfs @ 12.26 hrs, Volume= 0.070 af, Atten= 64%, Lag= 13.6 min
Primary = 0.02 cfs @ 12.26 hrs, Volume= 0.047 af
Routed to Reach DP-1 : Design Point
Secondary = 0.45 cfs @ 12.26 hrs, Volume= 0.023 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 599.07' @ 12.26 hrs Surf.Area= 1,524 sf Storage= 1,508 cf
Flood Elev= 600.00' Surf.Area= 2,203 sf Storage= 3,248 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 721.2 min (1,517.1 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1	594.42'	3,248 cf	**Bioretention (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.42	350	0.0	0	0
594.43	350	20.0	1	1
595.25	350	20.0	57	58
597.75	350	40.0	350	408
598.00	350	100.0	88	496
599.00	1,476	100.0	913	1,409
600.00	2,203	100.0	1,840	3,248

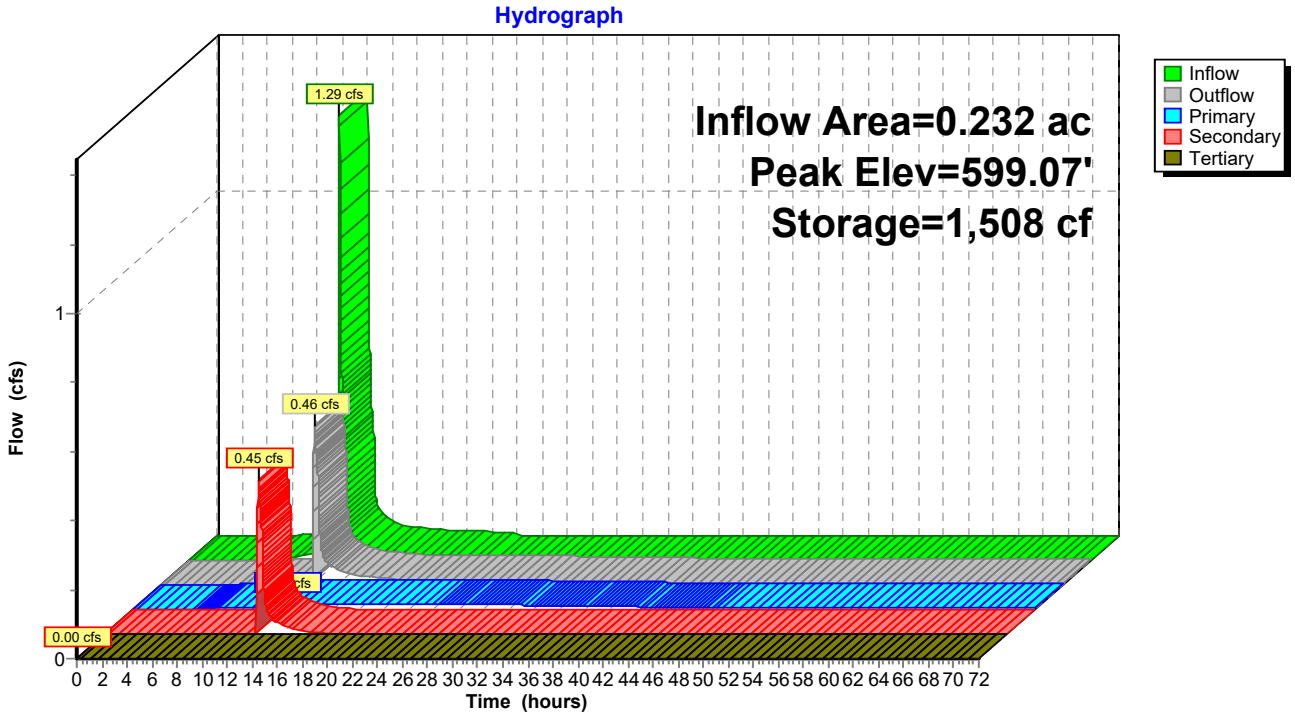
Device	Routing	Invert	Outlet Devices
#1	Primary	594.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	599.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	594.58'	**6.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 594.58' / 594.33' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Tertiary	599.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.02 cfs @ 12.26 hrs HW=599.07' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=0.44 cfs @ 12.26 hrs HW=599.07' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 0.44 cfs of 1.54 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 0.44 cfs @ 0.84 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=594.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-1A: Filtration Bioretention



Summary for Pond BIO-2: Filtration Bioretention

Inflow Area = 0.649 ac, 33.49% Impervious, Inflow Depth = 3.67" for 100-yr event
Inflow = 3.52 cfs @ 12.04 hrs, Volume= 0.199 af
Outflow = 2.95 cfs @ 12.08 hrs, Volume= 0.195 af, Atten= 16%, Lag= 2.5 min
Primary = 0.03 cfs @ 12.08 hrs, Volume= 0.073 af
Routed to Reach DP-1 : Design Point
Secondary = 2.92 cfs @ 12.08 hrs, Volume= 0.122 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 597.23' @ 12.08 hrs Surf.Area= 2,530 sf Storage= 2,585 cf
Flood Elev= 598.00' Surf.Area= 3,117 sf Storage= 4,754 cf

Plug-Flow detention time= 379.4 min calculated for 0.195 af (98% of inflow)
Center-of-Mass det. time= 368.3 min (1,167.1 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1	592.42'	4,754 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
592.42	370	0.0	0	0
592.43	370	20.0	1	1
593.25	370	20.0	61	61
595.75	370	40.0	370	431
596.00	370	100.0	93	524
596.50	1,629	100.0	500	1,024
597.00	2,353	100.0	996	2,019
598.00	3,117	100.0	2,735	4,754

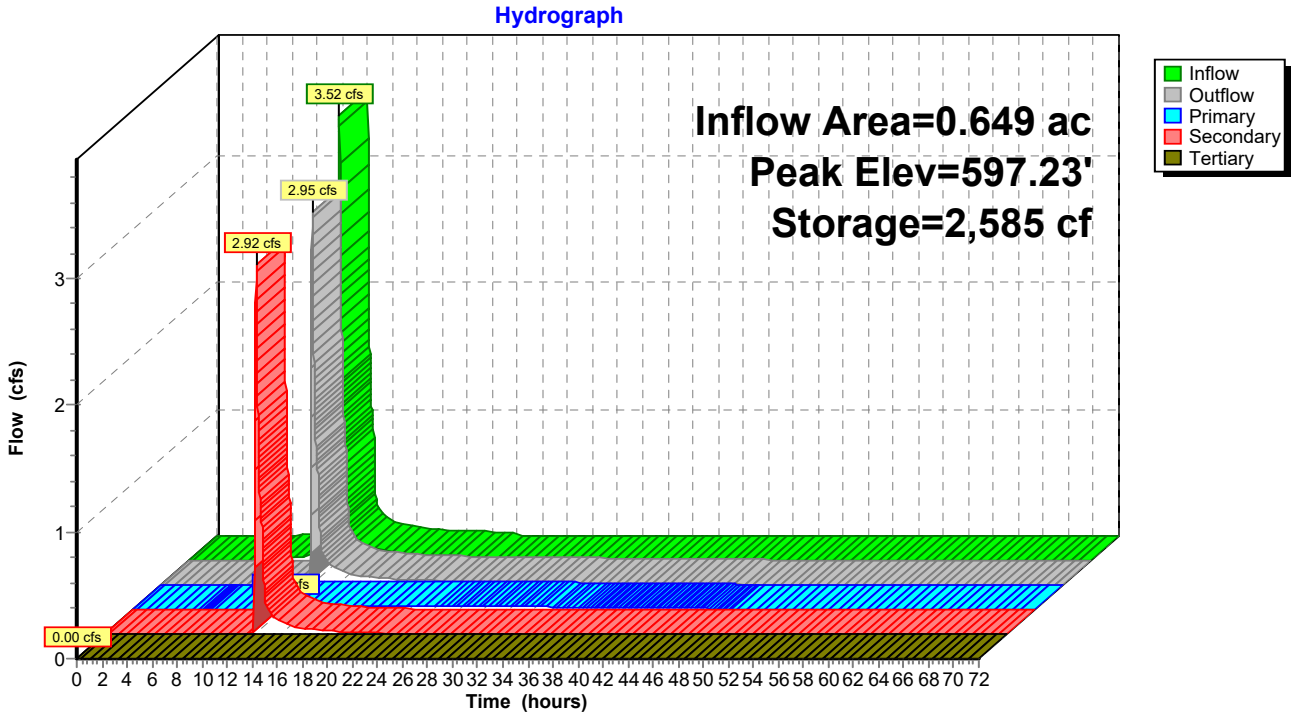
Device	Routing	Invert	Outlet Devices
#1	Primary	592.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	597.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	592.58'	**12.0" Round Culvert** L= 132.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 592.58' / 591.92' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	597.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.03 cfs @ 12.08 hrs HW=597.23' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.03 cfs)

Secondary OutFlow Max=2.92 cfs @ 12.08 hrs HW=597.23' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 2.92 cfs of 5.62 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 2.92 cfs @ 1.57 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=592.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-2: Filtration Bioretention



Summary for Pond BIO-3: Filtration Bioretention

Inflow Area = 0.743 ac, 64.64% Impervious, Inflow Depth = 4.30" for 100-yr event
Inflow = 4.57 cfs @ 12.04 hrs, Volume= 0.267 af
Outflow = 3.24 cfs @ 12.10 hrs, Volume= 0.260 af, Atten= 29%, Lag= 3.9 min
Primary = 0.04 cfs @ 12.10 hrs, Volume= 0.120 af
Routed to Reach DP-1 : Design Point
Secondary = 3.20 cfs @ 12.10 hrs, Volume= 0.140 af
Routed to Reach DP-1 : Design Point
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 596.25' @ 12.10 hrs Surf.Area= 3,616 sf Storage= 4,357 cf
Flood Elev= 597.00' Surf.Area= 4,176 sf Storage= 7,294 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 492.4 min (1,271.4 - 779.0)

Volume	Invert	Avail.Storage	Storage Description
#1	591.42'	12,099 cf	**Above Mulch Surface (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.42	705	0.0	0	0
591.43	705	20.0	1	1
592.25	705	20.0	116	117
594.75	705	40.0	705	822
595.00	705	100.0	176	998
595.50	2,913	100.0	905	1,903
596.00	3,433	100.0	1,587	3,489
597.00	4,176	100.0	3,805	7,294
598.00	5,434	100.0	4,805	12,099

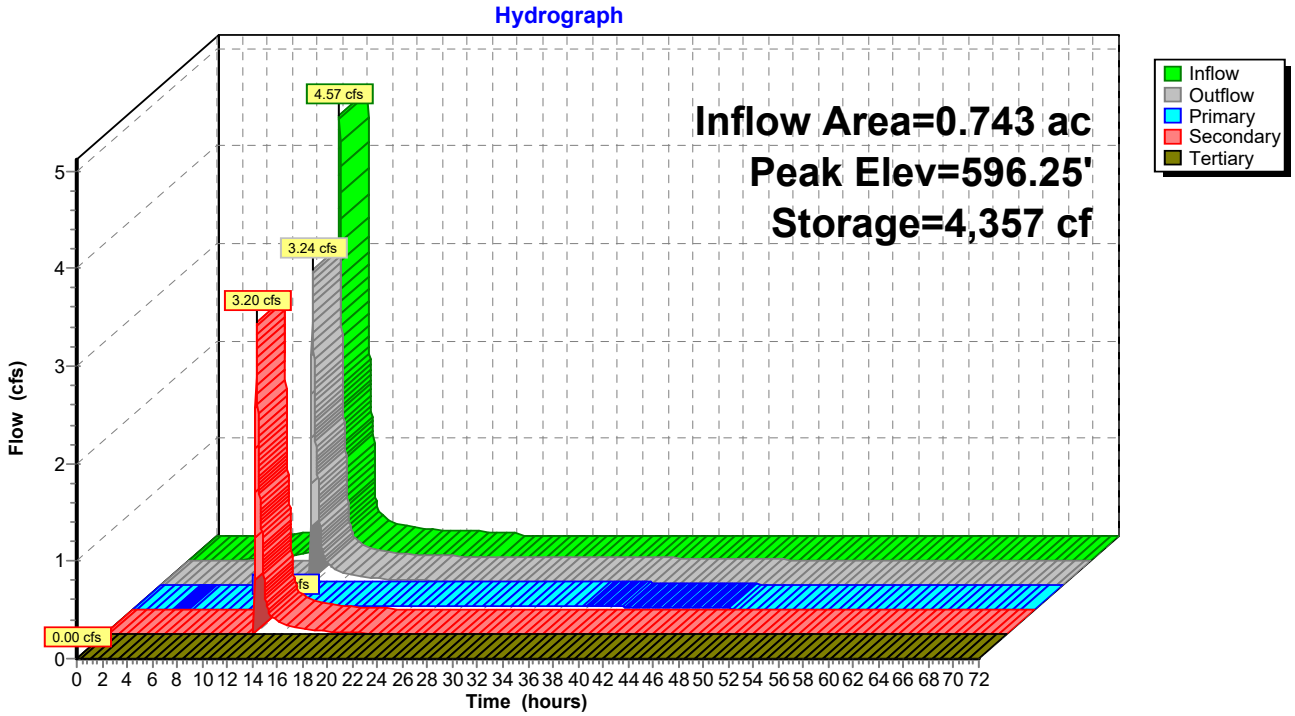
Device	Routing	Invert	Outlet Devices
#1	Primary	591.42'	**0.500 in/hr Exfiltration Through Media over Surface area**
#2	Device 3	596.00'	**24.0" x 24.0" Horiz. Overflow Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	591.58'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 591.58' / 591.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Tertiary	596.50'	**10.0' long x 3.0' breadth Emergency Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.04 cfs @ 12.10 hrs HW=596.25' TW=0.00' (Dynamic Tailwater)
└─**1=Exfiltration Through Media** (Exfiltration Controls 0.04 cfs)

Secondary OutFlow Max=3.19 cfs @ 12.10 hrs HW=596.25' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 3.19 cfs of 6.09 cfs potential flow)
└─**2=Overflow Grate** (Weir Controls 3.19 cfs @ 1.62 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=591.42' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Overflow Weir** (Controls 0.00 cfs)

Pond BIO-3: Filtration Bioretention



Summary for Pond CH-1: Chambers

Inflow Area = 2.286 ac, 90.30% Impervious, Inflow Depth = 4.81" for 100-yr event
Inflow = 14.93 cfs @ 12.04 hrs, Volume= 0.916 af
Outflow = 2.37 cfs @ 12.58 hrs, Volume= 0.869 af, Atten= 84%, Lag= 32.5 min
Primary = 2.37 cfs @ 12.58 hrs, Volume= 0.869 af
Routed to Reach DP-1 : Design Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 595.88' @ 12.58 hrs Surf.Area= 6,598 sf Storage= 22,228 cf
Flood Elev= 598.32' Surf.Area= 13,198 sf Storage= 26,499 cf

Plug-Flow detention time= 299.4 min calculated for 0.869 af (95% of inflow)
Center-of-Mass det. time= 269.4 min (1,025.7 - 756.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	590.50'	9,166 cf	**44.25'W x 149.10'L x 5.50'H Field A** 36,287 cf Overall - 13,373 cf Embedded = 22,914 cf x 40.0% Voids
#2A	591.25'	13,373 cf	**ADS_StormTech MC-3500 d +Cap** x 120 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 120 Chambers in 6 Rows Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf
#3	596.00'	3,960 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		26,499 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
596.00	6,600	0.0	0	0
597.50	6,600	40.0	3,960	3,960

Device	Routing	Invert	Outlet Devices
#1	Primary	590.50'	**8.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 590.50' / 589.25' S= 0.0104 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	591.25'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	594.35'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=2.37 cfs @ 12.58 hrs HW=595.88' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 2.37 cfs @ 6.78 fps)
└─**2=Orifice/Grate** (Passes < 0.89 cfs potential flow)
└─**3=Sharp-Crested Rectangular Weir** (Passes < 22.91 cfs potential flow)

Pond CH-1: Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
Cap Storage= 14.9 cf x 2 x 6 rows = 178.8 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

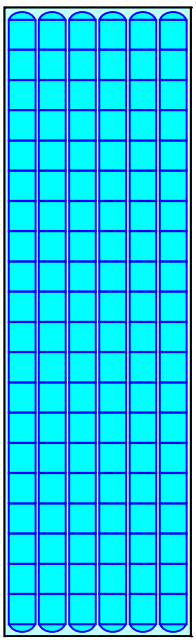
20 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 147.10' Row Length +12.0" End Stone x 2 = 149.10' Base Length
6 Rows x 77.0" Wide + 9.0" Spacing x 5 + 12.0" Side Stone x 2 = 44.25' Base Width
9.0" Stone Base + 45.0" Chamber Height + 12.0" Stone Cover = 5.50' Field Height

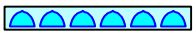
120 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 6 Rows = 13,373.0 cf Chamber Storage

36,287.2 cf Field - 13,373.0 cf Chambers = 22,914.2 cf Stone x 40.0% Voids = 9,165.7 cf Stone Storage

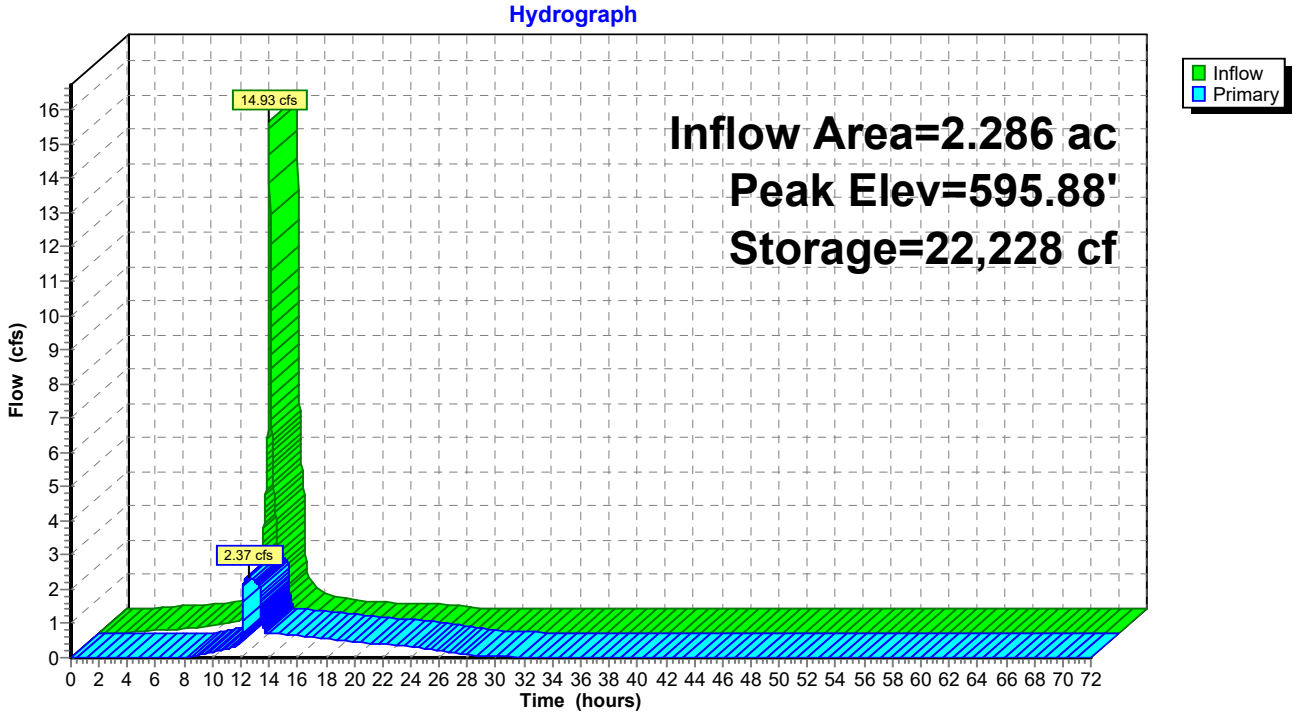
Chamber Storage + Stone Storage = 22,538.7 cf = 0.517 af
Overall Storage Efficiency = 62.1%
Overall System Size = 149.10' x 44.25' x 5.50'

120 Chambers
1,344.0 cy Field
848.7 cy Stone





Pond CH-1: Chambers

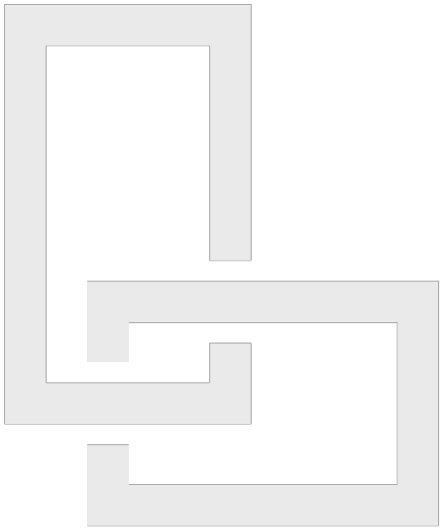


APPENDIX F:
SWPPP INSPECTION REPORT
(SAMPLE FORM)

LaBella
Powered by partnership.

Prepared by:
LaBella Associates
Choose an item.
Choose an item.
Choose an item.

SWPPP INSPECTION REPORT NUMBER XX
CLIENT NAME
PROJECT NAME
PROJECT ADDRESS, TOWN OF X, X COUNTY, NY
PERMIT NUMBER



Performed: 2/1/2025 @ 12:00 AM
Report Issued: 2/1/2025

Status: SATISFACTORY (All erosion control measures are installed and in working order)

Qualified Inspector (name and title)	Qualified Professional (name and title)
Click or tap to enter a date.	Click or tap to enter a date.
Date	Date
Signature	Signature

NYSDEC Documentation and SWPPP Forms

The project has received a Letter of Authorization (LOA) from NYSDEC	Choose an item.
The project has received a five acre waiver approved by NYSDEC or MS4	Choose an item.
The project currently has disturbance greater than five acres	Choose an item.
The project directly discharges to a 303d waterbody/course	Choose an item.
The project is within a phosphorus enhanced watershed	Choose an item.
Number of inspections required per week	Choose an item.

Included in Site Log Book

Preconstruction Assessment	Choose an item.
Copy of Notice of Intent (NOI)	Choose an item.
Letter of Authorization (LOA)	Choose an item.
SWPPP Preparer Certification Form	Choose an item.
Owner/Operator Certification Form	Choose an item.
MS4 SWPPP Acceptance Form	Choose an item.
NYCDEP SWPPP Acceptance/Approval Form	Choose an item.
MS4 No Jurisdiction Form	Choose an item.
Contractor and Subcontractor Certifications	Choose an item.
SPDES General Permit	Choose an item.
Five Acre Waiver Authorization	Choose an item.
Notice of Termination (NOT)	Choose an item.

Site Conditions

Total area (acres) with active soil disturbance (not requiring temporary or final stabilization)	
Total area (acres) with inactive soil disturbance (requiring temporary or final stabilization)	
Total area (acres) that has achieved temporary stabilization	
Total area (acres) that has achieved final stabilization	
Allowable disturbed area (acres) per NOI and/or five acre waiver	

Provide a general description of construction activities ongoing during inspection:

Weather Conditions	Choose an item.
Temperature at time of inspection	XX degrees F
Soil conditions at time of inspection	Choose an item.

Description of Discharge Point/Surface Waters of the State	Condition of Runoff	Sediment Discharge Noted	Corrective Action(s)
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	
	Choose an item.	Choose an item.	

Erosion and Sediment Control Deficiencies and Corrective Actions

In the following table, provide marks in the appropriate columns to indicate the conditions of all erosion and sediment control practices at the site.

Erosion & Sediment Control Practice	Not Applicable	Functioning as Designed	Needs Repair or Maintenance	Not Installed Properly
Temporary Erosion & Sediment Control Practices				
General Site Conditions	☐	☐	☐	☐
Stabilized Construction Access	☐	☐	☐	☐
Silt Fence	☐	☐	☐	☐
Inlet Protection Measures	☐	☐	☐	☐
Soil Stockpiles	☐	☐	☐	☐
Dust Control Measures	☐	☐	☐	☐
Pavement Sweeping	☐	☐	☐	☐
Temporary Stabilization	☐	☐	☐	☐
Dewatering Operations	☐	☐	☐	☐
Slope Protection Measures	☐	☐	☐	☐
Temporary Parking Areas	☐	☐	☐	☐
Concrete Washout	☐	☐	☐	☐
Temporary Swales and Berms	☐	☐	☐	☐
Stone Check Dams	☐	☐	☐	☐
Sediment Traps/Basins	☐	☐	☐	☐
Compost Filter Sock	☐	☐	☐	☐
Temporary Stream Crossing	☐	☐	☐	☐
Fiber Roll	☐	☐	☐	☐
Water Bars	☐	☐	☐	☐
Flow Diffusers	☐	☐	☐	☐
Other:	☐	☐	☐	☐
Permanent Erosion & Sediment Control Practices				
Rock Outlet Protection	☐	☐	☐	☐
Permanent Turf Reinforcement	☐	☐	☐	☐
Permanent Stabilization	☐	☐	☐	☐
Other:	☐	☐	☐	☐
Refer to the following page for deficiencies and corrective actions				

Corrective Actions

For all erosion and sediment control practices identified in the above table as “needs repair or maintenance” or “not installed properly,” provide detailed corrective actions that are required.

ESC Practice ID	Deficiency and Corrective Action	Date Deficiency First Reported	Deficiency Corrected?	Date Deficiency Corrected
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap
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Choose an item.		Click or	Choose an	Click or tap
Choose an item.		Click or	Choose an	Click or tap

Stormwater Management Practices

For all stormwater management practices proposed on the project, indicate the status of each practice at the time of inspection, any deficiencies (if applicable) and corresponding corrective actions.

SMP Practice ID	Sign Installed	Status	Deficiency and Corrective Action (if Applicable)	Deficiency Date	Corrected Action Date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date
	Choose an item.	Choose an item.		Click or tap to enter a date	Click or tap to enter a date

Deficiencies and Corrective Action Photo Log

Deficiency Photo 1 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 1*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 2 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 2*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 3 *ESC/SMP Practice ID:* *Deficiency Date:* Click or tap to enter a date.	***Corrective Action Photo 3*** *ESC/SMP Practice ID:* *Corrective Action Photo Date:* Click or tap to enter a date.

Deficiencies and Corrective Action Photo Log (continued)

Deficiency Photo 4	***Corrective Action Photo 4***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 5	***Corrective Action Photo 5***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.
Deficiency Photo 6	***Corrective Action Photo 6***
ESC/SMP Practice ID:	*ESC/SMP Practice ID:*
Deficiency Date: Click or tap to enter a date.	*Corrective Action Photo Date:* Click or tap to enter a date.

Disturbance / Photo Location Map

Replace this page to include an 11x17 erosion control plan sketch to scale showing:

1. Areas with active soil disturbance activity
2. Areas with inactive soil disturbance activity
3. Areas that have achieved temporary stabilization
4. Areas that have achieved final stabilization
5. Photo locations for deficiencies
6. Photo locations for corrective actions
7. Location of erosion and sediment control practices installed

Use Bluebeam template with standard colors to indicate limits

APPENDIX G:
POST-CONSTRUCTION INSPECTIONS AND MAINTENANCE

LaBella
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Bioretention Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	**Follow-Up Actions**
 ☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
	☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
 ☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR Inlets

Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice.

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell . ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell , bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell . If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR Outlets

Examine outlets that release water out of the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell . ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

Additional Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

Bioretention Stormwater Management Practices Level 2 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
☐ Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have bad soil media, try scraping off top 3 inches of media and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. ☐ Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: • Clogged underdrain? • Filter fabric between soil media and underdrain stone? • Need to install underdrain if not present? • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper soil media?	• Soil media is clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice. ☐ Level 3 inspection necessary
Observed Condition: Vegetation is sparse or out of control	
☐ Condition 1: Original design planting plan seems good but has not been maintained, so there are many invasives and/or dead plants Will require some horticultural experience to restore vegetation to intended condition by weeding, pruning, removing plants, and adding new plants. ☐ Condition 2: Original design planting plan is unknown or cannot be actualized A landscape architect or horticulturalist will be needed to redo the planting plan. Will likely require analysis of soil pH, moisture, organic content, sun/shade, and other conditions to make sure plants match conditions. Plan should include invasive plant management and maintenance plan to include mulching, watering, disease intervention, periodic thinning/pruning, etc.	• Vegetation deviates significantly from original planting plan; Bioretention has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice. ☐ Level 3 inspection necessary
Observed Condition: Bioretention does not conform to original design plan in surface area or storage	
☐ Condition 1: Level 2 Inspection reveals that practice is too small based on design dimension, does not have adequate storage (e.g., ponding depth) based on the plan, and/or does not treat the drainage area runoff as indicated on the plan Small areas of deviation can be corrected by the property owner or responsible party, but it is likely that a Qualified Professional will have to revisit the design and attempt a redesign that meets original objectives or that can be resubmitted to the municipality for approval.	• More than a 25% departure from the approved plan in surface area, storage, or drainage area; sometimes less than this threshold at the discretion of the Level 2 inspector. ☐ Level 3 inspection necessary

Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Severe erosion of filter bed, inlets, or around outlets	
☐ Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a more non-erosive lining and/or to extend the lining further down to where inlet slopes meet the Bioretention surface. If problem persists, analysis by a Qualified Professional is warranted. ☐ Condition 2: Erosion of Bioretention filter bed This is often caused by "preferential flow paths" through and along the Bioretention surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads). ☐ Condition 3: Erosion on side slopes Again, the issue is likely linked with unanticipated flow paths down the side slopes (probably overland flow that concentrates as it hits the edge of the slope). For small or isolated areas, try filling, compacting, and re-establishing healthy ground cover vegetation. If the problem is more widespread, further analysis is required to determine how to redirect the flow.	• Erosion (rills, gullies) is more than 12 inches deep at inlets or the filter bed or more than 3 inches deep on side slopes. • If the issue is not caused by moving water but some sort of subsurface defect. This may manifest as a sinkhole or linear depression and be associated with problems with the underdrain stone or pipe or underlying soil. ☐ Level 3 inspection necessary
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
☐ Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of Bioretention soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. ☐ Condition 2: Majority of the surface is caked with "hard pan" (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of Bioretention soil media) or another chronic source of sediment in the drainage area. Augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long as the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the Bioretention surface area. • "Hard pan" of thin, crusty layer covers majority of Bioretention surface area and seems to be impeding flow of water down through the soil media. • New sources of sediment seem to be accumulating with each significant rainfall event. ☐ Level 3 inspection necessary

Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

Isolator® Row Plus
O&M Manual



ADS StormTech™

The Isolator® Row Plus

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS), Total Phosphorus (TP), Total Petroluem Hydrocarbons (TPH) and Total Nitrogen (TN) removal with easy access for inspection and maintenance.

The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, DC-780, SC-800, MC-3500, MC-4500 or MC-7200 models, are lined with filter fabric and connected to a closely located manhole for easy access. The fabric lined chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers allow stormwater to flow vertically out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS Isolator Row and Plus fabric are placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting.

The Isolator Row Plus is designed to capture the “first flush” runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

The Isolator Row Plus Flamp™ is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end, or more difficult to remove and require confined space entry into the chamber area. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

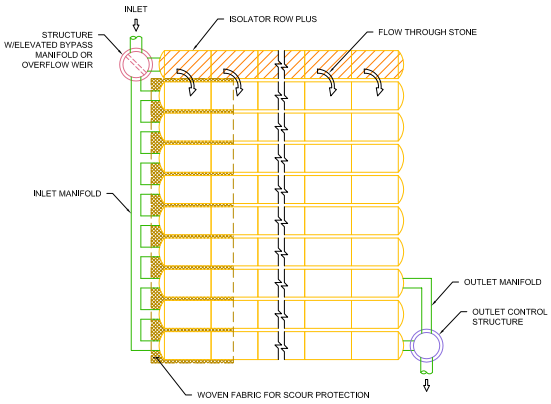
Note: *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*



Looking down the Isolator Row Plus from the manhole opening, ADS Plus Fabric is shown between the chamber and stone base.



StormTech Isolator Row Plus with Overflow Structure (not to scale)



Isolator Row Plus Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

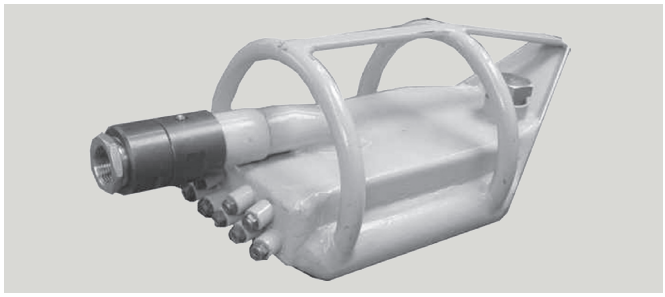
The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3" (75 mm) throughout the length of the Isolator Row Plus, clean-out should be performed.

Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entry.

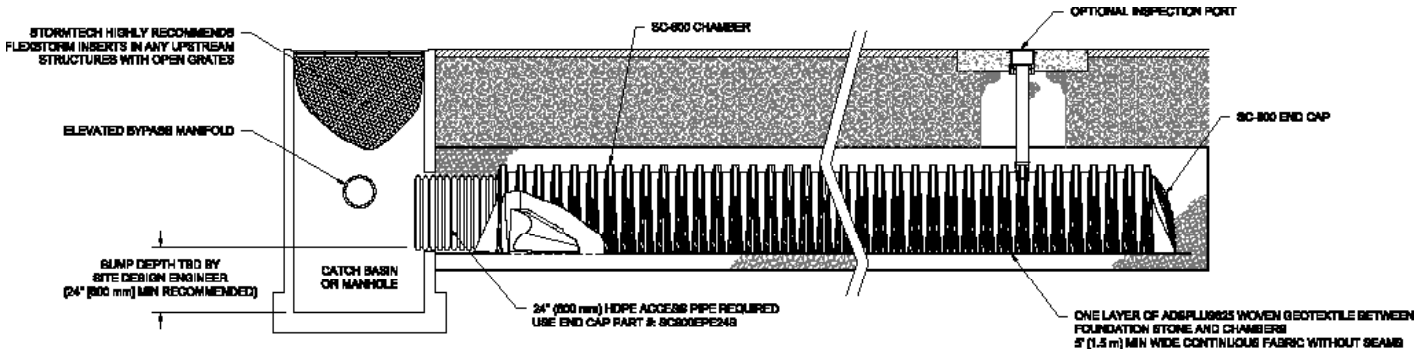
Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**







StormTech Isolator Row Plus (*not to scale*)



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

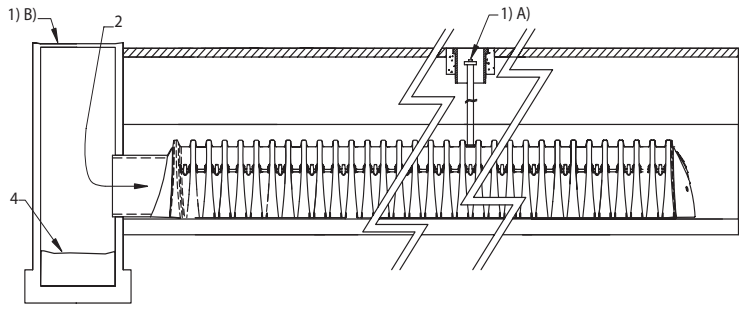
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sedi-ment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row Plus, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

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APPENDIX H:
NYSDEC "DEEP-RIPPING AND DECOMPACTION", APRIL 2008

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New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

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NYS Dept. of Agriculture & Markets)

New York State
Department of Environmental Conservation

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) “Deep Ripping;” and 2) “Decompaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

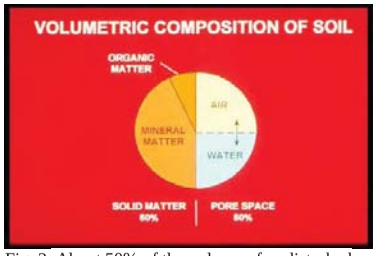


Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the “two-phase” practice of Deep Ripping and Decompaction first became established as a “best management practice” through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).



Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive “deep ripping” through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by “decompaction,” i.e.: “sub-soiling,” through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area’s direct surface infiltration of rainfall by providing the open site’s mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility/Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil
In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

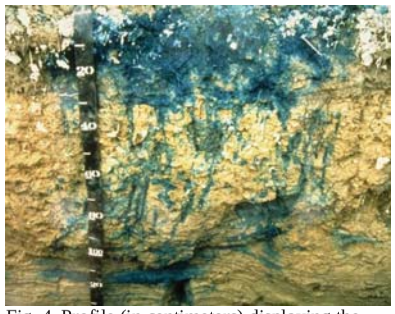


Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope
The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture
Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a “plastic” or “liquid” state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the “slicing and smearing” of the material or added “squeezing and compression” instead of the necessary fracturing. Ample drying time is needed for a “rippable” soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The “poor man’s Atterberg field test” for soil plasticity is a simple “hand-roll” method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a “plastic” state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.



Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, “decompaction,” mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area’s soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only “scarify” the uppermost surface portion of the mass of compacted subsoil material. The term “chisel plow” is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).



Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.



Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a “heavy duty” agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like “lifting and shattering” action up through the soil layers as it is pulled.

Pulling-Power of Equipment
Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.


Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.


Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement
As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.


Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.


Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas
For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)



Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.



Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors
In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

- A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor.

- The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.



Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

Resources

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Internet Access:

- Examples of implements:

V-Rippers. Access by internet search of *John Deere Ag -New Equipment for 915* (larger-frame model) *V-Rippe*; and, *for 913* (smaller-frame model) *V-Ripper*. Deep, angled-leg subsoiler. Access by internet search of: B*igham Brothers Shear Bolt Paratill-Subsoiler.* http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_tillage/2008/feature/rippers/915v_pattern_frame.html?sbu=ag&link=prodcat Last visited March 08.

- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*
- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester.* http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

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APPENDIX I:
LABELLA CERTIFYING PROFESSIONALS LETTER

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February 21, 2025

RE: LaBella Certifying Professionals for NYSDEC SPDES GP-0-25-001

To Whom it May Concern:

In accordance with the NYSDEC SPDES General Permit GP-0-25-001, Part VII.J.2, Kristopher Winkler, PE, a New York State Qualified Professional employed by LaBella Associates, is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), Notice of Intents (NOIs) and Notice of Terminations (NOTs).

Respectfully submitted,

LaBella Associates

Timothy Webber
Vice President, Civil Division Director

Kristopher Winkler, PE
Senior Civil Engineer
Team Leader

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APPENDIX J:
NYSDEC SPDES GENERAL PERMIT GP-0-25-001

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NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

Construction activities constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:
    a. one or more acres; or
    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:
    a. already covered by a different SPDES permit; or
    b. covered under a different SPDES permit that was denied, terminated, or revoked; or
    c. identified in an expired individual SPDES permit that was not renewed; or
    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.
3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:
    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or
    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.
4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:
    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
        i. 1-5 acres of disturbance - 20 feet; or
        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

a. obtain all such necessary permits; or

b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

a. For linear transportation and linear utility project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb two or more acres of *steep slope*.

b. For all other project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

   a. Wastewater from washout of concrete; and

   b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

   c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

   d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

   e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

   a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

i. meets all other eligibility requirements of Part I.A.; and

ii. will occur in NYSDEC's Regions 3-9; and

iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

i. for all eNOIs:

1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 "Governmental Immunity from Zoning and Other Legislation"; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

a. all areas of disturbance have achieved *final stabilization;* and

b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

a. all documentation necessary to demonstrate eligibility with this permit; and

b. this permit; and

c. the *SWPPP*; and

d. the signed SWPPP Preparer Certification Form; and

e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

   i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

   ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

   iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

   b. The written Request to Disturb Greater Than Five Acres must include:

      i. The SPDES permit identification number (Permit ID); and

      ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

      iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

      iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

      v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

      vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

   c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

   a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

   b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

   c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

   d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

   e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

   f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

      i. the revised area of disturbance and/or *impervious area(s)*; and

      ii. the revised SMP information, if applicable; and

      iii. a narrative description of what has changed; and

      iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

   Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

   a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*; and

      ii. Control *stormwater discharges*, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

      iii. *Minimize* the amount of soil exposed during *construction activity*; and

      iv. *Minimize* the disturbance of *steep slope*; and

      v. *Minimize* sediment *discharges* from the site; and

      vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharges*, unless *infeasible*; and

      vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

      where the intended function of a specific area of the site dictates that it be compacted; and

      viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

      ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

   b. **Soil Stabilization.** In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

   c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

   d. **Pollution Prevention Measures.** Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

      ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

   a. The owner or operator must consider:

      i. the following physical risks due to climate change:

         (i) increasing temperature; and

         (ii) increasing precipitation; and

         (iii) increasing variability in precipitation, including chance of drought; and

         (iv) increasing frequency and severity of flooding; and

         (v) rising sea level; and

         (vi) increasing storm surge; and

         (vii) shifting ecology.

      ii. for each of the following:

         (i) overall site planning; and

         (ii) location, elevation, and sizing of:

            a. control measures and practices; and

            b. conveyance system(s); and

            c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

    a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

    b. SMPs must be designed in conformance with the *performance criteria*:

        i. in the DM; or

        ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

        iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

    (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

    (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

    (iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

    (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

    (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

    (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

   i. begin implementing corrective actions within one business day; and

   ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

   i. begin the engineering design process within five business days; and

   ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

   a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

c. all areas of disturbance that have not achieved *final stabilization*; and

d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

      i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

      ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

      iii. Total area that has achieved *temporary stabilization*; and

      iv. Total area that has achieved *final stabilization*; and

   k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

   l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

   m. Identification and status of all corrective actions that were required by previous inspection; and

   n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

   a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

i. all soil disturbance activities have ceased; and

ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

   a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

   b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

   c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

   d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

   a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

   a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

   b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

   c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

   d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

   e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

   f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

   g. the *discharge* is in violation of section 17-0501 of the ECL; and

   h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

      i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

      ii. the size of the *discharge(s)*; and

      iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

      iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

   a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

      (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

      Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

   b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

   1. the chief executive officer of the agency; or

   2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint sources*, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Construction of a barn or other *agricultural building*, silo, stock yard or pen. • Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: • All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
Within the municipal boundaries of NYC: • Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.
The following *construction activities*: • Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover* • Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot • Dam rehabilitation (the structure of the dam itself) • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development; • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES**
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)**

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

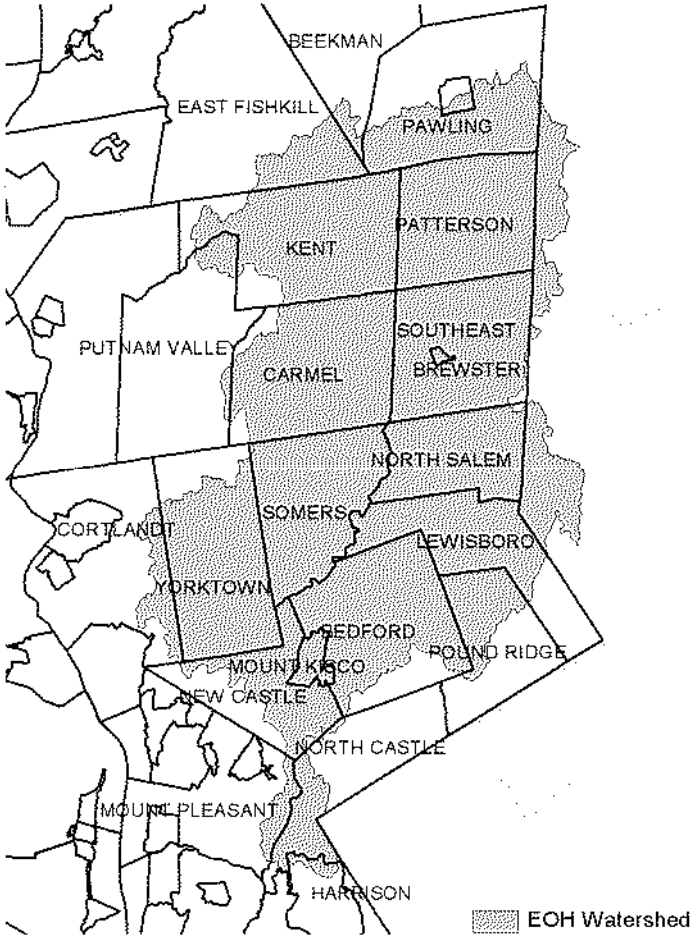


Figure 2 - Onondaga Lake Watershed

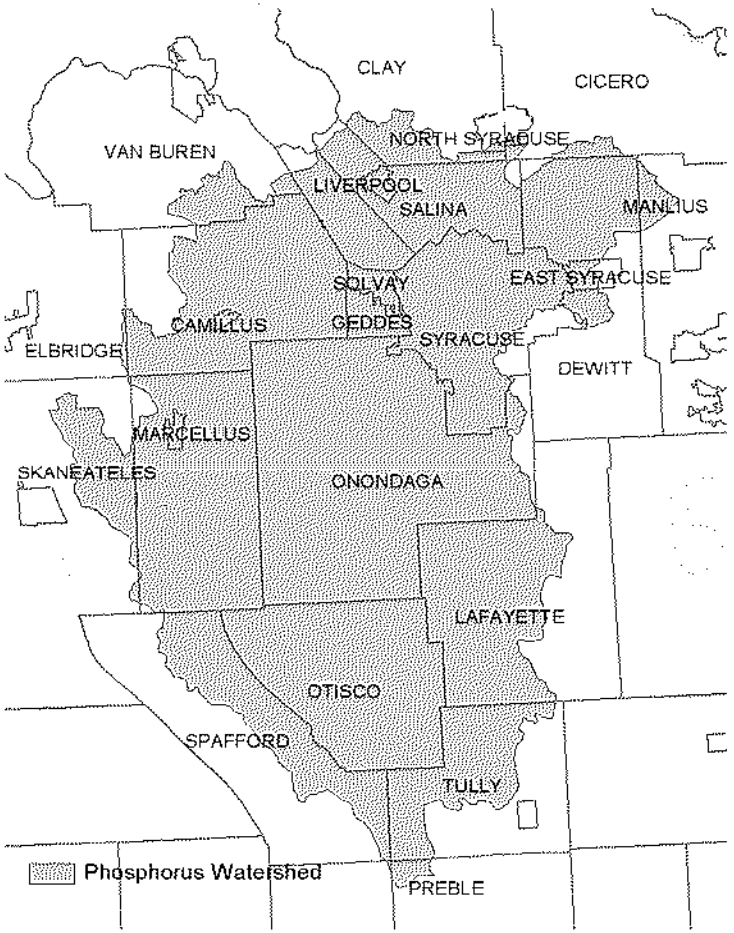


Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

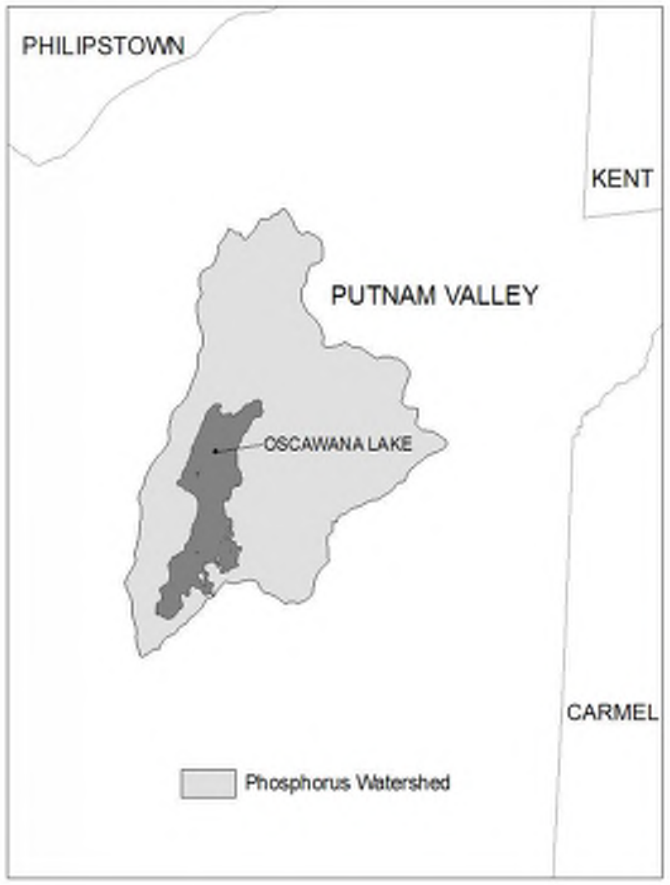
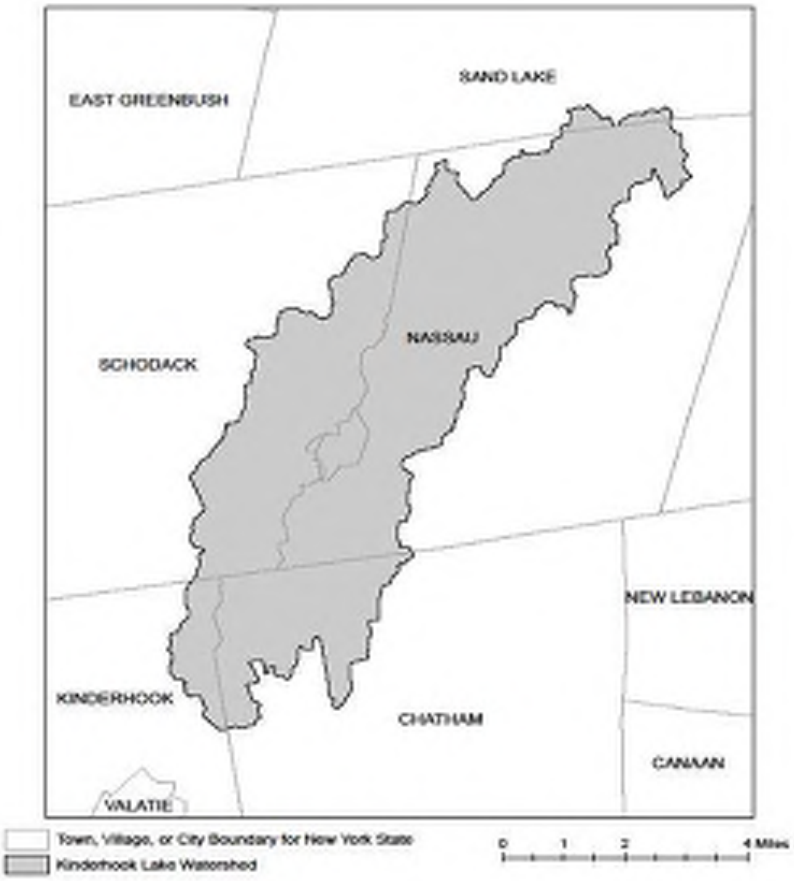


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	Division of Environmental Permits (DEP) Permit Administrators	Division of Water (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued
V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name[1]:
Title/Position:
Signature:
Date:
VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval
8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:
IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity
12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name:
Title/Position:
Signature:
Date:
VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

WEST SENECA APARTMENTS

SITE PIPE SIZING CONTRIBUTING AREAS

DATE: 06/23/2026

SCALE: 1"=40'

LaBella
Powered by partnership.

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

LABELLA Associates, D.P.C.
ENGINEERING.ARCHITECTURE.ENVIRONMENTAL.PLANNING
300 State Street, Suite 201 ● Rochester, NY 14614
Phone 585.454.6110 ● Fax 585.454.3066
www.labellapc.com

Project:	West Seneca Apartments
Project No.:	2241067
Subject	Pipe Sizing Calculations
Calc By:	JB
Date:	6/15/2026

Catchment # COLUMN C	Pervious (SF)	Impervious (SF)	Total (Acre) COLUMN D	Weighted Value COLUMN E
1 ST-3.4	816.00	8,177.00	0.21	0.84
2 ST-3.3	300.00	4,946.00	0.12	0.86
3 ST-3.2	3,905.00	12,827.00	0.38	0.74
4.1 CHAM	0.00	7,189.00	0.17	0.90
5 ST-3.1	1,198.00	17,386.00	0.43	0.85
6 ST-2.1	760.00	15,654.00	0.38	0.87
7 ST-2.2	548.00	6,725.00	0.17	0.85
8 ST-6.1	259,605.00	0.00	5.96	0.20
4.2 ST-3.0	0.00	7,189.00	0.17	0.90
4.3 ST-3.3	0.00	4,388.00	0.10	0.90
4.4 ST-3.4	0.00	6,627.00	0.15	0.90
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!

Totals for System			
Catchment	266316 SF	82931 SF	8.02 Acres
	6.11 Acres	1.9 Acres	

LABELLA Associates, D.P.C.
ENGINEERING.ARCHITECTURE.ENVIRONMENTAL.PLANNING
300 State Street, Suite 201 ● Rochester, NY 14614
Phone 585.454.6110 ● Fax 585.454.3066
www.labellapc.com

Job # 2241067
Project: West Seneca Apartments
Date: 6/15/2026
By: JB

Location: West Seneca, NY
Design Storm Event: 10-Year
Roughness Coefficient, N = 0.013

Storm Sewer Sizing Calculations, Run 01

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
ST-3.4	ST-3.3	1 ST-3.4	0.21	0.84	0.17	0.31	6.00	12.19	3.77	18	150	0.90%	0.67	5.7	0.44	1.50	1.767	4.712	0.375	9.99	PASS
ST-3.3	ST-3.2	2 ST-3.3	0.12	0.86	0.10	0.50	10.00	9.52	4.80	18	102	0.90%	0.85	5.7	0.30	1.50	1.767	4.712	0.375	9.99	PASS
ST-3.2	ST-3.1	3 ST-3.2	0.38	0.74	0.28	0.79	10.30	9.37	7.38	18	85	2.00%	0.88	8.4	0.17	1.50	1.767	4.712	0.375	14.90	PASS
ST-3.1	ST-3.0	5 ST-3.1	0.43	0.85	0.36	1.15	10.47	9.30	10.70	18	35	1.30%	1.58	6.8	0.09	1.50	1.767	4.712	0.375	12.01	PASS
			#N/A	#N/A	#N/A	#N/A	10.55	9.26	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	1.15	Ac
Next Tc =	10.55	Min.

Storm Sewer Sizing Calculations, Run 02

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
ST-2.2	ST-2.1	7 ST-2.2	0.17	0.85	0.14	0.14	5.00	13.19	1.87	12	50	2.00%	0.29	6.4	0.13	1.00	0.785	3.142	0.250	5.05	PASS
ST-2.1	CHAM	6 ST-2.1	0.38	0.87	0.33	0.47	5.13	13.05	6.11	18	30	1.83%	0.76	8.1	0.06	1.50	1.767	4.712	0.375	14.25	PASS
			#N/A	#N/A	#N/A	#N/A	5.19	12.98	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.47	Ac
Next Tc =	5.19	Min.

Storm Sewer Sizing Calculations, Run 03

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
BLDG	CHAM	4.1 CHAM	0.17	0.90	0.15	0.15	5.00	13.19	1.96	10	206	1.25%	0.43	4.5	0.76	0.83	0.545	2.618	0.208	2.46	PASS
			#N/A	#N/A	#N/A	#N/A	5.76	12.41	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.15	Ac
Next Tc =	5.76	Min.

LABELLA
Associates, D.P.C.

Storm Sewer Sizing Calculations, Run 04

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
SWALE	ST-6.1	8 ST-6.1	5.96	0.20	1.19	1.19	59.40	3.26	3.89	15	177	1.00%	0.74	5.3	0.56	1.25	1.227	3.927	0.313	6.48	PASS
			#N/A	#N/A	#N/A	#N/A	59.96	3.24	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	1.19	Ac
Next Tc =	59.96	Min.

Storm Sewer Sizing Calculations, Run 05

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.2	ST-3.0	4.2 ST-3.0	0.17	0.90	0.15	0.17	5.00	13.19	2.18	10	209	1.00%	0.54	4.0	0.86	0.83	0.545	2.618	0.208	2.20	PASS
			#N/A	#N/A	#N/A	#N/A	5.86	12.31	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.17	Ac
Next Tc =	5.86	Min.

Storm Sewer Sizing Calculations, Run 06

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.3	AREA 2	4.3 ST-3.3	0.10	0.90	0.09	0.09	5.00	13.19	1.20	10	26	3.38%	0.16	7.4	0.06	0.83	0.545	2.618	0.208	4.04	PASS
			#N/A	#N/A	#N/A	#N/A	5.06	13.12	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.09	Ac
Next Tc =	5.06	Min.

LABELLA
Associates, D.P.C.

Storm Sewer Sizing Calculations, Run 07																				
From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.4	AREA 3.4	4.4 ST-3.4	0.15	0.90	0.14	0.14	5.00	13.19	1.81	10	26	1.00%	0.45	4.0	0.11	0.83	0.545	2.618	0.208	2.20	PASS
			#N/A	#N/A	#N/A	#N/A	5.11	13.07	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
Contributing Area =		0.14	Ac																		
Next Tc =		5.11	Min.																		

NOT FOR CONSTRUCTION

Luminaire Schedule										
Symbol	Tag	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts	Mounting Height	BUG Rating
	S1	LITHONIA RSX1 LED P1 40K R3	Single	RSX1 LED P1 40K R3	0.850	7096	51.34	718.76	20	B1-U0-G2
	S2	LITHONIA RSX1 LED P1 40K R5	Back-Back	RSX1 LED P1 40K R5	0.850	7284	51.34	410.72	20	B3-U0-G2
	S3	LITHONIA RSX1 LED P1 40K R3	Single	RSX1 LED P1 40K R3	0.850	7096	51.34	718.76	10	B1-U0-G2

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Max/Avg
Parking Lot	Illuminance	Fc	0.86	5.0	0.0	N.A.	N.A.	5.81

Isoline Legend	
Illuminance (Fc)	
Color	Value
	0.1
	0.5
	1

N/F
ON STREET REALTY HOLDINGS
T.A.# 124.00-2-5
2544 CLINTON STREET
LIBER 11299 PAGE 9093
AREA = 9.402 ACRES TO TIE LINE
AREA = 12.7± ACRES TO CENTERLINE OF CREEK

PROPOSED
3-STORY
BUILDING
± 25,000 SF FOOTPRINT

MATCH TO SHEET: E052

1 E051 SITE PHOTOMETRIC PLAN
SCALE: 1" = 20'

LaBella
Powered by partnership.

300 Pearl Street, Suite 130
Buffalo, NY 14202
716-551-6281

labellapc.com

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

It is a violation of New York Education Law Art, 145 Sec. 7209 & Art, 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
1	06/23/2026	PLANNING BOARD COMMENTS
Revisions		

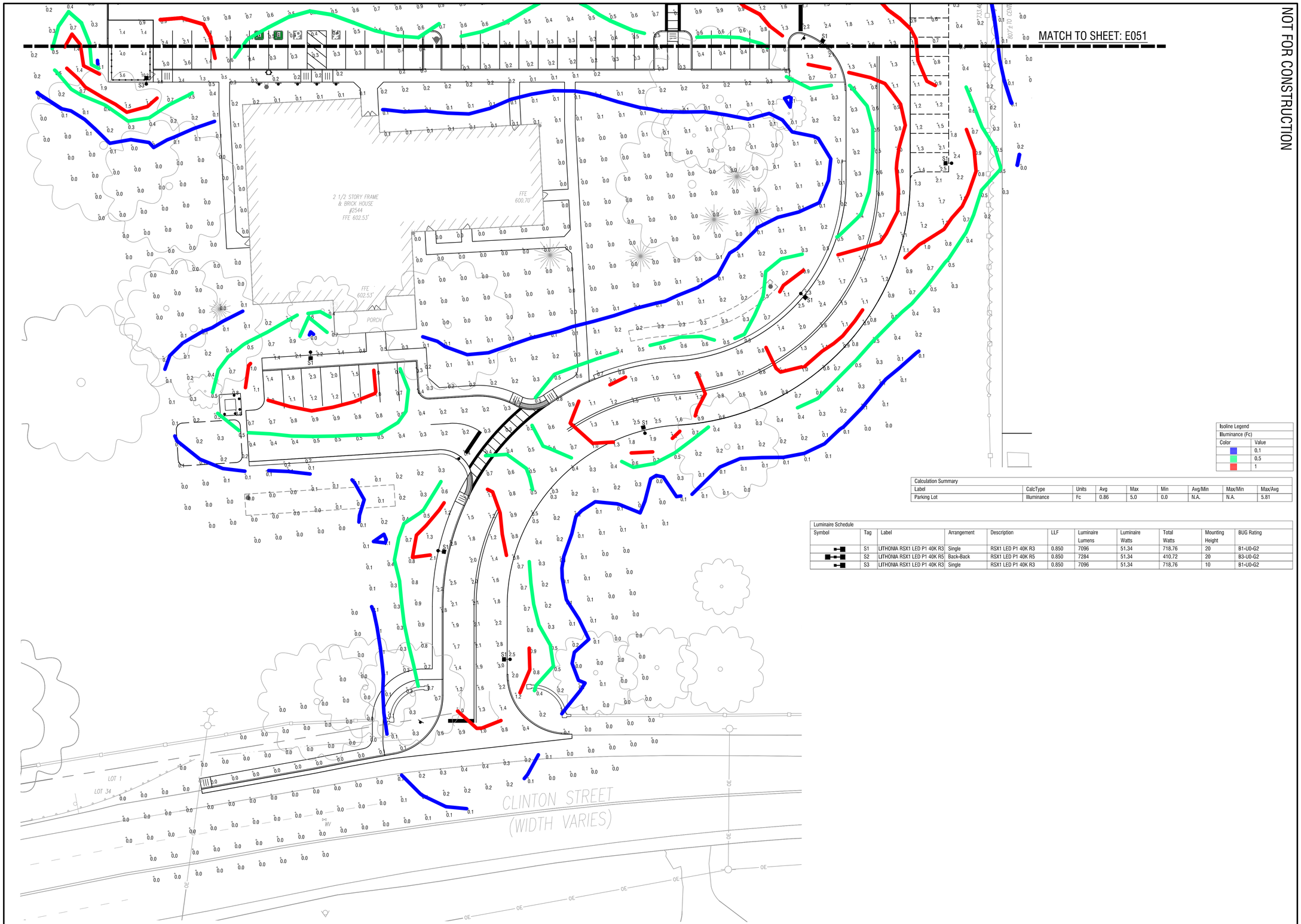
PROJECT NUMBER: 2241067
DRAWN BY: KBB
REVIEWED BY: CCL
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

SITE PHOTOMETRIC PLAN

DRAWING NUMBER:

E051

6/23/2026 1:56:56 PM
R:\GLOBAL\Projects\Home Leasing Services\2241067 - Affordable Housing West Seneca\06_Drawings\Electrical\E100 SITE PLAN.dwg



NOT FOR CONSTRUCTION

Isoline Legend	
Illuminance (Fc)	
Color	Value
	0.1
	0.5
	1

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Max/Avg
Parking Lot	Illuminance	Fc	0.86	5.0	0.0	N.A.	N.A.	5.81

Luminaire Schedule

Symbol	Tag	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts	Mounting Height	BUG Rating
	S1	LITHONIA RSX1 LED P1 40K R3	Single	RSX1 LED P1 40K R3	0.850	7096	51.34	718.76	20	B1-U0-G2
	S2	LITHONIA RSX1 LED P1 40K R5	Back-Back	RSX1 LED P1 40K R5	0.850	7284	51.34	410.72	20	B3-U0-G2
	S3	LITHONIA RSX1 LED P1 40K R3	Single	RSX1 LED P1 40K R3	0.850	7096	51.34	718.76	10	B1-U0-G2

1 E052 **SITE PHOTOMETRIC PLAN**
SCALE: 1" = 20'

LaBella
Powered by partnership.
300 Pearl Street, Suite 130
Buffalo, NY 14202
716-551-6281
labellapc.com

EXP: EXP:

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 0021272
LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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HOME LEASING
75 S CLINTON AVE SUITE 700,
ROCHESTER, NEW YORK 14604

HOME LEASING
DEVELOPMENT | CONSTRUCTION | MANAGEMENT

WEST SENECA APARTMENTS
2544 CLINTON ST,
WEST SENECA, NY 14224

NO:	DATE:	DESCRIPTION:
1	06/23/2026	PLANNING BOARD COMMENTS
Revisions		

PROJECT NUMBER: 2241067
DRAWN BY: KBB
REVIEWED BY: CCL
ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

SITE PHOTOMETRIC PLAN

DRAWING NUMBER:

E052

6/23/2026 1:57:28 PM
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#

June 23, 2026

Jeffery Schieber
Code Enforcement Officer
1250 Union Road – Room 210
West Seneca, New York 14224

RE: 2544 Clinton Street – Home Leasing – West Seneca Apartments
Planning Board Submission – Additional Items for Review

Mr. Schieber:

On behalf of Home Leasing, we offer the following supplemental information and drawings based on the feedback we received from meeting with at the June 11th Planning Board meeting, and outstanding engineering comments (from the engineering comments from CPL dated 5/8/2026).

Supplemental Drawings:

1. Landscaping Plans (sheets L401 – L403) per the Town of West Seneca Code are provided for Planning Board review.

2. Site Photometric Plans (sheets E051 and E052) per the Town of West Seneca Code are provided for Planning Board review. All proposed lights are downward facing, night sky compliant with shielding (if needed).

3. Profile Views for Sanitary and Stormwater (sheets C303 and C304) per the Town of West Seneca Code. Sketches SK-01-C305 and SK-02-C306 are also provided to show each utility run and stationing correlating with the profile views.

Supplemental Data:

4. Pipe Sizing Calculation Sheets – calculation sheets for storm pipe sizing throughout the site. Pipe sizes have been revised (as needed) to match the calculations for conveyance of the 10-year storm event. Revised pipe sizes are shown the utility plans on C305 and C306.

5. Pipe Sizing Drainage Map – Map correlating the site plan to the pipe runs in the spreadsheets.

Attached with this submission are the following additional drawings to be added into the set.

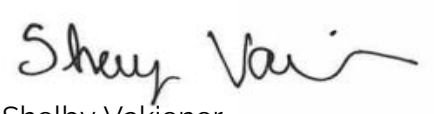
- L401 – Planting Plan – Overall
- L402 – Planting Plan -Enlargement 1
- L403 – Planting Plan – Enlargement 2
- E051 – Site Photometric Plan

- E052 – Site Photometric Plan
- C303 – Storm Profiles
- C304 – Storm Profiles
- C305 – Utility Profile Legend
- C306 - Utility Profile Legend

We look forward to presenting this project to the Planning Board on July 9th, 2026. If you have any questions or need any additional information, please feel free to contact me at 585-770-2525 or svakiener@labellapc.com.

Respectfully submitted,

LaBella Associates



Shelby Vakiener
Civil Engineer

6/23/2026 4:38:27 PM



1 OVERALL PLANTING PIAN
1" = 40'-0"

KEYNOTE SCHEDULE	
NO.	**Keynote Description**
1	TRANSFORMER PAD
2	GENERATOR
3	EXISTING FENCE
4	TRANSFORMER PAD
5	STONE PIER TO MATCH FRONT WALL
6	COLLAPSIBLE BOLLARDS FOR FIRE LANE ACCESS
7	PLAYGROUND / COURTYARD
8	STONE SEATWALL TO BE SIMILAR TO FRONT WALL
9	LIMITS OF ARCHAEOLOGICAL BUFFER AREA
10	EXISTING LAWN AREA WITH EXISTING TOPOGRAPHY
11	HAMMERHEAD TURNAROUND
12	OUTDOOR SEATING
13	CONCRETE SEATING AREA
14	PLAYGROUND / COURTYARD

PLANT SCHEDULE				
SYMBOL	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**REMARKS**
Deciduous Trees				
ACE RBR	10	Acer rubrum	Red Maple	
ACE SUG	1	Acer saccharum	Sugar Maple	
CEL OCC	9	Celtis occidentalis	Common Hackberry	
FRA MAS	9	Fraxinus pennsylvanica `Marshall`s Seedless`	Marshall`s Seedless Green Ash	
FRA SUM	10	Fraxinus pennsylvanica `Summit`	Summit Green Ash	
GLE SKY	5	Gleditsia triacanthos inermis `Skyline`	Skyline Honey Locust	
MAL FLO	2	Malus floribunda	Flowering Crabapple	
SYR RET	2	Syringa reticulata	Japanese Tree Lilac	
TIL GSP	5	Tilia cordata `Greenspire`	Greenspire Littleleaf Linden	
Evergreen Shrubs				
BUX WME	49	Buxus x `Gold Gem`	Gold Gem Boxwood	
JUN SK2	30	Juniperus scopulorum `Skyrocket`	Skyrocket Juniper	
Shrubs				
ABE DIS	113	Abeliophyllum distichum	White Forsythia	
COR GR2	59	Cornus racemosa	Gray Dogwood	
COR SI6	5	Cornus alba `Siberian Pearls`	Siberian Pearls Tatarian Dogwood	
DIE LON	37	Diervilla lonicera	Bush Honeysuckle	
HAM XIN	69	Hamamelis x `Rochester`	Rochester Witch Hazel	
VIB DEN	35	Viburnum dentatum `Arrowwood`	Arrowwood Viburnum	
VIB L2	39	Viburnum lentago	Nannyberry	

0 40' 80' 120'
SCALE: 1" = 40'

N

SWBR
260 E Main St Suite 4000 Rochester, NY 14604
585 232 8300 | rochester@swbr.com
SWBR NYS Certificate of Authorization #: 021723

Drawn By: RC/DK
Checked By: ES
Project Manager:

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Revisions

Project Name
SWBR Project Number 26054.00

Owner

L-401

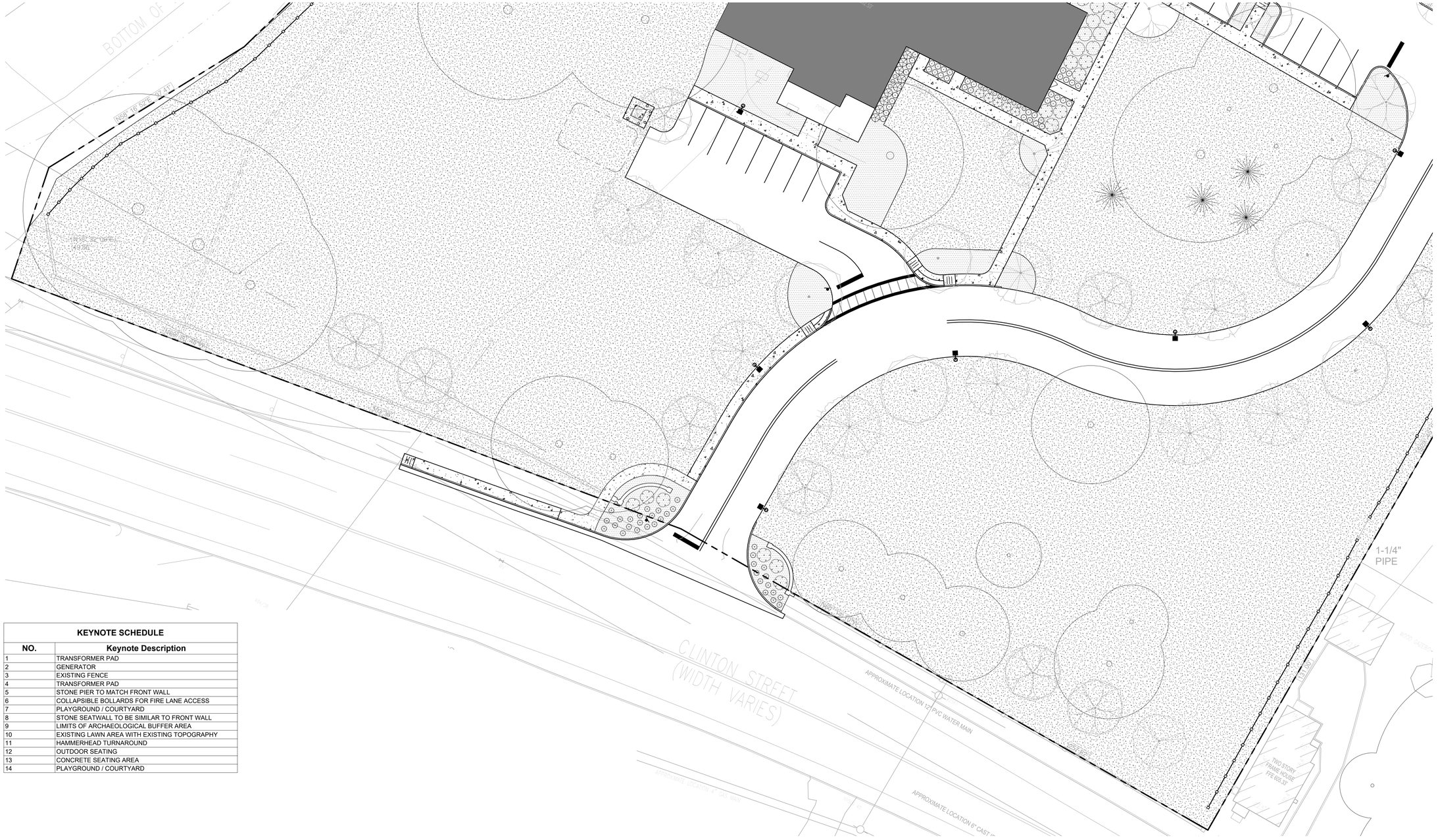
PLANTING PLAN - OVERALL

2026-06-23
PLANNING BOARD ISSUANCE

FILE PATH: Autodesk Docs://26054.00 Penrose West Seneca Apartments/Penrose West Seneca Apartments LA_R25.rvt

PLANT SCHEDULE				
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
Deciduous Trees				
ACE RBR	10	Acer rubrum	Red Maple	
ACE SUG	1	Acer saccharum	Sugar Maple	
CEL OCC	9	Celtis occidentalis	Common Hackberry	
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GLE SKY	5	Gleditsia triacanthos inermis `Skyline`	Skyline Honey Locust	
MAL FLO	2	Malus floribunda	Flowering Crabapple	
SYR RET	2	Syringa reticulata	Japanese Tree Lilac	
TIL GSP	5	Tilia cordata `Greenspire`	Greenspire Littleleaf Linden	

PLANT SCHEDULE				
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
Evergreen Shrubs				
BUX WME	49	Buxus x `Gold Gem`	Gold Gem Boxwood	
JUN SK2	30	Juniperus scopulorum `Skyrocket`	Skyrocket Juniper	
Shrubs				
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COR GR2	59	Cornus racemosa	Gray Dogwood	
COR SI6	5	Cornus alba `Siberian Pearls`	Siberian Pearls Tatarian Dogwood	
DIE LON	37	Diervilla lonicera	Bush Honeysuckle	
HAM XIN	69	Hamamelis x `Rochester`	Rochester Witch Hazel	
VIB DEN	35	Viburnum dentatum `Arrowwood`	Arrowwood Viburnum	
VIB L2	39	Viburnum lentago	Nannyberry	



KEYNOTE SCHEDULE	
NO.	Keynote Description
1	TRANSFORMER PAD
2	GENERATOR
3	EXISTING FENCE
4	TRANSFORMER PAD
5	STONE PIER TO MATCH FRONT WALL
6	COLLAPSIBLE BOLLARDS FOR FIRE LANE ACCESS
7	PLAYGROUND / COURTYARD
8	STONE SEATWALL TO BE SIMILAR TO FRONT WALL
9	LIMITS OF ARCHAEOLOGICAL BUFFER AREA
10	EXISTING LAWN AREA WITH EXISTING TOPOGRAPHY
11	HAMMERHEAD TURNAROUND
12	OUTDOOR SEATING
13	CONCRETE SEATING AREA
14	PLAYGROUND / COURTYARD

1 SITE PLAN ENLARGEMENT - ENTRANCE AND DRIVEWAY / PARKING
1" = 20'-0"

SWBR
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SWBR NYS Certificate of Authorization #: 021723

Drawn By: RC / DK
Checked By: ES
Project Manager:

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Revisions

Project Name
SWBR Project Number 26054.00

Owner

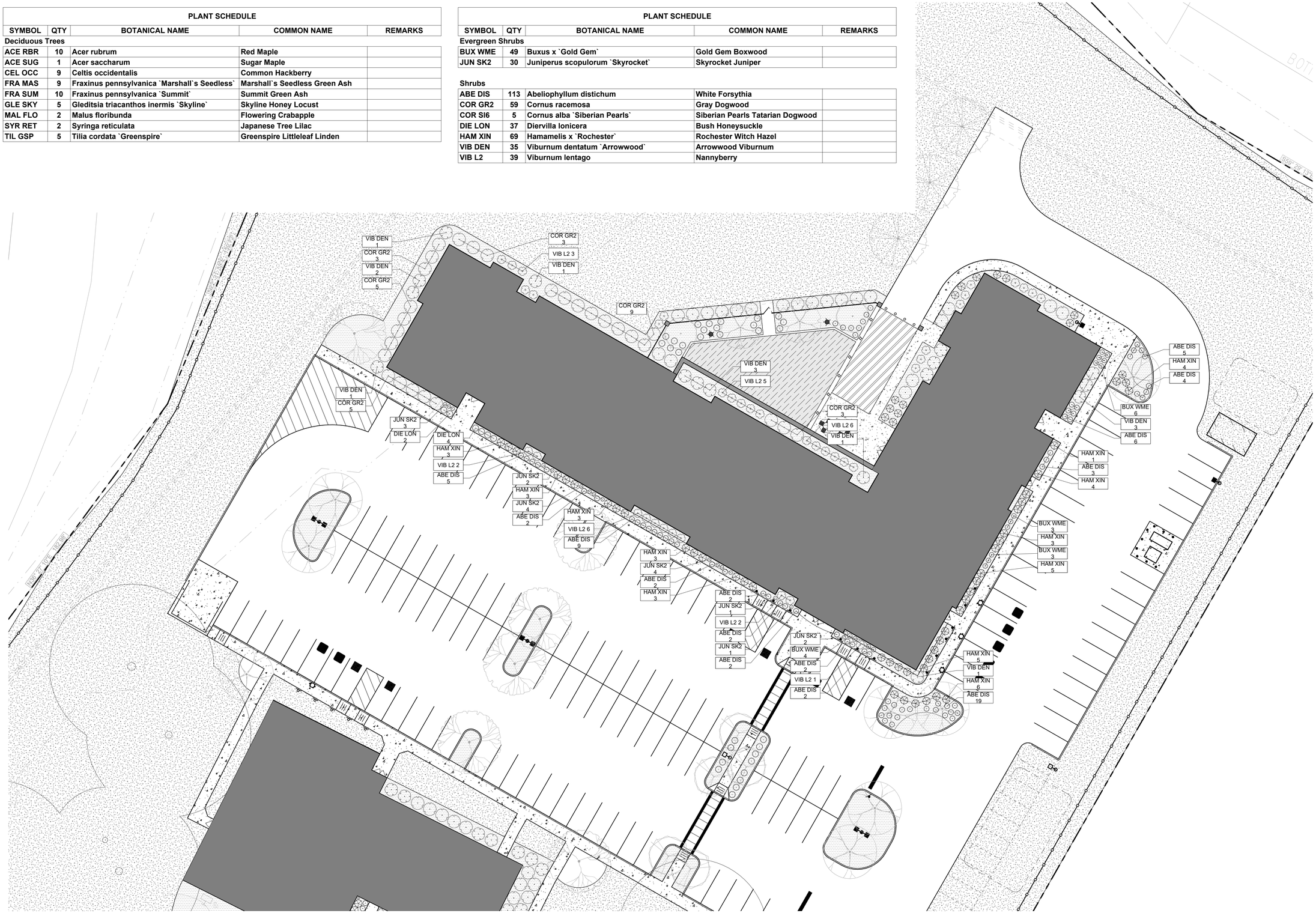
L-402

PLANTING PLAN ENLARGEMENT 1

2026-06-23
PLANNING BOARD ISSUANCE

PLANT SCHEDULE				
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
Deciduous Trees				
ACE RBR	10	Acer rubrum	Red Maple	
ACE SUG	1	Acer saccharum	Sugar Maple	
CEL OCC	9	Celtis occidentalis	Common Hackberry	
FRA MAS	9	Fraxinus pennsylvanica `Marshall`s Seedless`	Marshall`s Seedless Green Ash	
FRA SUM	10	Fraxinus pennsylvanica `Summit`	Summit Green Ash	
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SYR RET	2	Syringa reticulata	Japanese Tree Lilac	
TIL GSP	5	Tilia cordata `Greenspire`	Greenspire Littleleaf Linden	

PLANT SCHEDULE				
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
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JUN SK2	30	Juniperus scopulorum `Skyrocket`	Skyrocket Juniper	
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VIB DEN	35	Viburnum dentatum `Arrowwood`	Arrowwood Viburnum	
VIB L2	39	Viburnum lentago	Nannyberry	



1 SITE PLAN ENLARGEMENT - PLAYGROUND / COURTYARD / PARKING LOT 1
1" = 20'-0"

0 20' 40' 60'
SCALE: 1" = 20'

N

SWBR
260 E Main St Suite 4000 Rochester, NY 14604
585 232 8300 | rochester@swbr.com
SWBR NYS Certificate of Authorization #: 021723

Drawn By: RC/DK
Checked By: ES
Project Manager:

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Revisions

Project Name
SWBR Project Number 26054.00

Owner

L-403

PLANTING PLAN ENLARGEMENT 2

2026-06-23
PLANNING BOARD ISSUANCE

LABELLA
Associates, D.P.C.
ENGINEERING.ARCHITECTURE.ENVIRONMENTAL.PLANNING
300 State Street, Suite 201 ● Rochester, NY 14614
Phone 585.454.6110 ● Fax 585.454.3066
www.labellapc.com

Project:	West Seneca Apartments
Project No.:	2241067
Subject	Pipe Sizing Calculations
Calc By:	JB
Date:	6/15/2026

Catchment # COLUMN C	Pervious (SF)	Impervious (SF)	Total (Acre) COLUMN D	Weighted Value COLUMN E
1 ST-3.4	816.00	8,177.00	0.21	0.84
2 ST-3.3	300.00	4,946.00	0.12	0.86
3 ST-3.2	3,905.00	12,827.00	0.38	0.74
4.1 CHAM	0.00	7,189.00	0.17	0.90
5 ST-3.1	1,198.00	17,386.00	0.43	0.85
6 ST-2.1	760.00	15,654.00	0.38	0.87
7 ST-2.2	548.00	6,725.00	0.17	0.85
8 ST-6.1	41,805.00	0.00	0.96	0.20
4.2 ST-3.0	0.00	7,189.00	0.17	0.90
4.3 ST-3.3	0.00	4,388.00	0.10	0.90
4.4 ST-3.4	0.00	6,627.00	0.15	0.90
			0.00	#DIV/0!
			0.00	#DIV/0!
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			0.00	#DIV/0!
			0.00	#DIV/0!
			0.00	#DIV/0!

Totals for System			
Catchment	48516 SF	82931 SF	3.02 Acres
	1.11 Acres	1.9 Acres	

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300 State Street, Suite 201 ● Rochester, NY 14614
Phone 585.454.6110 ● Fax 585.454.3066
www.labellapc.com

Job # 2241067
Project: West Seneca Apartments
Date: 6/15/2026
By: JB

Location: West Seneca, NY
Design Storm Event: 10-Year
Roughness Coefficient, N = 0.013

Storm Sewer Sizing Calculations, Run 01

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
ST-3.4	ST-3.3	1 ST-3.4	0.21	0.84	0.17	0.31	6.00	12.19	3.77	18	150	0.90%	0.67	5.7	0.44	1.50	1.767	4.712	0.375	9.99	PASS
ST-3.3	ST-3.2	2 ST-3.3	0.12	0.86	0.10	0.50	10.00	9.52	4.80	18	102	0.90%	0.85	5.7	0.30	1.50	1.767	4.712	0.375	9.99	PASS
ST-3.2	ST-3.1	3 ST-3.2	0.38	0.74	0.28	0.79	10.30	9.37	7.38	18	85	2.00%	0.88	8.4	0.17	1.50	1.767	4.712	0.375	14.90	PASS
ST-3.1	ST-3.0	5 ST-3.1	0.43	0.85	0.36	1.15	10.47	9.30	10.70	18	35	1.30%	1.58	6.8	0.09	1.50	1.767	4.712	0.375	12.01	PASS
			#N/A	#N/A	#N/A	#N/A	10.55	9.26	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	1.15	Ac
Next Tc =	10.55	Min.

Storm Sewer Sizing Calculations, Run 02

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
ST-2.2	ST-2.1	7 ST-2.2	0.17	0.85	0.14	0.14	5.00	13.19	1.87	12	50	2.00%	0.29	6.4	0.13	1.00	0.785	3.142	0.250	5.05	PASS
ST-2.1	CHAM	6 ST-2.1	0.38	0.87	0.33	0.47	5.13	13.05	6.11	18	30	1.83%	0.76	8.1	0.06	1.50	1.767	4.712	0.375	14.25	PASS
			#N/A	#N/A	#N/A	#N/A	5.19	12.98	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.47	Ac
Next Tc =	5.19	Min.

Storm Sewer Sizing Calculations, Run 03

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
BLDG	CHAM	4.1 CHAM	0.17	0.90	0.15	0.15	5.00	13.19	1.96	10	206	1.25%	0.43	4.5	0.76	0.83	0.545	2.618	0.208	2.46	PASS
			#N/A	#N/A	#N/A	#N/A	5.76	12.41	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.15	Ac
Next Tc =	5.76	Min.

LABELLA Associates, D.P.C.

Storm Sewer Sizing Calculations, Run 04

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
SWALE	ST-6.1	8 ST-6.1	0.96	0.20	0.19	0.19	30.00	5.05	0.97	12	177	1.00%	0.21	4.5	0.65	1.00	0.785	3.142	0.250	3.57	PASS
			#N/A	#N/A	#N/A	#N/A	30.65	4.98	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.19	Ac
Next Tc =	30.65	Min.

Storm Sewer Sizing Calculations, Run 05

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.2	ST-3.0	4.2 ST-3.0	0.17	0.90	0.15	0.17	5.00	13.19	2.18	10	209	1.00%	0.54	4.0	0.86	0.83	0.545	2.618	0.208	2.20	PASS
			#N/A	#N/A	#N/A	#N/A	5.86	12.31	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.17	Ac
Next Tc =	5.86	Min.

Storm Sewer Sizing Calculations, Run 06

From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.3	AREA 2	4.3 ST-3.3	0.10	0.90	0.09	0.09	5.00	13.19	1.20	10	26	3.38%	0.16	7.4	0.06	0.83	0.545	2.618	0.208	4.04	PASS
			#N/A	#N/A	#N/A	#N/A	5.06	13.12	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!

Contributing Area =	0.09	Ac
Next Tc =	5.06	Min.

LABELLA
Associates, D.P.C.

Storm Sewer Sizing Calculations, Run 07																				
From	To	Area Number	Area	Coefficient	Equivalent	Accum.	Time of Concentration	Intensity	Q = CIA	Pipe Dia.	Pipe Length	Pipe Slope	Partially Full Pipe	Velocity at Reqd.	Time of Flow	Pipe Dia.	Pipe Area	Wetted Perimeter	Hydraulic Radius	Qmax (Full Pipe)	
ST	ST	(see map)	(Ac)	of Runoff	Area (Ac)	Area (Ac)	(min)	(in/hr)	(cfs)	(in.)	(ft)	(%)	Area (sf)	(fps)	(min)	(ft)	(sf)	(ft)	(ft)	(cfs)	
AREA 4.4	AREA 3.4	4.4 ST-3.4	0.15	0.90	0.14	0.14	5.00	13.19	1.81	10	26	1.00%	0.45	4.0	0.11	0.83	0.545	2.618	0.208	2.20	PASS
			#N/A	#N/A	#N/A	#N/A	5.11	13.07	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				#N/A	#N/A	#N/A	0.00	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!
Contributing Area =		0.14	Ac																		
Next Tc =		5.11	Min.																		

AREA 4.4
ST-3.4

AREA 1
ST-3.4

AREA 4.1
CHAM

AREA 4.2
ST-3.0

AREA 4.3
ST-3.3

AREA 2
ST-3.3

PROPOSED
3-STORY
BUILDING
± 25,000 SF FOOTPRINT

PROPOSED
PLAYGROUND

AREA 7
ST-2.2

AREA 6
ST-2.1

AREA 5
ST-3.1

AREA 3
ST-3.2

AREA 8
ST-6.1

ARCHAEOLOGICAL
BUFFER AREA

ZONE A ZONE LIMIT

ZONE AE ZONE LIMIT

ZONE X ZONE LIMIT

FLOODWAY ZONE LIMIT

LIMITS OF
ARCHAEOLOGICAL
BUFFER AREA

N/F
CLINTON STREET REALTY HOLDINGS
T.A.# 124.00-2-5
2544 CLINTON STREET
LIBER 11299 PAGE 9093
AREA = 9.402 ACRES TO
TIE LINE
AREA = 12.7± ACRES TO
CENTERLINE OF CREEK

N/F
CLINTON STREET REALTY HOLDINGS
T.A.# 124.00-2-8
2602 CLINTON STREET
LIBER 11299 PAGE 9093

N/F
CLINTON STREET REALTY HOLDINGS
T.A.# 124.00-2-7
2574 CLINTON STREET
LIBER 11299 PAGE 9093
AREA = 6.765 ACRES

2 1/2 STORY FRAME
& BRICK HOUSE
#2544
FFE 602.53'

ONE STORY FRAME
GARAGE FF=601.19'

TWO STORY
FRAME HOUSE
FF= 605.3

CAYUGA CREEK

BOTTOM OF BANK

TOP OF BANK

CLINTON STREET

R.O.W.

WOODS

FENCE
6.9'

1" PIN
0.4' ABOVE GRADE

SAN MH
RIM=602.51
NO ACCESS

SAN MH
RIM=594.92
NO ACCESS

SAN MH
RIM=595.13
NO ACCESS

GATE

15' WIDE EASEMENT
PER LIBER 7407 PAGE 407

15' WIDE EASEMENT
PER LIBER 8927 PAGE 407

10' WIDE EASEMENT
TO NYS ELECTRIC & GAS
CORPORATION
PER REF. 1

NEW 8" COMBINED
WATER SERVICE

NEW 8" FIRE SERVICE
(AFTER BACKFLOW
PREVENTION)

NEW PRIVATE
FIRE HYDRANT

NEW BACKFLOW PREVENTION
(IN MECHANICAL ROOM) FOR
COMBINED SERVICE.
DOMESTIC SERVICE WILL BE
METERED AFTER THE
BACKFLOW.

CONNECT TO EXISTING 6"
WATERMAIN WITH TS&V

APPROXIMATE LOCATION 12" PVC WATER MAIN

APPROXIMATE LOCATION 2" GAS MAIN

STONE WALL

4' WOOD FENCE

5' WOOD AND PLASTIC FENCE

SPEED LIMIT 50 MPH

WEST SENECA APARTMENTS

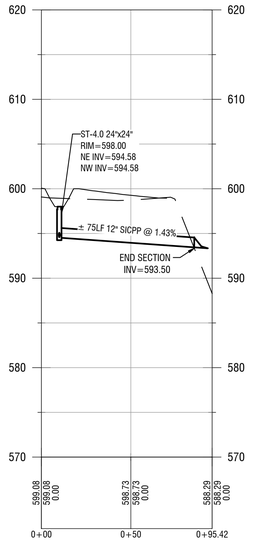
SITE PIPE SIZING CONTRIBUTING AREAS

DATE: 06/23/2026

SCALE: 1"=40'

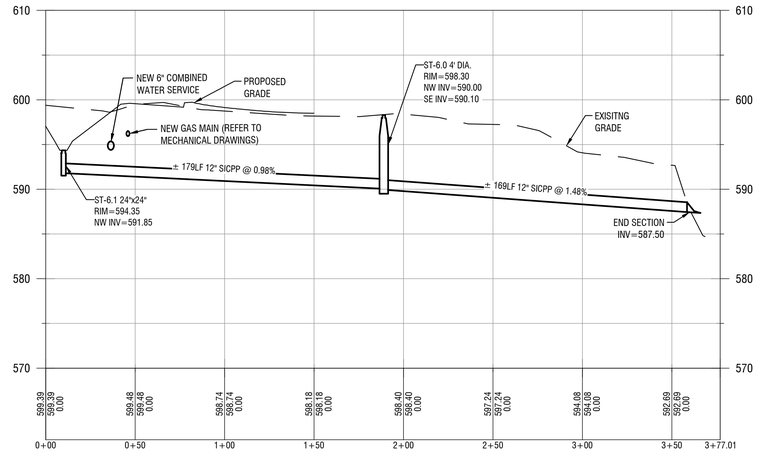
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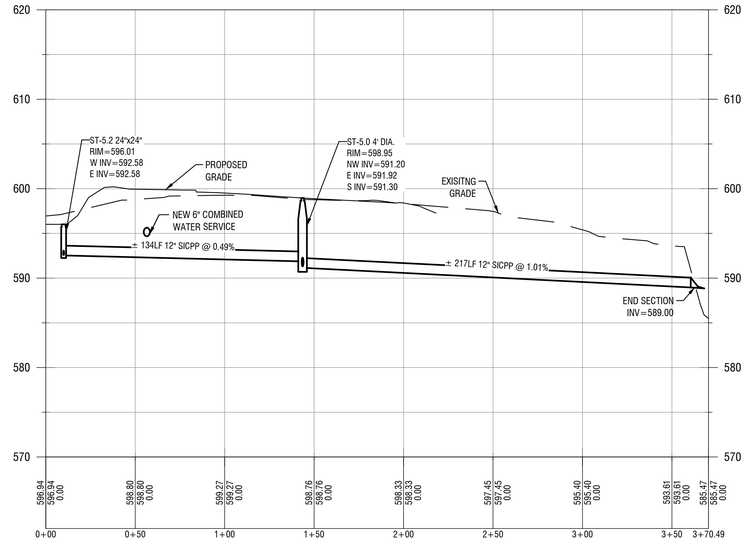
5 C303 **E STORM**

SCALE: H: 1" = 40' V: 1"=8'



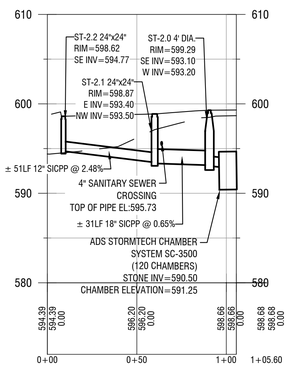
4 C303 **D STORM**

SCALE: H: 1" = 40' V: 1"=8'



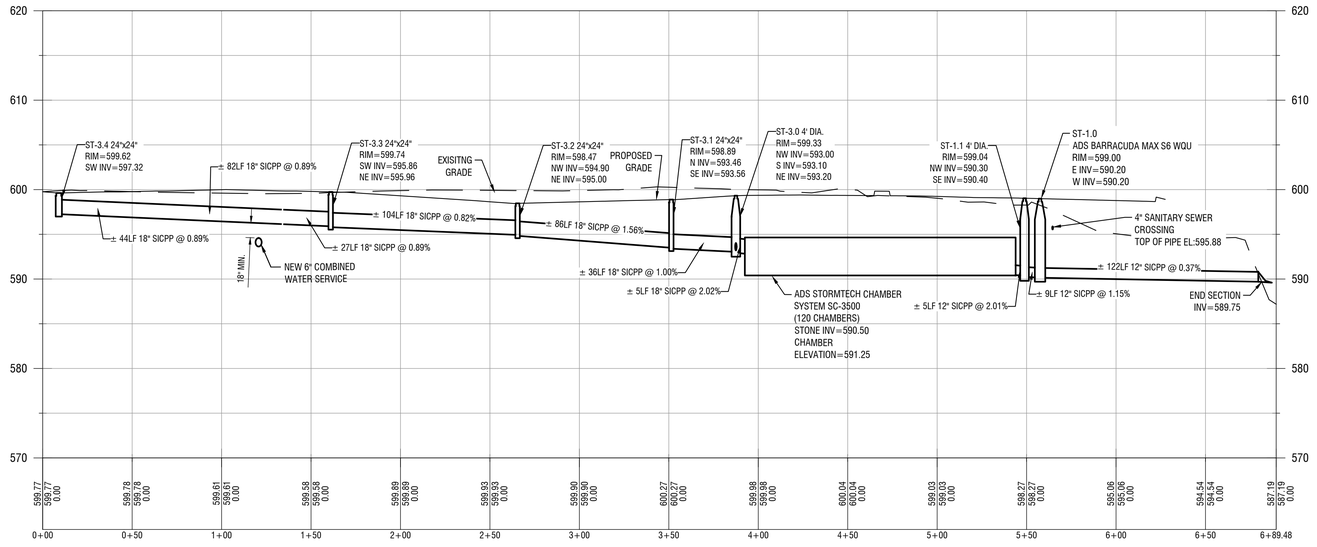
3 C303 **C STORM**

SCALE: H: 1" = 40' V: 1"=8'



2 C303 **B STORM**

SCALE: H: 1" = 40' V: 1"=8'



1 C303 **A STORM**

SCALE: H: 1" = 40' V: 1"=8'

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LAND SURVEYING: 0021271
GEOLOGICAL: 0021659

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2544 CLINTON ST,
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PROJECT NUMBER: 2241067
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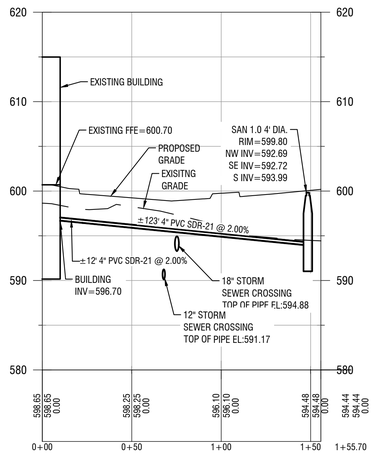
STORM PROFILES

DRAWING NUMBER:

C303

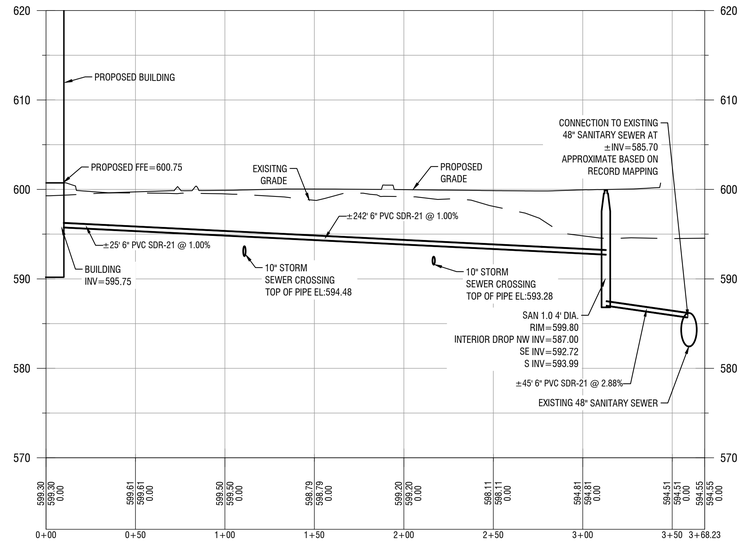
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1 C304 B SANITARY

SCALE: H: 1" = 40' V: 1"=8'



1 C304 A SANITARY

SCALE: H: 1" = 40' V: 1"=8'

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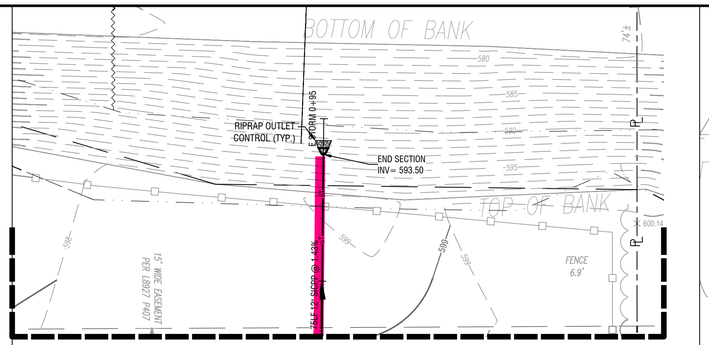
SANITARY PROFILES

DRAWING NUMBER:

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2 C305 INSET
SCALE: 1"=20'

PROFILE LEGEND
- A STORM
- B STORM
- C STORM
- D STORM
- E STORM
- A SANITARY
- B SANITARY

MATCH TO INSET

ARCHAEOLOGICAL BUFFER AREA
ZONE X ZONE LIMIT
LIMITS OF ARCHAEOLOGICAL BUFFER AREA

N/F
CLINTON STREET REALTY HOLDINGS
T.A.# 124.00-2-5
2544 CLINTON STREET
LIBER 11299 PAGE 9093
AREA = 9.402 ACRES TO TIE LINE
AREA = 12.7± ACRES TO CENTERLINE OF CREEK

15' WIDE EASEMENT PER L8927 P407

PROPOSED PLAYGROUND

PROPOSED
3-STORY
BUILDING
± 25,000 SF FOOTPRINT
FFE=600.75'

NEW BIORETENTION AREA #1 (± 375 SF)
NEW 2' WIDE GRAVEL DIAPHRAGM
ST-4.0 24"X24" CB RIM=598.00
E STORM 1+00
NEW PRIVATE FIRE HYDRANT
A STORM 0+00
ST-3.4 24"X24" CB RIM=599.62
CLEANOUT SE INV=597.26
NEW 6" FIRE SERVICE (AFTER BACKFLOW PREVENTOR)
A STORM 1+00
NEW BACKFLOW PREVENTOR (IN MECHANICAL ROOM) FOR COMBINED SERVICE. DOMESTIC SERVICE WILL BE METERED AFTER THE BACKFLOW.
CLEANOUT SE INV=596.51
ST-3.3 24"X24" CB RIM=599.74
A SANITARY 0+00
CLEANOUT NW INV=594.85
A STORM 2+00
5' WOOD AND PLASTIC FENCE

BLDG INV= SW INV=595.08
CLEANOUT SE INV=594.00
CONNECT INTO EXISTING SANITARY MAIN A SANITARY 3+58
B SANITARY 1+00
A SANITARY 3+00
SAN 1 0 4' DIA. RIM=594.70 NW INV=587.00 SE INV=592.72 S INV=593.99
SAN CO TYP.
CLEANOUT RIM=593.62 WYE THRU NW INV=593.08 SE INV=593.08 E INV=593.08
CLEANOUT SW INV=592.75 NW INV=592.75 SE INV=592.75
CLEANOUT NW INV=593.50
CLEANOUT SE INV=594.38
CLEANOUT SW INV=593.90 NW INV=593.90 SE INV=593.90
BLDG INV= SW INV=595.75
A SANITARY 2+00
A SANITARY 1+00
ST-2.0 4' DIA. MH RIM=599.29
ST-3.0 4' DIA. MH RIM=599.33
B STORM 1+00
B STORM 1+06
ST-1.1 4' DIA. MH RIM=599.04
A STORM 4+00
A STORM 5+00
A STORM 3+00
ST-3.2 24"X24" CB RIM=598.47
ST-3.1 24"X24" CB RIM=598.89
ST-2.2 24"X24" CB RIM=598.62
RIM 0+80
RIPRAP OUTLET CONTROL (TYP.)
A STORM 6+89
END SECTION INV= 589.75
A STORM 6+00
ST-2.1 24"X24" CB RIM=598.87
ST-1.0 ADS BARRACUDA MAX S6 WQU RIM=599.00
ADS STORMTECH CHAMBER SYSTEM SC-3500 (120 CHAMBERS)
NEW 6" COMBINED WATER SERVICE
NEW PRIVATE FIRE HYDRANT

MATCH TO SHEET: C302

1 C305 UTILITY PROFILE LEGEND
SCALE: 1" = 20'

0' 20' 40' 60'

UTILITY PLAN NOTES:
1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

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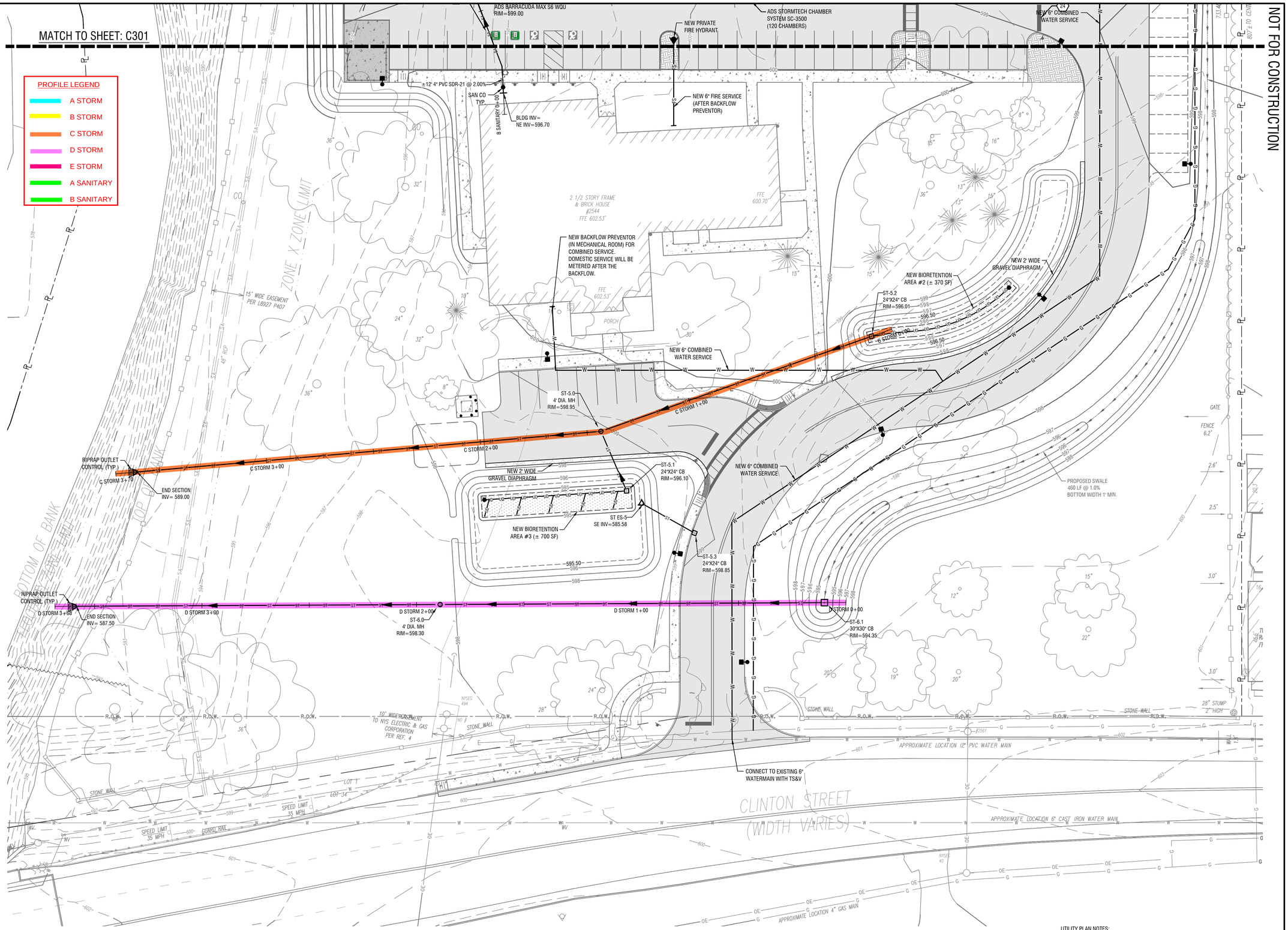
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Revisions		

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ISSUED FOR: SITE PLAN APPROVAL
DATE: 4/20/2026
DRAWING NAME:

UTILITY PROFILE LEGEND

DRAWING NUMBER:

C305



1 C306 UTILITY PROFILE LEGEND

SCALE: 1" = 20'

N

0' 20' 40' 60'

UTILITY PLAN NOTES:

1. A MINIMUM OF 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY AND WATER SERVICES
2. THE ERIE COUNTY WATER AUTHORITY IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE
3. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH ANY PAVEMENT AREA

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1	06/23/2026	PLANNING BOARD COMMENTS
Revisions		

PROJECT NUMBER: 2241067

DRAWN BY: EMM / JBB

REVIEWED BY: SRV / DPB

ISSUED FOR: SITE PLAN APPROVAL

DATE: 4/20/2026

DRAWING NAME: UTILITY PROFILE LEGEND

DRAWING NUMBER: C306

CARMINA WOOD
DESIGN

ENGINEER'S REPORT

for

West Seneca Exchange

Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave
0 Orchard Park Road
West Seneca, Erie County, NY

Prepared for

Benchmark Streamline, LLC

4053 Maple Road
Amherst NY, 14226

Prepared by

Carmina Wood Design

80 Silo City Row, Suite 100
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

July 2026



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Section 1 - Location & Description
Section 2 - Water Service
Section 3 - Sanitary Sewer Service
Section 4 - Storm Sewer Service

Appendices

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- Hydrant Flow Test Data

Appendix B Storm Sewer System Drainage Calculations

- Existing Runoff
- Proposed Runoff
    - Green Infrastructure & Water Quality Calculation

Section 1 - Location & Description

This project consists of the first phase of the redevelopment of the approximately 56 acre former Seneca Mall property, located within the area bounded by Slade Avenue, Ridge Road, and Orchard Park Road in the Town of West Seneca. The proposed redevelopment includes construction of an approximately 158,000 square foot commercial building to be occupied by Costco Wholesale, along with associated parking, utilities, stormwater management facilities, and other supporting site improvements. This phase also includes the primary infrastructure necessary to accommodate future phases and the ultimate full build out of the redevelopment site.

Proposed site improvements include upgrades to the existing utility infrastructure, construction of a new internal roadway network, parking facilities, site lighting, landscaping, and stormwater management system designed for the full build out. These improvements are intended to provide the framework required for future development throughout the remainder of the property.

The project site is currently occupied by the remnants of the former Seneca Mall and the existing Tops Market grocery store. The Tops Market will remain operational throughout construction and will not be impacted by the proposed redevelopment. Construction activities associated with the redevelopment are expected to result in approximately 27.71 acres of land disturbance.

Section 2 - Water Service

Water service for the proposed Seneca Mall redevelopment will be provided by a new private 8-inch combined water service main connected to an existing 24-inch Erie County Water Authority (ECWA) water main located within the northbound travel lane of Slade Avenue. The proposed water distribution system will consist of 8 & 10-inch AWWA C900 water main and will be designed to accommodate both domestic water demand and fire protection requirements for the development. Proposed and future buildings within the redevelopment will be served by separate 6-inch polyethylene combined water services connected to the proposed private water main system. The water distribution infrastructure has been designed to support the phased development of the site while providing adequate domestic and fire flow capacity for the ultimate build out condition.

The proposed 8-inch water main will extend into a dedicated insulated enclosure housing the water meter and backflow prevention equipment. This enclosure will contain a reduced pressure zone (RPZ) backflow preventer and will be heated to prevent freezing during winter conditions.

Discharge resulting from RPZ testing, maintenance, or relief valve operation will be conveyed by gravity to the nearest drainage inlet. The property owner will be responsible for maintaining the drainage conveyance system and ensuring that all drainage ports remain free of snow, ice, and debris to allow proper operation. Water service within the apartment buildings will be utilized for typical domestic purposes, including potable water supply and fire protection.

Four private hydrants will be installed on site as part of the development to ensure fire hose coverage not exceeding 400’.

Domestic Summary:	
Peak Operating Demand:	168.38 gpm
Water Main:	24” on Slade Avenue
Static Pressure:	90 psi (Per ECWA)
Friction Loss:	0.0 psi
Loss through meter/RPZ:	13 psi
Elevation Loss:	12.99 psi
Pressure after RPZ:	77.0 psi

Repairs to all devices will be made during off hours, dual backflow preventers are not required. The site is not located in a 100-year flood plain. Disinfection of the water service following installation will be continuous feed, according to AWWA C-651, latest revision.

Section 3 - Sanitary Sewer Service

Sanitary sewer service for the proposed Seneca Mall redevelopment will be provided by a private sanitary sewer collection system consisting of 8 inch and 10 inch sanitary sewer mains, with manholes installed at all changes in alignment and at appropriate intervals in accordance with Town of West Seneca and Erie County standards. The proposed sanitary sewer system has been designed to accommodate both the initial phase of development and future build out of the site.

Individual proposed and future buildings within the redevelopment will be connected to the private sanitary sewer system through separate 6 inch SDR 35 PVC sanitary service laterals installed at a minimum slope of 1.0 percent. The sanitary collection infrastructure has been designed to provide adequate capacity for the anticipated wastewater flows associated with the ultimate development of the property.

Design Parameters

0.1	gal/d/sf	x	241,000	sf	=	24,100	gpd
500	gal/d/wind.	x	4 wind.		=	2,000	gpd
25	gal/d/seat	x	222 seats		=	5,550	gpd
0.1	gal/d/sf	x	120,025	sf	=	12,003	gpd
15.0	gal/d/Employ.	x	5	Employ.	=	75	gpd
35	gal/d/seat	x	500 seats		=	17,500	gpd

Total Sanitary Sewer Demand = 61,228 gpd

61,228 gpd * 3.93 = 240,462 gpd *use peaking factor of 3.93

The hydraulic loading rate is per “Design Standards for Intermediate Sized Wastewater Treatment Systems” 2014, NYSDEC.

See Appendix A for detailed Calculations

Section 4 - Storm Sewer Service

Existing site drainage generally flows to two primary drainage areas. The western portion of the site drains toward Slade Avenue, while the remainder of the site is collected by an existing network of catch basins that ultimately discharge through a large storm sewer outlet located near the north central portion of the site. This outlet conveys runoff directly to Cazenovia Creek.

Stormwater runoff generated by the proposed redevelopment will be collected and conveyed through a stormwater management system consisting of a wet pond, catch basins, yard drains, manholes, and smooth interior HDPE storm sewer pipe. The proposed stormwater management infrastructure has been designed to accommodate the ultimate full build out of the site and will provide the necessary conveyance, water quality treatment, and peak flow attenuation for future development phases.

As a redevelopment project, the site is required to provide Water Quality Volume (WQv) treatment for 25 percent of the disturbed impervious area and 100 percent of any new impervious area in accordance with NYSDEC requirements. The existing site contains approximately 47.80 acres of impervious cover, while the proposed redevelopment will result in approximately 47.0 acres of impervious cover which includes the widening of Slade Ave and Orchard Park road. Since the project does not create any new impervious area, all proposed improvements are classified as disturbed impervious area and are therefore subject to the 25 percent WQv treatment requirement. Because no new impervious cover is being created, no Runoff Reduction Volume (RRv) is required for the project.

The proposed wet pond provides 100 percent of the required Water Quality Volume (WQv) treatment for the redevelopment and also provides peak flow attenuation. Discharge from the wet pond is controlled

through a 48 inch outlet pipe that connects to the existing storm sewer outlet system and ultimately discharges to Cazenovia Creek. The stormwater management facilities have been designed to satisfy the requirements of both the Town of West Seneca and the NYSDEC. The overall stormwater management system, including water quality treatment and peak flow control, has been designed in accordance with Chapters 4 and 9 of the NYSDEC Stormwater Management Design Manual.

Wet Pond Summary:

Top of basin elevation = 614.50
Permanent pool elevation = 607.80
Bottom of basin elevation = 601.80
100-year storm storage volume = 283,293 cf @ 612.22

Water Quality Summary:

WQv req'd = 46,210 cf (1.061 ac-ft)
RRv min. req'd = 0 cf (0 ac-ft)
WQv provided – Wet Pond = 46,210 cf (1.061 ac-ft)
WQv provided – 46,210 cf = WQv provided = 46,210 cf

Note: Since the proposed redevelopment results in a net decrease in impervious area, no Runoff Reduction Volume (RRv) is required. All new impervious surfaces associated with the project are classified as disturbed impervious areas. The proposed wet pond has been designed to provide stormwater treatment for the ultimate full buildout condition of the site.

Total Runoff Summary:

Event	Ex. Runoff (cfs)	Pro. Runoff (cfs)	Result (cfs)
1-year	103.89	38.71	-65.18
10-year	184.66	87.97	-96.69
25-year	229.09	109.83	-119.26
100-year	317.14	141.36	-175.78

Appendix A

Sanitary Sewer and Water Demand Calculations

CARMINA WOOD DESIGN
80 SILO CITY ROW, SUITE 100
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 24-4113 Date: 7/13/2026
Project Name: West Seneca Exchange
Project Address: Orchard Park Rd West Seneca, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 1 of 3

Sanitary Sewage Demand Calculations:

0.1	gal/d/sf	x	241,000	sf	=	24,100	gpd		*use 0.1 gallons per sq. ft. per day (shopping center)
500	gal/d/wind.	x	4	wind.	=	2,000	gpd		*use 500 gallons per drive thru window per day
25	gal/d/seat	x	222	seats	=	5,550	gpd		*use 25 gallons per seat per day (fast food)
0.1	gal/d/sf	x	120,025	sf	=	12,003	gpd		*use 0.1 gallons per sq. ft. per day (retail)
15.0	gal/d/Employ.	x	5	Employ.	=	75	gpd		*use 0.1 gallons per sq. ft. per day (retail)
35	gal/d/seat	x	500	seats	=	17,500	gpd		*use 25 gallons per seat per day (Ordinary Restraunt)

Total Site Sanitary Demand: = 61,228 gpd

* The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 61,228 gpd / 100 gpcd = 612 per capita

Population (P) = 612 people

Peaking Factor : (18 +√P) / (4 + √P) where P is in thousands

Peaking Factor = 3.93

Peak Sanitary Demand = 61,228 x 3.93 = 240,462 gpd
= 0.240 MGD
= 0.372 cfs

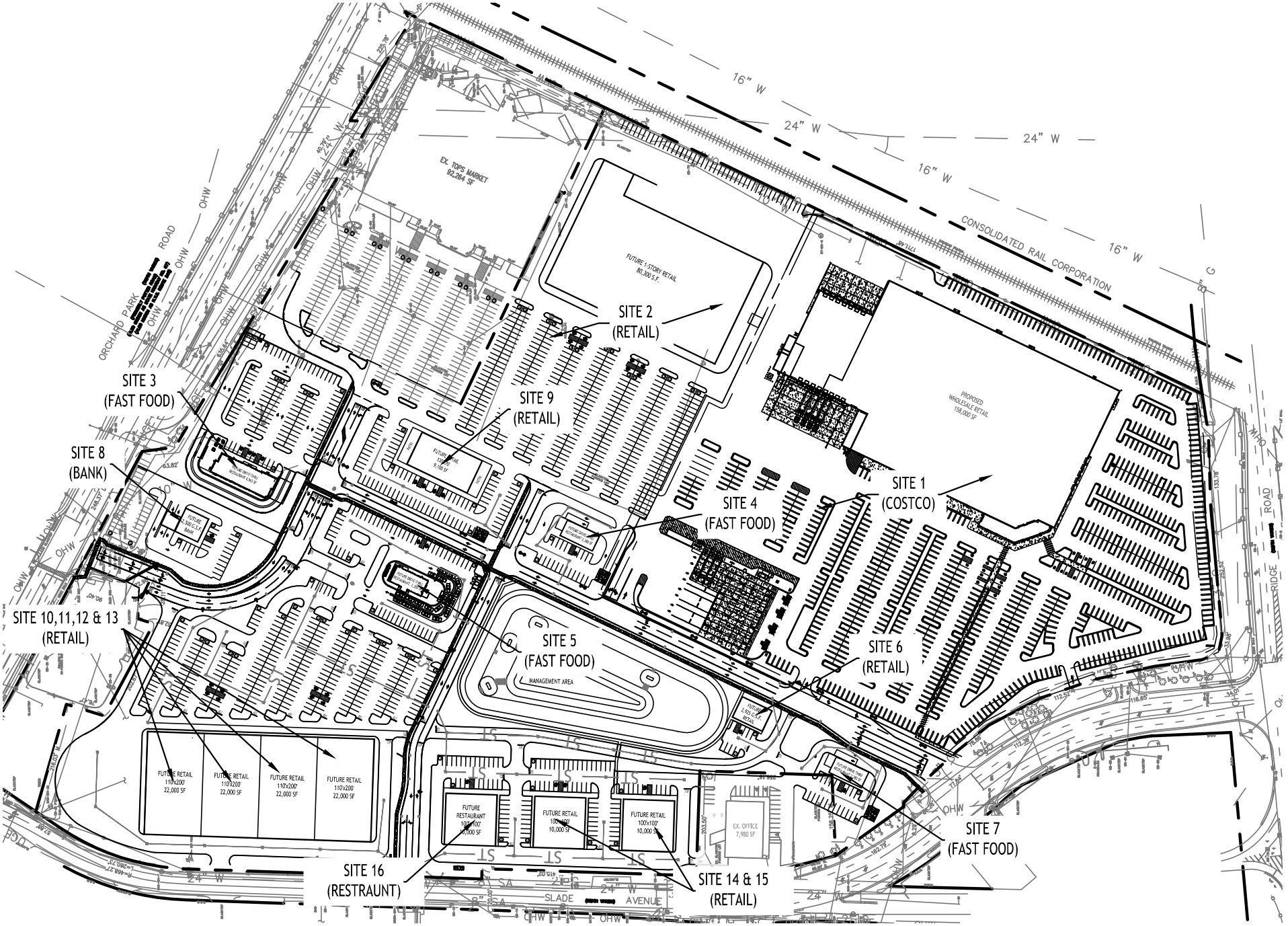
Peak Sanitary Flow = 240,462 gpd = 167.0 gpm

4:1 offset flow per NYSDEC requirements = 167.0 x 4 = 667.9 gpm req'd

Required Infiltration and Inflow Mitigation:

Mitigation Credit = $2.40 / gpd of average daily demand

Mitigation Agreement Amount = $146,946.00



SANITARY BREAKDOWN MAP

N

SCALE: 1"=250'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

250 0 250 500Ft.

250'

CARMINA WOOD DESIGN
80 SILO CITY ROW, SUITE 100
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Sanitary Sewage Demand Calculations:

Site 1 (Costco)									
0.1	gal/d/sf	x	158,000	sf	=	15,800	gpd		*use 0.1 gallons per sq. ft. per day (shopping center)
Site 2 (Retail)									
0.1	gal/d/sf	x	83,000	sf	=	8,300	gpd		*use 0.1 gallons per sq. ft. per day (shopping center)
Site 3 (Fast Food)									
500	gal/d/wind.	x	1	wind.	=	500	gpd		*use 500 gallons per drive thru window per day
25	gal/d/seat	x	50	seats	=	1,250	gpd		*use 25 gallons per seat per day (fast food)
Site 4 (Fast Food)									
500	gal/d/wind.	x	1	wind.	=	500	gpd		*use 500 gallons per drive thru window per day
25	gal/d/seat	x	50	seats	=	1,250	gpd		*use 25 gallons per seat per day (fast food)
Site 5 (Fast Food)									
500	gal/d/wind.	x	1	wind.	=	500	gpd		*use 500 gallons per drive thru window per day
25	gal/d/seat	x	60	seats	=	1,500	gpd		*use 25 gallons per seat per day (fast food)
Site 6 (Retail)									
0.1	gal/d/sf	x	2,925	sf	=	293	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 7 (Fast Food)									
500	gal/d/wind.	x	1	wind.	=	500	gpd		*use 500 gallons per drive thru window per day
25	gal/d/seat	x	62	seats	=	1,550	gpd		*use 25 gallons per seat per day (fast food)
Site 8 (Bank)									
15	gal/d/Employee	x	5	Employ.	=	75	gpd		*use 15 gallons per Employee per day
Site 9 (Retail)									
0.1	gal/d/sf	x	9,100	sf	=	910	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 10 (Retail)									
0.1	gal/d/sf	x	22,000	sf	=	2,200	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 11 (Retail)									
0.1	gal/d/sf	x	22,000	sf	=	2,200	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 12 (Retail)									
0.1	gal/d/sf	x	22,000	sf	=	2,200	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 13 (Retail)									
0.1	gal/d/sf	x	22,000	sf	=	2,200	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 14 (Retail)									
0.1	gal/d/sf	x	10,000	sf	=	1,000	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 15 (Retail)									
0.1	gal/d/sf	x	10,000	sf	=	1,000	gpd		*use 0.1 gallons per sq. ft. per day (retail)
Site 16 (Restraunt)									
35.0	gal/d/seat	x	500	seats	=	17,500	gpd		*use 35 gallons per seat per day (restraunt)
Total Site Sanitary Demand:					=	61,228	gpd		

CARMINA WOOD DESIGN
80 SILO CITY ROW, SUITE 100
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 24-4113 Date: 7/13/2026
Project Name: West Seneca Exchange
Project Address: Orchard Park Road West Seneca, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 3 of 3

Water Demand Calculations (domestic):

Proposed Shopping Center Development

61,228 gpd x 1.1 = 67,350 gpd *use 110% of sewage demand

*use 1.8 peaking factor and assume a 12 hour day

67,350 gpm x 1day/12hr x 1hr/60min = 93.54 gpm

93.54 gpm x 1.8 = 168.38 gpm Q_{peak}

Headlosses:

Q_{peak} = 168.38 gpm
Pipe = 8 inch Polyethylene C = 140
Length = 50 LF (approx. distance from tap to RPZ)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(50)(27.89)^{1.85}}{(140)^{1.85}\ (8)^{4.866}} = 0.03 \text{ ft} = 0.01 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss through meter = 1 psi
Loss through RPZ = 12 psi
Total Losses = 13.0 psi
Static Pressure = 90 psi (per ECWA)
Residual Pressure Following RPZ = 40 - 13.0 = 77.0 psi (available after rpz & meter)

Residual Pressure 30" above 2nd Floor
Δ elev = 15 ft = 6.50 psi
Residual Pressure 30" above 2nd Floor = 70.5 psi *

Water Demand Calculations (fire):

Proposed Shopping Center Development

Q = 1,000 gpd

Headlosses:

Q_{peak} = 1168 gpm
Pipe = 10 inch C-900 PVC C = 140
Length = 1,300 LF (approx. distance from RPZ to farthest hydrant)

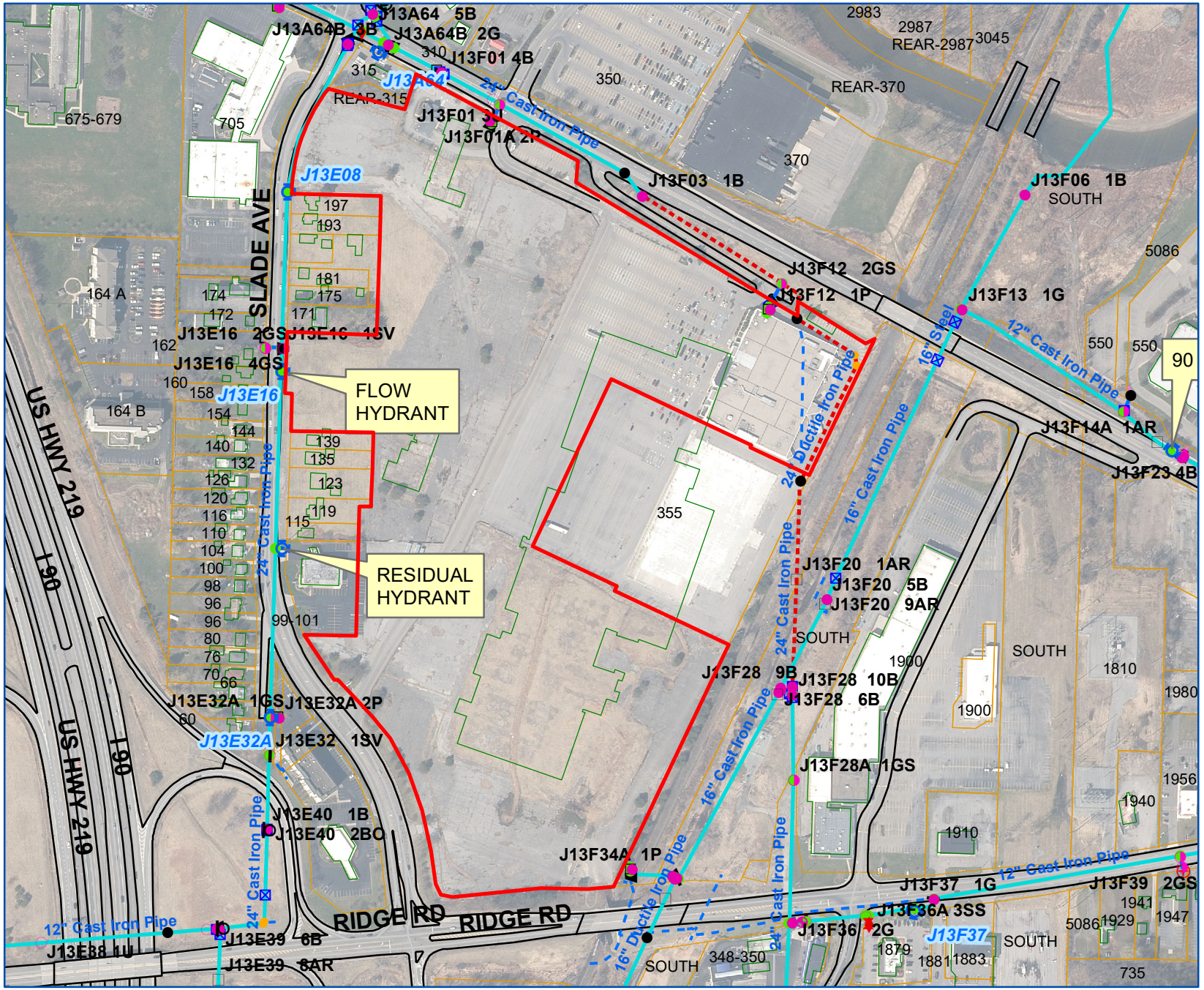
$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(1300)(1168)^{1.85}}{(140)^{1.85}\ (8)^{4.866}} = 9.36 \text{ ft} = 4.05 \text{ psi}$$

Δ elev = 4 ft = 1.73 psi

Static Pressure after RPZ = 77.0 psi
Residual Pressure at hydrant = 77 - 5.8 = 71.2 psi

Hydrant Flow Test Data

SLADE AVE & RIDGE RD., WSTN



ARM Hydrant Flow Test Inquiry -- Hydrant: J13E24 Test Date/Time: 7/25/2019 14:15 CHI095-B
Address: 115 SLADE AVE Side: E Location: 2ND N/O RIDGE RD
W SENECA
Size of Main/Branch: 24"/6" Fire District: 68024 FIRE DIST 5 Water District: 044 ECWA AREA-WEST SENECA

Performed By: BPS/CHM Comments: HYDRANT FLOW TEST REQUESTED BY THOMAS YAGER, ISO
PHONE: 716-207-4967; EMAIL: TYAGER@ISO.COM

CW #40336

Dischrge Coef: .90 Elvtn Usgs(ft): Static(psi): 90 Residual(psi): 84 Required Residual Pressure(psi): 20
Gallons Used..: 7,140 Total Flow(gpm): 2,372 Flow at Reqd Resid Pressure: 8,939
Flow Hydrants:

C	Flow Hyd	Flow Hydrant Address	Main/Brnch	Nzle	Size	Pitot	Flow	Comments
_	J13 E16	OP 160 SLADE AVE	24"/6"	1:	2.50	50.0	1,186	
		3RD HYD N/O RIDGE RD		2:	2.50	50.0	1,186	
				3:			Tot Flow: 2,372	

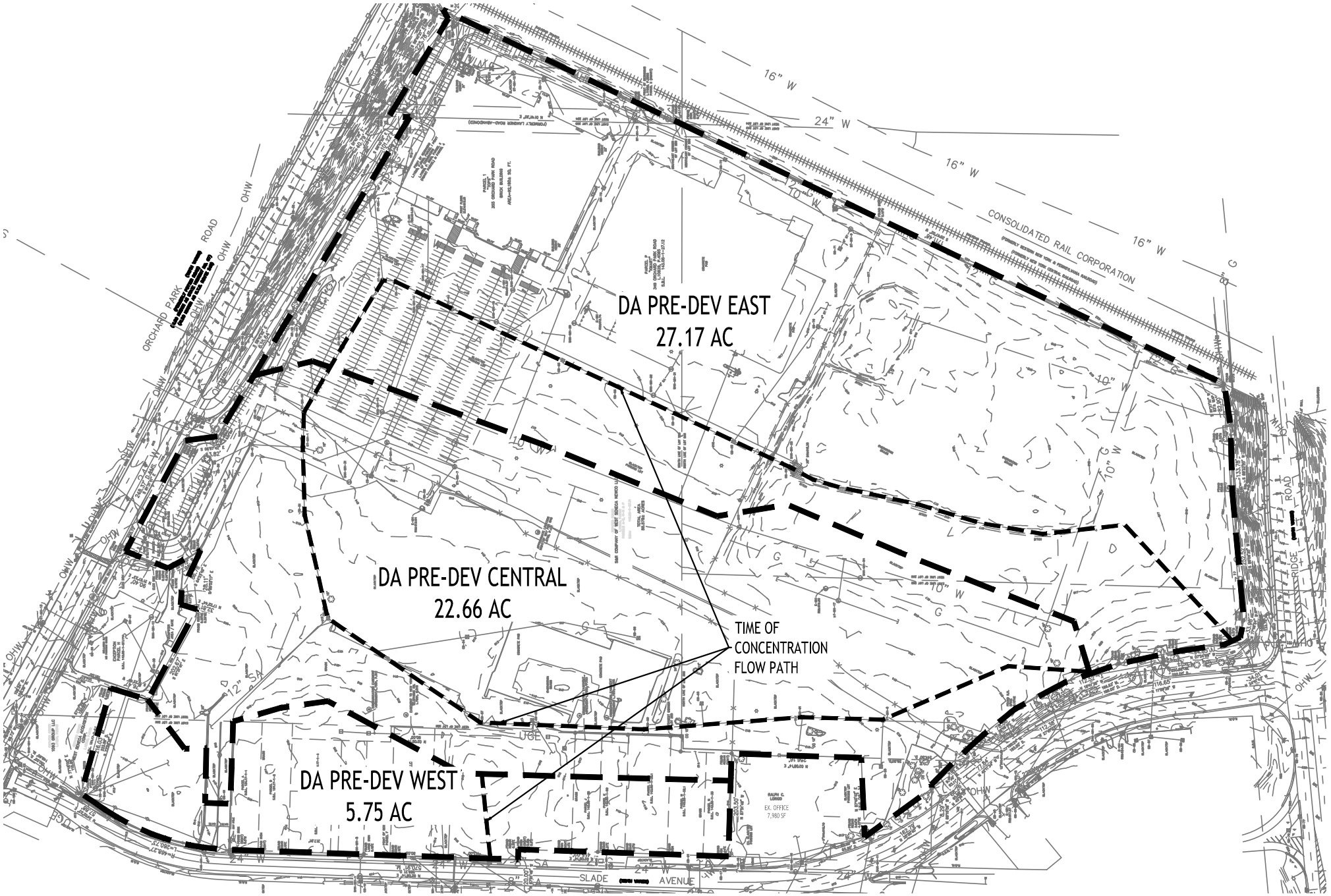
Bottom

I=Flow Hydrant Inquiry
ENTER=Continue F3=Exit F6=Maintain Test F7=Test Hydrant Inquiry F15=Print Test Information

Appendix B

Storm Sewer System Drainage Calculations

Existing Runoff



PRE-DEV DRAINAGE MAP

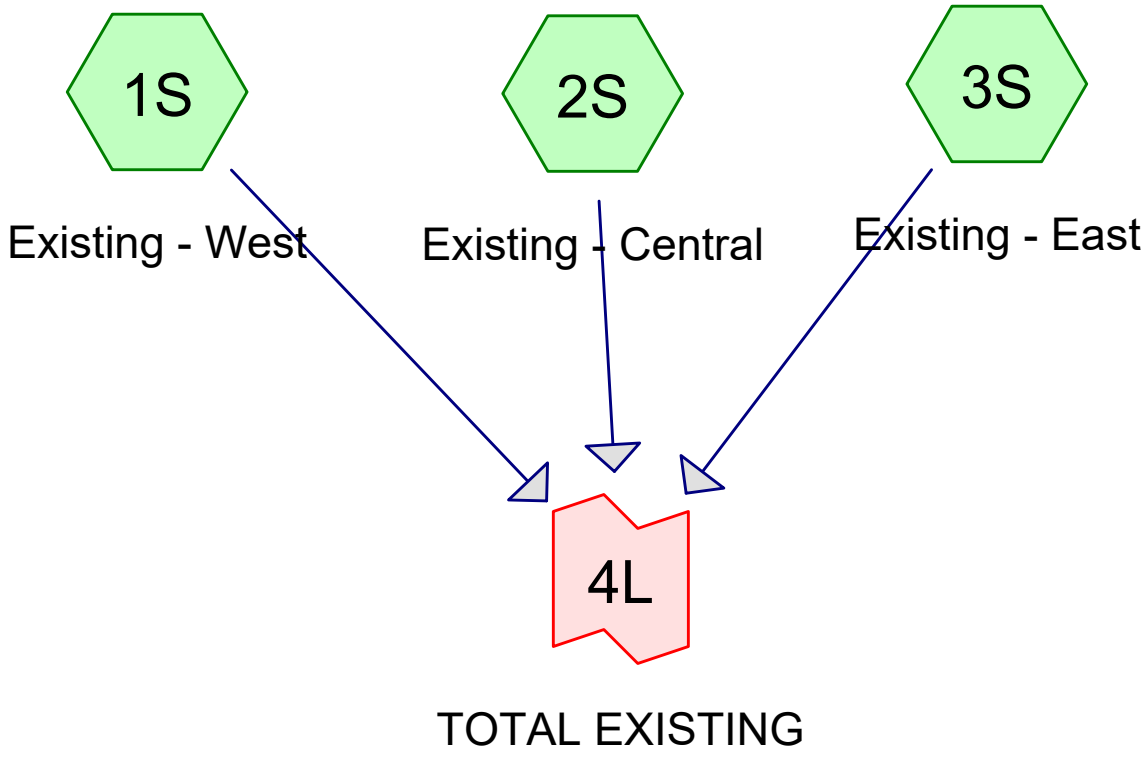
N

SCALE: 1"=200'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

250 0 250 500Ft.

250'



Subcat Reach Pond Link

Routing Diagram for 24-4113 WEST SENECA EXCHANGE EXISTING
Prepared by Carmina Wood Design, Printed 7/13/2026
HydroCAD® 10.20-7a s/n 05019 © 2025 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
7.850	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S)
46.500	98	Paved parking, HSG D (2S, 3S)
1.250	98	Water Surface, HSG D (1S)
55.600	**95**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
55.600	HSG D	1S, 2S, 3S
0.000	Other	
55.600		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	7.850	0.000	7.850	>75% Grass cover, Good	1S, 2S, 3S
0.000	0.000	0.000	46.500	0.000	46.500	Paved parking	2S, 3S
0.000	0.000	0.000	1.250	0.000	1.250	Water Surface	1S
0.000	**0.000**	**0.000**	**55.600**	**0.000**	**55.600**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	2S	0.00	0.00	745.0	0.0037	0.025	0.0	36.0	0.0	
2	2S	0.00	0.00	267.0	0.0015	0.025	0.0	42.0	0.0	
3	2S	0.00	0.00	300.0	0.0070	0.025	0.0	54.0	0.0	
4	3S	0.00	0.00	745.0	0.0037	0.025	0.0	36.0	0.0	
5	3S	0.00	0.00	267.0	0.0015	0.025	0.0	42.0	0.0	
6	3S	0.00	0.00	300.0	0.0070	0.025	0.0	54.0	0.0	

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Existing - West Runoff Area=5.700 ac 21.93% Impervious Runoff Depth=0.65"
Flow Length=160' Slope=0.0280 '/' Tc=20.6 min CN=84 Runoff=3.92 cfs 0.310 af

Subcatchment2S: Existing - Central Runoff Area=22.800 ac 87.72% Impervious Runoff Depth=1.45"
Flow Length=2,297' Tc=12.7 min CN=96 Runoff=44.18 cfs 2.753 af

Subcatchment3S: Existing - East Runoff Area=27.100 ac 97.79% Impervious Runoff Depth=1.65"
Flow Length=2,297' Tc=12.7 min CN=98 Runoff=56.79 cfs 3.716 af

Link 4L: TOTAL EXISTING Inflow=103.89 cfs 6.779 af
Primary=103.89 cfs 6.779 af

Total Runoff Area = 55.600 ac Runoff Volume = 6.779 af Average Runoff Depth = 1.46"
14.12% Pervious = 7.850 ac 85.88% Impervious = 47.750 ac

Summary for Subcatchment 1S: Existing - West

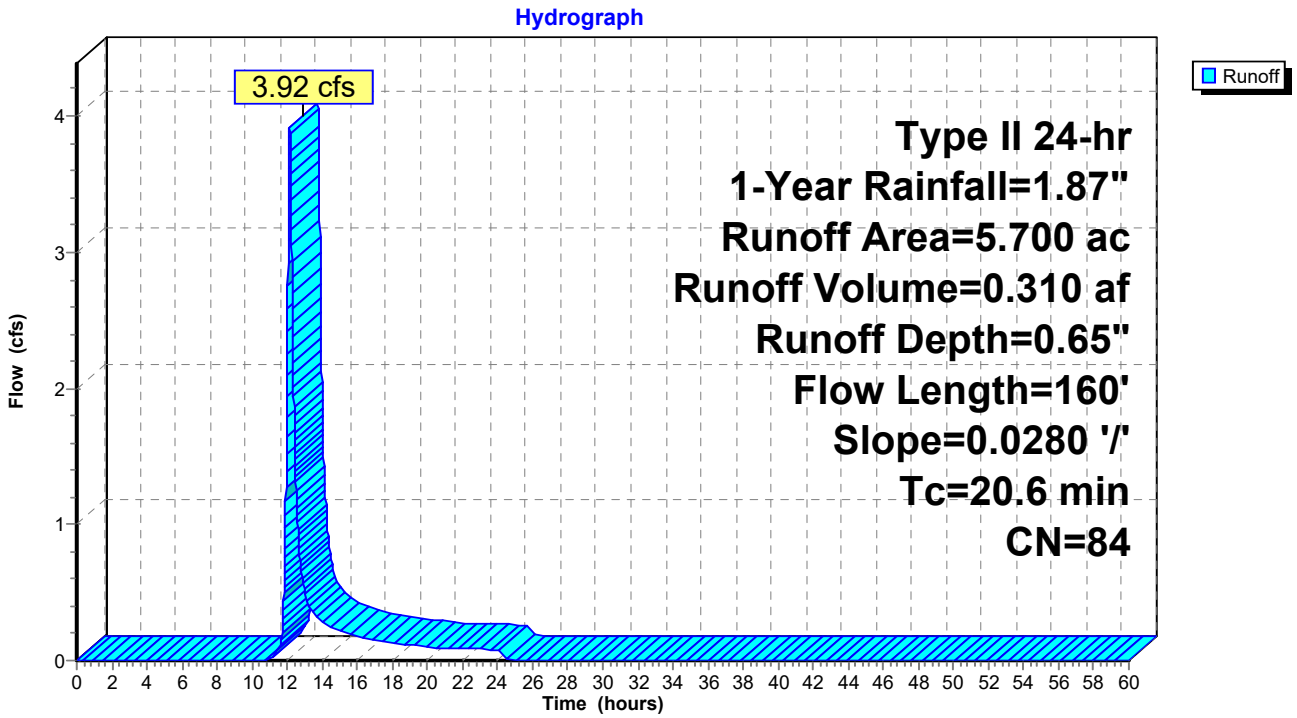
Runoff = 3.92 cfs @ 12.15 hrs, Volume= 0.310 af, Depth= 0.65"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
1.250	98	Water Surface, HSG D
4.450	80	>75% Grass cover, Good, HSG D
5.700	84	Weighted Average
4.450		78.07% Pervious Area
1.250		21.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	160	0.0280	0.13		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing - West



Summary for Subcatchment 2S: Existing - Central

[47] Hint: Peak is 209% of capacity of segment #4
[47] Hint: Peak is 218% of capacity of segment #5

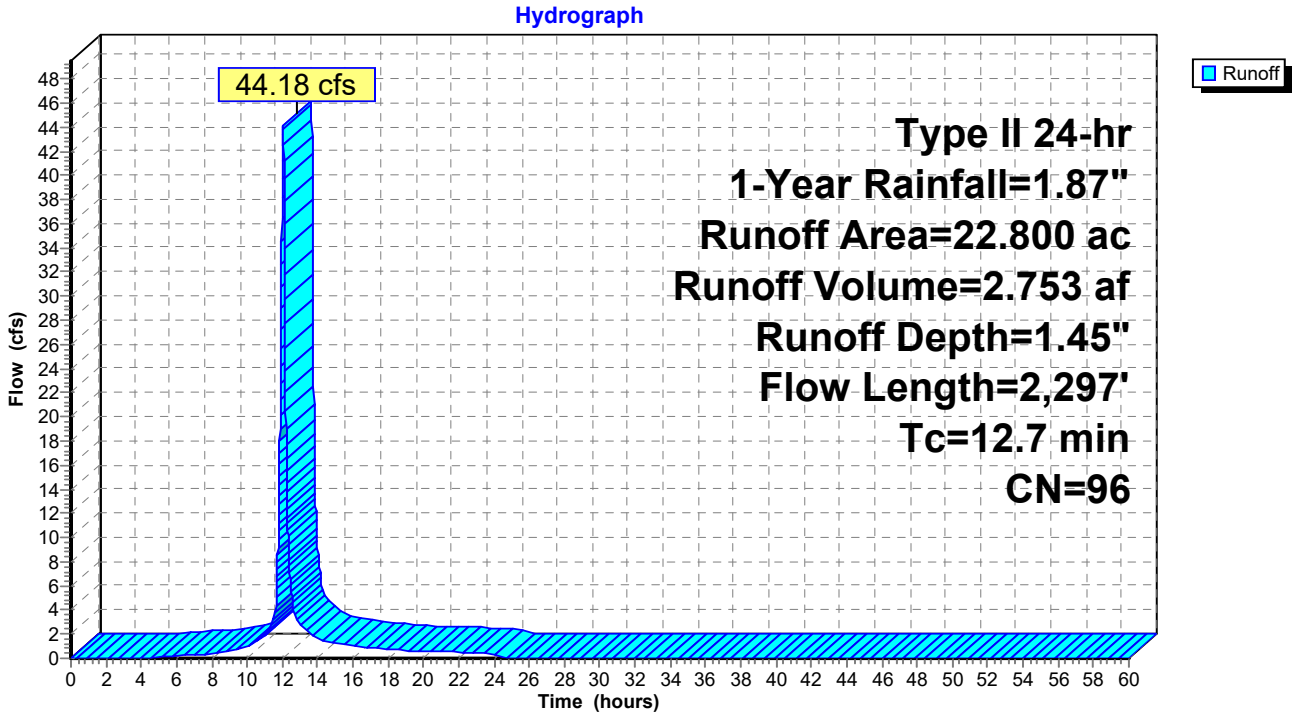
Runoff = 44.18 cfs @ 12.04 hrs, Volume= 2.753 af, Depth= 1.45"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
20.000	98	Paved parking, HSG D
2.800	80	>75% Grass cover, Good, HSG D
22.800	96	Weighted Average
2.800		12.28% Pervious Area
20.000		87.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 2S: Existing - Central



Summary for Subcatchment 3S: Existing - East

[47] Hint: Peak is 269% of capacity of segment #4
[47] Hint: Peak is 280% of capacity of segment #5

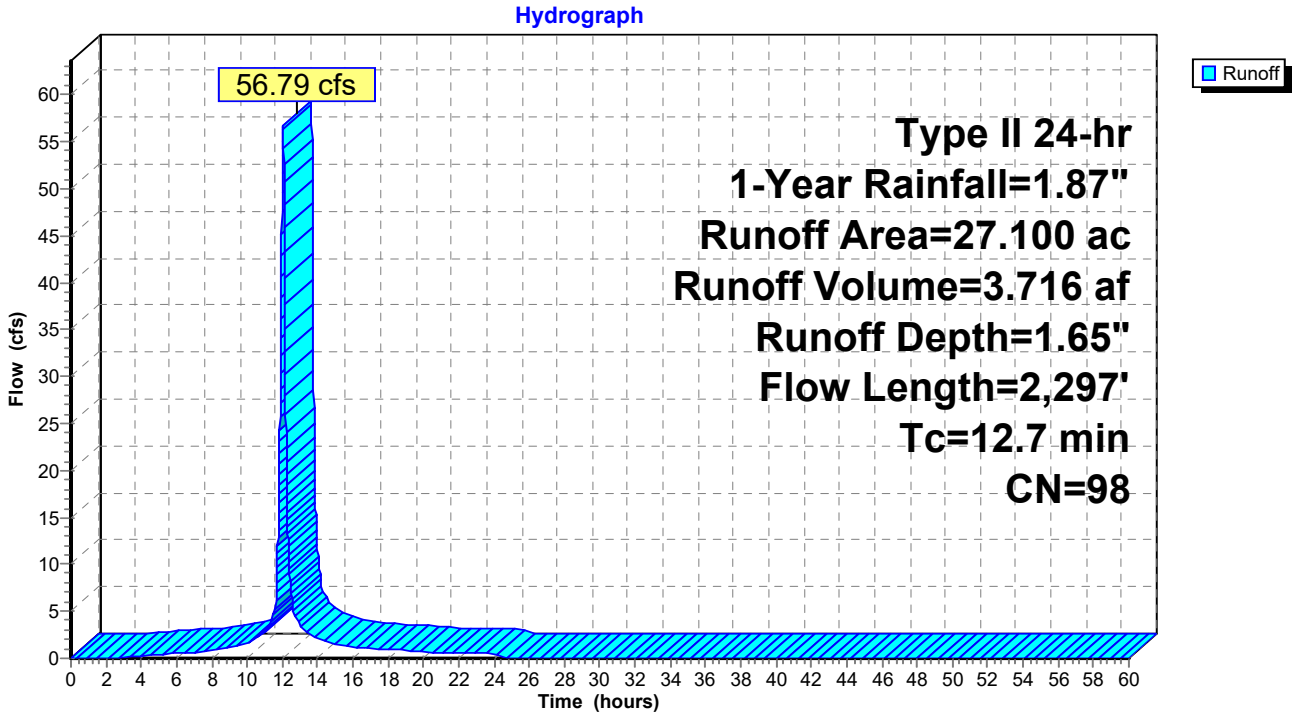
Runoff = 56.79 cfs @ 12.04 hrs, Volume= 3.716 af, Depth= 1.65"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
26.500	98	Paved parking, HSG D
0.600	80	>75% Grass cover, Good, HSG D
27.100	98	Weighted Average
0.600		2.21% Pervious Area
26.500		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 3S: Existing - East

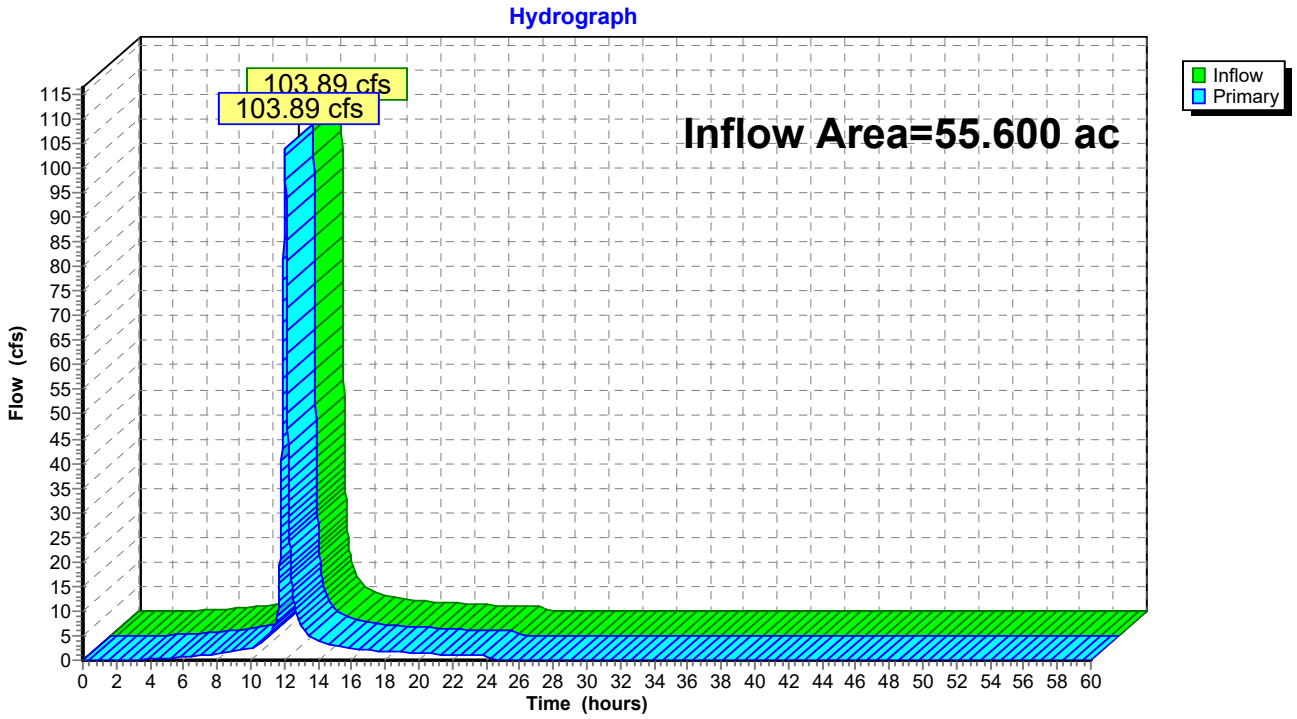


Summary for Link 4L: TOTAL EXISTING

Inflow Area = 55.600 ac, 85.88% Impervious, Inflow Depth = 1.46" for 1-Year event
Inflow = 103.89 cfs @ 12.04 hrs, Volume= 6.779 af
Primary = 103.89 cfs @ 12.04 hrs, Volume= 6.779 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL EXISTING



Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Existing - West Runoff Area=5.700 ac 21.93% Impervious Runoff Depth=1.63"
Flow Length=160' Slope=0.0280 '/' Tc=20.6 min CN=84 Runoff=10.17 cfs 0.775 af

Subcatchment2S: Existing - Central Runoff Area=22.800 ac 87.72% Impervious Runoff Depth=2.69"
Flow Length=2,297' Tc=12.7 min CN=96 Runoff=79.12 cfs 5.111 af

Subcatchment3S: Existing - East Runoff Area=27.100 ac 97.79% Impervious Runoff Depth=2.91"
Flow Length=2,297' Tc=12.7 min CN=98 Runoff=97.41 cfs 6.567 af

Link 4L: TOTAL EXISTING Inflow=184.66 cfs 12.453 af
Primary=184.66 cfs 12.453 af

Total Runoff Area = 55.600 ac Runoff Volume = 12.453 af Average Runoff Depth = 2.69"
14.12% Pervious = 7.850 ac 85.88% Impervious = 47.750 ac

Summary for Subcatchment 1S: Existing - West

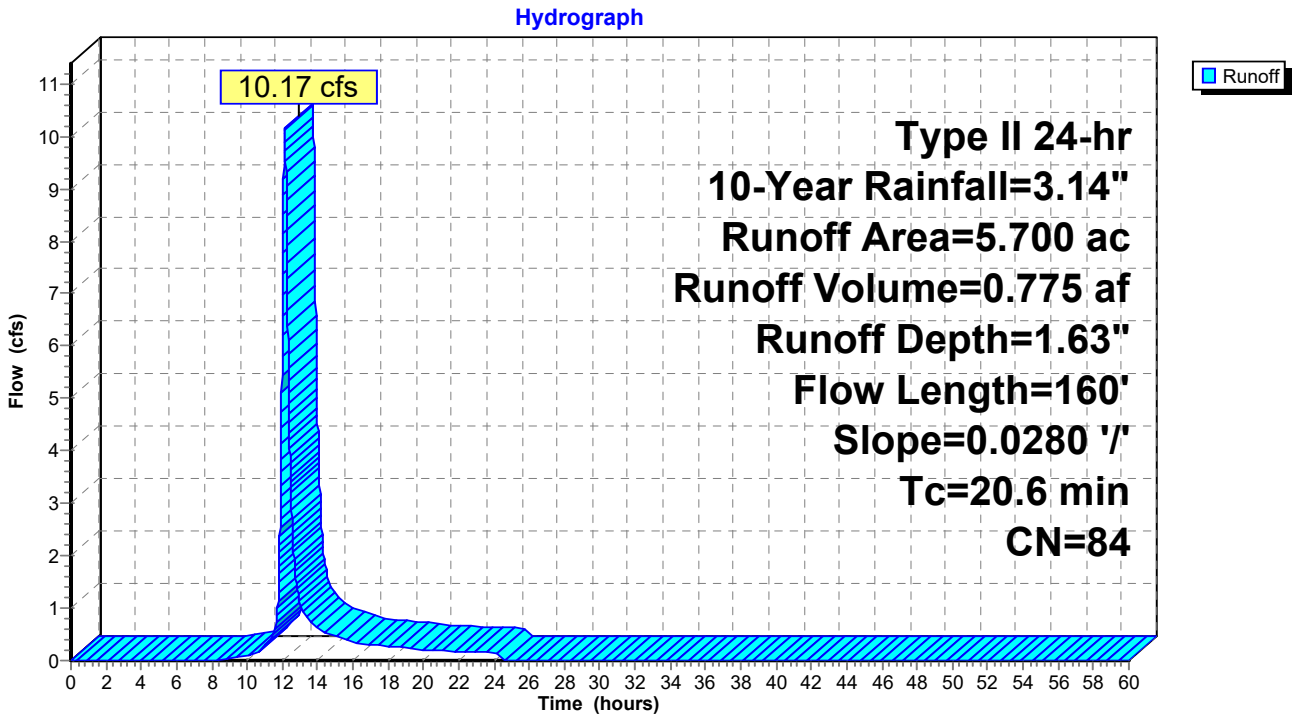
Runoff = 10.17 cfs @ 12.13 hrs, Volume= 0.775 af, Depth= 1.63"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
1.250	98	Water Surface, HSG D
4.450	80	>75% Grass cover, Good, HSG D
5.700	84	Weighted Average
4.450		78.07% Pervious Area
1.250		21.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	160	0.0280	0.13		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing - West



Summary for Subcatchment 2S: Existing - Central

[47] Hint: Peak is 375% of capacity of segment #4
[47] Hint: Peak is 390% of capacity of segment #5

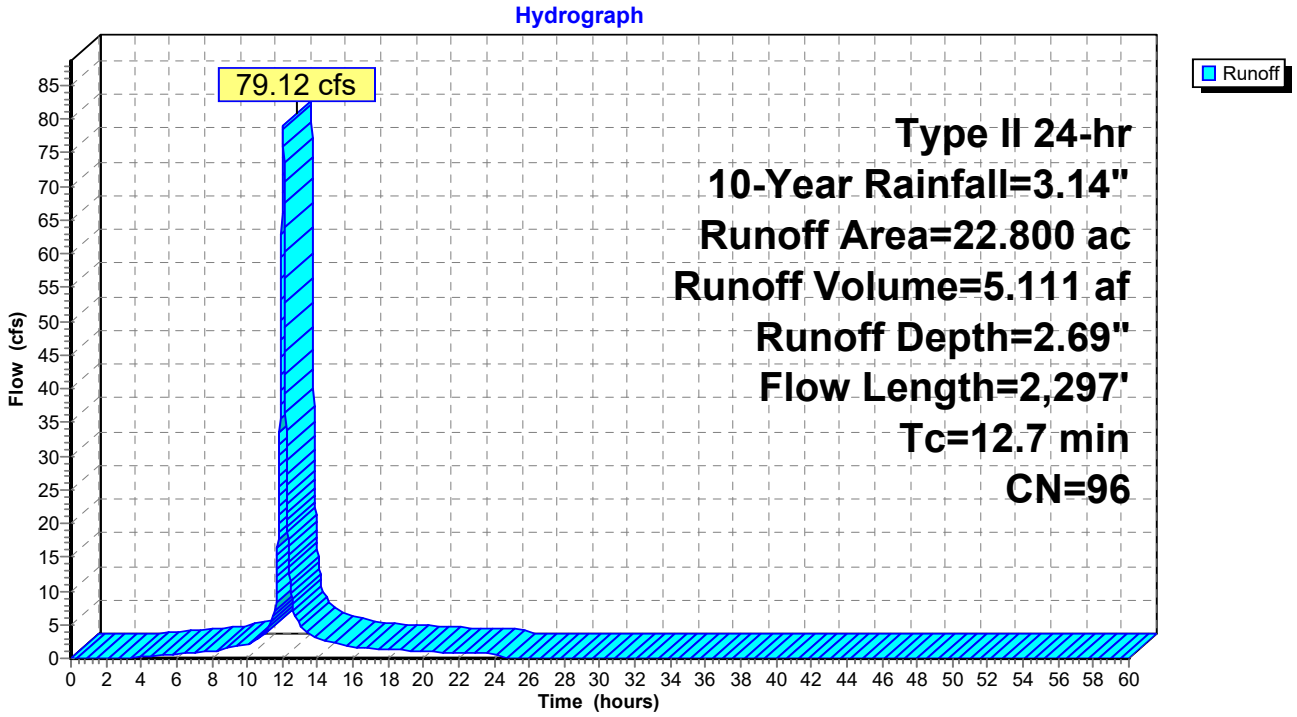
Runoff = 79.12 cfs @ 12.04 hrs, Volume= 5.111 af, Depth= 2.69"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
20.000	98	Paved parking, HSG D
2.800	80	>75% Grass cover, Good, HSG D
22.800	96	Weighted Average
2.800		12.28% Pervious Area
20.000		87.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 2S: Existing - Central



Summary for Subcatchment 3S: Existing - East

[47] Hint: Peak is 462% of capacity of segment #4
[47] Hint: Peak is 481% of capacity of segment #5
[47] Hint: Peak is 114% of capacity of segment #6

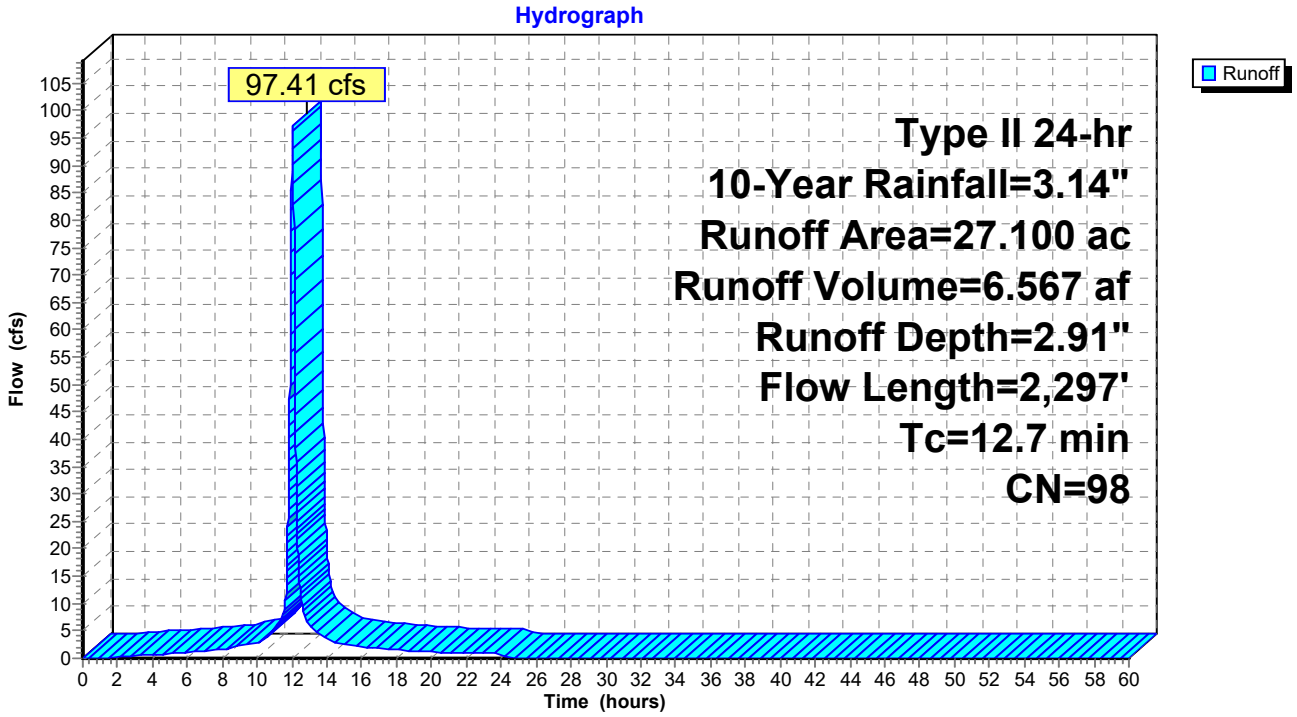
Runoff = 97.41 cfs @ 12.04 hrs, Volume= 6.567 af, Depth= 2.91"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
26.500	98	Paved parking, HSG D
0.600	80	>75% Grass cover, Good, HSG D
27.100	98	Weighted Average
0.600		2.21% Pervious Area
26.500		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 3S: Existing - East

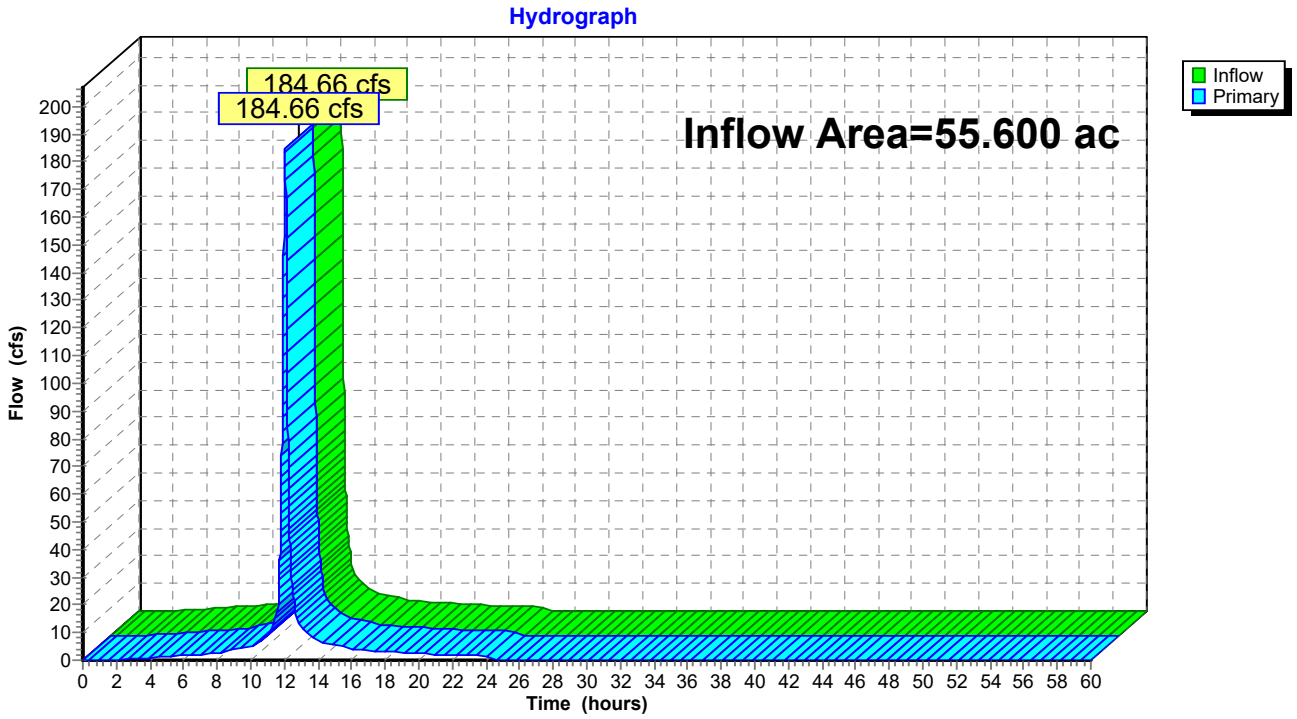


Summary for Link 4L: TOTAL EXISTING

Inflow Area = 55.600 ac, 85.88% Impervious, Inflow Depth = 2.69" for 10-Year event
Inflow = 184.66 cfs @ 12.04 hrs, Volume= 12.453 af
Primary = 184.66 cfs @ 12.04 hrs, Volume= 12.453 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL EXISTING



Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Existing - West Runoff Area=5.700 ac 21.93% Impervious Runoff Depth=2.23"
Flow Length=160' Slope=0.0280 '/' Tc=20.6 min CN=84 Runoff=13.91 cfs 1.060 af

Subcatchment2S: Existing - Central Runoff Area=22.800 ac 87.72% Impervious Runoff Depth=3.38"
Flow Length=2,297' Tc=12.7 min CN=96 Runoff=98.15 cfs 6.425 af

Subcatchment3S: Existing - East Runoff Area=27.100 ac 97.79% Impervious Runoff Depth=3.61"
Flow Length=2,297' Tc=12.7 min CN=98 Runoff=119.64 cfs 8.142 af

Link 4L: TOTAL EXISTING Inflow=229.09 cfs 15.627 af
Primary=229.09 cfs 15.627 af

Total Runoff Area = 55.600 ac Runoff Volume = 15.627 af Average Runoff Depth = 3.37"
14.12% Pervious = 7.850 ac 85.88% Impervious = 47.750 ac

Summary for Subcatchment 1S: Existing - West

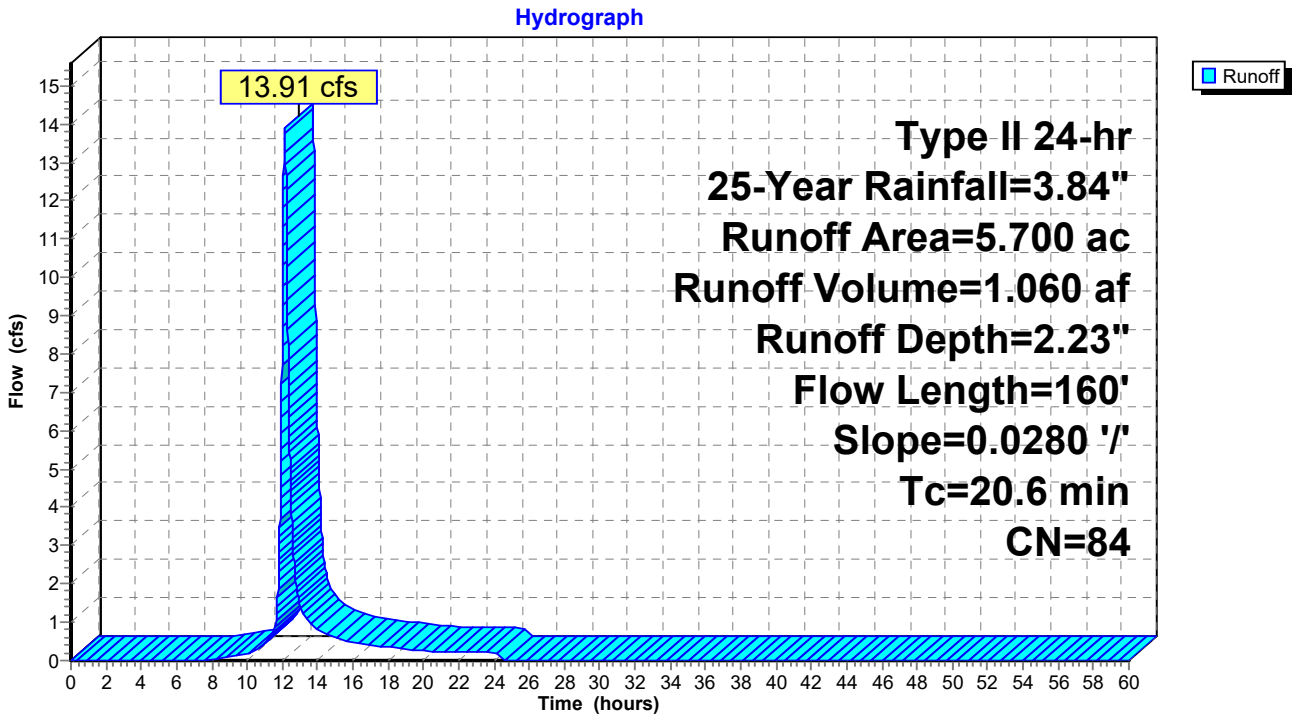
Runoff = 13.91 cfs @ 12.13 hrs, Volume= 1.060 af, Depth= 2.23"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
1.250	98	Water Surface, HSG D
4.450	80	>75% Grass cover, Good, HSG D
5.700	84	Weighted Average
4.450		78.07% Pervious Area
1.250		21.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	160	0.0280	0.13		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing - West



Summary for Subcatchment 2S: Existing - Central

[47] Hint: Peak is 465% of capacity of segment #4
[47] Hint: Peak is 484% of capacity of segment #5
[47] Hint: Peak is 115% of capacity of segment #6

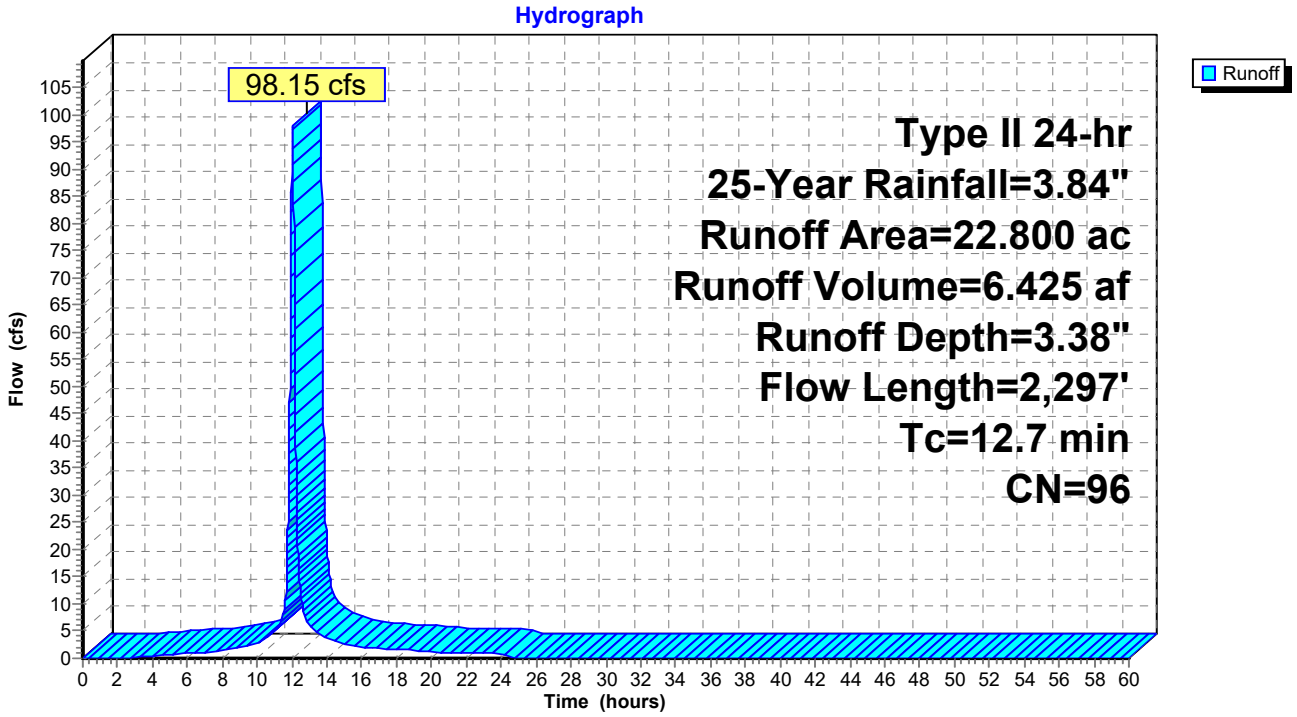
Runoff = 98.15 cfs @ 12.04 hrs, Volume= 6.425 af, Depth= 3.38"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
20.000	98	Paved parking, HSG D
2.800	80	>75% Grass cover, Good, HSG D
22.800	96	Weighted Average
2.800		12.28% Pervious Area
20.000		87.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 2S: Existing - Central



Summary for Subcatchment 3S: Existing - East

[47] Hint: Peak is 567% of capacity of segment #4
[47] Hint: Peak is 590% of capacity of segment #5
[47] Hint: Peak is 140% of capacity of segment #6

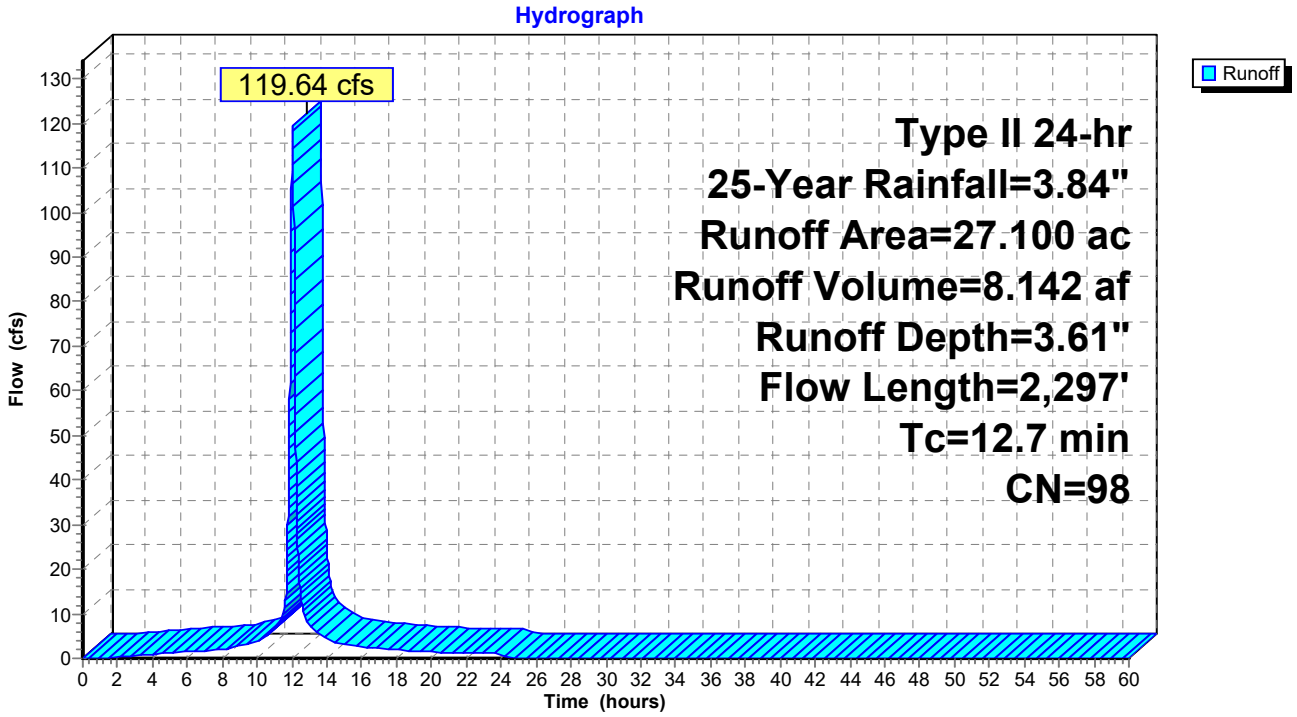
Runoff = 119.64 cfs @ 12.04 hrs, Volume= 8.142 af, Depth= 3.61"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
26.500	98	Paved parking, HSG D
0.600	80	>75% Grass cover, Good, HSG D
27.100	98	Weighted Average
0.600		2.21% Pervious Area
26.500		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 3S: Existing - East

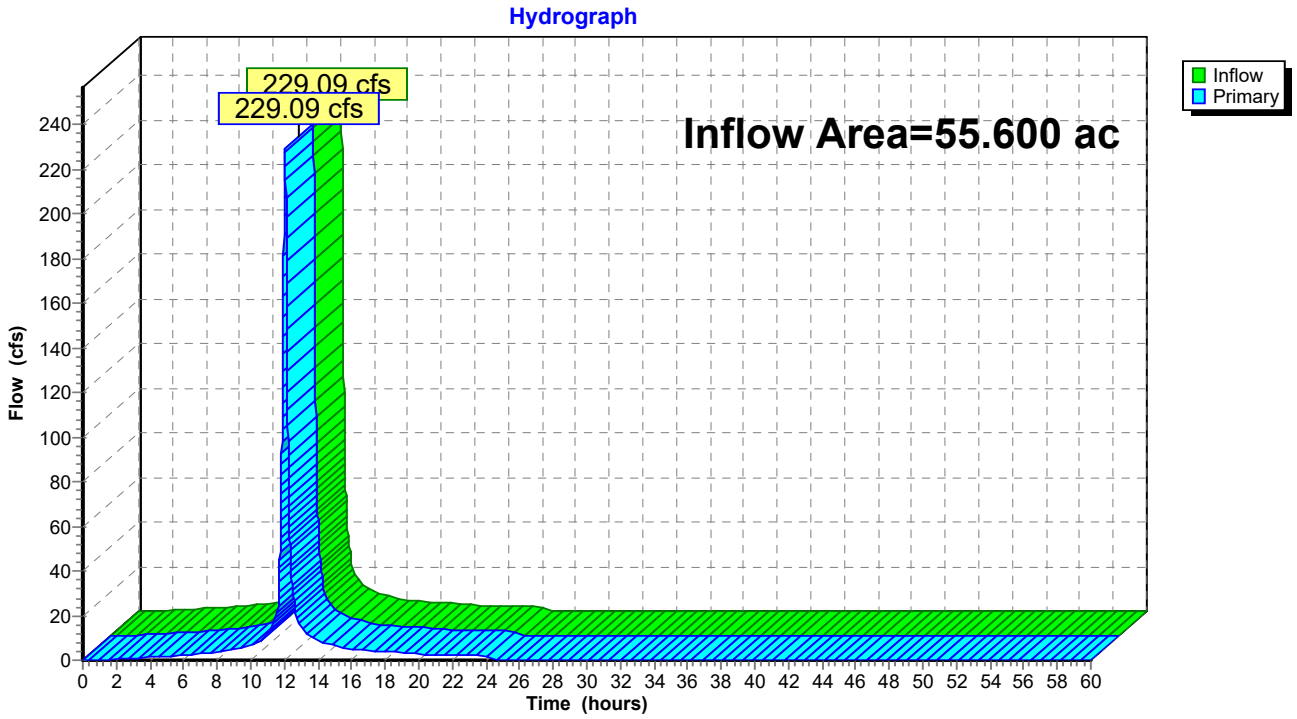


Summary for Link 4L: TOTAL EXISTING

Inflow Area = 55.600 ac, 85.88% Impervious, Inflow Depth = 3.37" for 25-Year event
Inflow = 229.09 cfs @ 12.04 hrs, Volume= 15.627 af
Primary = 229.09 cfs @ 12.04 hrs, Volume= 15.627 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL EXISTING



Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Existing - West Runoff Area=5.700 ac 21.93% Impervious Runoff Depth=3.48"
Flow Length=160' Slope=0.0280 '/' Tc=20.6 min CN=84 Runoff=21.56 cfs 1.654 af

Subcatchment2S: Existing - Central Runoff Area=22.800 ac 87.72% Impervious Runoff Depth=4.76"
Flow Length=2,297' Tc=12.7 min CN=96 Runoff=135.65 cfs 9.046 af

Subcatchment3S: Existing - East Runoff Area=27.100 ac 97.79% Impervious Runoff Depth=4.99"
Flow Length=2,297' Tc=12.7 min CN=98 Runoff=163.64 cfs 11.275 af

Link 4L: TOTAL EXISTING Inflow=317.14 cfs 21.975 af
Primary=317.14 cfs 21.975 af

Total Runoff Area = 55.600 ac Runoff Volume = 21.975 af Average Runoff Depth = 4.74"
14.12% Pervious = 7.850 ac 85.88% Impervious = 47.750 ac

Summary for Subcatchment 1S: Existing - West

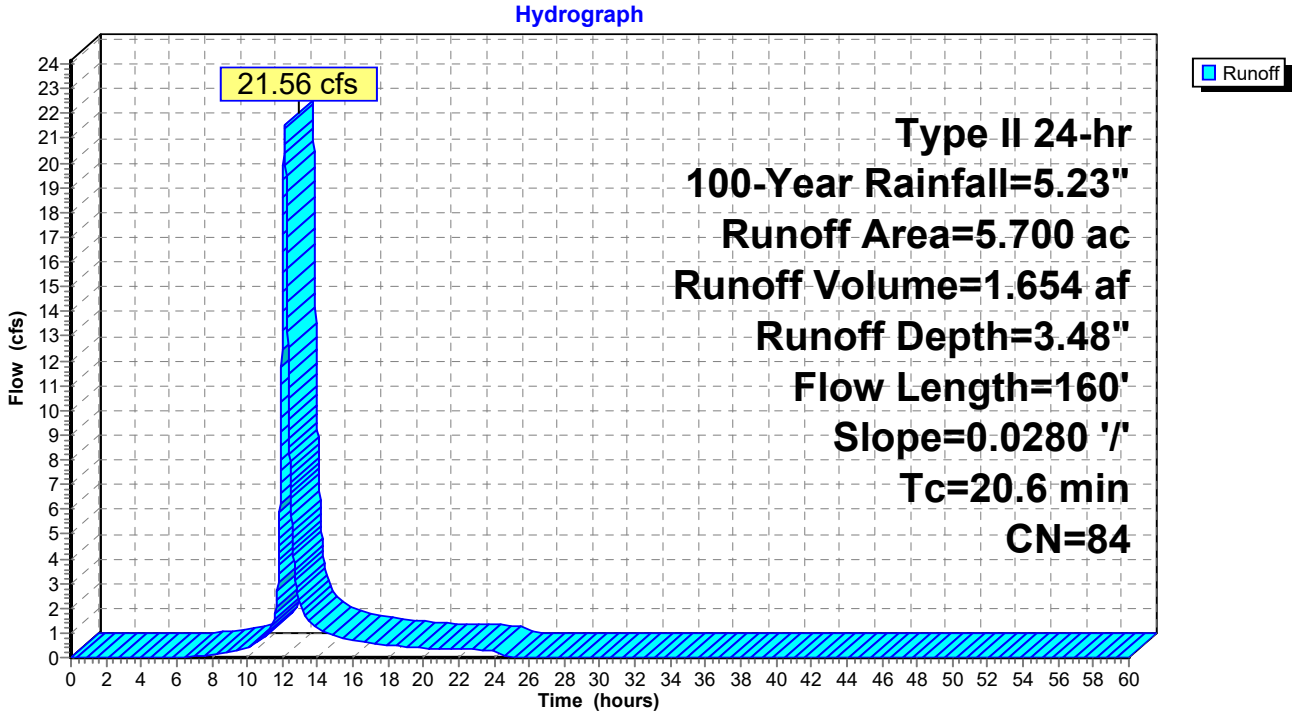
Runoff = 21.56 cfs @ 12.13 hrs, Volume= 1.654 af, Depth= 3.48"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
1.250	98	Water Surface, HSG D
4.450	80	>75% Grass cover, Good, HSG D
5.700	84	Weighted Average
4.450		78.07% Pervious Area
1.250		21.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	160	0.0280	0.13		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing - West



Summary for Subcatchment 2S: Existing - Central

[47] Hint: Peak is 103% of capacity of segment #3
[47] Hint: Peak is 643% of capacity of segment #4
[47] Hint: Peak is 669% of capacity of segment #5
[47] Hint: Peak is 159% of capacity of segment #6

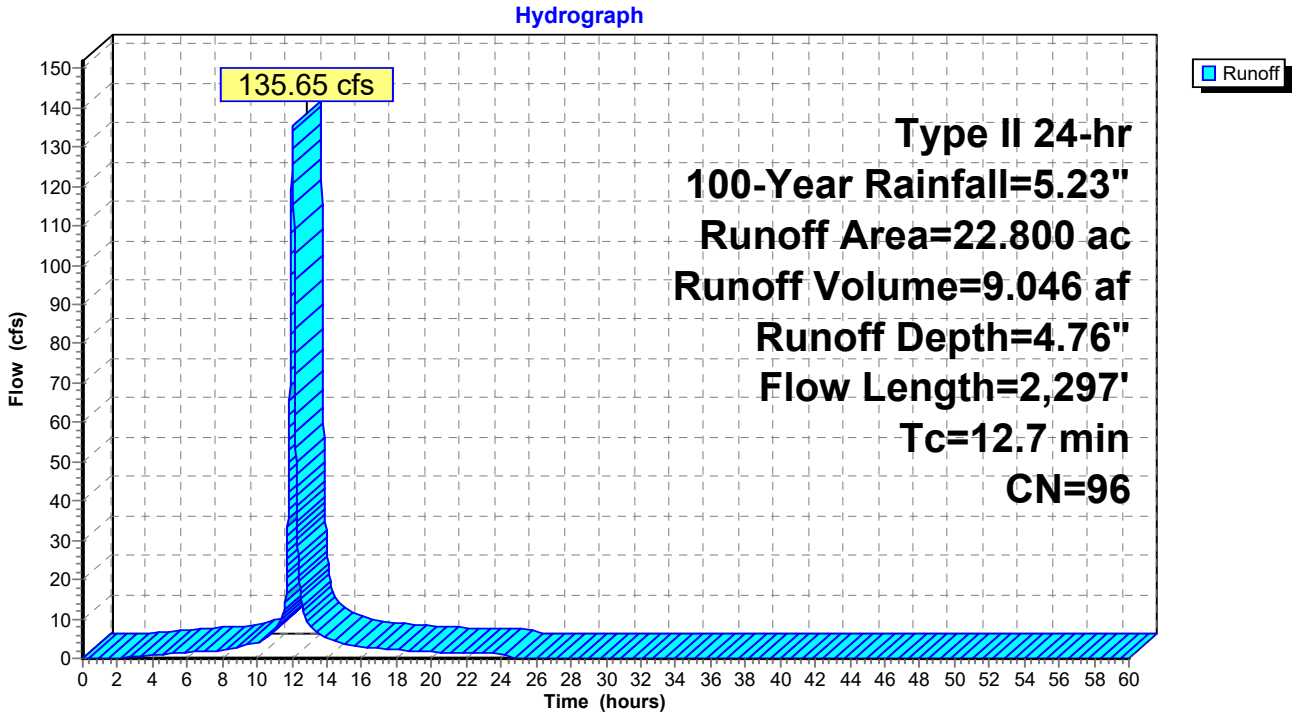
Runoff = 135.65 cfs @ 12.04 hrs, Volume= 9.046 af, Depth= 4.76"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
20.000	98	Paved parking, HSG D
2.800	80	>75% Grass cover, Good, HSG D
22.800	96	Weighted Average
2.800		12.28% Pervious Area
20.000		87.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 2S: Existing - Central



Summary for Subcatchment 3S: Existing - East

[47] Hint: Peak is 124% of capacity of segment #3
[47] Hint: Peak is 776% of capacity of segment #4
[47] Hint: Peak is 808% of capacity of segment #5
[47] Hint: Peak is 191% of capacity of segment #6

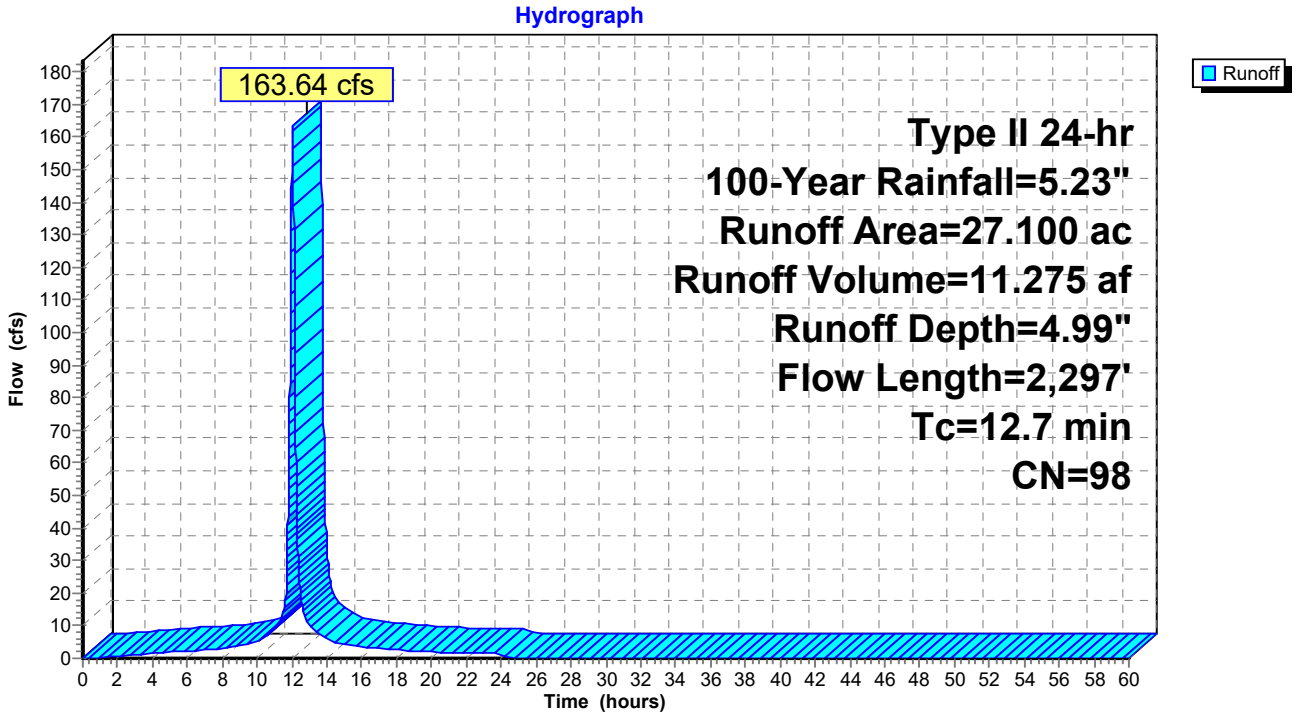
Runoff = 163.64 cfs @ 12.04 hrs, Volume= 11.275 af, Depth= 4.99"
Routed to Link 4L : TOTAL EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
26.500	98	Paved parking, HSG D
0.600	80	>75% Grass cover, Good, HSG D
27.100	98	Weighted Average
0.600		2.21% Pervious Area
26.500		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	300	0.0160	1.39		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	175	0.0160	2.57		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
0.8	510	0.0110	11.00	132.00	**Channel Flow, ditch/swale** Area= 12.0 sf Perim= 10.0' r= 1.20' n= 0.016 Asphalt, rough
4.2	745	0.0037	2.98	21.10	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
2.1	267	0.0015	2.11	20.26	**Pipe Channel, 42" Pipe** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.025 Corrugated metal
0.9	300	0.0070	5.38	85.55	**Pipe Channel, 54" Pipe** 54.0" Round Area= 15.9 sf Perim= 14.1' r= 1.13' n= 0.025 Corrugated metal
12.7	2,297	Total			

Subcatchment 3S: Existing - East

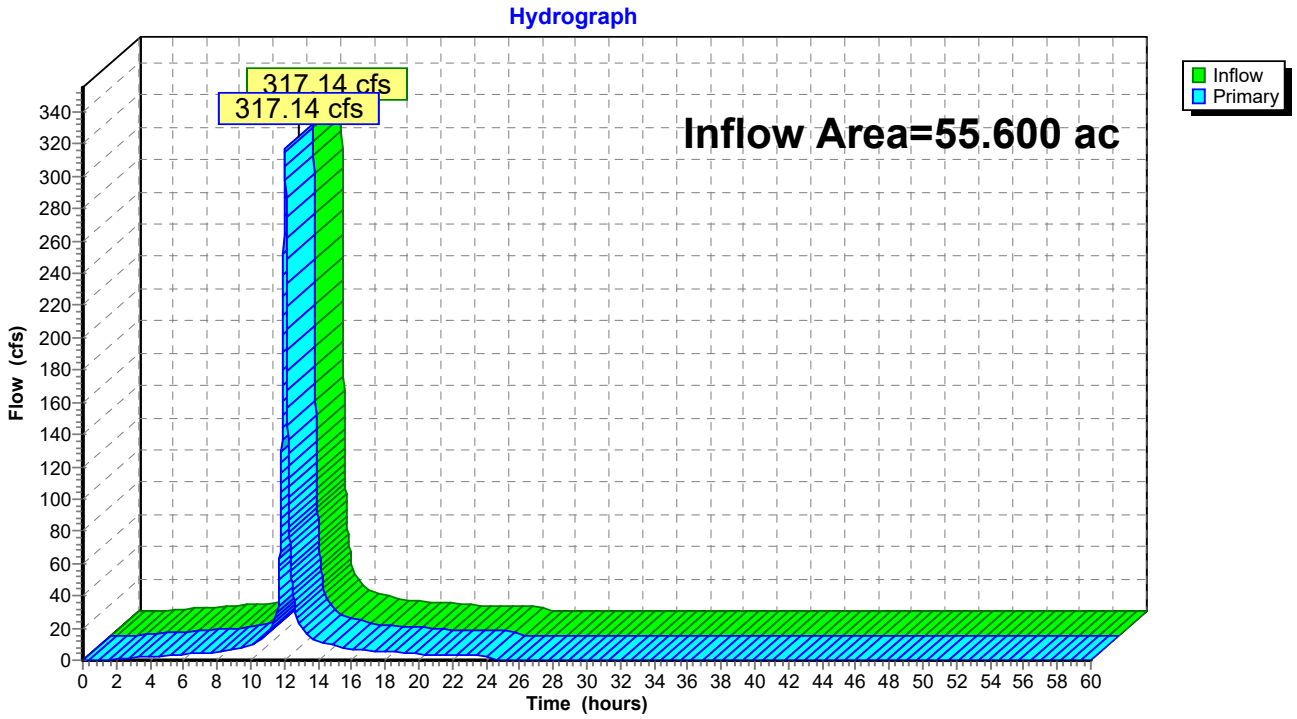


Summary for Link 4L: TOTAL EXISTING

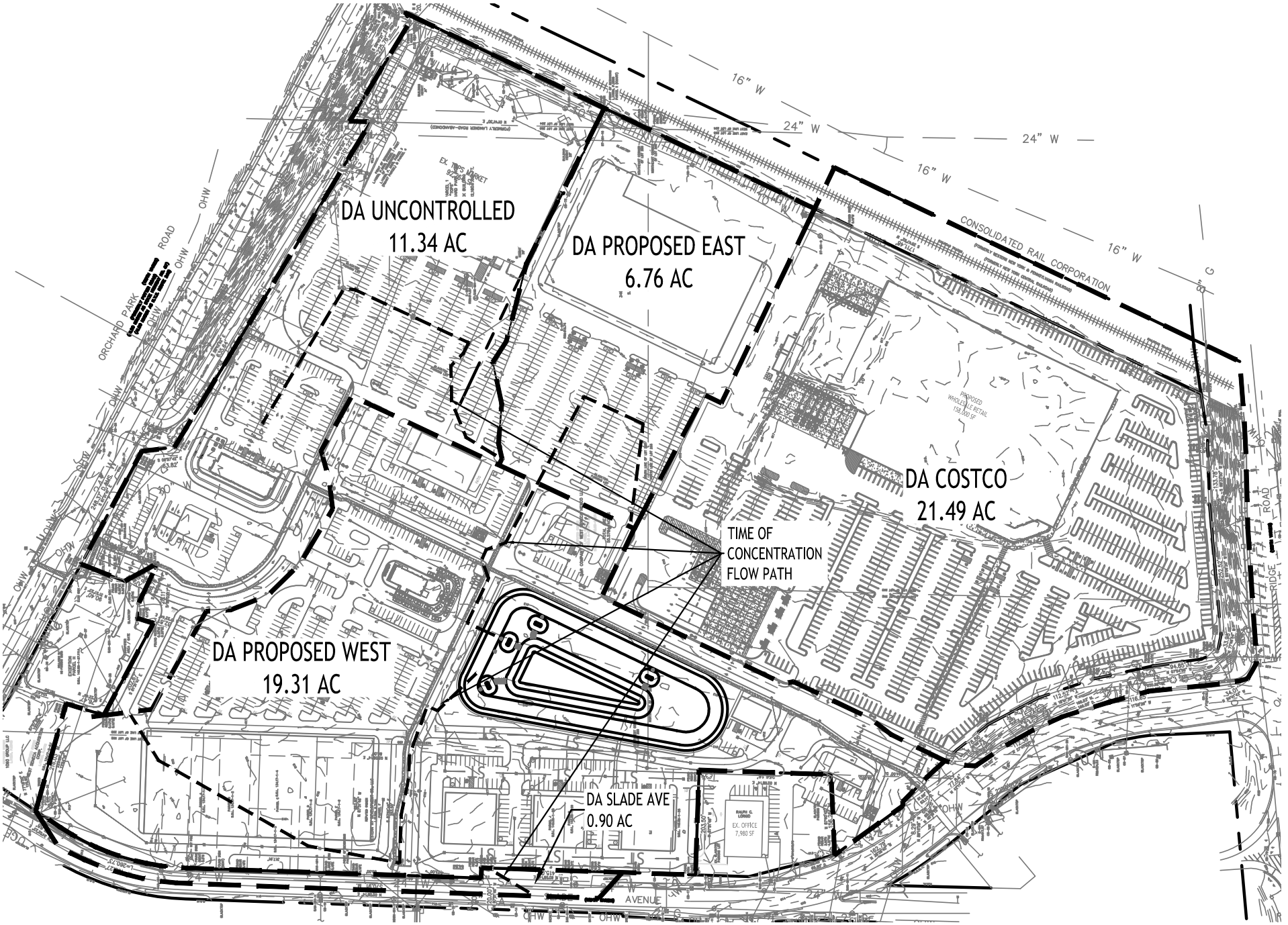
Inflow Area = 55.600 ac, 85.88% Impervious, Inflow Depth = 4.74" for 100-Year event
Inflow = 317.14 cfs @ 12.04 hrs, Volume= 21.975 af
Primary = 317.14 cfs @ 12.04 hrs, Volume= 21.975 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL EXISTING



Proposed Runoff



POST-DEV DRAINAGE MAP

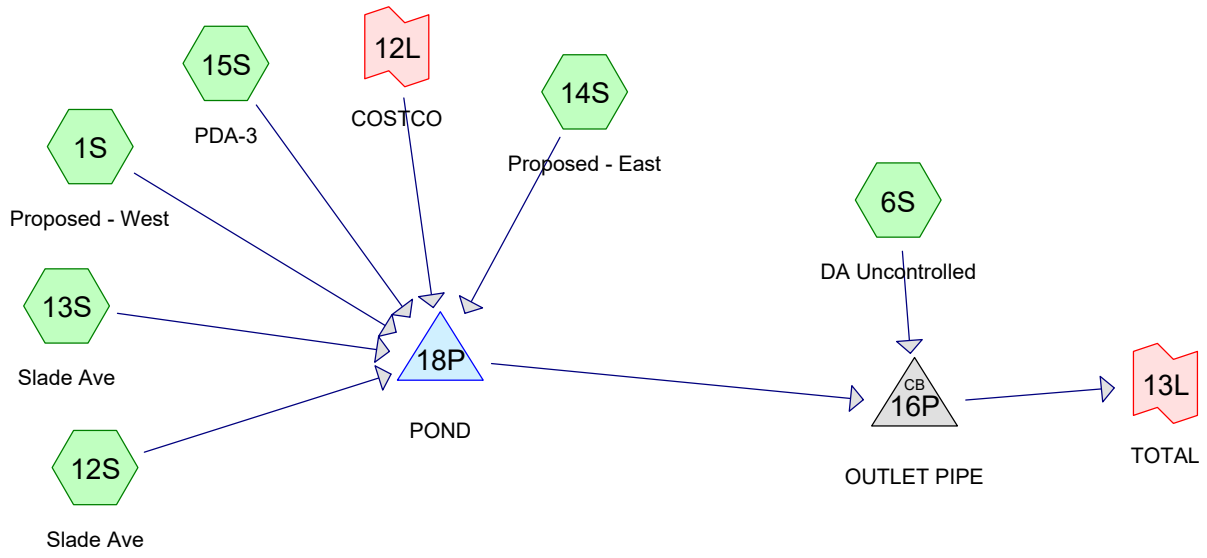
N

SCALE: 1"=250'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

250 0 250 500Ft.

250'



Subcat Reach Pond Link

Routing Diagram for 24-4113 WEST SENECA EXCAHNGE PROPOSED
Prepared by Carmina Wood Design, Printed 7/13/2026
HydroCAD® 10.20-7a s/n 05019 © 2025 HydroCAD Software Solutions LLC

Project Notes

Copied 10 events from NY-WestSeneca_NOAA14 24-hr S1 storm
Copied 10 events from NY-WestSeneca_NOAA14 24-hr S1 storm

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-WestSeneca_NOAA14 24-hr S1	1-yr	Default	24.00	1	1.87	2
2	10-yr	NY-WestSeneca_NOAA14 24-hr S1	10-yr	Default	24.00	1	3.39	2
3	25-yr	NY-WestSeneca_NOAA14 24-hr S1	25-yr	Default	24.00	1	4.10	2
4	100-yr	NY-WestSeneca_NOAA14 24-hr S1	100-yr	Default	24.00	1	5.20	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.876	80	>75% Grass cover, Good, HSG D (1S, 6S, 14S, 15S)
23.175	98	Paved parking, HSG D (1S, 6S, 12S, 13S, 14S, 15S)
8.420	98	Roofs, HSG D (1S, 6S, 14S)
38.471	**95**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
38.471	HSG D	1S, 6S, 12S, 13S, 14S, 15S
0.000	Other	
38.471		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	6.876	0.000	6.876	>75% Grass cover, Good	1S, 6S, 14S, 15S
0.000	0.000	0.000	23.175	0.000	23.175	Paved parking	1S, 6S, 12S, 13S, 14S, 15S
0.000	0.000	0.000	8.420	0.000	8.420	Roofs	1S, 6S, 14S
0.000	**0.000**	**0.000**	**38.471**	**0.000**	**38.471**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	1S	0.00	0.00	950.0	0.0080	0.013	0.0	18.0	0.0	
2	6S	0.00	0.00	580.0	0.0040	0.025	0.0	36.0	0.0	
3	12S	0.00	0.00	60.0	0.0025	0.013	0.0	12.0	0.0	
4	13S	0.00	0.00	60.0	0.0025	0.013	0.0	12.0	0.0	
5	14S	0.00	0.00	700.0	0.0050	0.013	0.0	24.0	0.0	
6	16P	603.56	601.35	641.0	0.0034	0.013	58.0	94.0	0.0	
7	18P	607.95	604.56	685.0	0.0049	0.013	0.0	48.0	0.0	

Time span=0.00-150.00 hrs, dt=0.01 hrs, 15001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Proposed - West Runoff Area=19.210 ac 73.66% Impervious Runoff Depth=1.20"
Flow Length=1,050' Tc=4.8 min CN=93 Runoff=40.40 cfs 1.915 af

Subcatchment6S: DA Uncontrolled Runoff Area=11.340 ac 86.77% Impervious Runoff Depth=1.45"
Flow Length=850' Tc=6.0 min CN=96 Runoff=26.40 cfs 1.369 af

Subcatchment12S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=1.65"
Flow Length=90' Tc=0.9 min CN=98 Runoff=1.33 cfs 0.062 af

Subcatchment13S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=1.65"
Flow Length=90' Tc=0.9 min CN=98 Runoff=1.33 cfs 0.062 af

Subcatchment14S: Proposed - East Runoff Area=6.760 ac 97.78% Impervious Runoff Depth=1.65"
Flow Length=890' Tc=4.8 min CN=98 Runoff=18.18 cfs 0.927 af

Subcatchment15S: PDA-3 Runoff Area=11,375 sf 36.48% Impervious Runoff Depth=0.81"
Tc=5.0 min CN=87 Runoff=0.36 cfs 0.018 af

Pond 16P: OUTLET PIPE Peak Elev=605.42' Inflow=38.71 cfs 6.652 af
58.0" x 94.0" Box Culvert n=0.013 L=641.0' S=0.0034 '/' Outflow=38.71 cfs 6.652 af

Pond 18P: POND Peak Elev=609.62' Storage=99,248 cf Inflow=106.67 cfs 5.283 af
Primary=20.20 cfs 5.283 af Secondary=0.00 cfs 0.000 af Outflow=20.20 cfs 5.283 af

Link 16L: Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce Inflow=46.67 cfs 2.301 af
Area= 924,495 sf 78.41% Imperv. Primary=46.67 cfs 2.301 af

Link 13L: TOTAL Inflow=38.71 cfs 6.652 af
Primary=38.71 cfs 6.652 af

Total Runoff Area = 38.471 ac Runoff Volume = 4.352 af Average Runoff Depth = 1.36"
17.87% Pervious = 6.876 ac 82.13% Impervious = 31.595 ac

Summary for Subcatchment 1S: Proposed - West

[47] Hint: Peak is 430% of capacity of segment #2

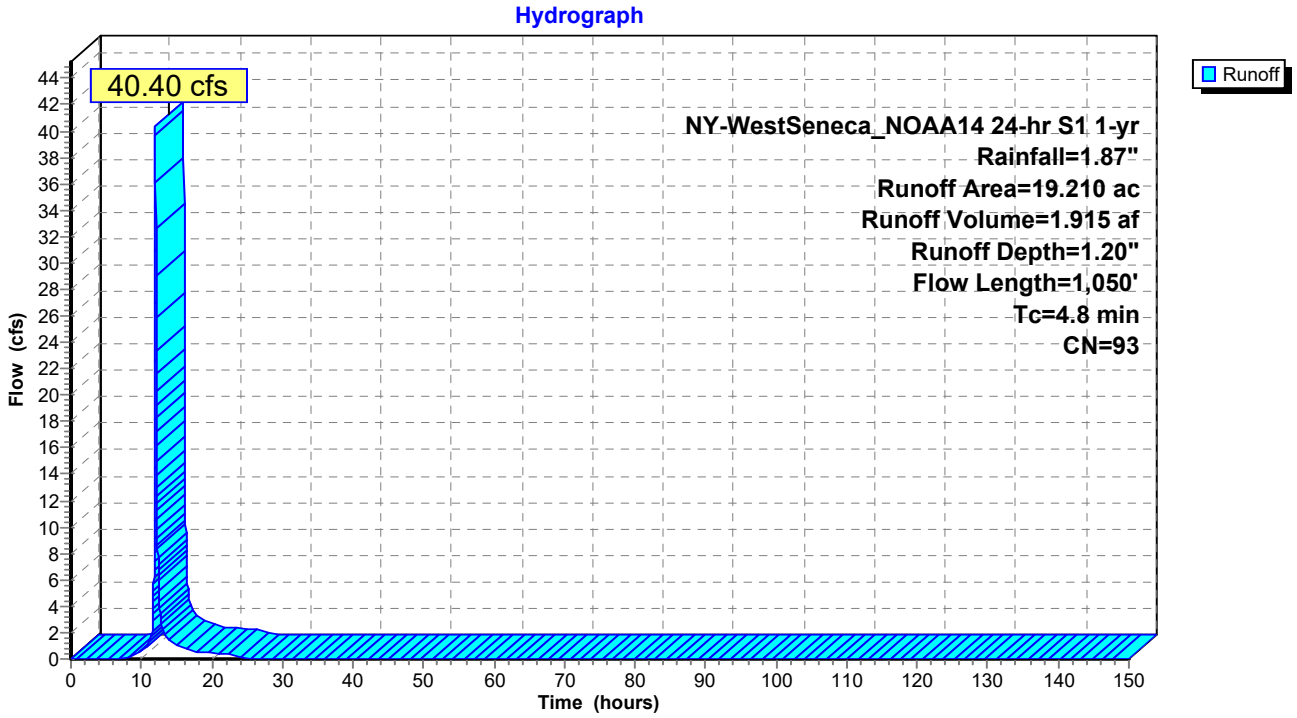
Runoff = 40.40 cfs @ 12.03 hrs, Volume= 1.915 af, Depth= 1.20"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
5.060	80	>75% Grass cover, Good, HSG D
4.110	98	Roofs, HSG D
10.040	98	Paved parking, HSG D
19.210	93	Weighted Average
5.060		26.34% Pervious Area
14.150		73.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
3.0	950	0.0080	5.32	9.40	**Pipe Channel, 18" PIPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
4.8	1,050	Total			

Subcatchment 1S: Proposed - West



Summary for Subcatchment 6S: DA Uncontrolled

[47] Hint: Peak is 120% of capacity of segment #3

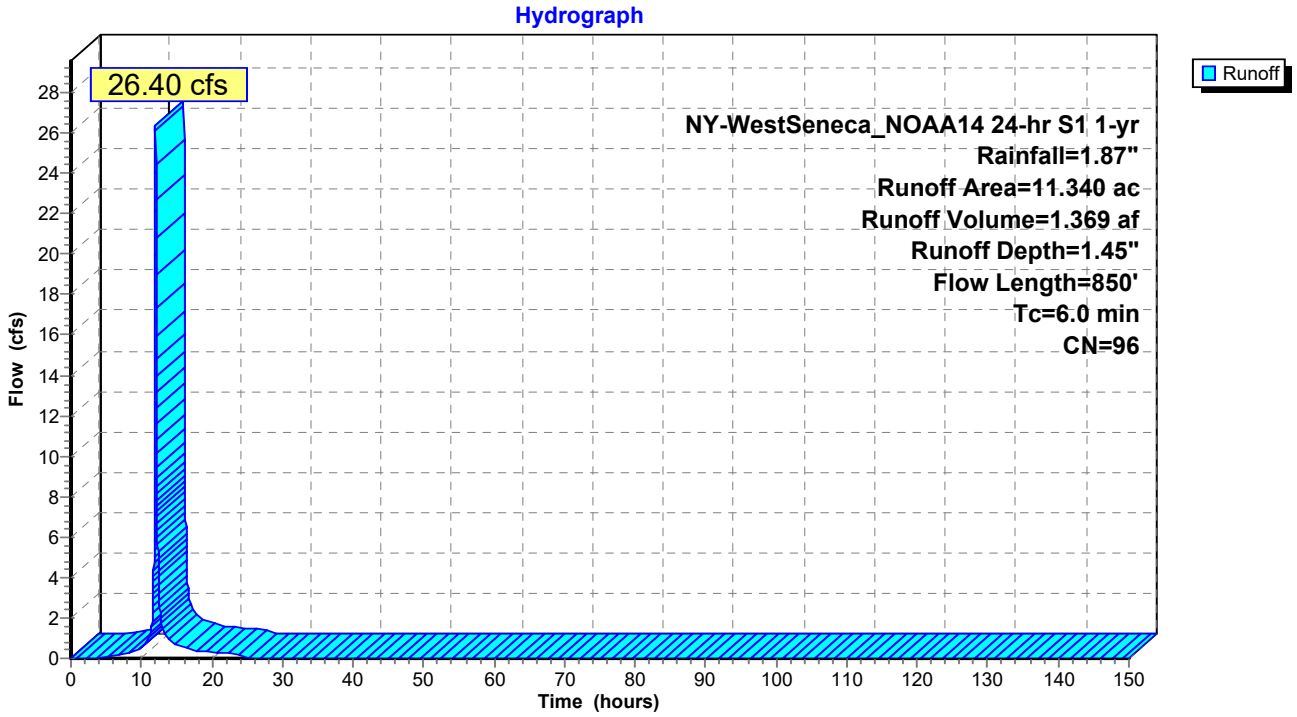
Runoff = 26.40 cfs @ 12.04 hrs, Volume= 1.369 af, Depth= 1.45"
Routed to Pond 16P : OUTLET PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
7.720	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
2.120	98	Roofs, HSG D
11.340	96	Weighted Average
1.500		13.23% Pervious Area
9.840		86.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	170	0.0150	2.49		**Shallow Concentrated Flow, PVMT** Paved Kv= 20.3 fps
3.1	580	0.0040	3.10	21.94	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
6.0	850	Total			

Subcatchment 6S: DA Uncontrolled



Summary for Subcatchment 12S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt

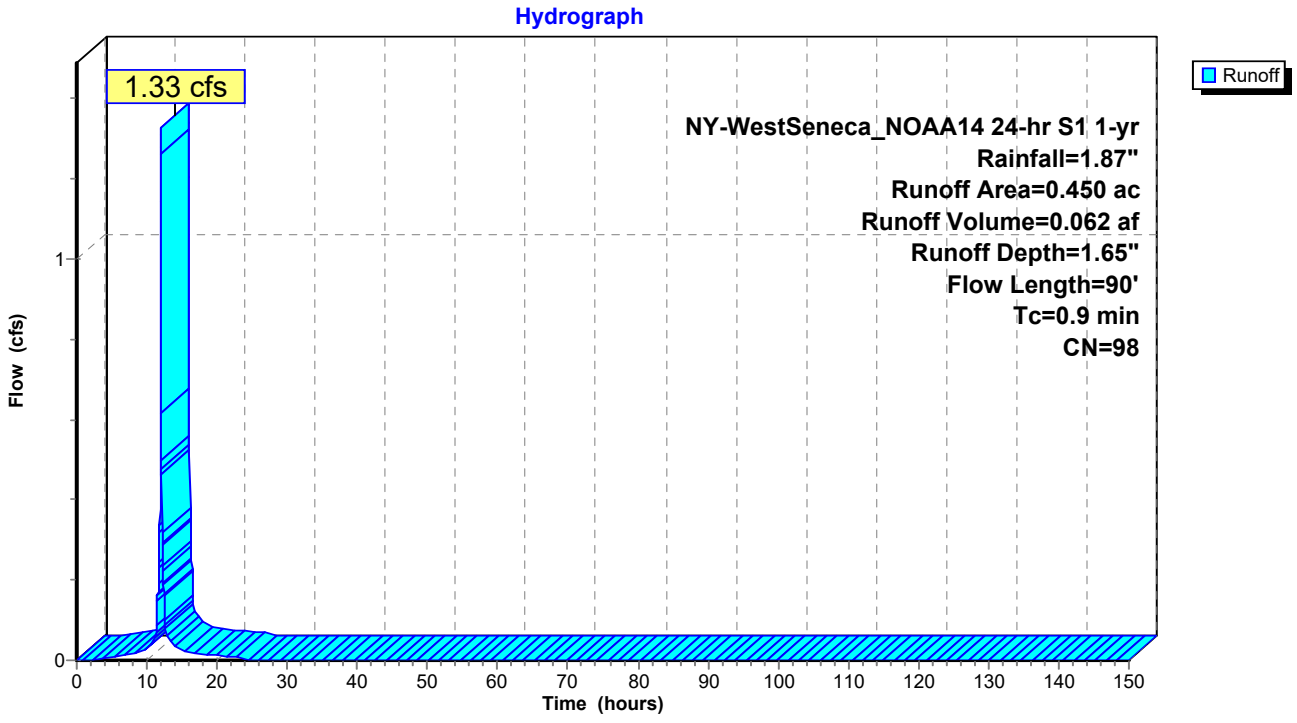
Runoff = 1.33 cfs @ 11.99 hrs, Volume= 0.062 af, Depth= 1.65"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 12S: Slade Ave



Summary for Subcatchment 13S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt

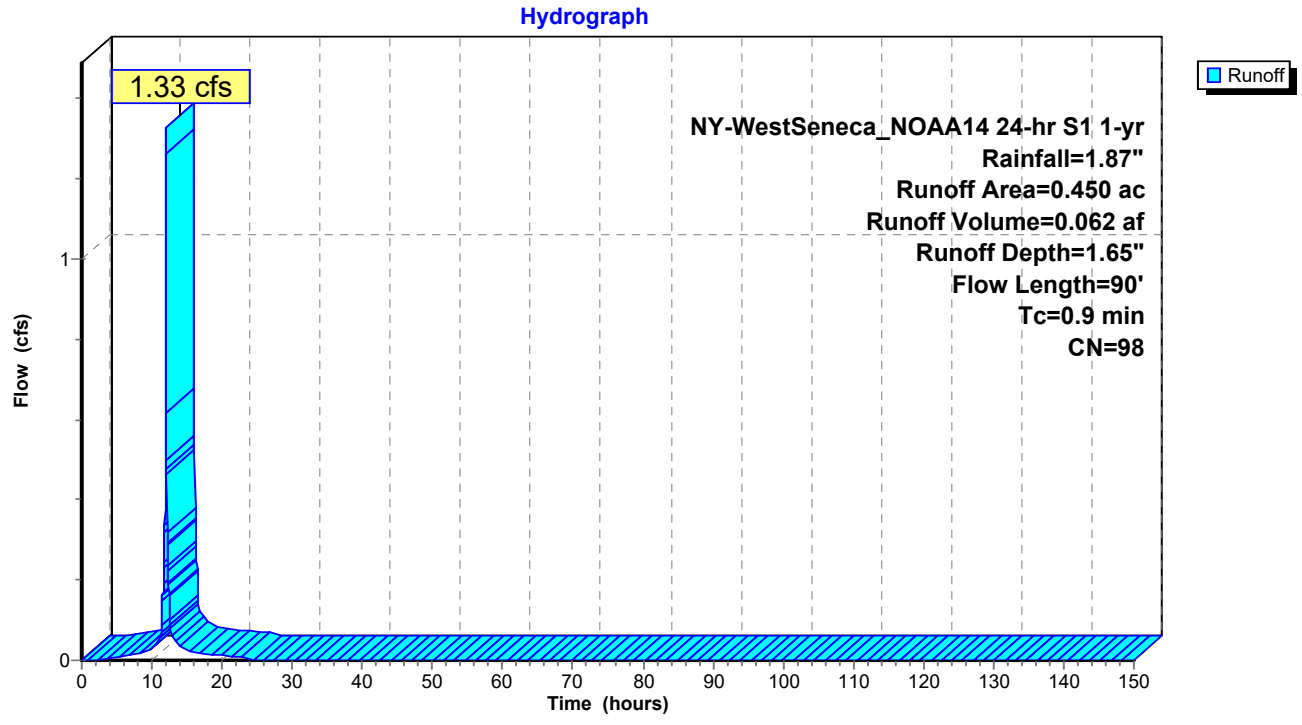
Runoff = 1.33 cfs @ 11.99 hrs, Volume= 0.062 af, Depth= 1.65"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 13S: Slade Ave



Summary for Subcatchment 14S: Proposed - East

[47] Hint: Peak is 114% of capacity of segment #3

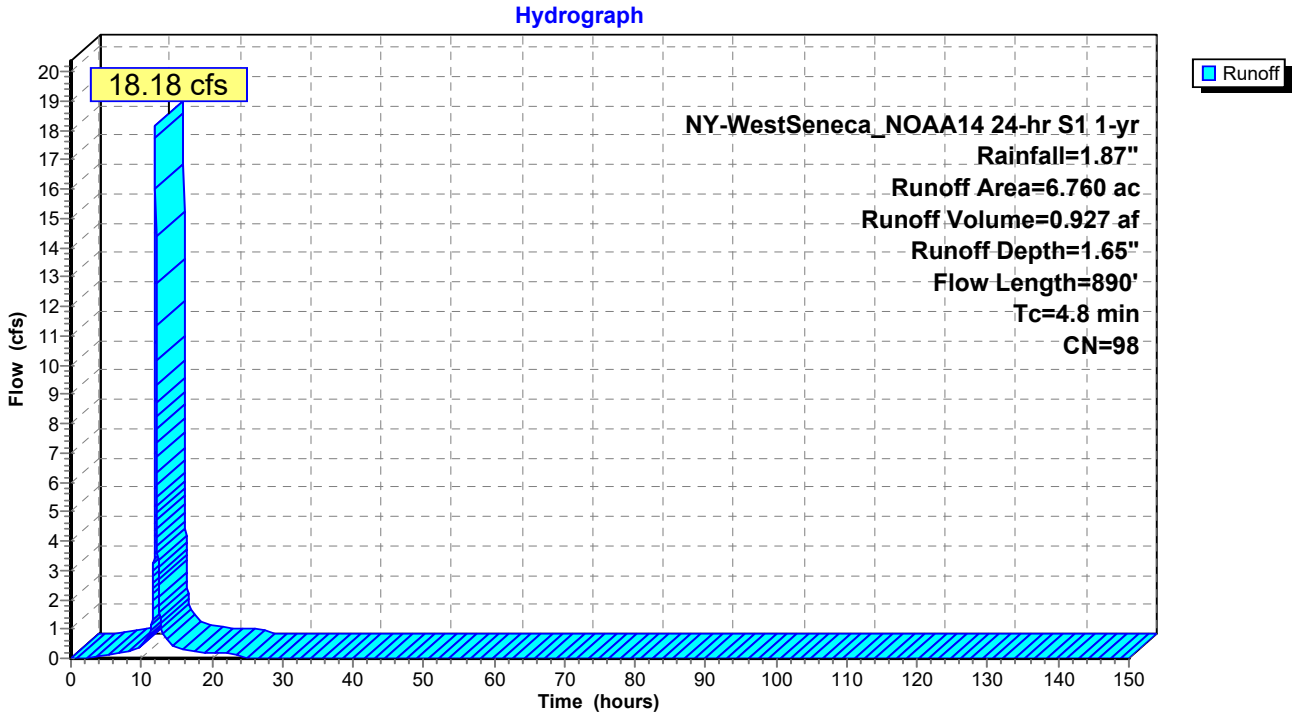
Runoff = 18.18 cfs @ 12.02 hrs, Volume= 0.927 af, Depth= 1.65"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
4.420	98	Paved parking, HSG D
2.190	98	Roofs, HSG D
0.150	80	>75% Grass cover, Good, HSG D
6.760	98	Weighted Average
0.150		2.22% Pervious Area
6.610		97.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, PVMT** Smooth surfaces n= 0.011 P2= 2.50"
0.7	90	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	700	0.0050	5.09	16.00	**Pipe Channel, PIPE** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Concrete pipe, bends & connections
4.8	890	Total			

Subcatchment 14S: Proposed - East



Summary for Subcatchment 15S: PDA-3

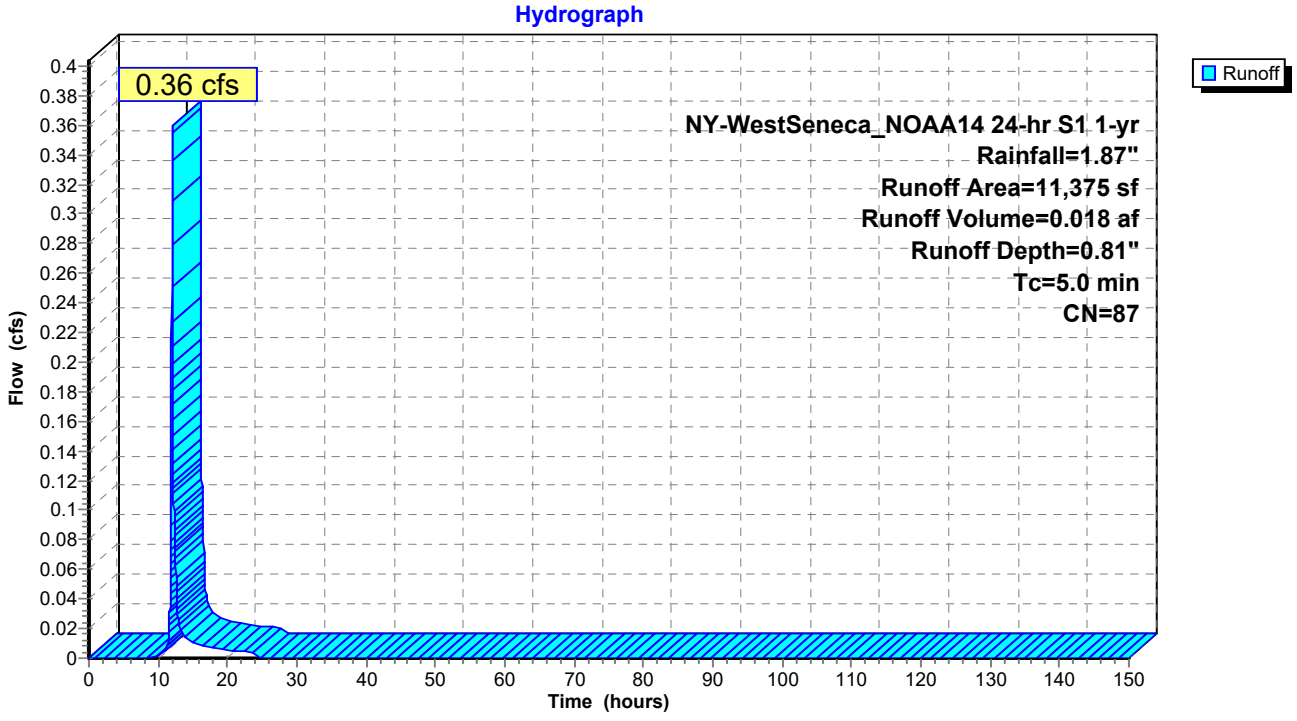
Runoff = 0.36 cfs @ 12.03 hrs, Volume= 0.018 af, Depth= 0.81"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 1-yr Rainfall=1.87"

Area (sf)	CN	Description
7,225	80	>75% Grass cover, Good, HSG D
4,150	98	Paved parking, HSG D
11,375	87	Weighted Average
7,225		63.52% Pervious Area
4,150		36.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 15S: PDA-3



Summary for Pond 16P: OUTLET PIPE

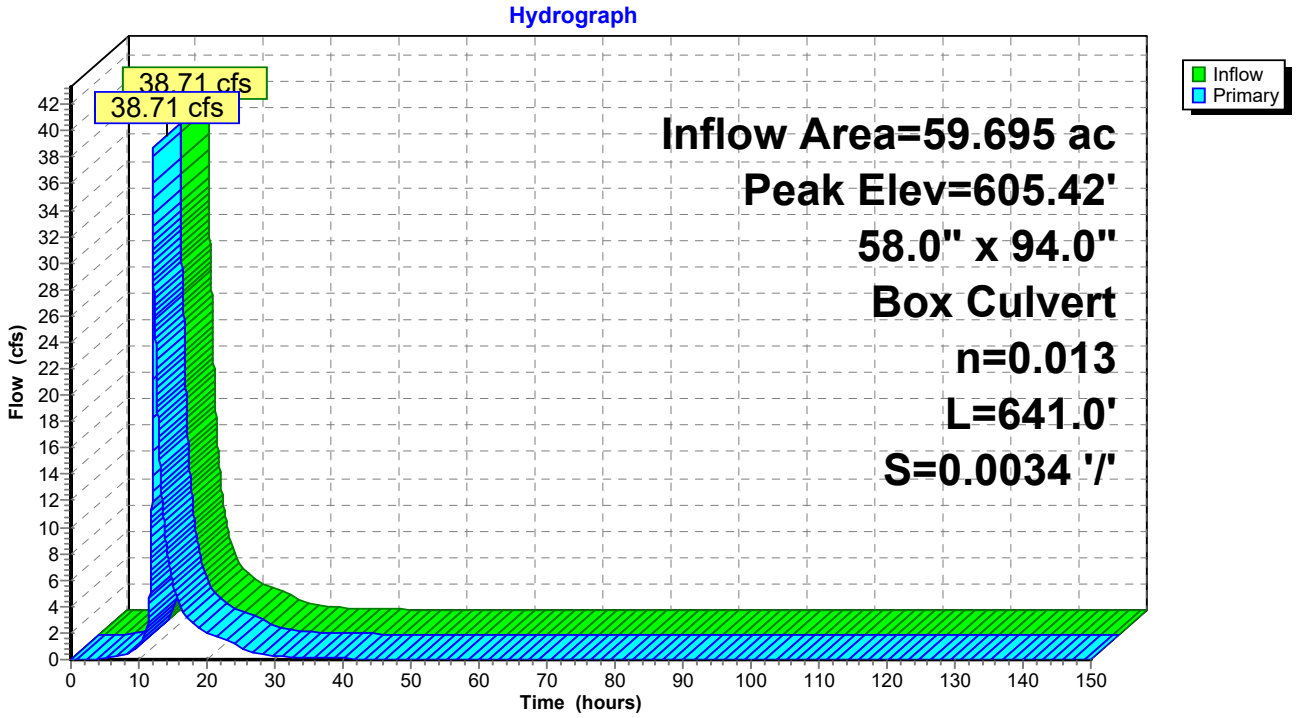
Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 1.34" for 1-yr event
Inflow = 38.71 cfs @ 12.05 hrs, Volume= 6.652 af
Outflow = 38.71 cfs @ 12.05 hrs, Volume= 6.652 af, Atten= 0%, Lag= 0.0 min
Primary = 38.71 cfs @ 12.05 hrs, Volume= 6.652 af
Routed to Link 13L : TOTAL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 605.42' @ 12.05 hrs
Flood Elev= 612.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	603.56'	**58.0" W x 94.0" H Box Culvert** L= 641.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 603.56' / 601.35' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 37.86 sf

Primary OutFlow Max=38.68 cfs @ 12.05 hrs HW=605.42' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 38.68 cfs @ 5.74 fps)

Pond 16P: OUTLET PIPE



Summary for Pond 18P: POND

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 48.355 ac, 79.40% Impervious, Inflow Depth = 1.31" for 1-yr event
Inflow = 106.67 cfs @ 12.03 hrs, Volume= 5.283 af
Outflow = 20.20 cfs @ 12.36 hrs, Volume= 5.283 af, Atten= 81%, Lag= 20.0 min
Primary = 20.20 cfs @ 12.36 hrs, Volume= 5.283 af
Routed to Pond 16P : OUTLET PIPE
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 609.62' @ 12.36 hrs Surf.Area= 64,897 sf Storage= 99,248 cf

Plug-Flow detention time= 185.3 min calculated for 5.283 af (100% of inflow)
Center-of-Mass det. time= 185.5 min (983.8 - 798.3)

Volume	Invert	Avail.Storage	Storage Description
#1	608.00'	471,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

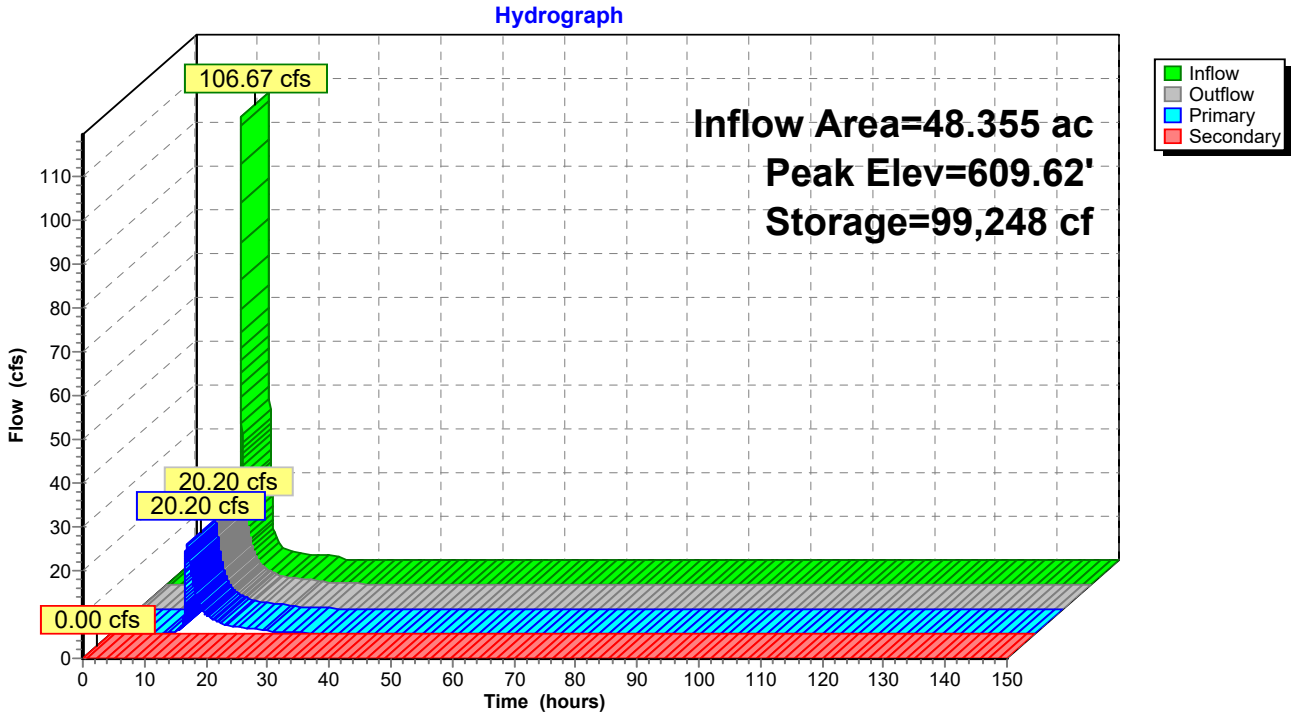
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
608.00	57,300	0	0
614.50	87,700	471,250	471,250

Device	Routing	Invert	Outlet Devices
#1	Primary	607.95'	**48.0" Round Culvert** L= 685.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 607.95' / 604.56' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 12.57 sf
#2	Secondary	614.00'	**50.0' long + 3.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=20.20 cfs @ 12.36 hrs HW=609.62' TW=604.95' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 20.20 cfs @ 5.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=608.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: POND



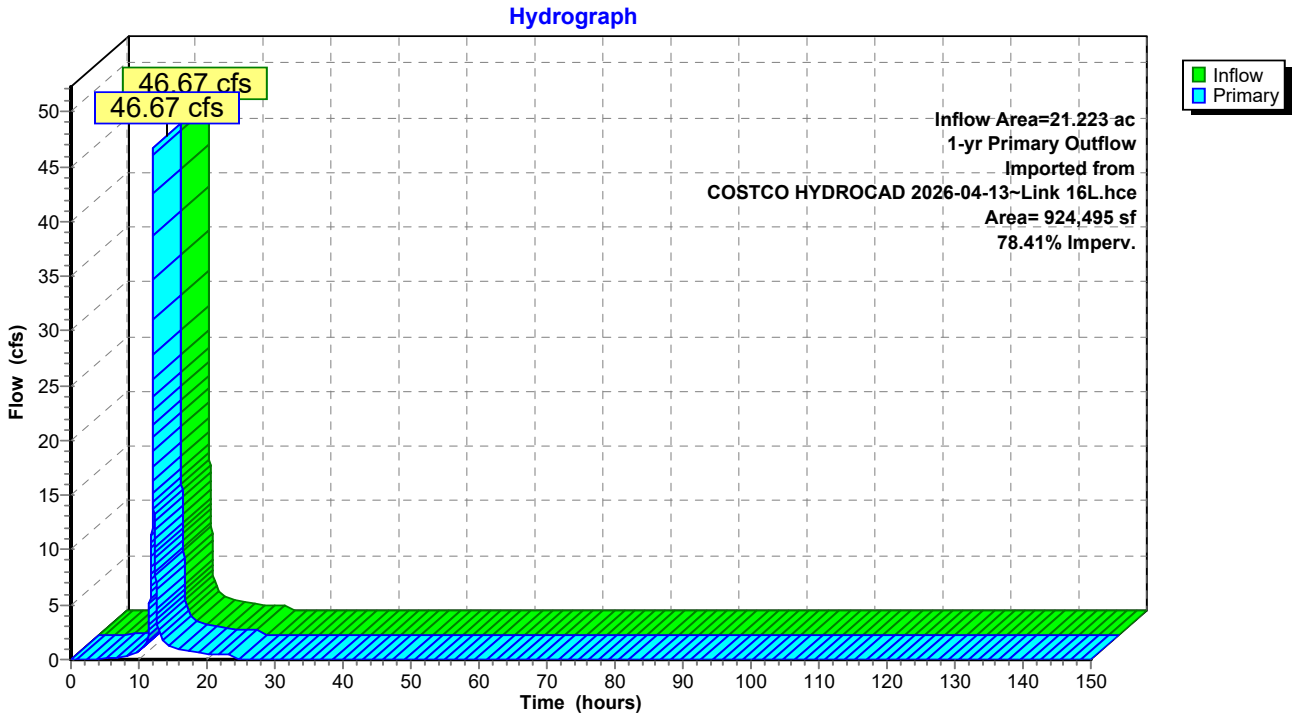
Summary for Link 12L: COSTCO

Inflow Area = 21.223 ac, 78.41% Impervious, Inflow Depth = 1.30" for 1-yr event
Inflow = 46.67 cfs @ 12.03 hrs, Volume= 2.301 af
Primary = 46.67 cfs @ 12.03 hrs, Volume= 2.301 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 18P : POND

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

1-yr Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce

Link 12L: COSTCO

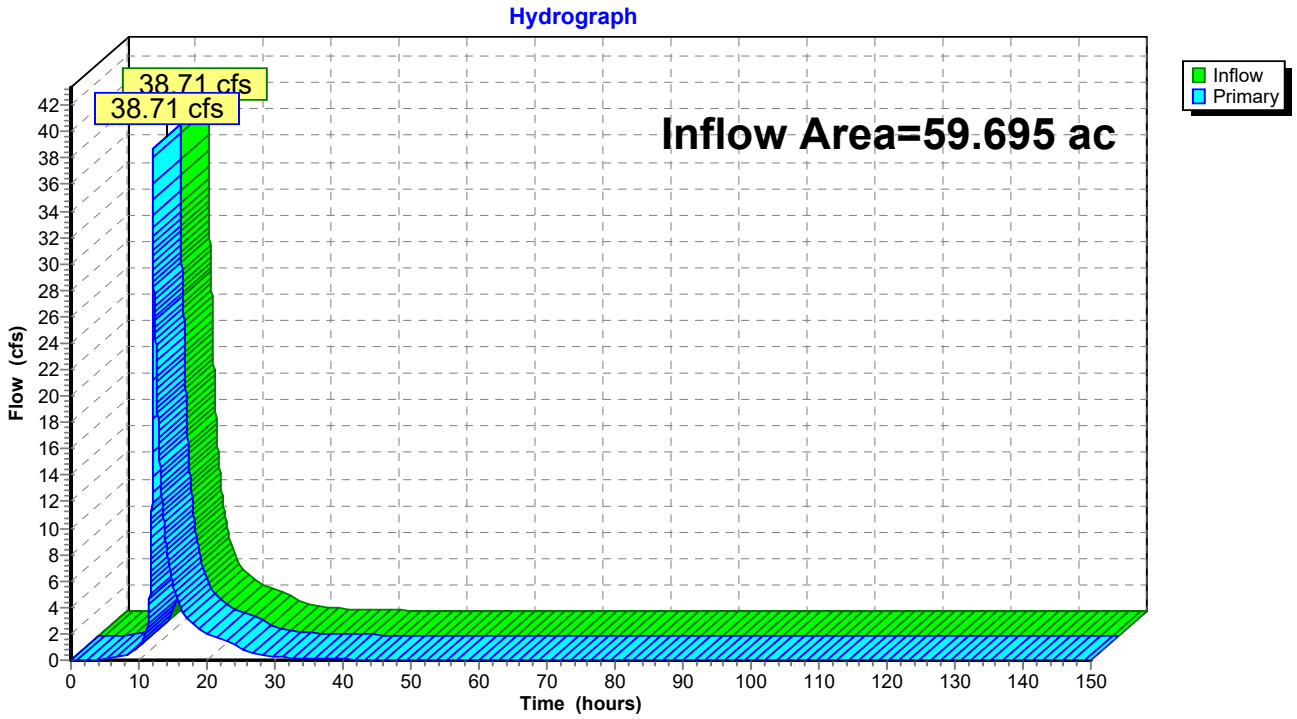


Summary for Link 13L: TOTAL

Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 1.34" for 1-yr event
Inflow = 38.71 cfs @ 12.05 hrs, Volume= 6.652 af
Primary = 38.71 cfs @ 12.05 hrs, Volume= 6.652 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

Link 13L: TOTAL



Time span=0.00-150.00 hrs, dt=0.01 hrs, 15001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Proposed - West Runoff Area=19.210 ac 73.66% Impervious Runoff Depth=2.63"
Flow Length=1,050' Tc=4.8 min CN=93 Runoff=86.22 cfs 4.208 af

Subcatchment6S: DA Uncontrolled Runoff Area=11.340 ac 86.77% Impervious Runoff Depth=2.94"
Flow Length=850' Tc=6.0 min CN=96 Runoff=51.57 cfs 2.775 af

Subcatchment12S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=3.16"
Flow Length=90' Tc=0.9 min CN=98 Runoff=2.45 cfs 0.118 af

Subcatchment13S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=3.16"
Flow Length=90' Tc=0.9 min CN=98 Runoff=2.45 cfs 0.118 af

Subcatchment14S: Proposed - East Runoff Area=6.760 ac 97.78% Impervious Runoff Depth=3.16"
Flow Length=890' Tc=4.8 min CN=98 Runoff=33.74 cfs 1.778 af

Subcatchment15S: PDA-3 Runoff Area=11,375 sf 36.48% Impervious Runoff Depth=2.08"
Tc=5.0 min CN=87 Runoff=0.95 cfs 0.045 af

Pond 16P: OUTLET PIPE Peak Elev=606.96' Inflow=87.97 cfs 13.894 af
58.0" x 94.0" Box Culvert n=0.013 L=641.0' S=0.0034 '/' Outflow=87.97 cfs 13.894 af

Pond 18P: POND Peak Elev=610.89' Storage=185,425 cf Inflow=218.75 cfs 11.119 af
Primary=53.90 cfs 11.119 af Secondary=0.00 cfs 0.000 af Outflow=53.90 cfs 11.119 af

Link 10L: Link Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce Inflow=96.07 cfs 4.850 af
Area= 924,495 sf 78.41% Imperv. Primary=96.07 cfs 4.850 af

Link 13L: TOTAL Inflow=87.97 cfs 13.894 af
Primary=87.97 cfs 13.894 af

Total Runoff Area = 38.471 ac Runoff Volume = 9.044 af Average Runoff Depth = 2.82"
17.87% Pervious = 6.876 ac 82.13% Impervious = 31.595 ac

Summary for Subcatchment 1S: Proposed - West

[47] Hint: Peak is 918% of capacity of segment #2

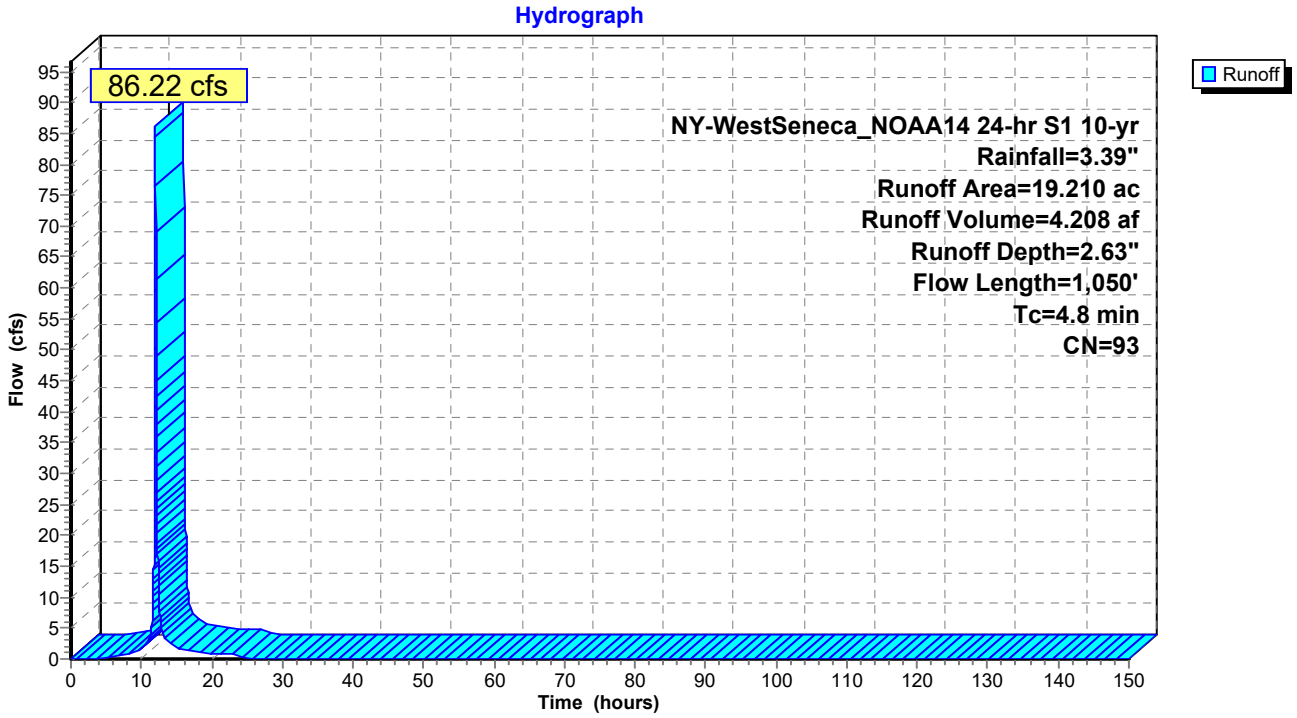
Runoff = 86.22 cfs @ 12.02 hrs, Volume= 4.208 af, Depth= 2.63"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (ac)	CN	Description
5.060	80	>75% Grass cover, Good, HSG D
4.110	98	Roofs, HSG D
10.040	98	Paved parking, HSG D
19.210	93	Weighted Average
5.060		26.34% Pervious Area
14.150		73.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
3.0	950	0.0080	5.32	9.40	**Pipe Channel, 18" PIPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
4.8	1,050	Total			

Subcatchment 1S: Proposed - West



Summary for Subcatchment 6S: DA Uncontrolled

[47] Hint: Peak is 235% of capacity of segment #3

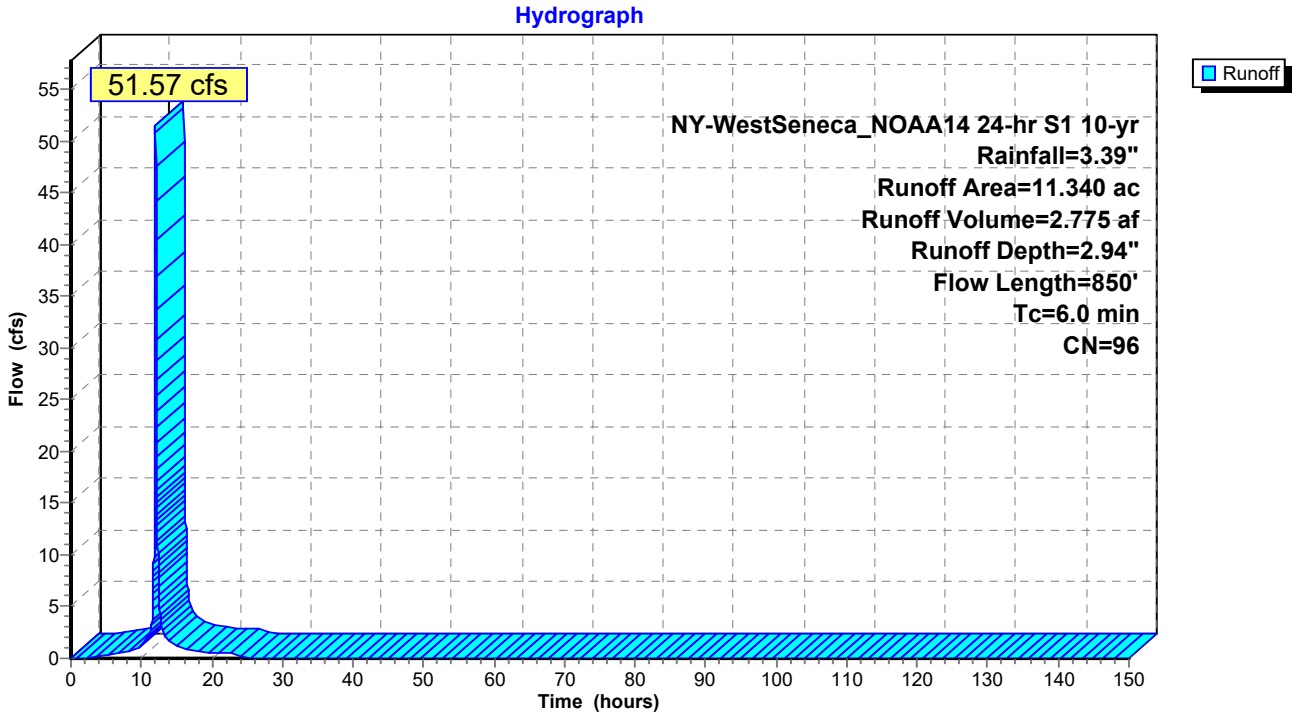
Runoff = 51.57 cfs @ 12.04 hrs, Volume= 2.775 af, Depth= 2.94"
Routed to Pond 16P : OUTLET PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (ac)	CN	Description
7.720	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
2.120	98	Roofs, HSG D
11.340	96	Weighted Average
1.500		13.23% Pervious Area
9.840		86.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	170	0.0150	2.49		**Shallow Concentrated Flow, PVMT** Paved Kv= 20.3 fps
3.1	580	0.0040	3.10	21.94	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
6.0	850	Total			

Subcatchment 6S: DA Uncontrolled



Summary for Subcatchment 12S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 138% of capacity of segment #2

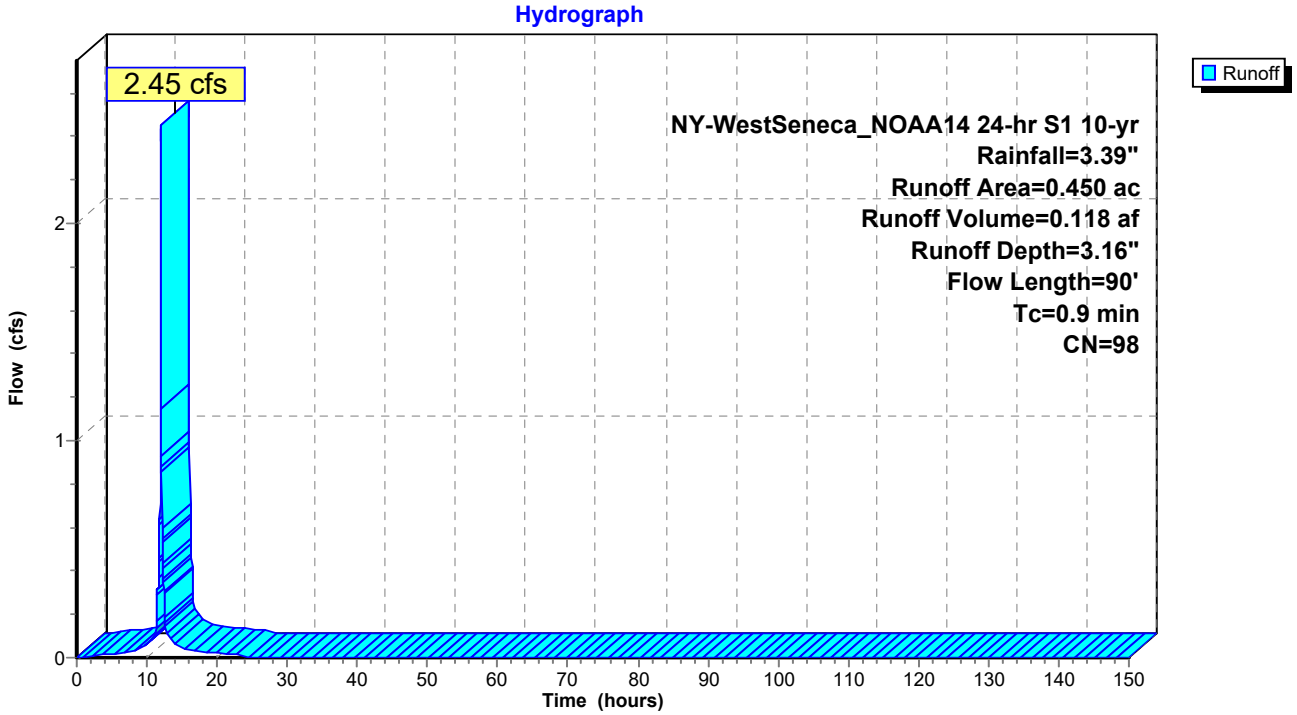
Runoff = 2.45 cfs @ 11.99 hrs, Volume= 0.118 af, Depth= 3.16"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 12S: Slade Ave



Summary for Subcatchment 13S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 138% of capacity of segment #2

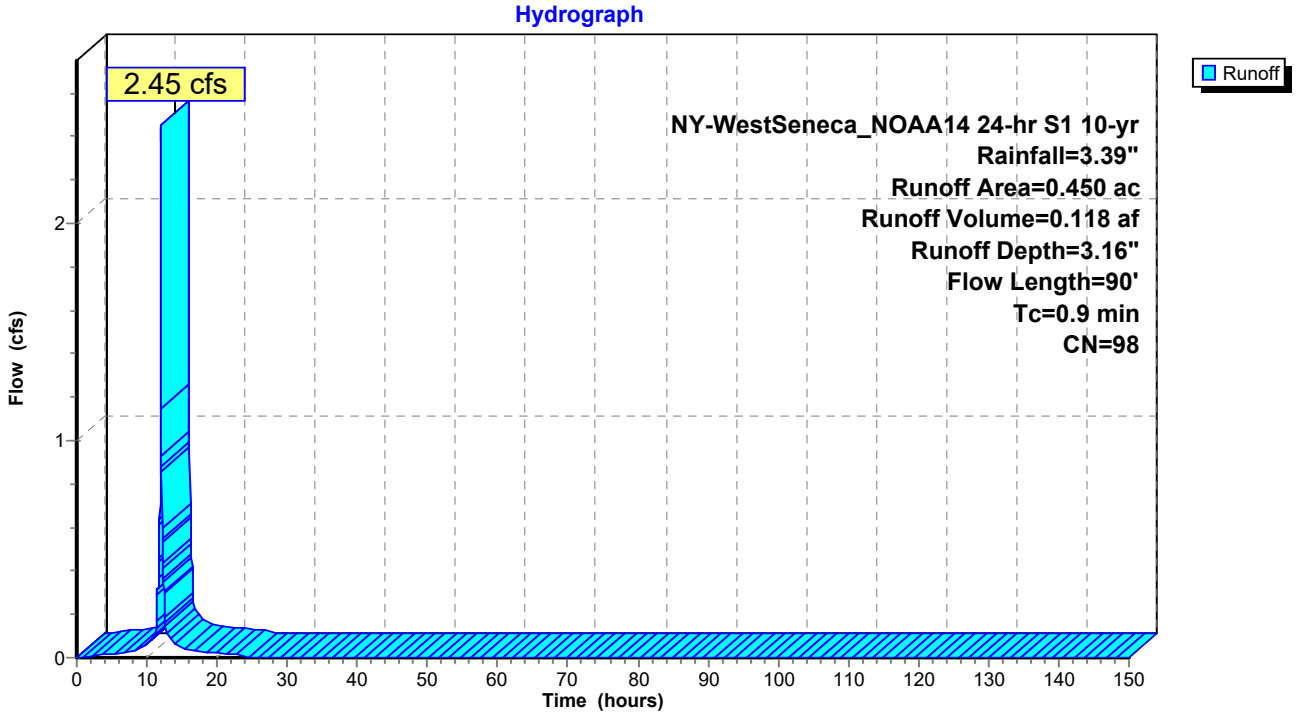
Runoff = 2.45 cfs @ 11.99 hrs, Volume= 0.118 af, Depth= 3.16"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 13S: Slade Ave



Summary for Subcatchment 14S: Proposed - East

[47] Hint: Peak is 211% of capacity of segment #3

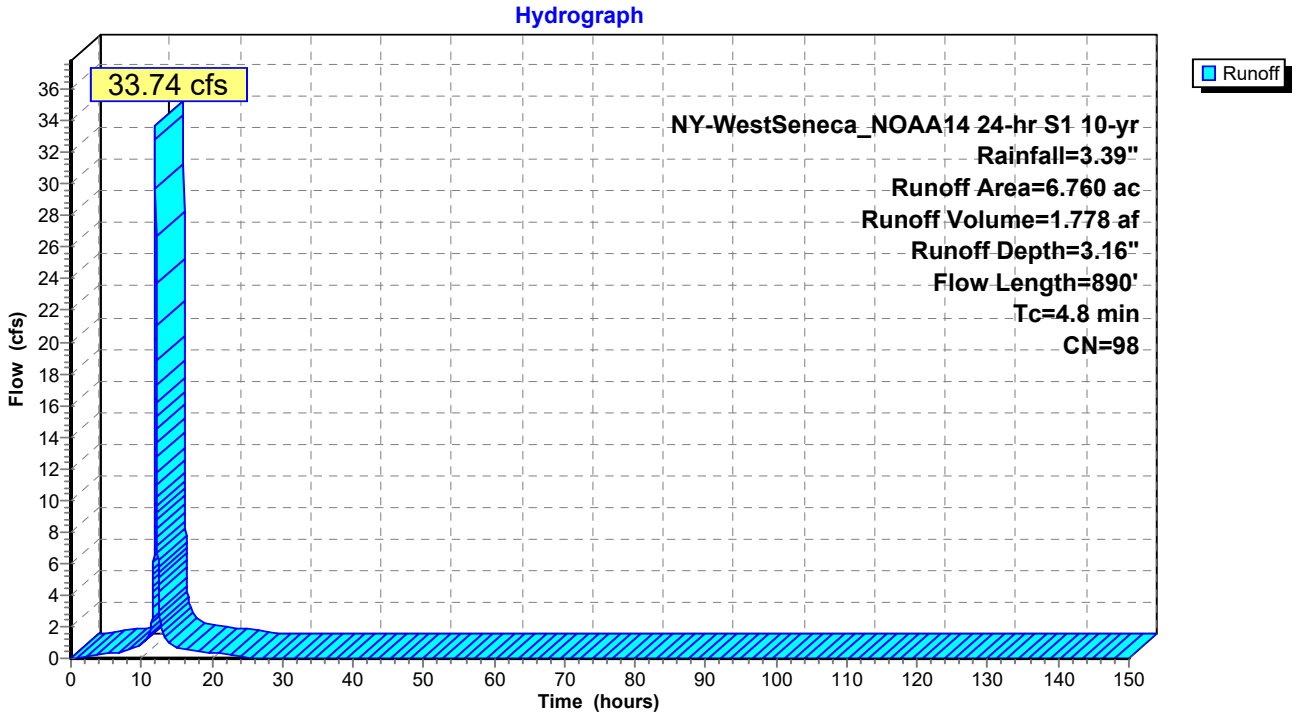
Runoff = 33.74 cfs @ 12.02 hrs, Volume= 1.778 af, Depth= 3.16"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (ac)	CN	Description
4.420	98	Paved parking, HSG D
2.190	98	Roofs, HSG D
0.150	80	>75% Grass cover, Good, HSG D
6.760	98	Weighted Average
0.150		2.22% Pervious Area
6.610		97.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, PVMT** Smooth surfaces n= 0.011 P2= 2.50"
0.7	90	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	700	0.0050	5.09	16.00	**Pipe Channel, PIPE** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Concrete pipe, bends & connections
4.8	890	Total			

Subcatchment 14S: Proposed - East



Summary for Subcatchment 15S: PDA-3

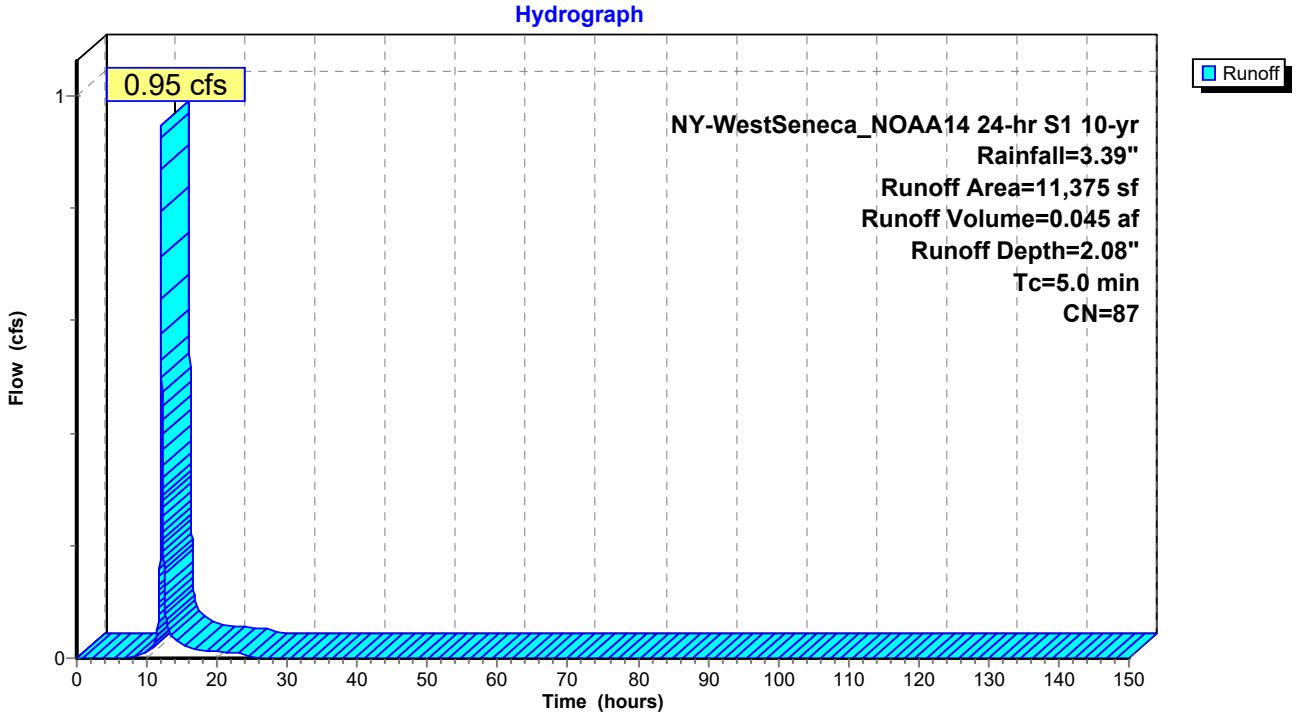
Runoff = 0.95 cfs @ 12.03 hrs, Volume= 0.045 af, Depth= 2.08"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 10-yr Rainfall=3.39"

Area (sf)	CN	Description
7,225	80	>75% Grass cover, Good, HSG D
4,150	98	Paved parking, HSG D
11,375	87	Weighted Average
7,225		63.52% Pervious Area
4,150		36.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 15S: PDA-3



Summary for Pond 16P: OUTLET PIPE

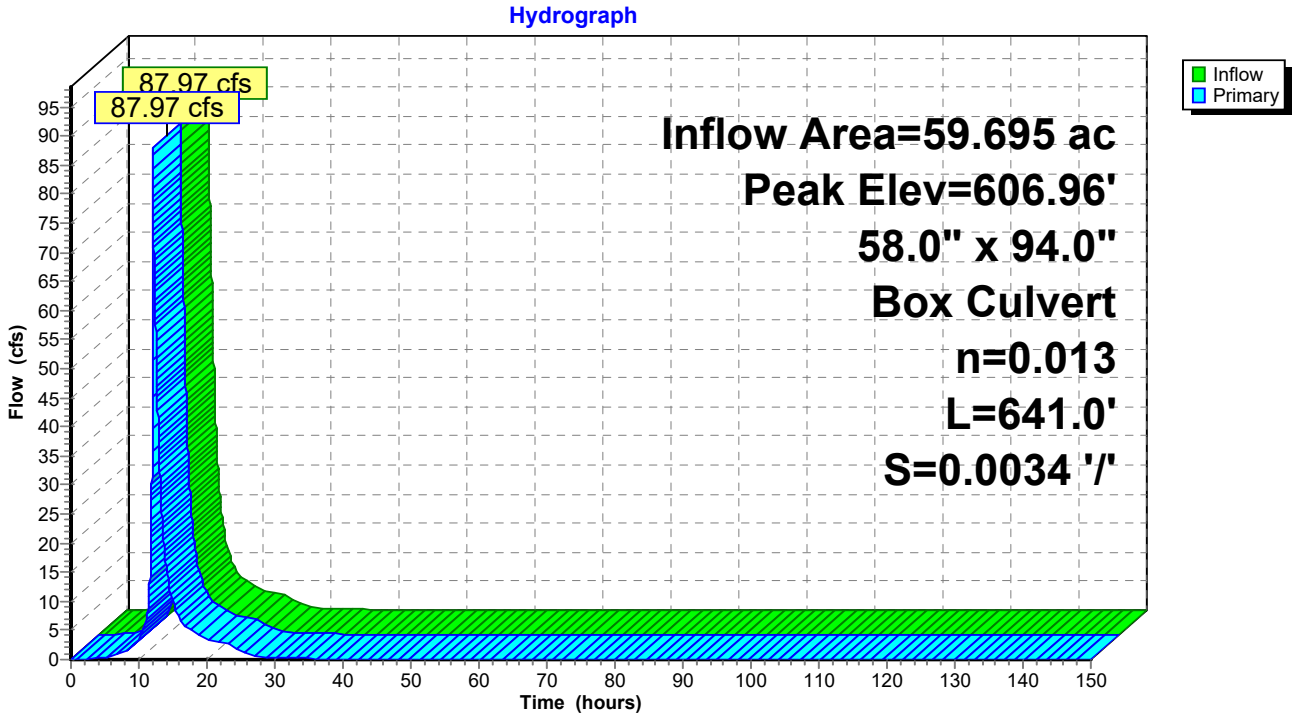
Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 2.79" for 10-yr event
Inflow = 87.97 cfs @ 12.05 hrs, Volume= 13.894 af
Outflow = 87.97 cfs @ 12.05 hrs, Volume= 13.894 af, Atten= 0%, Lag= 0.0 min
Primary = 87.97 cfs @ 12.05 hrs, Volume= 13.894 af
Routed to Link 13L : TOTAL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 606.96' @ 12.05 hrs
Flood Elev= 612.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	603.56'	**58.0" W x 94.0" H Box Culvert** L= 641.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 603.56' / 601.35' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 37.86 sf

Primary OutFlow Max=87.86 cfs @ 12.05 hrs HW=606.96' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 87.86 cfs @ 7.13 fps)

Pond 16P: OUTLET PIPE



Summary for Pond 18P: POND

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 48.355 ac, 79.40% Impervious, Inflow Depth = 2.76" for 10-yr event
Inflow = 218.75 cfs @ 12.02 hrs, Volume= 11.119 af
Outflow = 53.90 cfs @ 12.25 hrs, Volume= 11.119 af, Atten= 75%, Lag= 13.3 min
Primary = 53.90 cfs @ 12.25 hrs, Volume= 11.119 af
Routed to Pond 16P : OUTLET PIPE
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 610.89' @ 12.25 hrs Surf.Area= 70,836 sf Storage= 185,425 cf

Plug-Flow detention time= 131.1 min calculated for 11.118 af (100% of inflow)
Center-of-Mass det. time= 131.3 min (910.8 - 779.5)

Volume	Invert	Avail.Storage	Storage Description
#1	608.00'	471,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

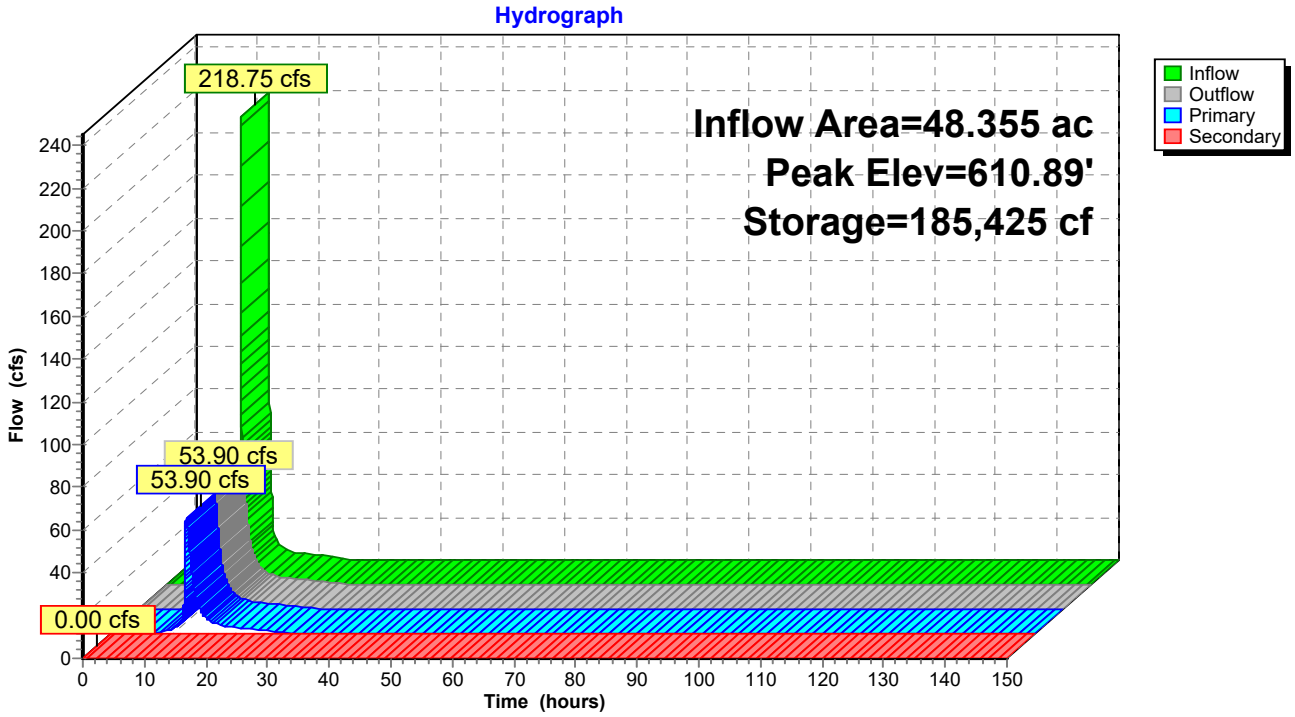
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
608.00	57,300	0	0
614.50	87,700	471,250	471,250

Device	Routing	Invert	Outlet Devices
#1	Primary	607.95'	**48.0" Round Culvert** L= 685.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 607.95' / 604.56' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 12.57 sf
#2	Secondary	614.00'	**50.0' long + 3.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=53.90 cfs @ 12.25 hrs HW=610.89' TW=606.37' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 53.90 cfs @ 7.58 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=608.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: POND



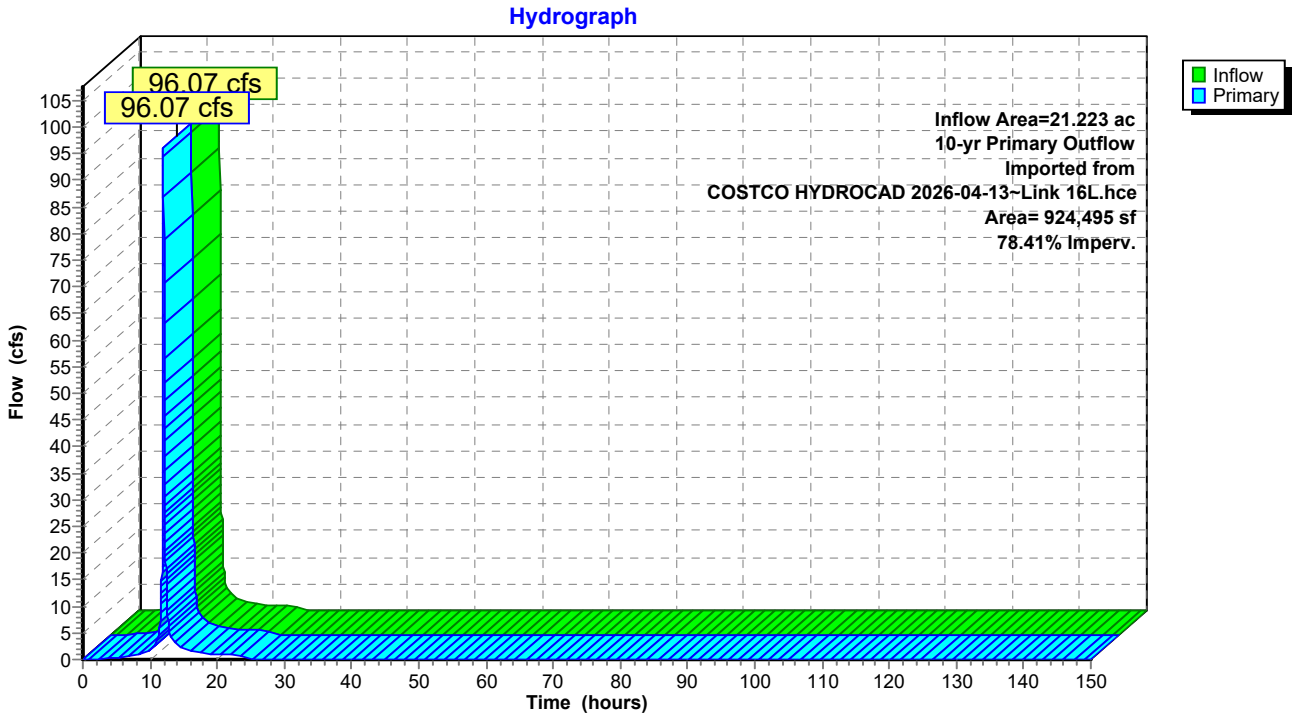
Summary for Link 12L: COSTCO

Inflow Area = 21.223 ac, 78.41% Impervious, Inflow Depth = 2.74" for 10-yr event
Inflow = 96.07 cfs @ 12.03 hrs, Volume= 4.850 af
Primary = 96.07 cfs @ 12.03 hrs, Volume= 4.850 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 18P : POND

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

10-yr Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce

Link 12L: COSTCO

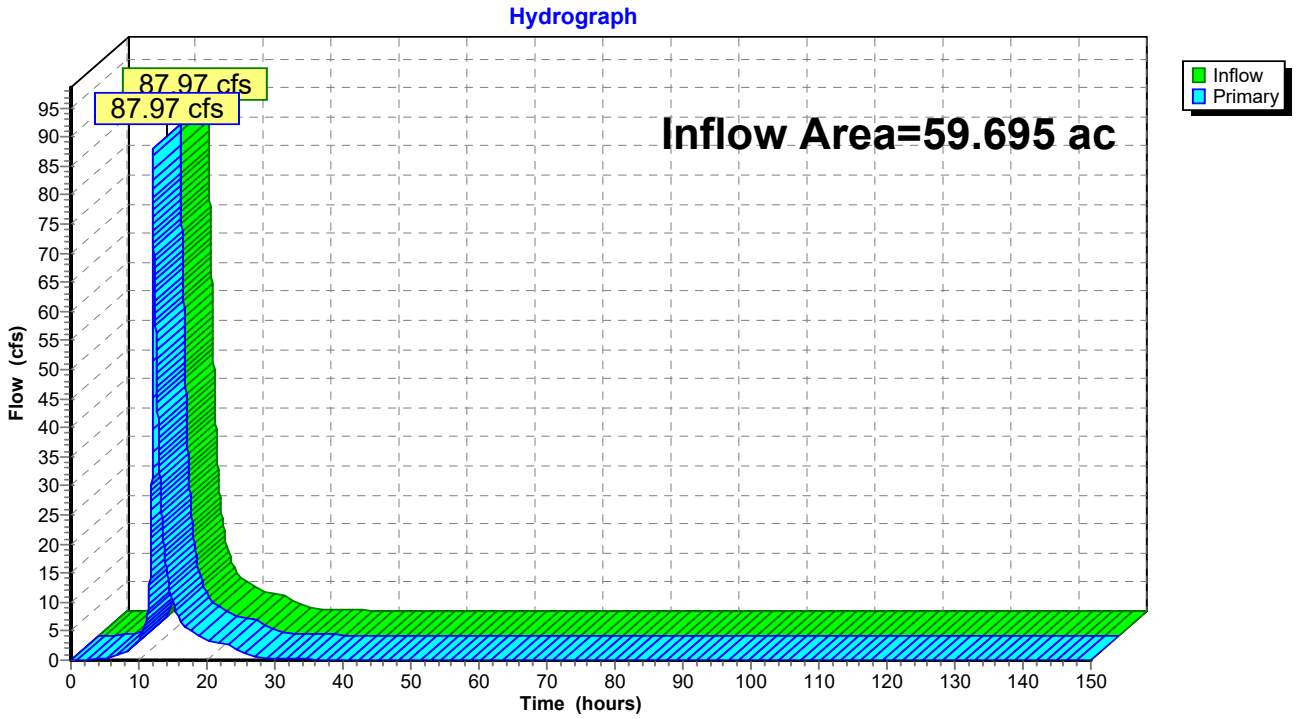


Summary for Link 13L: TOTAL

Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 2.79" for 10-yr event
Inflow = 87.97 cfs @ 12.05 hrs, Volume= 13.894 af
Primary = 87.97 cfs @ 12.05 hrs, Volume= 13.894 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

Link 13L: TOTAL



Time span=0.00-150.00 hrs, dt=0.01 hrs, 15001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Proposed - West Runoff Area=19.210 ac 73.66% Impervious Runoff Depth=3.32"
Flow Length=1,050' Tc=4.8 min CN=93 Runoff=107.55 cfs 5.310 af

Subcatchment6S: DA Uncontrolled Runoff Area=11.340 ac 86.77% Impervious Runoff Depth=3.64"
Flow Length=850' Tc=6.0 min CN=96 Runoff=63.19 cfs 3.439 af

Subcatchment12S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=3.86"
Flow Length=90' Tc=0.9 min CN=98 Runoff=2.98 cfs 0.145 af

Subcatchment13S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=3.86"
Flow Length=90' Tc=0.9 min CN=98 Runoff=2.98 cfs 0.145 af

Subcatchment14S: Proposed - East Runoff Area=6.760 ac 97.78% Impervious Runoff Depth=3.86"
Flow Length=890' Tc=4.8 min CN=98 Runoff=40.97 cfs 2.177 af

Subcatchment15S: PDA-3 Runoff Area=11,375 sf 36.48% Impervious Runoff Depth=2.73"
Tc=5.0 min CN=87 Runoff=1.24 cfs 0.059 af

Pond 16P: OUTLET PIPE Peak Elev=607.58' Inflow=109.83 cfs 17.346 af
58.0" x 94.0" Box Culvert n=0.013 L=641.0' S=0.0034 '/' Outflow=109.83 cfs 17.346 af

Pond 18P: POND Peak Elev=611.43' Storage=223,774 cf Inflow=271.07 cfs 13.907 af
Primary=69.28 cfs 13.907 af Secondary=0.00 cfs 0.000 af Outflow=69.28 cfs 13.907 af

25-yr **Link 16L:** Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce Inflow=119.16 cfs 6.071 af
Area= 924,495 sf 78.41% Imperv. Primary=119.16 cfs 6.071 af

Link 13L: TOTAL Inflow=109.83 cfs 17.346 af
Primary=109.83 cfs 17.346 af

Total Runoff Area = 38.471 ac Runoff Volume = 11.276 af Average Runoff Depth = 3.52"
17.87% Pervious = 6.876 ac 82.13% Impervious = 31.595 ac

Summary for Subcatchment 1S: Proposed - West

[47] Hint: Peak is 1145% of capacity of segment #2

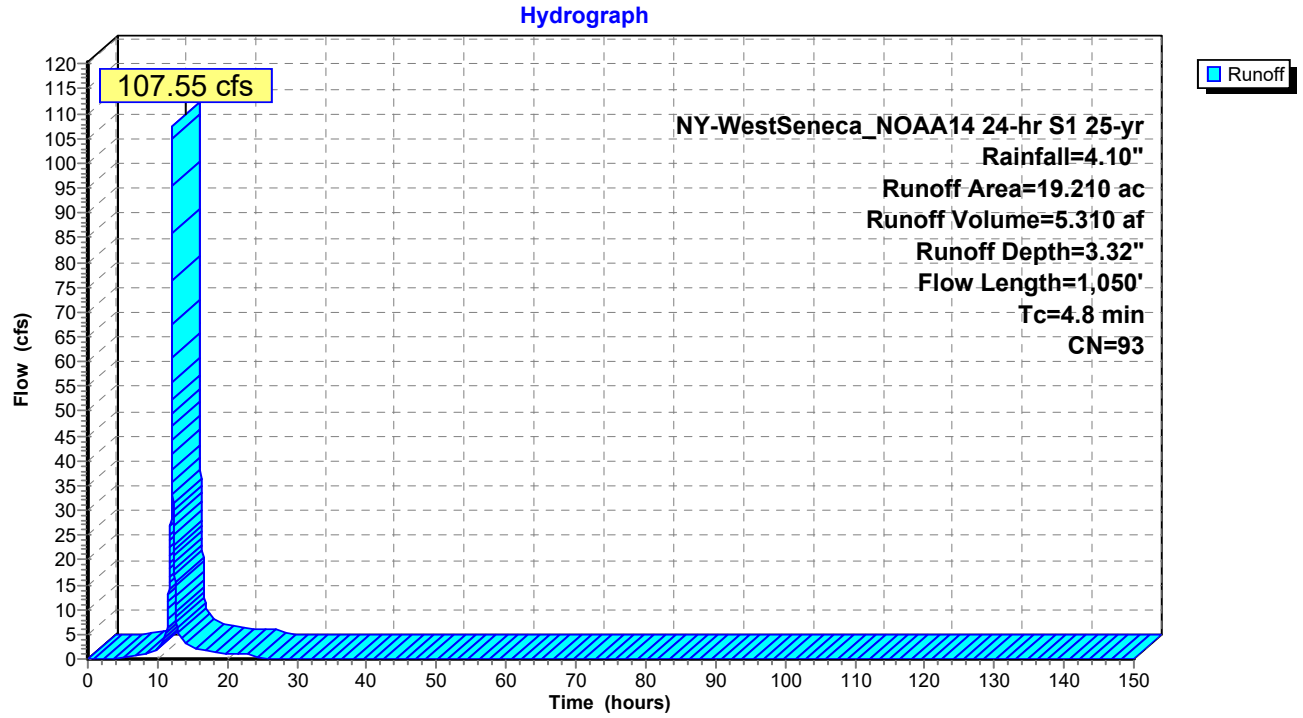
Runoff = 107.55 cfs @ 12.02 hrs, Volume= 5.310 af, Depth= 3.32"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (ac)	CN	Description
5.060	80	>75% Grass cover, Good, HSG D
4.110	98	Roofs, HSG D
10.040	98	Paved parking, HSG D
19.210	93	Weighted Average
5.060		26.34% Pervious Area
14.150		73.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
3.0	950	0.0080	5.32	9.40	**Pipe Channel, 18" PIPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
4.8	1,050	Total			

Subcatchment 1S: Proposed - West



Summary for Subcatchment 6S: DA Uncontrolled

[47] Hint: Peak is 288% of capacity of segment #3

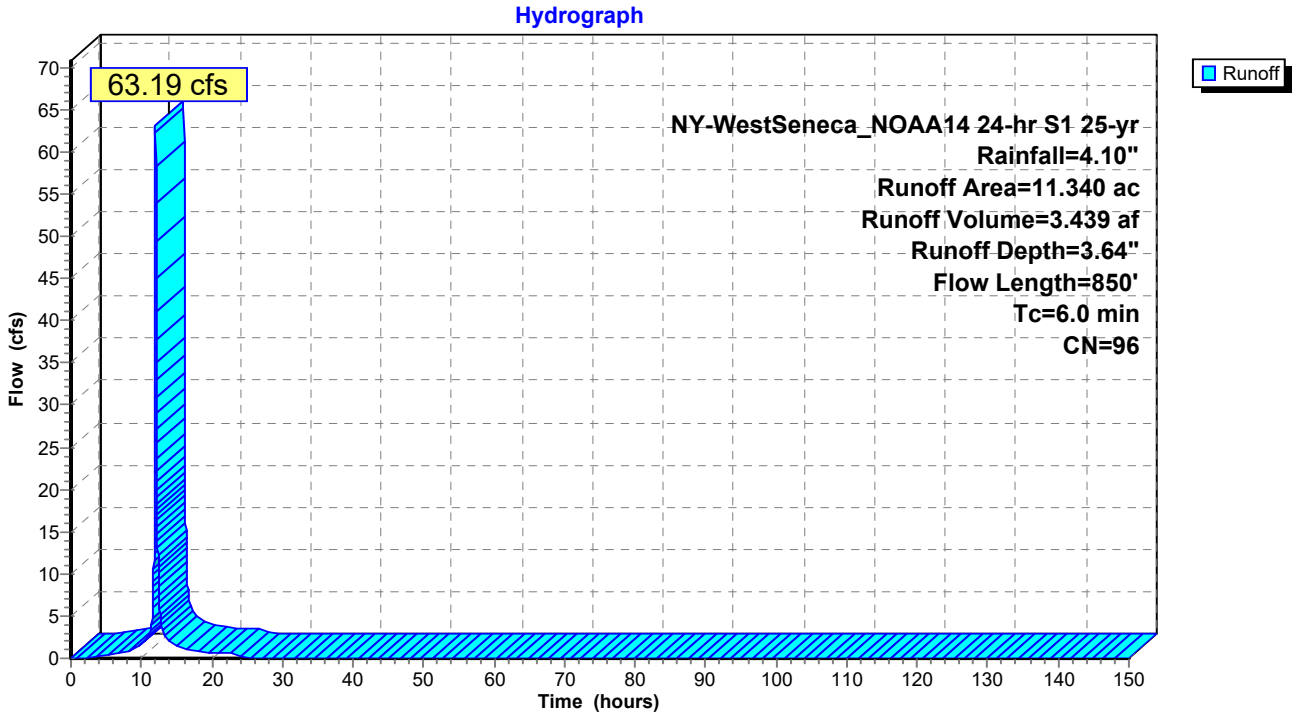
Runoff = 63.19 cfs @ 12.04 hrs, Volume= 3.439 af, Depth= 3.64"
Routed to Pond 16P : OUTLET PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (ac)	CN	Description
7.720	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
2.120	98	Roofs, HSG D
11.340	96	Weighted Average
1.500		13.23% Pervious Area
9.840		86.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	170	0.0150	2.49		**Shallow Concentrated Flow, PVMT** Paved Kv= 20.3 fps
3.1	580	0.0040	3.10	21.94	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
6.0	850	Total			

Subcatchment 6S: DA Uncontrolled



Summary for Subcatchment 12S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 167% of capacity of segment #2

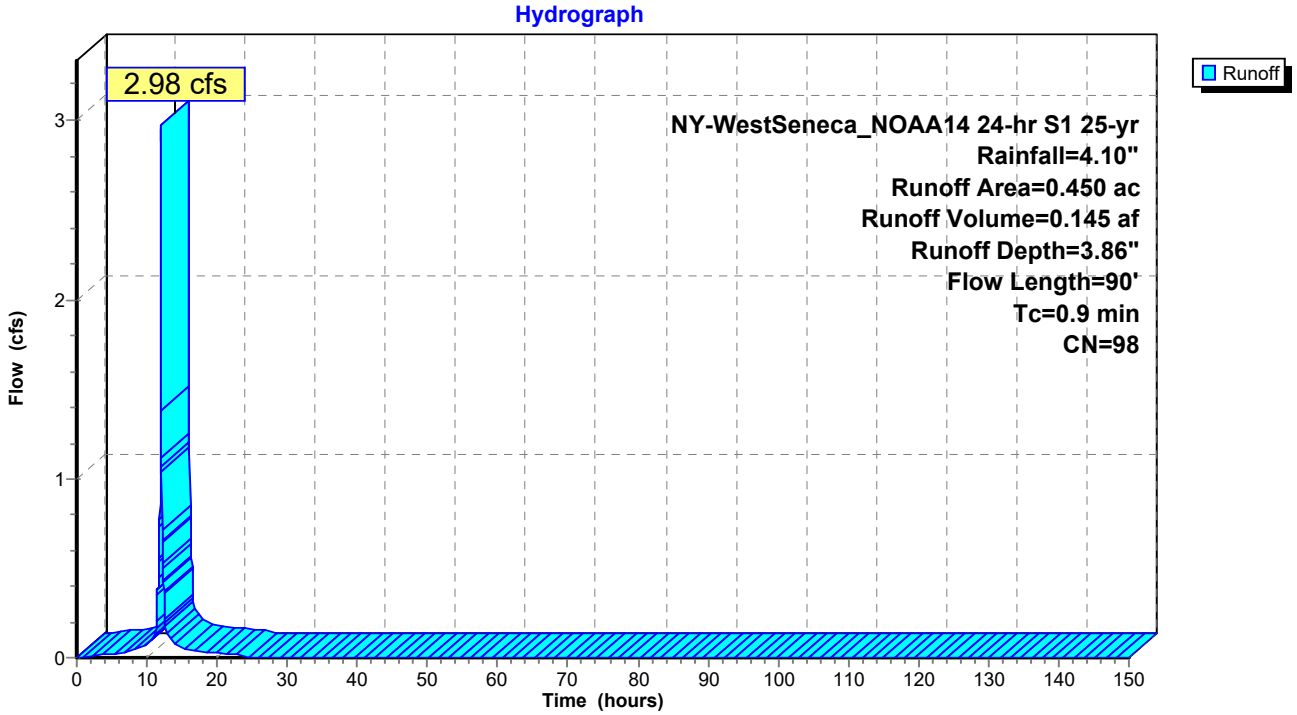
Runoff = 2.98 cfs @ 11.99 hrs, Volume= 0.145 af, Depth= 3.86"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 12S: Slade Ave



Summary for Subcatchment 13S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 167% of capacity of segment #2

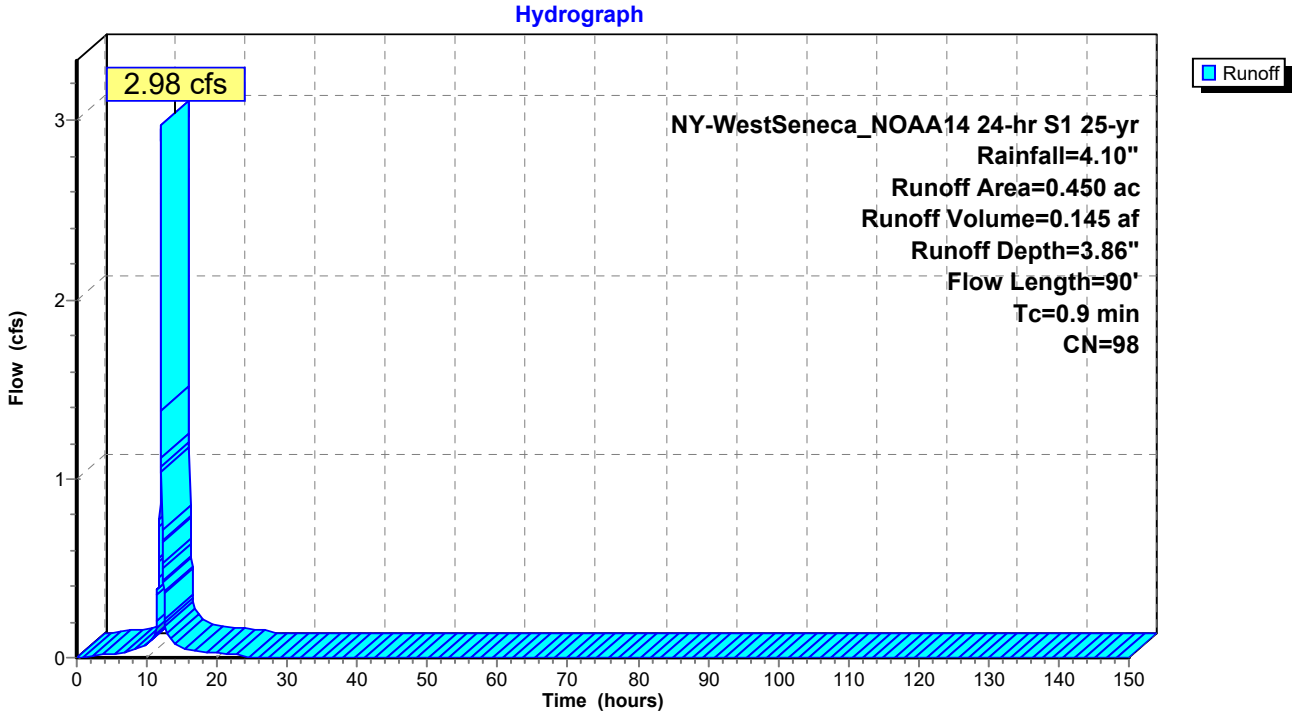
Runoff = 2.98 cfs @ 11.99 hrs, Volume= 0.145 af, Depth= 3.86"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 13S: Slade Ave



Summary for Subcatchment 14S: Proposed - East

[47] Hint: Peak is 256% of capacity of segment #3

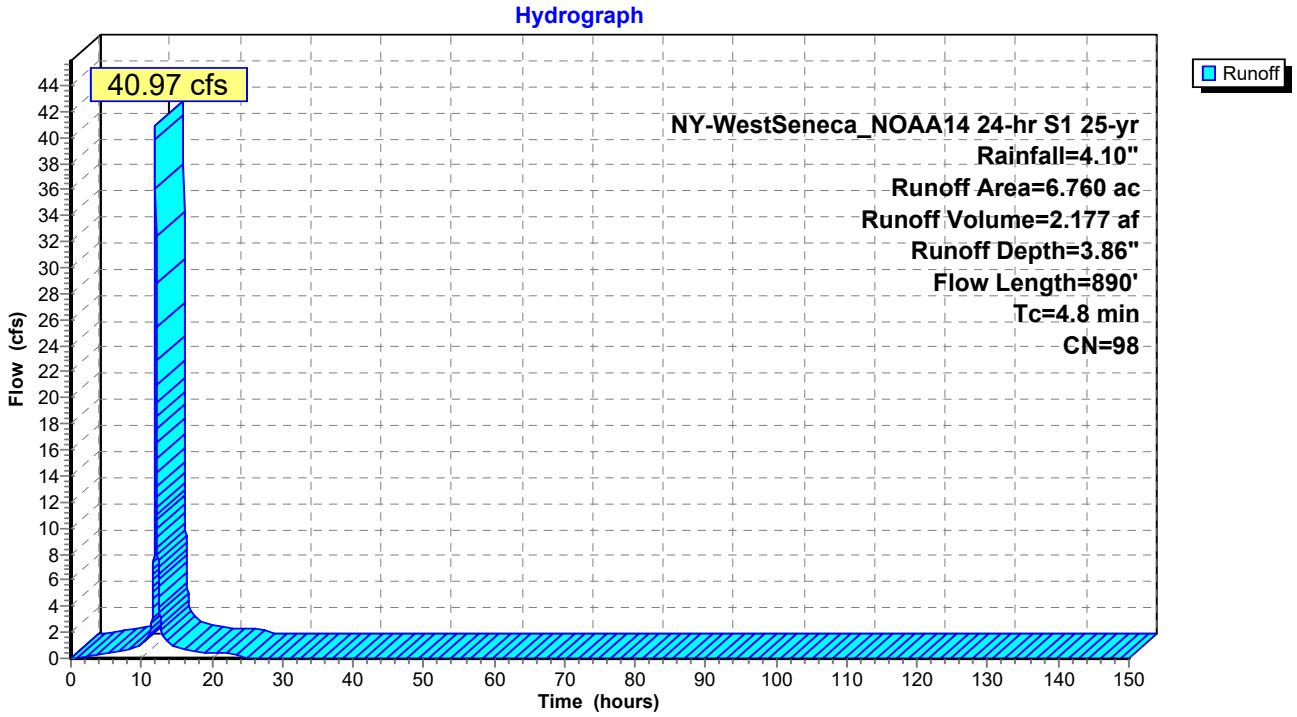
Runoff = 40.97 cfs @ 12.02 hrs, Volume= 2.177 af, Depth= 3.86"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (ac)	CN	Description
4.420	98	Paved parking, HSG D
2.190	98	Roofs, HSG D
0.150	80	>75% Grass cover, Good, HSG D
6.760	98	Weighted Average
0.150		2.22% Pervious Area
6.610		97.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, PVMT** Smooth surfaces n= 0.011 P2= 2.50"
0.7	90	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	700	0.0050	5.09	16.00	**Pipe Channel, PIPE** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Concrete pipe, bends & connections
4.8	890	Total			

Subcatchment 14S: Proposed - East



Summary for Subcatchment 15S: PDA-3

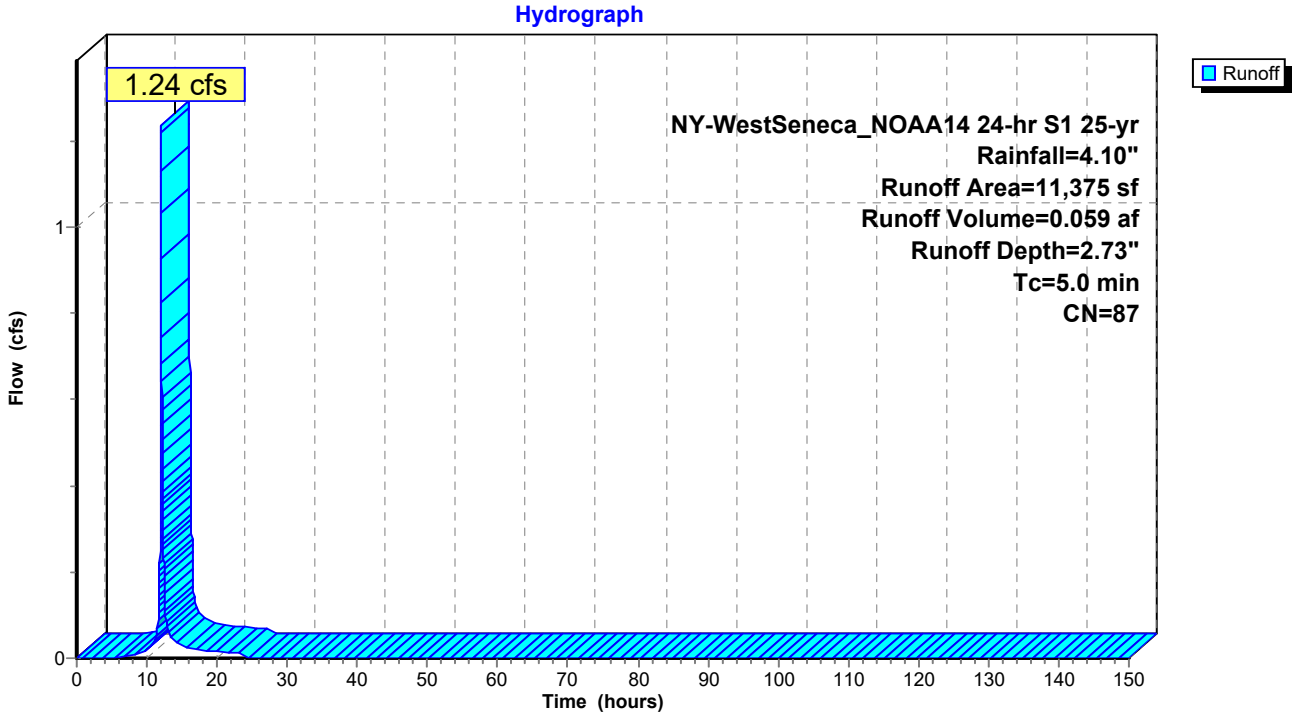
Runoff = 1.24 cfs @ 12.03 hrs, Volume= 0.059 af, Depth= 2.73"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 25-yr Rainfall=4.10"

Area (sf)	CN	Description
7,225	80	>75% Grass cover, Good, HSG D
4,150	98	Paved parking, HSG D
11,375	87	Weighted Average
7,225		63.52% Pervious Area
4,150		36.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 15S: PDA-3



Summary for Pond 16P: OUTLET PIPE

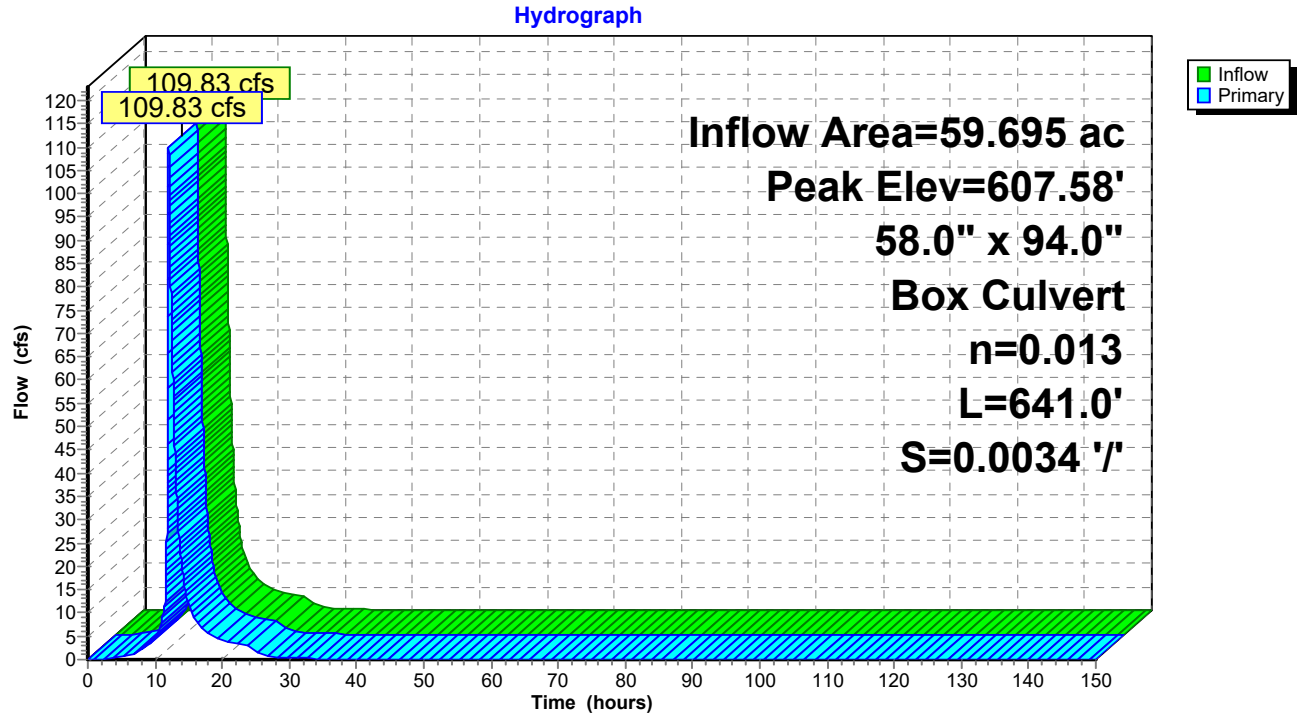
Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 3.49" for 25-yr event
Inflow = 109.83 cfs @ 12.05 hrs, Volume= 17.346 af
Outflow = 109.83 cfs @ 12.05 hrs, Volume= 17.346 af, Atten= 0%, Lag= 0.0 min
Primary = 109.83 cfs @ 12.05 hrs, Volume= 17.346 af
Routed to Link 13L : TOTAL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 607.58' @ 12.05 hrs
Flood Elev= 612.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	603.56'	**58.0" W x 94.0" H Box Culvert** L= 641.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 603.56' / 601.35' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 37.86 sf

Primary OutFlow Max=109.70 cfs @ 12.05 hrs HW=607.58' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 109.70 cfs @ 7.54 fps)

Pond 16P: OUTLET PIPE



Summary for Pond 18P: POND

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 48.355 ac, 79.40% Impervious, Inflow Depth = 3.45" for 25-yr event
Inflow = 271.07 cfs @ 12.02 hrs, Volume= 13.907 af
Outflow = 69.28 cfs @ 12.23 hrs, Volume= 13.907 af, Atten= 74%, Lag= 12.4 min
Primary = 69.28 cfs @ 12.23 hrs, Volume= 13.907 af
Routed to Pond 16P : OUTLET PIPE
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 611.43' @ 12.23 hrs Surf.Area= 73,324 sf Storage= 223,774 cf

Plug-Flow detention time= 119.2 min calculated for 13.906 af (100% of inflow)
Center-of-Mass det. time= 119.4 min (893.6 - 774.2)

Volume	Invert	Avail.Storage	Storage Description
#1	608.00'	471,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

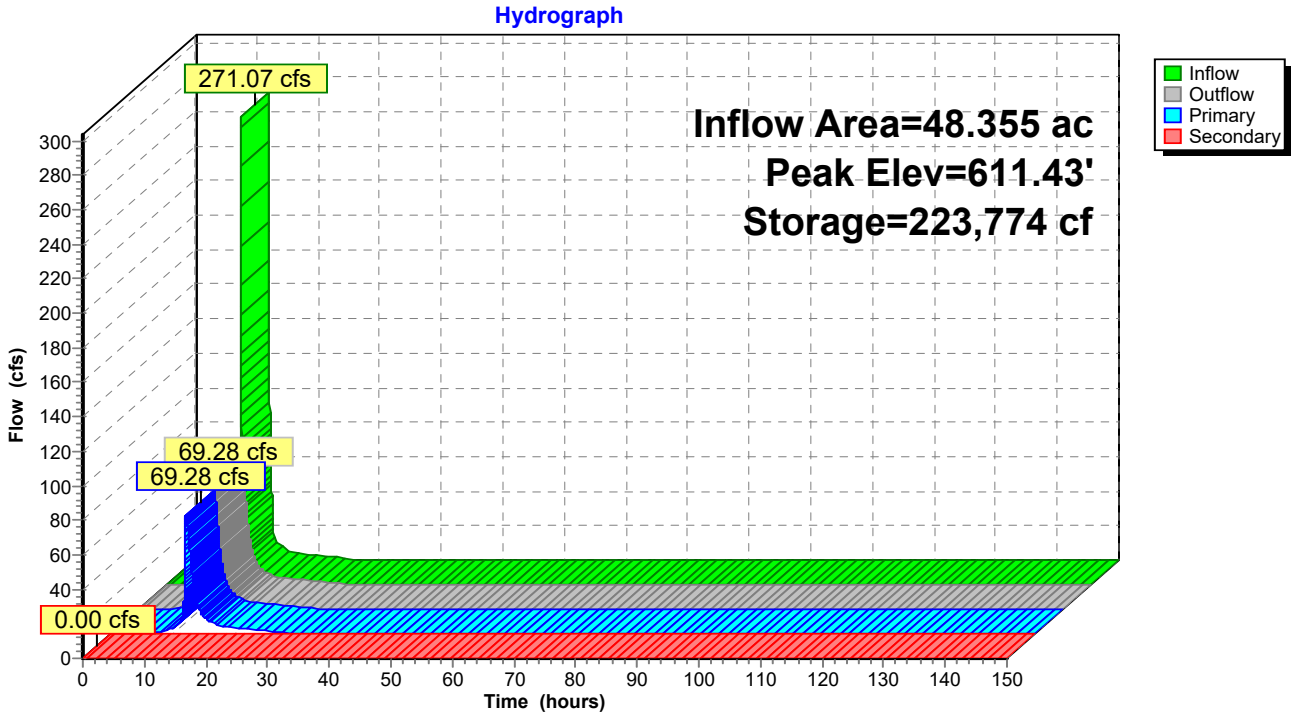
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
608.00	57,300	0	0
614.50	87,700	471,250	471,250

Device	Routing	Invert	Outlet Devices
#1	Primary	607.95'	**48.0" Round Culvert** L= 685.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 607.95' / 604.56' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 12.57 sf
#2	Secondary	614.00'	**50.0' long + 3.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=69.28 cfs @ 12.23 hrs HW=611.43' TW=606.95' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 69.28 cfs @ 7.99 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=608.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: POND



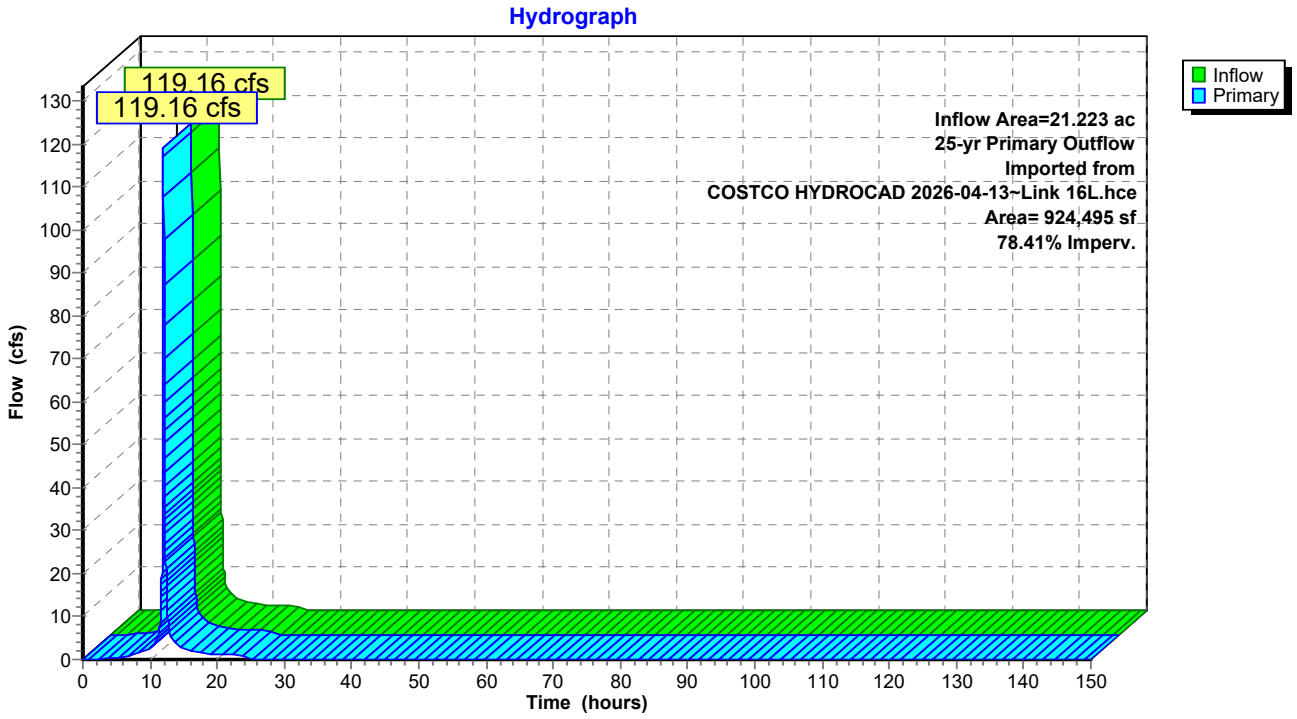
Summary for Link 12L: COSTCO

Inflow Area = 21.223 ac, 78.41% Impervious, Inflow Depth = 3.43" for 25-yr event
Inflow = 119.16 cfs @ 12.03 hrs, Volume= 6.071 af
Primary = 119.16 cfs @ 12.03 hrs, Volume= 6.071 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 18P : POND

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

25-yr Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce

Link 12L: COSTCO

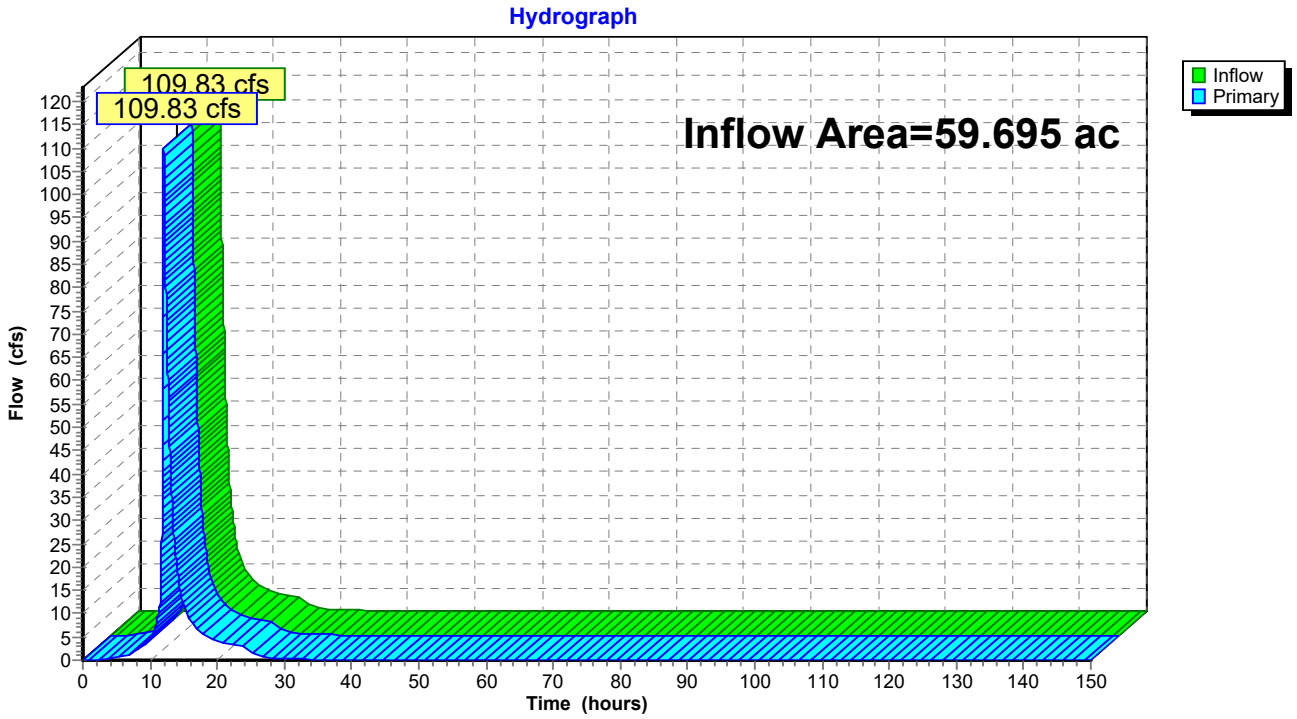


Summary for Link 13L: TOTAL

Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 3.49" for 25-yr event
Inflow = 109.83 cfs @ 12.05 hrs, Volume= 17.346 af
Primary = 109.83 cfs @ 12.05 hrs, Volume= 17.346 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

Link 13L: TOTAL



Time span=0.00-150.00 hrs, dt=0.01 hrs, 15001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Proposed - West Runoff Area=19.210 ac 73.66% Impervious Runoff Depth=4.39"
Flow Length=1,050' Tc=4.8 min CN=93 Runoff=140.14 cfs 7.035 af

Subcatchment6S: DA Uncontrolled Runoff Area=11.340 ac 86.77% Impervious Runoff Depth=4.73"
Flow Length=850' Tc=6.0 min CN=96 Runoff=80.95 cfs 4.471 af

Subcatchment12S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=4.96"
Flow Length=90' Tc=0.9 min CN=98 Runoff=3.78 cfs 0.186 af

Subcatchment13S: Slade Ave Runoff Area=0.450 ac 100.00% Impervious Runoff Depth=4.96"
Flow Length=90' Tc=0.9 min CN=98 Runoff=3.78 cfs 0.186 af

Subcatchment14S: Proposed - East Runoff Area=6.760 ac 97.78% Impervious Runoff Depth=4.96"
Flow Length=890' Tc=4.8 min CN=98 Runoff=52.06 cfs 2.796 af

Subcatchment15S: PDA-3 Runoff Area=11,375 sf 36.48% Impervious Runoff Depth=3.76"
Tc=5.0 min CN=87 Runoff=1.68 cfs 0.082 af

Pond 16P: OUTLET PIPE Peak Elev=608.42' Inflow=141.36 cfs 22.734 af
58.0" x 94.0" Box Culvert n=0.013 L=641.0' S=0.0034 '/' Outflow=141.36 cfs 22.734 af

Pond 18P: POND Peak Elev=612.22' Storage=283,293 cf Inflow=351.21 cfs 18.262 af
Primary=90.10 cfs 18.262 af Secondary=0.00 cfs 0.000 af Outflow=90.10 cfs 18.262 af

100-yr Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce Inflow=154.57 cfs 7.978 af
Link 11L: Primary Area= 924,495 sf 78.41% Imperv. Primary=154.57 cfs 7.978 af

Link 13L: TOTAL Inflow=141.36 cfs 22.734 af
Primary=141.36 cfs 22.734 af

Total Runoff Area = 38.471 ac Runoff Volume = 14.756 af Average Runoff Depth = 4.60"
17.87% Pervious = 6.876 ac 82.13% Impervious = 31.595 ac

Summary for Subcatchment 1S: Proposed - West

[47] Hint: Peak is 1492% of capacity of segment #2

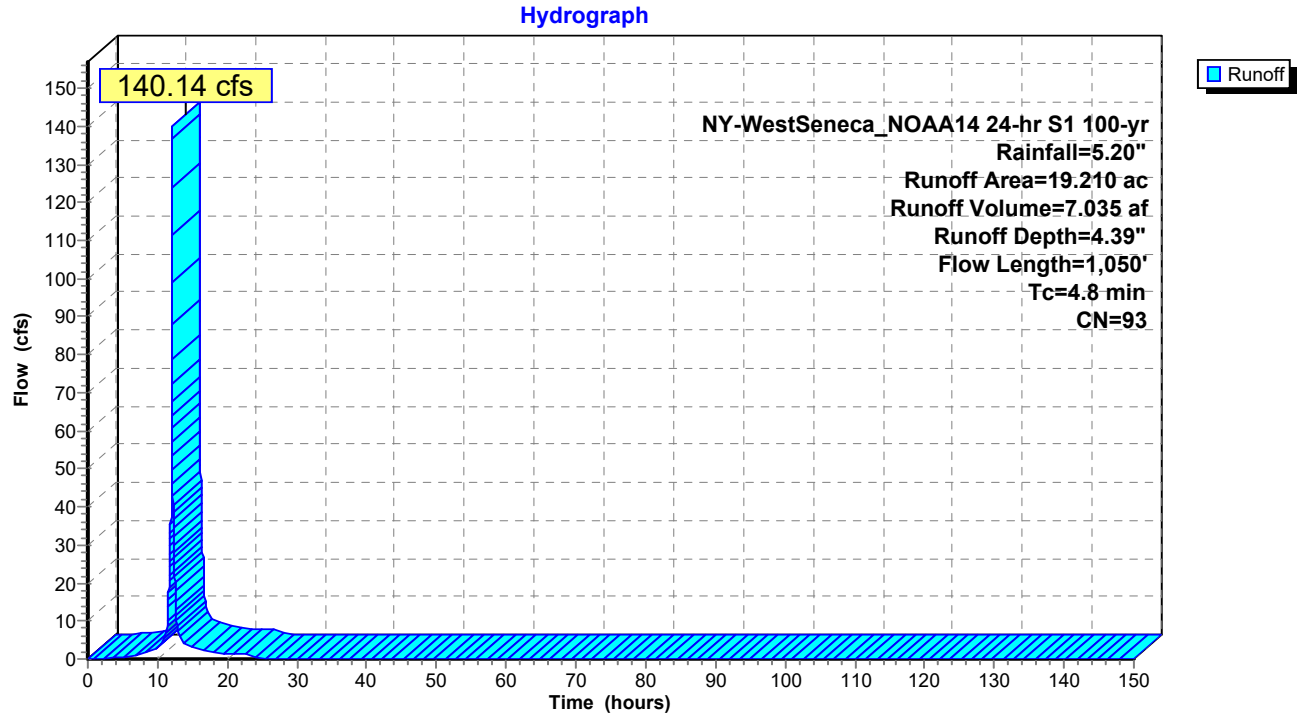
Runoff = 140.14 cfs @ 12.02 hrs, Volume= 7.035 af, Depth= 4.39"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (ac)	CN	Description
5.060	80	>75% Grass cover, Good, HSG D
4.110	98	Roofs, HSG D
10.040	98	Paved parking, HSG D
19.210	93	Weighted Average
5.060		26.34% Pervious Area
14.150		73.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
3.0	950	0.0080	5.32	9.40	**Pipe Channel, 18" PIPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
4.8	1,050	Total			

Subcatchment 1S: Proposed - West



Summary for Subcatchment 6S: DA Uncontrolled

[47] Hint: Peak is 369% of capacity of segment #3

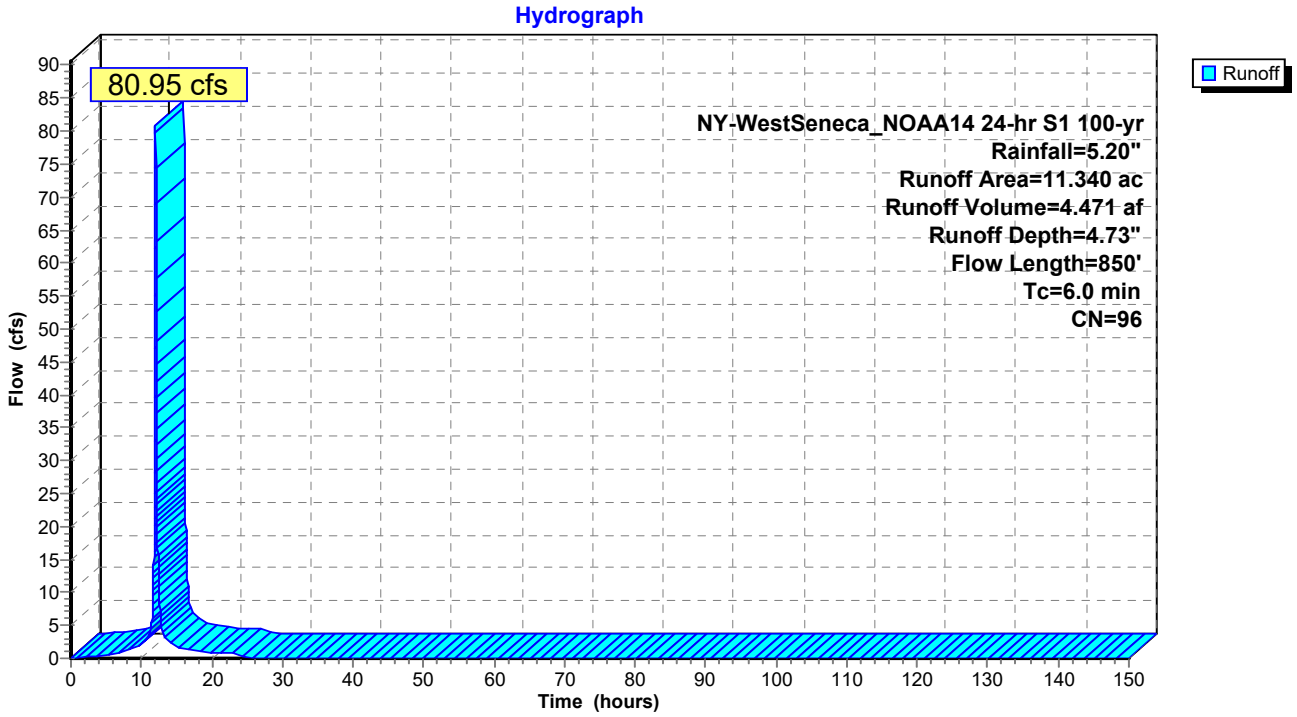
Runoff = 80.95 cfs @ 12.04 hrs, Volume= 4.471 af, Depth= 4.73"
Routed to Pond 16P : OUTLET PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (ac)	CN	Description
7.720	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
2.120	98	Roofs, HSG D
11.340	96	Weighted Average
1.500		13.23% Pervious Area
9.840		86.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.1	170	0.0150	2.49		**Shallow Concentrated Flow, PVMT** Paved Kv= 20.3 fps
3.1	580	0.0040	3.10	21.94	**Pipe Channel, 36" Pipe** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.025 Corrugated metal
6.0	850	Total			

Subcatchment 6S: DA Uncontrolled



Summary for Subcatchment 12S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 212% of capacity of segment #2

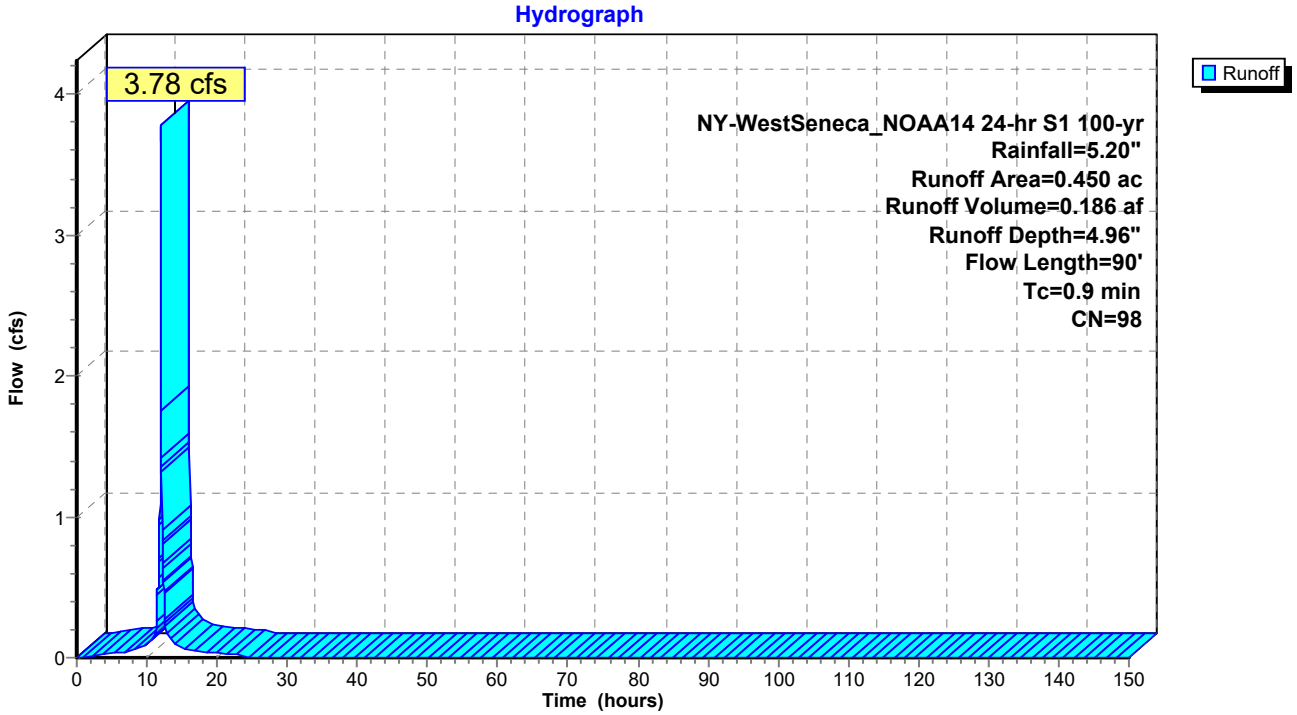
Runoff = 3.78 cfs @ 11.99 hrs, Volume= 0.186 af, Depth= 4.96"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 12S: Slade Ave



Summary for Subcatchment 13S: Slade Ave

[49] Hint: Tc<2dt may require smaller dt
[47] Hint: Peak is 212% of capacity of segment #2

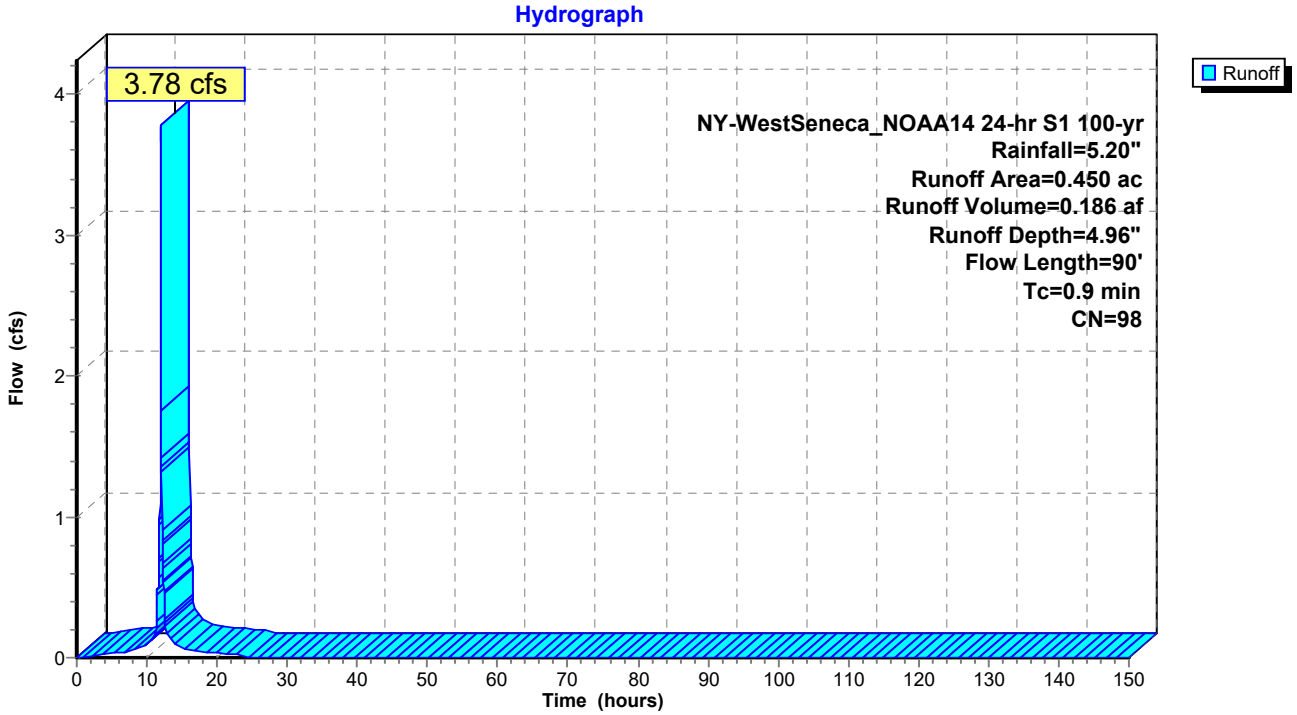
Runoff = 3.78 cfs @ 11.99 hrs, Volume= 0.186 af, Depth= 4.96"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0200	0.96		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
0.4	60	0.0025	2.27	1.78	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	90	Total			

Subcatchment 13S: Slade Ave



Summary for Subcatchment 14S: Proposed - East

[47] Hint: Peak is 325% of capacity of segment #3

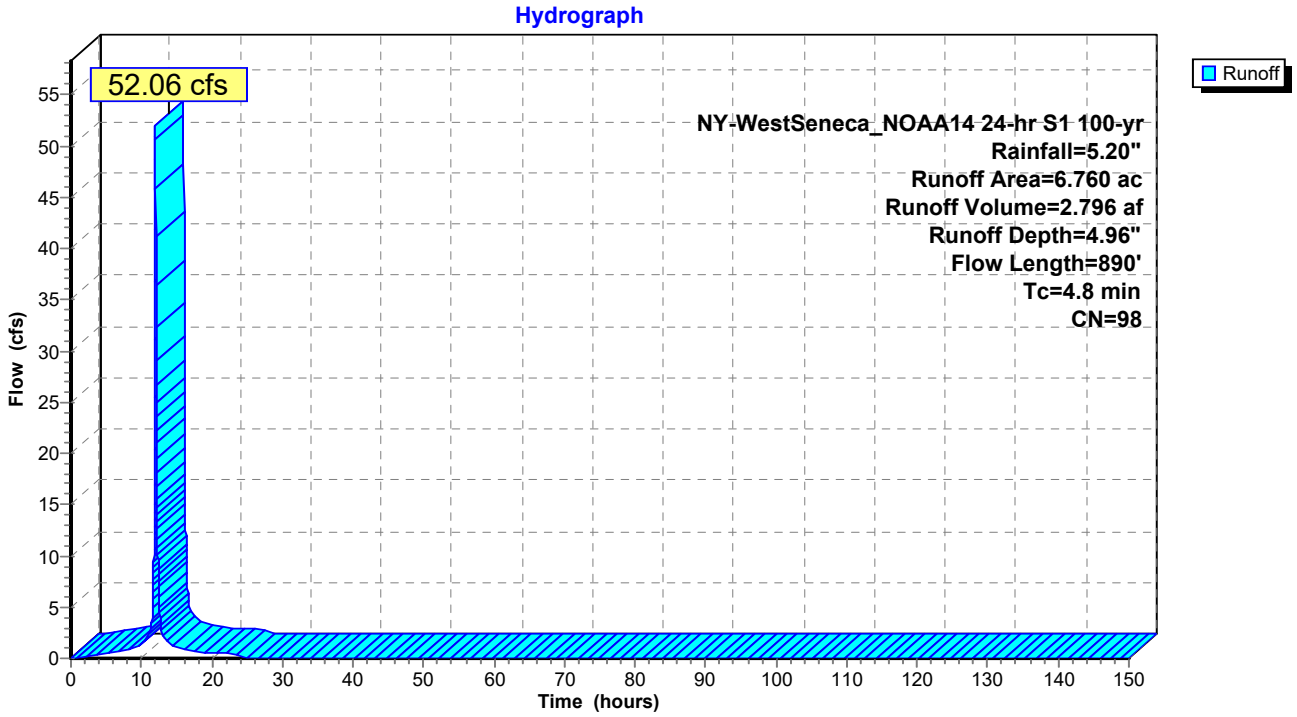
Runoff = 52.06 cfs @ 12.02 hrs, Volume= 2.796 af, Depth= 4.96"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (ac)	CN	Description
4.420	98	Paved parking, HSG D
2.190	98	Roofs, HSG D
0.150	80	>75% Grass cover, Good, HSG D
6.760	98	Weighted Average
0.150		2.22% Pervious Area
6.610		97.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, PVMT** Smooth surfaces n= 0.011 P2= 2.50"
0.7	90	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	700	0.0050	5.09	16.00	**Pipe Channel, PIPE** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Concrete pipe, bends & connections
4.8	890	Total			

Subcatchment 14S: Proposed - East



Summary for Subcatchment 15S: PDA-3

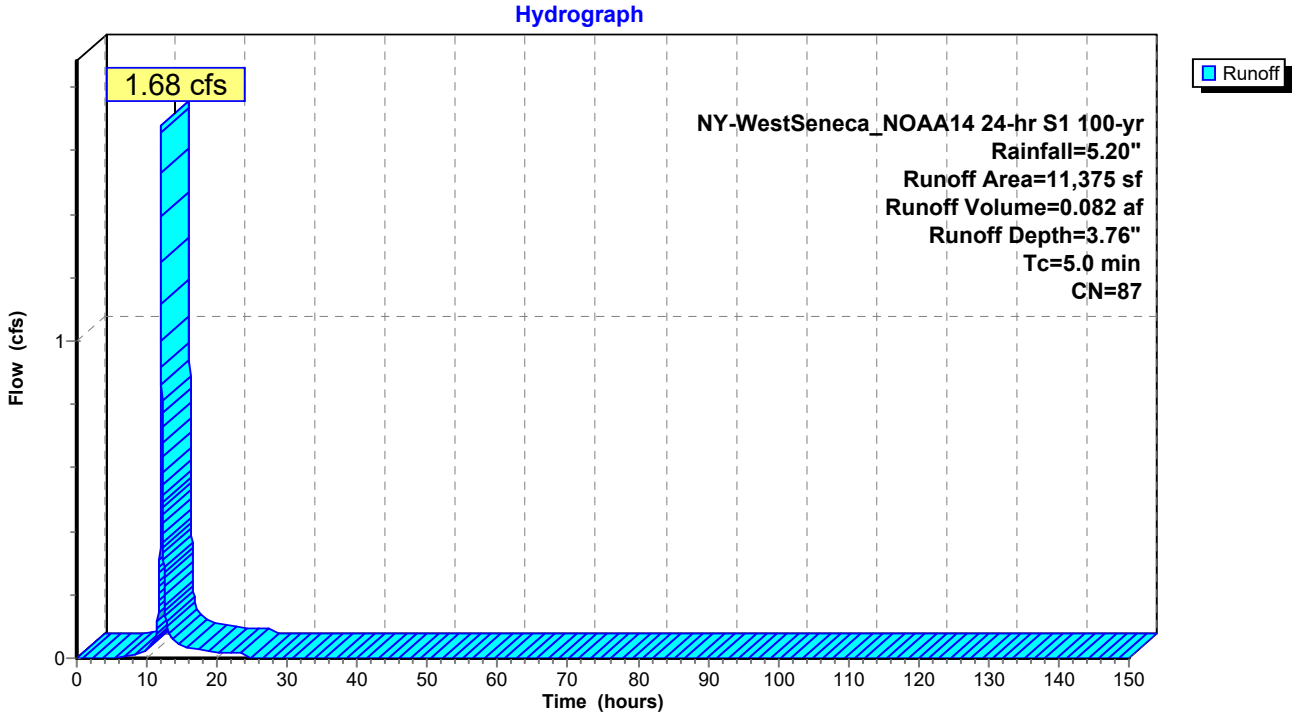
Runoff = 1.68 cfs @ 12.03 hrs, Volume= 0.082 af, Depth= 3.76"
Routed to Pond 18P : POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
NY-WestSeneca_NOAA14 24-hr S1 100-yr Rainfall=5.20"

Area (sf)	CN	Description
7,225	80	>75% Grass cover, Good, HSG D
4,150	98	Paved parking, HSG D
11,375	87	Weighted Average
7,225		63.52% Pervious Area
4,150		36.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 15S: PDA-3



Summary for Pond 16P: OUTLET PIPE

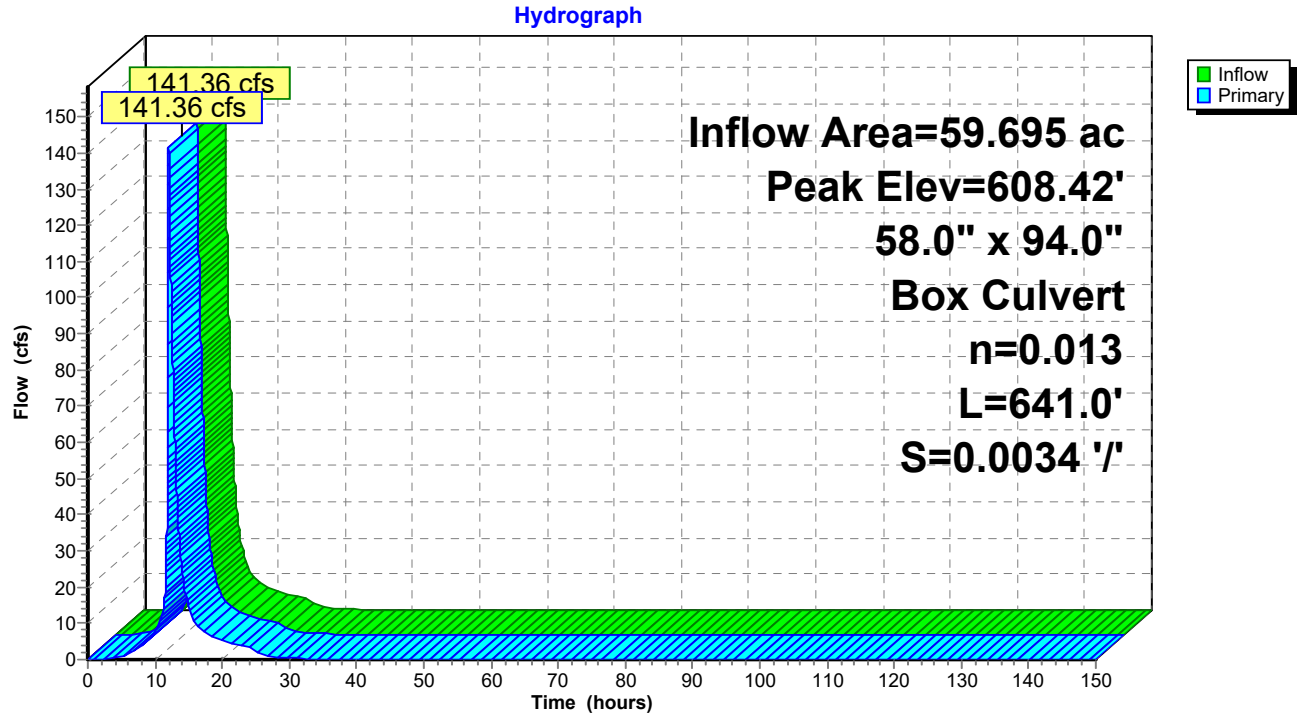
Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 4.57" for 100-yr event
Inflow = 141.36 cfs @ 12.05 hrs, Volume= 22.734 af
Outflow = 141.36 cfs @ 12.05 hrs, Volume= 22.734 af, Atten= 0%, Lag= 0.0 min
Primary = 141.36 cfs @ 12.05 hrs, Volume= 22.734 af
Routed to Link 13L : TOTAL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 608.42' @ 12.05 hrs
Flood Elev= 612.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	603.56'	**58.0" W x 94.0" H Box Culvert** L= 641.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 603.56' / 601.35' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 37.86 sf

Primary OutFlow Max=141.28 cfs @ 12.05 hrs HW=608.42' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 141.28 cfs @ 8.02 fps)

Pond 16P: OUTLET PIPE



Summary for Pond 18P: POND

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 48.355 ac, 79.40% Impervious, Inflow Depth = 4.53" for 100-yr event
Inflow = 351.21 cfs @ 12.02 hrs, Volume= 18.262 af
Outflow = 90.10 cfs @ 12.23 hrs, Volume= 18.262 af, Atten= 74%, Lag= 12.2 min
Primary = 90.10 cfs @ 12.23 hrs, Volume= 18.262 af
Routed to Pond 16P : OUTLET PIPE
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs
Peak Elev= 612.22' @ 12.23 hrs Surf.Area= 77,027 sf Storage= 283,293 cf

Plug-Flow detention time= 107.0 min calculated for 18.261 af (100% of inflow)
Center-of-Mass det. time= 107.2 min (875.1 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	608.00'	471,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

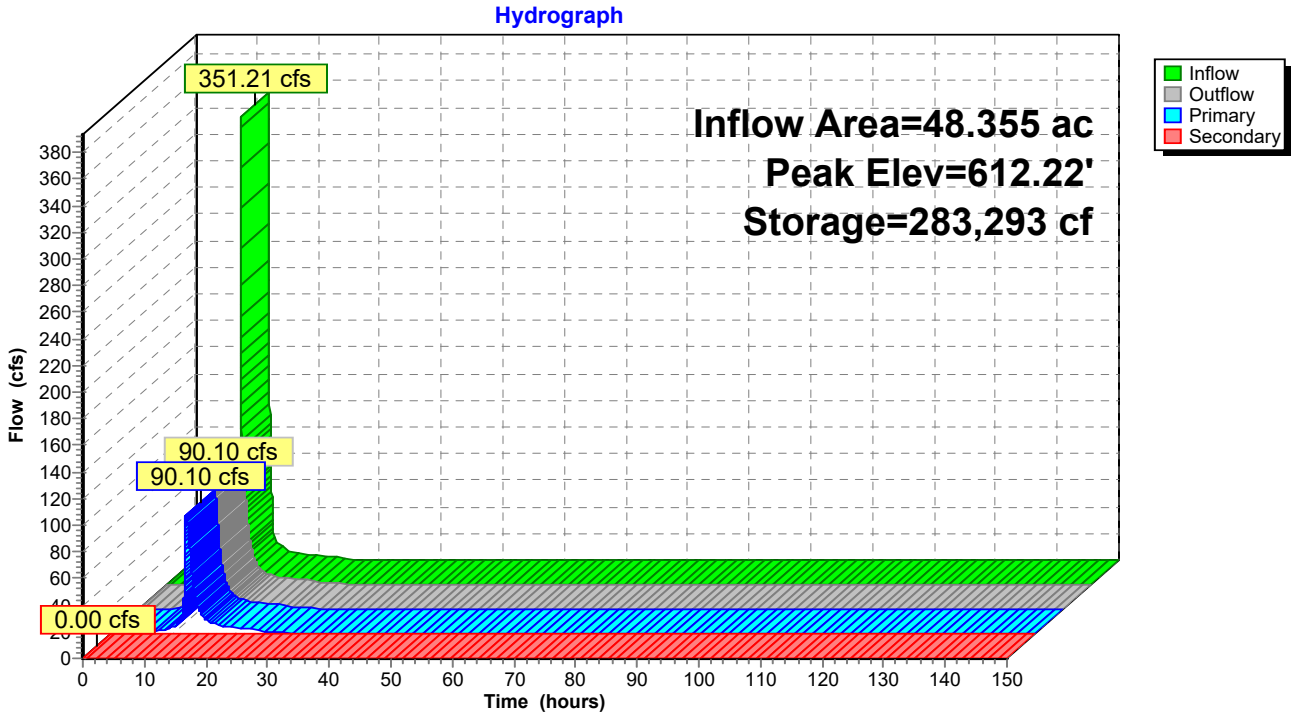
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
608.00	57,300	0	0
614.50	87,700	471,250	471,250

Device	Routing	Invert	Outlet Devices
#1	Primary	607.95'	**48.0" Round Culvert** L= 685.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 607.95' / 604.56' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 12.57 sf
#2	Secondary	614.00'	**50.0' long + 3.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=90.10 cfs @ 12.23 hrs HW=612.22' TW=607.69' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 90.10 cfs @ 8.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=608.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: POND



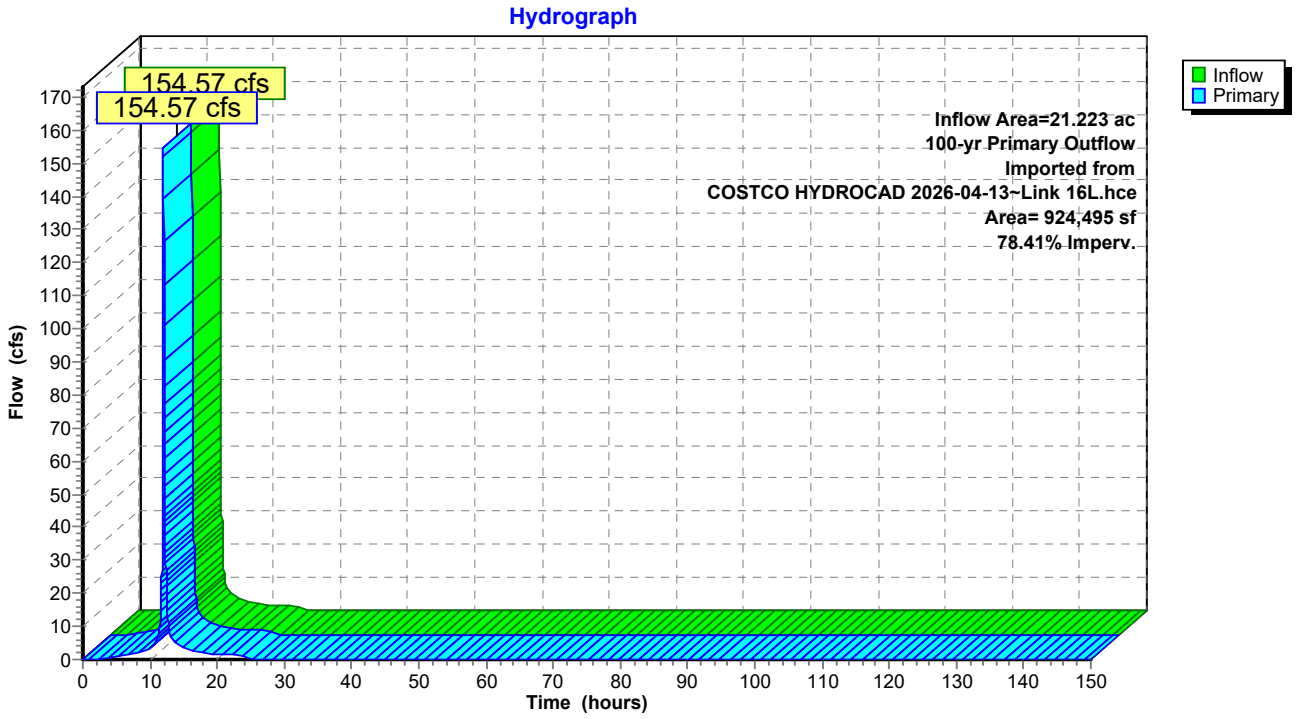
Summary for Link 12L: COSTCO

Inflow Area = 21.223 ac, 78.41% Impervious, Inflow Depth = 4.51" for 100-yr event
Inflow = 154.57 cfs @ 12.03 hrs, Volume= 7.978 af
Primary = 154.57 cfs @ 12.03 hrs, Volume= 7.978 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 18P : POND

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

100-yr Primary Outflow Imported from COSTCO HYDROCAD 2026-04-13~Link 16L.hce

Link 12L: COSTCO

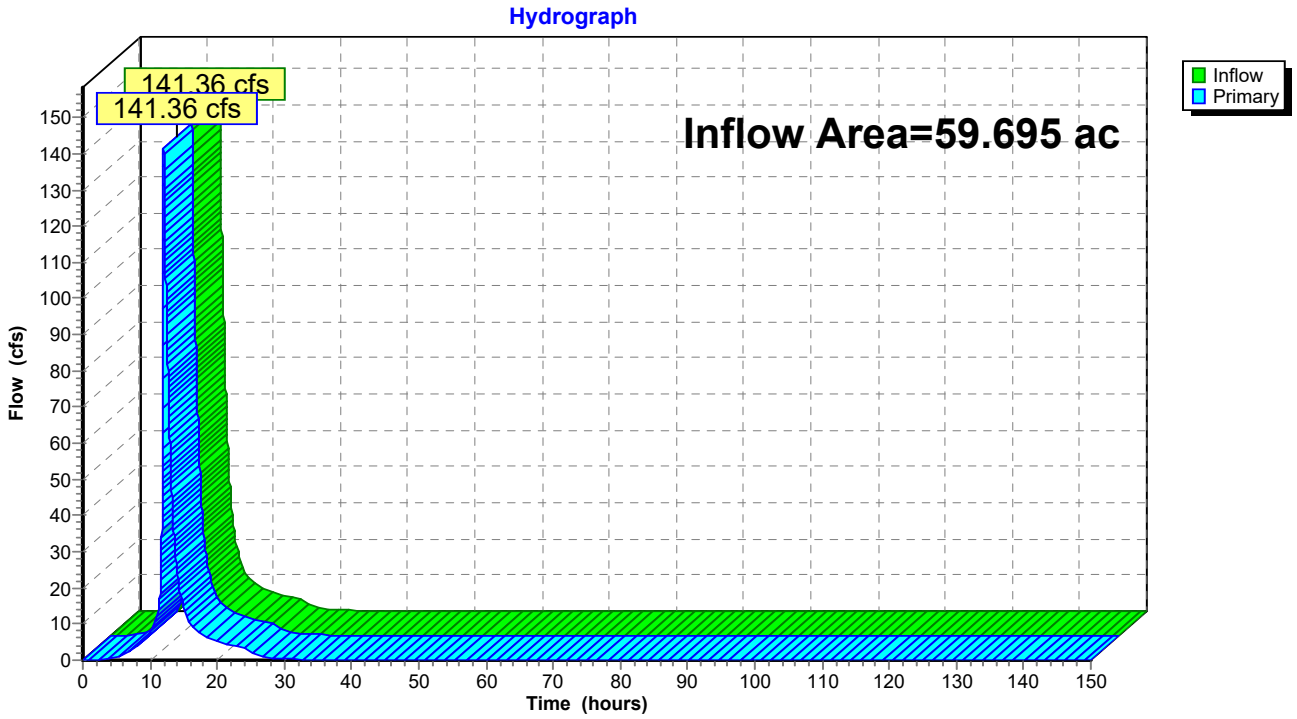


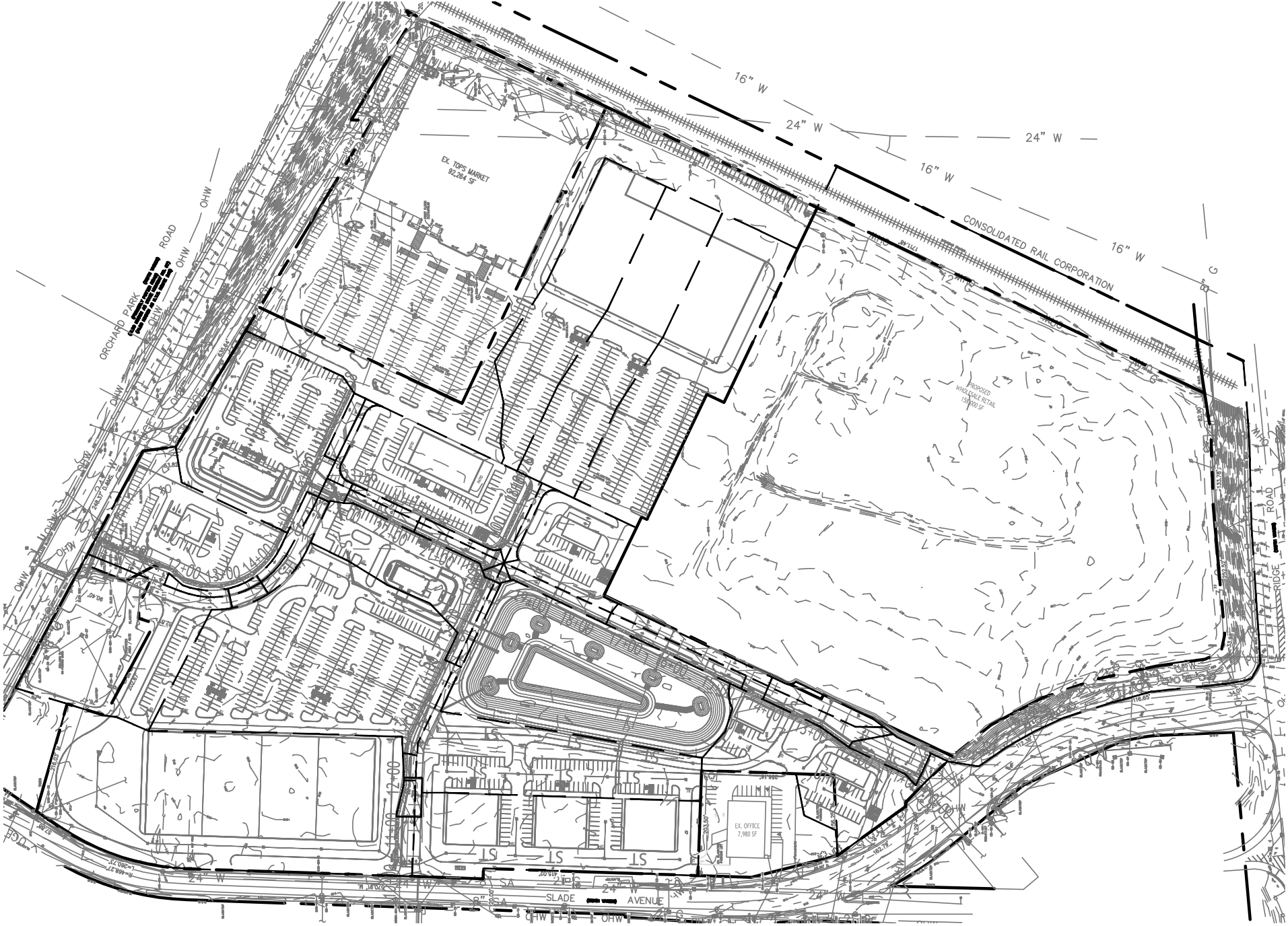
Summary for Link 13L: TOTAL

Inflow Area = 59.695 ac, 80.80% Impervious, Inflow Depth = 4.57" for 100-yr event
Inflow = 141.36 cfs @ 12.05 hrs, Volume= 22.734 af
Primary = 141.36 cfs @ 12.05 hrs, Volume= 22.734 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs

Link 13L: TOTAL





OVERALL STORM MAP

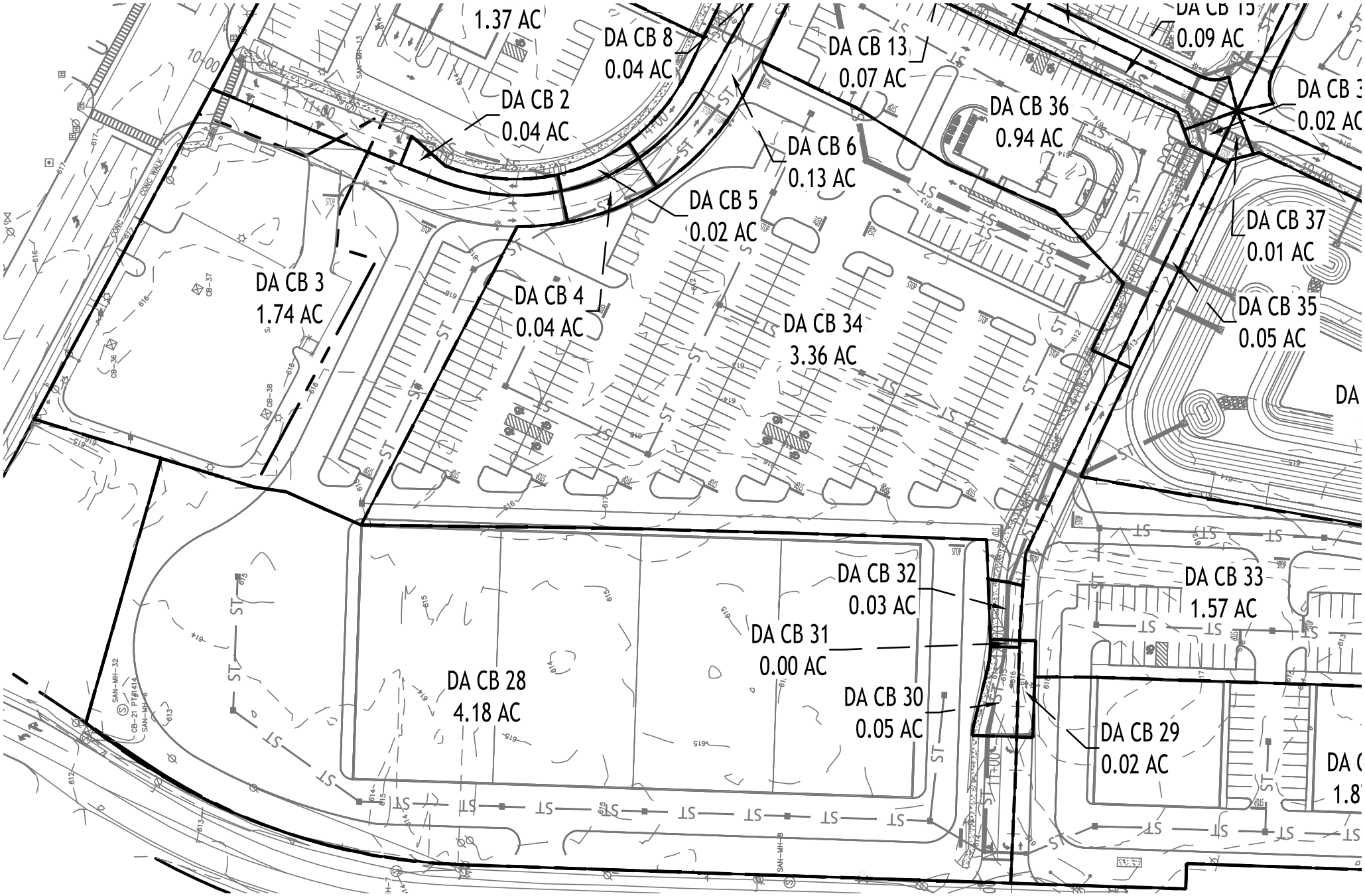
N

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

250 0 250 500Ft.

250'



STORM MAP

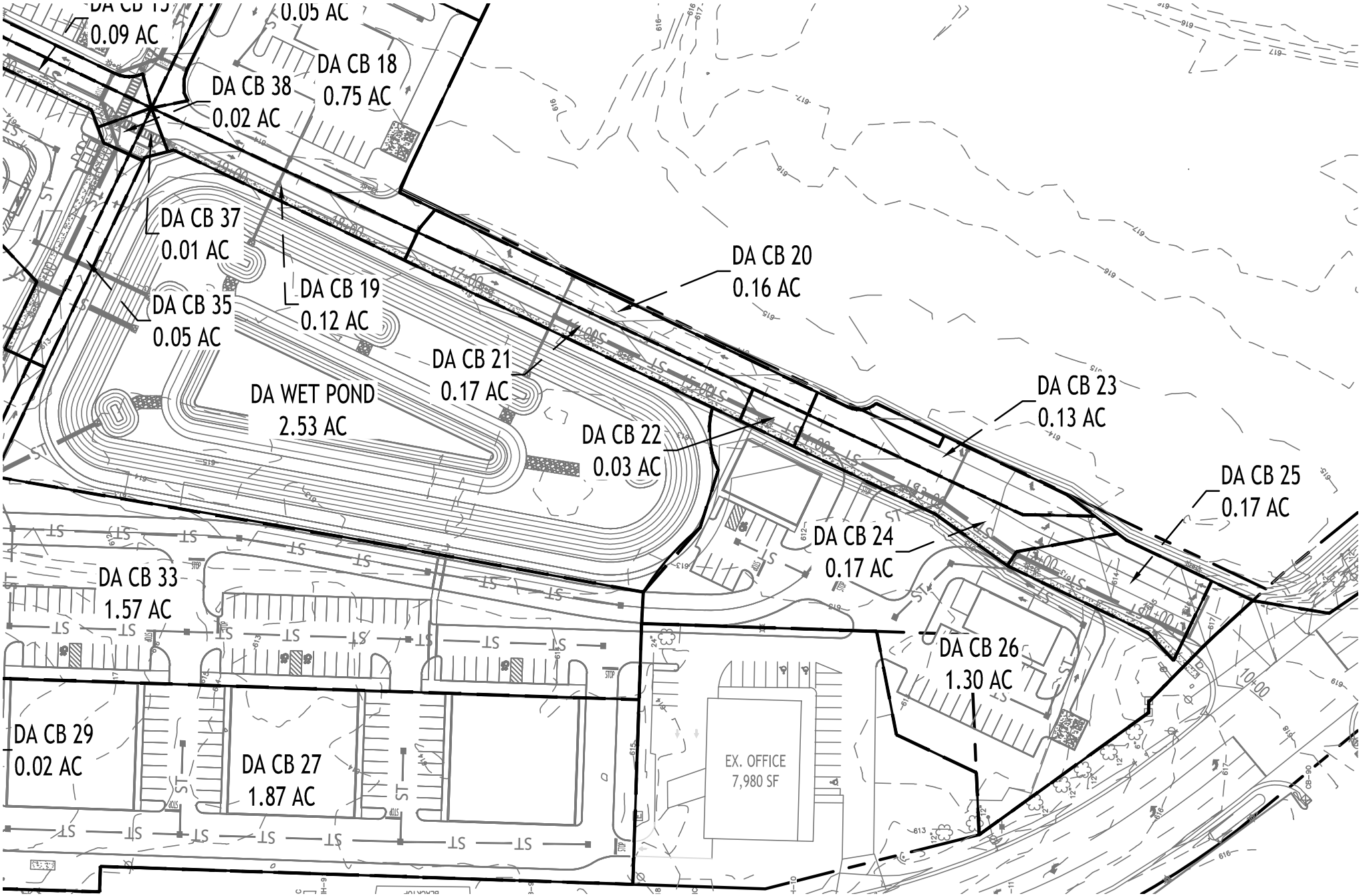
N

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100 0 100 200Ft.

100'



STORM MAP

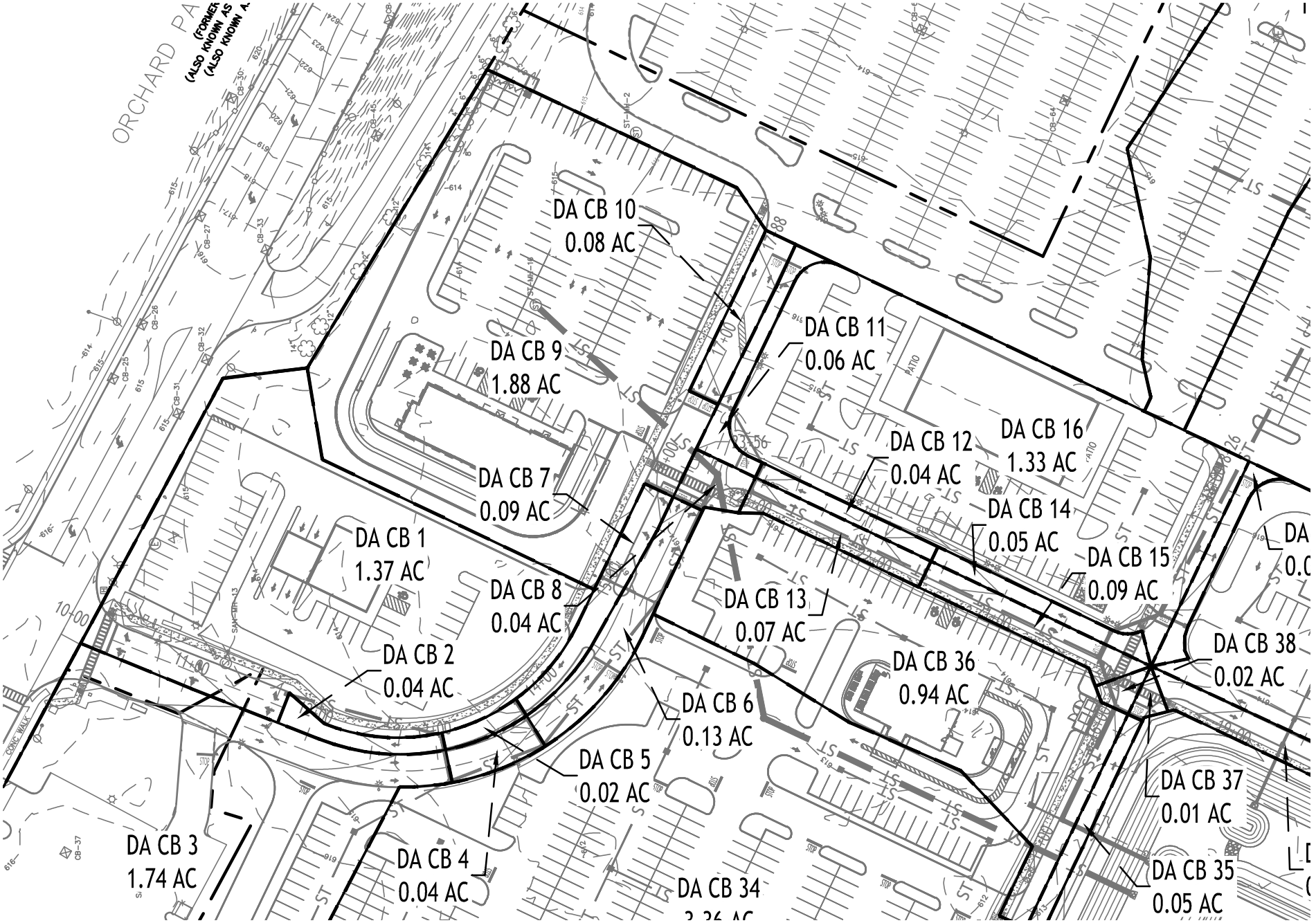
N

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100 0 100 200Ft.

100'



N

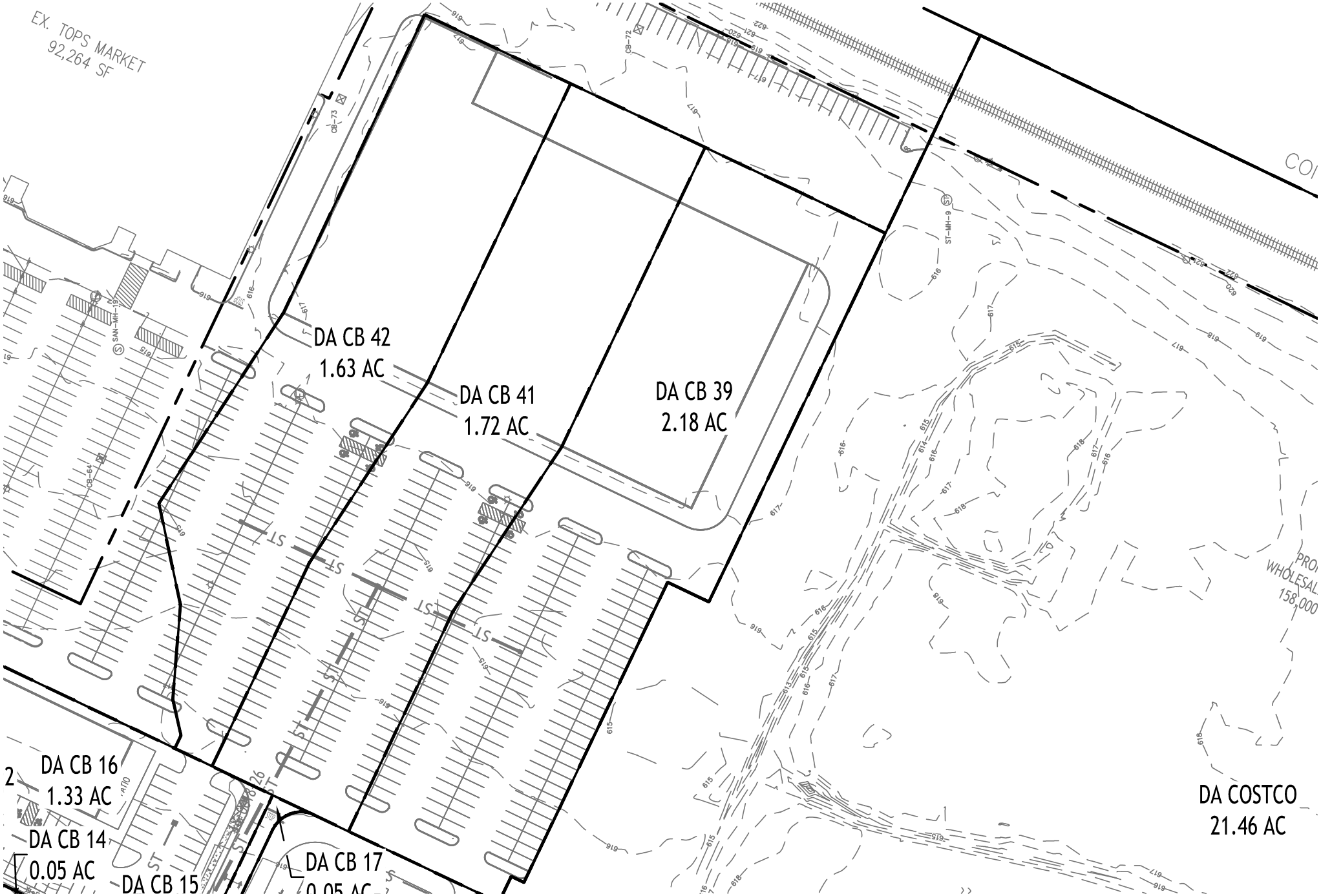
STORM MAP

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100 0 100 200Ft.

100'



STORM MAP

N

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200Ft.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	47.493	0.17	2.13	0.80	0.14	1.70	5.0	13.1	3.8	6.50	10.45	4.72	18	0.99	608.00	608.47	609.24	609.46	609.71	614.22	CB 21 - ES 3
2	1	170.686	0.03	1.80	0.80	0.02	1.44	5.0	12.2	4.0	5.70	9.61	5.34	18	0.84	611.00	612.43	611.83	613.35	614.22	615.96	CB 22 - CB 21
3	2	164.716	0.17	1.77	0.80	0.14	1.42	5.0	11.4	4.1	5.82	6.23	4.00	18	0.35	612.43	613.01	613.58	614.16	615.96	615.51	CB 24 - CB 22
4	3	70.935	0.17	1.47	0.80	0.14	1.18	5.0	10.9	4.2	4.93	9.25	3.22	18	0.78	613.01	613.56	614.53	614.63	615.51	616.12	CB 25 - CB 24
5	4	147.000	1.30	1.30	0.80	1.04	1.04	10.0	10.0	4.4	4.57	11.52	3.85	18	1.20	613.56	615.33	614.74	616.15	616.12	617.82	CB 26 - CB 25
6	3	45.048	0.13	0.13	0.80	0.10	0.10	5.0	5.0	6.0	0.63	3.71	0.80	12	1.09	613.01	613.50	614.53	614.55	615.51	615.50	CB 23 - CB 24
7	End	48.485	0.05	8.32	0.80	0.04	6.66	5.0	20.8	2.9	19.47	32.79	5.49	30	0.64	608.00	608.31	610.00	609.81	610.79	614.04	CB 35 - ES 2
8	7	21.008	0.94	8.27	0.80	0.75	6.62	12.0	20.7	2.9	19.41	32.26	6.34	30	0.62	608.31	608.44	609.81	609.93	614.04	614.04	CB 36 - CB 35
9	8	94.590	0.02	7.33	0.80	0.02	5.86	5.0	20.4	3.0	17.35	19.32	6.88	24	0.73	608.44	609.13	609.93	610.63	614.04	615.03	CB 38 - CB 36
10	9	39.665	0.09	7.30	0.80	0.07	5.84	5.0	20.3	3.0	17.34	17.95	6.51	24	0.63	609.13	609.38	610.71	610.96	615.03	615.20	CB 15 - CB 38
11	10	289.833	0.07	0.25	0.80	0.06	0.20	5.0	7.4	5.1	1.02	3.19	1.57	12	0.80	609.38	611.70	612.07	612.36	615.20	614.75	CB 13 - CB 15
12	11	21.007	0.04	0.18	0.80	0.03	0.14	5.0	7.1	5.2	0.75	3.56	2.06	12	1.00	611.70	611.91	612.44	612.27	614.75	614.76	CB 12 - CB 13
13	12	48.838	0.06	0.14	0.80	0.05	0.11	5.0	6.1	5.6	0.62	3.57	2.61	12	1.00	611.91	612.40	612.27	612.73	614.76	614.85	CB 11 - CB 12
14	13	32.993	0.08	0.08	0.80	0.06	0.06	5.0	5.0	6.0	0.39	3.56	2.08	12	1.00	612.40	612.73	612.73	612.99	614.85	614.73	CB 10 - CB 11
15	End	27.575	0.04	5.35	0.80	0.03	4.28	5.0	16.1	3.4	14.54	22.79	5.73	24	1.02	608.09	608.37	609.78	609.74	613.77	613.85	CB 8 - ST MH #2
16	15	79.651	0.13	3.43	0.80	0.10	2.74	5.0	15.8	3.4	9.41	10.50	5.92	18	1.00	608.37	609.17	609.74	610.35	613.85	612.85	CB 6 - CB 8
17	16	137.111	0.04	3.21	0.80	0.03	2.57	5.0	15.4	3.5	8.95	10.50	6.05	18	1.00	609.17	610.54	610.35	611.70	612.85	613.70	CB 4 - CB 6
18	17	74.605	1.74	3.15	0.80	1.39	2.52	12.0	15.1	3.5	8.86	10.53	6.07	18	1.01	610.54	611.29	611.70	612.44	613.70	614.25	CB 3 - CB 4
19	18	35.279	0.04	1.41	0.80	0.03	1.13	5.0	14.9	3.5	4.00	10.50	3.58	18	1.00	611.29	611.64	612.44	612.41	614.25	614.45	CB 2 - CB 3
20	19	119.924	1.37	1.37	0.80	1.10	1.10	14.0	14.0	3.7	4.02	10.50	4.43	18	1.00	611.64	612.84	612.41	613.61	614.45	615.34	CB 1 - CB 2
21	9	21.000	0.01	0.01	0.80	0.01	0.01	5.0	5.0	6.0	0.05	3.56	1.50	12	1.00	611.81	612.02	611.89	612.11	615.03	615.03	CB 37 - CB 38
22	17	38.900	0.02	0.02	0.80	0.02	0.02	5.0	5.0	6.0	0.10	3.56	1.36	12	1.00	611.52	611.91	611.70	612.04	613.70	613.91	CB 5 - CB 4

Project File: New.stm | Number of lines: 41 | Run Date: 7/20/2026

NOTES:Intensity = 27.10 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	10	21.007	0.05	6.96	0.80	0.04	5.57	5.0	20.2	3.0	16.56	17.11	5.27	24	0.57	609.38	609.50	612.07	612.19	615.20	615.20	CB 14 - CB 15
24	23	39.525	1.33	6.91	0.80	1.06	5.53	10.0	20.1	3.0	16.50	17.24	5.25	24	0.58	609.50	609.73	612.68	612.89	615.20	615.73	CB 16 - CB 14
25	24	321.752	1.72	5.53	0.80	1.38	4.42	18.0	18.9	3.1	13.70	14.04	4.36	24	0.39	609.73	610.97	613.37	614.55	615.73	614.26	CB 41 - CB 16
26	25	122.044	1.63	1.63	0.80	1.30	1.30	18.0	18.0	3.2	4.15	5.78	2.35	18	0.30	610.97	611.34	615.21	615.40	614.26	614.52	CB 42 - CB 41
27	25	126.597	2.18	2.18	0.80	1.74	1.74	18.0	18.0	3.2	5.55	5.75	3.14	18	0.30	610.97	611.35	615.21	615.57	614.26	614.35	CB 39 - CB 41
28	15	44.986	1.88	1.88	0.80	1.50	1.50	12.0	12.0	4.0	6.01	10.50	5.63	18	1.00	610.90	611.35	611.71	612.30	613.85	613.85	CB 9 - CB 8
29	End	90.457	1.57	11.09	0.80	1.26	8.87	5.0	18.1	3.2	28.15	36.84	6.83	30	0.81	608.00	608.73	610.15	610.54	610.79	614.04	CB 33 - ES 4
30	29	21.012	3.36	9.52	0.80	2.69	7.62	15.0	18.0	3.2	24.22	33.48	6.65	30	0.67	608.73	608.87	610.54	610.54	614.04	614.04	CB 34 - CB 33
31	30	100.720	0.03	6.16	0.80	0.02	4.93	5.0	17.7	3.2	15.84	18.17	6.10	24	0.65	608.87	609.52	610.54	610.96	614.04	615.14	CB 32 - CB 34
32	31	45.431	0.01	6.13	0.80	0.01	4.90	5.0	17.5	3.2	15.85	17.11	5.43	24	0.57	609.52	609.78	611.33	611.49	615.14	615.64	CB 31 - CB 32
33	32	73.808	0.05	6.12	0.80	0.04	4.90	5.0	17.3	3.3	15.95	17.26	5.23	24	0.58	609.78	610.21	611.73	612.01	615.64	614.71	CB 30 - CB 31
34	33	92.056	4.18	6.05	0.80	3.34	4.84	17.0	17.0	3.3	15.93	17.95	5.07	24	0.63	610.21	610.79	612.68	613.14	614.71	613.79	CB 28 - CB 30
35	34	33.024	1.87	1.87	0.80	1.50	1.50	12.0	12.0	4.0	5.98	10.34	3.38	18	0.97	610.79	611.11	613.74	613.84	613.79	614.02	CB 27 - CB 28
36	1	32.988	0.16	0.16	0.80	0.13	0.13	5.0	5.0	6.0	0.77	6.85	4.37	12	3.70	611.00	612.22	611.23	612.59	614.22	614.22	CB 20 - CB 21
37	24	21.000	0.05	0.05	0.80	0.04	0.04	5.0	5.0	6.0	0.24	18.19	0.14	18	3.00	610.00	610.63	613.37	613.37	615.73	615.73	CB 17 - CB 16
38	16	45.083	0.09	0.09	0.80	0.07	0.07	5.0	5.0	6.0	0.44	4.41	3.04	12	1.53	610.16	610.85	610.37	611.12	612.85	612.85	CB 7 - CB 6
39	33	33.031	0.02	0.02	0.80	0.02	0.02	5.0	5.0	6.0	0.10	18.36	0.05	18	3.06	608.53	609.54	612.68	612.68	614.71	614.96	CB 29 - CB 30
40	End	47.511	0.12	0.87	0.80	0.10	0.70	5.0	10.2	4.3	3.02	7.31	2.52	18	0.48	608.00	608.23	609.08	609.11	609.71	614.38	CB 19 - ES 1
41	40	21.007	0.75	0.75	0.80	0.60	0.60	10.0	10.0	4.4	2.64	7.60	3.07	18	0.52	608.23	608.34	609.17	608.96	614.38	614.38	CB 18 - CB 19

Project File: New.stm | Number of lines: 41 | Run Date: 7/20/2026

NOTES:Intensity = 27.10 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 10 ; c = cir e = ellip b = box

Green Infrastructure & Water Quality Calculations

West Seneca Exchange - Orchard Park Rd, Slade Ave, Ridge Rd
Town of West Seneca, Erie County, New York

WATER QUALITY REQUIRED FOR PROPOSED DEVELOPMENT AREA Area, Acres = 53
(Note: Reference Chap. 9 NYSDEC Stormwater Design Manual)

"Redevelopment Activity", Acres = 47.75 "New development", Acres = 5.25
(existing, disturbed impervious area)

Total proposed impervious, Acres = 47.00 Adjusted impervious, Acres = 11.19
"New" impervious, Acres = -0.75 (25% redevelopment, 100% new development)

Water Quality Volume (WQv) WQv=(P*Rv*A)/12

Where: P=90% Rainfall Event Number P= 1
Rv= 0.05+0.009*(I) Rv= 0.24
IC=Impervious Cover, Acres IC= 11.19
I=Impervious Cover (%) I= 21
A=Runoff Area, Acres A= 53

WQv (ac-ft)= 1.060
WQv (cf)= 46,174

RRv PROVIDED FOR PROPOSED DEVELOPMENT AREA (See NYSDEC worksheets)

		WQv, cf	RRv, cf
Min. RRv Req'd, cf =	0	RRv, none required	0	0
Min. RRv Req'd, ac-ft =	0.000	WQv, Wet Pond	46,174	0
		TOTAL, cf	46174	0
		TOTAL, ac-ft	1.060	0.000

WQ & RR SUMMARY (ac-ft):

TOTAL WATER QUALITY PROVIDED FOR PROPOSED DEVELOPMENT AREA 1.060

IS WATER QUALITY VOLUME REQUIREMENT MET? Yes
(WQv provided equal to or greater than WQv required)

IS RUNOFF REDUCTION VOLUME REQUIREMENT MET? Yes
(RRv provided equal to or greater than Min. RRv required)

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?	No
What is the nature of this construction project?	Redevelopment with no increase in impervious area

Design Point:	1		
P=	1.00	inches	*Enter 90% Rainfall Event as P*

Calculate Required WQv

Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	53.00	11.20	21	0.24	46,210	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	53.00	11.20	21	0.24	**46210**	**Required WQv**

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?	No
What is the nature of this construction project?	Redevelopment with no increase in impervious area

Design Point:	1		
P=	1.00	inches	*Enter 90% Rainfall Event as P*

Calculate Required WQv

Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	53.00	11.20	21	0.24	46,210	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	53.00	11.20	21	0.24	**46210**	**Required WQv**

Stormwater Ponds

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	53.00	11.20	21	0.24	46,210	1.00	0

Select pond type	Wet Pond

Design Criteria					
Is the pond located within jurisdictional waters?	No				
Enter the natural slope of the pond area (%)	2				
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D).	0				
Has an impermeable liner been provided?	No				
Is the pond located within a sole source aquifer?	No				
Is the pond located within a designated hotspot?	No				
Enter depth to seasonal high water table (ft)	5				
Enter depth to sound bedrock (ft)	5				
List any drainage areas treated by other practices that will be directed to this practice.				Additional Areas	0
Is the contributing area less than the minimum contributing area?	No				
Will the pond discharge to trout waters?	No				
Has a controlled outlet been provided?	Yes				
Has an emergency spillway been provided?	Yes				
Has pretreatment been provided per Section 6.1.3?	Yes				
Enter freeboard depth (ft)	1				
Enter side slopes above permanent pool (X:1)	4				
Enter aquatic bench slope (%)	15				
Enter aquatic bench slope to pond floor (X:1)	6.66				
Enter min. aquatic bench width provided (ft)	10				
Enter aquatic bench average width provided (ft)	15				
Enter aquatic bench depth (inches)	1.5				
Enter maintenance access slope (%)	5				
Enter maintenance access width (ft)	20				
Enter permanent pool depth (ft)	4				
Minimum permanent pool depth per Water Balance Calculation (ft)	4.00				

Sizing Criteria			
	Value	Units	Notes
Required Water Quality Volume	46210	cf	
Pretreatment WQv Provided	5000	cf	
Permanent Pool WQv Provided	50000	cf	
Extended Detention WQv Provided	0	cf	

Determine the Water Quality Volume Treated		
Water Quality Volume Treated	**46,210**	**cf**

CARMINA WOOD
DESIGN

STORMWATER POLLUTION PREVENTION PLAN

At

West Seneca Exchange

Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave
0 Orchard Park Road
West, Erie County, NY

Prepared for

Benchmark Streamline, LLC

4053 Maple Road
Amherst NY,14226

Prepared by

Carmina Wood Design

80 Silo City Row, Ste 100
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

July 2026



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101 SCOPE

A. **PURPOSE:** Benchmark Streamline, LLC (BS) has placed an emphasis on following the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity governing storm water discharges during construction, and in accordance with erosion control practices. The Contractor's participation in this program is mandatory and its non-compliance is subject to various remedies, including without limitation, monetary set-offs, withholding payments; reimbursement for costs, expenses (including reasonable attorney's fees), fines and civil penalties incurred by BS; and/or liquidated damages. This section provides a descriptive explanation of BS's Storm Water Pollution Prevention Program and required Contractor participation.

The Engineer of record for this project certifies that this SWPPP meets the requirements and is in compliance with the New York State Stormwater Management Design Manual and latest NYSDEC Phase II stormwater regulation requirements.

B. **SPDES General Permit for Stormwater Discharges from Construction Activity:** Regulations promulgated by the NYSDEC to regulate the discharge of storm water from construction activities on sites where more than one (1) acre of soil is disturbed. One of the ways to comply with these regulations for affected sites is to request coverage under the General Permit for Construction Activities for New York State. In order to use the General Permit, a Notice of Intent (NOI) form must be completed and electronically submitted to the NYSDEC at least 5 business days prior to any earth-disturbing activities (this time frame may increase to 60 business days if a full review of the SWPPP is determined necessary by the NYSDEC) and a Storm Water Pollution Prevention Plan (SWPPP) for the site must be prepared and followed during the construction activities. Once a copy of the SPDES permit is received from NYSDEC, a copy will be included in Appendix E of this report.

Approval from a regulated, traditional land use control MS4:

1. An **owner or operator** of a construction activity that is <u>not</u> subject to the requirements of a regulated, traditional land use control MS4 must first develop a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the NYSDEC.

2. An **owner or operator** of a construction activity that is subject to the requirements of a regulated, traditional land use control MS4 must first develop a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the MS4 prior to submitting the NOI to the NYSDEC. The **owner or operator** shall have the "MS4 SWPPP Acceptance" form signed by the principal executive officer or ranking elected official from the regulated, traditional land use control MS4, or by a duly authorized representative of that person, and then submit that form along with the NOI to the address referenced under "Notice of Intent (NOI) Submittal".

C. **RESPONSIBILITIES OF THE CONTRACTOR:** The Contractor shall manage the discharge of storm water from the site in accordance with the NYSDEC General Permit for Construction Activities conditions and the following provisions of this section. The Operator shall be responsible for conducting the storm water management practices in accordance with the permit. The Contractor shall be responsible for providing **qualified inspector**s to conduct the inspections required by the SWPPP. The Contractor shall be responsible for any enforcement action taken or imposed by federal, state, or local agencies, including the cost of fines, construction delays, and remedial actions resulting from the Contractor's failure to comply with the permit provisions. It shall be the responsibility of the Contractor to make any changes to the SWPPP necessary when the Contractor or any of his subcontractors elects to use borrow or fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction site. Such sites are considered to be part of the construction site covered by the permit and this SWPPP. Off-site borrow, fill, or material storage sites which are used for

multiple construction projects are not subject to this requirement, unless specifically required by state or local jurisdictional entity regulations. The Contractor should consider this requirement in negotiating with earthwork subcontractors, since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections required by the SWPPP for the site.

D. **NOTICE OF INTENT:** The Operator has petitioned the NYSDEC for coverage under the storm water discharges during construction at this site to be covered by the SPDES General Permit for Construction Activity for the State of New York. A Notice of Intent (NOI) for coverage under this permit has been filed by the Operator. The SWPPP must be prepared prior to submittal of the NOI form. The Operator will require the Contractor to be a co-permittee with the Operator. The Contractor will be required to post the NOI at the construction site along with any building permits.

E. **CONTRACTOR CERTIFICATION & TRAINING:** Proof of Training/Certification of the Contractor's designated individual shall be kept on site at all times.

F. **REQUIREMENTS FOR THE GENERAL CONTRACTOR AND SUBCONTRACTOR(S):** The General Contractor and Subcontractor(s) shall sign the "Contractor's Certification Statement" (located in the Appendix of this report) verifying they have been instructed on how to comply with and fully understand the requirements of the SPDES General Permit for Construction Activity for the State of New York and the SWPPP. These certifications must be signed, by a responsible corporate officer or other party meeting the "Signatory Requirements" of the SPDES General Permit, on behalf of each entity, prior to the beginning of any construction activities.

G. **STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS:** The SWPPP is meant to be a working document that shall be maintained at the site of the Construction Activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or NYSDEC or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the Final Stabilization section of this document. A sign or other notice must be posted near the main entrance of the construction site which contains a completed NOI, the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other state specific requirements. Disturbances greater than 5-acres requires MS4 (Town of West Seneca) approval.

H. **INSPECTIONS AND RECORD-KEEPING:**

A. **General Construction Site Inspection and Maintenance Requirements**

1. The **owner or operator** must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. **Owner or operator Maintenance Inspection Requirements**

1. The **owner or operator** shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the

SWPPP to ensure that they are being maintained in effective operating condition at all times.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the **owner or operator** can stop conducting the maintenance inspections. The **owner or operator** shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of the General Permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the **owner or operator** can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. **Qualified inspector Inspection Requirements**

The **owner or operator** shall have a **qualified inspector** conduct site inspections in conformance with the following requirements:

Note: The **trained contractor** identified in Part III.A.6 of the General Permit **cannot** conduct the **qualified inspector** site inspections unless they meet the **qualified inspector** qualifications included in Appendix A of the General Permit. In order to perform these inspections, the trained contractor would have to be a:

- Licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or
- Someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity.

1. A **qualified inspector** shall conduct site inspections for all construction activities identified in Tables 1 and 2 of Appendix B of the General Permit, with the exception of:

   a. The construction of a single family residential subdivision with 25% or less impervious cover at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C of the General Permit and not directly discharging to one of the 303(d) segments listed in Appendix E of the General Permit;

   b. The construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E of the General Permit;

c. Construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

d. Construction activities located in the watersheds identified in Appendix D of the General Permit that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the **qualified inspector** shall conduct site inspections in accordance with the following timetable:

a. For construction sites where soil disturbance activities are on-going, the **qualified inspector** shall conduct a site inspection at least once every seven (7) calendar days.

b. For construction sites where soil disturbance activities are on-going and the **owner or operator** has received authorization in accordance with Part II.C.3 of the General Permit to **disturb greater than five (5) acres** of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days. Disturbances greater than 5-acres requires MS4 (Town of West Seneca) approval.

c. For construction sites where soil disturbance activities have been **temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas**, the **qualified inspector** shall conduct a site inspection at least once every thirty (30) calendar days. The **owner or operator** shall notify the Regional Office stormwater contact person (see contact information in Appendix F of the General Permit) or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the **owner or operator** of the construction activity) in writing prior to reducing the frequency of inspections.

d. For construction sites where **soil disturbance activities have been shut down with partial project completion**, the **qualified inspector** can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The **owner or operator** shall notify the Regional Office stormwater contact person or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the **owner or operator** of the construction activity). in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the **owner or operator** shall have the **qualified inspector** perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The **owner or operator** shall then submit the completed NOT form to the address in Part II.A.1 of the General Permit.

3. At a minimum, the **qualified inspector** shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

4. The **qualified inspector** shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

    a. Date and time of inspection;

    b. Name and title of person(s) performing inspection;

    c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

    d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

    e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;

    f. Identification of all erosion and sediment control practices that need repair or maintenance;

    g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

    h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

    i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

    j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

    k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The **qualified inspector** shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The **qualified inspector** shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The **qualified inspector** shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the **qualified inspector** shall notify the **owner or operator** and appropriate contractor or subcontractor identified in Part III.A.6. of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the **qualified inspector**. Pursuant to Part II.C.2 of the General Permit, the inspection reports shall be maintained on site with the SWPPP.

Record Retention - The **owner or operator** shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the site achieves final stabilization. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

I. **SWPPP MODIFICATIONS:** The inspection report should also identify if any revisions to the SWPPP are warranted due to unexpected conditions. The SWPPP is meant to be a dynamic working guide that is to be kept current and amended whenever there is a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants or when the plan proves to be ineffective in eliminating or significantly minimizing pollutant discharges. The Contractor's failure to modify or report deficiencies to the Operator will result in the Contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action. The MS4 (Town of West Seneca) must be notified, and approval is required of changes to the SWPPP prior to applying said changes in the field.

J. **FINAL STABILIZATION AND TERMINATION OF PERMIT COVERAGE:** A site can be considered finally stabilized when all soil disturbing activities have been completed and a uniform perennial vegetative cover with a density of **85%** for the unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been established and the facility no longer discharges storm water associated with construction activities and a Notice of Termination (NOT) form filed by the Operator(s) with the NYSDEC. The Operator's Project Manager must complete the NOT. The NOT must be signed by the signatory (or equivalent position) on the NOI and subsequently submitted to the appropriate agency. The MS4 (Town of West Seneca) must accept and sign the NOT prior to submission to NYSDEC. The Operator's Project Manager must provide a completed copy of the NOT to the Contractor for inclusion in the SWPPP, which will then be optically scanned into the final SWPPP document as required. This filing terminates coverage under the General Permit and terminates the Contractor's responsibility to implement the SWPPP, but the requirements of the SWPPP, including periodic inspections, must be continued until the NOT is filed. The **owner or operator** shall also have the **qualified inspector** perform a final site inspection prior to submitting the NOT to the Department. Final payment and/or the release of retainage will be withheld until all provisions of the SWPPP have been submitted, completed and accepted by the Operator.

102 PROJECT NAME AND LOCATION

West Seneca Exchange

Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave, 0 Orchard Park Road

Town of West Seneca, County of Erie

Easting: 190518.567

Northing: 4749144.180

Estimated Area of Site ≈ 56 acres

Estimated Area to be disturbed by Construction Activities ≈ 27.71 acres.

A general location map is included as Appendix A.

103 OPERATOR'S NAME AND ADDRESS

Benchmark Streamline, LLC

4053 Maple Road

Amherst, NY 14226

Contact Person: Jared Lemankiewicz

Telephone: 716-876-0160

104 PROJECT DESCRIPTION

This project consists of the first phase of the redevelopment of the approximately 56 acre former Seneca Mall property, located within the area bounded by Slade Avenue, Ridge Road, and Orchard Park Road in the Town of West Seneca. The proposed redevelopment includes construction of an approximately 158,000 square foot commercial building to be occupied by Costco Wholesale, along with associated parking, utilities, stormwater management facilities, and other supporting site improvements. This phase also includes the primary infrastructure necessary to accommodate future phases and the ultimate full build out of the redevelopment site.

Proposed site improvements include upgrades to the existing utility infrastructure, construction of a new internal roadway network, parking facilities, site lighting, landscaping, and stormwater management system designed for the full build out. These improvements are intended to provide the framework required for future development throughout the remainder of the property.

The project site is currently occupied by the remnants of the former Seneca Mall and the existing Tops Market grocery store. The Tops Market will remain operational throughout construction and will not be impacted by the proposed redevelopment. Construction activities associated with the redevelopment are expected to result in approximately 27.71 acres of land disturbance.

Soil disturbing activities will include:

A. Construction of temporary construction exit points

B. Clearing & grubbing of the site within disturbance limits

C. Installation of the detention basin & bioretention areas including topsoil & seed

D. Installation of storm sewer pipes and inlets

E. Construction of utilities

F. Construction of curb and parking lot

G. Final grading & landscaping

H. Construction of buildings

This project is owned by Benchmark Streamline, LLC and will be developed by the same. The work area consists of approximately 27.71 acres for which erosion and sediment controls have been developed and fully addressed in this written plan and the Erosion and Sediment Control Plans. See the construction documents for additional details.

105 RUNOFF COEFFICIENT, SOILS, AND RAINFALL INFORMATION

The initial runoff curve number for the pre-construction site is "CN" = 96. The post-construction runoff curve number for the site will be "CN" = 96. The site is 56 acres of which approximately 27.71 acres will be disturbed by construction activities.

See soils information located in Appendix H.

The site is in Erie County, which receives an average of approximately 45 inches rainfall annually with the highest amounts of rainfall received in the months of May thru September. Annual snow for this area is approximately 120 inches.

106 WATERS

Existing site drainage generally flows to two primary drainage areas. The western portion of the site drains toward Slade Avenue, while the remainder of the site is collected by an existing network of catch basins that ultimately discharge through a large storm sewer outlet located near the north central portion of the site. This outlet conveys runoff directly to Cazenovia Creek.

107 INDIAN COUNTRY LANDS

This project is not located on Indian Lands.

108 ENDANGERED AND THREATENED SPECIES

No endangered or threatened species have been determined to be on the site.

109 CRITICAL HABITAT

See section 108 above.

110 HISTORIC PLACES

The assessed property is not shown on the NYSHPO map as an archeologically sensitive area. A review by NYSHPO was conducted, a copy of their review and clearance letter is included in Appendix K of this report.

111 WETLANDS AND/OR OTHER SURFACE WATERS

There are no known wetlands located on site. See Appendix L for NYSDEC Environmental Resource Mapper.

112 EROSION AND SEDIMENT CONTROLS

112.1 STABILIZATION PRACTICES

Stabilization practices for this site include:

A. Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed.

B. Use of stabilization method for all slopes having a slope greater than 1V:3H.

C. Permanent seeding and planting of all unpaved areas using the hydromulching grass seeding technique.

D. Mulching exposed areas.

E. Vegetation preservation in undisturbed areas.

F. Frequent watering to minimize wind erosion during construction.

a. **For sites where 5 acres or more are disturbed at any one time**: In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the New York Standards and Specifications for Erosion and Sediment Control.

b. The **owner or operator** shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

c. The **owner or operator** shall install any additional measures needed to protect water quality.

112.2 STRUCTURAL PRACTICES

Structural practices for this site include:

A. Inlet protection using a method detailed in the Construction Documents.

B. Perimeter protection using temporary silt fence/silt sock or silt sock.

C. Outlet protection using rip-rap stone and end sections.

D. Stabilized Construction Entrance.

E. Temporary stone wash off areas.

F. Storm sewer, curb/gutter.

G. Sediment traps and basins.

112.3 SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

A. Construct temporary construction exits at locations shown on the Demolition & Erosion Control Plan Sheet.

B. Install perimeter silt fence/silt socks/silt sock in the locations shown on the Demolition & Erosion Control Plan Sheet.

C. Clear & Grub site.

D. Installation of detention basin to act as sediment basins (do not install bioretention soil or underdrains until stabilized)

E. Commence site grading.

F. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.

G. Construction of buildings

H. Installation of proposed utilities

I. Finalize pavement subgrade preparation.

J. Construct all curb, drainage inlets, storm sewer pipes and storm sewer manholes, as shown on the plans. Install temporary inlet protection at the locations of all inlets.

K. Dust control.

L. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.

M. Install base material as required for pavement.

N. Carry out final grading and seeding and planting.

O. Clean storm system following construction, clean detention basins of any silt and return to design grades.

P. Remove silt fencing/silt sock only after all paving is complete and exposed surfaces are stabilized.

Q. Remove temporary construction exits only prior to pavement construction in these areas.

Note: Sediment control storage during construction (traps & basins) during construction shall be 134 cy per acre of disturbance per NYSDEC requirements.

112.4 STORMWATER MANAGEMENT

Existing site drainage generally flows to two primary drainage areas. The western portion of the site drains toward Slade Avenue, while the remainder of the site is collected by an existing network of catch basins that ultimately discharge through a large storm sewer outlet located near the north central portion of the site. This outlet conveys runoff directly to Cazenovia Creek.

Stormwater runoff generated by the proposed redevelopment will be collected and conveyed through a stormwater management system consisting of a wet pond, catch basins, yard drains, manholes, and smooth interior HDPE storm sewer pipe. The proposed stormwater management infrastructure has been designed to accommodate the ultimate full build out of the site and will provide the necessary conveyance, water quality treatment, and peak flow attenuation for future development phases.

As a redevelopment project, the site is required to provide Water Quality Volume (WQv) treatment for 25 percent of the disturbed impervious area and 100 percent of any new impervious area in accordance with NYSDEC requirements. The existing site contains approximately 47.75 acres of impervious cover, while the proposed redevelopment will result in approximately 47.0 acres of impervious cover. Since the project does not create any new impervious area, all proposed improvements are classified as disturbed impervious area and are therefore subject to the 25 percent WQv treatment requirement. Because no new impervious cover is being created, no Runoff Reduction Volume (RRv) is required for the project.

The proposed wet pond provides 100 percent of the required Water Quality Volume (WQv) treatment for the redevelopment and also provides peak flow attenuation. Discharge from the wet pond is controlled

through a 48 inch outlet pipe that connects to the existing storm sewer outlet system and ultimately discharges to Cazenovia Creek. The stormwater management facilities have been designed to satisfy the requirements of both the Town of West Seneca and the NYSDEC. The overall stormwater management system, including water quality treatment and peak flow control, has been designed in accordance with Chapters 4 and 9 of the NYSDEC Stormwater Management Design Manual.

Water Quality & Runoff Reduction Volume:

The proposed wet pond provides 100 percent of the required Water Quality Volume (WQv) treatment for the redevelopment. See the Stormwater Drainage Calculations for additional information. The project does not create any new impervious area, all proposed improvements are classified as disturbed impervious area and are therefore subject to the 25 percent WQv treatment requirement. Because no new impervious cover is being created, no Runoff Reduction Volume (RRv) is required for the project.

The NYSDEC Stormwater Management Design Manual requires a five-step process for Stormwater Management Planning as outlined in Chapter 3. The five steps include:

1. Site planning to preserve natural features and reduce impervious cover.
    - Existing vegetation to remain shall be protected from construction activities.
2. Calculation of Water Quality Volume (WQv=RRv) for site.
    - See Stormwater Drainage Calculations.
3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity.
    - The proposed wet pond provides 100 percent of the required Water Quality Volume (WQv) treatment for the redevelopment. See the Stormwater Drainage Calculations for additional information.
4. Use of standard SMPs where applicable, to treat the portion of water quality volume not addressed by green infrastructure techniques and standard SMPs with RRv capacity.
    - The project does not create any new impervious area, all proposed improvements are classified as disturbed impervious area and are therefore subject to the 25 percent WQv treatment requirement. Because no new impervious cover is being created, no Runoff Reduction Volume (RRv) is required for the project.
5. Design of volume and peak rate control practices where required.
    - See Stormwater Drainage Calculations.

The NYSDEC Stormwater Management Design Manual requires (5) five different criteria be considered when designing a stormwater management system. Those criteria are Water Quality, Runoff Reduction Volume, Channel Protection, Overbank Flooding and Extreme Storm Protection. Below is a summary of each item and how it is incorporated into this project.

The NYSDEC requires stormwater runoff from development sites to be treated through approved green infrastructure practices and stormwater management practices (SMPs) to improve water quality and better replicate predevelopment hydrology.

As a redevelopment project, only 25% of the Water Quality Volume (WQv) generated from disturbed impervious areas is required to be treated in accordance with the NYSDEC Stormwater Management Design Manual. Because the proposed redevelopment results in a net decrease in impervious area, all new

impervious surfaces associated with the project are classified as disturbed impervious areas, and no Runoff Reduction Volume (RRv) is required.

The total required Water Quality Volume (WQv) for the development is 46,210 cubic feet (1.061 ac-ft). This required treatment volume is fully provided by the proposed wet pond, which has been designed to treat stormwater runoff from the site under full buildout conditions.

Therefore, the proposed stormwater management system satisfies the NYSDEC water quality treatment and runoff reduction requirements for the development.

Channel Protection:

The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 99,248 cf is accommodated in the Wet Pond at elevation 609.62. The existing runoff flow rate is 103.89 cfs. The proposed runoff is 38.71 cfs. The flow rate has decreased by 65.18 cfs.

Overbank Flooding:

The NYSDEC requires that the 10-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event. A volume of 185,425 cf is accommodated in the Wet Pond at elevation 610.89. The existing runoff flow rate is 184.66 cfs. The proposed runoff is 87.97 cfs. The flow rate has decreased by 96.69 cfs.

Extreme Storm Protection:

The NYSDEC requires that the 100-year proposed storm event be attenuated with detention and that the outlet be restricted to the 100-year existing storm event. A volume of 283,293 cf is accommodated in the Wet Pond at elevation 612.22. The existing runoff flow rate is 317.14 cfs. The proposed runoff is 141.36 cfs. The flow rate has decreased by 175.78 cfs.

Refer to the engineer's report for storm sewer design criteria, runoff summary tables and stormwater drainage calculations.

113 OTHER CONTROLS

113.1 OFF-SITE VEHICLE TRACKING

A stabilized construction exit will be provided to help reduce vehicle tracking of sediments. Existing paved areas will remain as long as possible and will be used for vehicle wash areas and to further aid in the reduction of vehicle tracking of sediments. The paved streets adjacent to the site entrance shall be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material to/from the construction site will be covered with a tarpaulin. The job site superintendent will be responsible for seeing that these procedures are followed.

113.2 EXCAVATION SPOIL MATERIALS

Excavation spoil materials are generated during the excavation of the development's building and utilities installation. These materials must be properly managed to prevent them from contributing to storm water discharges. The materials generated from the development of this project will be hauled off-site or stockpiled for re-use in designated areas which will have temporary erosion & sediment control measures installed. Any removal from site will be done under the necessary permits required by the local governing agencies.

113.3 DUST CONTROL

Minimizing wind erosion and controlling dust will be accomplished by one or more of the following methods:

A. Frequent watering of excavation and fill areas.

B. Providing gravel or paving at entrance/exit drives, parking areas and transit paths.

113.4 WASTE DISPOSAL

If needed, all waste materials will be collected and stored in securely lidded metal dumpsters rented from an approved waste management company. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpsters. The dumpsters will be emptied when full and then hauled to a NYSDEC approved landfill for proper disposal. No construction waste will be buried on-site. All personnel will be instructed regarding the correct procedures for waste disposal.

113.5 SANITARY WASTE

If needed, portable toilet units or field offices with toilet facilities connected to the municipal sanitary sewer will be used for sanitary purposes. All portable toilet units will be emptied a minimum of once per week by a licensed portable facility provided in compliance with local and state regulations.

113.6 CONCRETE WASTE FROM CONCRETE TRUCKS

A. Emptying of excess unhardened concrete and/or washout from concrete delivery trucks will be allowed on the job site, but in either (1) specifically designated diked areas which have been prepared to prevent contact between concrete and/or washout and storm water which will be discharged from the site or (2) in locations where waste concrete will be poured into forms to make rip-rap or other useful concrete products.

B. Hardened waste concrete from the designated diked areas described above will be disposed of in accordance with applicable local and state regulations with regards to disposal of construction debris.

113.7 HAZARDOUS SUBSTANCES & HAZARDOUS WASTE

A. All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job superintendent, who will also be responsible for seeing these practices are followed. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such products are stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

B. The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this SWPPP and will train all personnel in the proper cleanup and handling of spilled

materials. No spilled hazardous materials of hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge shall be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job superintendent to properly train all personnel in the use of the SPCC plan.

C. Any spills of hazardous materials which are in excess of the Reportable Quantities as defined by the EPA regulations shall be immediately reported to the EPA National Response Center at 1-100-424-1102. From SWPPP-9 "Reportable Quantity Release Form" must be filled out.

D. In order to minimize the potential for a spill of hazardous materials to come in contact with storm water, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on the job site.

3. A spill control and containment kit (containing for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

4. All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.

5. All products will be stored in and used from the original container with the original product label.

6. All products will be used in strict compliance with instructions on the product label.

7. The disposal of excess or used products will be in strict compliance with instructions on the product label.

113.8 CONTAMINATED SOILS

A. Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

B. The job site superintendent will be responsible for seeing that these procedures are followed.

114 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The Contractor will obtain copies of any and all local and state regulations which are applicable to storm water management, erosion control, and pollution minimization at this job site and will comply fully with such regulations. The Contractor will submit written evidence of such compliance if requested by the Operator or any agent of a regulatory body. The Contractor will comply with all conditions of the SPDES General Permit for Construction Activity for the State of New York, including the conditions related to

maintaining the SWPPP and evidence of compliance with the SWPPP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance.

The SWPPP for this site development project requires regulated MS4 approval from the Town of West Seneca. All changes to the SWPPP must be approved by the Town of West Seneca prior to applying changes to the SWPPP in the field.

This project demonstrates consideration of the future physical risks due to climate change by reducing development below allowed zoning requirements to conserve, restore, or mimic natural processes that reduce risk from flooding and erosion in accordance with the Community Risk and Resiliency Act (CRRA), 6 NYCRR 490 and associated guidance.

115 INSPECTION AND MAINTENANCE PROCEDURES

The following inspection and maintenance practices will be used to maintain erosion and sediment controls and stabilization measures.

1. All control measures will be inspected by the owner/operator at least weekly and shall continue until the site complies with the Final Stabilization section of this document (See Section 116).

2. All control measures will be inspected by a Qualified Professional at least weekly and shall continue until the site complies with the Final Stabilization section of this document (See Section 116).

3. All measures will be maintained in good working order; if repairs or other measures are found to be necessary, they will be initiated within 24 hours of report.

4. Built up sediment will be removed from silt fence/silt sock when it has reached one-third the height of the fence.

5. Silt fence/silt socks will be inspected for depth of sediment, tears, etc., to see if the fabric is securely attached to the fence posts, and to see that the fence posts are securely in the ground.

6. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.

7. A maintenance inspection report will be made after each inspection. Copies of the report forms to be completed by the inspector are included in this SWPPP.

8. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities, and filling out inspection and maintenance reports.

9. Personnel selected for the inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order. They will also be trained in the completion of, initiation of actions required by, and the filing of the inspection forms. Documentation of this personnel training will be kept on site with the SWPPP.

10. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering stormwater systems.

11. Report to the NYSDEC within 24 hours any noncompliance with the SWPPP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the NYSDEC in the permit to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

12. Releases of hazardous substances or oil in excess of reportable quantities (as established under 40 CFR 110, 40 CFR 117 or 40 CFR 302) must be reported.

Upon completion of construction, the property owner is responsible for ensuring that the stormwater facilities are regularly inspected and maintained. Maintenance and inspection procedures are as follows.

1. On a quarterly basis and following significant rainfall events or snow-melts, perform the following:

    - Inspect catch basins, storm manholes, treatment structures, storm piping and stormwater pond for debris and accumulation of sediment.
    - Remove and properly dispose of any collected debris and sediment in accordance with applicable state, federal and local regulations.
    - Flush piping with water if necessary to remove accumulated sediment.
    - Bioretention areas shall be maintained per the NYSDEC Maintenance and Management Checklist included in this SWPPP.
    - Check all stone outfall structures for erosion and re-stone if necessary to prevent further erosion.
    - Inspect grassed/landscaped areas for un-vegetated areas or areas with less than 85% healthy stand of grass and reseed and mulch as necessary. Water daily if reseeded in July and August.
    - A record of all inspections should be kept.

2. Maintain all lawn areas by regular mowing, including the grassed slopes of the stormwater pond and any grass swales. Any eroded areas shall be regarded, seeded and mulched immediately.

116 INSPECTION AND MAINTENANCE REPORT FORMS

Once installation of any required or optional erosion control device or measure has been implemented, inspections shall be performed by a Qualified Professional at least once every seven (7) calendar days. For construction sites where soil disturbance activities are on-going and the **owner or operator** has received authorization in accordance with Part II.C.3 of the General Permit to disturb greater than five (5) acres of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days. The owner and contractor shall obtain from the MS4 an approval for disturbing more than five-acres at any given time. For construction sites where active construction has been suspended, inspection frequency under the general permit can be reduced to once every 30 days, provided temporary

stabilization measures have been applied to all disturbed areas. The forms found in this SWPPP shall be used by the inspectors to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.

These report forms shall become an integral part of the SWPPP and shall be made readily accessible to governmental inspection officials, the Operator's Engineer, and the Operator for review upon request during visits to the project site. In addition, copies of the reports shall be provided to any of these persons, upon request, via mail or facsimile transmission. Inspection and maintenance report forms are to be maintained by the permittee for five years following the final stabilization of the site.

117 OTHER RECORD-KEEPING REQUIREMENTS

The Contractor shall keep the following records related to construction activities at the site:

- Dates when major grading activities occur and the areas which were graded
- Dates and details concerning the installation of structural controls
- Dates when construction activities cease in an area
- Dates when an areas is stabilized, either temporarily or permanently
- Dates of rainfall and the amount of rainfall
- Dates and descriptions of the character and amount of any spills of hazardous materials
- Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled

118 SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN

118.1 MATERIALS COVERED

The following materials or substances are expected to be present onsite during construction:

- Concrete/Additives/Wastes
- Cleaning solvents
- Sanitary wastes
- Detergents
- Petroleum based products
- Paints/Solvents
- Pesticides
- Solid and construction wastes
- Acids
- Fertilizers
- Soil stabilization additives

118.2 MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. The job site superintendent will be responsible for ensuring that these procedures are followed.

A. Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project.

1. An effort will be made to store only enough products required to do the job.

2. All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or in a containment area. At a minimum, all containers will be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.

3. Products will be kept in their original containers with the original manufacturer's label in legible condition.

4. Substances will not be mixed with one another unless recommended by the manufacturer.

5. Whenever possible, all of a product will be used up before disposing of the container.

6. Manufacturer's recommendations for proper use and disposal will be followed.

7. The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

B. Hazardous Products

These practices will be used to reduce the risks associated with hazardous materials. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

1. Products will be kept in original containers with the original labels in legible condition.

2. Original labels and material safety data sheets (MSDS's) will be procured and used for each material.

3. If surplus product must be disposed of, manufacturer's or local/state/federal recommended methods for proper disposal will be followed.

4. A spill control and containment kit (containing for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

5. All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.

C. Hazardous Waste

All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site

personnel will be instructed in these practices by the job site superintendent, who will also be responsible for seeing that these practices are followed.

D. Product Specific Practices

The following product specific practices will be followed on the job site.

1. Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any petroleum storage tanks stored onsite will be located within a containment area that is designed with an impervious surface between the tank and the ground. The secondary containment must be designed to provide a containment volume that is equal to 110% of the volume of the largest tank. Drip pans shall be provided for all dispensers. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations. The location of any fuel tanks and/or equipment storage areas must be identified on a plan by the contractor once the locations have been determined.

2. Fertilizers

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to stormwater. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

3. Paints, Paint Solvents, and Cleaning Solvents

All containers will be tightly sealed and stored when not in use. Excess paint and solvents will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

4. Concrete Wastes

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site, but only in either (1) specifically designated diked areas which have been prepared to prevent contact between the concrete and/or wash out and storm water which will be discharged from the site or (2) in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.

The hardened residue from the concrete wash out diked areas will be disposed of in the same manner as other non-hazardous construction waste materials or may be broken up and used on site as deemed appropriate by the Contractor. The job site superintendent will be responsible for seeing that these procedures are followed.

All concrete wash out areas will be located in an area where the likelihood of the area contributing to storm water discharges is negligible. If required, additional BMPs must be implemented to prevent concrete wastes from contributing to storm water discharges. The location of concrete wash out area(s) must be identified on a plan by the contractor once the locations have been determined. In addition, a standard detail on the construction of the concrete wash out shall be included on this plan.

E. Solid and Construction Wastes

All waste materials will be collected and stored in an appropriately covered container and/or securely lidded metal dumpster rented from a local waste management company which must be a solid waste management company licensed to do business in New York and the Town of West Seneca. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week or more often if necessary, and the trash will be hauled to a landfill approved by the NYSDEC. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal.

All waste dumpsters and roll-off containers will be located in an area where the likelihood of the containers contributing to storm water discharges is negligible. If required, additional BMPs must be implemented, such as sandbags around the base, to prevent wastes from contributing to storm water discharges. The location of waste dumpsters and roll-off containers must be identified on a plan by the contractor once the locations have been determined.

F. Sanitary Wastes

Portable toilet units or field offices with toilet facilities connected to the municipal sanitary sewer will be used for sanitary purposes. All portable toilet units will be emptied a minimum of once per week by a licensed portable facility provided in compliance with local and state regulations.

All sanitary waste units will be located in an area where the likelihood of the unit contributing to storm water discharges is negligible. If required, additional BMPs must be implemented, such as sandbags around the base, to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on a plan by the contractor once the locations have been determined.

G. Contaminated Soils

Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Materials Management Plan and in accordance with applicable state and federal regulations.

118.3 SPILL PREVENTION AND RESPONSE PROCEDURES

The Contractor will train all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in spill prevention and clean up procedures.

A. In order to minimize the potential for a spill of hazardous materials to come into contact with storm water, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.)

will be stored in a secure location, with their lids on, preferably under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on the job site.

3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

B. In the event of a spill, the following procedures should be followed

1. All spills will be cleaned up immediately after discovery.

2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.

3. The project manager and the Engineer of Record will be notified immediately.

Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 110, 40 CFR 117, and 40 CFR 302) must be immediately reported to the EPA National Response Center, telephone 1-100-424-1102. From SWPPP-9 “Reportable Quantity Release Form” must be filled out.

4. If the spill exceeds a Reportable Quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the release, and the date of the release. The plans must identify measures to prevent the recurrence of such releases and to respond to such releases.

C. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the office trailer onsite.

119 CONTROL OF NON-STORM WATER DISCHARGES

Certain types of discharges are allowable under the NYSDEC SPDES General Permit for Construction Activity for the State of New York, and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this SWPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. The following allowable non-storm water discharges which may occur at the job site include:

A. Discharges from firefighting activities.

B. Fire hydrant flushings (see note below)

C. Waters used to wash vehicles or control dust in order to minimize offsite sediment tracking.

D. Routine external building washdown which does not use detergents.

E. Pavement wash waters where spills or leaks of hazardous materials have not occurred or detergents have not been used.

F. Air conditioning condensate.

G. Springs or other uncontaminated groundwater, including dewatering ground water infiltration.

H. Foundation or footing drains where no contamination with process materials such as solvents is present.

Note: The Contractor shall discharge any super-chlorinated water from water distribution pipe disinfection activities into sanitary sewer system

120 STORM WATER CONTROL FACILITY MAINTENANCE

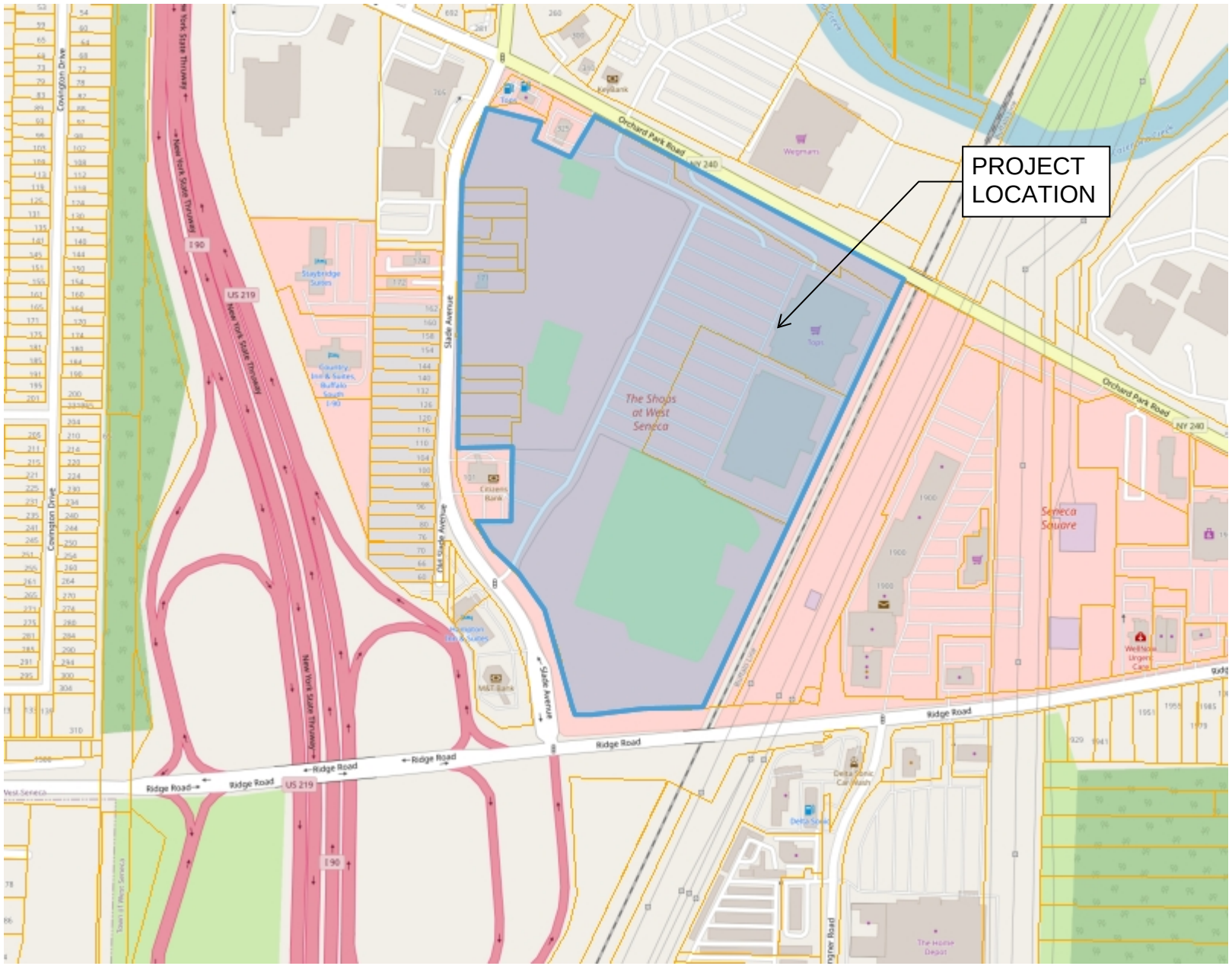
The frequency of inspections for the Wet Pond shall match the frequencies listed on the "Stormwater/Wetland Pond Construction Inspection Checklist" in Appendix J of the SWPPP.

The proposed catch basins, as per section 115, shall be inspected 4 times per year for removal of floatable debris. Any silt buildup over 6" in depth shall be removed and disposed of properly off-site.

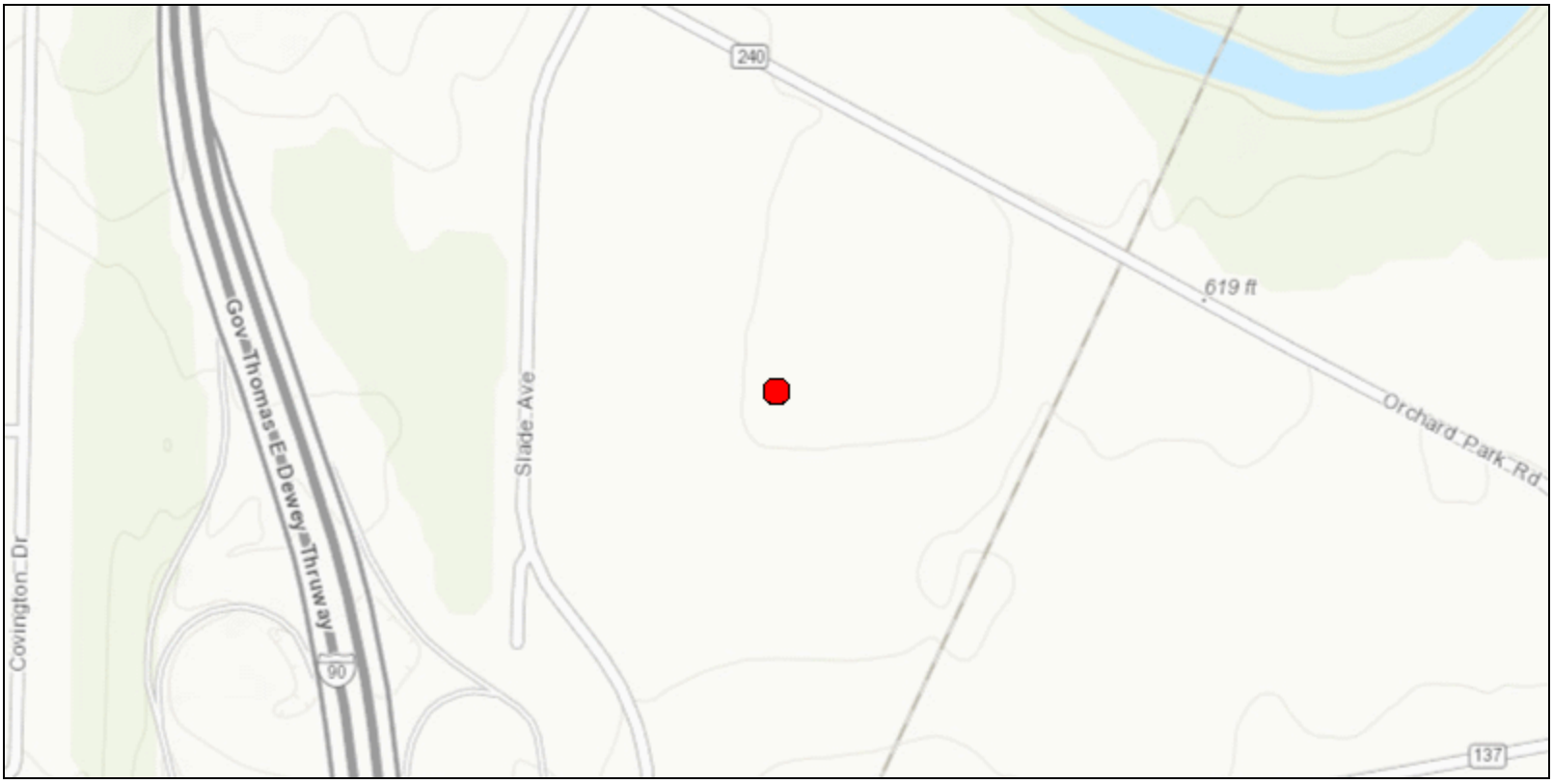
Appendix A

Site Location Map

Erie County On-Line Mapping Application


PROJECT LOCATION
Orchard Park Road
Ridge Road
Ridge Road
Ridge

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	190518.56737376	**Northing:**	4749144.180095579
Longitude/Latitude	**Longitude:**	-78.78643531512924	**Latitude:**	42.83225739560434

The approximate address of the point you clicked on is:
The Shops At West Seneca

County: Erie
Town: West Seneca
USGS Quad: BUFFALO SE

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which

Appendix B

NYSDEC Electronic Notice of Intent (eNOI)

Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.18

(Submission #: HQP-E4X5-0K5PC, version 1)

Details

Originally Started By	Eric Andrews
Alternate Identifier	Seneca Mall Redevelopment—Region 9
Submission ID	HQP-E4X5-0K5PC
Status	Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?
Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?
No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?
No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?
No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?
Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?
No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?
Yes

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?
Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?
Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001? Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.
Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?
No

Owner/Operator Information

8. Owner/Operator Name
Benchmark Streamline, LLC

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Jared Lemankiewicz	716-876-0160	JLemankiewicz@benchmarkgrp.com

10. Owner/Operator Mailing Address

4053 Maple Road
Amherst, NY 14226
USA

11. Is the billing contact different from the Owner/Operator Contact?
No

12. What type of organization is the owner/operator?
Corporation

12.b. Is the owner/operator registered with the Department of State to do business in New York State?
Yes

12.b.i. Department of State ID #
7397227

The Department of State ID can be found using the following link:
Department of State | Division of Corporations

Site Information

13. Project/Site Name
Seneca Mall Redevelopment

14. Site Address

133 Slade Ave
West Seneca, NY 14224
Erie

DEC Region
9

15. Site Latitude & Longitude
42.83222370000001,-78.7888822

Project Details

16. This eNOI submission is for:
A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".
Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.
This project consists of the first phase of the redevelopment of the approximately 56 acre former Seneca Mall property, located within the area bounded by Slade Avenue, Ridge Road, and Orchard Park Road in the Town of West Seneca. The proposed redevelopment includes construction of an approximately 158,000 square foot commercial building to be occupied by Costco Wholesale, along with associated parking, utilities, stormwater management facilities, and other supporting site improvements. This phase also includes the primary infrastructure necessary to accommodate future phases and the ultimate full build out of the redevelopment site.
Proposed site improvements include upgrades to the existing utility infrastructure, construction of a new internal roadway network, parking facilities, site lighting, landscaping, and stormwater management system designed for the full build out. These improvements are intended to provide the framework required for future development throughout the remainder of the property.
The project site is currently occupied by the remnants of the former Seneca Mall and the existing Tops Market grocery store. The Tops Market will remain operational throughout construction and will not be impacted by the proposed redevelopment. Construction activities associated with the redevelopment are expected to result in approximately 27.71 acres of land disturbance.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)
56.0

20. Total Area to be Disturbed (acres)
47.0

21. Existing Impervious Area to be Disturbed (acres)
47.0

22. Future Impervious Area Within Disturbed Area (acres)
11.2

Nature of the project:
Redevelopment with no increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?
Yes

> The owner/operator must meet the requirements in Part I.E.6. before disturbing greater than five acres at any one time.

---

24. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)
0

B (%)
0

C (%)
0

D (%)
100

25. Enter the planned start and end dates of the disturbance activities.

Start Date
07/30/2027

End Date
07/30/2028

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Cazenovia Creek and tribs - 0103-0009

27. Type of waterbody identified in question 26?
Stream/Creek Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?
No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?
No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
Yes

31.a. What is the name of the municipality/entity that owns the separate storm sewer system? If the separate sewer system is owned by an MS4 Operator, enter the MS4 Operator name.
West Seneca

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?
No

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

36. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

37. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

37.a. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

38. Has the post-construction stormwater management practice component of the SWPPP been developed by a qualified professional per Part III.A.4.?
Yes

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Chris Wood

41. SWPPP Preparer Organization Name
Carmina Wood Design

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Christopher Wood	7165503342	cwood@carminawooddesign.com

43. SWPPP Preparer Address

80 Silo City Row
Suite 100
Buffalo, NY 14203

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form
3) Upload the completed form
Download SWPPP Preparer Certification Form

44. Please upload the SWPPP Preparer Certification

NONE PROVIDED

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?

Yes

Erosion & Sediment Control Criteria

45. Has a construction sequence schedule for the planned management practices been prepared?

Yes

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

Preservation of Undisturbed Area
Preservation of Buffers

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.

All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

48. Is the reduction in impervious area greater than 25%?

No

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRv provided (acre-feet)	Minimum RRv (acre-feet)	Total WQv provided (acre-feet)	Sum of RRv and WQv provided
1.061	0	0	1.061	1.061

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?
No

51. Does one of the waiver conditions apply to the channel protection for this construction activity?
No

51.b.i. CPv Required (acre-feet)
6.78

51.b.ii. CPv Provided (acre-feet)
6.78

52. Does one of the waiver conditions apply to the Qp and Qf for this construction activity?
No

Overbank Flood Control Criteria (Qp)

52.b.i. Pre-Development (CFS)
184.66

52.b.ii. Post-Development (CFS)
87.97

Total Extreme Flood Control Criteria (Qf)

52.b.iii. Pre-Development (CFS)
317.14

52.b.iv. Post-Development (CFS)
141.36

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.
Benchmark Streamline, LLC

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Wet Pond (P-2)	11.20	

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
NONE PROVIDED	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
None

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
Yes

59.a. Which form is required per Part I.D.2.b.ii.?
MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.
MS4 SWPPP Acceptance Form

60. MS4 Acceptance or No Jurisdiction Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?
Yes

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
Owner/Operator Certification Form

61. Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?

Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.

NONE PROVIDED

Appendix C

MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Benchmark Streamline, LLC
2. Contact Person:	Jared Lemankiewicz
3. Street Address:	4053 Maple Road
4. City/State/Zip:	Amherst NY, 14226
II. Project Site Information	
5. Project/Site Name:	West Seneca Exchange
6. Street Address:	Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave 0 Orchard Park Road
7. City/State/Zip:	West Seneca, New York 14224
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4 Operator:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Street Address:	
14. City/State/Zip:	
15. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

Appendix D

NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-25-001

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

   i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

   ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

   iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

   i. meets all other eligibility requirements of Part I.A.; and

   ii. will occur in NYSDEC's Regions 3-9; and

   iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

   iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

   a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

   b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

      i. for all eNOIs:

         1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

   a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

   b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

   c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

    1. the chief executive officer of the agency; or

    2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

    c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

    I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

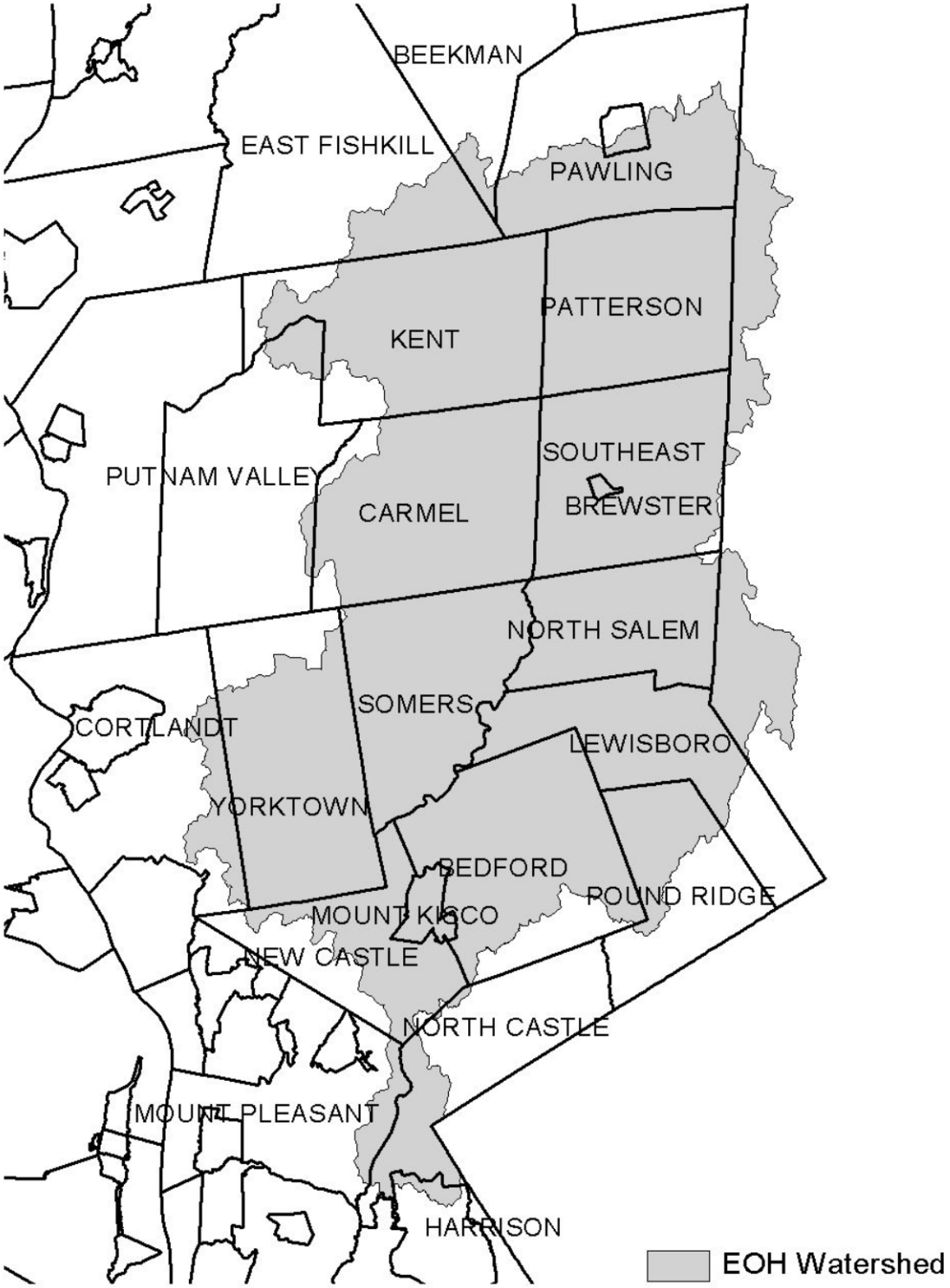


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed

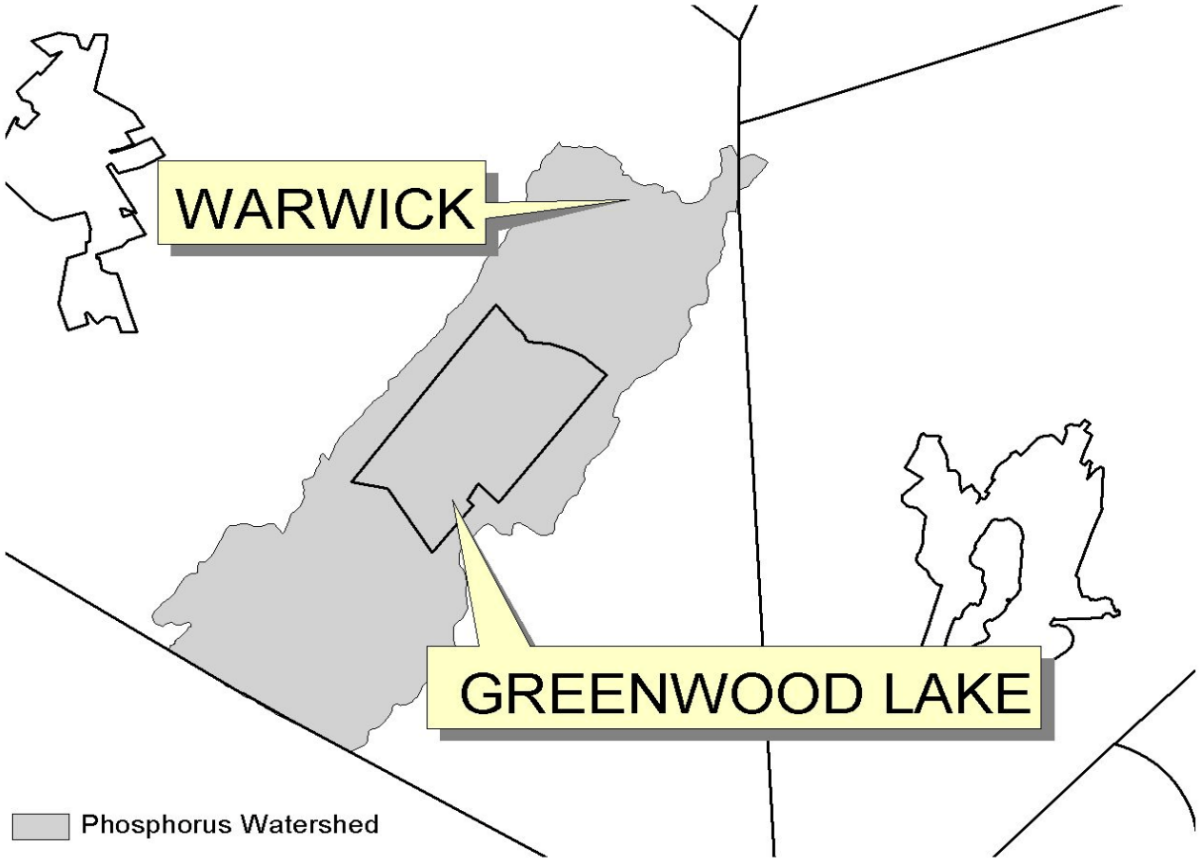


Figure 4 - Oscawana Lake Watershed

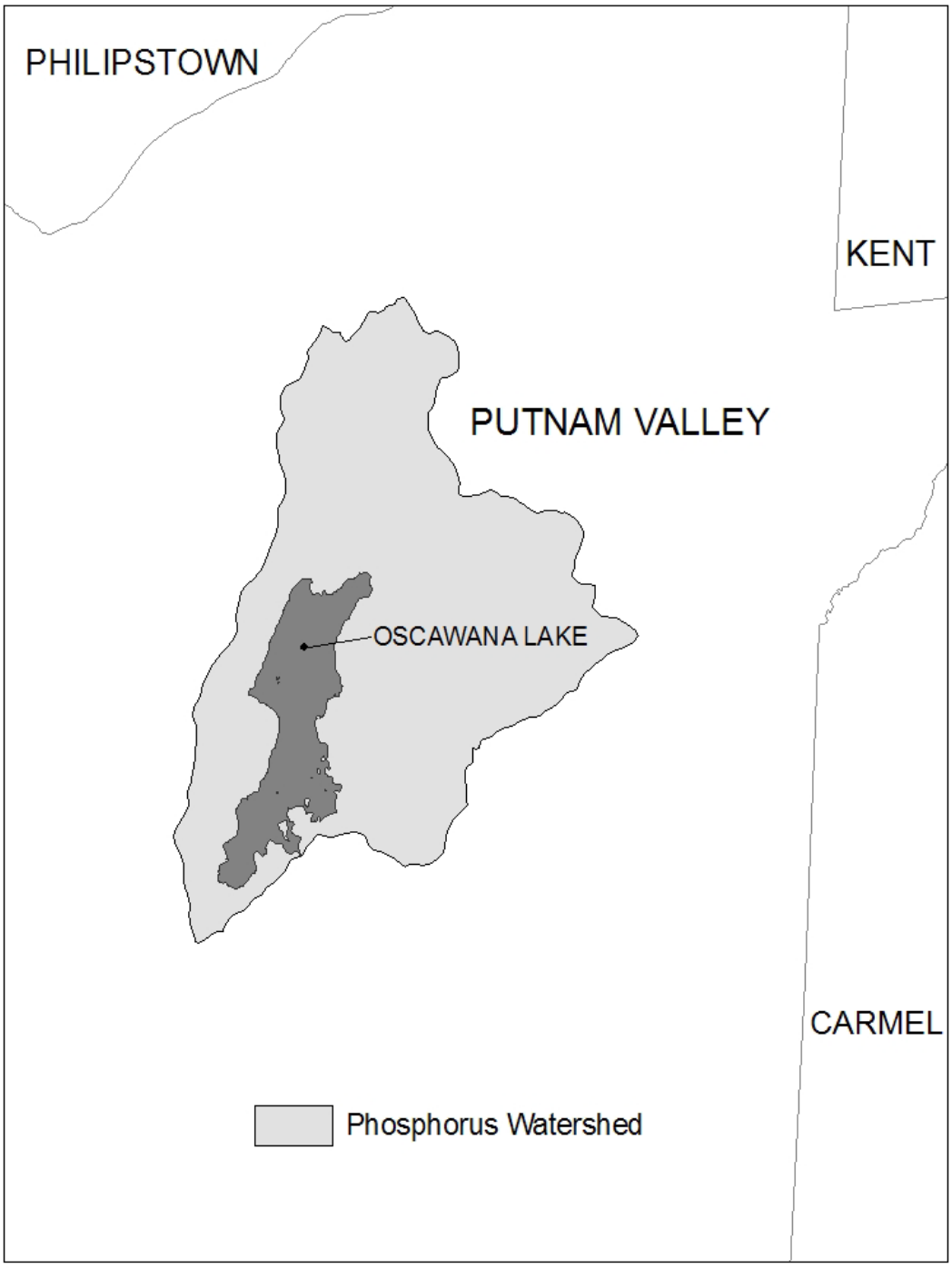
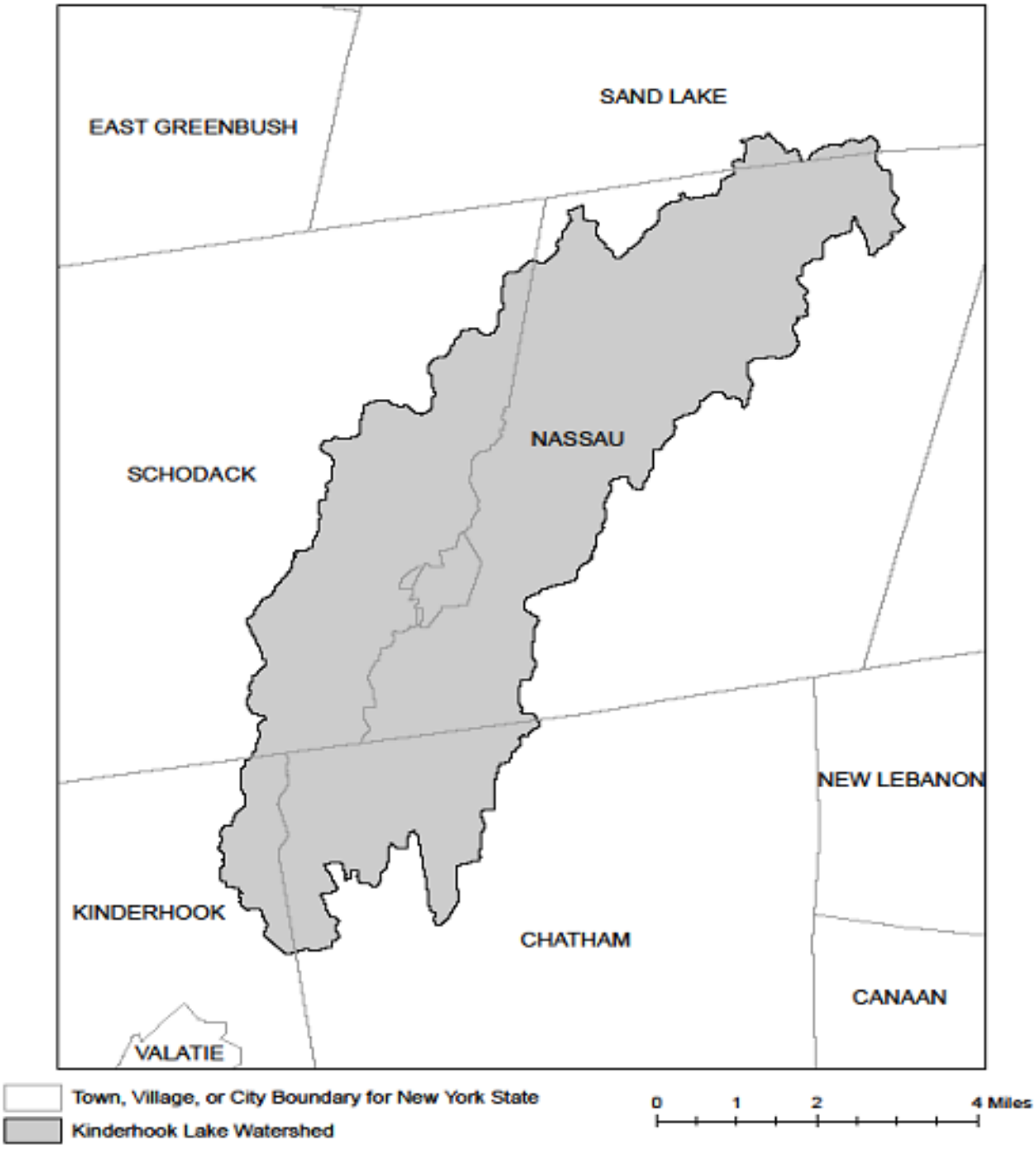


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

Appendix E

Forms

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

West Seneca Exchange

CONTRACTOR'S CERTIFICATION:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge storm water. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

Note: The contractor shall have at least one NYSDEC trained individual onsite at all times when earthwork and other SWPPP associated work is being performed from each contractor(s) and subcontractor(s). Each contractor(s) and subcontractor(s) shall provide copies of these individuals' certifications to the Town of West Seneca.

Name: _____
(Print)

Signature: _____

Title: _____

Company Name: _____

Address: _____

Telephone Number: _____

Date: _____

Scope of Services: _____

Trained Individual(s) Responsible for Implementation: _____

This form must be signed by a responsible corporate officer or other party meeting the "Signatory Requirements" of the NYSDEC SPDES General Permit

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: West Seneca Exchange

eNOI Submission ID: HQP-E4X5-0K5PC

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

Signature

Date

Revised: January 2025

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:	West Seneca Exchange
eNOI Submission ID:	HQP-E4X5-0K5PC
Owner/Operator Name:	Benchmark Streamline, LLC

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Chris		Wood
SWPPP Preparer First Name	MI	SWPPP Preparer Last Name



Signature

07/22/2026

Date

Revised: January 2025

Appendix F

NYSDEC Notice of Termination (NOT)

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

Appendix G

Construction Documents

West Seneca Exchange

Slade Ave, Ridge Road, & Orchard Park Road
West Seneca, New York

AGENCIES

ENGINEERING DEPT.
NAME/TITLE: STEVEN TANNER, P.E., TOWN ENGINEER
COMPANY/DEPT:. TOWN OF WEST SENECA ENGINEERING DEPT.
ADDRESS: 1250 UNION ROAD
WEST SENECA, NEW YORK 14224

TELEPHONE 716-558-3220

CODE ENFORCEMENT DEPT.
NAME/TITLE: JEFFREY SCHIEBER, CODE ENFORCEMENT OFFICER
TOWN OF WEST SENECA CODE ENFORCEMENT DEPT.
COMPANY/DEPT:. 1250 UNION ROAD
ADDRESS: WEST SENECA, NEW YORK 14224

716-558-3237
TELEPHONE

ECDOH
NAME/TITLE:
COMPANY/DEPT:. ERIE COUNTY DEPARTMENT OF HEALTH
ADDRESS: 503 KENSINGTON AVE
BUFFALO, NEW YORK 14214

TELEPHONE 716-961-6854

NYSDEC
NAME/TITLE:
COMPANY/DEPT: NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
ADDRESS: 270 MICHIGAN AVENUE
BUFFALO, NEW YORK 14203

TELEPHONE 716-851-7070

UTILITIES

NATURAL GAS
NAME/TITLE: DAVID KOZLOWSKI
COMPANY/DEPT:. NATIONAL FUEL GAS
ADDRESS: ORCHARD PARK, NEW YORK 14127

TELEPHONE 716-667-5503

TELEPHONE COMPANY
NAME/TITLE: JIM MURPHY
COMPANY/DEPT:. VERIZON
ADDRESS: 65 FRANKLIN STREET RM 601
BUFFALO, NEW YORK 14202

TELEPHONE 716-840-8698

ELECTRIC
NAME/TITLE: DAN LOSEL
COMPANY/DEPT:. NEW YORK STATE ELECTRIC & GAS
ADDRESS: HAMBURG, NEW YORK 14075

TELEPHONE 716-649-5556

WATER
NAME/TITLE: LEONARD KOWALSKI
COMPANY/DEPT:. ERIE COUNTY WATER AUTHORITY
ADDRESS: 3030 UNION ROAD
CHEEKTOWAGA, NEW YORK 14227

TELEPHONE 716-684-1510

DIG SAFELY NEW YORK

TELEPHONE 811

DESIGN CONSULTANTS

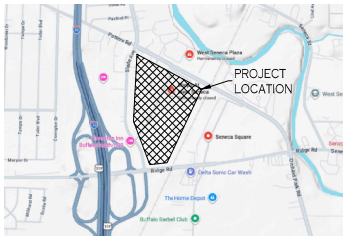
PROJECT SURVEYOR
NAME/TITLE:
COMPANY/DEPT:. NUSSBAUMER & CLARKE, INC.
ADDRESS: 3556 LAKE SHORE ROAD, SUITE 500
BUFFALO, NEW YORK 14219

TELEPHONE 716-827-8000

OWNER/DEVELOPER

Name: Benchmark Streamline
Address: 4053 Maple Road
Amherst, NY 14226
Telephone: (716) 833-4986

CARMINAWOOD DESIGN



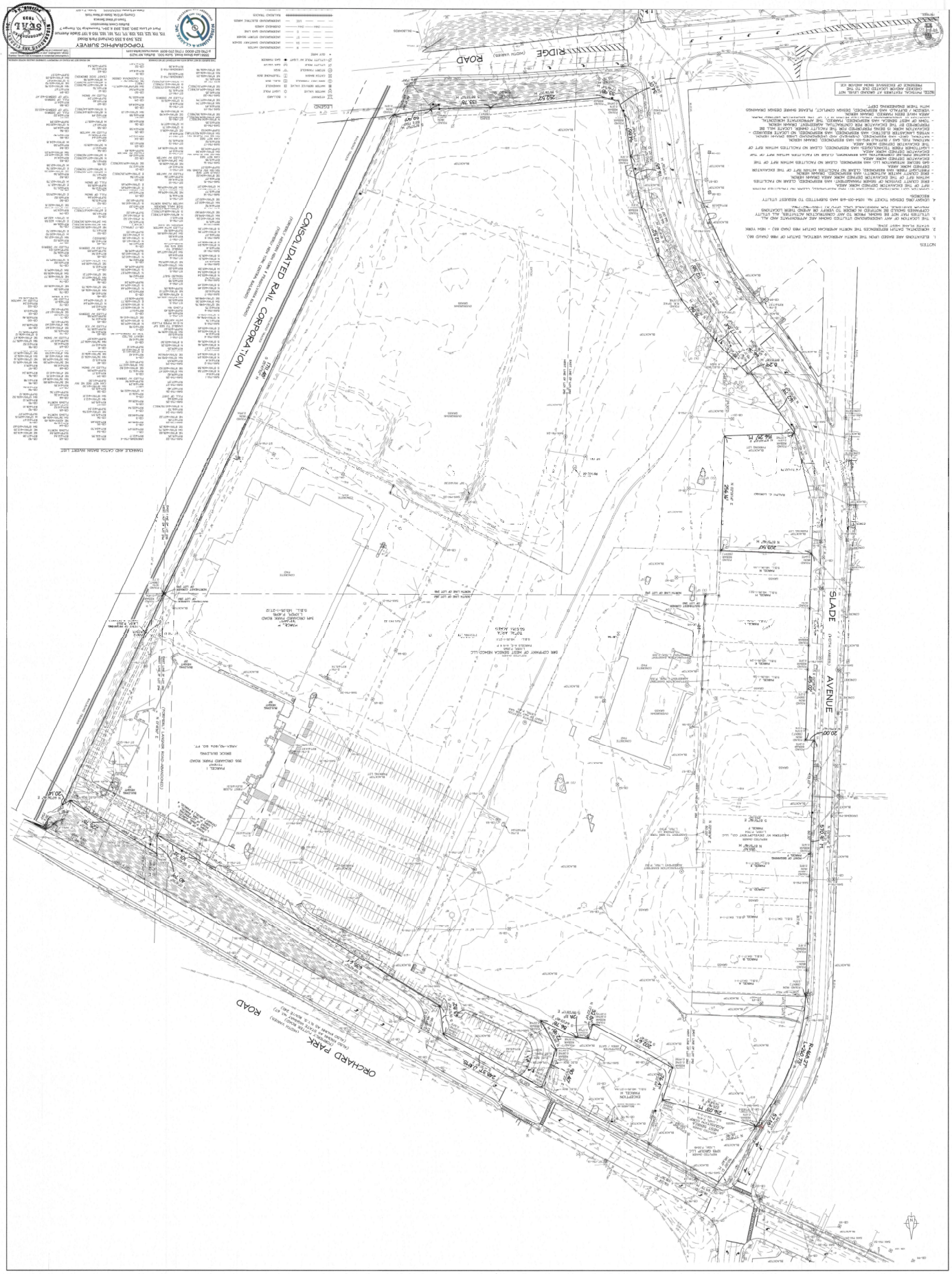
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NOT TO SCALE

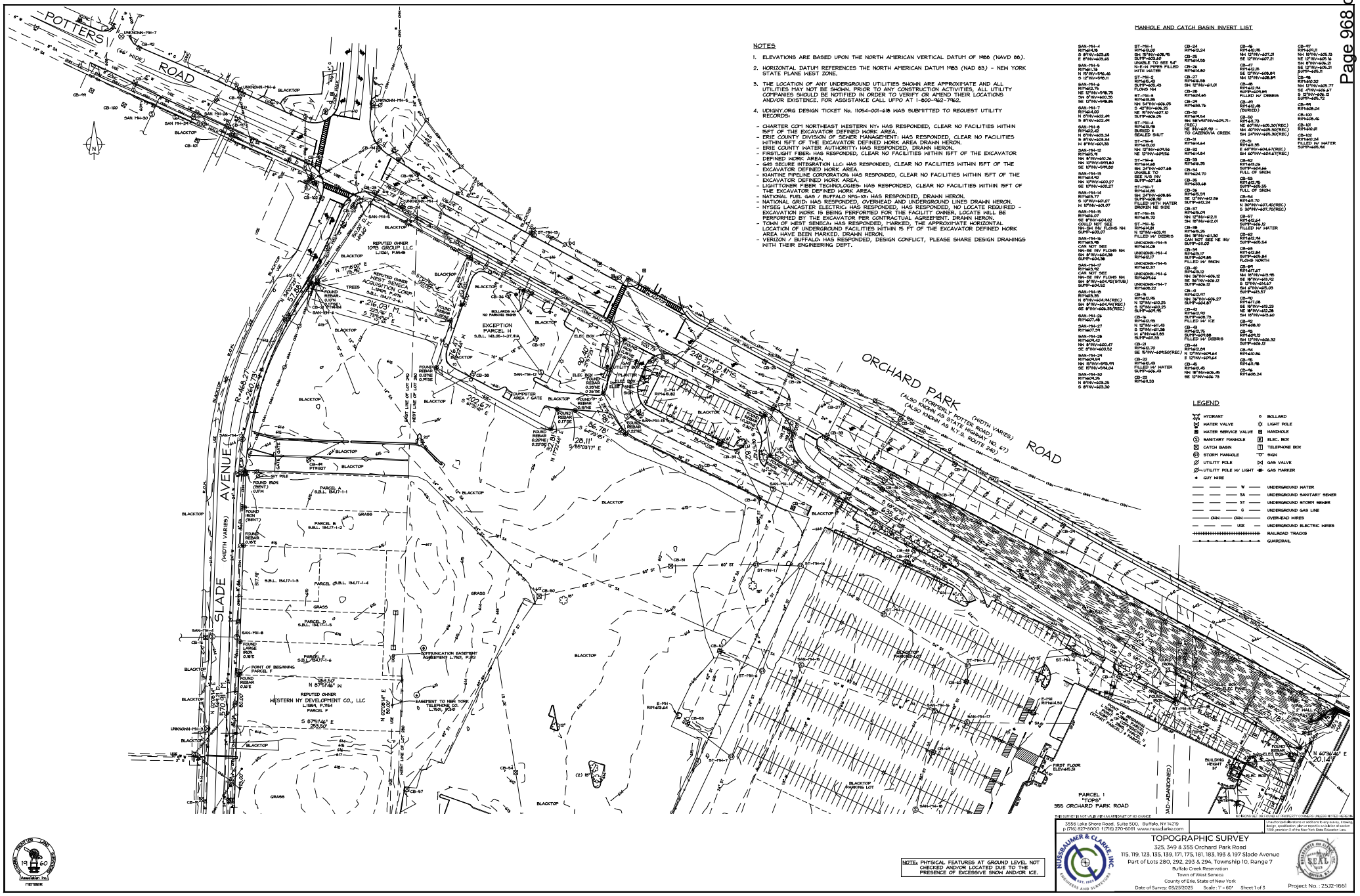
July 2026

DRAWING NO.	DRAWING TITLE
–	COVER SHEET
–	BOUNDARY/TOPO SURVEY (by Nussbaumer & Clark, Inc.)
C-001	DEMOLITION & EROSION CONTROL PLAN – PH1
C-002	DEMOLITION & EROSION CONTROL PLAN – UTILITY PHASING
C-003	DEMOLITION & EROSION CONTROL PLAN – PH2
C-004	DEMOLITION & EROSION CONTROL DETAILS
C-100	SITE PLAN – OVERALL
C-101	SITE PLAN – NORTHWEST
C-102	SITE PLAN – NORTHEAST
C-103	SITE PLAN – SOUTHWEST
C-104	SITE DETAILS
C-200	GRADING PLAN – OVERALL
C-201	GRADING PLAN – NORTHWEST
C-202	GRADING PLAN – NORTHEAST
C-203	GRADING PLAN – SOUTHWEST
C-300	STORM DRAINAGE PLAN –OVERALL
C-301	STORM DRAINAGE PLAN – NORTHWEST
C-302	STORM DRAINAGE PLAN – NORTHEAST
C-303	STORM DRAINAGE PLAN – SOUTHWEST
C-304	WET POND PLAN & DETAIL
C-305	STORM DRAINAGE DETAILS
C-400	UTILITY PLAN – OVERALL
C-401	UTILITY PLAN – NORTHWEST
C-402	UTILITY PLAN – NORTHEAST
C-403	UTILITY PLAN – SOUTHWEST
C-404	UTILITY DETAILS
C-405	UTILITY DETAILS
L-100	LANDSCAPE PLAN – OVERALL
L-101	LANDSCAPE PLAN – NORTHWEST
L-102	LANDSCAPE PLAN – NORTHEAST
L-103	LANDSCAPE PLAN – SOUTHWEST
L-104	LANDSCAPE DETAILS
LP-100	PHOTOMETRIC PLAN – OVERALL
LP-101	PHOTOMETRIC PLAN – NORTHWEST
LP-102	PHOTOMETRIC PLAN – NORTHEAST
LP-103	PHOTOMETRIC PLAN – SOUTHWEST
LP-104	PHOTOMETRIC DETAILS

REVISIONS:

No.	Description	Date


SLADE AVENUE
ORCHARD PARK ROAD
CONSOLIDATED RAIL CORPORATION
RIDGE ROAD (NORTH WALES)
NOTES
TOPOGRAPHIC SURVEY


POTTERS ROAD (66' WIDE)
SLADE AVENUE (WIDTH VARIES)
ORCHARD PARK (WIDTH VARIES) ROAD (FORMERLY POTTERS ROAD) (ALSO KNOWN AS NY-16, HIGHWAY NO. 67) (ALSO KNOWN AS NY-16, ROUTE 240)
PARCEL I TYPO* 355 ORCHARD PARK ROAD
EXCEPTION PARCEL H
PARCEL A
PARCEL B
PARCEL C
PARCEL D
PARCEL E
PARCEL F
POINT OF BEGINNING PARCEL F
REPUTED OWNER 1093 GROUP LLC
REPUTED OWNER NEXTERA SENECA ACQUISITION CORP.
REPUTED OWNER WESTERN NY DEVELOPMENT CO., LLC
COMMUNICATION EASEMENT AGREEMENT
EASEMENT TO NEW YORK TELEPHONE CO.
DUMPSTER AREA / GATE
BUILDING HEIGHT 31'
FIRST FLOOR ELEV=615.51
BLACKTOP PARKING LOT
GRASS
TREES
BOLLARDS (4) NO PARKING SIGNS
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CB-2675
CB-2676
CB-2677
CB



NOTES

1. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
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   - G4S SECURE INTEGRATION LLC: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - KIANTINE PIPELINE CORPORATION: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - LIGHTTOWER FIBER TECHNOLOGIES: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - NATIONAL FUEL GAS / BUFFALO NFG-101: HAS RESPONDED, DRAWN HERON.
   - NATIONAL GRID: HAS RESPONDED, OVERHEAD AND UNDERGROUND LINES DRAWN HERON.
   - NYSEG LANCASTER ELECTRIC: HAS RESPONDED, HAS RESPONDED, NO LOCATE REQUIRED - EXCAVATION WORK IS BEING PERFORMED FOR THE FACILITY OWNER. LOCATE WILL BE PERFORMED BY THE EXCAVATOR PER CONTRACTUAL AGREEMENT. DRAWN HERON.
   - TOWN OF WEST SENECA: HAS RESPONDED, MARKED. THE APPROXIMATE HORIZONTAL LOCATION OF UNDERGROUND FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA HAVE BEEN MARKED. DRAWN HERON.
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NOTE: PHYSICAL FEATURES AT GROUND LEVEL NOT CHECKED AND/OR LOCATED DUE TO THE PRESENCE OF EXCESSIVE SNOW AND/OR ICE.

MANHOLE AND CATCH BASIN INVERT LIST

SAN-T94-1 RIM=641.61 N 8"INV=607.58 S 8"INV=606.58	ST-T94-12 RIM=622.15 SW 15"INV=606.49	CB-58 RIM=611.92 N 30"INV=607.62(REC) S 30"INV=607.52(REC)
SAN-T94-2 RIM=636.14 N 8"INV=606.69 S 8"INV=606.59	ST-T94-14 RIM=634.61 SE 12"INV=608.11 S 12"INV=611.71 N 12"INV=607.98	CB-59 RIM=612.27 N 30"INV=608.51
SAN-T94-3 RIM=635.37 N 8"INV=605.46 S 8"INV=605.46	ST-T94-15 RIM=629.22 SE 18"INV=604.98 N 18"INV=604.98	CB-60 RIM=611.67 N 8"INV=608.17 CB-61 RIM=612.49 N 40"INV=608.64(REC) S 15"INV=608.64(REC)
SAN-T94-4 RIM=618.97 N 8"INV=605.31 S 8"INV=605.31	ST-T94-17 RIM=615.76 N 24"INV=602.17(REC) S 15"INV=612.17(REC) N 15"INV=613.25(REC)	
SAN-T94-10 RIM=615.41 N 8"INV=606.59 S 8"INV=606.59	CB-7 RIM=618.24 SUMP=612.46 FILLED W/ DEBRIS	CB-62 RIM=611.76 N 40"INV=607.36(REC) S 40"INV=607.36(REC) N 30"INV=611.76 (EAST SIDE BROKEN)
SAN-T94-11 RIM=616.07 N 8"INV=607.35 S 8"INV=607.35	CB-8 RIM=616.72 SE 18"INV=612.82 SW 18"INV=612.72 SUMP=607.72	CB-64 RIM=612.78 NE 42"INV=606.43 SW 36"INV=606.48 FLOWS NORTH
SAN-T94-19 RIM=641.49 NW 8"INV=607.79 SE 8"INV=607.79	CB-9 RIM=614.42 S 12"INV=611.12 N 6"INV=612.20 SUMP=611.12	CB-65 RIM=614.52 SUMP=608.02 FLOWS NORTH
SAN-T94-20 RIM=615.25 SW 8"INV=604.8(REC) SE 8"INV=604.51(REC)	CB-10 RIM=614.90 HEAVY SILTED TOP OF DEBRIS=611.90	CB-66 RIM=614.26 SUMP=607.36
SAN-T94-21 RIM=615.73 N 8"INV=606.23 NW 8"INV=606.68 SE 8"INV=606.98	CB-11 RIM=615.98 N 18"INV=609.28 S 18"INV=609.28 SE 12"INV=610.46	CB-67 RIM=614.30 SE 36"INV=608.85 SW 36"INV=608.60 NE 4"INV=610.15 SE 4"INV=610.10
SAN-T94-22 RIM=615.04 NE 8"INV=605.83 SW 8"INV=605.78 SE 8"INV=606.28	CB-12 RIM=615.71 N 18"INV=608.57 S 18"INV=608.57 SE 12"INV=609.77 SUMP=608.57	CB-68 RIM=614.38 NE 36"INV=609.38 SW 30"INV=609.38 NW 4"INV=612.38 SW 4"INV=612.53 SE 24"INV=610.46
SAN-T94-23 RIM=617.05 NE 8"INV=607.22	CB-13 RIM=615.24 N 12"INV=609.44 S 12"INV=609.44 SUMP=609.24	CB-69 RIM=614.26 SUMP=610.37 FILLED W/ SNOW
SAN-T94-24 RIM=616.70 N 8"INV=610.73(REC)	CB-14 RIM=615.95 N 12"INV=609.57 S 12"INV=609.55 N 40"INV=608.67(REC)	CB-70 RIM=615.95 SE 4"INV=612.60 SW 4"INV=612.60 SUMP=611.35
SAN-T94-25 RIM=622.66 FULL OF DIRT	CB-17 (SMALL) (8"x18") RIM=615.92 N 4"INV=611.92 S 4"INV=611.62 SUMP=611.22	CB-71 RIM=615.22 SE 15"INV=611.87 SUMP=611.82
ST-T94-8 RIM=615.11 NE 36"INV=604.66 NW 10"INV=610.76 SW 30"INV=604.86	CB-18 RIM=615.20 S 12"INV=607.35 SUMP=611.30	CB-72 RIM=614.01 FILLED W/ ICE & SNOW
ST-T94-10 RIM=644.64 SUMP=607.36 FILLED W/ WATER	CB-19 RIM=622.64 NW 12"INV=609.55 S 12"INV=609.65 E 12"INV=609.65	CB-73 RIM=615.28 SE 12"INV=608.00
ST-T94-11 RIM=620.47 NE 18"INV=608.18 SW 24"INV=608.18 FILLED W/ WATER	CB-20 RIM=615.56 E 21"INV=604.25(REC)	CB-74 RIM=611.76 NE 15"INV=608.77 SW 15"INV=608.58 SW 12"INV=609.13
		CB-75 RIM=612.67 SE 12"INV=609.15 SUMP=609.07

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p (716) 827-6500 f (716) 270-6091 www.nussclarke.com

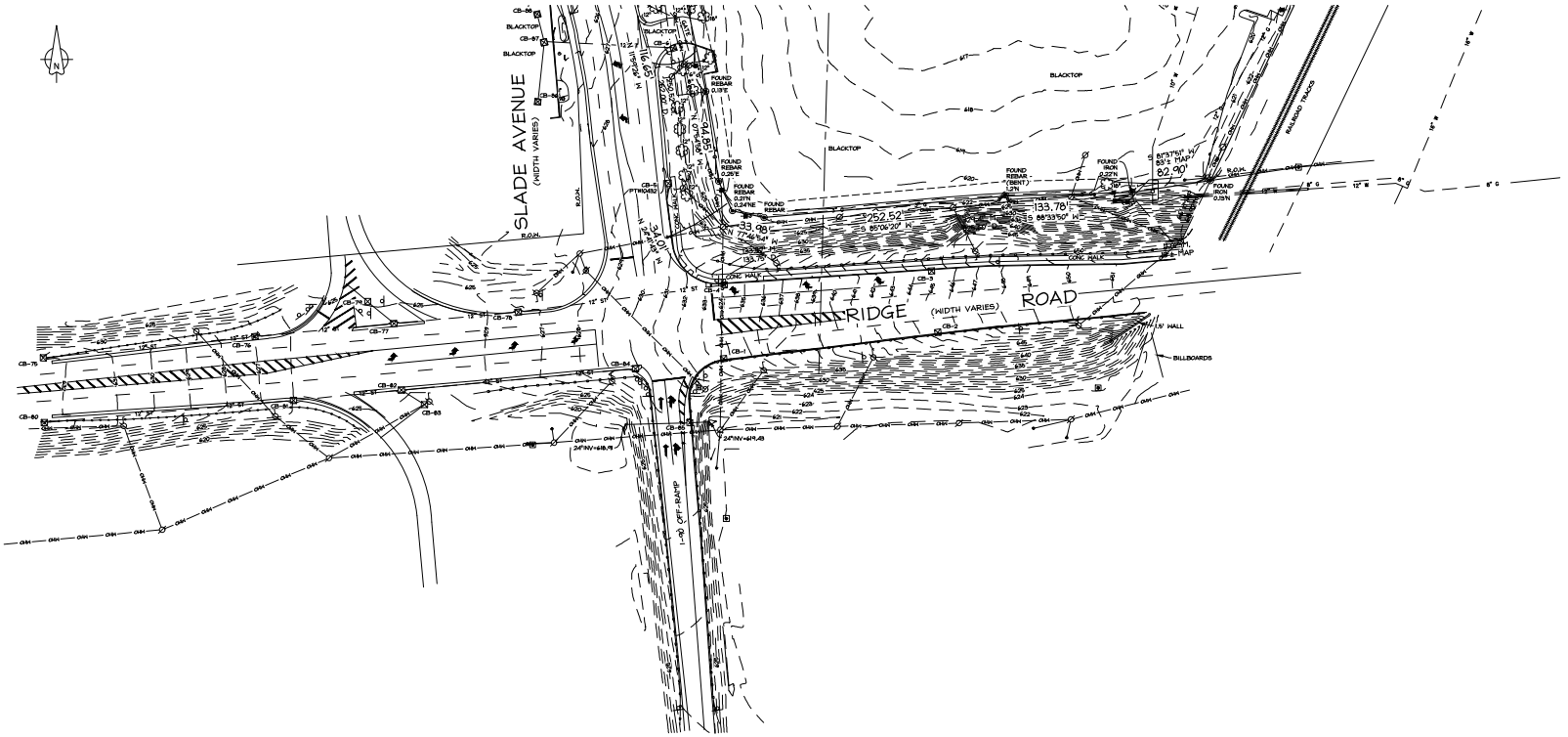
TOPOGRAPHIC SURVEY

325, 349 & 355 Orchard Park Road
115, 119, 123, 135, 139, 171, 175, 181, 183, 193 & 197 Slade Avenue
Part of Lots 280, 292, 293 & 294, Township 10, Range 7
Buffalo Creek Reservation
Town of West Seneca
County of Erie, State of New York

Date of Survey: 03/25/2025 Scale: 1" = 60' Sheet 2 of 3

Project No.: 25JZ-1661

MEMBER



MANHOLE AND CATCH BASIN INVERT LIST

CB-1
RIM=433.69

CB-2
RIM=445.08

CB-3
RIM=444.83

CB-4
RIM=433.94

CB-5
RIM=428.66

CB-6
RIM=436.72
N 12"INV=422.76

CB-75
RIM=431.82
E 12"INV=429.70

CB-76
RIM=436.92
SUMP=423.23
FILLED W/ DEBRIS

CB-77
RIM=435.03
NW 12"INV=421.06
N 12"INV=420.92
E 12"INV=420.72

CB-78
RIM=436.44
E 12"INV= 422.86
N 12"INV= 422.69

CB-79
RIM=434.94
NW 12"RW=419.32
SE 12"INV=420.15

CB-80
RIM=431.82
E 12"INV=424.53

CB-81
RIM=426.73
E 12"INV=421.71
N 12"INV=421.73

CB-82
RIM=426.36
SE 18"INV=420.38
E 12"INV=420.76
N 12"INV=421.36

CB-83
RIM=434.14
NW 18"INV=411.37
SW 18"INV=411.23

CB-84
RIM=429.58
W 18"INV=424.18

CB-85
RIM=429.90

CB-86
RIM=434.09
SUMP=420.54
SUMP=420.39

CB-87
RIM=434.22
FULL OF DEBRIS
TOP OF DEBRIS=422.02

CB-88
RIM=434.17
FULL OF DEBRIS
TOP OF DEBRIS=421.47

CB-89
RIM=417.67
NW 18"INV=413.76
SE 18"INV=413.92
S 12"INV=414.67
SW 6"INV=415.03
SUMP=413.57

CB-90
RIM=417.08
SE 18"INV=413.23
NE 18"INV=412.28
SW 18"INV=413.40

CB-91
RIM=412.67
N 12"INV=409.15
SUMP=409.07

CB-92
RIM=408.10

CB-93
RIM=409.12
SW 12"INV=406.32
SUMP=406.12

CB-94
RIM=410.86

CB-95
RIM=410.19

CB-96
RIM=408.24

CB-97
RIM=409.11
NW 18"INV=405.13
NE 12"INV=405.16
SW 8"INV=406.21
SE 12"INV=405.21
SUMP=405.11

CB-98
RIM=410.30
NW 12"INV=405.77
SE 4"INV=406.67
S 12"INV=406.12
SUMP=405.72

CB-99
RIM=408.04

CB-100
RIM=408.46

CB-101
RIM=410.01

CB-102
RIM=410.24
FILLED W/ WATER
SUMP=405.94

LEGEND

- HYDRANT
- WATER VALVE
- WATER SERVICE VALVE
- SANITARY MANHOLE
- CATCH BASIN
- STORM MANHOLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- GUY WIRE
- BOLLARD
- LIGHT POLE
- HANDHOLE
- ELEC. BOX
- TELEPHONE BOX
- SIGN
- GAS VALVE
- GAS MARKER
- W — UNDERGROUND WATER
- SA — UNDERGROUND SANITARY SEWER
- ST — UNDERGROUND STORM SEWER
- G — UNDERGROUND GAS LINE
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND ELECTRIC WIRES
- RAILROAD TRACKS
- GUARDRAIL

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NEW YORK STATE LAND SURVEYORS ASSOCIATION, INC. 1960 MEMBER

THIS SURVEY IS NOT VALID WITH AN ALTERATION OF NO CHANGE — NO PRINTS SET OR FOUND AT PROPERTY CORNERS OR REFERENCE MONUMENTS

NUSSBAUMER & CLARKE, INC. ENGINEERS AND SURVEYORS EST. 1921
3556 Lake Shore Road, Suite 500, Buffalo, NY 14219
p (716) 827-3000 f (716) 270-5001 www.nussclarke.com

Any alteration or addition to this survey, drawing, design, specification, plan or report is a violation of section 7209, provision 2 of the New York State Education Law.

TOPOGRAPHIC SURVEY

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Town of West Seneca
County of Erie, State of New York

Date of Survey: 03/25/2025 Scale: 1" = 60' Sheet 3 of 3

LICENSED IN NEW YORK STATE No. 050342 SCAL SURVEYOR

Project No.: 25JZ-1661

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PHASE - 1 DEMOLITION NARRATIVE:

DEMOLITION WORK TO BE PERFORMED DURING PHASE-1 SHALL INCLUDE THE FOLLOWING:

- REMOVAL OF EXISTING PAVEMENT, CURBING, SIDEWALK, BUILDING FOOTPRINT/FOUNDATION WITHIN HATCHED LIMITS AS SHOWN.
- REMOVAL OF EXISTING SITE UTILITIES, AS SHOWN ON SHEET "C-002", TO BE COORDINATED WITH PROPOSED UTILITY CONNECTIONS FROM THE PROPOSED UTILITY PLANS IN ORDER TO MAINTAIN FULL SERVICE OF UTILITIES FOR EXISTING TENANTS.
- REMOVAL OF EXISTING TREES, LIGHT POLES, FENCING, AND OTHER SITE ITEMS AS LISTED ON "C-001".
-REMOVAL OF INTERNAL ROADWAY CONNECTION WITHIN EXISTING SITE WHILE MAINTAINING ACCESS FOR EXISTING TENANTS ALONG ORCHARD PARK ROAD AND SLADE AVENUE AS SHOWN.

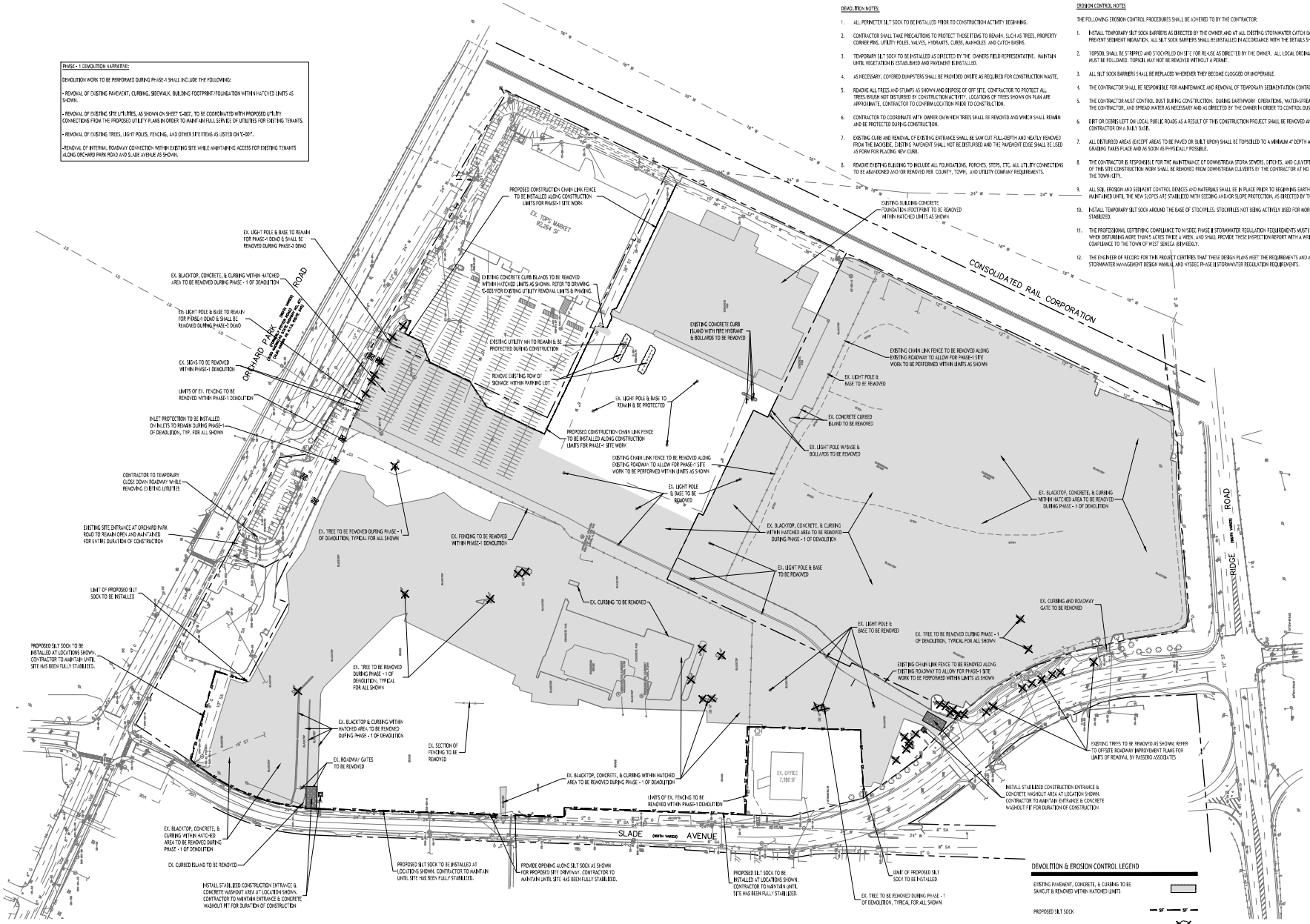
DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF-SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH OWNER ON WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
7. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
8. REMOVE EXISTING BUILDING TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT SOCK BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT SOCK BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASE.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER THE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT SOCK AROUND THE BASE OF STOCKPILES. STOCKPILES NOT BEING ACTIVELY USED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY, AND WHEN DISTURBING MORE THAN 5 ACRES TWICE A WEEK, AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF WEST SENECA (BIWEEKLY).
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.



DEMO & E.C. PLAN - PHASE 1

SCALE: 1"=100'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT, CONCRETE, & CURBING TO BE SAWCUT & REMOVED WITHIN HATCHED LIMITS
- PROPOSED SILT SOCK
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION
- EXISTING UTILITY STRUCTURE & PIPING TO BE REMOVED
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT AREA

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100 0 100 200FT.

CARMINAWOOD DESIGN
Buffalo | Utica | Syracuse

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK — CHRISTOPHER WOOD — 075084 — LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Demolition & Erosion Control Plan - PH1

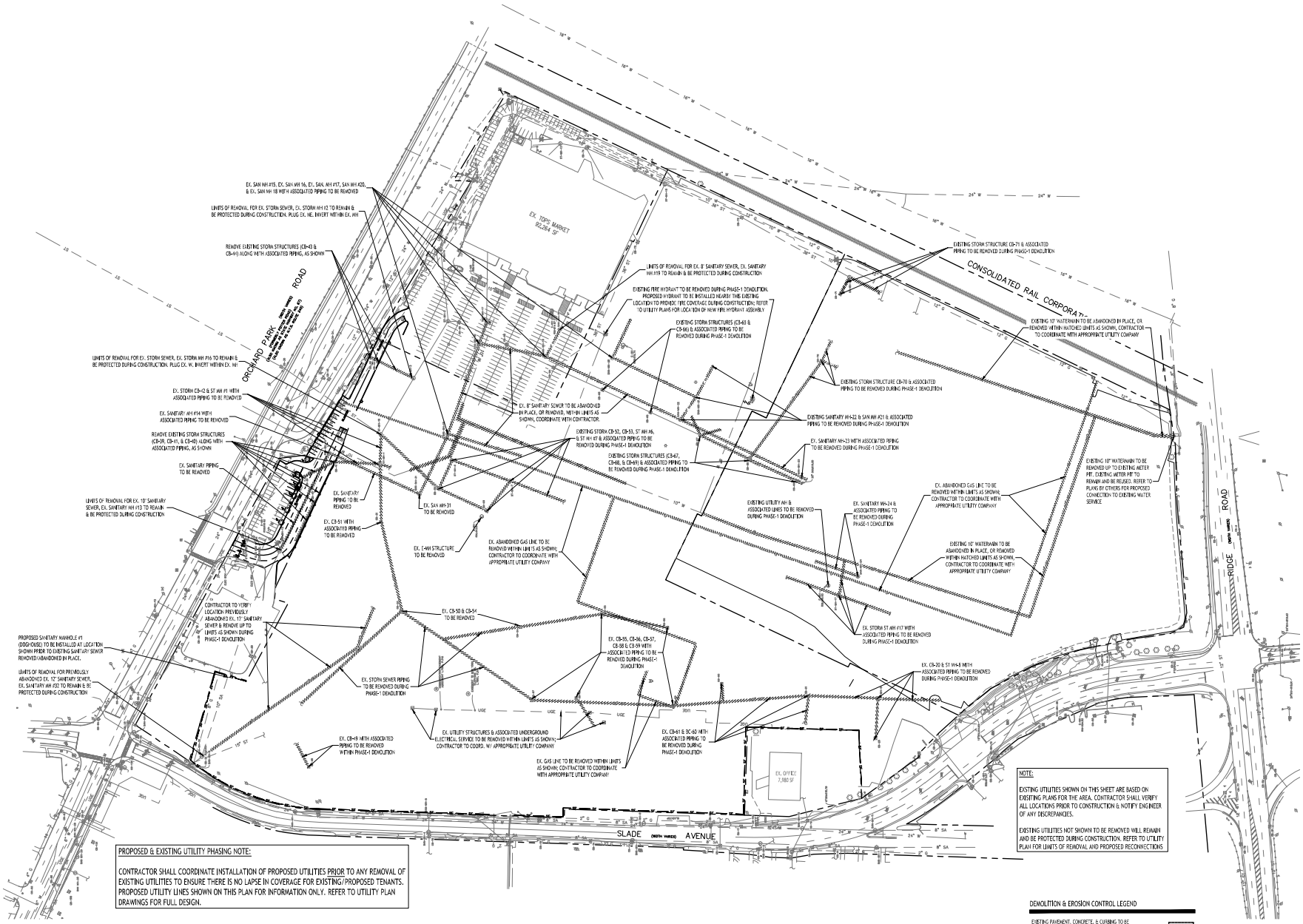
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-001

Project No: 24-4113

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PROPOSED & EXISTING UTILITY PHASING NOTE:

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES PRIOR TO ANY REMOVAL OF EXISTING UTILITIES TO ENSURE THERE IS NO LAPSE IN COVERAGE FOR EXISTING/PROPOSED TENANTS. PROPOSED UTILITY LINES SHOWN ON THIS PLAN FOR INFORMATION ONLY. REFER TO UTILITY PLAN DRAWINGS FOR FULL DESIGN.

NOTE:

EXISTING UTILITIES SHOWN ON THIS SHEET ARE BASED ON EXISTING PLANS FOR THE AREA. CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION & NOTIFY ENGINEER OF ANY DISCREPANCIES.

EXISTING UTILITIES NOT SHOWN TO BE REMOVED WILL REMAIN AND BE PROTECTED DURING CONSTRUCTION. REFER TO UTILITY PLAN FOR LIMITS OF REMOVAL AND PROPOSED RECONNECTIONS

DEMO & E.C. PLAN - UTILITY PHASING

SCALE: 1"=100'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT, CONCRETE, & CURBING TO BE SAWCUT & REMOVED WITHIN HATCHED LIMITS
- PROPOSED SILT SOCK — SF — SF —
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION
- EXISTING UTILITY STRUCTURE & PIPING TO BE REMOVED

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100 0 100 200FT.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER M. WOOD * 075084 LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Demolition & Erosion Control Plan - Utility Phasing

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-002

Project No: 24-4113

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PHASE - 2 DEMOLITION NARRATIVE:

DEMOLITION WORK TO BE PERFORMED DURING PHASE-2 SHALL INCLUDE THE FOLLOWING:

- REMOVAL OF EXISTING PAVEMENT, CURBING, SIDEWALK, BUILDING FOOTPRINT/FOUNDATION WITHIN HATCHED LIMITS AS SHOWN.
- REMOVAL OF REMAINING EXISTING SITE UTILITIES WITHIN PHASE - 2 DEMOLITION LIMITS, AS SHOWN ON SHEET "C-002", TO BE COORDINATED WITH PROPOSED UTILITY CONNECTIONS FROM THE PROPOSED UTILITY PLANS IN ORDER TO MAINTAIN FULL SERVICE OF UTILITIES FOR EXISTING TENANTS.
- REMOVAL OF EXISTING TREES, LIGHT POLES, FENCING, AND OTHER SITE ITEMS AS LISTED ON "C-003".
- REMOVAL OF EXISTING ACCESS TO "TOPS MARKET" AT ORCHARD PARK ROADWAY & CONNECTION TO PROPOSED INTERNAL ROADWAY AS SHOWN ON PLAN "C-002" TO RE-INTRODUCE INTERNAL TRAFFIC FLOW TO PLAZA.

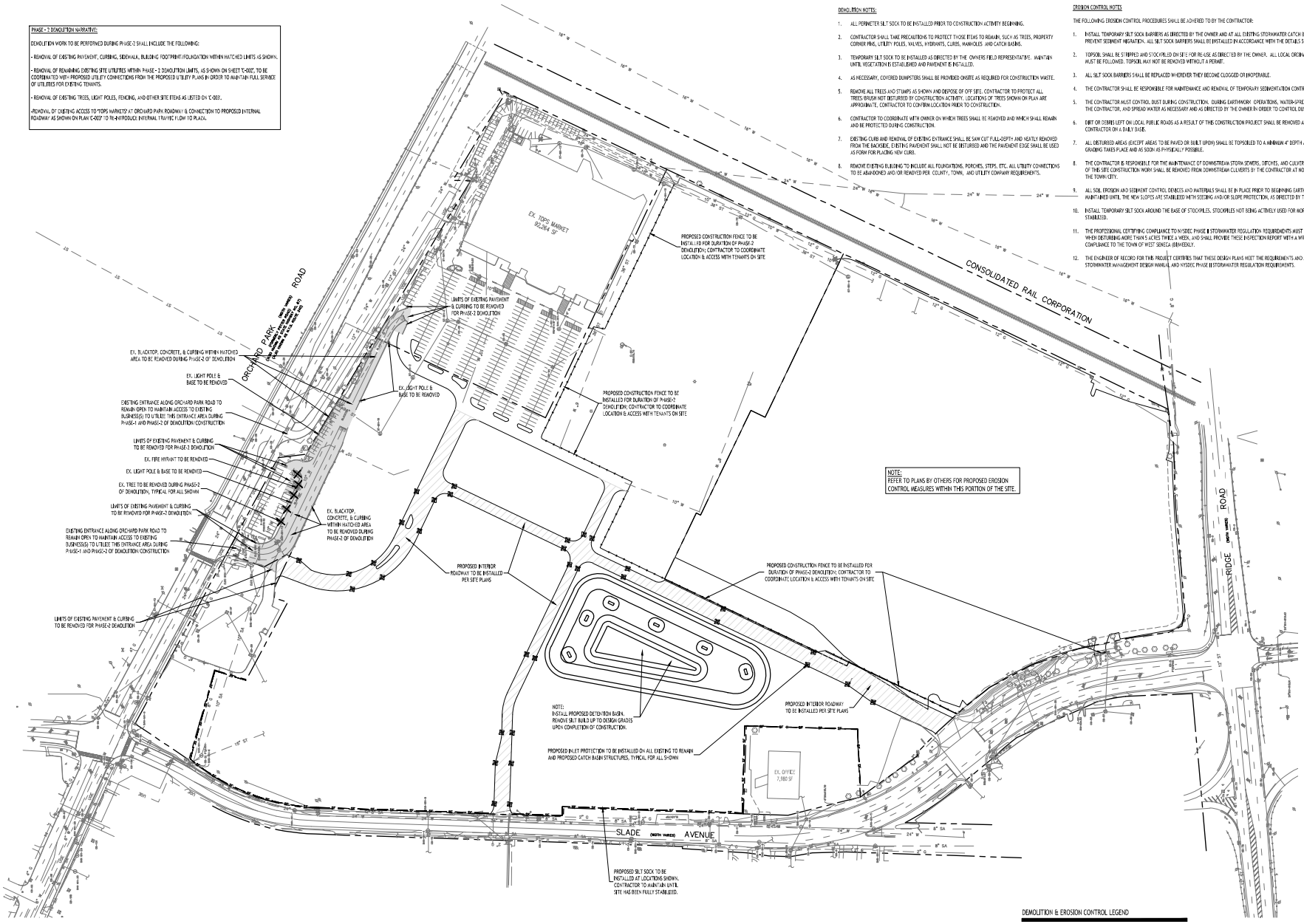
DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF-SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH OWNER ON WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
7. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
8. REMOVE EXISTING BUILDING TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT SOCK BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT SOCK BARRIERS SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASE.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER THE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT SOCK AROUND THE BASE OF STOCKPILES. STOCKPILES NOT BEING ACTIVELY USED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY, AND WHEN DISTURBING MORE THAN 5 ACRES TWICE A WEEK, AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF WEST SENECA (BIWEEKLY.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.



DEMO & E.C. PLAN - PHASE 2

SCALE: 1"=100'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT, CONCRETE, & CURBING TO BE SAWCUT & REMOVED WITHIN HATCHED LIMITS
- PROPOSED SILT SOCK — SF — SF —
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK * C. CHRISTOPHER WOOD * 075984 LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Demolition & Erosion Control Plan - PH2

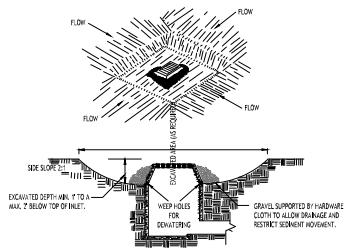
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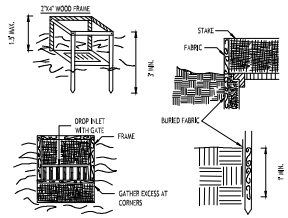


CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1
NOT TO SCALE



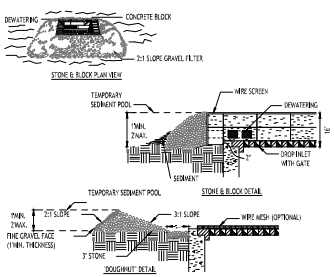
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2' x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. 1' SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2' x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2
NOT TO SCALE

NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION

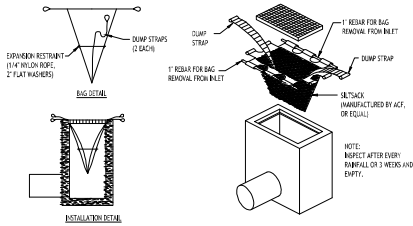


CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

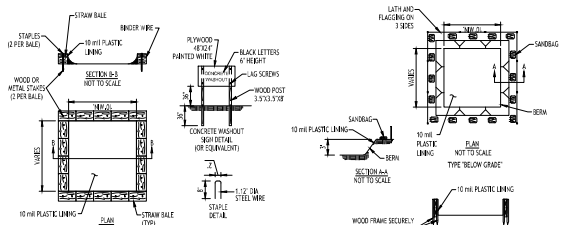
MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3
NOT TO SCALE



NOTE: INSPECT AFTER EVERY RAINFALL OR 3 WEEKS AND EMPTY.

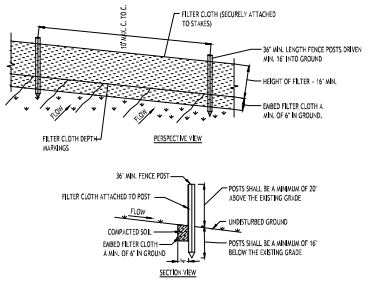
SILT SACK DETAIL
NOT TO SCALE



NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

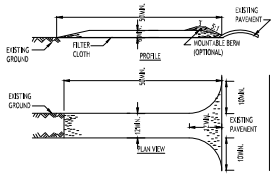
CONCRETE WASHOUT DETAIL
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE OR HARDWOOD.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

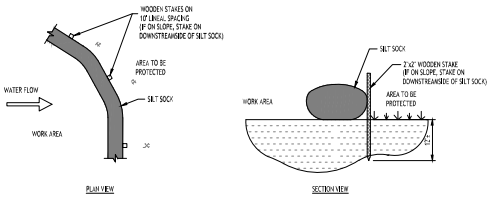
SILT FENCE DETAIL
NOT TO SCALE

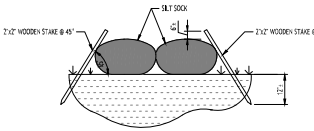


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE





NOTES:

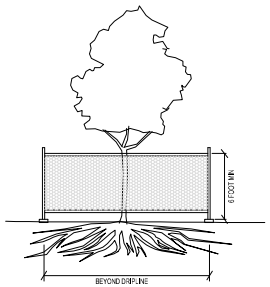
CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED 1/2 OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL
NOT TO SCALE





EXISTING TREE PROTECTION FENCE

MATERIALS

MATERIALS FOR TEMPORARY PLASTIC BARRIER FENCES SHALL MEET THE FOLLOWING REQUIREMENTS:
- FENCE: HIGH-DENSITY POLYETHYLENE MESH, ULTRAVIOLET-STABILIZED MIN. 2 YEARS, MINIMUM HEIGHT 4.0 FEET. COLOR: HIGH-VISIBILITY ORANGE OR GREEN. WHEN USED TO PROTECT TREES OR OTHER VEGETATION, COLOR SHALL BE HIGH-VISIBILITY ORANGE.
- POSTS: RIGID METAL OR WOOD POSTS, MINIMUM LENGTH 6.0 FEET.
- TIES: STEEL WIRE, #14 GAUGE OR NYLON CABLE TIES.
- WARNING SIGNS: SHEET METAL, PLASTIC OR OTHER RIGID, WATERPROOF MATERIAL, 1.5 FEET BY 2.0 FEET WITH 4 INCH BLACK LETTERS ON A WHITE BACKGROUND. TEXT SHALL BE: 'PROTECTED SITE - KEEP OUT' UNLESS OTHERWISE SPECIFIED.

DETAILS

FENCES SHALL BE ERECTED PRIOR TO MOVING CONSTRUCTION EQUIPMENT ONTO ANY AREA DESIGNATED FOR PROTECTION.

THE LINE OF FENCES SHALL BE STAKED OR MARKED OUT ON THE GROUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER BEFORE ANY FENCE IS INSTALLED. WHERE USED FOR PROTECTION OF INDIVIDUAL TREES, FENCE SHALL BE PLACED AT THE DRIP LINE (EXTENT OF CANOPY). IF NOT POSSIBLE, PLACEMENT SHALL BE AS CLOSE TO THE DRIP LINE AS POSSIBLE AND IN NO CASE LESS THAN 5.0 FEET AWAY FROM THE TREE TRUNK.

ON APPROVAL OF THE STAKEOUT, POSTS SHALL BE SECURELY DRIVEN ON 6.0 FOOT-MAXIMUM CENTERS, NORMAL TO THE GROUND, TO A DEPTH 1/3 OF THE TOTAL POST LENGTH. PLASTIC BARRIER FENCE SHALL BE PLACED ALONG THE SIDE OF ALL POSTS. ENDS OF FENCING SEGMENTS SHALL OVERLAP A DISTANCE OF AT LEAST ONE HALF THE FENCE HEIGHT.

FENCING SHALL BE SECURED TO POSTS WITH WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF POST. FASTENER SHALL BE TIGHT ENOUGH TO PREVENT THE FENCING FROM SLIPPING DOWN. OVERLAPS SHALL ALSO BE SECURELY FASTENED.

BARRIER FENCE WHICH IS NOT ORANGE IN COLOR SHALL BE FLAGGED AT 6.0 FOOT INTERVALS WITH RED OR ORANGE FLORESCENT TAPE. WARNING SIGNS SHALL BE MOUNTED ON THE FENCE AT NO MORE THAN 100 FOOT INTERVALS.

MAINTENANCE SHALL COMMENCE IMMEDIATELY AFTER ERECTION OF THE FENCE AND CONTINUE UNTIL ONE WEEK PRIOR TO ACCEPTANCE OF THE CONTRACT, AND SHALL CONSIST OF: REPLACING DAMAGED POST(S) AND FENCING; RE-FASTENING AND TIGHTENING FENCING; AND RESTORING FENCE TO ITS INTENDED HEIGHT.

FENCING USED FOR TREE OR OTHER VEGETATION PROTECTION SHALL NOT BE TEMPORARILY REMOVED TO ALLOW EQUIPMENT ACCESS OVER A PROTECTED AREA, EXCEPT AS REQUIRED FOR ITEMS OF WORK SPECIFICALLY SHOWN ON THE PLANS AND APPROVED BY THE ENGINEER IN WRITING.

TREE PROTECTION DETAIL
NOT TO SCALE

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West Seneca Exchange
Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

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No.	Description	Date



Seal on 07/20/2026

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Demolition & Erosion Control Details

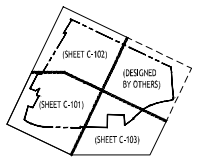
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SHEET LOCATION MAP

SCALE: N.T.S.

N

SITE PLAN

SCALE: 1"=100'

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
5. ALL HANDICAP RAMPS (NOT WITHIN THE NYSDOT R.O.W.) AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPS WHERE ENTERING PARKING AREAS/DRIVEWAYS. SIDEWALKS FLUSH TO PAVEMENT WITHIN THE NYSDOT R.O.W. SHALL ADHERE TO THE NOTES AND DESIGN REGULATIONS AS STATED ON NYSDOT STANDARD SHEET 608-01.
6. EXISTING TREE LOCATIONS ARE APPROXIMATE. CONTRACTOR TO LOCATE LOCATIONS PRIOR TO CONSTRUCTION AND COORDINATE WITH OWNER WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF WEST SENECA ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
10. ALL DISTURBED AREAS WITHIN NYSDOT R.O.W. TO BE RESTORED USING ITEM 610.1402 TOPSOIL - ROADSIDE AND ITEM 610.1602 TURF ESTABLISHMENT - LAWNS AND COMPLY WITH NYSDOT STANDARDS AND SPECIFICATIONS SECTION 713 - LANDSCAPE DEVELOPMENT MATERIALS.
11. ANY NYS RIGHT OF WAY DAMAGES CAUSED BY OR DURING CONSTRUCTION TO FEATURES TO REMAIN SHALL BE REPAIRED OR REPLACED PER MOST CURRENT NYSDOT STANDARDS AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

SITE DATA

SITE AREA = 56 AC ±
ZONED: C-2(S)
BUILDINGS: PROP. 382,848 SF COMMERCIAL,
EX. 92,264 SF TOPS MARKET, EX. 7,980 SF OFFICE
(TOTAL 483,092 SF)

SETBACKS - BUILDING	REQUIRED
FRONT	40 FT
SIDE	5 FT
SIDE (IF USED FOR INGRESS/EGRESS)	25 FT
REAR (ABUTTING COMM/RES)	10 FT/ 30 FT
SETBACKS - PARKING	
FRONT	N/A
SIDE (ABUTTING RES)	10 FT
REAR	10 FT
MAX. BUILDING HEIGHT	40 FT

PARKING CALCULATION
GREATER THAN 400,000 AND LESS THAN 600,000 SQUARE FEET OF GROSS FLOOR AREA
REQ'D = 4.75 SPACES FOR EACH 1,000 SQUARE FEET OF GROSS FLOOR AREA
REQ'D = 483,092 / 1,000 x 4.75 = 2,295 SPACES REQ'D

PARKING PROVIDED = 2,382 SPACES PROVIDED

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200Ft.

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Buffalo | Utica | Rochester

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER M. WOOD * 075084 LICENSED PROFESSIONAL ENGINEER

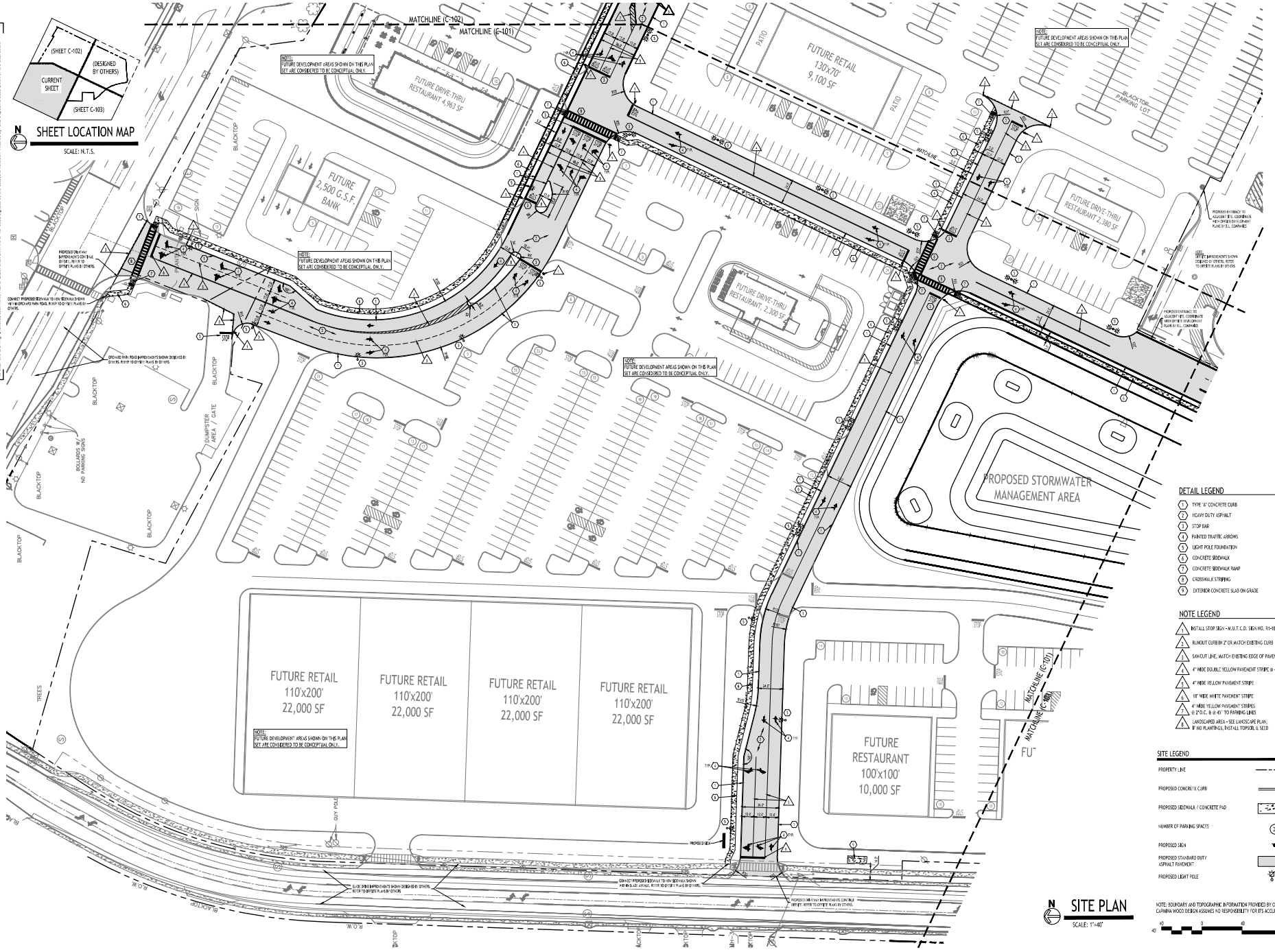
Seal on 07/20/2026

DRAWING NAME:
Site Plan
Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-100

Project No: 24-4113



(SHEET C-102) (DESIGNED BY OTHERS) CURRENT SHEET (SHEET C-103)

SHEET LOCATION MAP

SCALE: N.T.S.

SITE PLAN

SCALE: 1"=40'

DETAIL LEGEND

1. TYPE 'A' CONCRETE CURB
2. HEAVY DUTY ASPHALT
3. STOP BAR
4. PAINTED TRAFFIC ARROWS
5. LIGHT POLE FOUNDATION
6. CONCRETE SIDEWALK
7. CONCRETE SIDEWALK RAMP
8. CROSSWALK STRIPING
9. EXTERIOR CONCRETE SLAB ON GRADE

NOTE LEGEND

1. INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1B
2. RUNOUT CURB BY 2' OR MATCH EXISTING CURB
3. SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
4. 4" WIDE DOUBLE YELLOW PAVEMENT STRIPE @ 4" SPACING
5. 4" WIDE YELLOW PAVEMENT STRIPE
6. 18" WIDE WHITE PAVEMENT STRIPE
7. 4" WIDE YELLOW PAVEMENT STRIPES @ 2'-0 C. & @ 45° TO PARKING LINES
8. LANDSCAPED AREA - SEE LANDSCAPE PLAN. IF NO PLANTINGS, INSTALL TOPSOIL & SEED

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

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40 0 40 80Ft.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK · CHRISTOPHER M. WOOD · 075884 · LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME: Site Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

C-101

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

SITE PLAN

SCALE: 1"=40'

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE LEGEND

- INSTALL STOP SIGN + A.U.T.C.D. MCH-100, R-1-R
- REMOVE CURB & TRANSITION TO MATCH EXISTING CURB
- SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
- 4" WIDE DOUBLE YELLOW PAVEMENT STRIPE @ 4" SPACING
- 4" WIDE YELLOW PAVEMENT STRIPE
- 24" WIDE WHITE PAVEMENT STRIPE
- 4" WIDE YELLOW PAVEMENT STRIPES
- 8' POLE & 6-8' TO PARKING LINES
- LANDSCAPED AREA - SEE LANDSCAPE PLAN.
- INSTALL PAVING, INSTALL CURB & SEED

DETAIL LEGEND

- TYPE 'A' CONCRETE CURB
- HEAVY DUTY ASPHALT
- STOP BAR
- PAINTED TRAFFIC ARROWS
- LIGHT POLE FOUNDATION
- CONCRETE SIDEWALK
- CONCRETE SIDEWALK RAMP
- CROSSWALK STRIPING
- EXTERIOR CONCRETE SLAB ON GRADE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINAWOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
CHRISTOPHER M. WOOD
Sealed 07/20/2026

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DRAWING NO. C-102
Project No: 24-4113

DRAWING NAME: Site Plan

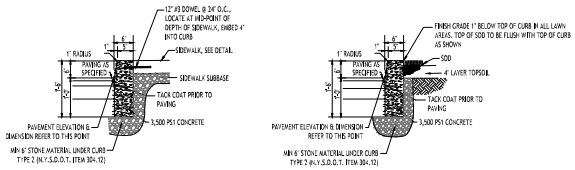
Date: 07/20/26
Drawn By: DC
Scale: As Noted

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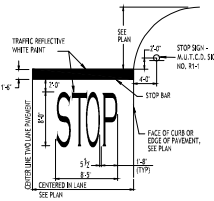


ABUTTING SIDEWALK

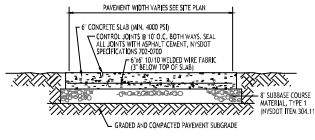
ABUTTING LANDSCAPE/GRASS

NOTES:
1. CONTROL JOINTS TO BE 3" DEEP AT 15'-0" O.C. - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. WHERE THE CURB DROPS (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.

TYPE "A" CONCRETE CURB - 1
NOT TO SCALE

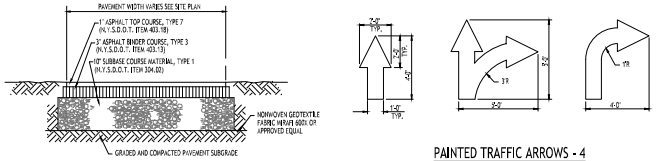


STOP BAR DETAIL - 3
NOT TO SCALE



NOTE: CONCRETE PAVEMENT MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 502-2.

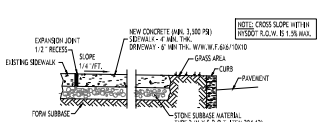
EXTERIOR CONCRETE SLAB-ON-GRADE SECTION - 9
NOT TO SCALE



NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

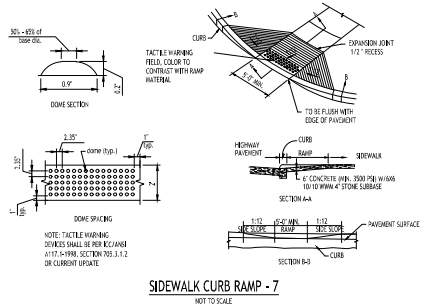
HEAVY DUTY ASPHALT SECTION - 2
NOT TO SCALE

PAINTED TRAFFIC ARROWS - 4
NOT TO SCALE

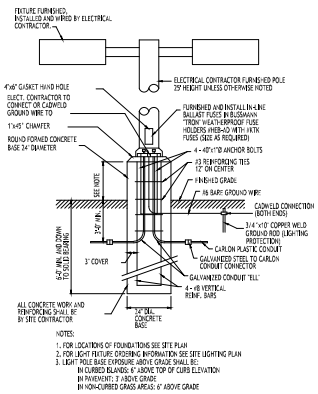


NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20'-0 O.C., BOTHWAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
5. SEE CURB DETAIL FOR BOWLING REQUIREMENTS WHERE ABUTTING CURB.
6. INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

CONCRETE SIDEWALK - 6
NOT TO SCALE

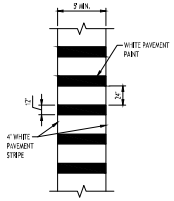


SIDEWALK CURB RAMP - 7
NOT TO SCALE



NOTES:
1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN
2. FOR LIGHT FIXTURE ORDERING INFORMATION SEE SITE LIGHTING PLAN
3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE:
IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION
IN PAVEMENT: 3" ABOVE GRADE
IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

LIGHT POLE FOUNDATION - 5
NOT TO SCALE



CROSSWALK STRIPING - 8
NOT TO SCALE

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REVISIONS:
No. Description Date



Seal on 07/20/2026

DRAWING NAME:
Site Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-104

Project No: 24-4113

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N
SHEET LOCATION MAP
SCALE: N.T.S.

(SHEET C-201)
(SHEET C-202)
(SHEET C-203)
(DESIGNED BY OTHERS)

N
GRADING PLAN
SCALE: 1"=100'

MATCH LINE (C-202)
MATCH LINE (C-201)

MATCH LINE (C-201)
MATCH LINE (C-203)

MATCH LINE (C-202)
MATCH LINE (PLANS BY OTHERS)

MATCH LINE (PLANS BY OTHERS)
MATCH LINE (C-203)

ORCHARD PARK ROAD

CONSOLIDATED RAIL CORPORATION

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THE PLAN ARE CONSIDERED TO BE CONCEPTUAL ONLY.

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THE PLAN ARE CONSIDERED TO BE CONCEPTUAL ONLY.

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THE PLAN ARE CONSIDERED TO BE CONCEPTUAL ONLY.

NOTE:
FUTURE BUILDING SHOWN, SCREENED BY EXISTING TREES TO REMAIN UNDISTURBED

PROPOSED GRADING LEGEND

PROPOSED CONTOUR — 101 —
PROPOSED SPOT ELEVATION — 100.80
PROPOSED TOP/BOTTOM OF CURB ELEV. — TC: 100.50 / BC: 100.00
PROPOSED CATCH BASIN — CB
PAVEMENT GRADING SLOPE →
PROPOSED YARD DRAIN — YD
PROPOSED MANHOLE — MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

0 10' 20' 30' 40' 50' 60' 70' 80' 90' 100'

Date: 07/20/26
Drawn By: CWD
Scale: As Noted
DRAWING NO. C-200
Project No: 24-113

DRAWING NAME:
Grading Plan
Overall

M. CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
Sealed 07/20/2026

REVISIONS:

No.	Description	Date

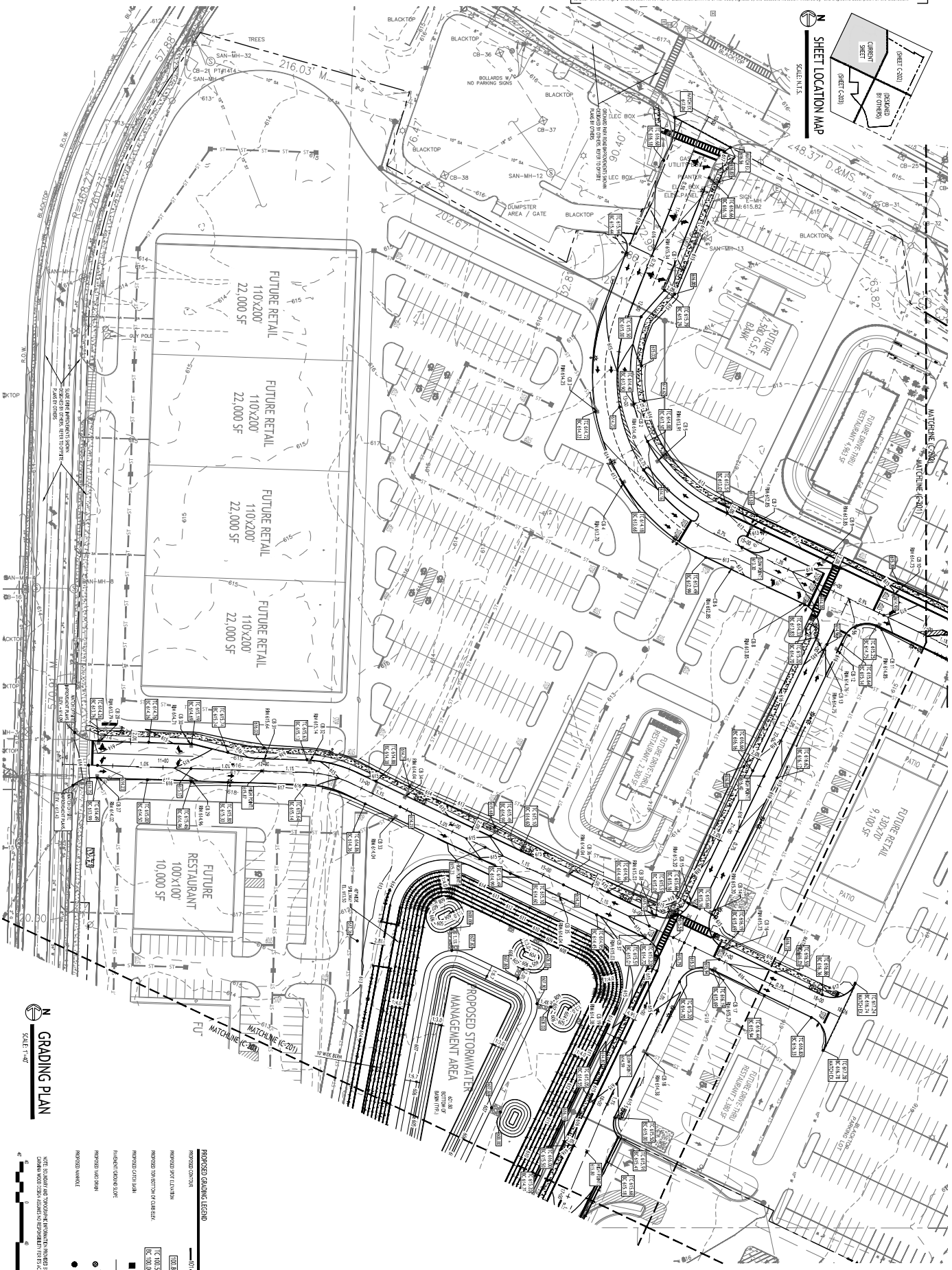
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DRAWING NO.
C-201
Project No: 24-113

DRAWING NAME:
Grading Plan

Date: 07/20/26
Drawn By: DC
Scale: As Noted

REVISIONS:

No.	Description	Date

Sealed 07/20/2026

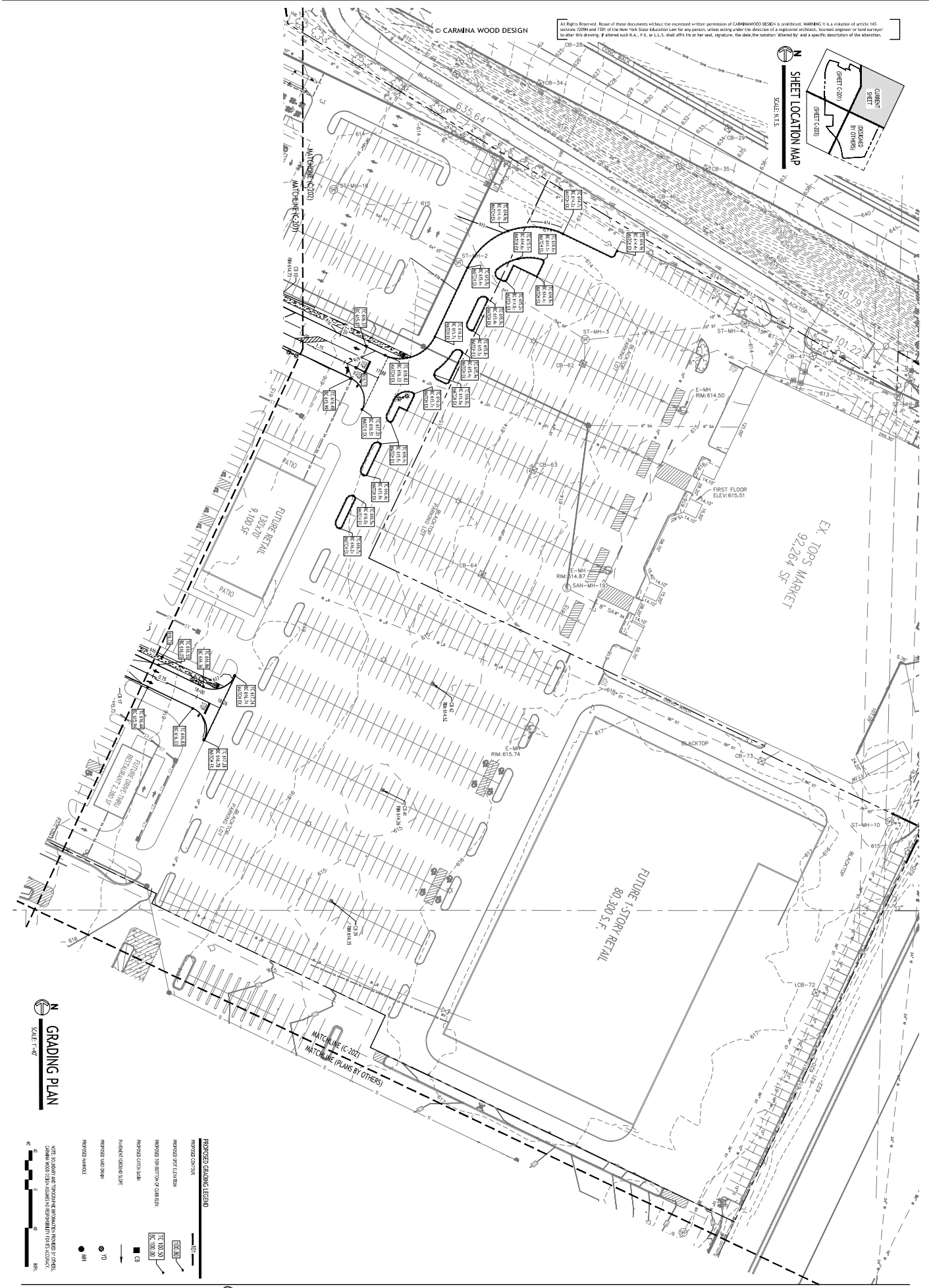
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DRAWING NO. C-202
Project No: 24-113
Date: 07/20/26
Drawn By: DJ
Scale: As Noted
DRAWING NAME: Grading Plan

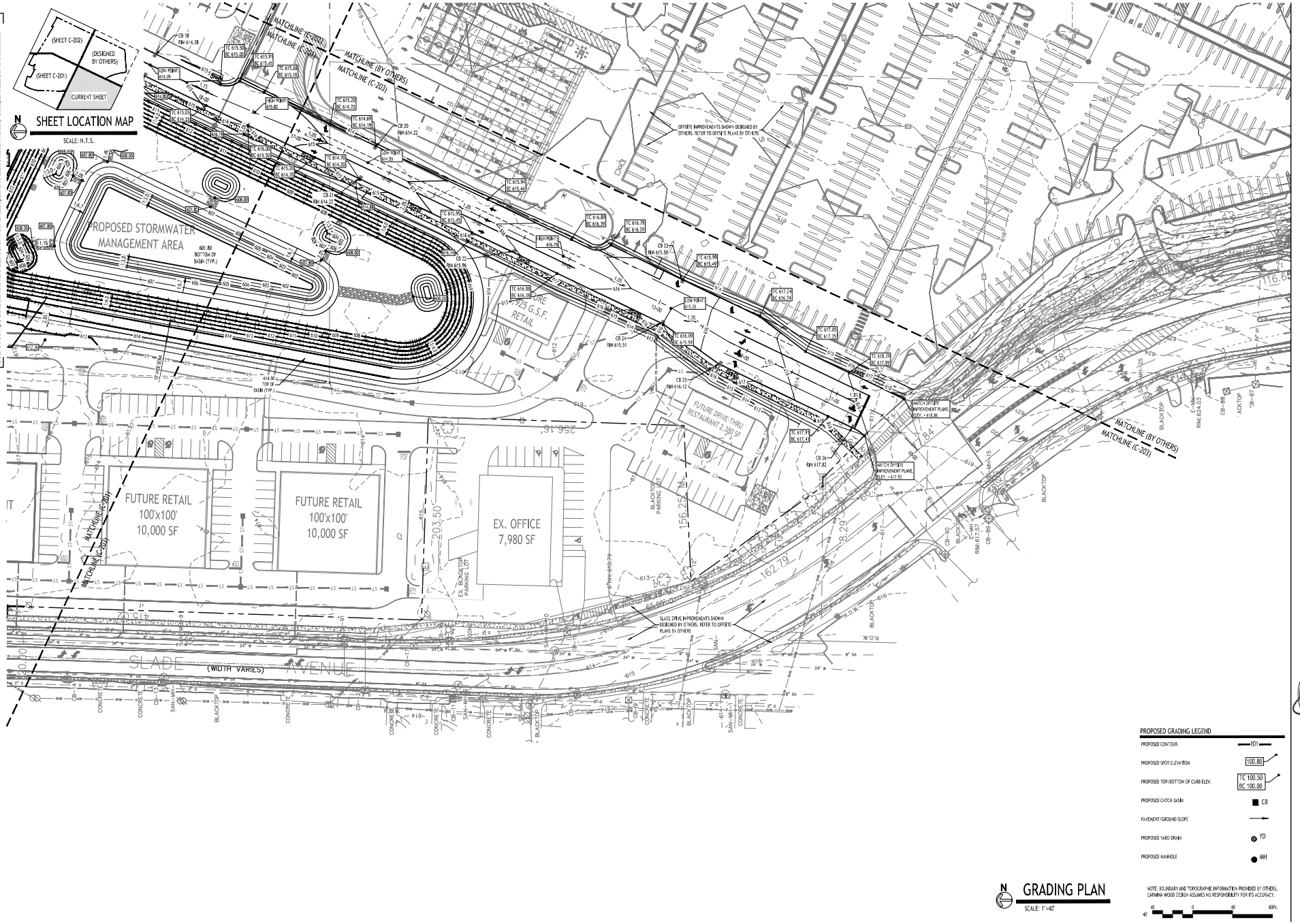
STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
Sealed 07/20/2026

REVISIONS:

No.	Description	Date

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
N. CHRISTOPHER WOOD
075984
LICENSED PROFESSIONAL ENGINEER
Sealed 07/20/2026

DRAWING NAME:
Grading Plan

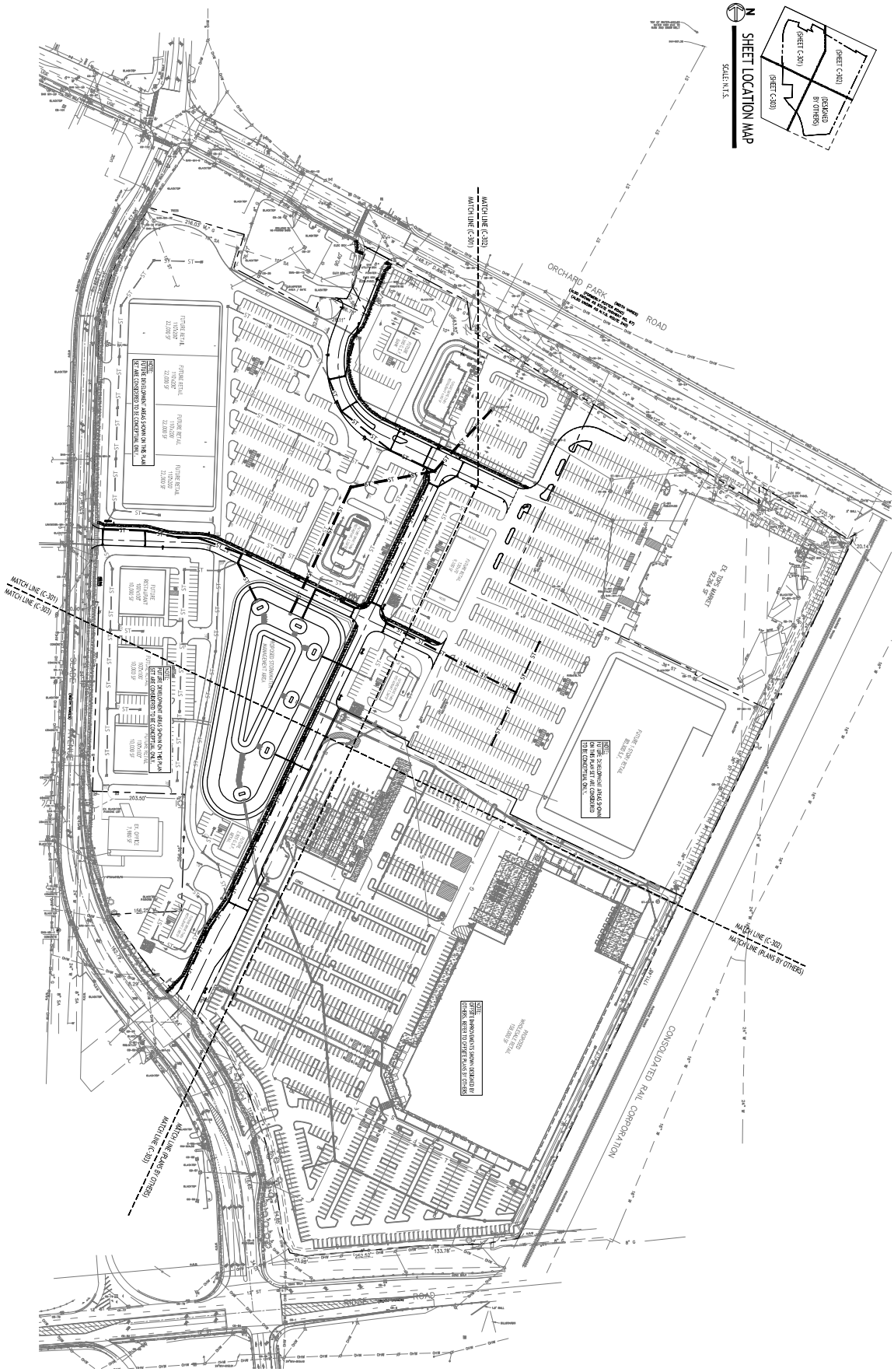
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-203

Project No: 24-4113

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Date: 07/20/26
Drawn By: CWDD
Scale: As Noted

DRAWING NO.
C-300
Project No: 24-4113

DRAWING NAME:
Storm Drainage Plan - Overall

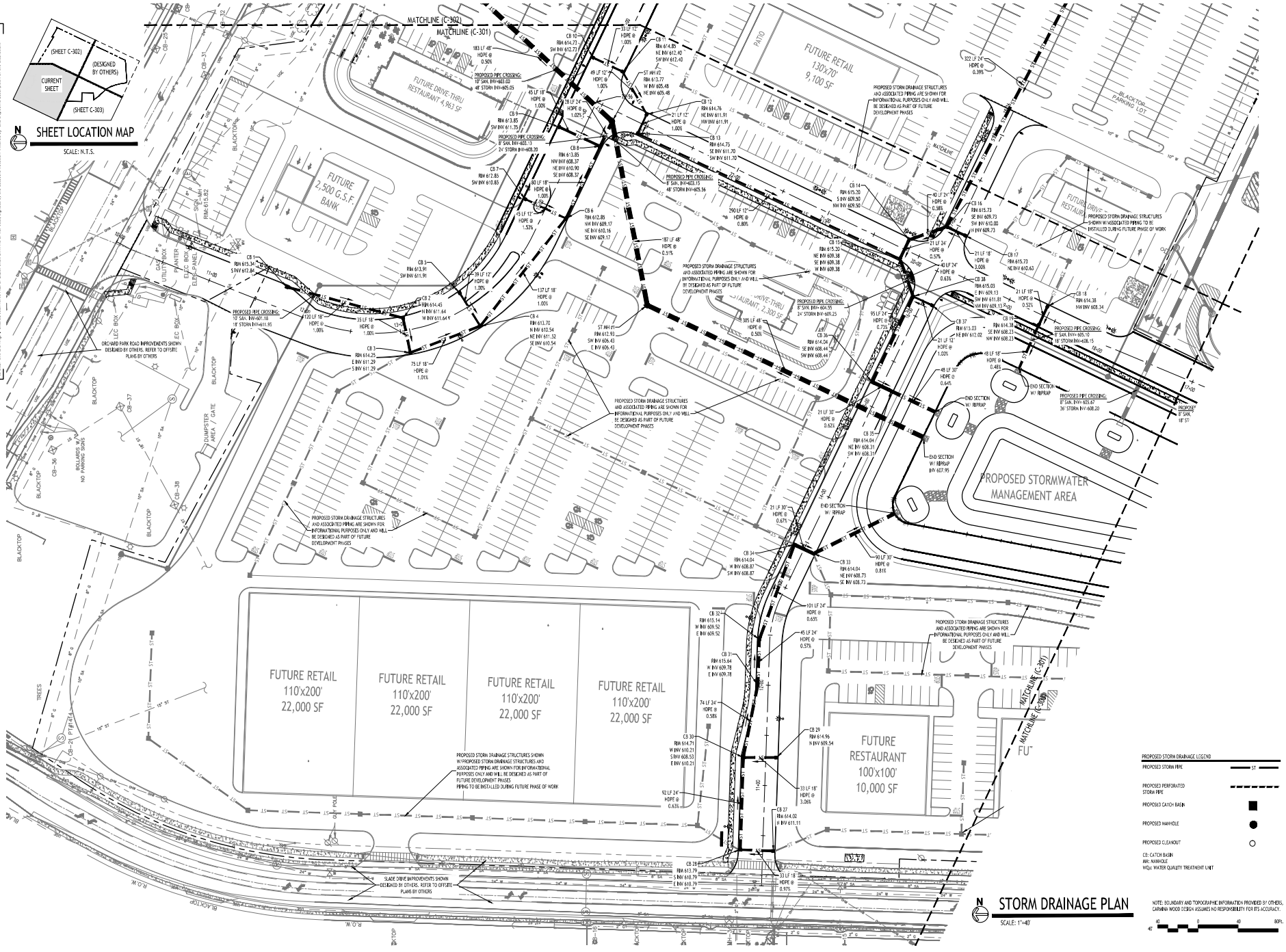
STATE OF NEW YORK
M. CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
Sealed 07/20/2026

REVISIONS:		
No.	Description	Date

West Seneca Exchange

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REVISIONS:
No. Description Date

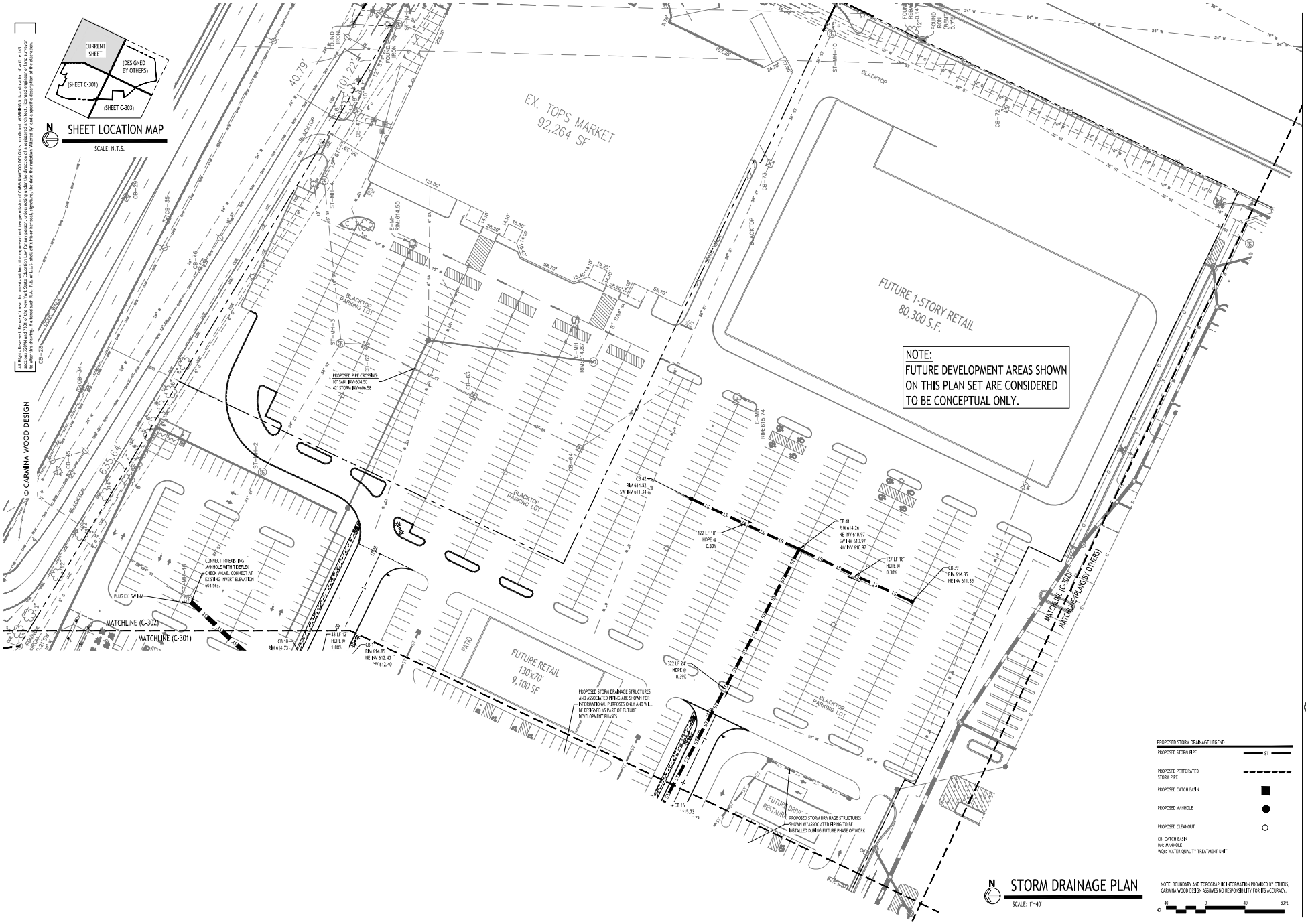
STATE OF NEW YORK
CHRISTOPHER WOOD
075884
LICENSED PROFESSIONAL ENGINEER
Seal on 07/20/2026

DRAWING NAME:
Storm Drainage Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-301

Project No: 24-4113



N STORM DRAINAGE PLAN
SCALE: 1"=40'

N SHEET LOCATION MAP
SCALE: N.T.S.

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West Seneca New York

REVISIONS:
No. Description Date

STATE OF NEW YORK
CHRISTOPHER J. WOOD
LICENSED PROFESSIONAL ENGINEER
075084

DRAWING NAME:
Storm Drainage Plan

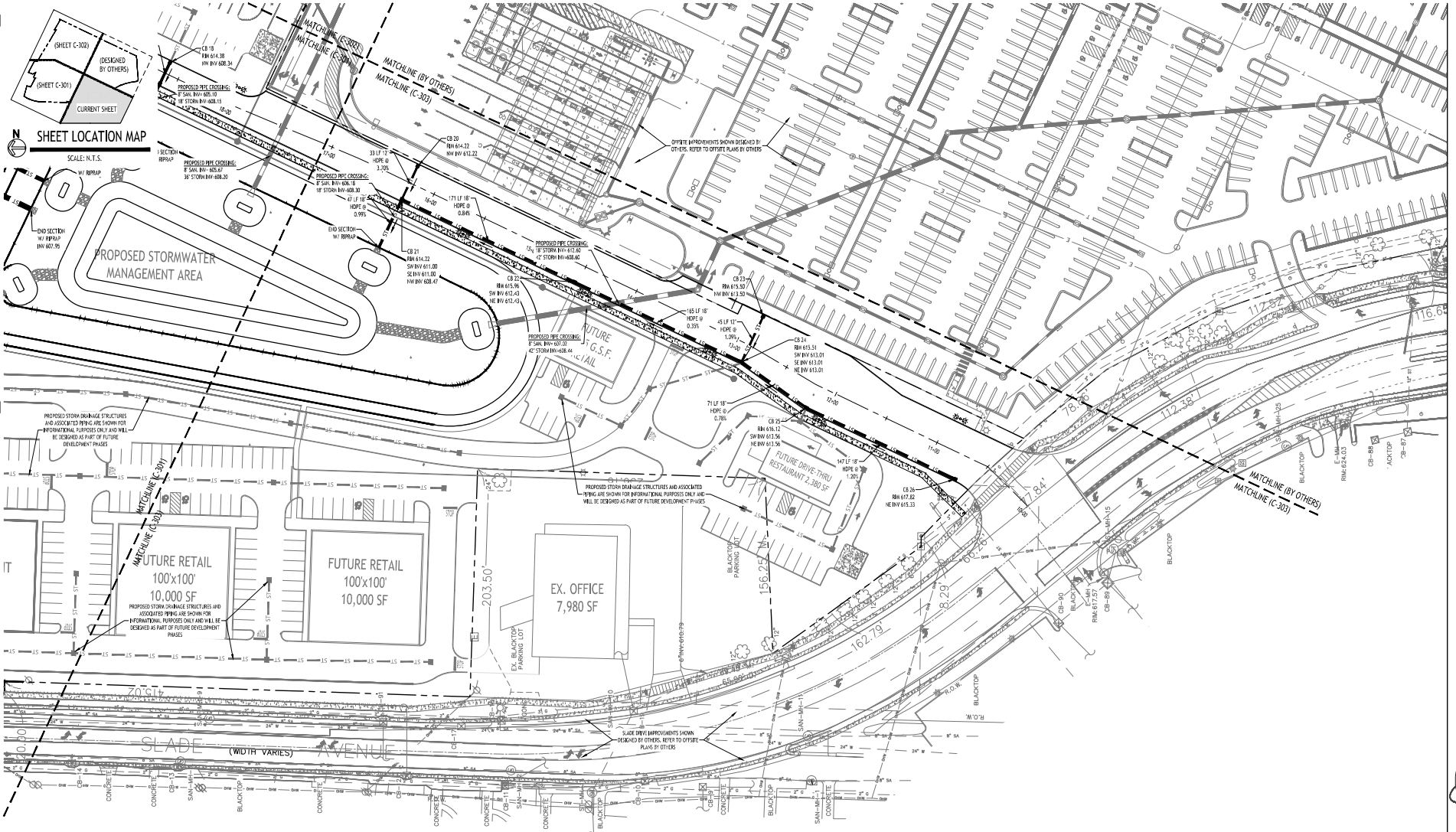
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-302

Project No: 24-4113

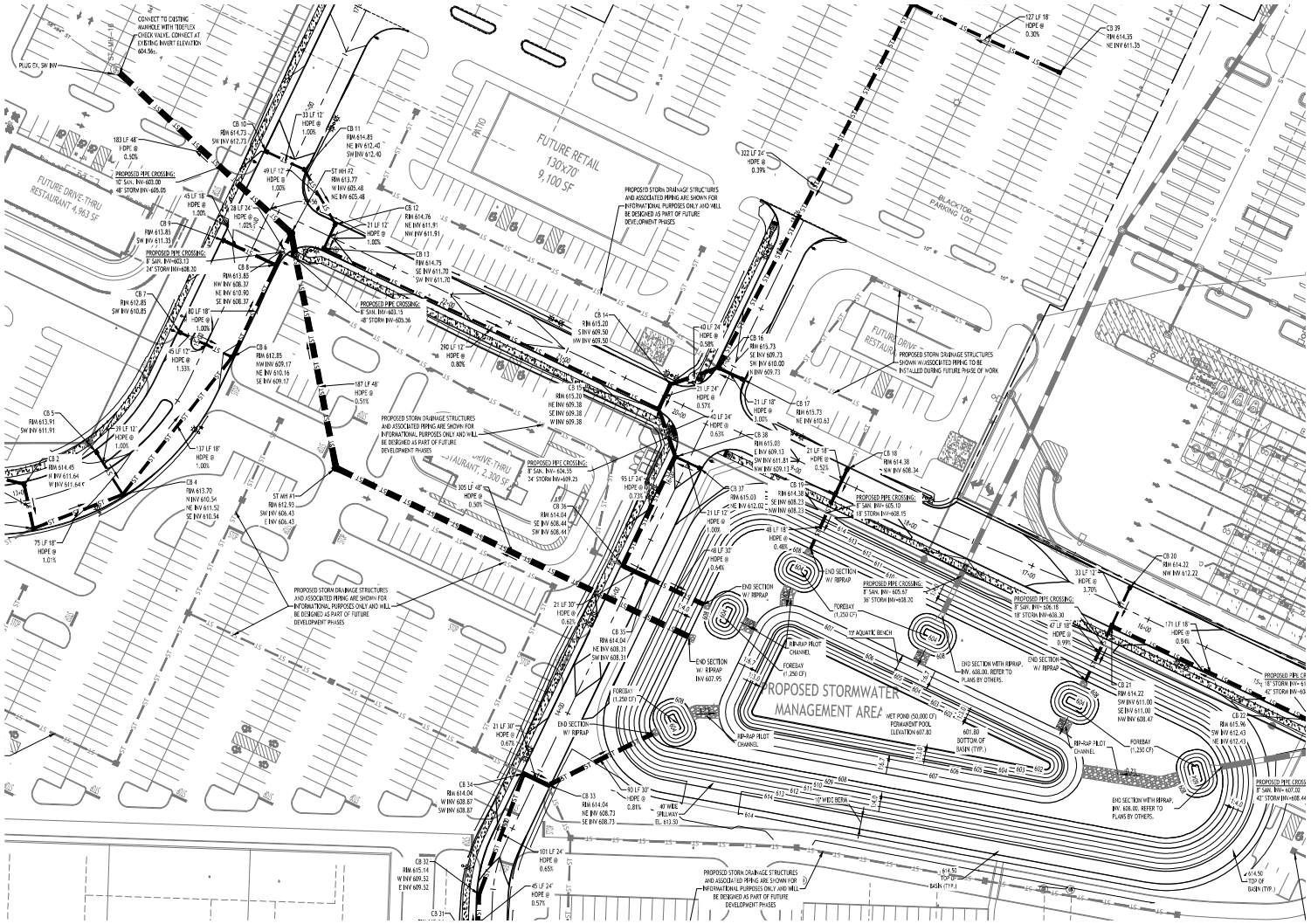
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SHEET LOCATION MAP
SCALE: N.T.S.
(SHEET C-302)
(DESIGNED BY OTHERS)
(SHEET C-301)
CURRENT SHEET
PROPOSED STORMWATER MANAGEMENT AREA
FUTURE RETAIL 100'x100' 10,000 SF
FUTURE RETAIL 100'x100' 10,000 SF
EX. OFFICE 7,980 SF
FUTURE DRIVE-THRU RESTAURANT 2,380 SF
FUTURE 7,000 S.F. RETAIL
EX. BLACKTOP PARKING LOT
BLACKTOP PARKING LOT
SLADE AVENUE (WIDTH VARIES)
MATCHLINE (C-301)
MATCHLINE (C-302)
MATCHLINE (C-303)
MATCHLINE (BY OTHERS)
OFFSITE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
SLADE DRIVE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
PROPOSED STORM DRAINAGE STRUCTURES AND ASSOCIATED PIPING ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND WILL BE DESIGNED AS PART OF FUTURE DEVELOPMENT PHASES
CB 19 RIM 614.38 INV INV 608.34
CB 20 RIM 614.22 NW INV 612.22
CB 21 RIM 614.22 SW INV 611.00 SE INV 611.00 NW INV 608.47
CB 22 RIM 615.96 SW INV 612.43 NE INV 612.43
CB 23 RIM 615.50 NW INV 613.50
CB 24 RIM 615.51 SW INV 613.01 SE INV 613.01 NE INV 613.01
CB 25 RIM 616.12 SW INV 613.56 NE INV 613.56
CB 26 RIM 617.82 NE INV 615.33
171 LF 18" HDPE @ 0.84%
33 LF 12" HDPE @ 3.70%
67 LF 18" HDPE @ 0.99%
165 LF 18" HDPE @ 0.35%
45 LF 12" HDPE @ 1.09%
71 LF 18" HDPE @ 0.70%
147 LF 18" HDPE @ 1.20%
END SECTION W/ RIPRAP INV 607.99
1 SECTION RIPRAP
PROPOSED PIPE CROSSING: 8" SAN. INV= 605.67 36" STORM INV=608.20
PROPOSED PIPE CROSSING: 8" SAN. INV= 606.18 18" STORM INV=608.30
PROPOSED PIPE CROSSING: 15" 18" STORM INV= 612.60 42" STORM INV=608.60
PROPOSED PIPE CROSSING: 8" SAN. INV= 607.20 42" STORM INV=608.44
PROPOSED PIPE CROSSING: 8" SAN. INV= 605.10 18" STORM INV=608.15
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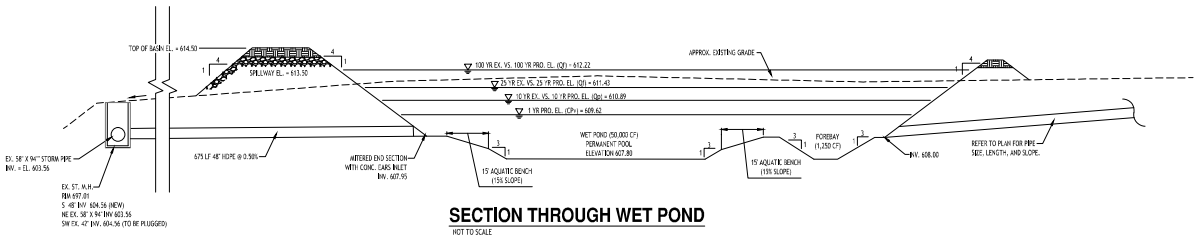
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WET POND PLAN & DETAIL

SCALE: 1"=40'



SECTION THROUGH WET POND

NOT TO SCALE

CARMINAWOOD DESIGN
Buffalo | Utica | Rochester

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
N. CHRISTOPHER WOOD
076584
LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Wet Pond Plan & Detail

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

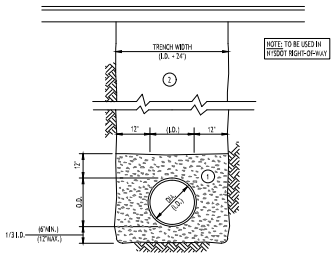
DRAWING NO.

C-304

Project No: 24-4113

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

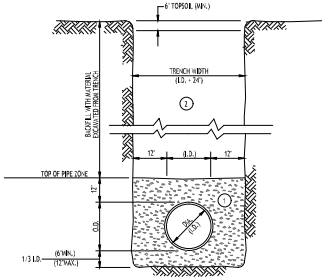
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.07 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

STORM SEWER TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

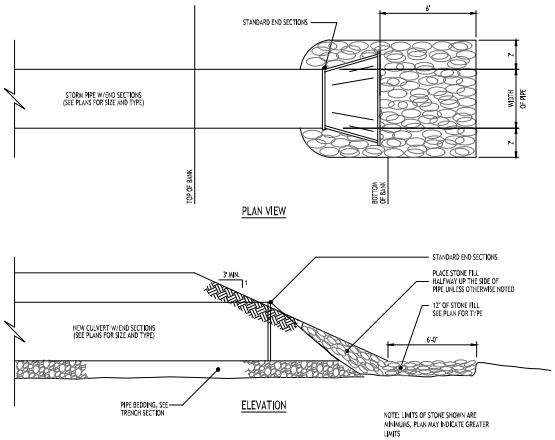
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

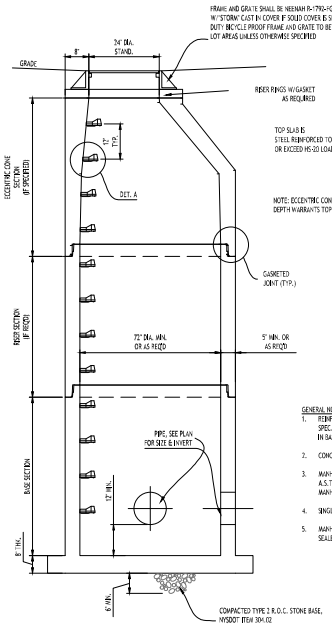
STORM SEWER TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE



TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP

NOT TO SCALE



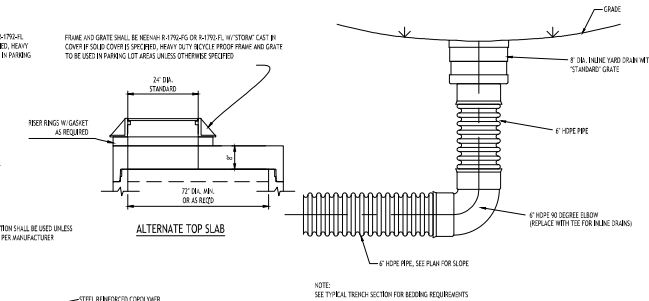
NOTE: ECCENTRIC CONE SECTION SHALL BE USED UNLESS DEPTH WARRANTS TOP SLAB PER MANUFACTURER

GENERAL NOTES:

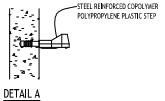
1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN SLAB SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.
5. MANHOLE TO BE COATED ON OUTSIDE WITH BITUMASTIC SEALER.

TYPICAL STORM MANHOLE DETAIL

NOT TO SCALE

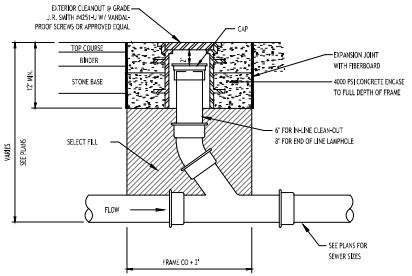


NOTE:
SEE TYPICAL TRENCH SECTION FOR BEDDING REQUIREMENTS



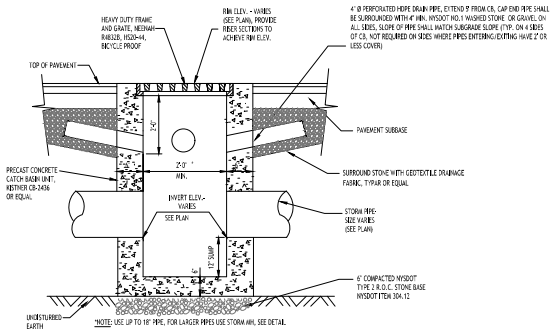
TYPICAL YARD DRAIN DETAIL

NOT TO SCALE



LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK

NOT TO SCALE



TYPICAL PRECAST CATCH BASIN

NOT TO SCALE

CARMINAWOOD DESIGN
Buffalo | Utica | Syracuse

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
079584
LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Storm Drainage Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

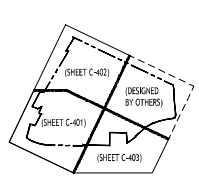
DRAWING NO.

C-305

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

UTILITY PLAN

SCALE: 1"=100'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

UTILITY NOTES:

1. FOR ALL SANITARY SEWERS, INSTALL SELECT FILL IN PAVED AREAS, EXTEND 5' MIN. BEYOND PAVEMENT LIMITS
2. BUILDINGS TO HAVE INVERT ELEVATION 5' MIN. BELOW F.F.E. OF THE BUILDING. PIPE TO BE 6" SDR-35 PVC @ 1.0% MIN. WITH MIN 4' OF COVER. ADD CLEANOUTS @ 90' MAX. SPACING FOR 6" LATERALS OVER 90' IN LENGTH.
3. COORDINATE GAS & ELEC. METER BANK LOCATIONS ON BUILDINGS WITH M.E.P. PLANS & UTILITY CO'S.
4. COORDINATE LOCATION OF CTV & TELEPHONE SERVICE TO BUILDINGS WITH M.E.P. PLANS AND UTILITY CO.'S.
5. ANY EXISTING UTILITIES WHICH ARE TO BE ABANDONED AND FALL UNDER PAVEMENT OR BUILDINGS SHALL BE REMOVED VS. BEING ABANDONED UNLESS THOSE UTILITIES ARE FILLED WITH FLOWABLE FILL.
6. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
7. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH CONCRETE AND ASPHALT PAVEMENT AREAS.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200FT.

CARMINA WOOD DESIGN
Buffalo | Utica | Syracuse

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER J. WOOD * 075084 LICENSED PROFESSIONAL ENGINEER

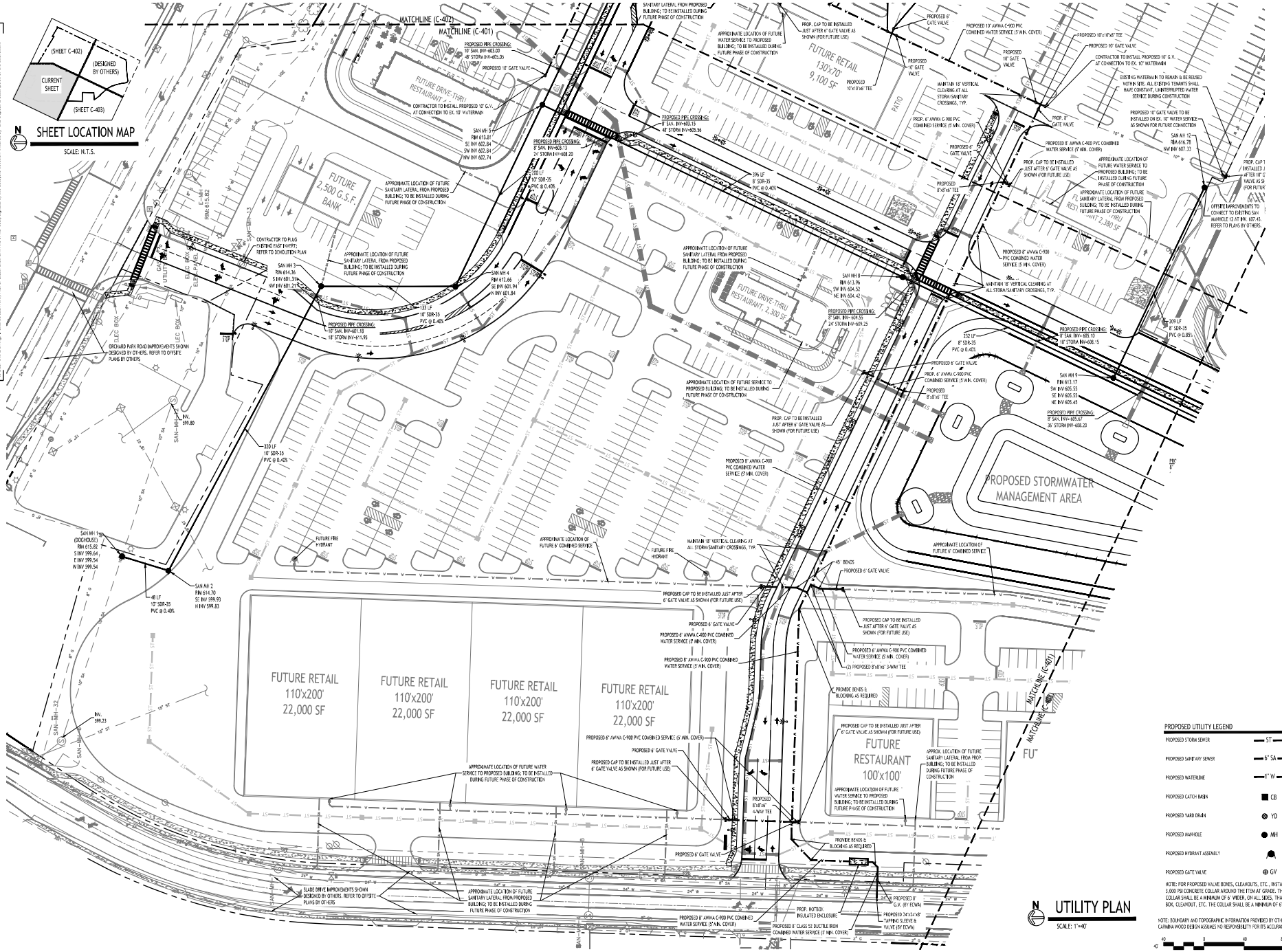
Seal on 07/20/2026

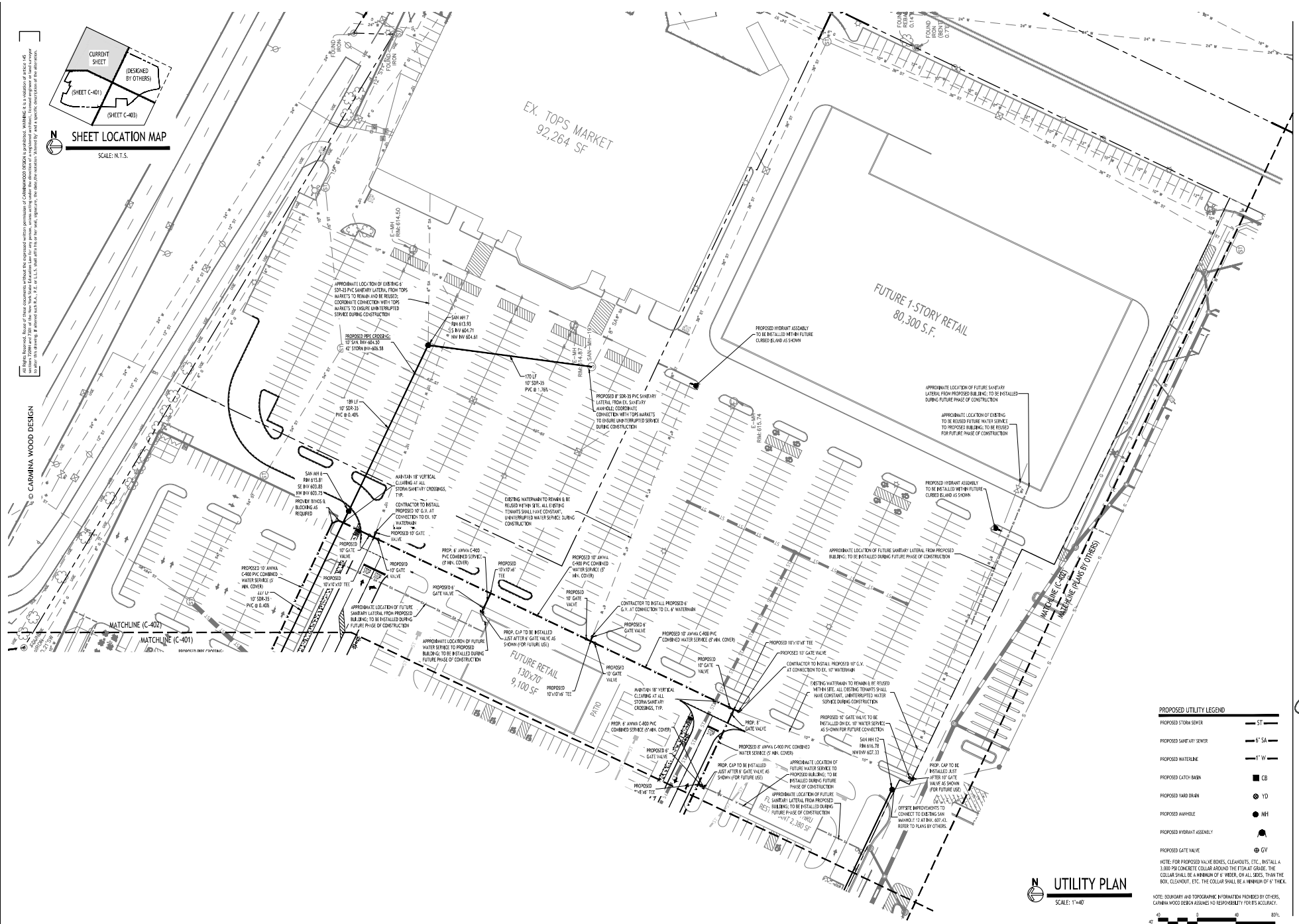
DRAWING NAME:
Utility Plan Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-400

Project No: 24-4113


MATCHLINE (C-402)
MATCHLINE (C-401)
FUTURE RETAIL 130'X70' 9,100 SF
FUTURE DRIVE-THRU RESTAURANT
FUTURE 2,500 G.S.F. BANK
FUTURE DRIVE-THRU RESTAURANT 2,300 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RESTAURANT 100'x100'
PROPOSED STORMWATER MANAGEMENT AREA
PATIO
ORCHARD PARK ROAD IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
SLADE DRIVE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
OFFSITE IMPROVEMENTS TO CONNECT TO EXISTING SAN MANHOLE 12 AT INV. 607.43. REFER TO PLANS BY OTHERS.
SAN MH 1 (DOGHOUSE) RIM 615.82 S INV 599.64 E INV 599.54 W INV 599.54
SAN MH 2 RIM 614.70 SE INV 599.93 N INV 599.83
SAN MH 3 RIM 614.36 S INV 601.31R NW INV 601.21
SAN MH 4 RIM 613.66 SE INV 601.94 N INV 601.84
SAN MH 5 RIM 613.81 SE INV 602.84 SW INV 602.84 NW INV 602.74
SAN MH 8 RIM 613.96 SW INV 604.52 NE INV 604.42
SAN MH 9 RIM 613.17 SW INV 605.55 SE INV 605.55 NE INV 605.45
SAN MH 12 RIM 616.78 NW INV 607.33
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SAN MH 1823
SAN MH 1824
SAN MH 1825
SAN M



SHEET LOCATION MAP

SCALE: N.T.S.

UTILITY PLAN

SCALE: 1"=40'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE FTGH AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 0 40 80Ft.

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CHRISTOPHER WOOD
075084
LICENSED PROFESSIONAL ENGINEER

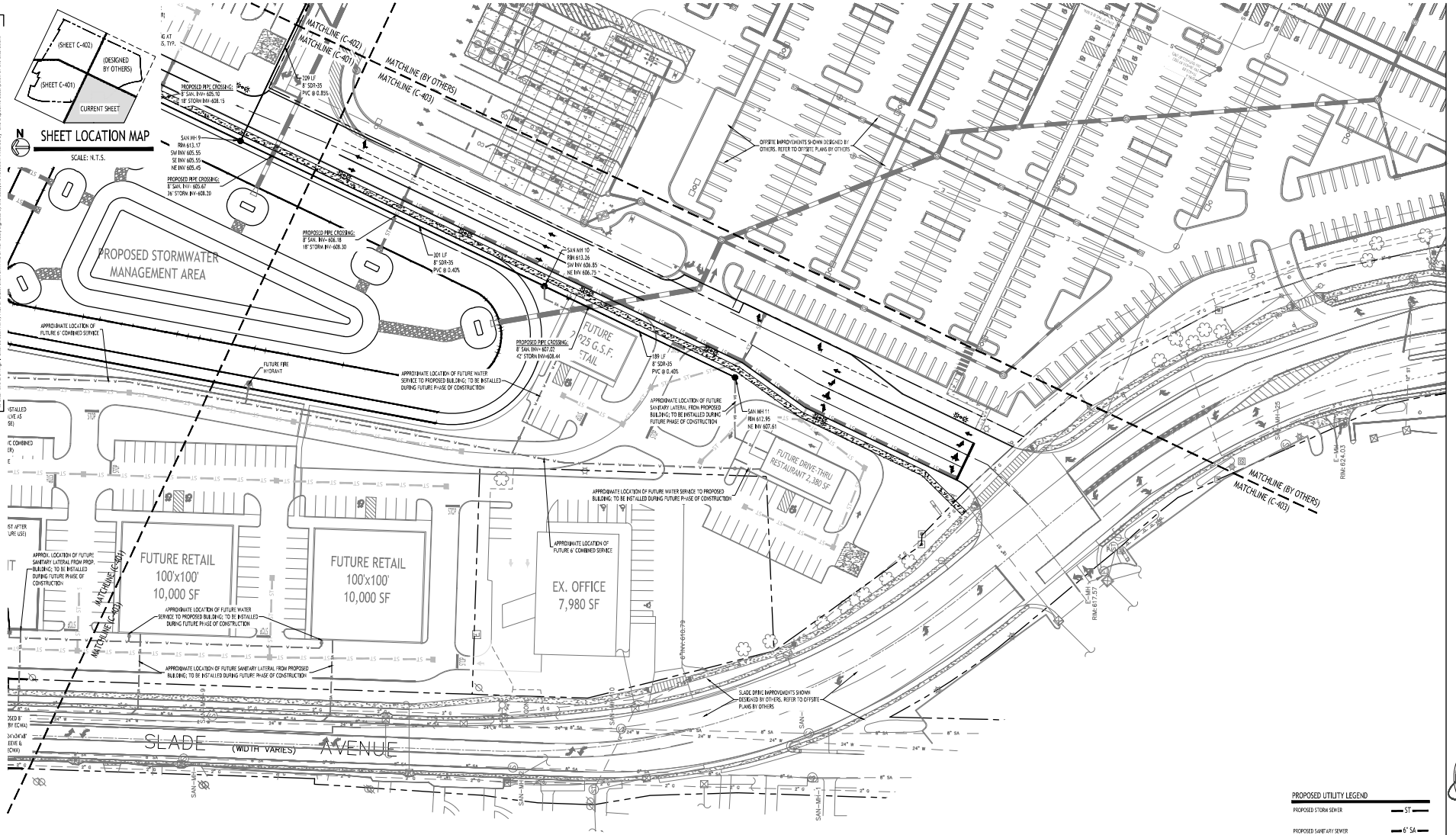
Sealed 07/20/2026

DRAWING NAME:
Utility Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-402

Project No: 24-4113



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PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

N UTILITY PLAN
SCALE: 1"=40'

40 0 40 80Ft.

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Seal on 07/20/2026

DRAWING NAME:
Utility Plan

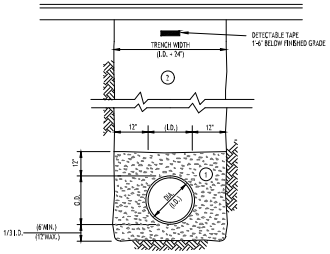
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-403

Project No: 24-4113

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

1. NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

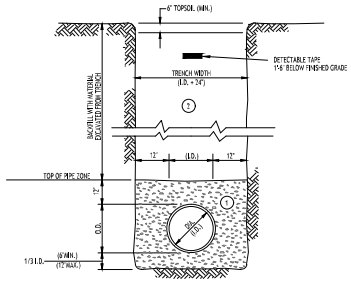
NO SLAG SHALL BE ALLOWED FOR MATERIAL. (1)

2. TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

SEWER/WATERLINE TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

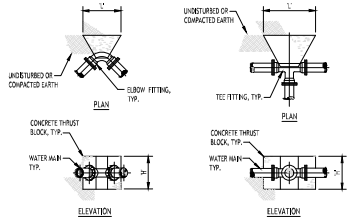
1. NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL. (1)

2. BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

SEWER/WATERLINE TRENCH SECTION IN UNPAVED AREAS

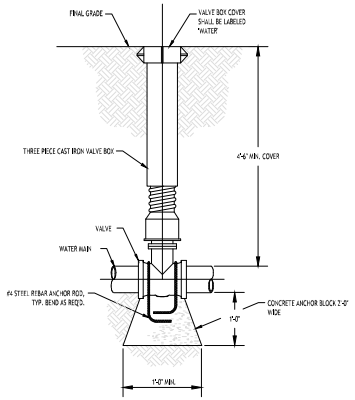
NOT TO SCALE



DIMENSION SCHEDULE								
PIPE SIZE	90° ELBOW		45° ELBOW		22.5° ELBOW		11.25° ELBOW	
	'A'	'L'	'A'	'L'	'A'	'L'	'A'	'L'
4"	1.5	2.0'	1.0'	2.0	1.0	1.0'	1.0	1.0'
6"	2.0'	2.5'	1.5'	2.0	1.0	1.5'	1.0	1.5'
8"	2.5'	3.5'	2.0'	2.5	1.5	1.5'	1.0	2.0
10"	3.0'	4.5'	2.5'	3.0	1.5	3.0'	1.0	2.5
12"	3.5'	5.0'	3.0'	3.5	2.5'	2.5	1.5	2.5

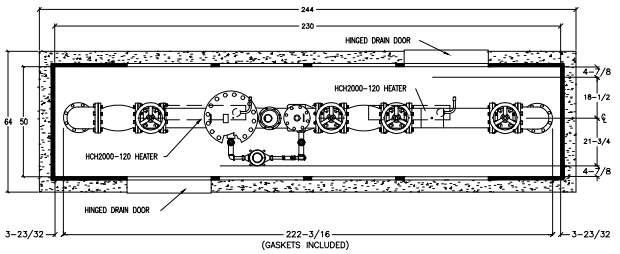
DIMENSION SCHEDULE		
PIPE SIZE	TEE OR TAP SLEEVE	
----	'A'	'L'
4"	1.5	1.0
6"	1.5	2.5'
8"	1.5	3.5'
10"	2.5	3.5'
12"	3.5	3.5'

THRUST BLOCK SCHEDULE



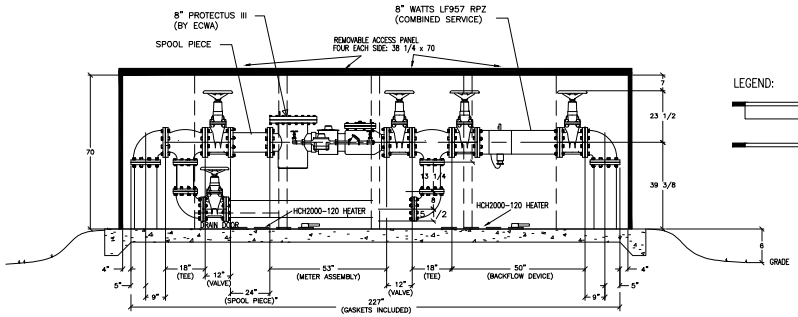
TYPICAL GATE VALVE DETAIL

NOT TO SCALE



NOTES:

1. BACKFLOW PREVENTER DIMENSIONS FURNISHED BY WATTS
2. ALL DIMENSIONS ARE IN INCHES
3. WALL & INSULATION THICKNESS IS 1-1/2"
4. ROOF & INSULATION THICKNESS IS 3"
5. ENCLOSURE SHOWN IS SAFE-T-COVER MODEL 1000D-ALC00-17
6. EXTERIOR ENCLOSURE DIMENSIONS: 5.3'W x 2.3.1'L x 7.3" H
7. CONCRETE PAD IS 64"W x 244"L x 6"THK W/W.W.F. 6X6/10X10
8. METER SHOWN: 8" PROTECTUS III, SPOOL PIECE & METER SUPPLIED BY ECWA, VERIFY DIMENSIONS PRIOR TO ORDERING
9. RPZ SHOWN: 8" WATTS LF957 RPZ
10. CONTRACTOR TO INSTALL ELECTRIC SERVICE TO ENCLOSURE, COORDINATE SOURCE WITH OWNER
11. INSTALL A 120V GFI OUTLET IN THE ENCLOSURE
12. HEATERS TO HAVE THERMOSTAT CONTROL
13. ALL 8" PIPING & FITTINGS WITHIN THE ENCLOSURE SHALL BE DUCTILE IRON
14. CONCRETE PAD TO BE 6" ABOVE ADJACENT GRADE

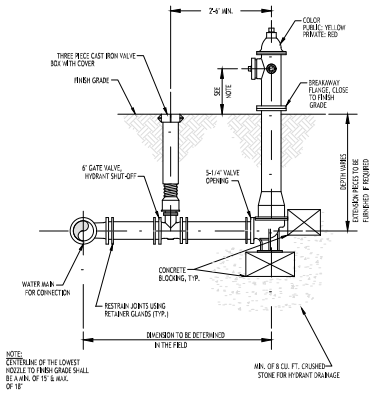


LEGEND:

REMOVABLE ACCESS PANEL 38 1/4"W x 70"H w/DRAIN DOOR

REMOVABLE ACCESS PANEL 38 1/4"W x 70"H

8"METER & RPZ INSULATED ENCLOSURE



NOTE:
CENTERLINE OF THE LOWEST HOZZLE TO FINISH GRADE SHALL BE A MIN. OF 15" & MAX. OF 18"

TYPICAL FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

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STATE OF NEW YORK
CHRISTOPHER J. WOOD
LICENSED PROFESSIONAL ENGINEER
075984

Seal on 07/20/2026

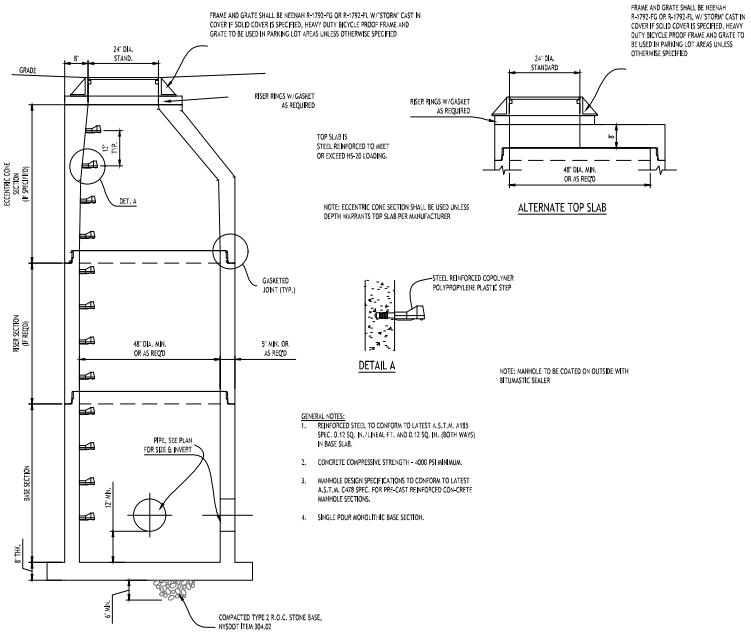
DRAWING NAME:
Utility Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

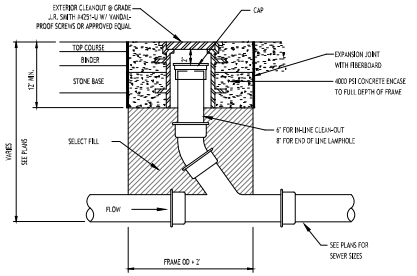
DRAWING NO.

C-404

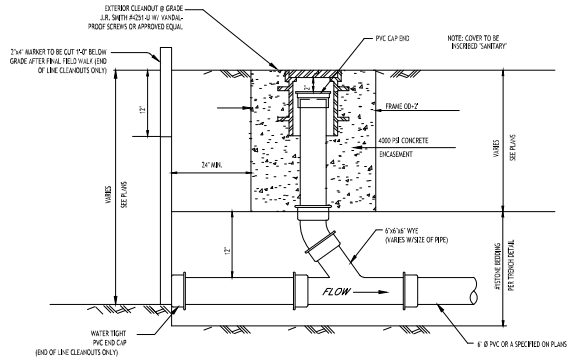
Project No: 24-4113



TYPICAL SANITARY MANHOLE DETAIL
NOT TO SCALE



LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK
NOT TO SCALE



LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS
NOT TO SCALE

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DRAWING NAME:
Sanitary Sewer Details

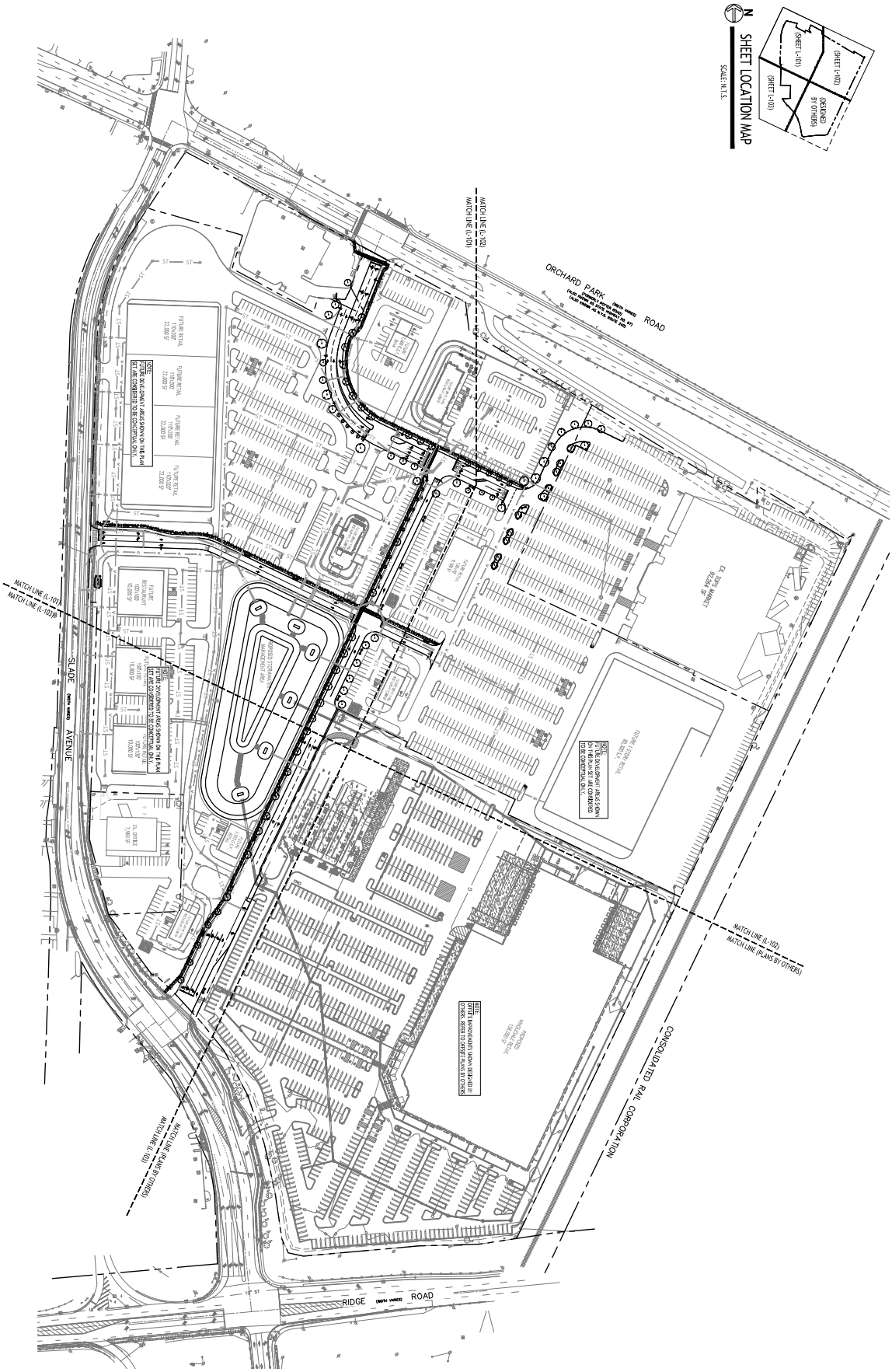
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C-405

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DRAWING NAME:
Landscape Plan
Overall

DRAWING NO.
L-100

Project No: 24-4113

Date: 07/20/26
By: Author
Scale: As Noted

REVISIONS:

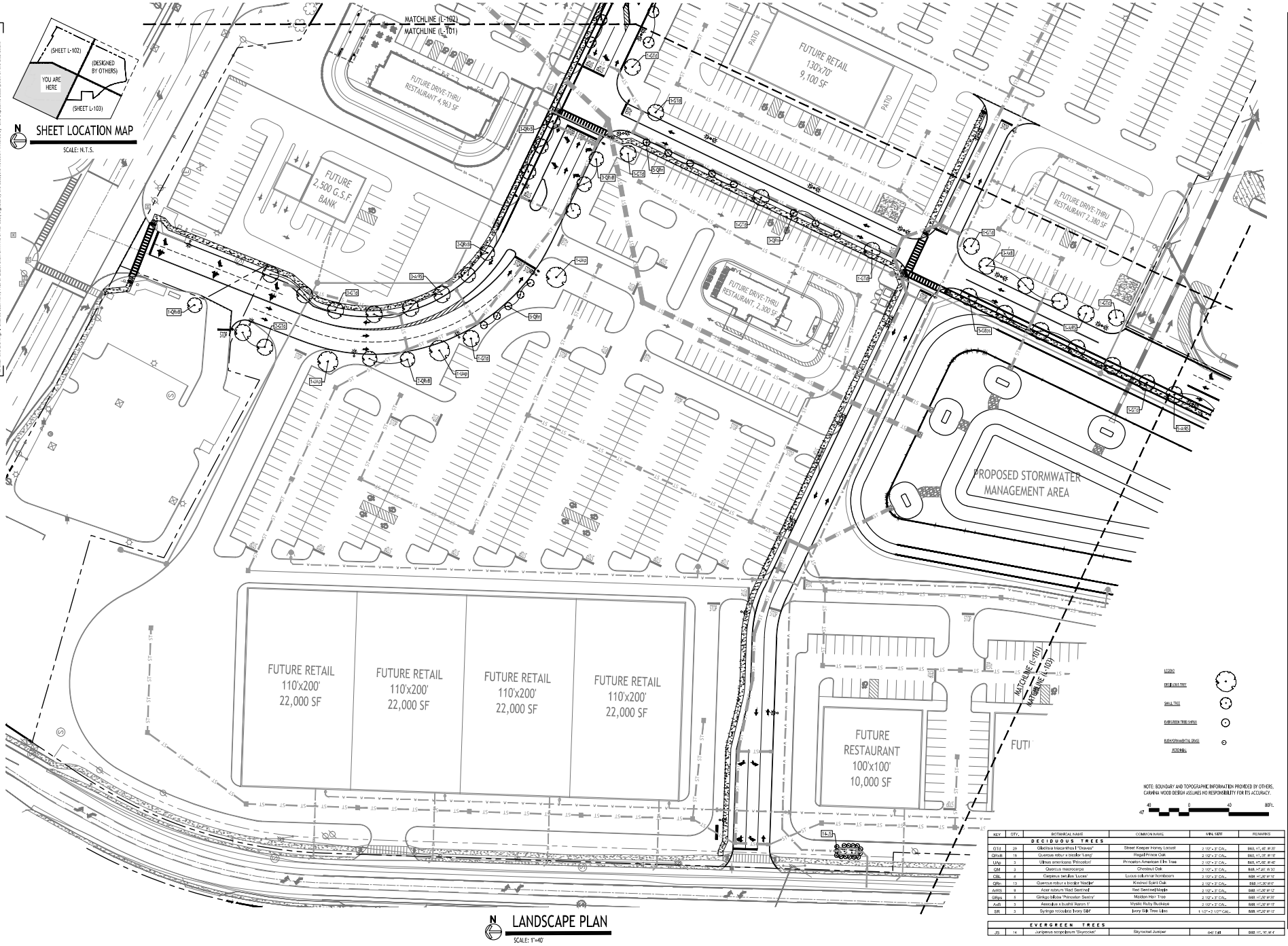
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Sealed 07/20/2026

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SHEET LOCATION MAP

SCALE: N.T.S.

LANDSCAPE PLAN

SCALE: 1"=40'

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
DECIDUOUS TREES					
GTd	26	Gleditsia triacanthos f.'Draves'	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT, WF, W 30'
QRub	19	Quercus rubra x bicolor 'Long'	Regal Prince Oak	2 1/2" - 3" CAL.	B&B, HT, FF, W 15'
UAp	3	Ulmus americana 'Princeton'	Princeton American Elm Tree	2 1/2" - 3" CAL.	B&B, HT, RF, W 40'
QM	3	Quercus macrocarpa	Chestnut Oak	2 1/2" - 3" CAL.	B&B, HT, RF, W 50'
CBL	4	Celtis occidentalis 'Lucas'	Lucas columnar hackberry	2 1/2" - 3" CAL.	B&B, HT, RF, W 15'
QRc	13	Quercus rubra x bicolor 'Heritage'	Knockout Spirit Oak	2 1/2" - 3" CAL.	B&B, HT, RF, W 40'
AcRS	9	Acer rubrum 'Red Sentinel'	Red Sentinel Maple	2 1/2" - 3" CAL.	B&B, HT, RF, W 12'
GBpa	8	Ginkgo biloba 'Princeton Sentry'	Maidden Hair Tree	2 1/2" - 3" CAL.	B&B, HT, RF, W 30'
AsR	3	Aesculus x bushii 'Ruma 1'	Mystic Ruby Buckeye	2 1/2" - 3" CAL.	B&B, HT, RF, W 15'
SR	3	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1 1/2" - 2 1/2" CAL.	B&B, HT, RF, W 15'
EVERGREEN TREES					
JS	14	Juniperus scopulorum 'Skyrocket'	Skyrocket Juniper	6-8' tall	B&B, HT, W, W 4'

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REVISIONS:

No.	Description	Date

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Seal on 07/20/2026

DRAWING NAME:
Landscape Plan

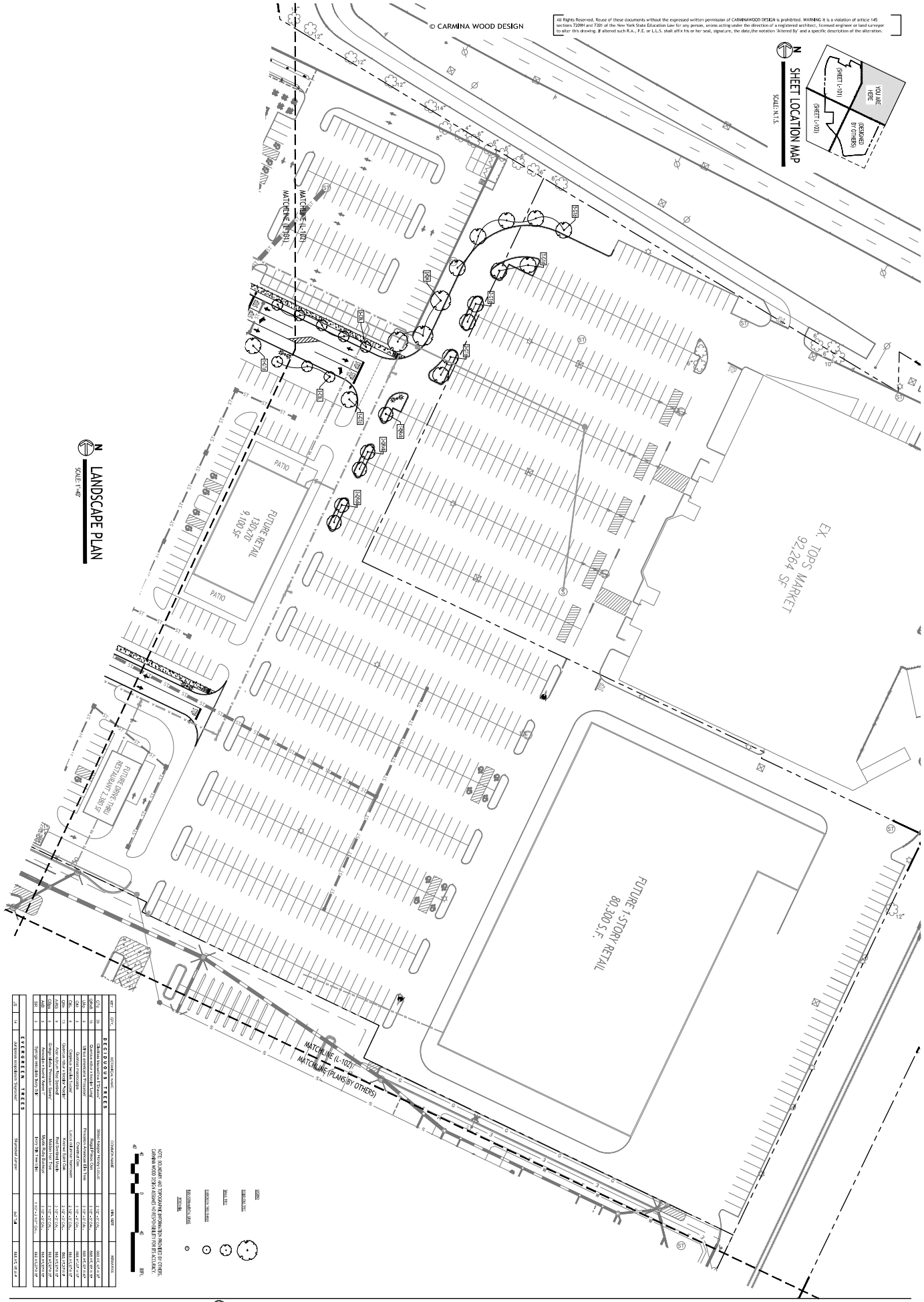
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Scale: As Noted

DRAWING NO.
L-101

Project No: 24-4113

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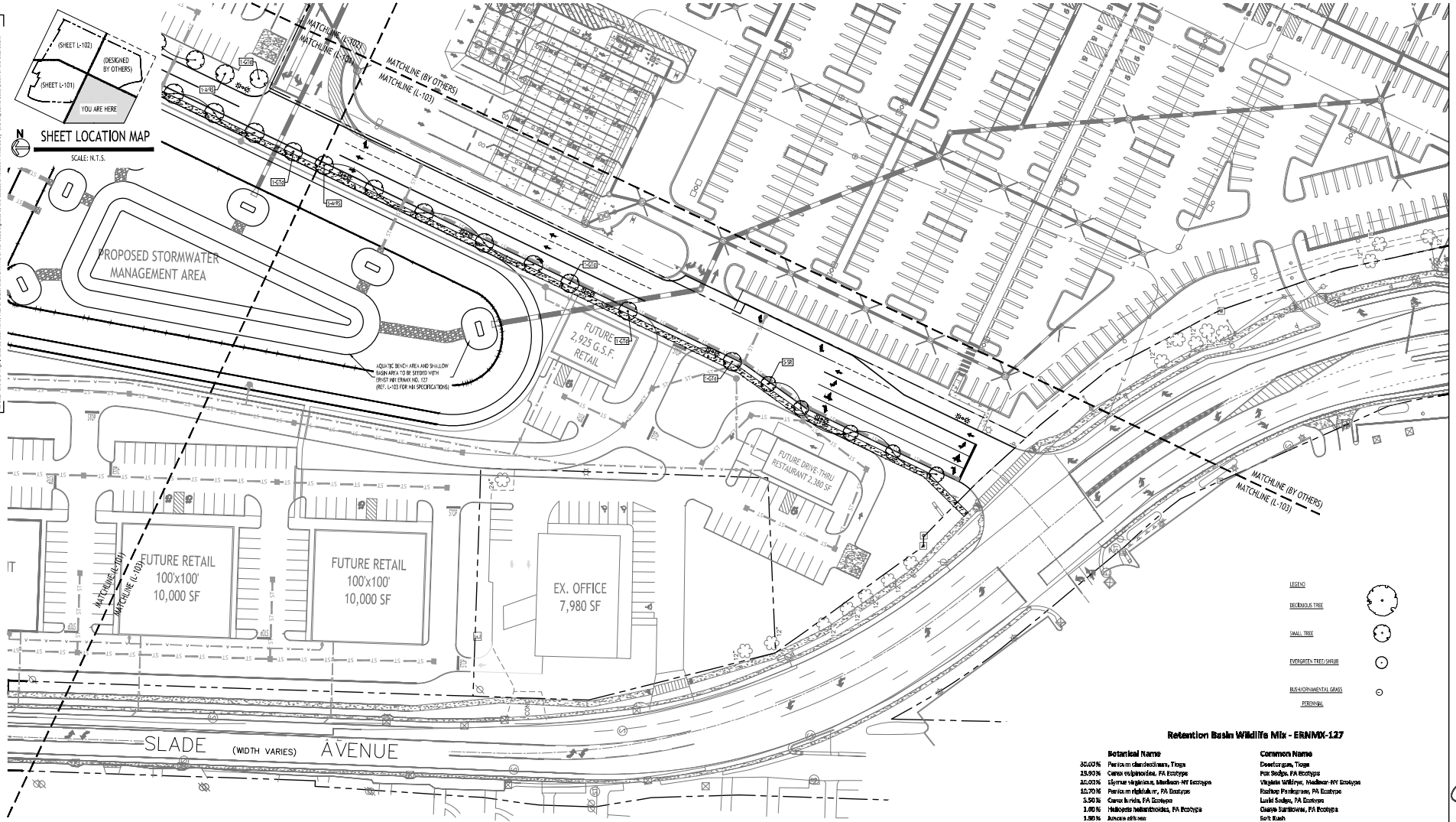


QTY.	KEY/ABBR.	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
35	GTC	Skyline Honeylocust	Gleditsia triacanthos f. inermis 'Skyline'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
5	PCH	Princeton Sentry Ash	Fraxinus pennsylvanica 'Princeton Sentry'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
5	CHA	Chanticleer Pear	Pyrus calleryana 'Chanticleer'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
4	CSL	Common Hackberry	Celtis occidentalis	3 1/2" - 4" Cal.	B&B, full, 6'-10'
5	HHC	Hot Wings Tatarian Maple	Acer tataricum 'Hot Wings'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
5	GBA	Ginkgo Allee Thornless Sentry	Ginkgo biloba 'Thornless Sentry'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
3	AGD	Accolade Dawn Redbud	Cercis canadensis 'Alan Mey'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
3	RBS	Royal Burgundy Sumac	Rhus typhina 'Bailtiger'	3 1/2" - 4" Cal.	B&B, full, 6'-10'
14	JCS	Japanese Cryptomeria 'Sheroidii'	Cryptomeria japonica 'Sheroidii'	6'-7' Ht.	B&B, full, 5'-6' o.c.

Date: 07/20/26
Drawn By: DP, MW
Scale: 1"=40'
DRAWING NO. L-102
Project No: 24-113
DRAWING NAME: Landscape Plan
Sealed 07/20/2026
REVISIONS:
No. Description Date
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KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
GTd	29	Gleditsia triacanthos I "Draves"	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT. 40', W 35'
QRxB	16	Quercus robur x bicolor 'Long'	Regal Prince Oak	2 1/2" - 3" CAL.	B&B, HT. 35', W 18'
UAp	3	Ulmus americana 'Princeton'	Princeton American Elm Tree	2 1/2" - 3" CAL.	B&B, HT. 60', W 40'
QM	3	Quercus macrocarpa	Chestnut Oak	2 1/2" - 3" CAL.	B&B, HT.50', W 30'
CBL	8	Carpinus betulus 'Lucas'	Lucus columnar hornbeam	2 1/2" - 3" CAL.	B&B, HT.30' W 10'
QRn	13	Quercus robur x bicolor 'Nadler'	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT.30' W 6'
ArRS	9	Acer rubrum 'Red Sentinel'	Red Sentinel Maple	2 1/2" - 3" CAL.	B&B, HT.30' W 12'
GBos	5	Ginkgo biloba 'Princeton Sentry'	Maiden Hair Tree	2 1/2" - 3" CAL.	B&B, HT.50' W 20'
AxB	3	Aesculus x bushii 'Aaron 1'	Mystic Ruby Buckeye	2 1/2" - 3" CAL.	B&B, HT.30' W 15'
SR	3	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1 1/2" - 2 1/2"" CAL.	B&B, HT.20' W 15'
		EVERGREEN TREES			
JS	14	Juniperus scopolarum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT. 16', W 4'

LANDSCAPE PLAN
SCALE: 1"=40'

Retention Basin Wildlife Mix - ERNMX-127

	Botanical Name	Common Name
35.00%	Panicum clandestinum, Tioga	Deertongue, Tioga
15.00%	Carex vulpinoidea, PA Ecotype	Fox Sedge, PA Ecotype
15.00%	Elymus virginicus, Madison-NY Ecotype	Virginia Wildrye, Madison-NY Ecotype
12.70%	Panicum virgatum, PA Ecotype	Switchgrass, PA Ecotype
5.50%	Carex lurida, PA Ecotype	Lurid Sedge, PA Ecotype
1.00%	Helianthus helianthoides, PA Ecotype	Ox-eye Sunflower, PA Ecotype
1.00%	Juncus effusus	Soft Rush
1.00%	Verbena hastata, PA Ecotype	Blue Vervain, PA Ecotype
0.50%	Scirpus cyperinus, PA Ecotype	Woolgrass, PA Ecotype
0.50%	Agrostis perennans, Albany Pine Bush-NY Ecotype	Autumn Bentgrass, Albany Pine Bush-NY Ecotype
0.50%	Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype
0.10%	Aster pilosus, PA Ecotype	Heath Aster, PA Ecotype
0.10%	Lobelia siphilitica, PA Ecotype	Great Blue Lobelia, PA Ecotype
0.10%	Mimulus ringens, PA Ecotype	Sessile Seemroot Monkeyflower, PA Ecotype
100.00%		

Seeding Rate: 20 lbs per acre, or 0.5-1 lb/1,000 sf, if with a cover crop. For a cover crop use one of the following grain rye (1 Sep to 20 Apr; 90 lbs/acre), Japanese millet (1 May to 31 Aug; 30 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

Grasses & Grass-like Species, Herbaceous Flowering Species, Mixes, Stormwater Management, Wildlife Habitat & Food Plots

The grasses, grass-like species and forbs provide a diverse cover in retention basins where mowing is not anticipated. Mix formulations are subject to change as new species depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 0 40 80Ft.

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West Seneca New York

REVISIONS:
No. Description Date

STATE OF NEW YORK
C. CHRISTOPHER WOOD
075614
LICENSED PROFESSIONAL ENGINEER
Seal on 07/20/2026

DRAWING NAME:
Landscape Plan

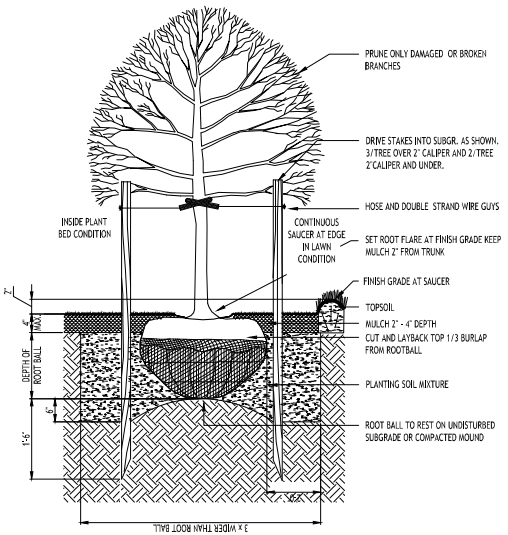
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Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
L-103

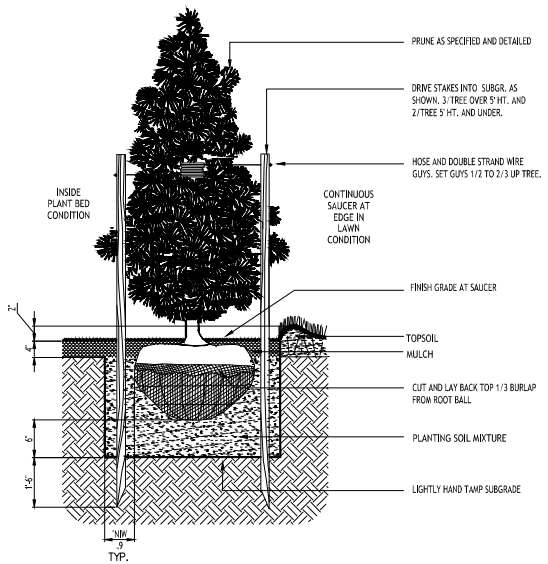
Project No: 24-4113

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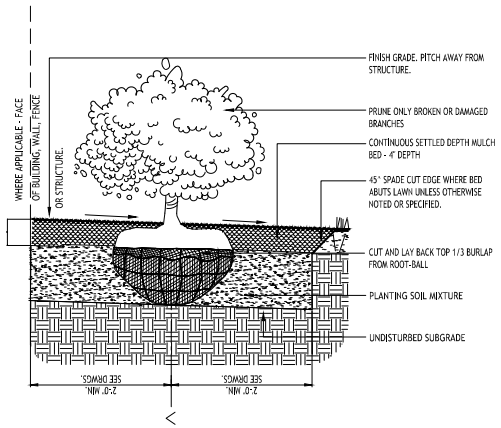
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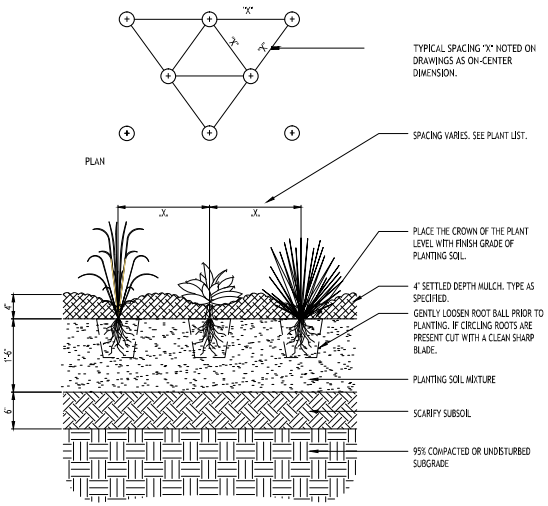
STD. DECIDUOUS TREET PLANTING



STD. EVERGREEN PLANTING



STD. SHRUB PLANTING

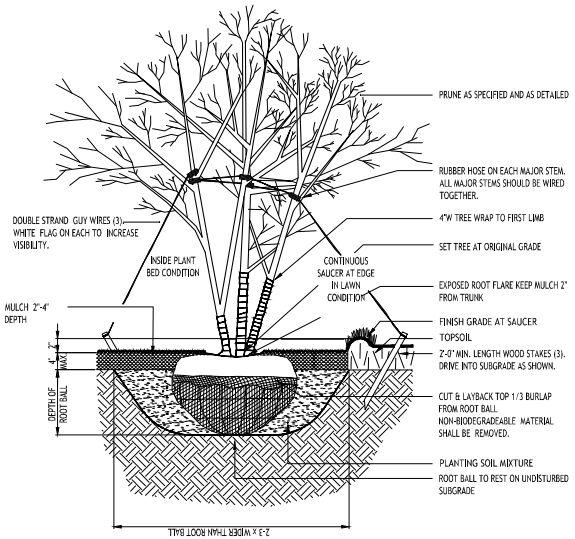


SECTION

NOTE: PLANT BULBS IN TRENCHES AND BOUQUET PLANTING GROUPS.

GROUND COVER PLANT SPACING

NO TO SCALE



DECIDUOUS TREE PLANTING - MULTI - STEM

NO TO SCALE

LANDSCAPE NOTES:

1. ALL PLANTS INSTALLED SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED ON THE PLANS AND IN THE LATEST EDITION ON THE AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ANSI Z60.1
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF. THE QUANTITIES SHOWN ARE A MINIMUM AND ARE FOR REFERENCE ONLY.
3. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKEOUT OF ALL PLANTING MATERIAL LOCATIONS AND CONTACT THE OWNERS FIELD REPRESENTATIVE PRIOR TO ACTUAL INSTALLING. THE PLANTING MATERIAL LOCATIONS SHOWN ON THE PLANS ARE TO CONVEY THE DESIGN INTENT ONLY, ACTUAL LOCATIONS WILL BE FINALIZED BY THE OWNERS FIELD REPRESENTATIVE AT THE TIME OF INSTALLATION.
4. THE CONTRACTOR IS HEREBY NOTIFIED THAT IF UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE PLANTINGS, ALL PROPOSED PLANTINGS SHALL BE INSTALLED A MINIMUM OF 5' FROM ANY UNDERGROUND UTILITY, CONTACT THE OWNERS FIELD REPRESENTATIVE IF PLANTINGS SHOWN ON THE PLANS VIOLATE THIS SITUATION.
5. ALL TREES SHALL BE INSTALLED A MINIMUM OF 20' FROM ANY OVERHEAD ELECTRIC LINES.
6. PLANTING BACKFILL MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, ¼ PART WELL ROTTED MANURE, 10 LBS 5-10-5 PLANTING FERTILIZER THOROUGHLY MIXED PER CUBIC YARD.
7. STAKE AND WRAP TREES IMMEDIATELY FOLLOWING INSTALLATION.
8. ALL PLANTED AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH OVER 10 MIL. WEED MAT EQUAL TO "WEEDBLOCK" BY EASY GARDENER OR DEWITT WEED BARRIER.
9. THE AREAS ON THE PLAN TO BE SEEDED SHALL HAVE 4" MINIMUM OF TOPSOIL, DISK PLOWED, LEVELED AND HAND RAKED SMOOTH. SURFACE SHALL BE ROLLED TO REMOVE LUMPS.
10. ALL SEEDED AREAS SHALL BE HYDROSEEDED IN ACCORDANCE WITH THE SPECIFICATION INDICATED. WHERE REQUIRED BY CLIMATIC CONDITIONS, SLOPE OR SEASON OF PLANTING, SOD MAY BE SUBSTITUTED FOR SEEDING IN ORDER TO ACHIEVE THE REQUIRED COVERAGE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MOWING AND OTHER MAINTENANCE TO SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. THIS SHALL INCLUDE WATERING DAILY FOR 15 DAYS OR AS REQUIRED BY WEATHER CONDITIONS AND RE-SEEDING OF THIN SPOTS FOLLOWING THE GERMINATION OF THE SEED.

CARMINAWOOD DESIGN

Buffalo | Utica | Greenport

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER C. WOOD
079884
LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:

Landscape Notes & Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

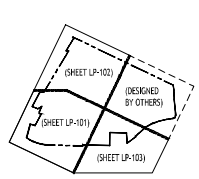
DRAWING NO.

L-104

Project No: 24-4113

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N SHEET LOCATION MAP

SCALE: N.T.S.

N LIGHTING PLAN

SCALE: 1"=100

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200FT.

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West Seneca New York

REVISIONS:
No. Description Date

STATE OF NEW YORK * CHRISTOPHER WOOD * 076884 LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Lighting Plan Overall

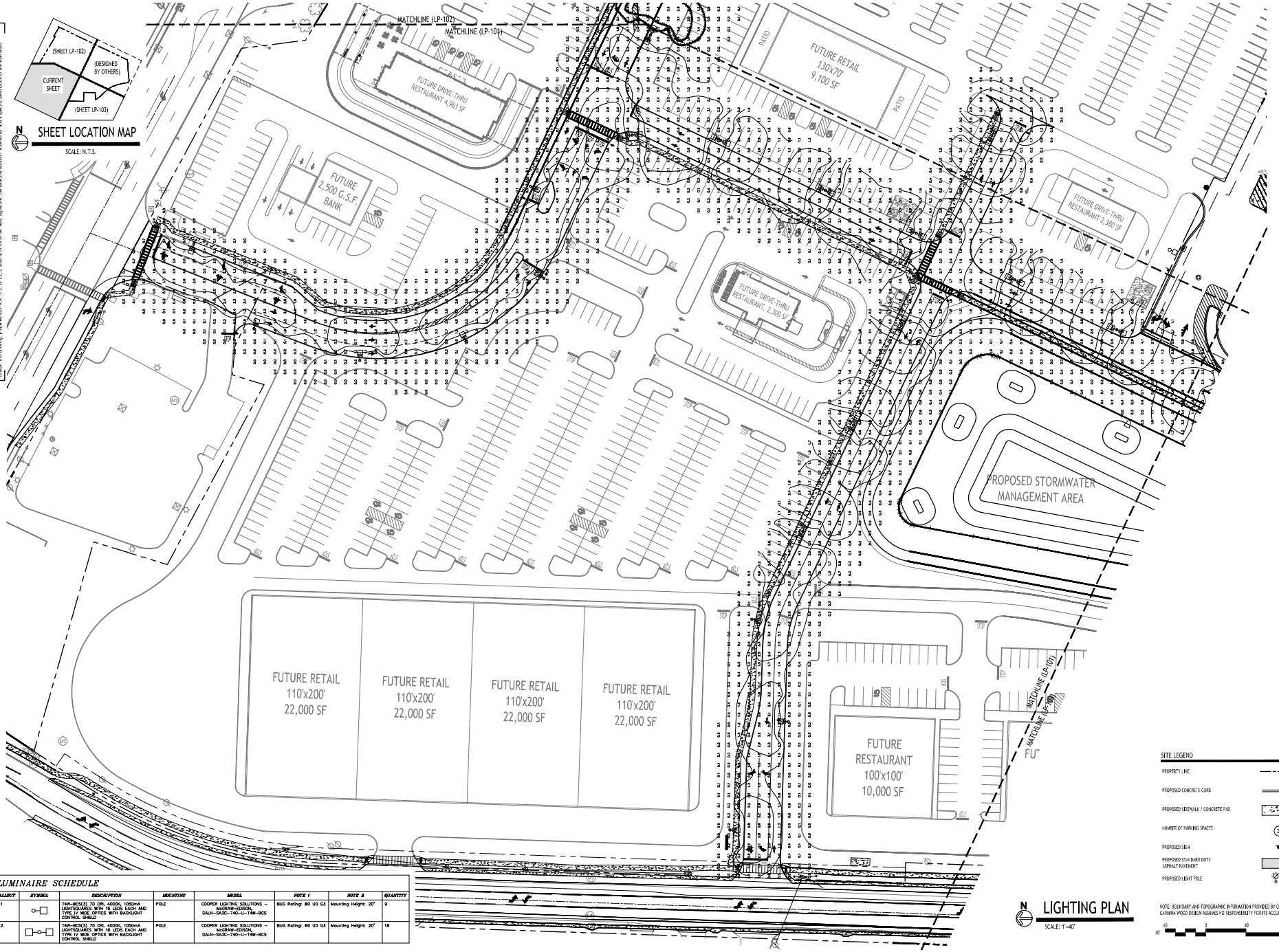
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
LP-100

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

LIGHTING PLAN

SCALE: 1"=40'

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		14W-BCX(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SASC-740-U-14W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		14W-BCX(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SASC-740-U-14W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 0 40 80Ft.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER WOOD * 075984 LICENSED PROFESSIONAL ENGINEER

Seal on 07/20/2026

DRAWING NAME:
Lighting Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
LP-101

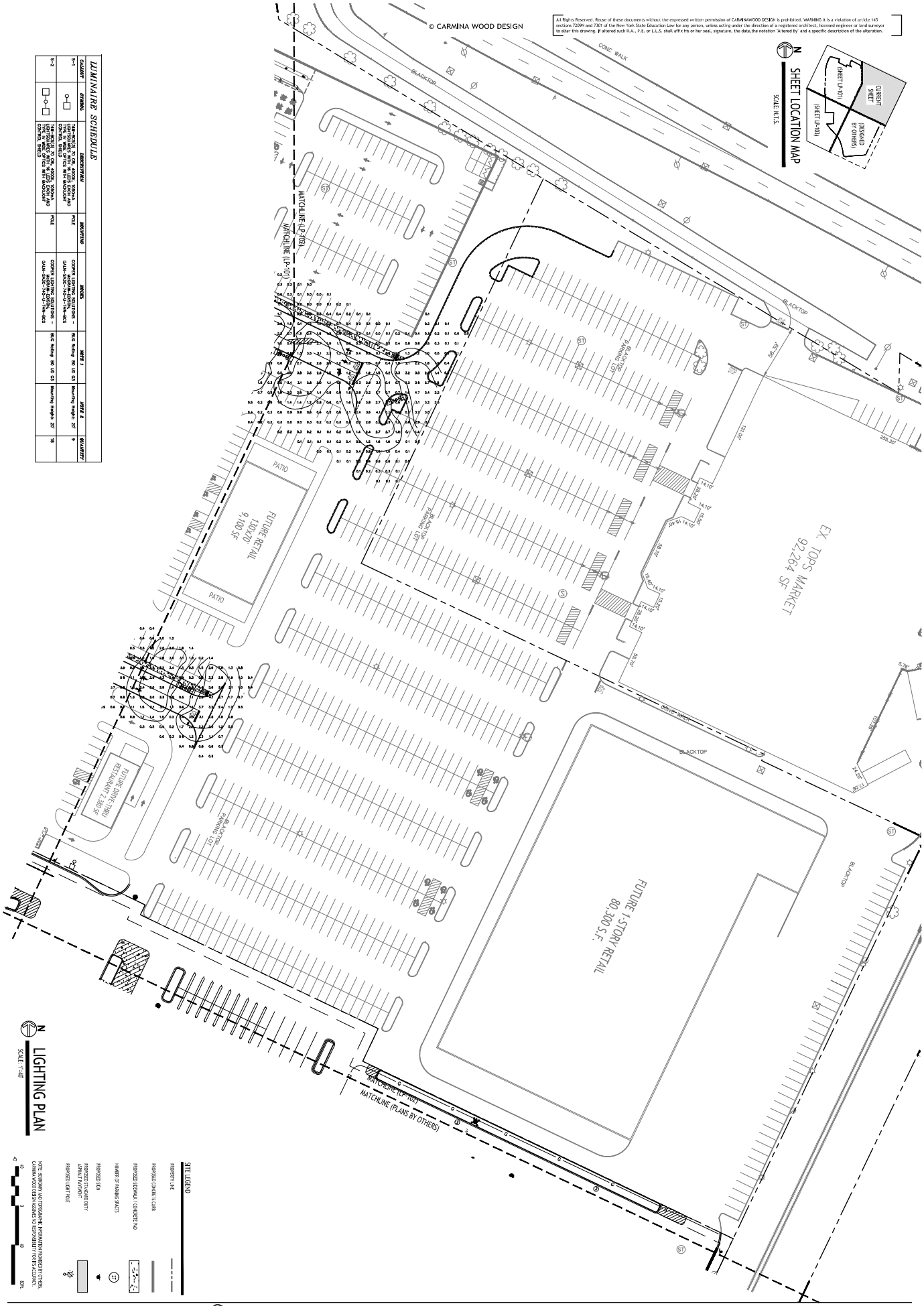
Project No: 24-4113

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LUMINAIRE SCHEDULE

QUANTITY	SYMBOL	DESCRIPTION	MOUNTING	MANUFACTURER	MFR'S # 1	MFR'S # 2	QUANTITY
S-1		144-W RSS2D, 7G, DP, 4700K, 1000mA, TYPE IV MEDIUM, W/ 8' BLACK POLE AND CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS - GALA - RSS2D-4-T4M-U-THA-4K7-BDS	BIS Rating: 80 (G 03)	Mounting Height: 20'	6
S-2		144-W RSS2D, 7G, DP, 4700K, 1000mA, TYPE IV MEDIUM, W/ 8' BLACK POLE AND CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS - GALA - RSS2D-4-T4M-U-THA-4K7-BDS	BIS Rating: 80 (G 03)	Mounting Height: 20'	10



REVISIONS:

No.	Description	Date

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

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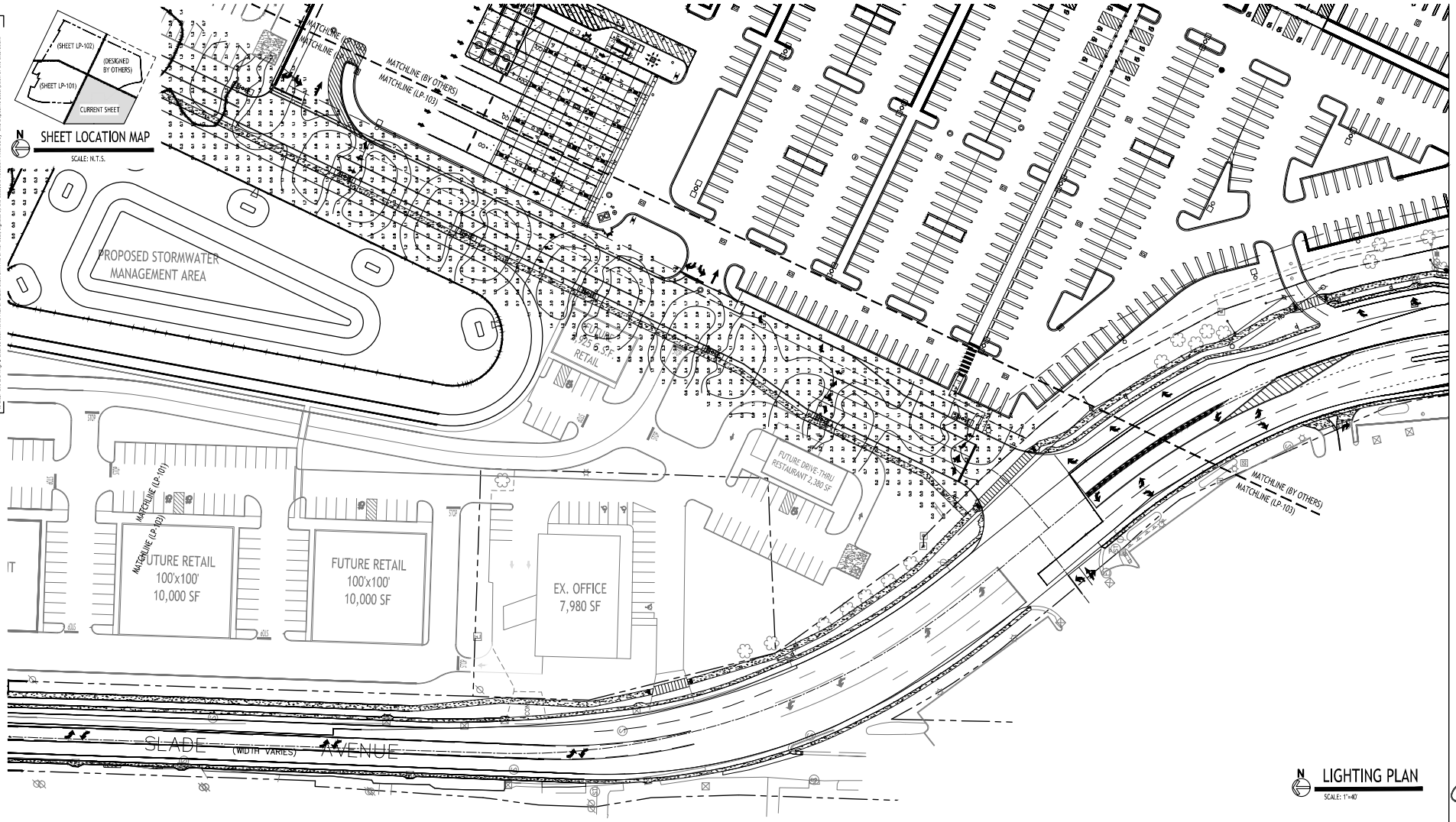
Project No: 24-113
DRAWING NO. LP-102
Date: 07/20/26
Drawn By: CWD
Scale: As Noted

DRAWING NAME: Lighting Plan

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N
LIGHTING PLAN
SCALE: 1"=40'

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (17)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

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40 0 40 80Ft.

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		74W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		74W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

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Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:
No. Description Date

STATE OF NEW YORK
CHRISTOPHER J. WOOD
079884
LICENSED PROFESSIONAL ENGINEER

DRAWING NAME:
Lighting Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
LP-103

Project No: 24-4113

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Project		Catalog #	
Type			
Prepared by		Notes	
Date			



McGraw-Edison

GALN Galleon II

Area / Site Luminaire

Product Features

BAA · BAA · TAA · FADC · Light Architecture®

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 13

Product Certifications

DLC · DLC Premium · DLC Flex · 3G VBI · IP66 · ETL Certified · ENERGY STAR · RoHS

Quick Facts

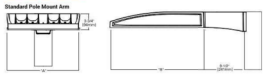
- Lumen packages range from 3,300 - 102,700 (33W - 658W)
- 17 optical distributions
- Efficacy up to 178 LPW

Connected Systems

- Wavelinx LITE Wireless
- Wavelinx PRO Wireless
- AirMesh Wireless

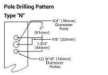
Dimensional Details

Standard Pole Mount Arm



Pole Drilling Pattern

Type "N"



Number of Light Squares	Width "A"	Housing Length "B"	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	23"	29 lb	0.95
5-6	22"	23"	29 lb	0.95
7-9	22"	28-1/8"	48 lb	1.1

NOTES: For anti-glare/dark-sky requirements and additional fine art, see Mounting Details section.

NOTES:
1. DLC-Certified 3000K CCT and warmer only (fixed mounting options).

Ordering Information

SAMPLE NUMBER: **GALN-SA4C-740-U-T4FT-GM**

Product Family	Light Engine Configuration: Light Square	Light Engine Configuration: Square Count	Light Engine Configuration: Lumen Output	Color Temperature	Voltage	Distribution	Mounting	Finish
GALN Galleon II **GALN-L** Galleon II Compliant **TAA-GALN** Galleon II **GALN-A** Galleon II Compliant **BAA-GALN** Galleon **GALN-LA** Galleon II Compliant	**SA**=16 LED Light Square **SB**=24 LED Light Square	1=1 Light Square 2=2 Light Squares 3=3 Light Squares 4=4 Light Squares 5=5 Light Squares 6=6 Light Squares 7=7 Light Squares 8=8 Light Squares 9=9 Light Squares	A=Output Level 1 B=Output Level 2 C=Output Level 3 D=Output Level 4 ** Z=Configured Outputs*	722=722DL 2200K 727=727DL 2700K 730=730DL 3000K 735=735DL 3500K 740=740DL 4000K 745=745DL 4500K 750=750DL 5000K 757=757DL 5700K 827=827DL 2700K 830=830DL 3000K 835=835DL 3500K 840=840DL 4000K 845=845DL 4500K 850=850DL 5000K 857=857DL 5700K 940=940DL 4000K 945=945DL 4500K 950=950DL 5000K 957=957DL 5700K AMB=Amber *** R=120-277V W=347V 480V *** 2=208V 3=240V 4=277V 5=347V 6=480V 7=120V *** 8=480V Inverted Drivers ***	T1=Type I T2=Type II T3=Type III T4=Type IV T4W=Type IV Roadway T5=Type V T5W=Type V Roadway T5VS=Type V Short T5VW=Type V Wide SNM=Type V Square Narrow SMM=Type V Square Medium SWM=Type V Square Wide T5S=Type V Square T5LE=Type IV w/Split Control SLA=Type IV w/Split Control SLB=90° Split Light Eliminator Left SLC=90° Split Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	**[Blank]**=Standard Pole Mount Arm **QM**=Pole Mount Arm with Quick Mount Universal Slot **QMA**=Pole Mount Arm with Quick Mount Mast Arm **PA**=Pole Mount, Adjustable **SP**=3" Slipfitter, Adj/Width * **WA**=Wall Mount, Adjustable * **[Blank]**=Black **DMA**=Quick Mount Mast Arm **MA**=Mast Arm, Fixed **WM**=Wall Mount, Fixed **WA**=Wall Mount, Adjustable **UP**=Upsweep Arm	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite **PL**=Platinum **WH**=White **SALX**=Custom Color

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately) **
DMG=Extend 0-10V Dimming Leads **PIR**=Bi-Level PIR, 180 Sensor (120-277V Voltage) **PIR**=Bi-Level PIR, 180 Sensor (347V-480V Voltage) **DIM**=DIM-10, 1479 Hood surge protective device *** **HS**=Houseside Shield **SF**=Single Fuse (120V) *** **DF**=Double Fuse (208, 240 or 480V Specific Voltage) **DBW**=DIM-10, 1479 Hood surge protective device *** **HS**=Houseside Shield **SF**=Single Fuse (120V) *** **DF**=Double Fuse (208, 240 or 480V Specific Voltage) **RPA**=Rotatable Mounting Arm, Pole Mount **RPAN**=Rotating Mount Arm, Pole Mount **QSRA**=Qlyte Retrofit Shield, White ** **QSRAN**=Qlyte Retrofit Shield, Black Housing ** **TP**=Tool-less Door Hardware * **CC**=Coastal Construction Finish * **SCC**=Super Coastal Coating * **SCCR**=Corrosion Resistant HW * **SSCW**=3 Gasketed Borehole Color Matching * **ARS145**=After Hours Dim, 5 Hours * **ARS245**=After Hours Dim, 5 Hours * **ARS345**=After Hours Dim, 5 Hours * **ARS445**=After Hours Dim, 5 Hours * **DMG**=DALI Drivers	**DPC**=Button Type Photocontrol. Must specify voltage 120V, 208V, 240V or 277V * **PE**=NEMA 7 PIN Photocontrol Receptacle * **PE7**=NEMA 7 PIN Photocontrol Receptacle * **FADC**=Field Adjustable Dimming Controller * **DMG**=Dimming Motion Sensor * **CPD**=Dimming Motion Sensor, 9' DF mounting * **DPMS**=Dimming Motion Sensor, 21'-40' mounting * **DPMS-L**=Dimming Motion Sensor, Inverted square count, 21'-40' mounting * **DPMS-S**=Dimming Motion Sensor, Inverted square count, 21'-40' mounting * **MS/DIM-L20**=Motion Sensor for Dimming Operation, 21'-40' Mounting * **MS/DIM-L40**=Motion Sensor for Dimming Operation, 21'-40' Mounting * **M-SCCS**=Wavelinx LITE, Sub-Circuit, Dimming Motion and Daylight, Bluetooth **M-SCCS-L**=Wavelinx LITE, Sub-Circuit, Dimming Motion and Daylight, Bluetooth **M-CAN**=Wavelinx LITE, 20 Drive, Dimming Motion and Daylight, Bluetooth **M-CAN-L**=Wavelinx LITE, 20 Drive, Dimming Motion and Daylight, Bluetooth **MPC220**=Wavelinx PRO, 08 Drive, Dimming Motion and Daylight, NAC **MS/DIM-L20**=Motion Sensor for Dimming Operation, 21'-40' Mounting * **MPC420**=Wavelinx PRO, 20 Drive, Dimming Motion and Daylight, NAC **DMG-L20**=AirMesh Occupancy Sensor 20' @ Mounting * **DMG-L40**=AirMesh Occupancy Sensor 21'-40' Mounting *	**DALA3174**=DALA Photocontrol Multi-Tap - 105-285V **DALA3177**=DALA Photocontrol - 347V **DALA3221**=DALA Photocontrol - 480V **DALA3213**=Photocontrol Shorting Cap **WA1122**=347V Surge Module **WA1222**=480V Surge Module Replacement **WA1836-SS**=Single Tenon Adapter for 2-3/8" O.D. Tenon **WA1837-SS**=Single Tenon Adapter for 2-3/8" O.D. Tenon **WA1147-SS**=2-3/8" Tenon Adapter for 2-3/8" O.D. Tenon **WA1188-SS**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **WA1189-SS**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **WA1190-SS**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **WA1191-SS**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **WA1838-SS**=Single Tenon Adapter for 3-1/2" O.D. Tenon **WA1839-SS**=(2)180° Tenon Adapter for 3-1/2" O.D. Tenon **WA1840-SS**=(2)90° Tenon Adapter for 3-1/2" O.D. Tenon **WA1841-SS**=(3)120° Tenon Adapter for 3-1/2" O.D. Tenon **WA1144-SS**=(3)90° Tenon Adapter for 3-1/2" O.D. Tenon **WA1145-SS**=(4)90° Tenon Adapter for 3-1/2" O.D. Tenon **SALDA**=Adjust-A-Tel for mounting 2.38" and to 2-3/8" O.D. vertical tenon **FSB-SBD**=Wireless Configuration Tool for MSI/DIM **LSBMS-BK**=Field Installed Photo Fully Shield for GEN 2 Squares *,** **LSBMS-BR**=Field Installed Photo Fully Shield for GEN Squares *,** **LSBCS**=Backlight Control Shield *,** **LSGEN-BK**=Gen 2 Retrofit Shield, Black *,** **LSGEN-WH**=Gen 2 Retrofit Shield, White *,** **LSPPS**=Perimeter Shield, Black * **WSJ-PI-10A**=Mount to Outdoor Control Module *,**,*** **7-7-51-HH**=Outdoor 7-PIN male, 110-480V *,**,*** **LSEDM-SD-SC**=Additional control base station with 5-button control **

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our Terms and Conditions of Sale for complete warranty terms.
2. Consult factory if more than 9 Light Squares are required.
3. Coastal Construction finish salt spray tested to over 5,000 hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
4. Not available with SPD options.
5. When using 120-347V (Specific Voltage), must use with a neutral.
6. Not available with DMG, PIR or other motion response control options.
7. Not available with 480V.
8. Not available with Bird-Ex Shield configurations.
9. Not available with 480V, 347V, SPD Options for 2-3/8" O.D. vertical tenon.
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Appendix H

Soils Information



Map Scale: 1:4,240 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 24, Aug 25, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CsB	Collamer silt loam, 3 to 8 percent slopes	C/D	0.0	0.0%
Hm	Hamlin silt loam	B	0.6	0.9%
NfA	Niagara silt loam, 0 to 3 percent slopes	C/D	4.3	7.3%
RgA	Rhinebeck silt loam, 0 to 3 percent slopes	C/D	0.6	1.1%
RkA	Rhinebeck gravelly loam, 0 to 3 percent slopes	C/D	1.7	2.8%
Te	Teel silt loam	B/D	0.1	0.2%
Uc	Udorthents, smoothed		1.5	2.6%
Ud	Urban land		49.7	85.0%
Totals for Area of Interest			**58.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

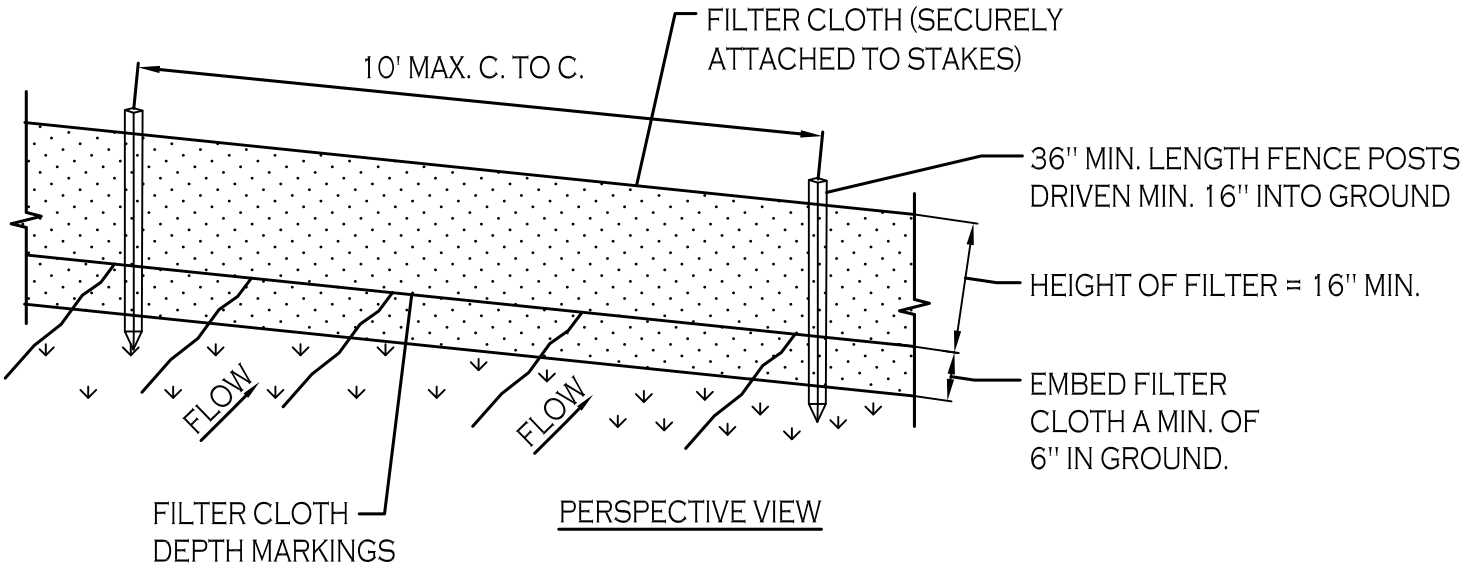
Aggregation Method: Dominant Condition

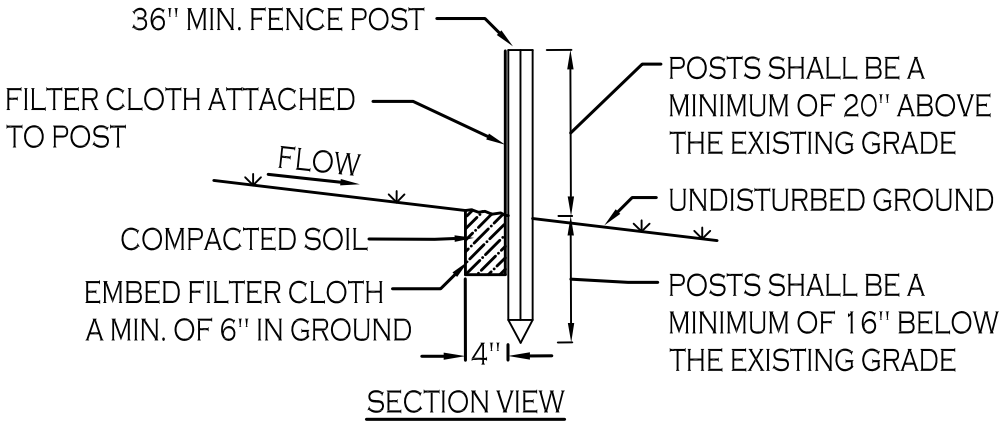
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix I

Standard Erosion Control Details





CONSTRUCTION SPECIFICATIONS

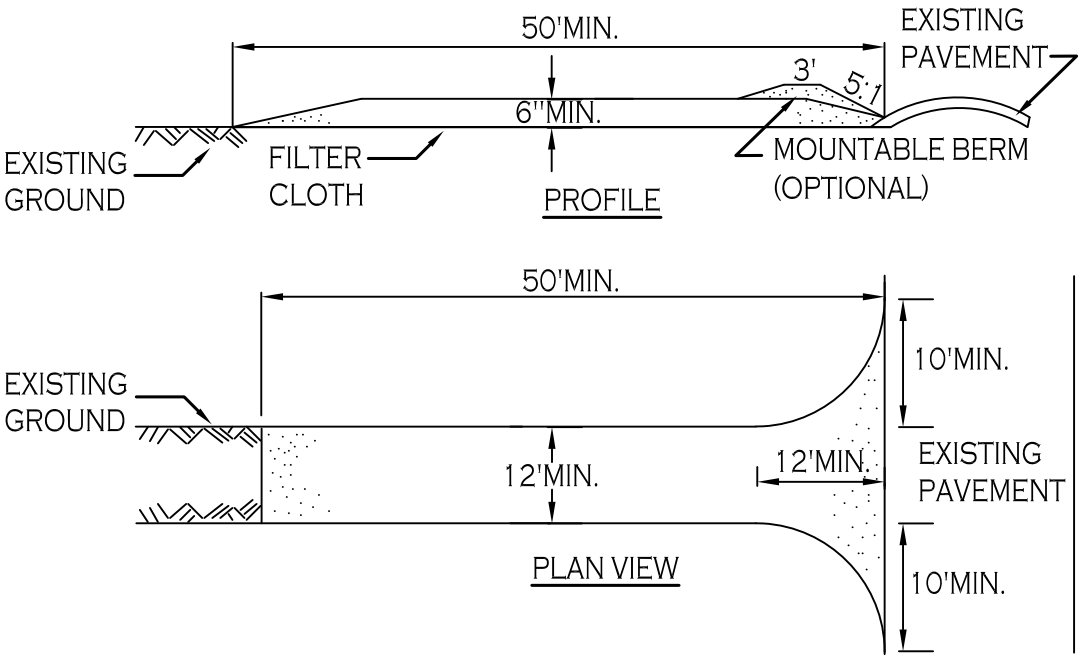
1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.

2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.

3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.

5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

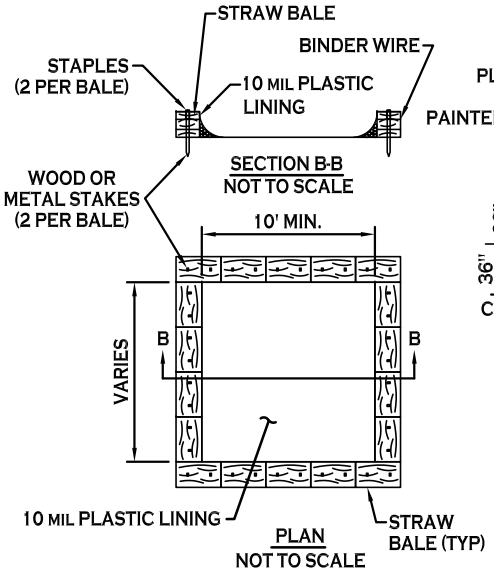
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

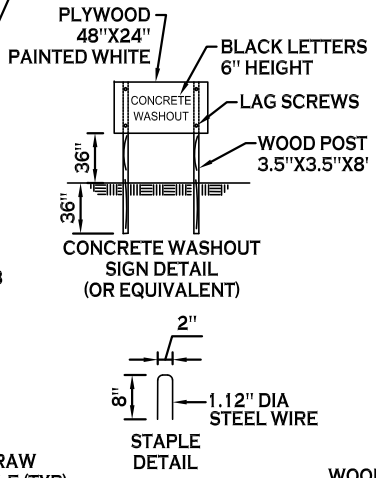
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

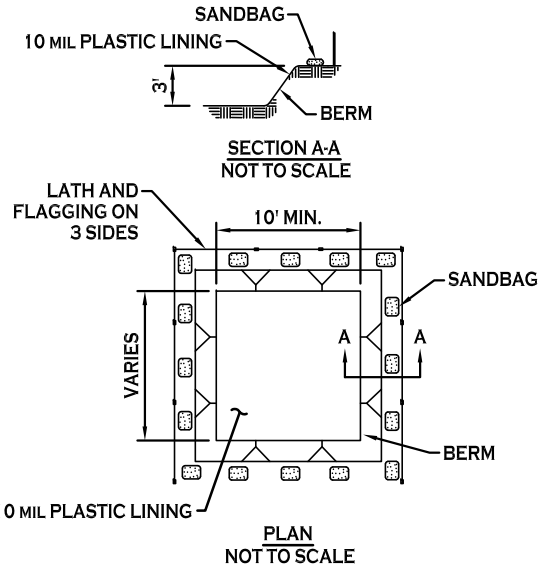
STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

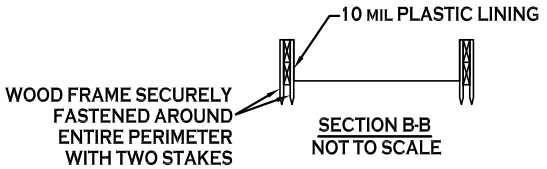


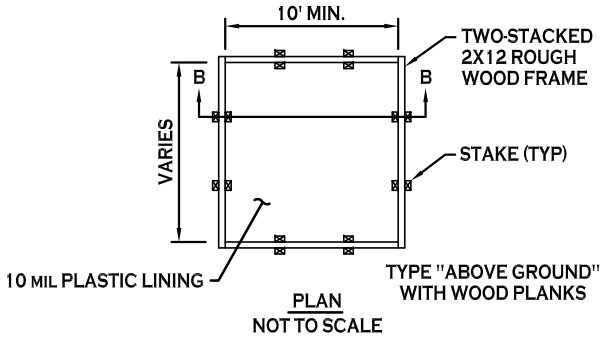
TYPE "ABOVE GRADE" WITH STRAW BALES





TYPE "BELOW GRADE"



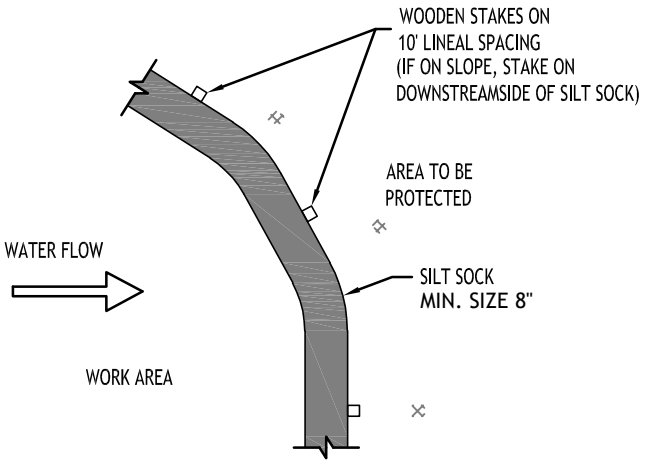


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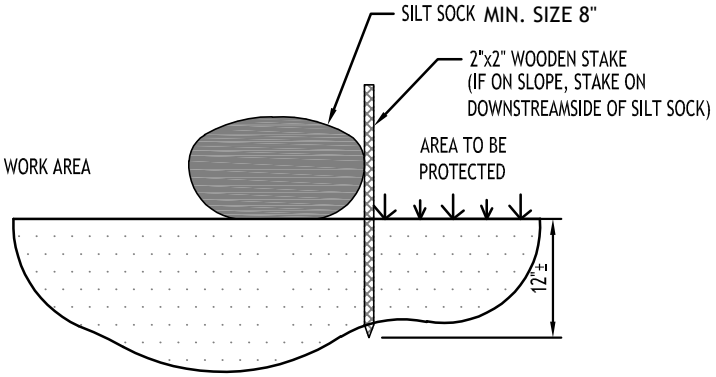
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT DETAIL

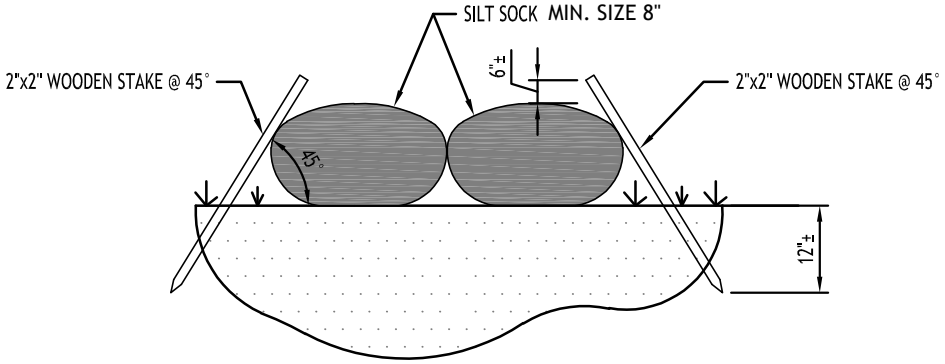
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PLAN VIEW



SECTION VIEW



SECTION VIEW @ JOINT OVERLAP

NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

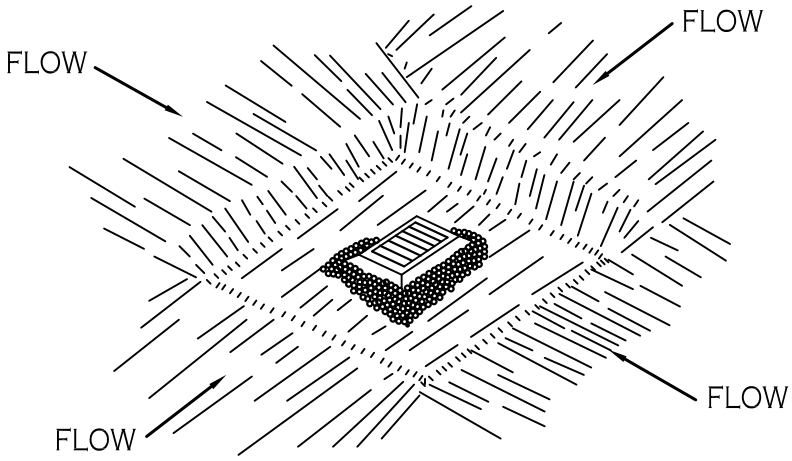
CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED $\frac{1}{2}$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

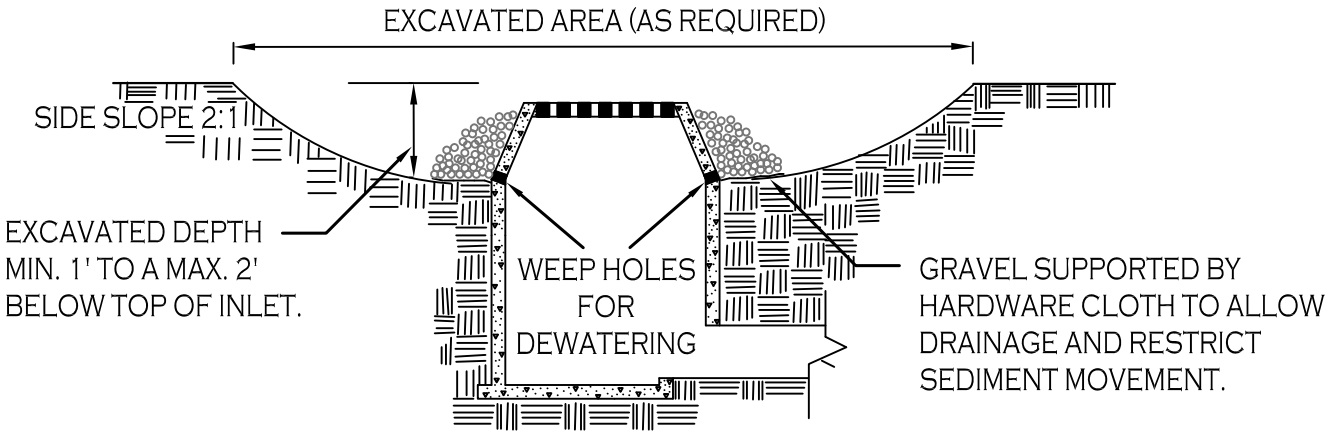
SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

THE MINIMUM SIZE OF THE SILT SOCK SHALL BE 8".

SILT SOCK DETAIL

NOT TO SCALE





CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.

2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.

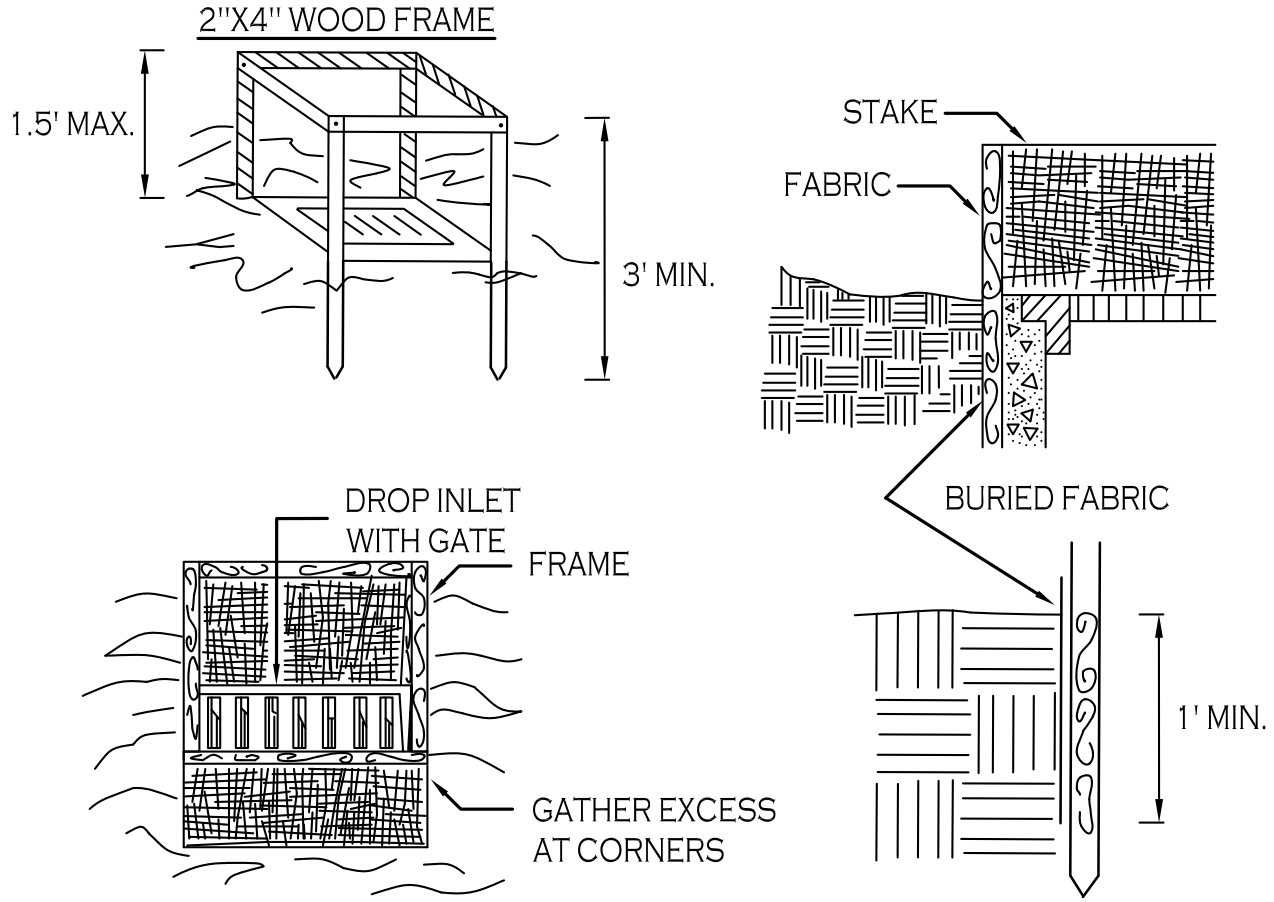
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.

4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.

2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.

3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.

4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.

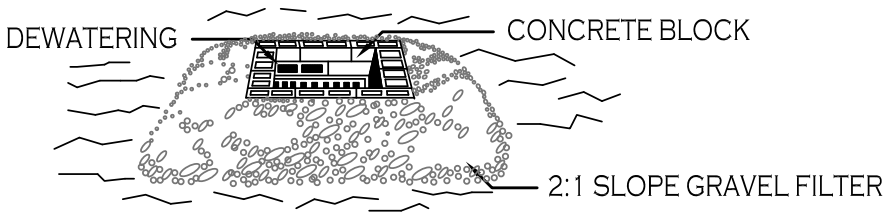
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.

6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

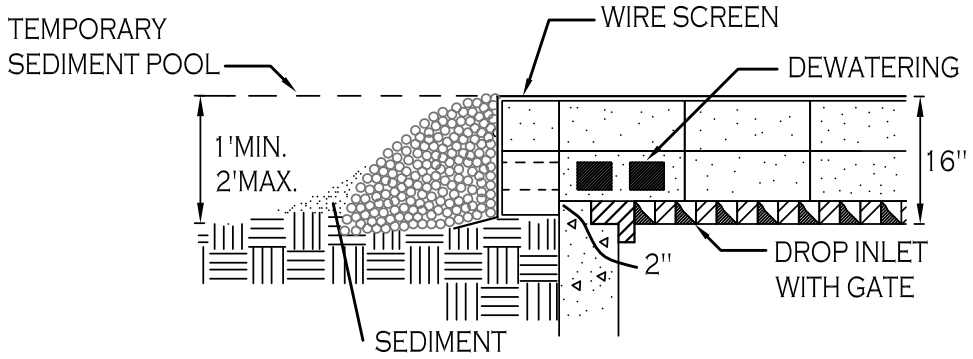
MAXIMUN DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2

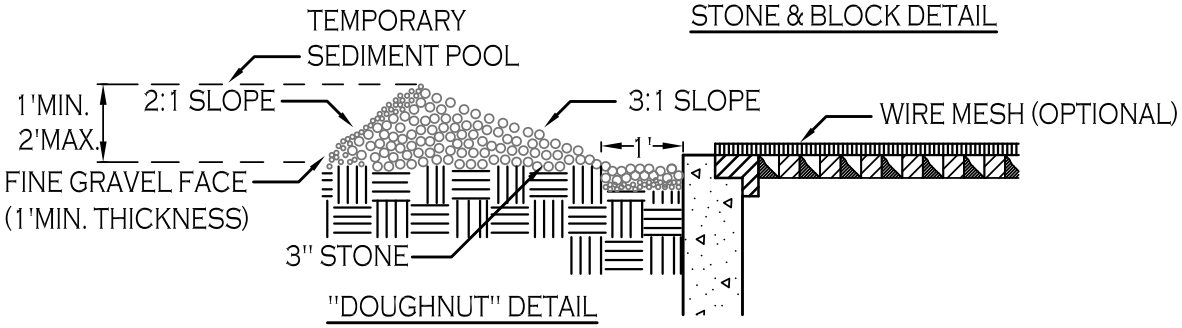
NOT TO SCALE



STONE & BLOCK PLAN VIEW



STONE & BLOCK DETAIL



"DOUGHNUT" DETAIL

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.

2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.

3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.

4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3

NOT TO SCALE

EXISTING TREE PROTECTION FENCE

MATERIALS

MATERIALS FOR TEMPORARY PLASTIC BARRIER FENCES SHALL MEET THE FOLLOWING REQUIREMENTS:

- FENCE: HIGH-DENSITY POLYETHYLENE MESH, ULTRAVIOLET-STABILIZED MIN. 2 YEARS; MINIMUM HEIGHT 4.0 FEET. COLOR: HIGH-VISIBILITY ORANGE OR GREEN. WHEN USED TO PROTECT TREES OR OTHER VEGETATION, COLOR SHALL BE HIGH-VISIBILITY ORANGE.
- POSTS: RIGID METAL OR WOOD POSTS, MINIMUM LENGTH 6.0 FEET.
- TIES: STEEL WIRE, #14 GAUGE OR NYLON CABLE TIES.
- WARNING SIGNS: SHEET METAL, PLASTIC OR OTHER RIGID, WATERPROOF MATERIAL, 1.5 FEET BY 2.0 FEET WITH 4 INCH BLACK LETTERS ON A WHITE BACKGROUND. TEXT SHALL BE: "PROTECTED SITE - KEEP OUT" UNLESS OTHERWISE SPECIFIED.

DETAILS

FENCES SHALL BE ERECTED PRIOR TO MOVING CONSTRUCTION EQUIPMENT ONTO ANY AREA DESIGNATED FOR PROTECTION.

THE LINE OF FENCES SHALL BE STAKED OR MARKED OUT ON THE GROUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER BEFORE ANY FENCE IS INSTALLED. WHERE USED FOR PROTECTION OF INDIVIDUAL TREES, FENCE SHALL BE PLACED AT THE DRIP LINE (EXTENT OF CANOPY). IF NOT POSSIBLE, PLACEMENT SHALL BE AS CLOSE TO THE DRIP LINE AS POSSIBLE AND IN NO CASE LESS THAN 5.0 FEET AWAY FROM THE TREE TRUNK.

ON APPROVAL OF THE STAKEOUT, POSTS SHALL BE SECURELY DRIVEN ON 6.0 FOOT-MAXIMUM CENTERS, NORMAL TO THE GROUND, TO A DEPTH 1/3 OF THE TOTAL POST LENGTH. PLASTIC BARRIER FENCE SHALL BE PLACED ALONG THE SIDE OF ALL POSTS. ENDS OF FENCING SEGMENTS SHALL OVERLAP A DISTANCE OF AT LEAST ONE HALF THE FENCE HEIGHT.

FENCING SHALL BE SECURED TO POSTS WITH WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF POST. FASTENER SHALL BE TIGHT ENOUGH TO PREVENT THE FENCING FROM SLIPPING DOWN. OVERLAPS SHALL ALSO BE SECURELY FASTENED.

BARRIER FENCE WHICH IS NOT ORANGE IN COLOR SHALL BE FLAGGED AT 6.0 FOOT INTERVALS WITH RED OR ORANGE FLORESCENT TAPE. WARNING SIGNS SHALL BE MOUNTED ON THE FENCE AT NO MORE THAN 100 FOOT INTERVALS.

MAINTENANCE SHALL COMMENCE IMMEDIATELY AFTER ERECTION OF THE FENCE AND CONTINUE UNTIL ONE WEEK PRIOR TO ACCEPTANCE OF THE CONTRACT, AND SHALL CONSIST OF: REPLACING DAMAGED POST(S) AND FENCING; RE-FASTENING AND TIGHTENING FENCING; AND RESTORING FENCE TO ITS INTENDED HEIGHT.

FENCING USED FOR TREE OR OTHER VEGETATION PROTECTION SHALL NOT BE TEMPORARILY REMOVED TO ALLOW EQUIPMENT ACCESS OVER A PROTECTED AREA, EXCEPT AS REQUIRED FOR ITEMS OF WORK SPECIFICALLY SHOWN ON THE PLANS AND APPROVED BY THE ENGINEER IN WRITING.

Appendix J

NYSDEC Stormwater Management Inspection Lists

2.10. Ponds and Wetlands

Areas of Ponds and Wetlands

Key areas to inspect for ponds and wetlands include the following:

- PO 1. Drainage area
- PO 2. Inlet pipes and swales
- PO 3. Pond area and embankments
- PO 4. Pond outlet

Note: This category includes the following practices:

- *Wet ponds* – have a permanent pool of water and may be divided into various “cells”
- *Stormwater wetlands* – have a variety of depth zones ranging from deep pools to shallow wetlands and are characterized by wetland vegetation

It is recommended strongly to have as-built drawings and copies of previous inspections at hand, if available. Aerial photos may be needed to help direct the inspector to the pond or wetland location if it is obscured by vegetation.

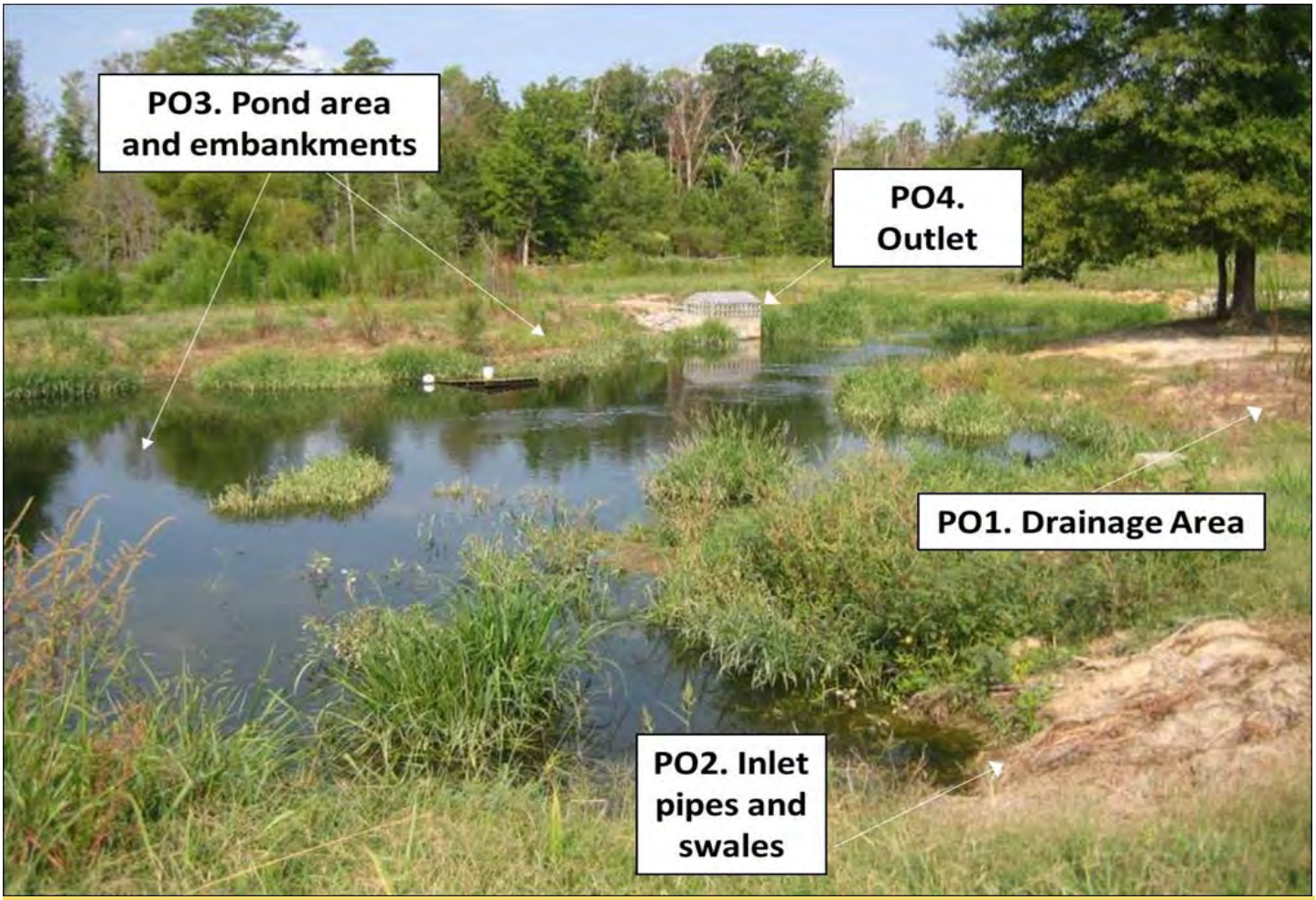


Figure 2.10.1. Key Areas for Level 1 Inspection of a Pond/Wetland

Pond and Wetland Level 1 Inspection

The Level 1 Inspection focuses on the drainage area (PW 1), inlet pipes or swales (PW 2), pond area and embankments (PW 3) and pond outlet structures and outfall (PW 4). This inspection should be conducted on a regular basis to ensure that a buildup of trash, vegetation, or sediment does not interfere with the pre-treatment, pond or wetland, and the outfall's normal flow or function. Pond embankments and dams should be regularly inspected for evidence of erosion, burrowing or tunneling animals, and large woody vegetation growing on the dam.

PW 1. Drainage Area

Description: The drainage area conveys runoff to and is uphill from the pond inlet. When it rains, water runs off through roof drains, yard drains, parking lots, roadways and underdrains to the ponds. Flow is through underground piping systems, overland via swales, or across the ground as sheetflow. Sometimes, the runoff will contain dirt, grit, grass clippings, leaves and woody debris that can collect in the drainage system. If left alone, blockages can occur and increase the chance of shallow flooding or standing water. Standing water in drainage systems foster mosquitos, pipe corrosion, and possible nuisance and odor conditions.

Instruction: Look for areas that are uphill from the pond. Consult **Table 2.10.1** below:

Table 2.10.1 PW Drainage Area

Problem (Check if Present)	Follow-Up Actions
☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and straw areas of bare soil to establish vegetation. ☐ Fill in eroded areas with soil, compact, seed and mulch with straw to establish vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ If large areas of soil have been eroded or larger channels are forming, this may require rerouting of flow paths or use of an erosion-control seed mat or blanket to reestablish acceptable ground cover or anchor sod where it is practical.
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Remove excessive vegetation or woody debris that can block drainage systems. ☐ Other:
 ☐ Open containers of oil, grease, paint, or other substances exposed to rain in the drainage area	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

PW 2. Pond Inlets

Description: Free, unobstructed flow from the drainage area to stormwater ponds is necessary to prevent shallow flooding and even structural damage from flooding. Pond inlets can consist of pipes, ditches, swales, or other means to convey stormwater to the pond or wetland.

Instruction: Look for all areas where water flows into the pond during storms. Note that there may be multiple points of inflow and types of structures (e.g., pipes, open ditches, etc.). Consult **Table 2.10.2** below:

Table 2.10.2 Pond Inlets

Problem (Check if Present)		Follow-Up Actions
 	☐ Inlets are buried, covered or filled with silt, debris, or trash, or blocked by excessive vegetation.	☐ If the problem can be remedied with hand tools and done in a safe manner, remove vegetation, trash, woody debris, etc. from blocking inlet structures. ☐ Other: ☐ Kick-Out to Level 2 or 3 Inspection: If the amount of material is too large to handle OR there are ANY safety concerns about working in standing water, soft sediment, etc., the work will likely have to be performed by a qualified contractor.
	☐ Inlets are broken, and, with pieces of pipe or concrete falling into the pond, there is erosion around the inlet, there is open space under the pipe, or there is erosion where the inlet meets the pond	☐ Kick-Out to Level 2 Inspection: These types of structural or erosion problems are more serious and will require a qualified contractor to repair.

PW 3. Pond Area and Embankments

Description: The pond area and embankment can consist of the following elements:

- Pre-treatment cell or small holding area where water first flows into the pond from the various inlets. These are commonly referred to as “forebays” and will be demarcated from the main pond area by small dams made of earth or rock. The purpose of forebays is to capture some of the sediment and pollutants before they reach the deep pool, making maintenance easier over time. Not all ponds will have forebays.
- The pond surface can be open water or a combination of open water and areas with wetland vegetation. Sometimes there is a shallow bench around the perimeter of a pond, known as an “aquatic bench.”
- The “side slopes” are areas around the perimeter of the pond where the surrounding land slopes down to the pond surface.
- Most ponds will have a “riser structure,” where the water exits a pond during storms. This can be a concrete or metal pipe that is open at the top, often with some type of trash rack. Some ponds also have an “emergency spillway,” which is an open, rock-lined channel that carries water from large storms safely across the embankment.
- The dam or embankment holds water in the pond and is constructed of compacted soil, such as clay. There is often a pipe through the embankment that carries water from the riser structure safely through the embankment to the downstream channel.

The pond’s pre-treatment areas or forebays should not be choked with vegetation or full of sediment. Removal of excessive vegetation and sediment and selective replanting are often annual maintenance activities.

Likewise, the pond’s deep pool should not to be choked with vegetation or filled with sediment. Vegetation and sediment bars can restrict flow and cause short circuiting that reduces capture of sediment. Pond volume is to be maintained at the original design capacity and free of sediment bars or debris piles. Sometimes ponds are over-maintained and have no vegetation. Algae and turbidity (muddy water) are common problems in many ponds.

Instruction: Examine both interior and exterior pond banks as well as the pond body. Observe from the inlet pipes to the outfall structure and emergency overflow.

Table 2.10.3 PW Pond Area and Embankments

Problem (Check if Present)		Follow-Up Actions
	☐ The pretreatment area(s) or forebay(s) are filled with sediment, trash, vegetation, or other debris.	☐ If the problem can be remedied with hand tools and done in a safe manner, use a flat shovel or other equipment to remove small amounts of sediment. ☐ Remove trash and excessive vegetation from forebays if this can be done in a safe manner. ☐ Other:
		☐ Kick-Out to Level 2 Inspection: Large amounts of sediment or debris will have to be removed by a qualified contractor. ANY condition that poses a safety concern for working in standing water or soft sediments should be referred to a Level 2 Inspection or qualified contractor.

Table 2.10.3 PW Pond Area and Embankments

Problem (Check if Present)		Follow-Up Actions
	☐ The pond area itself has accumulated sediment, trash, debris, or excessive vegetation that is choking the flow of the water, OR the pond area is covered with algae or aquatic plants.	☐ Level 1 includes handling only small amounts of material that can be removed by hand, or with rakes or other hand tools. Do not attempt any repair that poses a safety issue. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Most cases will call for a Level 2 Inspection and/or a qualified contractor. ☐ You are not sure what type and amount of vegetation is supposed to be in the pond. ☐ The algae or aquatic plants should be identified so that proper control techniques can be applied.
	☐ The side slopes of the pond are unstable, eroding, and have areas of bare dirt.	☐ If there are only minor areas, try filling in small rills or gullies with topsoil, compacting, and seeding and mulching all bare dirt areas with an appropriate seed. Alternatively, try using herbaceous plugs to get vegetation established in tricky areas, such as steep slopes. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion and many bare dirt areas on steep side slopes will require a Level 2 Inspection and repair by a qualified contractor.
 	☐ The riser structure is clogged with trash, debris, sediment, vegetation, etc., OR is open, unlocked, or has a steep drop and poses a safety concern. The pond level may have dropped below its “normal” level.	☐ If you can safely access the riser on foot or with a small boat, clear minor amounts of debris and remove it from the pond area for safe disposal. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The riser cannot be accessed safely, the amount of debris is substantial, or the riser seems to be completely clogged and the water level has risen too high. ☐ There are safety issues with the riser and concern about access to pipes, drops, or any other life safety concern. ☐ The riser is leaning, broken, settling or slumping, corroded, eroded or any other structural problem.

Table 2.10.3 PW Pond Area and Embankments		
Problem (Check if Present)		**Follow-Up Actions**
	☐ The dam/embankment is slumping, sinking, settling, eroding, or has medium or large trees growing on it.	☐ If there are small isolated areas, try to fix them by adding clean material (clay and topsoil) and seeding and mulching. ☐ Periodically mow embankments to enable inspection of the banks and to minimize establishment of woody vegetation. ☐ Remove any woody vegetation that has already established on embankments. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Most of these situations will require a Level 2 Inspection or evaluation and repair by a qualified contractor. Seepage through the dam or problems with the pipe through the dam can be a serious issue that should be addressed to avoid possible dam failure.
	☐ The emergency spillway or outfall (if it exists) has ☐ erosion, settlement, or loss of material. Rock-lined spillways have excessive debris or vegetation.	☐ Clear light debris and vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Displacement of rock lining, excessive vegetation and erosion/settlement may warrant review and decision by Level 2 Inspector to check against original plan. ☐ Any uncertainty about the integrity of the emergency spillway should be referred to a Level 2 Inspector. ☐ Erosion or settlement such that design has been compromised should be reviewed by an engineer.

PW 4. Pond Outlet

Description: The pond's outlet enables the ponded water to discharge to downstream drainage systems or stream channels. The outlet is often at the base of the dam/embankment on the downstream side. Inspection of this point can help prevent flooding of the pond and upstream drainage systems and prevent pond failure at a weak point of a pond's containment system.

Instruction: Examine the outlet of the pipe on the downstream side of the dam/embankment where it empties into a stream, channel, or drainage system. Consult the table below for possible problems.

Table 2.10.4 PW Pond Outlet

Problem (Check if Present)	Follow-Up Actions
 ☐ The pond outlet is clogged with sediment, trash, debris, vegetation, or is eroding, caving in, slumping, or falling apart.	☐ If there is a minor blockage, remove the debris or vegetation to allow free flow of water. ☐ Remove any accumulated trash at the outlet. ☐ Outlet: ☐ Kick-Out to Level 2 Inspection: ☐ If the area at the outlet cannot be easily accessed or if the blockage is substantial, a Level 2 Inspection is warranted. ☐ Erosion at and downstream of the outfall should be evaluated by a qualified professional. ☐ Any structural problems, such as broken pipes, structures falling into the stream, or holes or tunnels around the outfall pipe, should be evaluated by a Level 2 Inspector and will require repair by a qualified contractor. ☐ The pool of water at the outlet pipe is discolored, has an odor, or has excessive algae or vegetative growth.

2.11. Infiltration

Areas of Infiltration

Key areas to inspect for Infiltration include the following:

- IN 1. Drainage Area
- IN 2. Inlets
- IN 3. Infiltration Area
- IN 4. Outlets

Note: The category of Infiltration includes:

- Infiltration Trench – Long, narrow infiltration practice, usually with small gravel at the surface and a reservoir of larger gravel or stone beneath
- Infiltration Basin – Larger practice, usually covered with grass and highly permeable soil beneath
- Dry Well – Small pit filled with stone or gravel, or precast concrete chamber surrounded by stone that receives and stores runoff to enable it to infiltrate into the underlying ground.



Figure 2.11.1 Key Areas for Level 1 Inspection of Infiltration Practice

Appendix K

SHPO Clearance Letter

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

February 10, 2025

Jeffrey Schieber
Town of West Seneca
1250 Union Road
West Seneca, NY 14224

Re: DEC
Seneca Mall Redevelopment
355 Orchard Park Rd, West Seneca, NY 14224
25PR01131

Dear Jeffrey Schieber:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Sydney Snyder at the following email address:

Sydney.Snyder@parks.ny.gov

Sincerely,

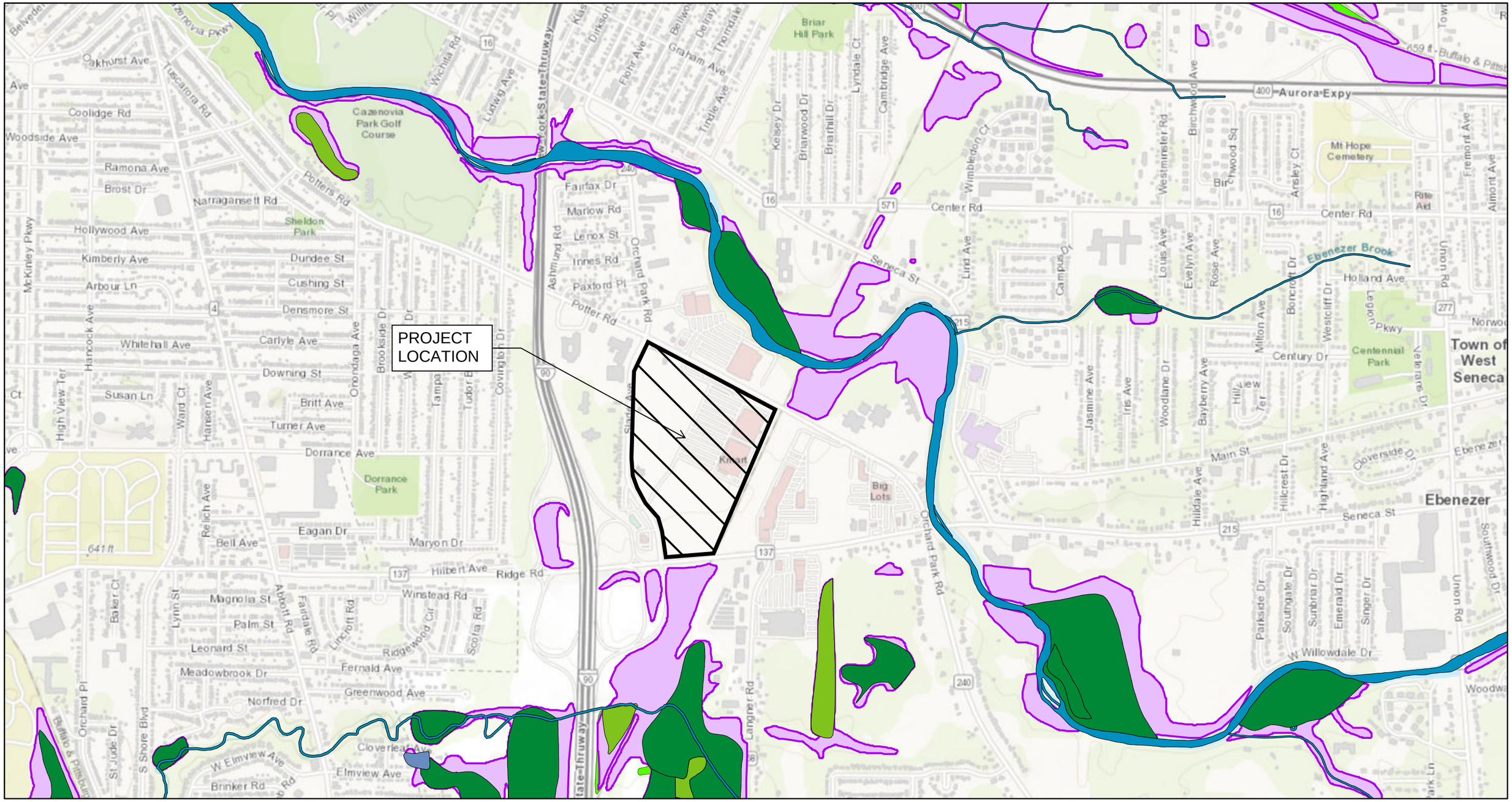
R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

Appendix L

NYSDEC Environmental Resource Mapper

West Seneca Exchange Wetland Mapper



June 24, 2026

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

NYS Department of Environmental Conservation

Not a legal document

West Seneca Exchange

Slade Ave, Ridge Road, & Orchard Park Road
West Seneca, New York

AGENCIES

ENGINEERING DEPT.
NAME/TITLE: STEVEN TANNER, P.E., TOWN ENGINEER
COMPANY/DEPT:. TOWN OF WEST SENECA ENGINEERING DEPT.
ADDRESS: 1250 UNION ROAD
WEST SENECA, NEW YORK 14224

TELEPHONE 716-558-3220

CODE ENFORCEMENT DEPT.
NAME/TITLE: JEFFREY SCHIEBER, CODE ENFORCEMENT OFFICER
TOWN OF WEST SENECA CODE ENFORCEMENT DEPT.
COMPANY/DEPT:. 1250 UNION ROAD
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716-558-3237
TELEPHONE

ECDOH
NAME/TITLE:
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BUFFALO, NEW YORK 14214

TELEPHONE 716-961-6854

NYSDEC
NAME/TITLE:
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BUFFALO, NEW YORK 14203

TELEPHONE 716-851-7070

UTILITIES

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TELEPHONE COMPANY
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BUFFALO, NEW YORK 14202

TELEPHONE 716-840-8698

ELECTRIC
NAME/TITLE: DAN LOSEL
COMPANY/DEPT:. NEW YORK STATE ELECTRIC & GAS
ADDRESS: HAMBURG, NEW YORK 14075

TELEPHONE 716-649-5556

WATER
NAME/TITLE: LEONARD KOWALSKI
COMPANY/DEPT:. ERIE COUNTY WATER AUTHORITY
ADDRESS: 3030 UNION ROAD
CHEEKTOWAGA, NEW YORK 14227

TELEPHONE 716-684-1510

DIG SAFELY NEW YORK

TELEPHONE 811

DESIGN CONSULTANTS

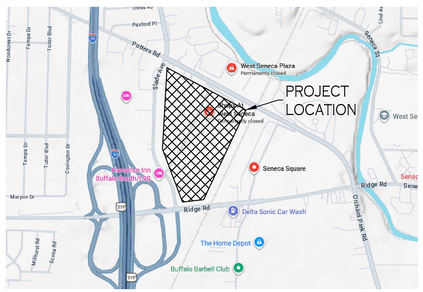
PROJECT SURVEYOR
NAME/TITLE:
COMPANY/DEPT:. NUSSBAUMER & CLARKE, INC.
ADDRESS: 3556 LAKE SHORE ROAD, SUITE 500
BUFFALO, NEW YORK 14219

TELEPHONE 716-827-8000

OWNER/DEVELOPER

Name: Benchmark Streamline
Address: 4053 Maple Road
Amherst, NY 14226
Telephone: (716) 833-4986

CARMINAWOOD DESIGN



LOCATION MAP
NOT TO SCALE

July 2026

DRAWING NO.	DRAWING TITLE
–	COVER SHEET
–	BOUNDARY/TOPO SURVEY (by Nussbaumer & Clark, Inc.)
C-001	DEMOLITION & EROSION CONTROL PLAN – PH1
C-002	DEMOLITION & EROSION CONTROL PLAN – UTILITY PHASING
C-003	DEMOLITION & EROSION CONTROL PLAN – PH2
C-004	DEMOLITION & EROSION CONTROL DETAILS
C-100	SITE PLAN – OVERALL
C-101	SITE PLAN – NORTHWEST
C-102	SITE PLAN – NORTHEAST
C-103	SITE PLAN – SOUTHWEST
C-104	SITE DETAILS
C-200	GRADING PLAN – OVERALL
C-201	GRADING PLAN – NORTHWEST
C-202	GRADING PLAN – NORTHEAST
C-203	GRADING PLAN – SOUTHWEST
C-300	STORM DRAINAGE PLAN –OVERALL
C-301	STORM DRAINAGE PLAN – NORTHWEST
C-302	STORM DRAINAGE PLAN – NORTHEAST
C-303	STORM DRAINAGE PLAN – SOUTHWEST
C-304	WET POND PLAN & DETAIL
C-305	STORM DRAINAGE DETAILS
C-400	UTILITY PLAN – OVERALL
C-401	UTILITY PLAN – NORTHWEST
C-402	UTILITY PLAN – NORTHEAST
C-403	UTILITY PLAN – SOUTHWEST
C-404	UTILITY DETAILS
C-405	UTILITY DETAILS
L-100	LANDSCAPE PLAN – OVERALL
L-101	LANDSCAPE PLAN – NORTHWEST
L-102	LANDSCAPE PLAN – NORTHEAST
L-103	LANDSCAPE PLAN – SOUTHWEST
L-104	LANDSCAPE DETAILS
LP-100	PHOTOMETRIC PLAN – OVERALL
LP-101	PHOTOMETRIC PLAN – NORTHWEST
LP-102	PHOTOMETRIC PLAN – NORTHEAST
LP-103	PHOTOMETRIC PLAN – SOUTHWEST
LP-104	PHOTOMETRIC DETAILS

REVISIONS:

No.	Description	Date

West Seneca Exchange
Slade Ave, Ridge Road, & Orchard Park Road
West Seneca, New York

NOTES:

1. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. HORIZONTAL DATUM REFERENCED TO THE NORTH AMERICAN DATUM 1983 (NAD 83) - NEW YORK STATE PLANE WEST ZONE.
3. UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY CONSTRUCTION ACTIVITIES, ALL UTILITY COMPANIES SHOULD BE CONTACTED TO MARK THEIR LOCATIONS AND/OR EASEMENTS FOR ASSISTANCE CALL UPSTATE 811 OR 1-800-962-7962.
4. UDIGNY-ORG DESIGN TICKET No. 19354-001-49 WAS SUBMITTED TO REQUEST UTILITY
   - CHARTER (OPT NORTHEAST (WESTERN NY) HAS RESPONDED, CLEAR NO FACILITIES WITHIN
   - RIFT OF THE EXCAVATOR DEFINED WORK AREA.
   - CROWN CASTLE HAS RESPONDED, CLEAR NO FACILITIES WITHIN
   - RIFT OF THE EXCAVATOR DEFINED WORK AREA.
   - NATIONAL GRID HAS RESPONDED, CLEAR NO FACILITIES WITHIN
   - RIFT OF THE EXCAVATOR DEFINED WORK AREA.
   - SPECTRUM HAS RESPONDED, CLEAR NO FACILITIES WITHIN RIFT OF THE
   - EXCAVATOR DEFINED WORK AREA.
   - VERIZON HAS RESPONDED, CLEAR NO FACILITIES WITHIN RIFT OF THE
   - EXCAVATOR DEFINED WORK AREA.
   - WATER DEPT. HAS RESPONDED, CLEAR NO FACILITIES WITHIN RIFT OF THE
   - EXCAVATOR DEFINED WORK AREA.
   - NATIONAL GRID HAS RESPONDED, OVERHEAD AND UNDERGROUND LINES DRAWN HERON.
   - TOWN OF WEST SENECA HAS RESPONDED, MARKED, THE APPROXIMATE HORIZONTAL
   - EXCAVATION WORK IS BEING PERFORMED FOR THE FACILITY OWNER LOCATE WILL BE
   - REQUESTED IN THE AREAS WHERE THE FACILITIES ARE LOCATED WITHIN 5 FT OF THE
   - AREA HAVE BEEN MARKED DRAWN HERON.
   - ALL OTHER UTILITIES WITHIN THE PROJECT AREA HAVE BEEN MARKED BY
   - WITH THEIR ENGINEERING DEPT. DESIGN CONFLICT, PLEASE SHARE DESIGN DRAWINGS

NOTE: PROPOSED PROPERTY BOUNDARIES NOT CHECKED AND/OR LOCATED DUE TO THE PRESENCE OF EXCESSIVE SNOW AND/OR ICE

SLADE (WIDTH VARIES) AVENUE

ORCHARD PARK ROAD

CONSOLIDATED RAIL CORPORATION
(FORMERLY WESTERN NEW YORK & PENNSYLVANIA RAILROAD)
(FORMERLY NEW YORK CENTRAL RAILROAD)

RIDGE ROAD (WIDTH VARIES)

LEGEND

- IRON PIPE
- UNDERGROUND WATER
- UNDERGROUND SANITARY SEWER
- UNDERGROUND STORM SEWER
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC WIRES
- RAILROAD TRACKS
- GUIDERAIL
- INTERNET
- WATER VALVE
- SANITARY MANHOLE
- CATCH BASIN
- TELEPHONE BOX
- ELEC. BOX
- GAS VALVE
- GAS MARKER
- UTILITY POLE W/ LIGHT
- UTILITY POLE
- BOLLARD
- LIGHT POLE
- SIGN
- MAILBOX
- FLAG POLE
- SPOT ELEVATION
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB

MANHOLE AND CATCH BASIN INVERT LIST

NUSSBAUMER & CLARKE, INC.
CONSULTING ENGINEERS
3556 SOUTH BUFFALO STREET, ORCHARD PARK, NEW YORK 14127
PHONE (716) 827-8000 | FAX (716) 827-8005 | www.nussbaumerclarke.com

TOPOGRAPHIC SURVEY
3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183 & 197 Slade Avenue
Part of Lots 260, 259, 293 & 294, Township 10, Range 7
Town of West Seneca
County of Erie, State of New York
Date of Survey 03/25/2025 Scale: 1"=60'

Page 1040 of 1174

POTTERS ROAD (66' WIDE)

ORCHARD PARK (WIDTH VARIES) (FORMERLY POTTER ROAD) (ALSO KNOWN AS STATE HIGHWAY NO. 67) (ALSO KNOWN AS N.Y.S. ROUTE 240)

SLADE AVENUE (WIDTH VARIES)

NOTES

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3. THE LOCATION OF ANY UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY CONSTRUCTION ACTIVITIES, ALL UTILITY COMPANIES SHOULD BE NOTIFIED IN ORDER TO VERIFY OR AMEND THEIR LOCATIONS AND/OR EXISTENCE. FOR ASSISTANCE CALL UFPO AT 1-800-962-7962.
4. UDIGNY.ORG DESIGN TICKET No. 11054-001-618 WAS SUBMITTED TO REQUEST UTILITY RECORDS:
   - CHARTER COM NORTHEAST WESTERN NY: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - ERIE COUNTY DIVISION OF SEWER MANAGEMENT: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA DRAWN HERON.
   - ERIE COUNTY WATER AUTHORITY: HAS RESPONDED, DRAWN HERON.
   - FIRSTLIGHT FIBER: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - G4S SECURE INTEGRATION LLC: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - KIANTINE PIPELINE CORPORATION: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - LIGHTTOWER FIBER TECHNOLOGIES: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - NATIONAL FUEL GAS / BUFFALO NFG-101: HAS RESPONDED, DRAWN HERON.
   - NATIONAL GRID: HAS RESPONDED, OVERHEAD AND UNDERGROUND LINES DRAWN HERON.
   - NYSEG LANCASTER ELECTRIC: HAS RESPONDED, HAS RESPONDED, NO LOCATE REQUIRED - EXCAVATION WORK IS BEING PERFORMED FOR THE FACILITY OWNER. LOCATE WILL BE PERFORMED BY THE EXCAVATOR PER CONTRACTUAL AGREEMENT. DRAWN HERON.
   - TOWN OF WEST SENECA: HAS RESPONDED, MARKED, THE APPROXIMATE HORIZONTAL LOCATION OF UNDERGROUND FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA HAVE BEEN MARKED. DRAWN HERON.
   - VERIZON / BUFFALO: HAS RESPONDED, DESIGN CONFLICT, PLEASE SHARE DESIGN DRAWINGS WITH THEIR ENGINEERING DEPT.

MANHOLE AND CATCH BASIN INVERT LIST

SAN-MH-4
RIM=614.18
S 8"INV=603.65
E 8"INV=603.65

SAN-MH-5
RIM=611.76
N 15"INV=596.46
S 12"INV=598.11

SAN-MH-6
RIM=612.75
NE 12"INV=598.75
SW 8"INV=600.35
SE 12"INV=598.85

SAN-MH-7
RIM=614.00
N 8"INV=602.49
S 8"INV=602.49

SAN-MH-8
RIM=612.42
N 8"INV=603.34
S 8"INV=603.34
W 8"INV=601.33

SAN-MH-12
RIM=615.19
NW 8"INV=610.26
NW 10"INV=598.80
SE 10"INV=598.80

SAN-MH-13
RIM=614.92
NW 10"INV=600.27
SE 10"INV=600.27

SAN-MH-14
RIM=613.77
S 10"INV=601.07
W 10"INV=601.07

SAN-MH-15
RIM=614.27
SE 8"INV=604.02
COULD NOT SEE
NW-SW INV. FLOWS NW
SUMP=603.07

SAN-MH-16
RIM=613.98
CAN NOT SEE
NW-SE INV FLOWS NW
SW 8"INV=604.38
SUMP=604.38

SAN-MH-17
RIM=613.92
CAN NOT SEE
NW-SE INV FLOWS NW
SW 8"INV=604.92(STUB)
SUMP=604.52

SAN-MH-18
RIM=613.35
N 8"INV=604.94(REC)
SW 8"INV=604.94(REC)
SE 8"INV=606.35(REC)

SAN-MH-26
RIM=607.48

SAN-MH-27
RIM=607.39

SAN-MH-28
RIM=609.42
NW 8"INV=600.47
SE 8"INV=600.52

SAN-MH-29
RIM=609.59
NW 15"INV=593.99
SE 15"INV=594.04

SAN-MH-30
RIM=609.26
N 8"INV=603.25
S 8"INV=603.30

ST-MH-1
RIM=613.00
SW 15"INV=608.95
SUMP=603.60
UNABLE TO SEE 54" N-E-W PIPES FILLED WITH WATER

ST-MH-2
RIM=615.43
SUMP=605.43
FLOWS NW

ST-MH-3
RIM=613.35
NW 54"INV=606.05
S 42"INV=606.25
NE 15"INV=607.10
SUMP=606.05

ST-MH-4
RIM=613.98
BURIED &
SEALED SHUT

ST-MH-5
RIM=613.00
NW 12"INV=609.56
NE 12"INV=609.56

ST-MH-6
RIM=614.68
SW 24"INV=607.68
UNABLE TO
SEE N/S INV
SUMP=607.68

ST-MH-7
RIM=614.85
SW 24"INV=608.85
SUMP=608.90
FILLED WITH WATER
BROKEN NE SIDE

ST-MH-13
RIM=615.70

ST-MH-16
RIM=614.81
N 12"INV=603.91
FILLED W/ DEBRIS

UNKNOWN-MH-3
RIM=613.17
SUMP=609.85
FILLED W/ SNOW

UNKNOWN-MH-4
RIM=612.17

UNKNOWN-MH-5
RIM=610.37

UNKNOWN-MH-6
RIM=609.66

UNKNOWN-MH-7
RIM=608.22

CB-15
RIM=612.95
N 12"INV=610.25
S 12"INV=610.25
SUMP=609.95

CB-16
RIM=612.93
N 12"INV=611.43
S 12"INV=611.38
W 6"INV=611.83
SUMP=611.33

CB-21
RIM=612.70
SE 15"INV=609.50(REC)

CB-22
RIM=610.43
FILLED W/ WATER
SUMP=606.43

CB-23
RIM=611.33

CB-24
RIM=612.24

CB-25
RIM=614.58

CB-26
RIM=614.80

CB-27
RIM=616.58
SW 12"INV=611.01

CB-28
RIM=624.65

CB-29
RIM=633.76

CB-30
RIM=619.54
SW 58"x94"INV=609.71-(REC)
NE INV=601.90 -
TO CAZENOVIA CREEK

CB-31
RIM=614.64

CB-32
RIM=614.84

CB-33
RIM=616.35

CB-34
RIM=624.70

CB-35
RIM=633.68

CB-36
RIM=615.59
SE 12"INV=612.56
SUMP=612.24

CB-37
RIM=615.09
NW 12"INV=612.11
SW 18"INV=612.01

CB-38
RIM=615.25
SW 18"INV=611.30
CAN NOT SEE NE INV
SUMP=611.00

CB-39
RIM=613.17
SUMP=609.85
FILLED W/ SNOW

CB-40
RIM=613.12
NW 36"INV=606.12
SE 36"INV=606.12
SUMP=606.12

CB-41
RIM=612.47
NW 36"INV=606.27
SUMP=604.67

CB-42
RIM=612.90
SUMP=608.73
FILLED W/ ICE

CB-43
RIM=612.75
SUMP=609.88
FILLED W/ DEBRIS

CB-44
RIM=612.89
N 12"INV=609.64
E 12"INV=609.64

CB-45
RIM=610.45
NW 18"INV=606.45
SE 12"INV=606.73

CB-46
RIM=610.95
NW 12"INV=607.01
SE 12"INV=607.21

CB-47
RIM=612.15
SE 12"INV=608.89
NW 12"INV=608.89

CB-48
RIM=612.94
SUMP=609.84
FILLED W/ DEBRIS

CB-49
RIM=612.48
(BURIED)

CB-50
RIM=611.73
NE 60"INV=605.30(REC)
NW 40"INV=605.30(REC)
SW 24"INV=605.30(REC)

CB-51
RIM=611.35
E 60"INV=604.67(REC)
SW 60"INV=604.67(REC)

CB-52
RIM=613.06
SUMP=604.66
FULL OF SNOW

CB-53
RIM=612.95
SUMP=605.55
FULL OF SNOW

CB-54
RIM=611.70
N 30"INV=607.40(REC)
S 30"INV=607.70(REC)

CB-57
RIM=612.64
SUMP=606.12
FILLED W/ WATER

CB-62
RIM=612.94
SUMP=609.54

CB-63
RIM=612.84
SUMP=609.84
FLOWS NORTH

CB-89
RIM=617.67
NW 18"INV=613.95
SE 18"INV=613.92
S 12"INV=614.67
SW 6"INV=615.03
SUMP=613.57

CB-90
RIM=617.08
SE 18"INV=613.23
NE 18"INV=612.28
SW 18"INV=613.60

CB-92
RIM=608.10

CB-93
RIM=609.12
SW 12"INV=606.32
SUMP=606.12

CB-94
RIM=610.86

CB-95
RIM=611.98

CB-96
RIM=608.24

CB-97
RIM=609.11
NW 18"INV=605.13
NE 12"INV=605.16
SW 8"INV=606.21
SE 12"INV=605.21
SUMP=605.11

CB-98
RIM=610.32
NW 12"INV=605.77
SE 6"INV=606.67
S 12"INV=606.12
SUMP=605.72

CB-99
RIM=608.04

CB-100
RIM=608.46

CB-101
RIM=610.01

CB-102
RIM=610.24
FILLED W/ WATER
SUMP=605.94

LEGEND

- HYDRANT
- WATER VALVE
- WATER SERVICE VALVE
- SANITARY MANHOLE
- CATCH BASIN
- STORM MANHOLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- GUY WIRE
- BOLLARD
- LIGHT POLE
- HANDHOLE
- ELEC. BOX
- TELEPHONE BOX
- SIGN
- GAS VALVE
- GAS MARKER
- W — UNDERGROUND WATER
- SA — UNDERGROUND SANITARY SEWER
- ST — UNDERGROUND STORM SEWER
- G — UNDERGROUND GAS LINE
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND ELECTRIC WIRES
- RAILROAD TRACKS
- GUARDRAIL

NOTE: PHYSICAL FEATURES AT GROUND LEVEL NOT CHECKED AND/OR LOCATED DUE TO THE PRESENCE OF EXCESSIVE SNOW AND/OR ICE.

THIS SURVEY IS NOT VALID WITH AN AFFIDAVIT OF NO CHANGE

NO IRONS SET OR FOUND AT PROPERTY CORNERS UNLESS NOTED HEREON.

3556 Lake Shore Road, Suite 500, Buffalo, NY 14219
p (716) 827-8000 f (716) 270-6091 www.nussclarke.com

Unauthorized alterations or additions to any survey, drawing, design, specification, plan or report is a violation of section 7209, provision 2 of the New York State Education Law.

TOPOGRAPHIC SURVEY

325, 349 & 355 Orchard Park Road
115, 119, 123, 135, 139, 171, 175, 181, 183, 193 & 197 Slade Avenue
Part of Lots 280, 292, 293 & 294, Township 10, Range 7
Buffalo Creek Reservation
Town of West Seneca
County of Erie, State of New York

Date of Survey: 03/25/2025 Scale : 1" = 60' Sheet 1 of 3

Project No. : 2532-1661

PARCEL I
"TOPS"
355 ORCHARD PARK ROAD



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   - CHARTER COM NORTHEAST WESTERN NY: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - ERIE COUNTY DIVISION OF SEWER MANAGEMENT: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA DRAWN HERON.
   - ERIE COUNTY WATER AUTHORITY: HAS RESPONDED, DRAWN HERON.
   - FIRSTLIGHT FIBER: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - G4S SECURE INTEGRATION LLC: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - KIANTINE PIPELINE CORPORATION: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - LIGHTTOWER FIBER TECHNOLOGIES: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
   - NATIONAL FUEL GAS / BUFFALO NFG-101: HAS RESPONDED, DRAWN HERON.
   - NATIONAL GRID: HAS RESPONDED, OVERHEAD AND UNDERGROUND LINES DRAWN HERON.
   - NYSEG LANCASTER ELECTRIC: HAS RESPONDED, HAS RESPONDED, NO LOCATE REQUIRED - EXCAVATION WORK IS BEING PERFORMED FOR THE FACILITY OWNER. LOCATE WILL BE PERFORMED BY THE EXCAVATOR PER CONTRACTUAL AGREEMENT. DRAWN HERON.
   - TOWN OF WEST SENECA: HAS RESPONDED, MARKED, THE APPROXIMATE HORIZONTAL LOCATION OF UNDERGROUND FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA HAVE BEEN MARKED. DRAWN HERON.
   - VERIZON / BUFFALO: HAS RESPONDED, DESIGN CONFLICT, PLEASE SHARE DESIGN DRAWINGS WITH THEIR ENGINEERING DEPT.

MANHOLE AND CATCH BASIN INVERT LIST

SAN-MH-1
RIM=614.61
N 8"INV=607.58
S 8"INV=606.58

SAN-MH-2
RIM=614.14
N 8"INV=606.69
S 8"INV=606.69

SAN-MH-3
RIM=613.37
N 8"INV=605.46
S 8"INV=605.46

SAN-MH-9
RIM=613.37
N 8"INV=605.31
S 8"INV=605.31

SAN-MH-10
RIM=613.41
N 8"INV=606.59
S 8"INV=606.59

SAN-MH-11
RIM=614.07
N 8"INV=607.35
S 8"INV=607.35

SAN-MH-19
RIM=614.49
NW 8"INV=607.79
SE 8"INV=607.79

SAN-MH-20
RIM=615.25
SW 8"INV=609.41(REC)
SE 8"INV=609.51(REC)

SAN-MH-21
RIM=615.73
NE 8"INV=606.23
NW 8"INV=606.68
SE 8"INV=606.98

SAN-MH-22
RIM=615.25
NE 8"INV=605.83
SW 8"INV=605.75
SE 8"INV=606.25

SAN-MH-23
RIM=617.05
NE 8"INV=607.22

SAN-MH-24
RIM=616.70
N 8"INV=610.73(REC)

SAN-MH-25
RIM=622.66
FULL OF DIRT

ST-MH-8
RIM=613.11
N 40"INV=608.67(REC)
S 15"INV=608.67(REC)
W 21"INV=608.67(REC)
SIDE WALL BROKEN
WATER FLOWS NORTH

ST-MH-9
RIM=616.91
NE 36"INV=609.66
NW 15"INV=610.76
SW 30"INV=609.86

ST-MH-10
RIM=614.44
SW15"=607.36
FILLED W/ WATER

ST-MH-11
RIM=612.47
NE 18"INV=608.18
SW 24"INV=609.18
FILLED W/ WATER

ST-MH-12
RIM=612.19
SW 15"INV=608.49

ST-MH-14
RIM=614.61
SE 12"INV=608.11
S 12"INV=611.71
W 12"INV=607.91

ST-MH-15
RIM=611.02
SE 18"INV=614.98
W 18"INV=614.98

ST-MH-17
RIM=615.75
N 24"INV=612.17(REC)
S 15"INV=612.17(REC)
W 15"INV=613.25(REC)

ST-MH-10
SUMP=607.24
FILLED W/ SNOW

CB-7
RIM=615.29
SUMP=614.94
FILLED W/ DEBRIS

CB-8
RIM=614.72
SE 18"INV=612.82
SW 18"INV=612.77
SUMP=612.72

CB-9
RIM=614.42
S 12"INV=611.12
W 6"INV=612.20
SUMP=611.12

CB-10
RIM=614.90
HEAVY SILTED
TOP OF DEBRIS=611.90

CB-11
RIM=615.98
N 18"INV=609.28
S 18"INV=609.28
SE 12"=610.46

CB-12
RIM=613.17
N 18"INV=608.57
S 18"INV=608.57
E 12"INV=608.77
SUMP=608.57

CB-13
RIM=613.24
N 12"INV=609.44
S 12"INV=609.44
SUMP=609.24

CB-14
RIM=612.95
N 12"INV=609.57
S 12"INV=609.55
SUMP=609.45

CB-17 (SMALL)
(18"x18")
RIM=613.32
N 4"INV=611.52
S 4"INV=611.62
SUMP=611.22

CB-18
RIM=613.20
S 12"INV=610.35
SUMP=611.30

CB-19
RIM=612.64
NW 12"INV=609.55
S 12"INV=609.65
E 12"INV=609.65

CB-20
RIM=611.56
E 21"INV=609.25(REC)

ST-MH-12
RIM=612.19
SW 15"INV=608.49

ST-MH-14
RIM=614.61
SE 12"INV=608.11
S 12"INV=611.71
W 12"INV=607.91

ST-MH-15
RIM=611.02
SE 18"INV=614.98
W 18"INV=614.98

ST-MH-17
RIM=615.75
N 24"INV=612.17(REC)
S 15"INV=612.17(REC)
W 15"INV=613.25(REC)

CB-7
RIM=615.29
SUMP=614.94
FILLED W/ DEBRIS

CB-8
RIM=614.72
SE 18"INV=612.82
SW 18"INV=612.77
SUMP=612.72

CB-9
RIM=614.42
S 12"INV=611.12
W 6"INV=612.20
SUMP=611.12

CB-10
RIM=614.90
HEAVY SILTED
TOP OF DEBRIS=611.90

CB-11
RIM=615.98
N 18"INV=609.28
S 18"INV=609.28
SE 12"=610.46

CB-12
RIM=613.17
N 18"INV=608.57
S 18"INV=608.57
E 12"INV=608.77
SUMP=608.57

CB-13
RIM=613.24
N 12"INV=609.44
S 12"INV=609.44
SUMP=609.24

CB-14
RIM=612.95
N 12"INV=609.57
S 12"INV=609.55
SUMP=609.45

CB-17 (SMALL)
(18"x18")
RIM=613.32
N 4"INV=611.52
S 4"INV=611.62
SUMP=611.22

CB-18
RIM=613.20
S 12"INV=610.35
SUMP=611.30

CB-19
RIM=612.64
NW 12"INV=609.55
S 12"INV=609.65
E 12"INV=609.65

CB-20
RIM=611.56
E 21"INV=609.25(REC)

CB-55
RIM=611.92
N 30"INV=607.62(REC)
S 30"INV=607.92(REC)

CB-56
RIM=612.17
N 30"INV=608.51

CB-58
RIM=611.67
W 8"INV=608.17

CB-59
RIM=612.49
N 40"INV=608.64(REC)
S 15"INV=608.64(REC)

CB-60
RIM=611.46
SUMP=607.24
FILLED W/ SNOW

CB-61
RIM=611.76
N 40"INV=607.36(REC)
S 40"INV=607.36(REC)
W 18"INV=609.98
(EAST SIDE BROKEN)

CB-64
RIM=612.98
NE 42"INV=606.43
SW 36"INV=606.48
FLOWS NORTH

CB-65
RIM=614.52
SUMP=608.02
FLOWS NORTH

CB-66
RIM=614.26
SUMP=607.36

CB-67
RIM=614.35
NE 36"INV=608.85
SW 36"INV=608.60
NE 4"INV=610.15
SE 4"INV=610.10

CB-68
RIM=614.38
NE 36"INV=609.38
SW 30"INV=609.38
NW 4"INV=612.48
SW 4"INV=612.53
SE 24"INV=610.46

CB-69
RIM=614.35
SUMP=610.37
FILLED W/ SNOW

CB-70
RIM=615.35
SE 4"INV=612.60
SW 4"INV=612.60
SUMP=611.35

CB-71
RIM=615.22
SE 15"INV=611.87
SUMP=611.82

CB-72
RIM=616.01
FILLED W/
ICE & SNOW

CB-73
RIM=615.28
NE 12"INV=608.00

CB-74
RIM=611.78
NE 15"INV=608.77
SW 18"INV=608.58
SW 12"INV=609.13

CB-91
RIM=612.67
N 12"INV=609.15
SUMP=609.07

NOTE: PHYSICAL FEATURES AT GROUND LEVEL NOT CHECKED AND/OR LOCATED DUE TO THE PRESENCE OF EXCESSIVE SNOW AND/OR ICE.

THIS SURVEY IS NOT VALID WITH AN AFFIDAVIT OF NO CHANGE

NO IRONS SET OR FOUND AT PROPERTY CORNERS UNLESS NOTED HEREON

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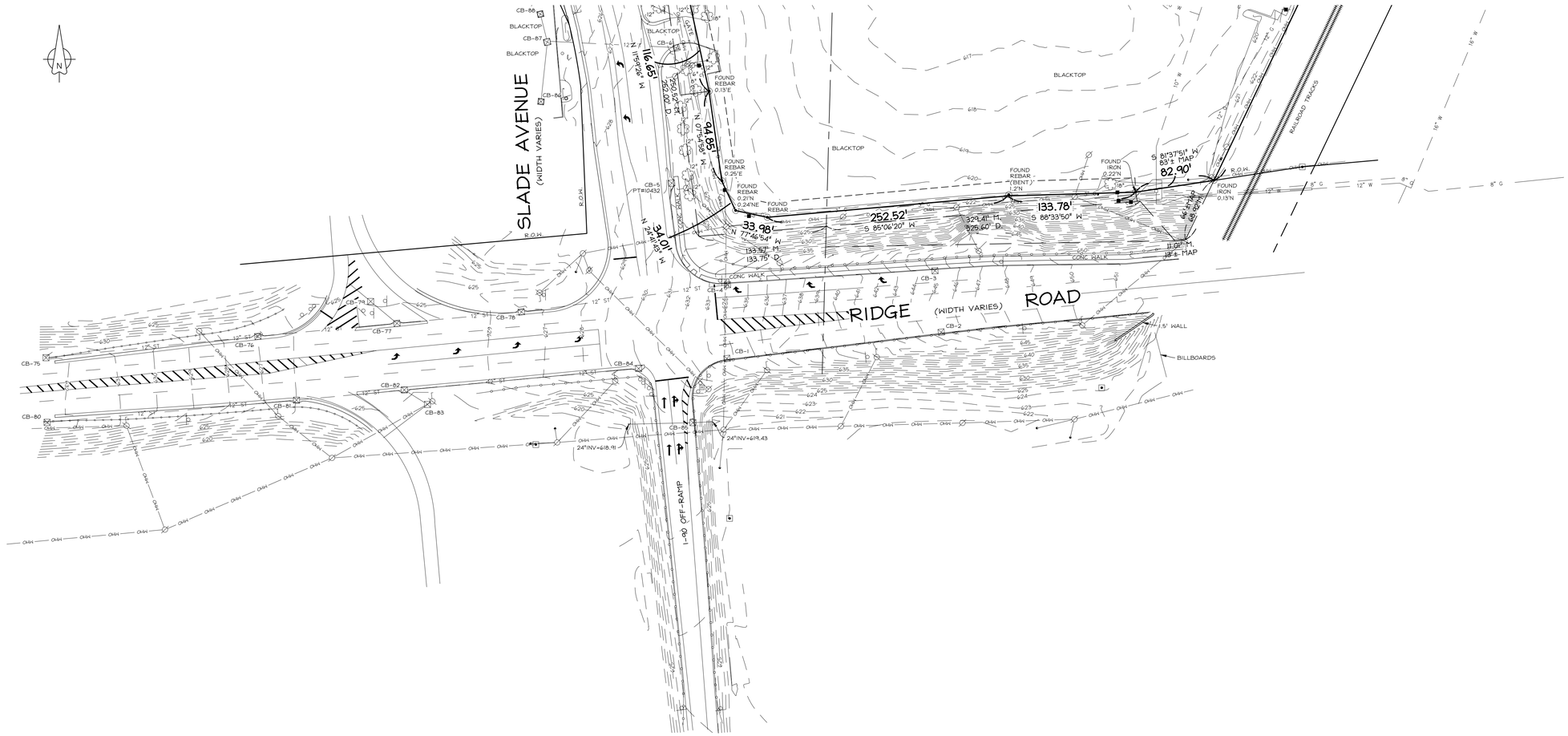
TOPOGRAPHIC SURVEY

325, 349 & 355 Orchard Park Road
115, 119, 123, 135, 139, 171, 175, 181, 183, 193 & 197 Slade Avenue
Part of Lots 280, 292, 293 & 294, Township 10, Range 7
Buffalo Creek Reservation
Town of West Seneca
County of Erie, State of New York

Date of Survey: 03/25/2025 Scale: 1" = 60' Sheet 2 of 3

Project No.: 25J2-1661

MEMBER Association Inc.



MANHOLE AND CATCH BASIN INVERT LIST

CB-1
RIM=633.69

CB-2
RIM=645.08

CB-3
RIM=644.83

CB-4
RIM=633.94

CB-5
RIM=628.66

CB-6
RIM=628.12
W 12"INV=622.95

CB-75
RIM=631.82
E 12"INV=629.70

CB-76
RIM=626.92
SUMP=623.12±
FILLED W/ DEBRIS

CB-77
RIM=625.02
NW 12"INV=621.06
W 12"INV=620.92
E 12"INV=620.72

CB-78
RIM=626.44
E 12"INV= 622.58
W 12"INV= 622.49

CB-79
RIM=624.39
NW 12"INV=619.32
SE 12"INV=620.15

CB-80
RIM=631.82
E 12"INV=629.53

CB-81
RIM=625.73
E 12"INV=621.71
W 12"INV=621.73

CB-82
RIM=625.36
SE 18"INV=620.38
E 12"INV=620.76
W 12"INV=621.38

CB-83
RIM=624.14
NW 18"INV=619.37
SW 18"INV=619.23

CB-84
RIM=629.58
W 18"INV=624.18

CB-85
RIM=629.90

CB-86
RIM=624.09
N 12"INV=620.54
SUMP=620.39

CB-87
RIM=624.22
FULL OF DEBRIS
TOP OF DEBRIS=622.02

CB-88
RIM=624.17
FULL OF DEBRIS
TOP OF DEBRIS=621.47

CB-89
RIM=617.67
NW 18"INV=613.95
SE 18"INV=613.92
S 12"INV=614.67

CB-90
RIM=617.08
SE 18"INV=613.23
NE 18"INV=612.28
SW 18"INV=613.60

CB-91
RIM=612.67
W 12"INV=609.15
SUMP=609.07

CB-92
RIM=608.10

CB-93
RIM=609.12
SW 12"INV=606.32
SUMP=606.12

CB-94
RIM=610.86

CB-95
RIM=611.98

CB-96
RIM=608.24

CB-97
RIM=609.11
NW 18"INV=605.13
NE 12"INV=605.16
SW 8"INV=606.21
SE 12"INV=605.21
SUMP=605.11

CB-98
RIM=610.32
NW 12"INV=605.77
SE 4"INV=606.67
S 12"INV=606.12
SUMP=605.72

CB-99
RIM=608.04

CB-100
RIM=608.46

CB-101
RIM=610.01

CB-102
RIM=610.24
FILLED W/ WATER
SUMP=605.94

LEGEND

- HYDRANT
- WATER VALVE
- WATER SERVICE VALVE
- SANITARY MANHOLE
- CATCH BASIN
- STORM MANHOLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- GUY WIRE
- BOLLARD
- LIGHT POLE
- HANDHOLE
- ELEC. BOX
- TELEPHONE BOX
- SIGN
- GAS VALVE
- GAS MARKER
- W — UNDERGROUND WATER
- SA — UNDERGROUND SANITARY SEWER
- ST — UNDERGROUND STORM SEWER
- G — UNDERGROUND GAS LINE
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND ELECTRIC WIRES
- RAILROAD TRACKS
- GUARDRAIL

NOTES

1. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. HORIZONTAL DATUM REFERENCES THE NORTH AMERICAN DATUM 1983 (NAD 83) - NEW YORK STATE PLANE WEST ZONE.
3. THE LOCATION OF ANY UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY CONSTRUCTION ACTIVITIES, ALL UTILITY COMPANIES SHOULD BE NOTIFIED IN ORDER TO VERIFY OR AMEND THEIR LOCATIONS AND/OR EXISTENCE. FOR ASSISTANCE CALL UFPO AT 1-800-962-7962.
4. UDIGNY.ORG DESIGN TICKET No. 11054-001-618 WAS SUBMITTED TO REQUEST UTILITY RECORDS:

- CHARTER COM NORTHEAST WESTERN NY: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
- ERIE COUNTY DIVISION OF SEWER MANAGEMENT: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA DRAWN HERON.
- ERIE COUNTY WATER AUTHORITY: HAS RESPONDED, DRAWN HERON.
- FIRSTLIGHT FIBER: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
- G4S SECURE INTEGRATION LLC: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
- KIANTINE PIPELINE CORPORATION: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
- LIGHTTOWER FIBER TECHNOLOGIES: HAS RESPONDED, CLEAR NO FACILITIES WITHIN 15FT OF THE EXCAVATOR DEFINED WORK AREA.
- NATIONAL FUEL GAS / BUFFALO NFG-101: HAS RESPONDED, DRAWN HERON.
- NATIONAL GRID: HAS RESPONDED, OVERHEAD AND UNDERGROUND LINES DRAWN HERON.
- NYSEG LANCASTER ELECTRIC: HAS RESPONDED, HAS RESPONDED, NO LOCATE REQUIRED - EXCAVATION WORK IS BEING PERFORMED FOR THE FACILITY OWNER. LOCATE WILL BE PERFORMED BY THE EXCAVATOR PER CONTRACTUAL AGREEMENT. DRAWN HERON.
- TOWN OF WEST SENECA: HAS RESPONDED, MARKED, THE APPROXIMATE HORIZONTAL LOCATION OF UNDERGROUND FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA HAVE BEEN MARKED. DRAWN HERON.
- VERIZON / BUFFALO: HAS RESPONDED, DESIGN CONFLICT, PLEASE SHARE DESIGN DRAWINGS WITH THEIR ENGINEERING DEPT.

NOTE: PHYSICAL FEATURES AT GROUND LEVEL NOT CHECKED AND/OR LOCATED DUE TO THE PRESENCE OF EXCESSIVE SNOW AND/OR ICE.

MEMBER

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NUSSBAUMER & CLARKE, INC. ENGINEERS AND SURVEYORS EST. 1933

TOPOGRAPHIC SURVEY

325, 349 & 355 Orchard Park Road
115, 119, 123, 135, 139, 171, 175, 181, 183, 193 & 197 Slade Avenue
Part of Lots 280, 292, 293 & 294, Township 10, Range 7
Buffalo Creek Reservation
Town of West Seneca
County of Erie, State of New York

Date of Survey: 03/25/2025 Scale : 1" = 60' Sheet 3 of 3

Project No. : 2532-1661

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PHASE - 1 DEMOLITION NARRATIVE:

DEMOLITION WORK TO BE PERFORMED DURING PHASE-1 SHALL INCLUDE THE FOLLOWING:

- REMOVAL OF EXISTING PAVEMENT, CURBING, SIDEWALK, BUILDING FOOTPRINT/FOUNDATION WITHIN HATCHED LIMITS AS SHOWN.

- REMOVAL OF EXISTING SITE UTILITIES, AS SHOWN ON SHEET 'C-002', TO BE COORDINATED WITH PROPOSED UTILITY CONNECTIONS FROM THE PROPOSED UTILITY PLANS IN ORDER TO MAINTAIN FULL SERVICE OF UTILITIES FOR EXISTING TENANTS.

- REMOVAL OF EXISTING TREES, LIGHT POLES, FENCING, AND OTHER SITE ITEMS AS LISTED ON 'C-001'.

-REMOVAL OF INTERNAL ROADWAY CONNECTION WITHIN EXISTING SITE WHILE MAINTAINING ACCESS FOR EXISTING TENANTS ALONG ORCHARD PARK ROAD AND SLADE AVENUE AS SHOWN.

DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH OWNER ON WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
7. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
8. REMOVE EXISTING BUILDING TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.

EROSION CONTROL NOTES

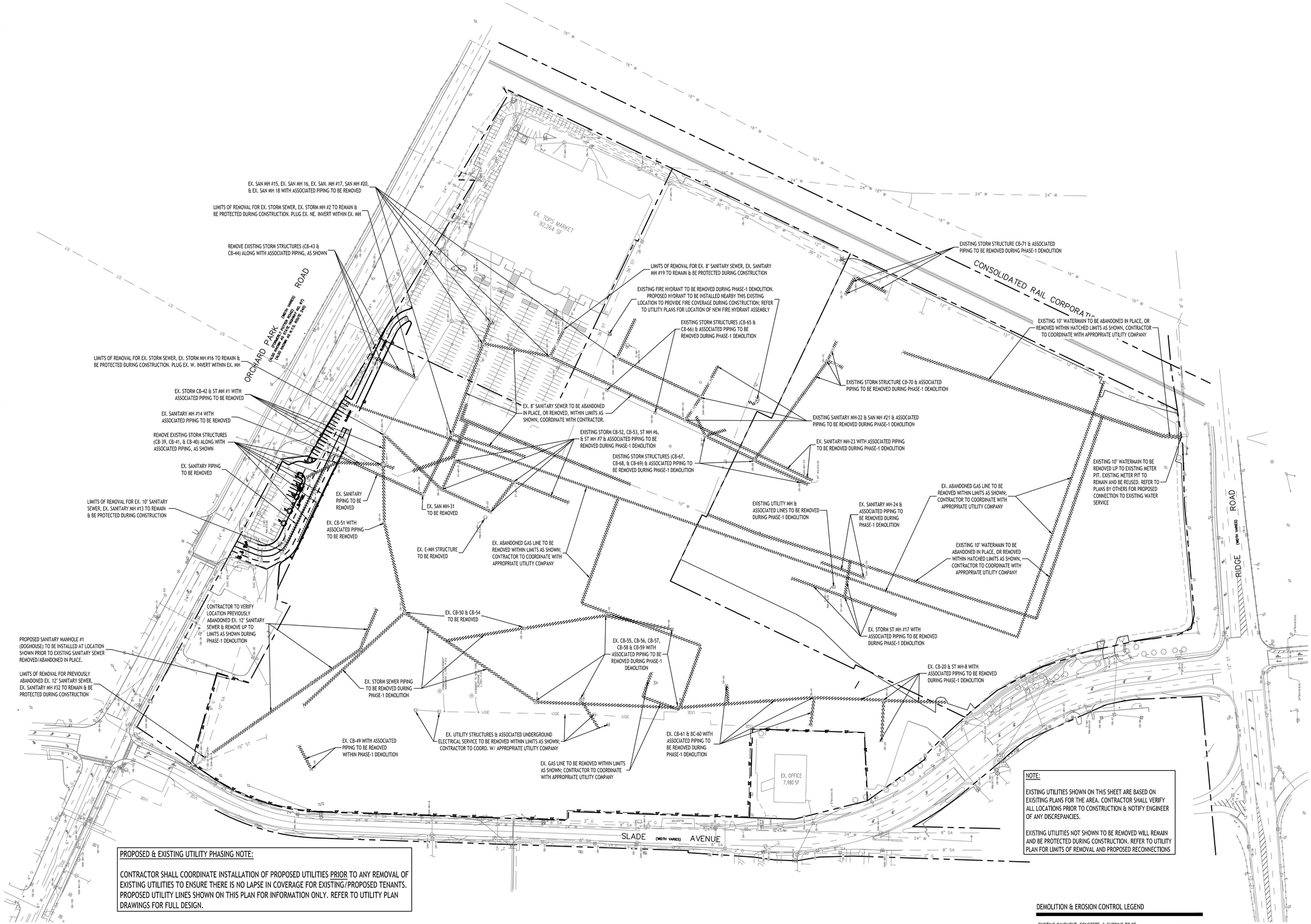
THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT SOCK BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT SOCK BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT SOCK AROUND THE BASE OF STOCKPILES. STOCKPILES NOT BEING ACTIVELY USED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY, AND WHEN DISTURBING MORE THAN 5 ACRES TWICE A WEEK, AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF WEST SENECA (BI)WEEKLY.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.

EX. LIGHT POLE & BASE TO REMAIN FOR PHASE-1 DEMO & SHALL BE REMOVED DURING PHASE-2 DEMO
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO REMAIN FOR PHASE-1 DEMO & SHALL BE REMOVED DURING PHASE-2 DEMO
EX. SIGNS TO BE REMOVED WITHIN PHASE-1 DEMOLITION
LIMITS OF EX. FENCING TO BE REMOVED WITHIN PHASE-1 DEMOLITION
INLET PROTECTION TO BE INSTALLED ON INLETS TO REMAIN DURING PHASE-1 OF DEMOLITION, TYP. FOR ALL SHOWN
CONTRACTOR TO TEMPORARY CLOSE DOWN ROADWAY WHILE REMOVING EXISTING UTILITIES
EXISTING SITE ENTRANCE AT ORCHARD PARK ROAD TO REMAIN OPEN AND MAINTAINED FOR ENTIRE DURATION OF CONSTRUCTION
LIMIT OF PROPOSED SILT SOCK TO BE INSTALLED
PROPOSED SILT SOCK TO BE INSTALLED AT LOCATIONS SHOWN. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. CURBED ISLAND TO BE REMOVED
INSTALL STABILIZED CONSTRUCTION ENTRANCE & CONCRETE WASHOUT AREA AT LOCATION SHOWN. CONTRACTOR TO MAINTAIN ENTRANCE & CONCRETE WASHOUT PIT FOR DURATION OF CONSTRUCTION
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EX. FENCING TO BE REMOVED WITHIN PHASE-1 DEMOLITION
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EX. BLACKTOP & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. ROADWAY GATES TO BE REMOVED
EX. SECTION OF FENCING TO BE REMOVED
PROPOSED SILT SOCK TO BE INSTALLED AT LOCATIONS SHOWN. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
PROVIDE OPENING ALONG SILT SOCK AS SHOWN FOR PROPOSED SITE DRIVEWAY. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
PROPOSED CONSTRUCTION CHAIN LINK FENCE TO BE INSTALLED ALONG CONSTRUCTION LIMITS FOR PHASE-1 SITE WORK
EX. TOPS MARKET 92,264 SF
EXISTING CONCRETE CURB ISLANDS TO BE REMOVED WITHIN HATCHED LIMITS AS SHOWN. REFER TO DRAWING 'C-003' FOR EXISTING UTILITY REMOVAL LIMITS & PHASING.
EXISTING UTILITY MH TO REMAIN & BE PROTECTED DURING CONSTRUCTION
REMOVE EXISTING ROW OF SIGNAGE WITHIN PARKING LOT
EX. LIGHT POLE & BASE TO REMAIN & BE PROTECTED
PROPOSED CONSTRUCTION CHAIN LINK FENCE TO BE INSTALLED ALONG CONSTRUCTION LIMITS FOR PHASE-1 SITE WORK
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EX. LIGHT POLE & BASE TO BE REMOVED
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. CURBING TO BE REMOVED
EX. OFFICE 7,980 SF
LIMITS OF EX. FENCING TO BE REMOVED WITHIN PHASE-1 DEMOLITION
EXISTING CONCRETE CURB ISLAND WITH FIRE HYDRANT & BOLLARDS TO BE REMOVED
EXISTING BUILDING CONCRETE FOUNDATION/FOOTPRINT TO BE REMOVED WITHIN HATCHED LIMITS AS SHOWN
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EX. LIGHT POLE & BASE TO BE REMOVED
EX. CONCRETE CURBED ISLAND TO BE REMOVED
EX. LIGHT POLE W/BASE & BOLLARDS TO BE REMOVED
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EX. LIGHT POLE & BASE TO BE REMOVED
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO BE REMOVED
EX. CURBING AND ROADWAY GATE TO BE REMOVED
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EXISTING TREES TO BE REMOVED AS SHOWN; REFER TO OFFSITE ROADWAY IMPROVEMENT PLANS FOR LIMITS OF REMOVAL BY PASSERO ASSOCIATES
INSTALL STABILIZED CONSTRUCTION ENTRANCE & CONCRETE WASHOUT AREA AT LOCATION SHOWN. CONTRACTOR TO MAINTAIN ENTRANCE & CONCRETE WASHOUT PIT FOR DURATION OF CONSTRUCTION
PROPOSED SILT SOCK TO BE INSTALLED AT LOCATIONS SHOWN. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
LIMIT OF PROPOSED SILT SOCK TO BE INSTALLED
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EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO REMAIN FOR PHASE-1 DEMO & SHALL BE REMOVED DURING PHASE-2 DEMO
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. SIGNS TO BE REMOVED WITHIN PHASE-1 DEMOLITION
LIMITS OF EX. FENCING TO BE REMOVED WITHIN PHASE-1 DEMOLITION
INLET PROTECTION TO BE INSTALLED ON INLETS TO REMAIN DURING PHASE-1 OF DEMOLITION, TYP. FOR ALL SHOWN
CONTRACTOR TO TEMPORARY CLOSE DOWN ROADWAY WHILE REMOVING EXISTING UTILITIES
EXISTING SITE ENTRANCE AT ORCHARD PARK ROAD TO REMAIN OPEN AND MAINTAINED FOR ENTIRE DURATION OF CONSTRUCTION
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EX. CURBED ISLAND TO BE REMOVED
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EX. FENCING TO BE REMOVED WITHIN PHASE-1 DEMOLITION
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EX. BLACKTOP & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. ROADWAY GATES TO BE REMOVED
EX. SECTION OF FENCING TO BE REMOVED
PROPOSED SILT SOCK TO BE INSTALLED AT LOCATIONS SHOWN. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
PROVIDE OPENING ALONG SILT SOCK AS SHOWN FOR PROPOSED SITE DRIVEWAY. CONTRACTOR TO MAINTAIN UNTIL SITE HAS BEEN FULLY STABILIZED.
PROPOSED CONSTRUCTION CHAIN LINK FENCE TO BE INSTALLED ALONG CONSTRUCTION LIMITS FOR PHASE-1 SITE WORK
EX. TOPS MARKET 92,264 SF
EXISTING CONCRETE CURB ISLANDS TO BE REMOVED WITHIN HATCHED LIMITS AS SHOWN. REFER TO DRAWING 'C-003' FOR EXISTING UTILITY REMOVAL LIMITS & PHASING.
EXISTING UTILITY MH TO REMAIN & BE PROTECTED DURING CONSTRUCTION
REMOVE EXISTING ROW OF SIGNAGE WITHIN PARKING LOT
EX. LIGHT POLE & BASE TO REMAIN & BE PROTECTED
PROPOSED CONSTRUCTION CHAIN LINK FENCE TO BE INSTALLED ALONG CONSTRUCTION LIMITS FOR PHASE-1 SITE WORK
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EX. LIGHT POLE & BASE TO BE REMOVED
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO BE REMOVED
EX. CURBING AND ROADWAY GATE TO BE REMOVED
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EXISTING TREES TO BE REMOVED AS SHOWN; REFER TO OFFSITE ROADWAY IMPROVEMENT PLANS FOR LIMITS OF REMOVAL BY PASSERO ASSOCIATES
INSTALL STABILIZED CONSTRUCTION ENTRANCE & CONCRETE WASHOUT AREA AT LOCATION SHOWN. CONTRACTOR TO MAINTAIN ENTRANCE & CONCRETE WASHOUT PIT FOR DURATION OF CONSTRUCTION
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO BE REMOVED
EX. BLACKTOP, CONCRETE, & CURBING WITHIN HATCHED AREA TO BE REMOVED DURING PHASE - 1 OF DEMOLITION
EX. LIGHT POLE & BASE TO BE REMOVED
EX. CURBING TO BE REMOVED
EX. LIGHT POLE & BASE TO BE REMOVED
EX. TREE TO BE REMOVED DURING PHASE - 1 OF DEMOLITION, TYPICAL FOR ALL SHOWN
EXISTING CHAIN LINK FENCE TO BE REMOVED ALONG EXISTING ROADWAY TO ALLOW FOR PHASE-1 SITE WORK TO BE PERFORMED WITHIN LIMITS AS SHOWN
EX. CURBING AND ROADWAY GATE TO BE REMOVED

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PROPOSED & EXISTING UTILITY PHASING NOTE:

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES PRIOR TO ANY REMOVAL OF EXISTING UTILITIES TO ENSURE THERE IS NO LAPSE IN COVERAGE FOR EXISTING/PROPOSED TENANTS. PROPOSED UTILITY LINES SHOWN ON THIS PLAN FOR INFORMATION ONLY. REFER TO UTILITY PLAN DRAWINGS FOR FULL DESIGN.

NOTE:

EXSTING UTILITIES SHOWN ON THIS SHEET ARE BASED ON EXISITING PLANS FOR THE AREA. CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION & NOTIFY ENGINEER OF ANY DISCREPANCIES.

EXISTING UTILITIES NOT SHOWN TO BE REMOVED WILL REMAIN AND BE PROTECTED DURING CONSTRUCTION. REFER TO UTILITY PLAN FOR LIMITS OF REMOVAL AND PROPOSED RECONNECTIONS

DEMO & E.C. PLAN - UTILITY PHASING

SCALE: 1"=100'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT, CONCRETE, & CURBING TO BE SAWCUT & REMOVED WITHIN HATCHED LIMITS
- PROPOSED SILT SOCK — SF — SF —
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION
- EXISTING UTILITY STRUCTURE & PIPING TO BE REMOVED

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER R. WOOD * 076394 LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:

Demolition & Erosion Control Plan - Utility Phasing

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

C-002

Project No: 24-4113

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PHASE - 2 DEMOLITION NARRATIVE:

DEMOLITION WORK TO BE PERFORMED DURING PHASE-2 SHALL INCLUDE THE FOLLOWING:

- REMOVAL OF EXISTING PAVEMENT, CURBING, SIDEWALK, BUILDING FOOTPRINT/FOUNDATION WITHIN HATCHED LIMITS AS SHOWN.

- REMOVAL OF REMAINING EXISTING SITE UTILITIES WITHIN PHASE - 2 DEMOLITION LIMITS, AS SHOWN ON SHEET 'C-002', TO BE COORDINATED WITH PROPOSED UTILITY CONNECTIONS FROM THE PROPOSED UTILITY PLANS IN ORDER TO MAINTAIN FULL SERVICE OF UTILITIES FOR EXISTING TENANTS.

- REMOVAL OF EXISTING TREES, LIGHT POLES, FENCING, AND OTHER SITE ITEMS AS LISTED ON 'C-003'.

-REMOVAL OF EXISTING ACCESS TO 'TOPS MARKET'S AT ORCHARD PARK ROADWAY & CONNECTION TO PROPOSED INTERNAL ROADWAY AS SHOWN ON PLAN 'C-003' TO RE-INTRODUCE INTERNAL TRAFFIC FLOW TO PLAZA.

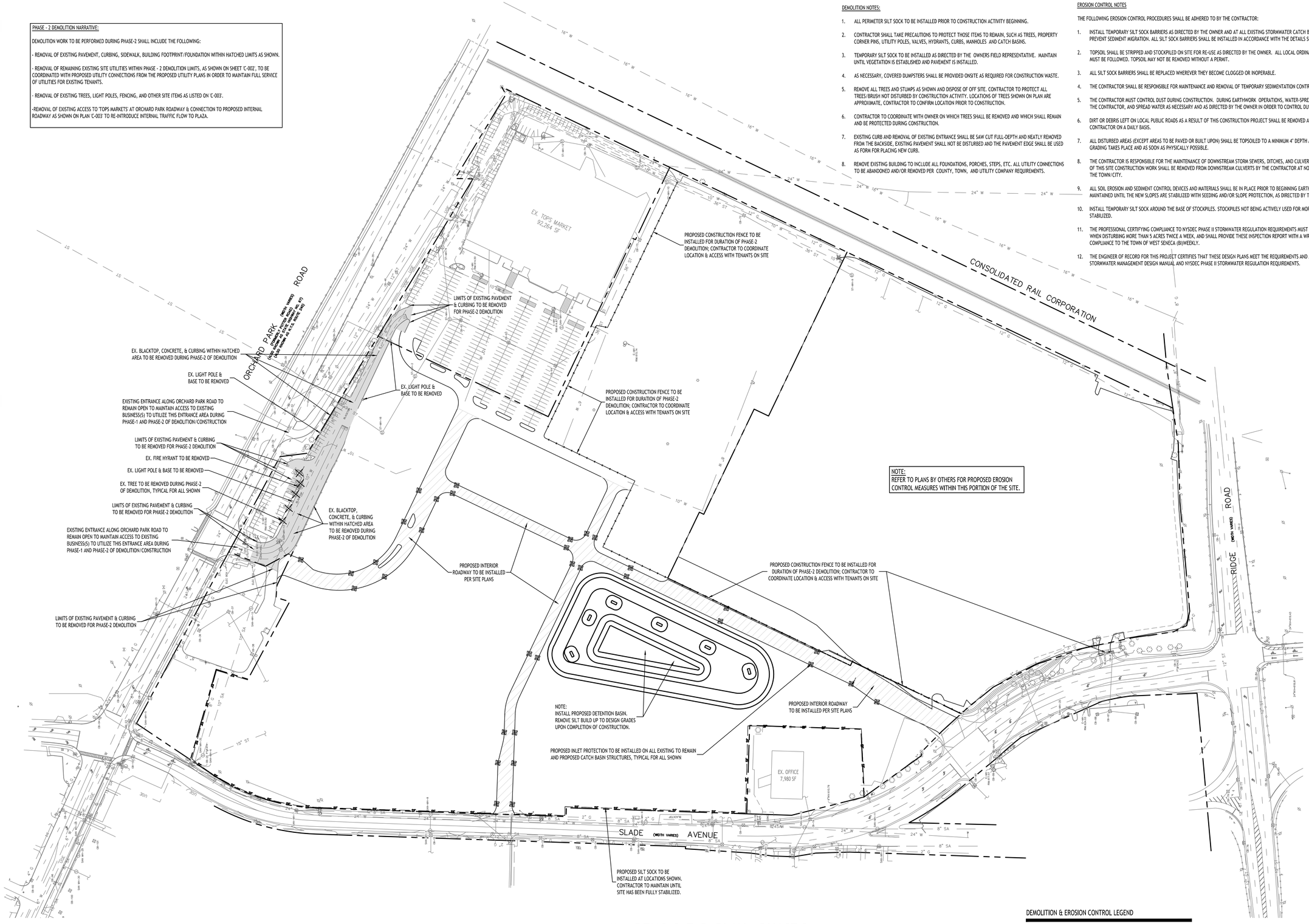
DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH OWNER ON WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
7. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
8. REMOVE EXISTING BUILDING TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT SOCK BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT SOCK BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT SOCK AROUND THE BASE OF STOCKPILES. STOCKPILES NOT BEING ACTIVELY USED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY, AND WHEN DISTURBING MORE THAN 5 ACRES TWICE A WEEK, AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF WEST SENECA (BI)WEEKLY.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.



DEMO & E.C. PLAN - PHASE 2

SCALE: 1"=100'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT, CONCRETE, & CURBING TO BE SAWCUT & REMOVED WITHIN HATCHED LIMITS
- PROPOSED SILT SOCK — SF — SF —
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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STATE OF NEW YORK * CHRISTOPHER WOOD * LICENSED PROFESSIONAL ENGINEER 076394

Sealed 07/20/2026

DRAWING NAME:

Demolition & Erosion Control Plan - PH2

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

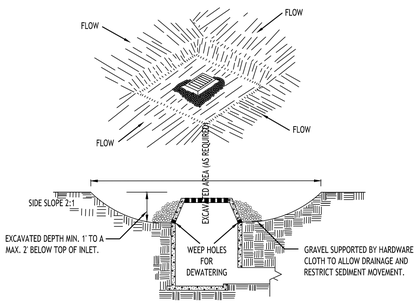
DRAWING NO.

C-003

Project No: 24-4113

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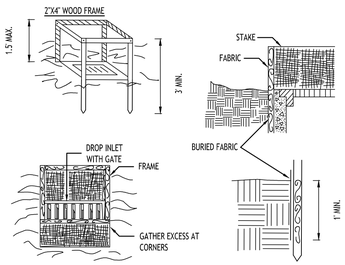
CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

   MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

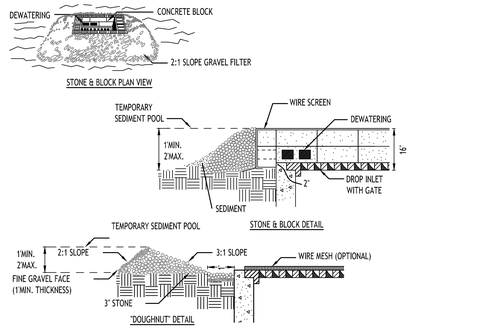
1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

   MAXIMUN DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2

NOT TO SCALE

NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION



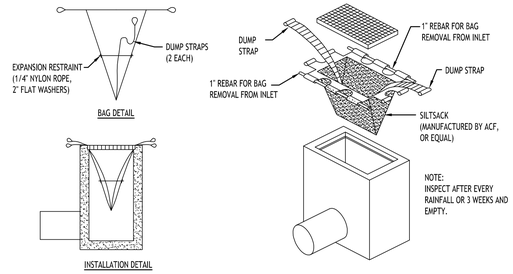
CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

   MAXIMUM DRAINAGE AREA 1 ACRE

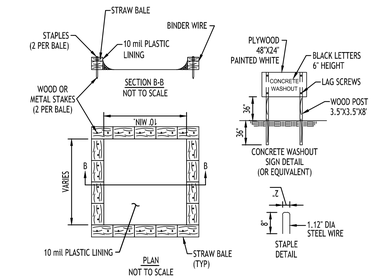
INLET PROTECTION DETAIL 3

NOT TO SCALE



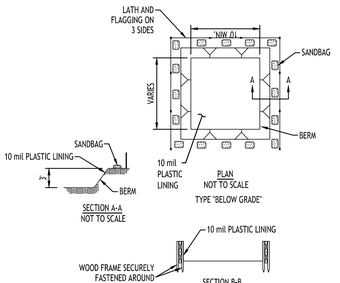
SILT SACK DETAIL

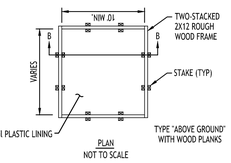
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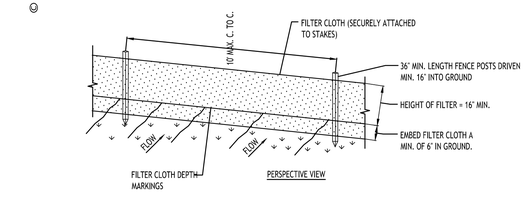
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.





CONCRETE WASHOUT DETAIL

NOT TO SCALE

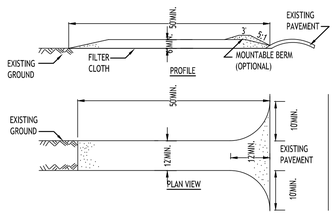


CONSTRUCTION SPECIFICATIONS

1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE OR HARDWOOD.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE

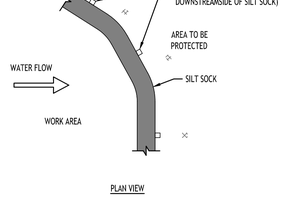


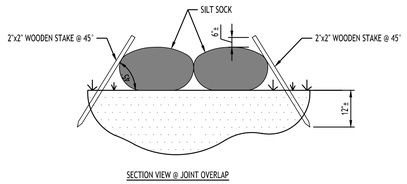
CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE





NOTES:

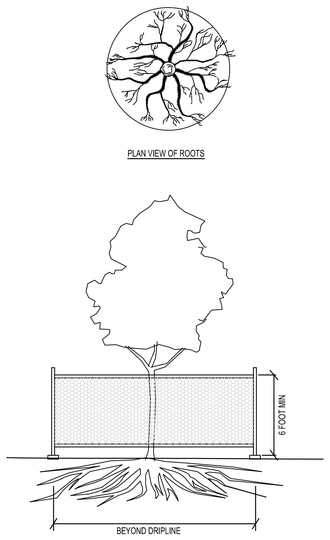
CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED ½ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

NOT TO SCALE



EXISTING TREE PROTECTION FENCE

MATERIALS

MATERIALS FOR TEMPORARY PLASTIC BARRIER FENCES SHALL MEET THE FOLLOWING REQUIREMENTS:

- FENCE: HIGH-DENSITY POLYETHYLENE MESH, ULTRAVIOLET-STABILIZED MIN. 2 YEARS; MINIMUM HEIGHT 4.0 FEET. COLOR: HIGH-VISIBILITY ORANGE OR GREEN. WHEN USED TO PROTECT TREES OR OTHER VEGETATION, COLOR SHALL BE HIGH-VISIBILITY ORANGE.
- POSTS: RIGID METAL OR WOOD POSTS, MINIMUM LENGTH 6.0 FEET.
- TIES: STEEL WIRE, #14 GAUGE OR NYLON CABLE TIES.
- WARNING SIGNS: SHEET METAL, PLASTIC OR OTHER RIGID, WATERPROOF MATERIAL, 1.5 FEET BY 2.0 FEET WITH 4 INCH BLACK LETTERS ON A WHITE BACKGROUND. TEXT SHALL BE: "PROTECTED SITE - KEEP OUT" UNLESS OTHERWISE SPECIFIED.

DETAILS

FENCES SHALL BE ERECTED PRIOR TO MOVING CONSTRUCTION EQUIPMENT ONTO ANY AREA DESIGNATED FOR PROTECTION.

THE LINE OF FENCES SHALL BE STAKED OR MARKED OUT ON THE GROUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER BEFORE ANY FENCE IS INSTALLED. WHERE USED FOR PROTECTION OF INDIVIDUAL TREES, FENCE SHALL BE PLACED AT THE DRIP LINE (EXTENT OF CANOPY). IF NOT POSSIBLE, PLACEMENT SHALL BE AS CLOSE TO THE DRIP LINE AS POSSIBLE AND IN NO CASE LESS THAN 5.0 FEET AWAY FROM THE TREE TRUNK.

ON APPROVAL OF THE STAKEOUT, POSTS SHALL BE SECURELY DRIVEN ON 6.0 FOOT-MAXIMUM CENTERS, NORMAL TO THE GROUND, TO A DEPTH 1/3 OF THE TOTAL POST LENGTH. PLASTIC BARRIER FENCE SHALL BE PLACED ALONG THE SIDE OF ALL POSTS. ENDS OF FENCING SEGMENTS SHALL OVERLAP A DISTANCE OF AT LEAST ONE HALF THE FENCE HEIGHT.

FENCING SHALL BE SECURED TO POSTS WITH WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF POST. FASTENER SHALL BE TIGHT ENOUGH TO PREVENT THE FENCING FROM SLIPPING DOWN. OVERLAPS SHALL ALSO BE SECURELY FASTENED.

BARRIER FENCE WHICH IS NOT ORANGE IN COLOR SHALL BE FLAGGED AT 6.0 FOOT INTERVALS WITH RED OR ORANGE FLORESCENT TAPE. WARNING SIGNS SHALL BE MOUNTED ON THE FENCE AT NO MORE THAN 100 FOOT INTERVALS.

MAINTENANCE SHALL COMMENCE IMMEDIATELY AFTER ERECTION OF THE FENCE AND CONTINUE UNTIL ONE WEEK PRIOR TO ACCEPTANCE OF THE CONTRACT, AND SHALL CONSIST OF: REPLACING DAMAGED POST(S) AND FENCING; RE-FASTENING AND TIGHTENING FENCING; AND RESTORING FENCE TO ITS INTENDED HEIGHT.

FENCING USED FOR TREE OR OTHER VEGETATION PROTECTION SHALL NOT BE TEMPORARILY REMOVED TO ALLOW EQUIPMENT ACCESS OVER A PROTECTED AREA, EXCEPT AS REQUIRED FOR ITEMS OF WORK SPECIFICALLY SHOWN ON THE PLANS AND APPROVED BY THE ENGINEER IN WRITING.

TREE PROTECTION DETAIL

NOT TO SCALE

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Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date



Sealed 07/20/2026

DRAWING NAME:

Demolition & Erosion Control Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

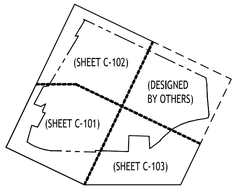
DRAWING NO.

C-004

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

SITE PLAN

SCALE: 1"=100'

SITE DATA

SITE AREA = 56 AC ±
ZONED: C-2(S)
BUILDINGS: PROP. 382,848 SF COMMERCIAL,
EX. 92,264 SF TOPS MARKET, EX. 7,980 SF OFFICE
(TOTAL 483,092 SF)

SETBACKS - BUILDING	REQUIRED
FRONT	40 FT
SIDE	5 FT
SIDE (IF USED FOR INGRESS/EGRESS)	25 FT
REAR (ABUTTING COMM/RES)	10 FT/30 FT
SETBACKS - PARKING	
FRONT	N/A
SIDE (ABUTTING RES)	10 FT
REAR	10 FT
MAX. BUILDING HEIGHT	40 FT

PARKING CALCULATION
GREATER THAN 400,000 AND LESS THAN 600,000 SQUARE FEET OF GROSS FLOOR AREA
REQD = 4.75 SPACES FOR EACH 1,000 SQUARE FEET OF GROSS FLOOR AREA
REQD = 483,092 / 1,000 x 4.75 = 2,295 SPACES REQ'D

PARKING PROVIDED = 2,382 SPACES PROVIDED

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
5. ALL HANDICAP RAMPS (NOT WITHIN THE NYSDOT R.O.W.) AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPS WHERE ENTERING PARKING AREAS/DRIVEWAYS. SIDEWALKS FLUSH TO PAVEMENT WITHIN THE NYSDOT R.O.W. SHALL ADHERE TO THE NOTES AND DESIGN REGULATIONS AS STATED ON NYSDOT STANDARD SHEET 608-01.
6. EXISTING TREE LOCATIONS ARE APPROXIMATE, CONTRACTOR TO LOCATE LOCATIONS PRIOR TO CONSTRUCTION AND COORDINATE WITH OWNER WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF WEST SENECA ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
10. ALL DISTURBED AREAS WITHIN NYSDOT R.O.W. TO BE RESTORED USING ITEM 610.1402 TOPSOIL - ROADSIDE AND ITEM 610.1602 TURF ESTABLISHMENT - LAWNS AND COMPLY WITH NYSDOT STANDARDS AND SPECIFICATIONS SECTION 713 - LANDSCAPE DEVELOPMENT MATERIALS.
11. ANY NYS RIGHT OF WAY DAMAGES CAUSED BY OR DURING CONSTRUCTION TO FEATURES TO REMAIN SHALL BE REPAIRED OR REPLACED PER MOST CURRENT NYSDOT STANDARDS AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

SITE LEGEND

PROPERTY LINE
PROPOSED CONCRETE CURB
PROPOSED SIDEWALK / CONCRETE PAD
NUMBER OF PARKING SPACES (27)
PROPOSED SIGN
PROPOSED STANDARD DUTY ASPHALT PAVEMENT
PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100 100 0 100 200FT.

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:
Site Plan Overall

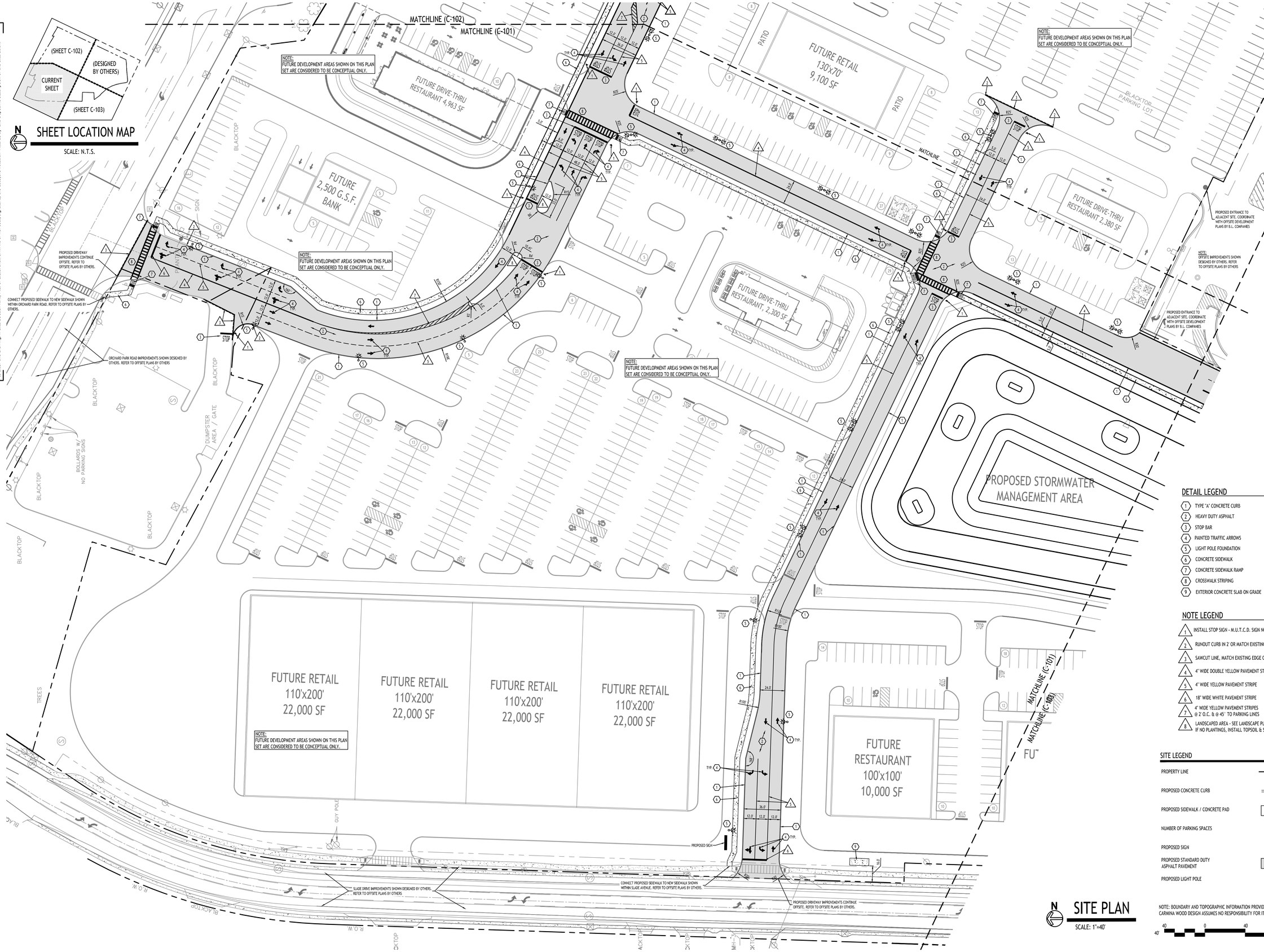
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DRAWING NO.
C-100

Project No: 24-4113

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SITE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 0 40 80Ft.

DETAIL LEGEND

1. TYPE 'A' CONCRETE CURB
2. HEAVY DUTY ASPHALT
3. STOP BAR
4. PAINTED TRAFFIC ARROWS
5. LIGHT POLE FOUNDATION
6. CONCRETE SIDEWALK
7. CONCRETE SIDEWALK RAMP
8. CROSSWALK STRIPING
9. EXTERIOR CONCRETE SLAB ON GRADE

NOTE LEGEND

1. INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1B
2. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3. SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
4. 4" WIDE DOUBLE YELLOW PAVEMENT STRIPE @ 4" SPACING
5. 4" WIDE YELLOW PAVEMENT STRIPE
6. 18" WIDE WHITE PAVEMENT STRIPE
7. 4" WIDE YELLOW PAVEMENT STRIPES @ 2' O.C. & @ 45° TO PARKING LINES
8. LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

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Site Plan

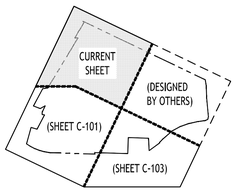
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C-101

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SHEET LOCATION MAP

SCALE: N.T.S.

EX. TOPS MARKET
92,264 SF

FUTURE 1-STORY RETAIL
80,300 S.F.

FUTURE RETAIL
130'X70'
9,100 SF

FUTURE DRIVE-THRU
RESTAURANT 2,380 SF

PATIO

BLACKTOP

BLACKTOP PARKING LOT

CONC. WALK

PROPOSED CURBED ISLANDS TO BE INSTALLED AT END OF EX. PARKING ROWS AS SHOWN, TYP. FOR ALL SHOWN. THIS PORTION OF SITE WORK TO BE INCLUDED WITHIN INITIAL ROADWAY DESIGN.

PROPOSED ENTRANCE TO ADJACENT SITE. COORDINATE WITH OFFSITE DEVELOPMENT PLANS BY B.L. COMPANIES

PROPOSED ENTRANCE TO ADJACENT SITE. COORDINATE WITH OFFSITE DEVELOPMENT PLANS BY B.L. COMPANIES

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THIS PLAN SET ARE CONSIDERED TO BE CONCEPTUAL ONLY.

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THIS PLAN SET ARE CONSIDERED TO BE CONCEPTUAL ONLY.

NOTE:
OFFSITE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS

MATCHLINE (C-102)
MATCHLINE (C-101)
MATCHLINE (C-102)
MATCHLINE (PLANS BY OTHERS)

SITE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

DETAIL LEGEND

1. TYPE 'A' CONCRETE CURB
2. HEAVY DUTY ASPHALT
3. STOP BAR
4. PAINTED TRAFFIC ARROWS
5. LIGHT POLE FOUNDATION
6. CONCRETE SIDEWALK
7. CONCRETE SIDEWALK RAMP
8. CROSSWALK STRIPING
9. EXTERIOR CONCRETE SLAB ON GRADE

NOTE LEGEND

1. INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1B
2. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3. SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
4. 4" WIDE DOUBLE YELLOW PAVEMENT STRIPE @ 4" SPACING
5. 4" WIDE YELLOW PAVEMENT STRIPE
6. 18" WIDE WHITE PAVEMENT STRIPE
7. 4" WIDE YELLOW PAVEMENT STRIPES @ 2' O.C. & @ 45° TO PARKING LINES
8. LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED

SITE LEGEND

PROPERTY LINE	
PROPOSED CONCRETE CURB	
PROPOSED SIDEWALK / CONCRETE PAD	
NUMBER OF PARKING SPACES	27
PROPOSED SIGN	
PROPOSED STANDARD DUTY ASPHALT PAVEMENT	
PROPOSED LIGHT POLE	

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076994
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Site Plan

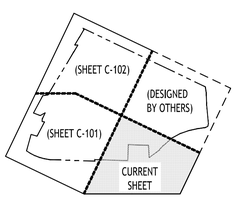
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C-102

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

DETAIL LEGEND

1. TYPE 'A' CONCRETE CURB
2. HEAVY DUTY ASPHALT
3. STOP BAR
4. PAINTED TRAFFIC ARROWS
5. LIGHT POLE FOUNDATION
6. CONCRETE SIDEWALK
7. CONCRETE SIDEWALK RAMP
8. CROSSWALK STRIPING
9. EXTERIOR CONCRETE SLAB ON GRADE

NOTE LEGEND

1. INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1B
2. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3. SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
4. 4" WIDE DOUBLE YELLOW PAVEMENT STRIPE @ 4" SPACING
5. 4" WIDE YELLOW PAVEMENT STRIPE
6. 18" WIDE WHITE PAVEMENT STRIPE
7. 4" WIDE YELLOW PAVEMENT STRIPES @ 2' O.C. & @ 45° TO PARKING LINES
8. LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED

SITE LEGEND

PROPERTY LINE	
PROPOSED CONCRETE CURB	
PROPOSED SIDEWALK / CONCRETE PAD	
NUMBER OF PARKING SPACES	(27)
PROPOSED SIGN	
PROPOSED STANDARD DUTY ASPHALT PAVEMENT	
PROPOSED LIGHT POLE	

SITE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

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Site Plan

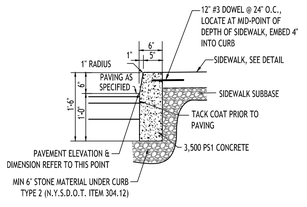
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Scale: As Noted

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C-103

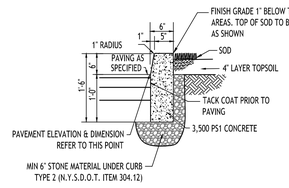
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ABUTTING SIDEWALK

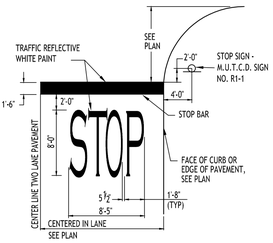


ABUTTING LANDSCAPE/GRASS

NOTES:
1. CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. WHERE THE CURB DROPS (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.

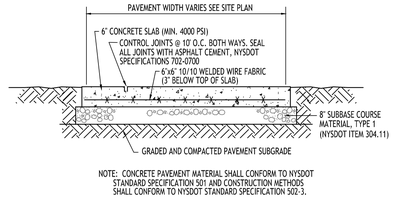
TYPE "A" CONCRETE CURB - 1

NOT TO SCALE



STOP BAR DETAIL - 3

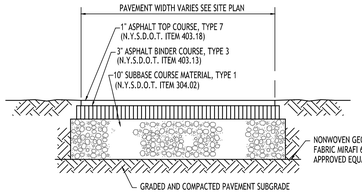
NOT TO SCALE



NOTE: CONCRETE PAVEMENT MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 502-3.

EXTERIOR CONCRETE SLAB-ON-GRADE SECTION - 9

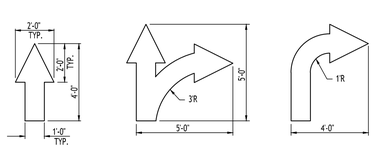
NOT TO SCALE



NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

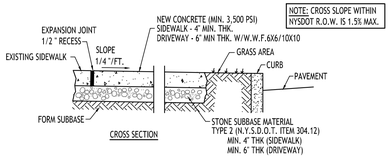
HEAVY DUTY ASPHALT SECTION - 2

NOT TO SCALE



PAINTED TRAFFIC ARROWS - 4

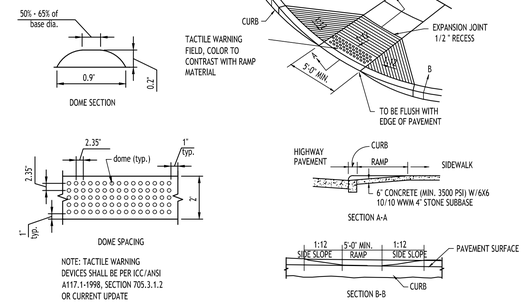
NOT TO SCALE



NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
5. SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB.
6. INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

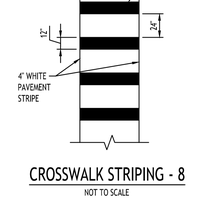
CONCRETE SIDEWALK - 6

NOT TO SCALE



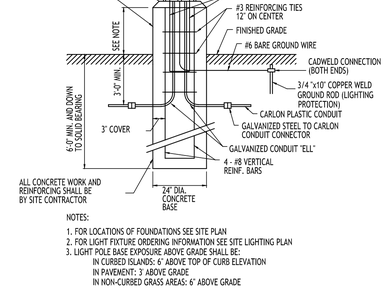
SIDEWALK CURB RAMP - 7

NOT TO SCALE



CROSSWALK STRIPING - 8

NOT TO SCALE



NOTES:
1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN
2. FOR LIGHT FIXTURE ORDERING INFORMATION SEE SITE LIGHTING PLAN
3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE:
   IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION
   IN PAVEMENT: 3" ABOVE GRADE
   IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

LIGHT POLE FOUNDATION - 5

NOT TO SCALE

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REVISIONS:

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Sealed 07/20/2026

DRAWING NAME:

Site Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

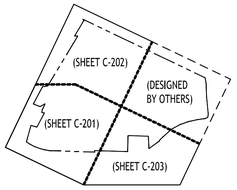
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Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

GRADING PLAN

SCALE: 1"=100'

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	101
PROPOSED SPOT ELEVATION	100.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 100.50 BC 100.00
PROPOSED CATCH BASIN	CB
PAVEMENT/GROUND SLOPE	
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH

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100 100' 0 100 200FT

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REVISIONS:

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Sealed 07/20/2026

DRAWING NAME:

Grading Plan Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

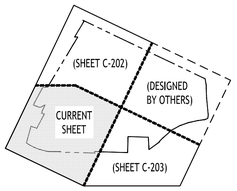
DRAWING NO.

C-200

Project No: 24-4113

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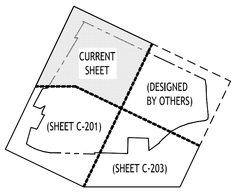
SHEET LOCATION MAP

SCALE: N.T.S.

MATCHLINE (C-202)
MATCHLINE (C-201)
FUTURE 2,500 G.S.F. BANK
FUTURE DRIVE-THRU RESTAURANT 4,963 SF
FUTURE RETAIL 130'x70' 9,100 SF
PATIO
BLACKTOP PARKING LOT
FUTURE DRIVE-THRU RESTAURANT 2,380 SF
FUTURE DRIVE-THRU RESTAURANT, 2,300 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RESTAURANT 100'x100' 10,000 SF
PROPOSED STORMWATER MANAGEMENT AREA
601.80 BOTTOM OF BASIN (TYP.)
ORCHARD PARK ROAD IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
SLADE DRIVE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
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MATCH OFFSITE IMPROVEMENT PLANS, ELEV. = 613.43
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N

SHEET LOCATION MAP

SCALE: N.T.S.

EX. TOPS MARKET
92,264 SF

FUTURE 1-STORY RETAIL
80,300 S.F.

FUTURE RETAIL
130x70'
9,100 SF

FUTURE DRIVE-THRU
RESTAURANT 2,380 SF

PATIO

BLACKTOP PARKING LOT

BLACKTOP

MATCHLINE (C-202)

MATCHLINE (C-201)

MATCHLINE (PLANS BY OTHERS)

TC 614.9±
BC 614.4±
MATCH EX.

TC 614.7±
BC 614.2±
MATCH EX.

TC 614.6±
BC 614.1±
MATCH EX.

TC 615.1±
BC 614.6±
MATCH EX.

TC 614.9±
BC 614.4±
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TC 615.2±
BC 614.8±
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TC 615.9±
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TC 615.9±
BC 615.4±
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TC 615.8±
BC 615.3±
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TC 615.9±
BC 615.4±
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TC 616.0±
BC 615.5±
MATCH EX.

TC 616.2±
BC 615.7±
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TC 616.2±
BC 615.7±
MATCH EX.

TC 616.83
BC 616.33
MATCH EX.

TC 616.4±
BC 615.9±
MATCH EX.

TC 617.01
BC 616.51
MATCH EX.

TC 616.4±
BC 615.9±
MATCH EX.

TC 616.5±
BC 616.0±
MATCH EX.

TC 616.7±
BC 616.2±
MATCH EX.

TC 616.37
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TC 617.24
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TC 617.28
BC 616.78
MATCH EX.

TC 616.86
BC 616.36

TC 616.55
BC 616.05

TC 616.83
BC 616.33

TC 616.44
BC 615.94

616.73

CB 10
RIM 614.73

CB 17
615.73

CB 42
RIM 614.52

CB 41
RIM 614.26

CB 39
RIM 614.35

E-MH
RIM:614.50

FIRST FLOOR
ELEV:615.51

E-MH
RIM:614.87

SAN-MH-19

E-MH
RIM:615.74

ST-MH-1

ST-MH-2

ST-MH-3

ST-MH-10

ST-MH-18

CB-25

CB-28

CB-29

CB-34

CB-35

CB-45

CB-46

CB-62

CB-63

CB-64

CB-72

CB-73

635.64'

40.79'

101.22'

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	101
PROPOSED SPOT ELEVATION	100.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 100.50 BC 100.00
PROPOSED CATCH BASIN	CB
PAVEMENT/GROUND SLOPE	
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

N

GRADING PLAN

SCALE: 1"=40'

CARMINAWOOD
DESIGN
Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
R. CHRISTOPHER WOOD
076994
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Grading Plan

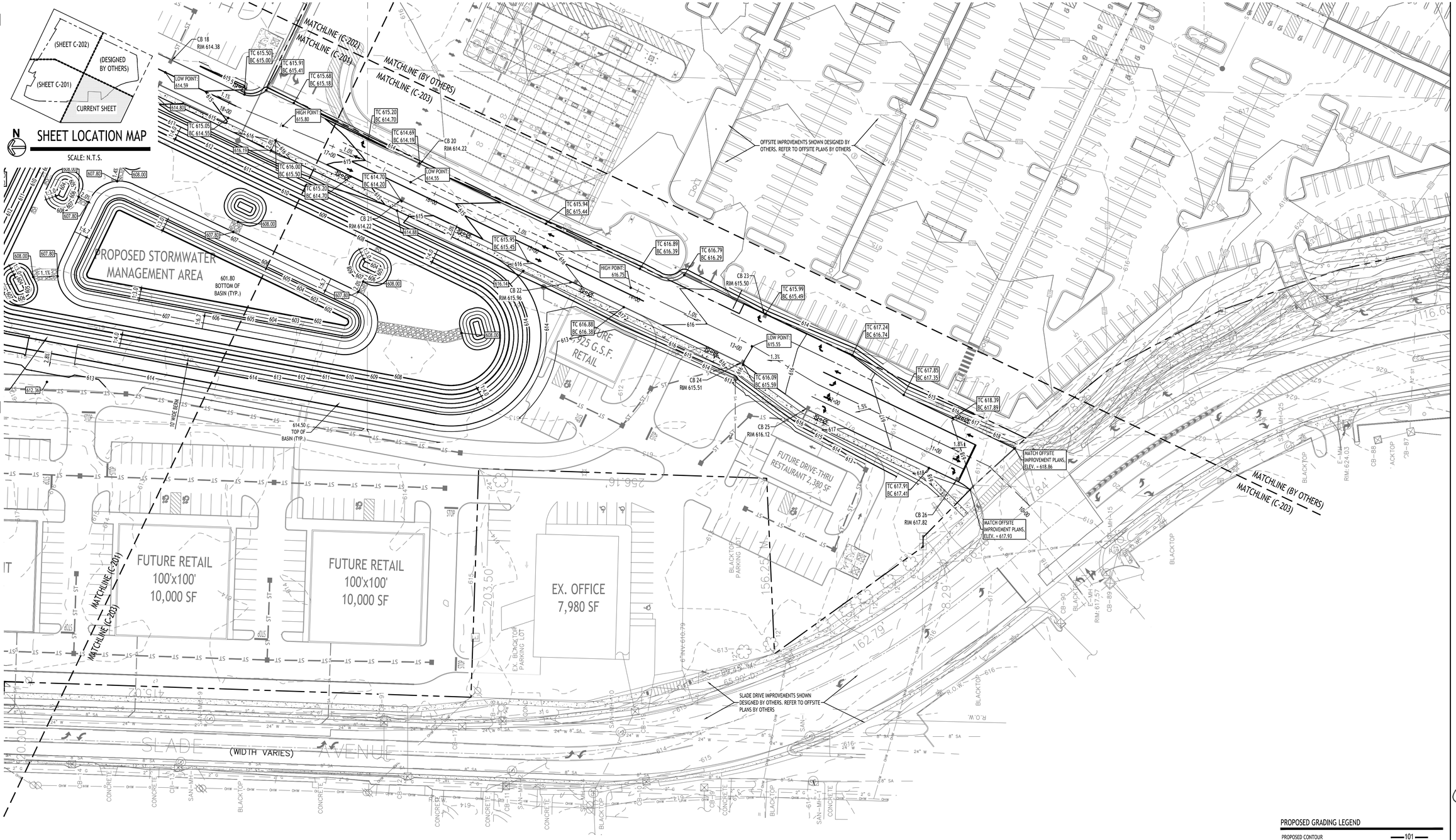
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-202

Project No: 24-4113

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GRADING PLAN

SCALE: 1"=40'

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	101
PROPOSED SPOT ELEVATION	100.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 100.50 BC 100.00
PROPOSED CATCH BASIN	CB
PAVEMENT/GROUND SLOPE	
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

CARMINAWOOD DESIGN
Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
076394
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Grading Plan

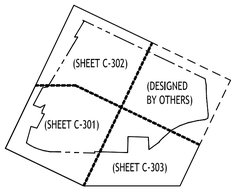
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-203

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

STORM DRAINAGE PLAN

SCALE: 1"=100'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200Ft.

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Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
R. CHRISTOPHER WOOD
076394
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:

Storm Drainage Plan - Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

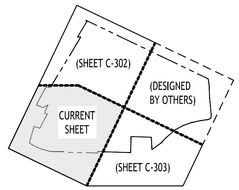
DRAWING NO.

C-300

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

MATCHLINE (C-302)

MATCHLINE (C-301)

FUTURE DRIVE-THRU RESTAURANT 4,963 SF

FUTURE 2,500 G.S.F. BANK

FUTURE RETAIL 130'x70' 9,100 SF

PATIO

BLACKTOP PARKING LOT

FUTURE RESTAURANT

DRIVE-THRU RESTAURANT, 2,300 SF

PROPOSED STORMWATER MANAGEMENT AREA

FUTURE RETAIL 110'x200' 22,000 SF

FUTURE RETAIL 110'x200' 22,000 SF

FUTURE RETAIL 110'x200' 22,000 SF

FUTURE RETAIL 110'x200' 22,000 SF

FUTURE RESTAURANT 100'x100' 10,000 SF

CB 1 RIM 615.34 S INV 612.84

CB 2 RIM 614.45 N INV 611.64 W INV 611.64

CB 3 RIM 614.25 E INV 611.29 S INV 611.29

CB 4 RIM 613.70 N INV 610.54 NE INV 611.52 SE INV 610.54

CB 5 RIM 613.91 SW INV 611.91

CB 6 RIM 612.85 NW INV 609.17 NE INV 610.16 SE INV 609.17

CB 7 RIM 612.85 SW INV 610.85

CB 8 RIM 613.85 NW INV 608.37 NE INV 610.90 SE INV 608.37

CB 9 RIM 613.85 SW INV 611.35

CB 10 RIM 614.73 SW INV 612.73

CB 11 RIM 614.85 NE INV 612.40 SW INV 612.40

CB 12 RIM 614.76 NE INV 611.91 NW INV 611.91

CB 13 RIM 614.75 SE INV 611.70 SW INV 611.70

CB 14 RIM 615.20 S INV 609.50 NW INV 609.50

CB 15 RIM 615.20 NE INV 609.38 SE INV 609.38 W INV 609.38

CB 16 RIM 615.73 SE INV 609.73 SW INV 610.00 N INV 609.73

CB 17 RIM 615.73 NE INV 610.63

CB 18 RIM 614.38 NW INV 608.34

CB 19 RIM 614.38 SE INV 608.23 NW INV 608.23

CB 27 RIM 614.02 N INV 611.11

CB 28 RIM 613.79 S INV 610.79 E INV 610.79

CB 29 RIM 614.96 N INV 609.54

CB 30 RIM 614.71 W INV 610.21 S INV 608.53 E INV 610.21

CB 31 RIM 615.64 W INV 609.78 E INV 609.78

CB 32 RIM 615.14 W INV 609.52 E INV 609.52

CB 33 RIM 614.04 NE INV 608.73 SE INV 608.73

CB 34 RIM 614.04 W INV 608.87 SW INV 608.87

CB 35 RIM 614.04 NE INV 608.31 SW INV 608.31

CB 36 RIM 614.04 SE INV 608.44 SW INV 608.44

CB 37 RIM 615.03 NE INV 612.02

CB 38 RIM 615.03 E INV 609.13 SW INV 611.81 NW INV 609.13

ST MH #1 RIM 612.93 SW INV 606.43 E INV 606.43

ST MH #2 RIM 613.77 W INV 605.48 NE INV 605.48

SIGN ELEC MH RIM 615.82

GAS UTILITY BOX

PLANTER

ELEC BOX

ELEC PANEL

DUMPSTER AREA / GATE

BOLLARDS W/ NO PARKING SIGNS

GUY POLE

TREES

PROPOSED PIPE CROSSING: 10" SAN. INV=601.18 18" STORM INV=611.95

PROPOSED PIPE CROSSING: 10" SAN. INV=603.00 48" STORM INV=605.05

PROPOSED PIPE CROSSING: 8" SAN. INV=603.13 24" STORM INV=608.20

PROPOSED PIPE CROSSING: 8" SAN. INV=603.15 48" STORM INV=605.56

PROPOSED PIPE CROSSING: 8" SAN. INV= 604.55 24" STORM INV=609.25

PROPOSED PIPE CROSSING: 8" SAN. INV= 605.10 18" STORM INV=608.15

PROPOSED PIPE CROSSING: 8" SAN. INV= 605.67 36" STORM INV=608.20

PROPOSED STORM DRAINAGE STRUCTURES AND ASSOCIATED PIPING ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND WILL BE DESIGNED AS PART OF FUTURE DEVELOPMENT PHASES

PROPOSED STORM DRAINAGE STRUCTURES SHOWN W/ASSOCIATED PIPING TO BE INSTALLED DURING FUTURE PHASE OF WORK

PROPOSED STORM DRAINAGE STRUCTURES SHOWN W/PROPOSED STORM DRAINAGE STRUCTURES AND ASSOCIATED PIPING ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND WILL BE DESIGNED AS PART OF FUTURE DEVELOPMENT PHASES PIPING TO BE INSTALLED DURING FUTURE PHASE OF WORK

ORCHARD PARK ROAD IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS

SLADE DRIVE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS

PROPOSED STORM DRAINAGE LEGEND

PROPOSED STORM PIPE	ST
PROPOSED PERFORATED STORM PIPE	
PROPOSED CATCH BASIN	
PROPOSED MANHOLE	
PROPOSED CLEANOUT	

CB: CATCH BASIN
MH: MANHOLE
WQu: WATER QUALITY TREATMENT UNIT

N

STORM DRAINAGE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 0 40 80Ft.

CARMINAWOOD DESIGN

Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:

Storm Drainage Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

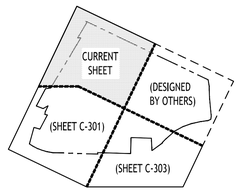
DRAWING NO.

C-301

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

EX. TOPS MARKET
92,264 SF

FUTURE 1-STORY RETAIL
80,300 S.F.

NOTE:
FUTURE DEVELOPMENT AREAS SHOWN ON THIS PLAN SET ARE CONSIDERED TO BE CONCEPTUAL ONLY.

FUTURE RETAIL
130'X70'
9,100 SF

PATIO

FUTURE DRIVE-THRU RESTAURANT

BLACKTOP PARKING LOT

BLACKTOP

CONCRETE

PROPOSED PIPE CROSSING:
10" SAN. INV=604.50
42" STORM INV=606.58

CONNECT TO EXISTING MANHOLE WITH TIDEFLEX CHECK VALVE. CONNECT AT EXISTING INVERT ELEVATION 604.56±.

PLUG EX. SW INV

CB 42
RIM 614.52
SW INV 611.34

122 LF 18" HDPE @ 0.30%

CB 41
RIM 614.26
NE INV 610.97
SW INV 610.97
NW INV 610.97

127 LF 18" HDPE @ 0.30%

CB 39
RIM 614.35
NE INV 611.35

322 LF 24" HDPE @ 0.39%

CB 10
RIM 614.73

33 LF 12" HDPE @ 1.00%

CB 11
RIM 614.85
NE INV 612.40
NW INV 612.40

CB 16
615.73

PROPOSED STORM DRAINAGE STRUCTURES AND ASSOCIATED PIPING ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND WILL BE DESIGNED AS PART OF FUTURE DEVELOPMENT PHASES

PROPOSED STORM DRAINAGE STRUCTURES SHOWN W/ASSOCIATED PIPING TO BE INSTALLED DURING FUTURE PHASE OF WORK

MATCHLINE (C-301)

MATCHLINE (C-302)

MATCHLINE (PLANS BY OTHERS)

MATCHLINE (C-302)

STORM DRAINAGE PLAN

SCALE: 1"=40'

PROPOSED STORM DRAINAGE LEGEND

- PROPOSED STORM PIPE — ST —
- PROPOSED PERFORATED STORM PIPE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT

CB: CATCH BASIN
MH: MANHOLE
WQu: WATER QUALITY TREATMENT UNIT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40 40 0 40 80Ft.

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West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
076994
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:

Storm Drainage Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

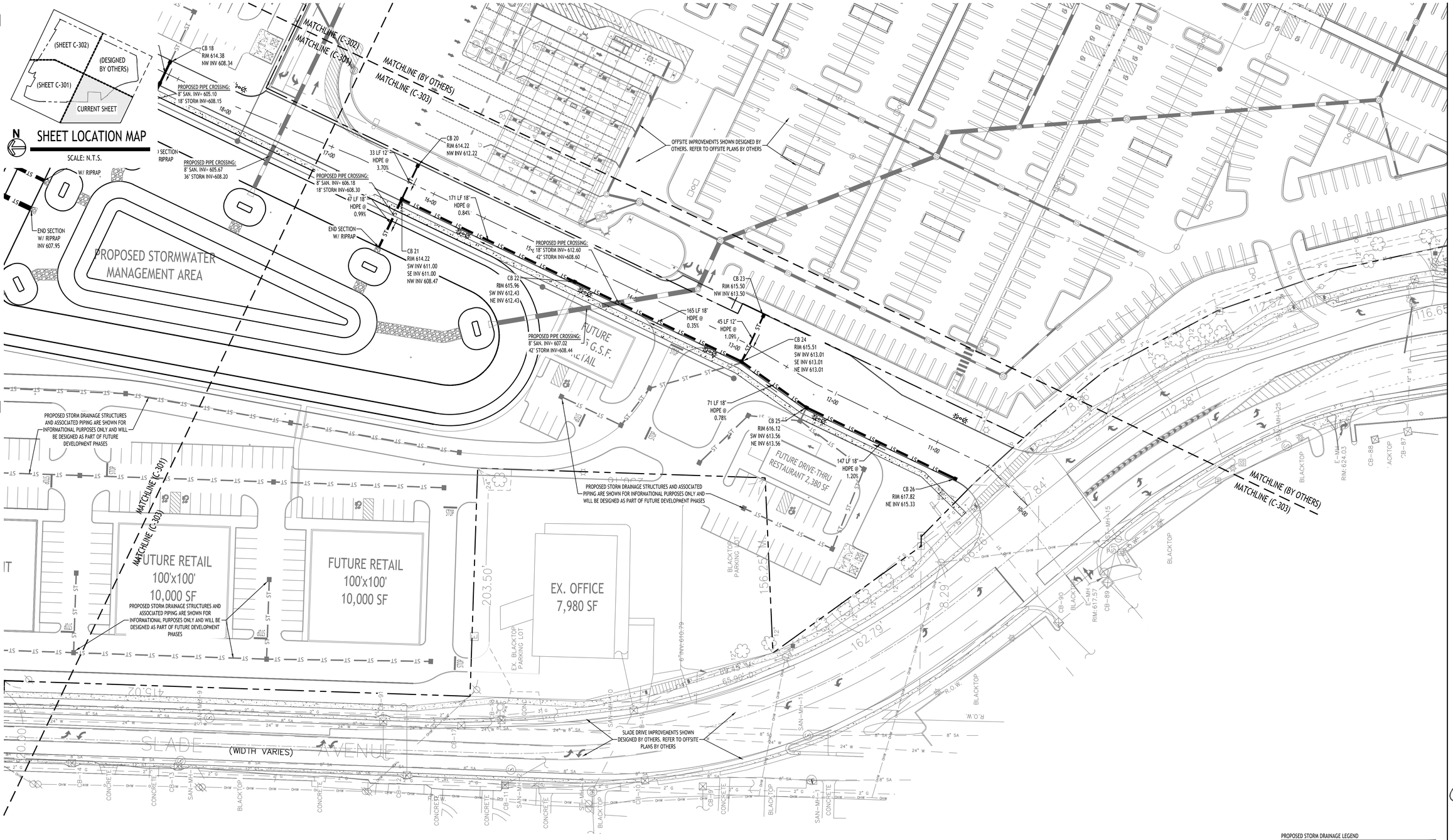
DRAWING NO.

C-302

Project No: 24-4113

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PROPOSED STORM DRAINAGE LEGEND

PROPOSED STORM PIPE	ST
PROPOSED PERFORATED STORM PIPE	
PROPOSED CATCH BASIN	
PROPOSED MANHOLE	
PROPOSED CLEANOUT	

CB: CATCH BASIN
MH: MANHOLE
WQ_U: WATER QUALITY TREATMENT UNIT

STORM DRAINAGE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076994

Sealed 07/20/2026

DRAWING NAME:
Storm Drainage Plan

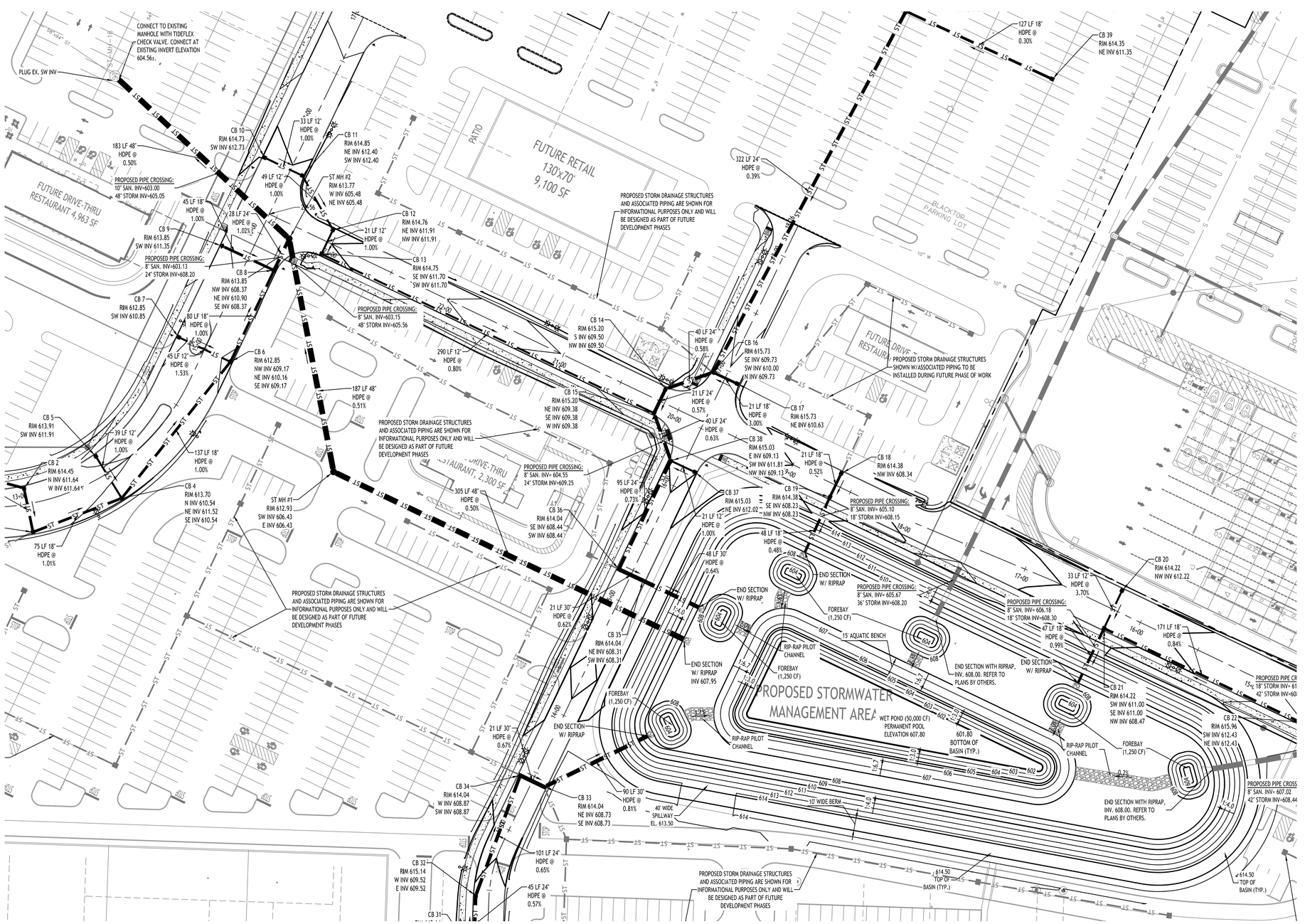
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-303

Project No: 24-4113

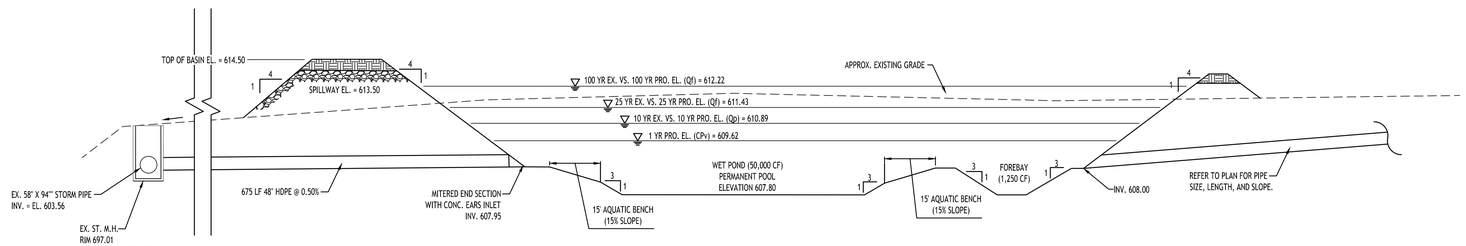
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WET POND PLAN & DETAIL

SCALE: 1"=40'



SECTION THROUGH WET POND

NOT TO SCALE

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * R. CHRISTOPHER WOOD * LICENSED PROFESSIONAL ENGINEER * 076394

Sealed 07/20/2026

DRAWING NAME:

Wet Pond Plan & Detail

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

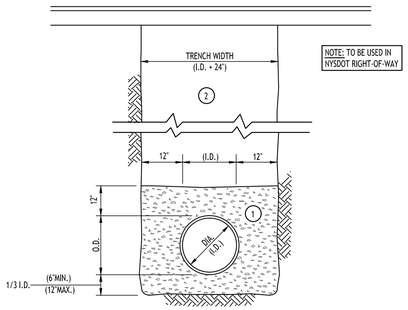
DRAWING NO.

C-304

Project No: 24-4113

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

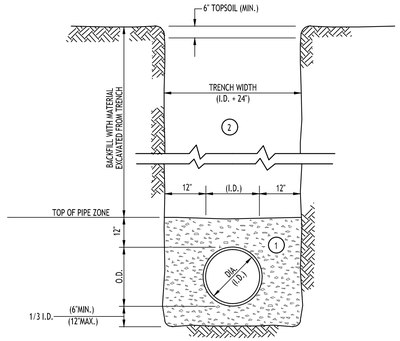
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

STORM SEWER TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

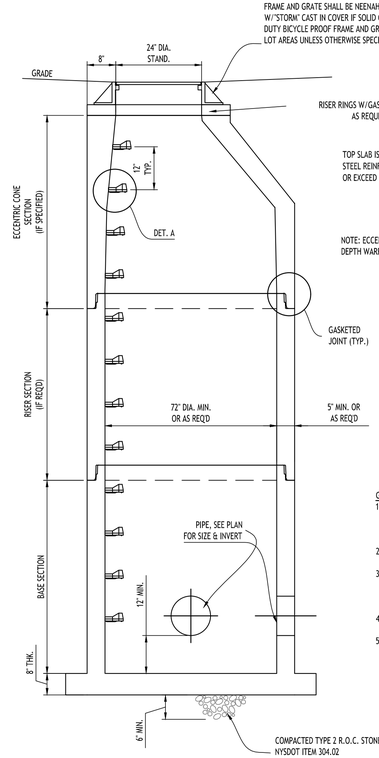
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

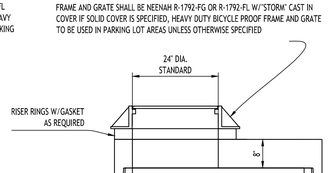
STORM SEWER TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE



TYPICAL STORM MANHOLE DETAIL

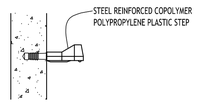
NOT TO SCALE



TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED HS-20 LOADING.

NOTE: ECCENTRIC CONE SECTION SHALL BE USED UNLESS DEPTH WARRANTS TOP SLAB PER MANUFACTURER

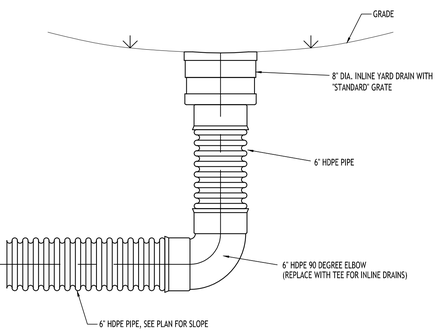
ALTERNATE TOP SLAB



DETAIL A

GENERAL NOTES:

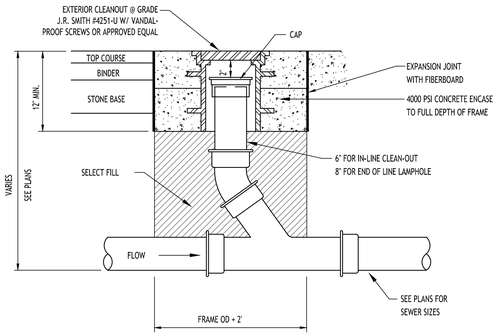
1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN BASE SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRE-CAST REINFORCED CON-CRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.
5. MANHOLE TO BE COATED ON OUTSIDE WITH BITUMASTIC SEALER.



NOTE:
SEE TYPICAL TRENCH SECTION FOR BEDDING REQUIREMENTS

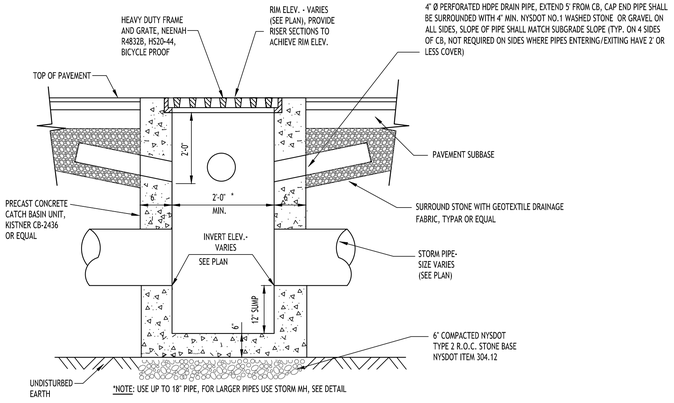
TYPICAL YARD DRAIN DETAIL

NOT TO SCALE



LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK

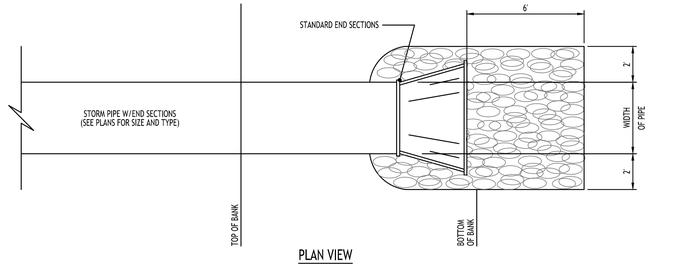
NOT TO SCALE



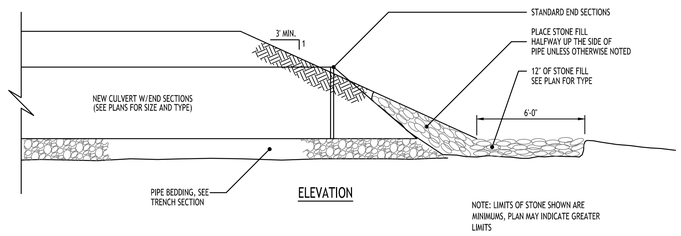
*NOTE: USE UP TO 18" PIPE, FOR LARGER PIPES USE STORM MH, SEE DETAIL

TYPICAL PRECAST CATCH BASIN

NOT TO SCALE



PLAN VIEW



ELEVATION

NOTE: LIMITS OF STONE SHOWN ARE MINIMUMS, PLAN MAY INDICATE GREATER LIMITS

TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP

NOT TO SCALE

CARMINAWOOD DESIGN
Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER WOOD * LICENSED PROFESSIONAL ENGINEER 076394

Sealed 07/20/2026

DRAWING NAME:

Storm Drainage Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

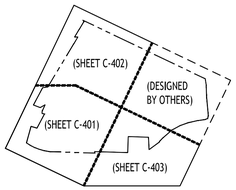
DRAWING NO.

C-305

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

UTILITY PLAN

SCALE: 1"=100'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6' WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

UTILITY NOTES:

1. FOR ALL SANITARY SEWERS, INSTALL SELECT FILL IN PAVED AREAS, EXTEND 5' MIN. BEYOND PAVEMENT LIMITS
2. BUILDINGS TO HAVE INVERT ELEVATION 5' MIN. BELOW F.F.E. OF THE BUILDING. PIPE TO BE 6" SDR-35 PVC @ 1.0% MIN. WITH MIN 4' OF COVER. ADD CLEANOUTS @ 90' MAX. SPACING FOR 6" LATERALS OVER 90' IN LENGTH.
3. COORDINATE GAS & ELEC. METER BANK LOCATIONS ON BUILDINGS WITH M.E.P. PLANS & UTILITY CO.'S.
4. COORDINATE LOCATION OF CTV & TELEPHONE SERVICE TO BUILDINGS WITH M.E.P. PLANS AND UTILITY CO.'S.
5. ANY EXISTING UTILITIES WHICH ARE TO BE ABANDONED AND FALL UNDER PAVEMENT OR BUILDINGS SHALL BE REMOVED VS. BEING ABANDONED UNLESS THOSE UTILITIES ARE FILLED WITH FLOWABLE FILL.
6. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
7. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH CONCRETE AND ASPHALT PAVEMENT AREAS.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200Ft.

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER R WOOD * LICENSED PROFESSIONAL ENGINEER * 076394

Sealed 07/20/2026

DRAWING NAME:

Utility Plan Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

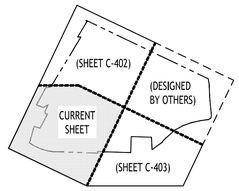
DRAWING NO.

C-400

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

MATCHLINE (C-402)
MATCHLINE (C-401)

FUTURE RETAIL 130x70' 9,100 SF

PROPOSED 6" GATE VALVE
PROPOSED 10" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
PROPOSED 10"x10"x8" TEE
PROPOSED 10" GATE VALVE
PROPOSED 10" GATE VALVE
CONTRACTOR TO INSTALL PROPOSED 10" G.V. AT CONNECTION TO EX. 10" WATERMAIN
PROPOSED 10"x10"x6" TEE
EXISTING WATERMAIN TO REMAIN & BE REUSED WITHIN SITE. ALL EXISTING TENANTS SHALL HAVE CONSTANT, UNINTERRUPTED WATER SERVICE DURING CONSTRUCTION
MAINTAIN 18" VERTICAL CLEARING AT ALL STORM/SANITARY CROSSINGS, TYP.
PROPOSED 10" GATE VALVE TO BE INSTALLED ON EX. 10" WATER SERVICE AS SHOWN FOR FUTURE CONNECTION
PROP. 6" AWWA C-900 PVC COMBINED SERVICE (5' MIN. COVER)
PROP. 8" GATE VALVE
SAN MH 12
RIM 616.78
NW INV 607.33
PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
PROPOSED 6" GATE VALVE
PROP. CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)
APPROXIMATE LOCATION OF FUTURE WATER SERVICE TO PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROP. CAP TO BE INSTALLED JUST AFTER 6" G VALVE AS SH (FOR FUTUR
PROPOSED 8"x8"x6" TEE
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
OFFSITE IMPROVEMENTS TO CONNECT TO EXISTING SAN MANHOLE 12 AT INV. 607.43. REFER TO PLANS BY OTHERS.
PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
MAINTAIN 18" VERTICAL CLEARING AT ALL STORM/SANITARY CROSSINGS, TYP.
SAN MH 8
RIM 613.96
SW INV 604.52
NE INV 604.42
PROPOSED PIPE CROSSING:
8" SAN. INV= 604.55
24" STORM INV=609.25
232 LF
8" SDR-35
PVC @ 0.40%
209 LF
8" SDR-35
PVC @ 0.85%
PROPOSED PIPE CROSSING:
8" SAN. INV= 605.10
18" STORM INV=608.15
PROPOSED 6" GATE VALVE
PROP. 6" AWWA C-900 PVC COMBINED SERVICE (5' MIN. COVER)
PROPOSED 8"x8"x6" TEE
SAN MH 9
RIM 613.17
SW INV 605.55
SE INV 605.55
NE INV 605.45
PROPOSED PIPE CROSSING:
8" SAN. INV= 605.67
36" STORM INV=608.20
APPROXIMATE LOCATION OF FUTURE SERVICE TO PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROP. CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)
PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
PROPOSED STORMWATER MANAGEMENT AREA
APPROXIMATE LOCATION OF FUTURE 6" COMBINED SERVICE
MAINTAIN 18" VERTICAL CLEARING AT ALL STORM/SANITARY CROSSINGS, TYP.
45° BENDS
PROPOSED 6" GATE VALVE
PROPOSED CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)
PROPOSED 6" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
(2) PROPOSED 8"x8"x6" 3-WAY TEE
PROVIDE BENDS & BLOCKING AS REQUIRED
MATCHLINE (C-401)
MATCHLINE (C-402)
PROPOSED CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)
FUTURE RESTAURANT 100'x100'
APPROX. LOCATION OF FUTURE SANITARY LATERAL FROM PROP. BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
APPROXIMATE LOCATION OF FUTURE WATER SERVICE TO PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROPOSED 8"x8"x6" 4-WAY TEE
PROPOSED 6" GATE VALVE
PROVIDE BENDS & BLOCKING AS REQUIRED
PROPOSED 8" G.V. (BY ECWA)
PROPOSED 24"x24"x8" TAPPING SLEEVE & VALVE (BY ECWA)
PROP. HOTBOX INSULATED ENCLOSURE
PROPOSED 8" CLASS 52 DUCTILE IRON COMBINED WATER SERVICE (5' MIN. COVER)
PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
APPROXIMATE LOCATION OF FUTURE WATER SERVICE TO PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROPOSED 6" GATE VALVE
PROPOSED CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)
PROPOSED 6" AWWA C-900 PVC COMBINED SERVICE (5' MIN. COVER)
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
SLADE DRIVE IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE RETAIL 110'x200' 22,000 SF
FUTURE FIRE HYDRANT
APPROXIMATE LOCATION OF FUTURE 6" COMBINED SERVICE
FUTURE FIRE HYDRANT
SAN MH 1 (DOGHOUSE)
RIM 615.82
S INV 599.64
E INV 599.54
W INV 599.54
INV. 599.80
SAN MH 2
RIM 614.70
SE INV 599.93
N INV 599.83
48 LF
10" SDR-35
PVC @ 0.40%
INV. 599.23
320 LF
10" SDR-35
PVC @ 0.40%
SAN MH 3
RIM 614.36
S INV 601.31
NW INV 601.21
PROPOSED PIPE CROSSING:
10" SAN. INV=601.18
18" STORM INV=611.95
133 LF
10" SDR-35
PVC @ 0.40%
SAN MH 4
RIM 612.66
SE INV 601.94
N INV 601.84
ORCHARD PARK ROAD IMPROVEMENTS SHOWN DESIGNED BY OTHERS. REFER TO OFFSITE PLANS BY OTHERS
CONTRACTOR TO PLUG EXISTING EAST INVERT; REFER TO DEMOLITION PLAN
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROPOSED PIPE CROSSING:
10" SAN. INV=603.00
48" STORM INV=605.05
PROPOSED 10" GATE VALVE
CONTRACTOR TO INSTALL PROPOSED 10" G.V. AT CONNECTION TO EX. 10" WATERMAIN
SAN MH 5
RIM 613.81
SE INV 602.84
SW INV 602.84
NW INV 602.74
PROPOSED PIPE CROSSING:
8" SAN. INV=603.13
24" STORM INV=608.20
200 LF
10" SDR-35
PVC @ 0.40%
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
PROPOSED PIPE CROSSING:
8" SAN. INV=603.15
48" STORM INV=605.56
396 LF
8" SDR-35
PVC @ 0.40%
APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION
FUTURE DRIVE-THRU RESTAURANT, 2,300 SF
FUTURE DRIVE-THRU RESTAURANT 2,380 SF
FUTURE 2,500 G.S.F. BANK
PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)
MAINTAIN 18" VERTICAL CLEARING AT ALL STORM/SANITARY CROSSINGS, TYP.
PROPOSED 6" GATE VALVE
PROPOSED 10" GATE VALVE
PROPOSED 10"x10"x6" TEE
PATIO

N
UTILITY PLAN
SCALE: 1"=40'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
076394
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Utility Plan

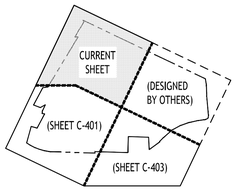
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Scale: As Noted

DRAWING NO.
C-401

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

EX. TOPS MARKET
92,264 SF

FUTURE 1-STORY RETAIL
80,300 S.F.

FUTURE RETAIL
130x70'
9,100 SF

PATIO

FUTURE REST. W/ DRIVE-THRU
2,380 SF

APPROXIMATE LOCATION OF EXISTING 6" SDR-35 PVC SANITARY LATERAL FROM TOPS MARKETS TO REMAIN AND BE REUSED; COORDINATE CONNECTION WITH TOPS MARKETS TO ENSURE UNINTERRUPTED SERVICE DURING CONSTRUCTION

PROPOSED PIPE CROSSING:
10" SAN. INV=604.50
42" STORM INV=606.58

SAN MH 7
RIM 613.93
S INV 604.71
NW INV 604.61

170 LF
10" SDR-35
PVC @ 1.76%

189 LF
10" SDR-35
PVC @ 0.40%

PROPOSED 8" SDR-35 PVC SANITARY LATERAL FROM EX. SANITARY MANHOLE; COORDINATE CONNECTION WITH TOPS MARKETS TO ENSURE UNINTERRUPTED SERVICE DURING CONSTRUCTION

PROPOSED HYDRANT ASSEMBLY TO BE INSTALLED WITHIN FUTURE CURBED ISLAND AS SHOWN

SAN MH 6
RIM 615.81
SE INV 603.85
NW INV 603.75
PROVIDE BENDS & BLOCKING AS REQUIRED

MAINTAIN 18" VERTICAL CLEARING AT ALL STORM/SANITARY CROSSINGS, TYP.

CONTRACTOR TO INSTALL PROPOSED 10" G.V. AT CONNECTION TO EX. 10" WATERMAIN

PROPOSED 10" GATE VALVE

PROPOSED 10" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)

PROPOSED 10"x10"x6" TEE

PROPOSED 10"x10"x10" TEE

PROPOSED 10" GATE VALVE

PROP. 6" AWWA C-900 PVC COMBINED SERVICE (5' MIN. COVER)

PROPOSED 6" GATE VALVE

PROP. CAP TO BE INSTALLED JUST AFTER 6" GATE VALVE AS SHOWN (FOR FUTURE USE)

EXISTING WATERMAIN TO REMAIN & BE REUSED WITHIN SITE. ALL EXISTING TENANTS SHALL HAVE CONSTANT, UNINTERRUPTED WATER SERVICE DURING CONSTRUCTION

APPROXIMATE LOCATION OF FUTURE SANITARY LATERAL FROM PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION

APPROXIMATE LOCATION OF FUTURE WATER SERVICE TO PROPOSED BUILDING; TO BE INSTALLED DURING FUTURE PHASE OF CONSTRUCTION

CONTRACTOR TO INSTALL PROPOSED 6" G.V. AT CONNECTION TO EX. 6" WATERMAIN

PROPOSED 10"x10"x8" TEE

PROPOSED 10" GATE VALVE

CONTRACTOR TO INSTALL PROPOSED 10" G.V. AT CONNECTION TO EX. 10" WATERMAIN

EXISTING WATERMAIN TO REMAIN & BE REUSED WITHIN SITE. ALL EXISTING TENANTS SHALL HAVE CONSTANT, UNINTERRUPTED WATER SERVICE DURING CONSTRUCTION

PROPOSED 10" GATE VALVE TO BE INSTALLED ON EX. 10" WATER SERVICE AS SHOWN FOR FUTURE CONNECTION

SAN MH 12
RIM 616.78
NW INV 607.33

PROP. 8" GATE VALVE

PROPOSED 8" AWWA C-900 PVC COMBINED WATER SERVICE (5' MIN. COVER)

PROP. 6" AWWA C-900 PVC COMBINED SERVICE (5' MIN. COVER)

PROPOSED 6" GATE VALVE

PROPOSED 8"x6" TEE

PROP. CAP TO BE INSTALLED JUST AFTER 10" GATE VALVE AS SHOWN (FOR FUTURE USE)

OFFSITE IMPROVEMENTS TO CONNECT TO EXISTING SAN MANHOLE 12 AT INV. 607.43. REFER TO PLANS BY OTHERS.

MATCHLINE (C-402)

MATCHLINE (C-401)

MATCHLINE (PLANS BY OTHERS)

N

UTILITY PLAN

SCALE: 1"=40'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
076394
LICENSED PROFESSIONAL ENGINEER

Scaled 07/20/2026

DRAWING NAME:
Utility Plan

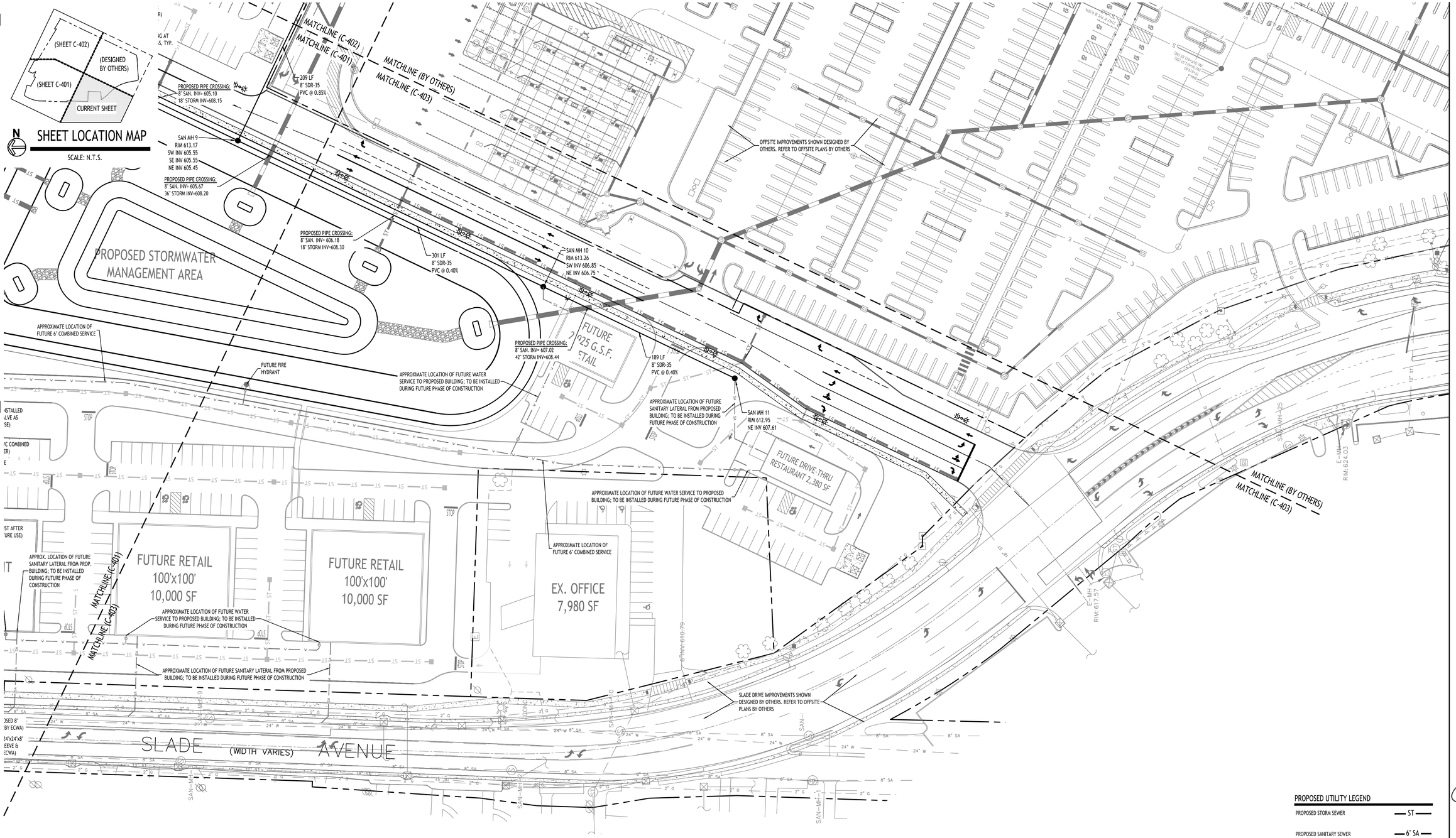
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C-402

Project No: 24-4113

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UTILITY PLAN

SCALE: 1"=40'

N

40' 40 0 40 80Ft.

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6' WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6' THICK.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER R WOOD * 076394 LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Utility Plan

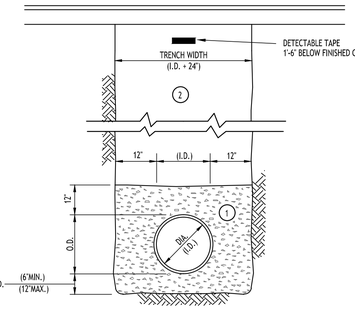
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DRAWING NO.
C-403

Project No: 24-4113

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

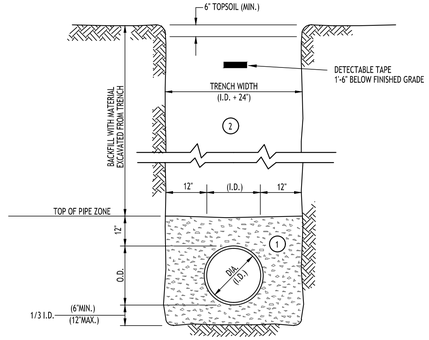
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

SEWER/WATERLINE TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

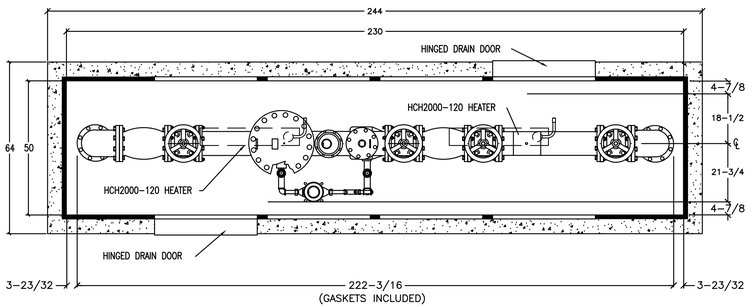
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

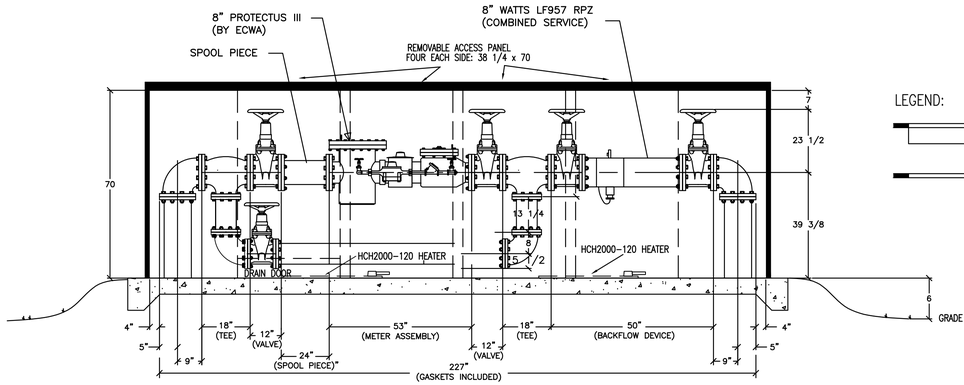
SEWER/WATERLINE TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE



NOTES:

1. BACKFLOW PREVENTER DIMENSIONS FURNISHED BY WATTS
2. ALL DIMENSIONS ARE IN INCHES
3. WALL & INSULATION THICKNESS IS 1-1/2"
4. ROOF & INSULATION THICKNESS IS 3"
5. ENCLOSURE SHOWN IS SAFE-T-COVER MODEL 1000D-ALC00-17
6. EXTERIOR ENCLOSURE DIMENSIONS: 53"W x 233"L x 73" H
7. CONCRETE PAD IS 64"W x 244"L x 6"THK W/W.W.F. 6X6/10X10
8. METER SHOWN: 8" PROTECTUS III, SPOOL PIECE & METER SUPPLIED BY ECWA. VERIFY DIMENSIONS PRIOR TO ORDERING
9. RPZ SHOWN: 8" WATTS LF957 RPZ
10. CONTRACTOR TO INSTALL ELECTRIC SERVICE TO ENCLOSURE, COORDINATE SOURCE WITH OWNER
11. INSTALL A 120V GFI OUTLET IN THE ENCLOSURE
12. HEATERS TO HAVE THERMOSTAT CONTROL
13. ALL 8" PIPING & FITTINGS WITHIN THE ENCLOSURE SHALL BE DUCTILE IRON
14. CONCRETE PAD TO BE 6" ABOVE ADJACENT GRADE

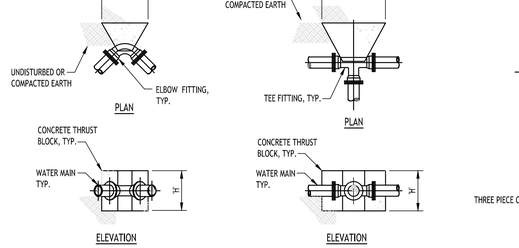


LEGEND:

REMOVABLE ACCESS PANEL 38 1/4"W x 70"H w/DRAIN DOOR

REMOVABLE ACCESS PANEL 38 1/4"W x 70"H

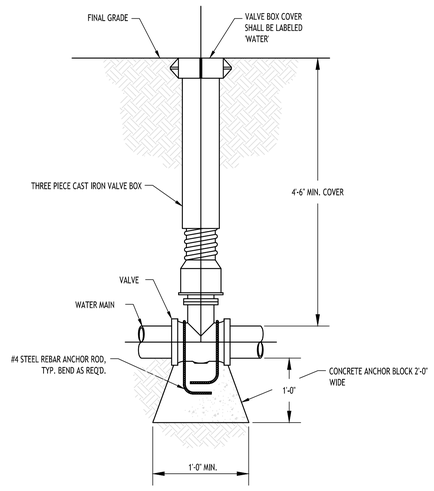
8"METER & RPZ INSULATED ENCLOSURE



DIMENSION SCHEDULE								
PIPE SIZE	90° ELBOW		45° ELBOW		22.5° ELBOW		11.25° ELBOW	
	'H'	'L'	'H'	'L'	'H'	'L'	'H'	'L'
4"	1.5'	2.0'	1.0'	2.0'	1.0'	1.0'	1.0'	1.0'
6"	2.0'	2.5'	1.5'	2.0'	1.0'	1.5'	1.0'	1.5'
8"	2.5'	3.5'	2.0'	2.5'	1.5'	1.5'	1.0'	2.0'
10"	3.0'	4.5'	2.5'	3.0'	1.5'	3.0'	1.0'	2.5'
12"	3.5'	5.0'	3.0'	3.5'	2.5'	2.5'	1.5'	2.5'

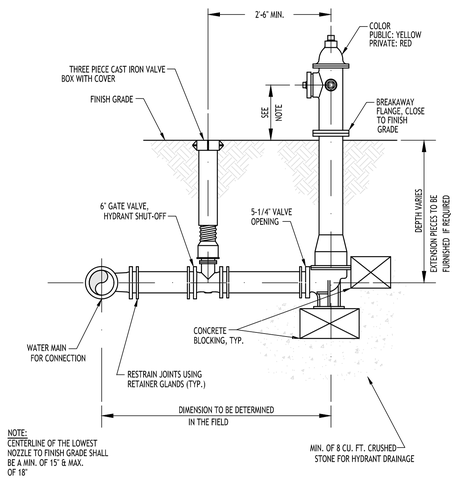
DIMENSION SCHEDULE		
PIPE SIZE	TEE OR TAP SLEEVE	
----	'H'	'L'
4"	1.5'	1.0'
6"	1.5'	2.5'
8"	1.5'	3.5'
10"	2.5'	3.5'
12"	3.5'	3.5'

THRUST BLOCK SCHEDULE



TYPICAL GATE VALVE DETAIL

NOT TO SCALE



NOTE:
CENTERLINE OF THE LOWEST NOZZLE TO FINISH GRADE SHALL BE A MIN. OF 15" & MAX. OF 18"

TYPICAL FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

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West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK * CHRISTOPHER WOOD * LICENSED PROFESSIONAL ENGINEER 076994

Sealed 07/20/2026

DRAWING NAME:

Utility Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

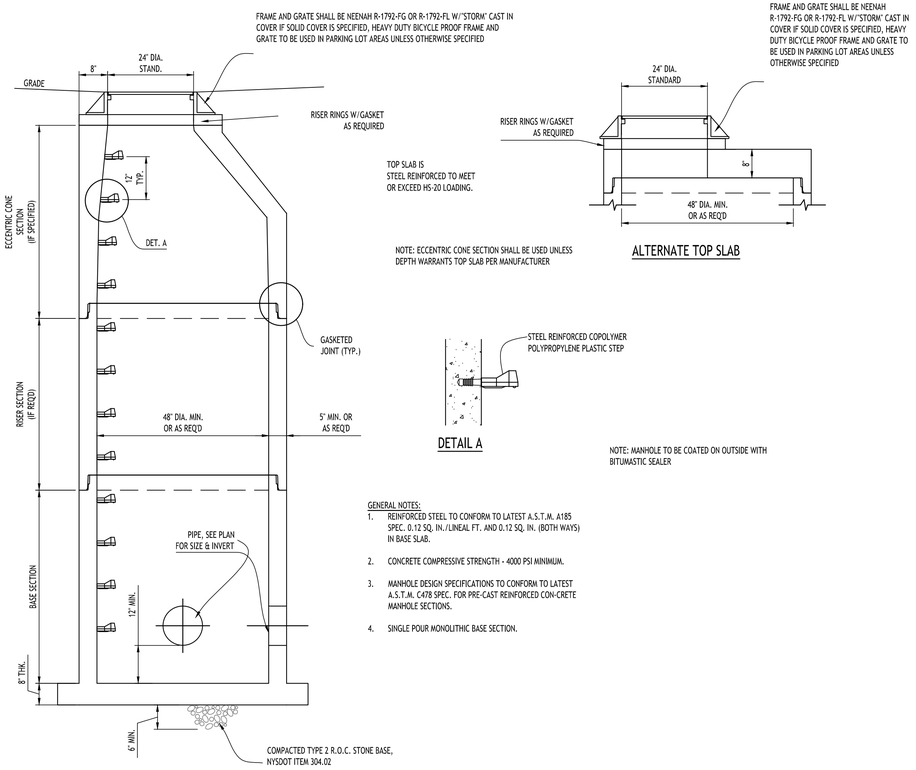
DRAWING NO.

C-404

Project No: 24-4113

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TYPICAL SANITARY MANHOLE DETAIL

NOT TO SCALE

NOTE: ECCENTRIC CONE SECTION SHALL BE USED UNLESS DEPTH WARRANTS TOP SLAB PER MANUFACTURER

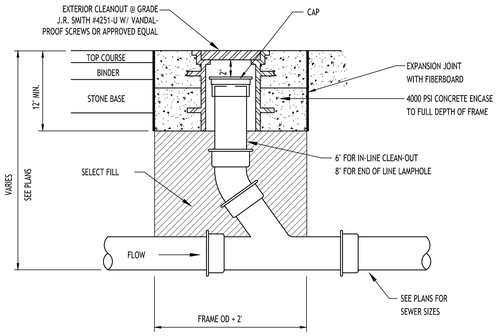
ALTERNATE TOP SLAB

DETAIL A

NOTE: MANHOLE TO BE COATED ON OUTSIDE WITH BITUMASTIC SEALER

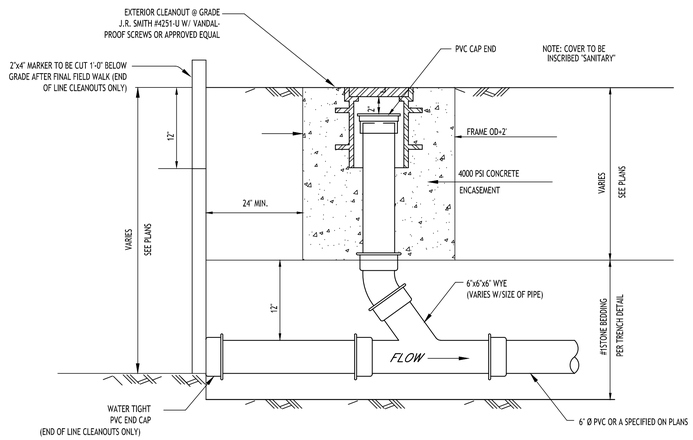
GENERAL NOTES:

1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN BASE SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRE-CAST REINFORCED CON-CRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.



LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK

NOT TO SCALE



LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS

NOT TO SCALE

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Sealed 07/20/2026

DRAWING NAME:

Sanitary Sewer Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

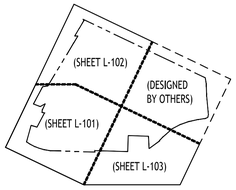
DRAWING NO.

C-405

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

OVERALL LANDSCAPE PLAN

SCALE: 1"=100'

LEGEND

DECIDUOUS TREE

SMALL TREE

EVERGREEN TREE/SHRUB

BUSH/ORNAMENTAL GRASS PERENNIAL

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200Ft.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:

Landscape Plan Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

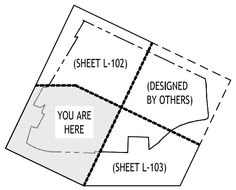
DRAWING NO.

L-100

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

LANDSCAPE PLAN

SCALE: 1"=40'

LEGEND

DECIDUOUS TREE

SMALL TREE

EVERGREEN TREE/SHRUB

BUSH/ORNAMENTAL GRASS

PERENNIAL

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 0 40 80Ft.

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
GTd	29	Gleditsia triacanthos I''Draves'	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT.,40', W 35'
QRvB	16	Quercus robur x bicolor 'Long'	Regal Prince Oak	2 1/2" - 3" CAL.	B&B, HT.,35', W 18'
UAp	3	Ulmus americana 'Princeton'	Princeton American Elm Tree	2 1/2" - 3" CAL.	B&B, HT.,50', W 40'
QM	3	Quercus macrocarpa	Chestnut Oak	2 1/2" - 3" CAL.	B&B, HT.50', W 30'
CBL	8	Carpinus betulus 'Lucas'	Lucus columnar hornbeam	2 1/2" - 3" CAL.	B&B, HT.30' W 10'
QRn	13	Quercus robur x bicolor 'Nadler'	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT.30' W 6'
ArRS	9	Acer rubrum 'Red Sentinel'	Red Sentinel Maple	2 1/2" - 3" CAL.	B&B, HT.30' W 12'
GBps	5	Ginkgo biloba 'Princeton Sentry'	Maiden Hair Tree	2 1/2" - 3" CAL.	B&B, HT.50' W 20'
AxB	3	Aesculus x bushii 'Aaron 1'	Mystic Ruby Buckeye	2 1/2" - 3" CAL.	B&B, HT.30' W 15'
SR	3	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1 1/2" - 2 1/2"" CAL.	B&B, HT.20' W 15'

		EVERGREEN TREES			
JS	14	Juniperus scopolarum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT. 16', W 4'

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076394

Sealed 07/20/2026

DRAWING NAME:

Landscape Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

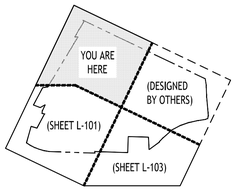
DRAWING NO.

L-101

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

EX. TOPS MARKET
92,264 SF

FUTURE 1-STORY RETAIL
80,300 S.F.

FUTURE RETAIL
130'X70'
9,100 SF

PATIO

PATIO

FUTURE DRIVE-THRU
RESTAURANT 2,380 SF

MATCHLINE (L-102)

MATCHLINE (L-101)

MATCHLINE (L-102)

MATCHLINE (PLANS BY OTHERS)

5-GTd
2-GTd
2-GTd
2-GTd
3-QM
1-QRxB
2-QRxB
2-QRxB
5-CBL
1-GTd
3-CBL
1-GTd

LEGEND

DECIDUOUS TREE

SMALL TREE

EVERGREEN TREE/SHRUB

BUSH/ORNAMENTAL GRASS

PERENNIAL

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40' 40 0 40 80Ft.

N

LANDSCAPE PLAN

SCALE: 1"=40'

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
GTd	29	Gleditsia triacanthos I "Draves"	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT. 40', W 35'
QRxB	16	Quercus robur x bicolor 'Long'	Regal Prince Oak	2 1/2" - 3" CAL.	B&B, HT. 35', W 18'
UAp	3	Ulmus americana 'Princeton'	Princeton American Elm Tree	2 1/2" - 3" CAL.	B&B, HT. 60', W 40'
QM	3	Quercus macrocarpa	Chestnut Oak	2 1/2" - 3" CAL.	B&B, HT.50', W 30'
CBL	8	Carpinus betulus 'Lucas'	Lucus columnar hornbeam	2 1/2" - 3" CAL.	B&B, HT.30' W 10'
QRs	13	Quercus robur x bicolor 'Nadler'	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT.30' W 6'
AriRS	9	Acer rubrum 'Red Sentinel'	Red Sentinel Maple	2 1/2" - 3" CAL.	B&B, HT.30' W 12'
GBps	5	Ginkgo biloba 'Princeton Sentry'	Maiden Hair Tree	2 1/2" - 3" CAL.	B&B, HT.50' W 20'
AxB	3	Aesculus x bushii 'Aaron 1'	Mystic Ruby Buckeye	2 1/2" - 3" CAL.	B&B, HT.30' W 15'
SR	3	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1 1/2" - 2 1/2"" CAL.	B&B, HT.20' W 15'
		EVERGREEN TREES			
JS	14	Juniperus scopolarum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT.. 16', W 4'

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No.	Description	Date

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CHRISTOPHER WOOD
076994
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:

Landscape Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

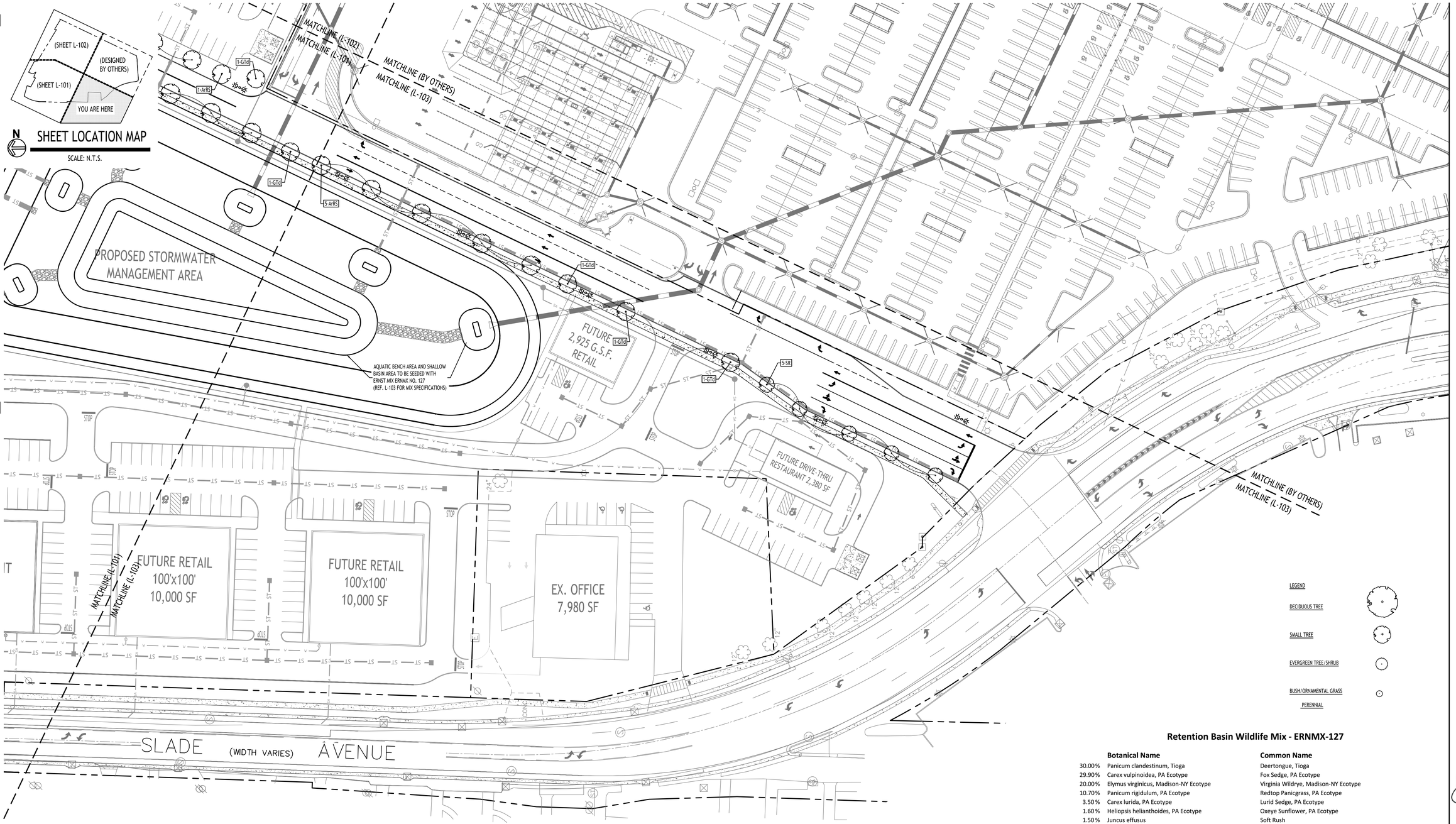
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L-102

Project No: 24-4113

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KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		D E C I D U O U S T R E E S			
GTd	29	Gleditsia triacanthos I "Draves"	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT. 40', W 35'
QRxB	16	Quercus robur x bicolor 'Long'	Regal Prince Oak	2 1/2" - 3" CAL.	B&B, HT. 35', W 18'
UAp	3	Ulmus americana 'Princeton'	Princeton American Elm Tree	2 1/2" - 3" CAL.	B&B, HT. 60', W 40'
QM	3	Quercus macrocarpa	Chestnut Oak	2 1/2" - 3" CAL.	B&B, HT.50', W 30'
CBL	8	Carpinus betulus 'Lucas'	Lucus columnar hornbeam	2 1/2" - 3" CAL.	B&B, HT.30' W 10'
QRn	13	Quercus robur x bicolor 'Nadler'	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT.30' W 6'
ArRS	9	Acer rubrum 'Red Sentinel'	Red Sentinel Maple	2 1/2" - 3" CAL.	B&B, HT.30' W 12'
GBps	5	Ginkgo biloba 'Princeton Sentry'	Maiden Hair Tree	2 1/2" - 3" CAL.	B&B, HT.50' W 20'
AxB	3	Aesculus x bushii 'Aaron 1'	Mystic Ruby Buckeye	2 1/2" - 3" CAL.	B&B, HT.30' W 15'
SR	3	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1 1/2" - 2 1/2"" CAL.	B&B, HT.20' W 15'
		E V E R G R E E N T R E E S			
JS	14	Juniperus scopolarum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT. 16', W 4'

N
LANDSCAPE PLAN
SCALE: 1"=40'

Retention Basin Wildlife Mix - ERNMX-127

	Botanical Name	Common Name
30.00%	Panicum clandestinum, Tioga	Deertongue, Tioga
29.90%	Carex vulpinoidea, PA Ecotype	Fox Sedge, PA Ecotype
20.00%	Elymus virginicus, Madison-NY Ecotype	Virginia Wildrye, Madison-NY Ecotype
10.70%	Panicum rigidulum, PA Ecotype	Redtop Panicgrass, PA Ecotype
3.50%	Carex lurida, PA Ecotype	Lurid Sedge, PA Ecotype
1.60%	Heliopsis helianthoides, PA Ecotype	Oxeye Sunflower, PA Ecotype
1.50%	Juncus effusus	Soft Rush
1.00%	Verbena hastata, PA Ecotype	Blue Vervain, PA Ecotype
0.50%	Scirpus cyperinus, PA Ecotype	Woolgrass, PA Ecotype
0.50%	Agrostis perennans, Albany Pine Bush-NY Ecotype	Autumn Bentgrass, Albany Pine Bush-NY Ecotype
0.50%	Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype
0.10%	Aster pilosus, PA Ecotype	Heath Aster, PA Ecotype
0.10%	Lobelia siphilitica, PA Ecotype	Great Blue Lobelia, PA Ecotype
0.10%	Mimulus ringens, PA Ecotype	Square Stemmed Monkeyflower, PA Ecotype

100.00%

Seeding Rate: 20 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

Grasses & Grass-like Species, Herbaceous Flowering Species, Mixes, Stormwater Management, Wildlife Habitat & Food Plots

The grasses, grass-like species and forbs provide a diverse cover in retention basins where mowing is not anticipated. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ERNST SEEDS
Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191

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40' 40 0 40 80Ft.

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Sealed 07/20/2026

DRAWING NAME:
Landscape Plan

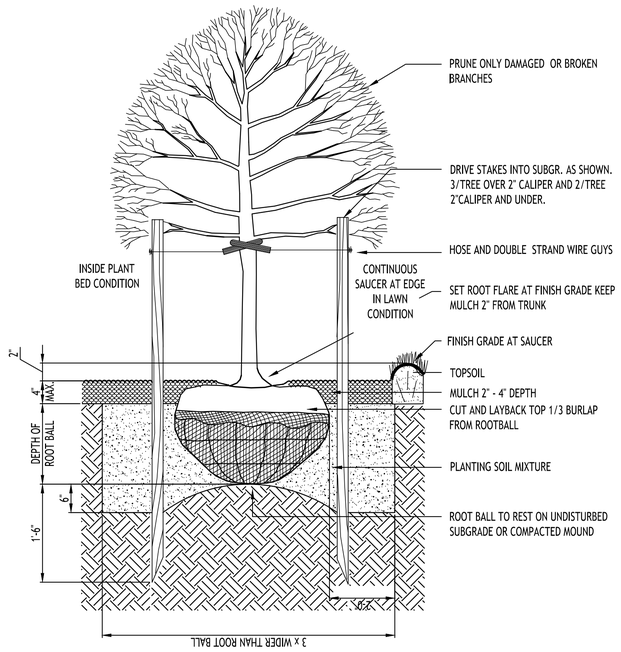
Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
L-103

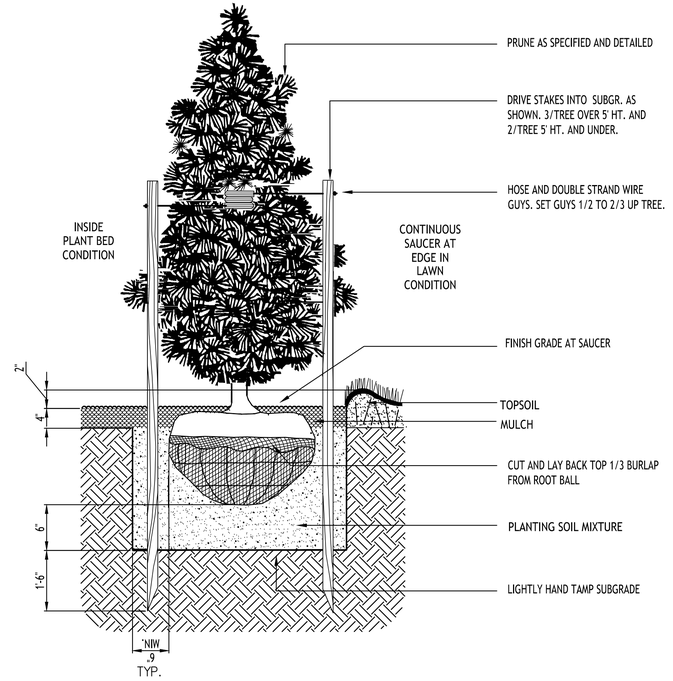
Project No: 24-4113

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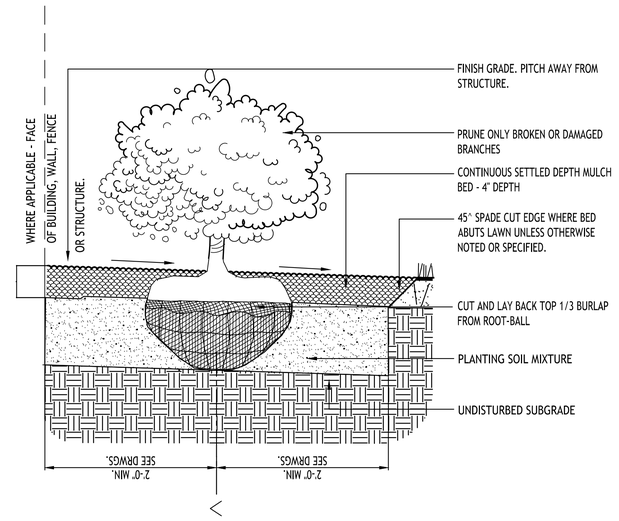
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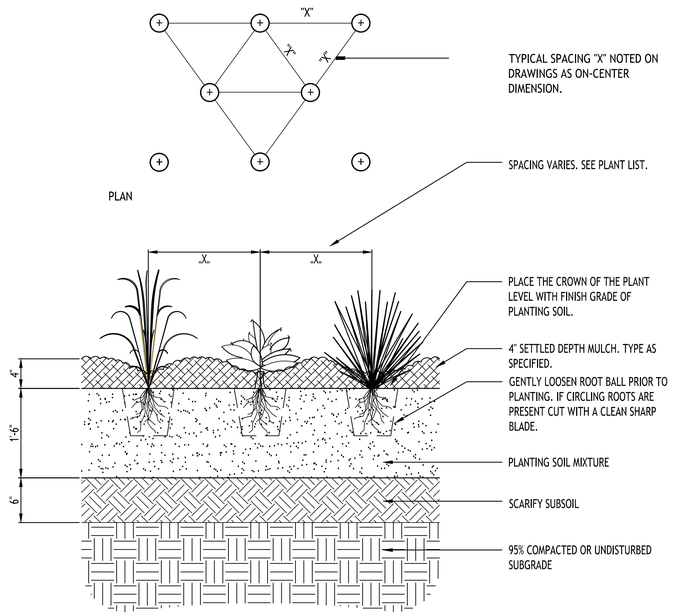
STD. DECIDUOUS TREET PLANTING



STD. EVERGREEN PLANTING



STD. SHRUB PLANTING

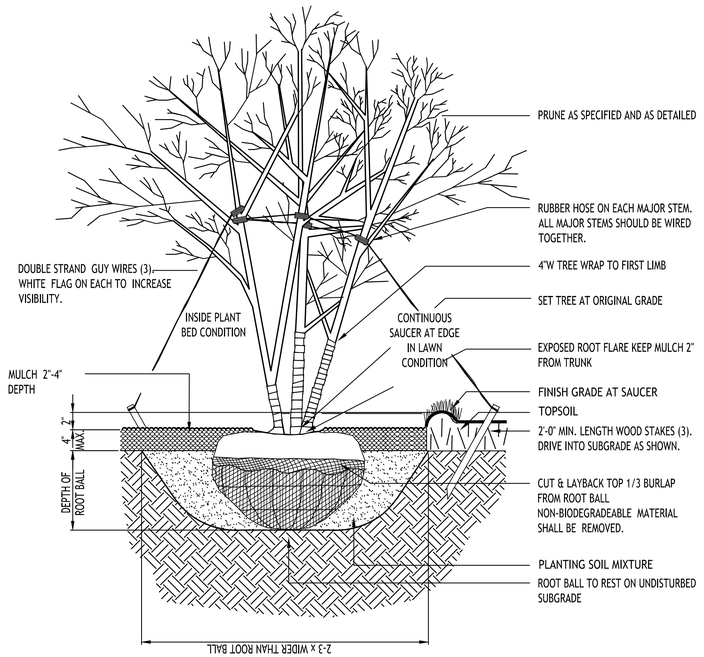


SECTION

NOTE: PLANT BULBS IN TRENCHES AND BOUQUET PLANTING GROUPS.

GROUND COVER PLANT SPACING

NO TO SCALE



DECIDUOUS TREE PLANTING - MULTI - STEM

NO TO SCALE

LANDSCAPE NOTES:

1. ALL PLANTS INSTALLED SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED ON THE PLANS AND IN THE LATEST EDITION ON THE AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, ANSI 260.1
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF, THE QUANTITIES SHOWN ARE A MINIMUM AND ARE FOR REFERENCE ONLY.
3. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKEOUT OF ALL PLANTING MATERIAL LOCATIONS AND CONTACT THE OWNERS FIELD REPRESENTATIVE PRIOR TO ACTUALL INSTALLING. THE PLANTING MATERIAL LOCATIONS SHOWN ON THE PLANS ARE TO CONVEY THE DESIGN INTENT ONLY, ACTUAL LOCATIONS WILL BE FINALIZED BY THE OWNERS FIELD REPRESENTATIVE AT THE TIME OF INSTALLATION.
4. THE CONTRACTOR IS HEREBY NOTIFIED THAT IF UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE PLANTINGS, ALL PROPOSED PLANTINGS SHALL BE INSTALLED A MINIMUM OF 5' FROM ANY UNDERGROUND UTILITY, CONTACT THE OWNERS FIELD REPRESENTATIVE IF PLANTINGS SHOWN ON THE PLANS VIOLATE THIS SITUATION.
5. ALL TREES SHALL BE INSTALLED A MINIMUM OF 20' FROM ANY OVERHEAD ELECTRIC LINES.
6. PLANTING BACKFILL MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, ⅓ PART WELL ROTTED MANURE, 10 LBS 5-10-5 PLANTING FERTILIZER THOROUGHLY MIXED PER CUBIC YARD.
7. STAKE AND WRAP TREES IMMEDIATELY FOLLOWING INSTALLATION.
8. ALL PLANTED AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH OVER 10 MIL. WEED MAT EQUAL TO "WEEDBLOCK" BY EASY GARDENER OR DEWITT WEED BARRIER.
9. THE AREAS ON THE PLAN TO BE SEEDED SHALL HAVE 4" MINIMUM OF TOPSOIL, DISK PLOWED, LEVELED AND HAND RAKED SMOOTH. SURFACE SHALL BE ROLLED TO REMOVE LUMPS.
10. ALL SEEDED AREAS SHALL BE HYDROSEEDED IN ACCORDANCE WITH THE SPECIFICATION INDICATED. WHERE REQUIRED BY CLIMATIC CONDITIONS, SLOPE OR SEASON OF PLANTING, SOD MAY BE SUBSTITUTED FOR SEEDING IN ORDER TO ACHIEVE THE REQUIRED COVERAGE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MOWING AND OTHER MAINTENANCE TO SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER, THIS SHALL INCLUDE WATERING DAILY FOR 15 DAYS OR AS REQUIRED BY WEATHER CONDITIONS AND RE-SEEDING OF THIN SPOTS FOLLOWING THE GERMINATION OF THE SEEDS.

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DESIGN
Buffalo | Utica | Greensboro

West Seneca Exchange

Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:

Landscape Notes & Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

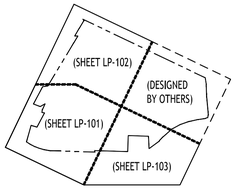
DRAWING NO.

L-104

Project No: 24-4113

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N

SHEET LOCATION MAP

SCALE: N.T.S.

N

LIGHTING PLAN

SCALE: 1"=100'

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

100' 100 0 100 200FT.

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REVISIONS:

No.	Description	Date

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CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:

Lighting Plan Overall

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

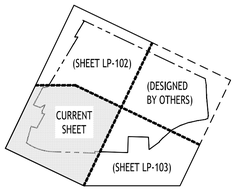
DRAWING NO.

LP-100

Project No: 24-4113

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SHEET LOCATION MAP

SCALE: N.T.S.

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SASC-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SASC-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

LIGHTING PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

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REVISIONS:

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LICENSED PROFESSIONAL ENGINEER
076394

Sealed 07/20/2026

DRAWING NAME:

Lighting Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

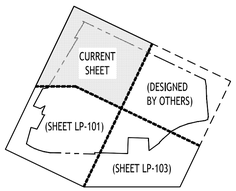
DRAWING NO.

LP-101

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N

SHEET LOCATION MAP

SCALE: N.T.S.

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS – McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

N

LIGHTING PLAN

SCALE: 1"=40'

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

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REVISIONS:

No.	Description	Date

STATE OF NEW YORK
CHRISTOPHER WOOD
076994
LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:

Lighting Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

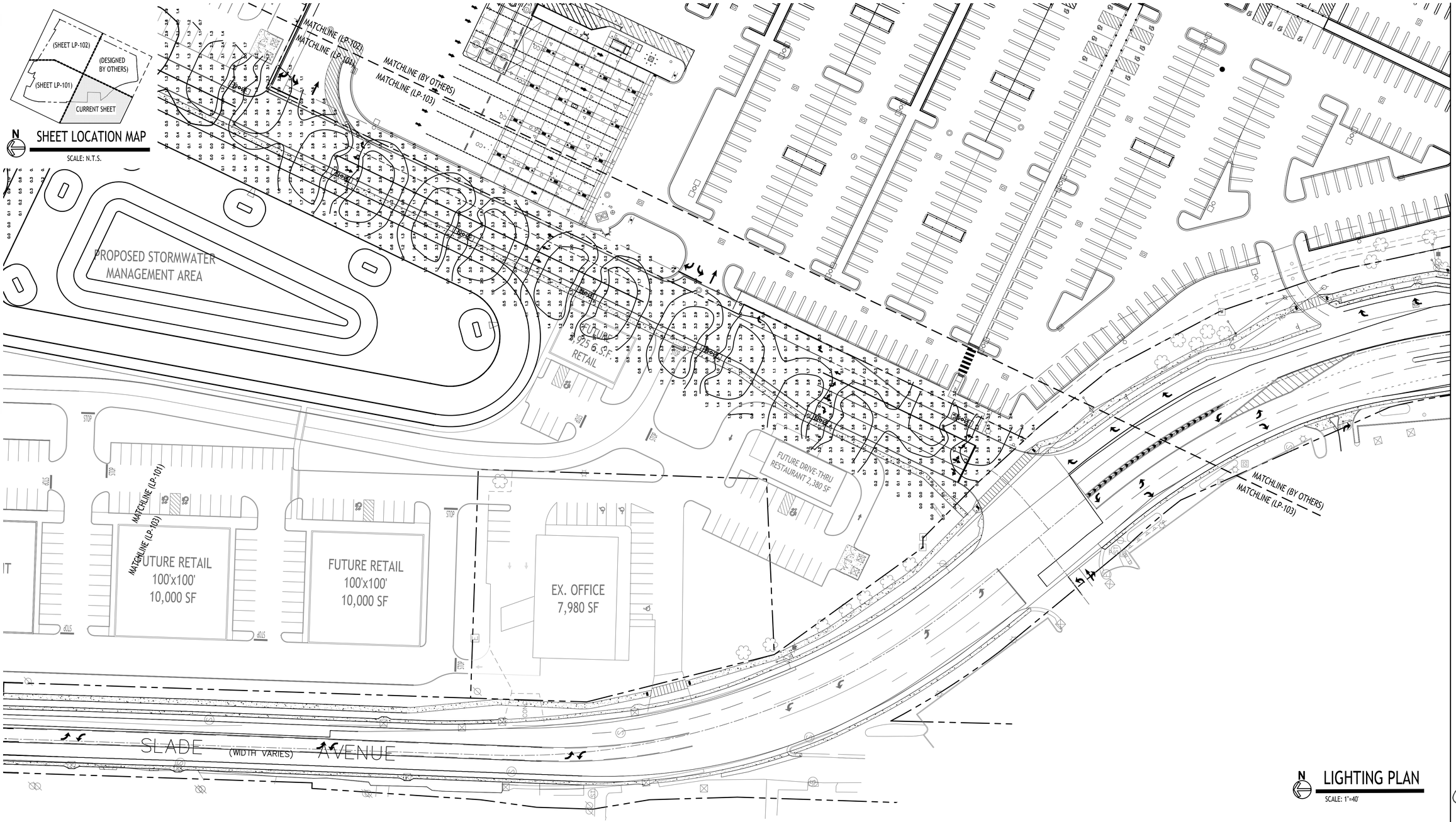
DRAWING NO.

LP-102

Project No: 24-4113

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LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	NOTE 1	NOTE 2	QUANTITY
S-1		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS - McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	9
S-2		T4W-BCS(3) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH BACKLIGHT CONTROL SHIELD	POLE	COOPER LIGHTING SOLUTIONS - McGRAW-EDISON, GALN-SA3C-740-U-T4W-BCS	BUG Rating: B0 U0 G3	Mounting Height: 20'	18

N

LIGHTING PLAN

SCALE: 1"=40'

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 40 0 40 80Ft.

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No.	Description	Date

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Sealed 07/20/2026

DRAWING NAME:
Lighting Plan

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
LP-103

Project No: 24-4113

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Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GALN Galleon II

Area / Site Luminaire

Product Features

BABA · BAA · TAA · PADC · Light Allchitect™

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 13

Product Certifications

USTI · DLC LISTED · DLC PREMIUM · 3G VIB · IP66 · CA TITLE 20 · 5 YEAR · RoHS

Quick Facts

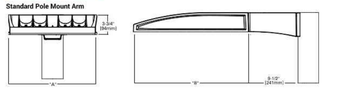
- Lumen packages range from 3,300 - 102,700 (33W - 658W)
- 17 optical distributions
- Efficacy up to 178 LPW

Connected Systems

- Wavelinx LITE Wireless
- Wavelinx PRO Wireless
- AirMesh Wireless

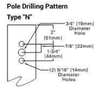
Dimensional Details

Standard Pole Mount Arm



Pole Drilling Pattern

Type "N"



Number of Light Squares	Width "A"	Housing Length "B"	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	22"	29 lb	0.95
5-6	22"	22"	39 lb	0.95
7-9	22"	28-1/8"	48 lb	1.1

NOTES:
1. IDA Certified (3000K CCT and warmer only, fixed mounting options)

Ordering Information

SAMPLE NUMBER: **GALN-SA4C-740-U-T4FT-GM**

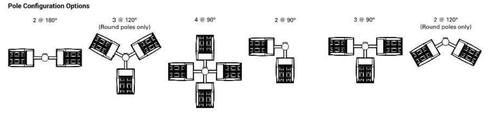
Product Family [1, 2]	Light Engine Configuration			Color Temperature	Voltage	Distribution	Mounting	Finish
	Light Square	Square Count	Lumen Output					
GALN=Galleon II **BAA-GALN**=Galleon II Compliant [3] **TAA-GALN**=Galleon II Trade Agreements Act Compliant [3] **BABA-GALN**=Galleon II BABA/TAA Compliant [3]	**SA**=16 LED Light Square **SB**=25 LED Light Square	1=1 Light Square 2=2 Light Squares 3=3 Light Squares 4=4 Light Squares 5=5 Light Squares 6=6 Light Squares 7=7 Light Squares 8=8 Light Squares 9=9 Light Squares	**A**=Output Level 1 **B**=Output Level 2 **C**=Output Level 3 **D**=Output Level 4 [4, 5] **Z**=Configured Outputs [6]	**722**=722K, 2200K **727**=727K, 2700K **730**=730K, 3000K **735**=735K, 3500K **740**=740K, 4000K **750**=750K, 5000K **760**=760K, 6000K **827**=827K, 2700K **830**=830K, 3000K **835**=835K, 3500K **840**=840K, 4000K **930**=930K, 3000K **935**=935K, 3500K **940**=940K, 4000K **950**=950K, 5000K **AMB**=Amber [7, 8]	**H**=120-277V **H**=347V-480V [7, 9] **2**=208V **3**=240V **4**=277V **5**=480V [9] **6**=347V **DV**=277V-480V Dual-Volt Drivers [10, 11]	**T1**=Type I **T2**=Type II **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **SM2**=Type V Narrow **SM3**=Type V Square Medium **SM4**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **AFL**=Automotive Frontline	**[Blank]**=Standard Pole Mount Arm **QM**=Quick Mount Universal Arm **QMA**=Pole Mount Arm with Quick Mount Adaptor **PA**=Pole Mount, Adjustable **SP**=2 Slipfitter, Adjustable [12] **SP2**=2-3/8" Slipfitter, Adjustable [12] **QMA**=Quick Mount Mast Arm, Fixed **MA**=Mast Arm, Fixed **WM**=Wall Mount, Fixed **WA**=Wall Mount, Adjustable **UP**=Upswept Arm	**AP**=Grey **BZ**=Bronze **BK**=Black **DN**=Dark Platinum **GM**=Granite Metallic **WH**=White **BALEX**=Custom Color

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately) [17]
DIM=External 0-10V Dimming Leads [13] **F**=Single Fuse (120, 277 or 347V Specify Voltage) **FF**=Double Fuse (208, 240 or 480V Specify Voltage) **23K**=23KV UL 1449 fused surge protective device [14] **JL**=Two Circuits [15] **HA**=50°C High Ambient [16] **HSS**=Installed House Side Shield [17] **FG**=Fusing Configuration Feeds [18] **GBSBK**=Glare Reducing Shield, Black [19] **GBSWH**=Glare Reducing Shield, White [19] **LCF**=Light Square Trim Painted to Match Housing [20] **TH**=Tool-less Door Hardware [21] **CC**=Coastal Construction Finish [22] **LTO**=Optics Rotated 90° Left **RTO**=Optics Rotated 90° Right **3SDCM**=3 Standard Deviation Color Matching [23] **AHD1465**=After Hours Dim, 5 Hours [24] **AHD2465**=After Hours Dim, 6 Hours [24] **AHD2554**=After Hours Dim, 7 Hours [24] **AHD3554**=After Hours Dim, 8 Hours [24] **DALI**=DALI Drivers	**BPC**=Button Type Photocontrol. Must specify voltage 120V, 208V, 240V or 277V. [24] **PR**=NEMA 3-PIN Photocontrol Receptacle [25] **PR7**=NEMA 7-PIN Photocontrol Receptacle [26] **FADC**=Field Adjustable Dimming Controller [27] **PSC**=Photocontrol Shorting Cap **SPBD**=Dimming Motion Sensor, 9' (3) mounting [28] **SPBDX**=Dimming Motion Sensor, 21'-40' mounting [28] **SPBDXL**=Dimming Motion Sensor, limited square count, 9'-20' mounting [28] **SPBDXLW**=Dimming Motion Sensor, limited square count, 21'-40' mounting [28] **WSXW-LSB**=Mini Sensor for Dimming Operation, 9'-20' Mounting [29] **WSLSBM-LAB**=Motion Sensor for Dimming Operation, 21'-40' Mounting [29] **WLSXW**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [13, 29, 30] **WLSXW**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [13, 29, 30] **WPSXW**=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [13, 29, 30, 31] **DMOS-LSB**=AirMesh Occupancy Sensor (9'-20' Mounting) [29, 32] **DMHF-L40**=AirMesh Occupancy Sensor (21'-40' Mounting) [29, 32]	**GALRA1010**=NEMA Photocontrol Multi-Tap - 105-285V **GALRA1022**=NEMA Photocontrol - 480V [33] **GALRA1320**=NEMA Photocontrol - 347V **GALRA1013**=Photocontrol Shorting Cap **GALRA1014**=120V Photocontrol **MA1252**=10kV Surge Module Replacement **MA1030-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1031-XX**=(2) 180° Tenon Adapter for 2-3/8" O.D. Tenons **MA1187-XX**=(2) 90° Tenon Adapter for 2-3/8" O.D. Tenons **MA1189-XX**=(3) 90° Tenon Adapter for 2-3/8" O.D. Tenons **MA1188-XX**=(3) 90° Tenon Adapter for 2-3/8" O.D. Tenons **MA1190-XX**=(4) 90° Tenon Adapter for 2-3/8" O.D. Tenons **MA1191-XX**=(2) 120° Tenon Adapter for 2-3/8" O.D. Tenons **MA1038-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon **MA1039-XX**=(2) 180° Tenon Adapter for 3-1/2" O.D. Tenons **MA1192-XX**=(3) 90° Tenon Adapter for 3-1/2" O.D. Tenons **MA1193-XX**=(4) 90° Tenon Adapter for 3-1/2" O.D. Tenons **MA1194-XX**=(2) 90° Tenon Adapter for 3-1/2" O.D. Tenons **MA1195-XX**=(3) 90° Tenon Adapter for 3-1/2" O.D. Tenons **SSA238**=Adapter kit for mounting 3" DP arm to 2-3/8" O.D. vertical tenon **FSIR-100**=Wireless Configuration Tool for MS/DIM [34] **LSXHSS**=Field Installed House Side Shield for SA Light Squares [6, 17] **LSXHSS-SB**=Field Installed House Side Shield for SB Light Squares [6, 17] **LSXSBK**=Glare Reducing Shield, Black [6, 19] **LSXSBK-2PK**=Glare Reducing Shield, Black, 2-Pk [6, 19] **LSXSBWH**=Glare Reducing Shield, White [6, 19] **LSXPS**=Perimeter Shield, Black [6] **WSLC-7P-10A**=WaveLinx Outdoor Control Module [13, 29, 31] **TLT-S1-WH**= AirMesh 7-PIN node, 110-480V [13, 29, 35] **CBSSW-450-002**= AirMesh central base station with 5-button control [29]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our Pole Match Charts for details and recommendations.
2. Designlights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Details.
3. Coastal construction finish salt spray tested to over 5,000 hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
4. Not available with SB light squares.
5. When using SA light squares, Output Level 4 not available with color temperatures 722, 727, 827, 830 or 930 when HSS is used.
6. Trim option not 3G rated. Not available with Coastal Construction (CC) option.
7. Not available with SB light squares and Levels 3 & 4.
8. Not available with 347V or 480V configurations. Not available in combination with HA high ambient and sensor options at Output Level 3. H voltage not available with sensor options, choose voltage 5 or 6.
9. SP arm limited to 3" O.D. vertical tenon. SP2 limited to 2-3/8" O.D. vertical tenon.
10. Not available with 480V.
11. DL is not available with SB light squares. Not available with DPB at 347V or 480V. Not available with WaveLinx or 208V surge option.
12. Requires PBT.
13. Replace KS with sensor color (WH, BZ or BK).
14. WAC Gateway required to enable field configurability. Order WAC WAC-EtoE and WPOE 120 (1EA) to PoE injector/ power supply if not using existing PoE switch in the building.
15. Narrow-band 3000lm +/- 5lm for wildlife and observatory use. Choose Output Level 1, supplied at 350mA drive current only. Not available with SB light squares. Exact luminaire wattage available in IES files. Available with SWQ, SWQ, SL2, SL3 and T3R distributions only. Not available with Coastal.
16. Set of 4 pcs. One set required per Light Square.
17. HA option not available with Output Level 4 or AMB Amber.
18. Not for use with T1, SWQ, SWQ, SWQ or RW optics.
19. Not available with SB light squares.
20. Low reflect control seal brought out 15° outside fixture. Not available with DALI or integrated controls options.
21. Not available if any SPB, LMS, or WaveLinx sensor is selected. Motion sensor has an integral photocell.
22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. Not available with DPB, DMOS, DMHF, SPBD, SPBDX, SPBDXL or SPBDXLW.
23. Not for use with T1, T4FT, T4W or SL optics. See IES files for details. Not available with SB light squares.
24. Sensor configuration module application required for configuration. See controls page for details.
25. Not available with HSS. Not available with Coastal Construction. Not available with SB light squares.
26. Not available with HSS, SWSWH or SWSBK.
27. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America, Buy America Act (BABA) requirements. Consult factory for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
28. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
29. WaveLinx drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.designlights.org/search/ to confirm qualification.
30. 480V not to be used with ungrounded or impedance grounded systems.
31. Not available with SA1A or SA1B. Not available with DR1, or any DB configuration using Output Level 1. Not available with any control option except PE.
32. Cannot be used with DALI, PRC or other motion response control options. Not available with SB light squares when using Output Level 1.
33. Use GALN Product Configurator to specify lumen output, drive current and wattage. Not available with AWO. Not available with SB light squares.
34. Uses the FSP-211 nation sensor. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, photocell on/off thresholds, time delays and ramp rates. Download the app from the app store. Search "Fresnel" for more information.
35. Controls system is not available with photocontrol receptacle (PR, PR7) or other controls systems (HADC, DPAA).
36. Requires AirMesh central base station CBSSW-450-002 and Synapse commissioning for operation.
37. Only product configurations with these designated prefixes are built to be TAA (SR/DCT) only. Longer lead times apply, consult your lighting representative at Cooper Lighting Solutions for more information.
38. Not available with SB light squares.
39. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America, Buy America Act (BABA) requirements. BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

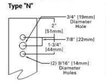
Mounting Details

Pole Configuration Options

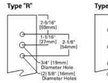


Pole Drilling Patterns

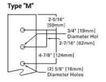
Type "N"



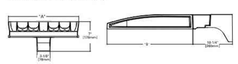
Type "R"



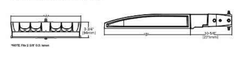
Type "M"



Quick Mount Universal Arm (QU)



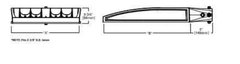
Quick Mount Mast Arm (QMA)



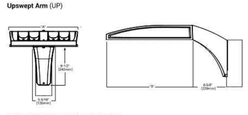
Pole Mount Arm with Quick Mount Adaptor (QM)



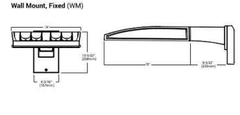
Mast Arm, Fixed (MA)



Upswept Arm (UP)



Wall Mount, Fixed (WM)



Mounting Details

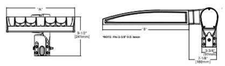
Wall Mount, Adjustable (WA)



3" Slipfitter, Adjustable (SP)



2-3/8" Slipfitter, Adjustable (SP2)

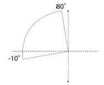


Pole Mount, Adjustable Arm (PA)



Adjustable Arm Range of Motion

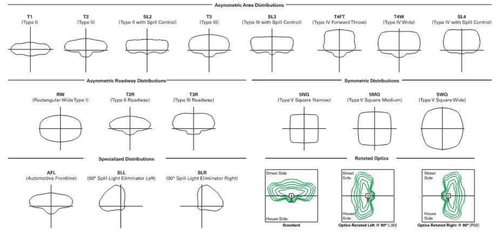
- Includes WA, SP, SP2 and PA mounting options
- Adjustable in increments of 5°
- Must maintain downward facing orientation



Fixture Weights and EPAs

Tilt Angle (Degrees)	Number of Light Squares	Weight	1 @ 90°	2 @ 180°	2 @ 90°	2 @ 120°	3 @ 90°	3 @ 120°	4 @ 90°
0°	1-4	33.5 lb (15.2 kg)	0.85	1.70	1.46	1.66	2.31	2.25	2.35
	5-6	43.5 lb (19.7 kg)	0.86	1.71	1.62	1.80	2.49	2.35	2.50
	7-9	52.5 lb (23.8 kg)	0.98	1.95	1.75	1.98	2.73	2.55	2.76
15°	1-4	33.5 lb (15.2 kg)	1.10	1.71	1.95	2.26	2.81	3.30	2.87
	5-6	43.5 lb (19.7 kg)	1.42	1.71	2.27	2.72	3.13	3.63	3.15
	7-9	52.5 lb (23.8 kg)	1.69	1.96	2.67	3.22	3.65	4.38	3.72
30°	1-4	33.5 lb (15.2 kg)	1.72	1.81	2.58	3.21	3.44	4.59	3.53
	5-6	43.5 lb (19.7 kg)	2.26	2.29	3.11	4.00	3.97	5.27	4.00
	7-9	52.5 lb (23.8 kg)	2.75	2.85	3.73	4.83	4.71	6.45	4.81
45°	1-4	33.5 lb (15.2 kg)	2.25	2.36	3.10	4.00	3.96	5.63	4.08
	5-6	43.5 lb (19.7 kg)	2.96	2.99	3.81	5.06	4.67	6.49	4.71
	7-9	52.5 lb (23.8 kg)	3.63	3.76	3.73	6.17	5.59	8.03	5.73
60°	1-4	33.5 lb (15.2 kg)	2.63	2.77	3.49	4.58	4.34	6.21	4.48
	5-6	43.5 lb (19.7 kg)	3.46	3.51	4.32	5.84	5.19	7.01	5.22
	7-9	52.5 lb (23.8 kg)	4.27	4.44	5.25	7.15	6.23	8.80	6.40

Optical Distributions



Product Specifications

Construction
- Die-cast aluminum housing and heat sink
- Three housing sizes, using 1 to 9 light squares

Optics
- High-efficiency injection-molded AccuLED Optics technology
- 17 optical distributions for area site and roadway applications
- 4 shielding options include HSS, BCS, GRS and PFS
- IDA Certified (3000K CCT and warmer only, fixed mounting options)
- 5 step MacAdam ellipse binning (5 SDCM) standard with 70CRI and 80CRI. 3SDCM option available with 740 CRI/CCT. 3 step MacAdam ellipse binning standard with 90CRI

Electrical
- Removable power tray assembly includes drivers, surge modules and control modules for ease of maintenance and serviceability
- Standard with 0-10V dimming
- Standard with 10kV surge module, optional 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting
- Arms are factory installed, enabling closed-housing installation
- All arms suitable for round or square pole installation
- All arms provide clearance for multiple fixture installations at 90°

Finish
- 6 standard finishes use super durable TGIC polyester powder coat paint, providing 2.5 mil nominal thickness and salt-spray tested to 3,000 hours per ASTM B117
- RAL and custom color matches available
- Coastal Construction (CC) option salt-spray tested to 5,000 hours per ASTM B117, achieving a scribe rating of 9 per ASTM D1654

Compliance
- Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified
- IDA Certified (3000K CCT and warmer only, fixed mounting options)
- FHWA and FTA agencies are utilizing their BAA rules for BABA compliance. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Build America Act (BABA).BABA is the minimum Government compliance requirement for the Buy America Build America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements

Typical Applications
- Outdoor, Parking Lots, Walkways, Roadways, Building Areas
- Sports lighting, including tennis, pickleball, basketball courts

Warranty
- Five-year limited warranty. Consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Lumen Maintenance (TM-21)

Output Level	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Output Levels 1-3	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
Output Level 4	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

FADC Settings
SA1-SA3 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: +/-5% typical value

FADC Settings
SA4-SA6 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	14%
2	25%
3	32%
4	43%
5	49%
6	57%
7	65%
8	72%
9	80%
10	100%

Note: +/-5% typical value

FADC Settings
SA7-SA9 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	19%
2	38%
3	47%
4	63%
5	74%
6	85%
7	95%
8	97%
9	100%
10	100%

Note: +/-5% typical value

Drive Currents

Lumen Output	SA Light Squares	SB Light Squares
Output Level 1	615mA	350mA
Output Level 2	800mA	450mA
Output Level 3	1050mA	615mA
Output Level 4	1200mA	900mA

CARMINWOOD DESIGN
Buffalo | Utica | Greensboro

West Seneca Exchange
Slade Ave, Ridge Rd & Orchard Park Rd
West Seneca New York

REVISIONS:

No.	Description	Date

STATE OF NEW YORK · CHRISTOPHER WOOD · 076394 · LICENSED PROFESSIONAL ENGINEER

Sealed 07/20/2026

DRAWING NAME:
Lighting Details

Date: 07/20/26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
LP-104

Project No: 24-4113

CARMINAWOOD
DESIGN

July 22, 2026

Jeffrey Schieber, Code Enforcement Officer
Town of West Seneca
1250 Union Road
West Seneca, NY 14224

Re: Seneca Mall Redevelopment
Orchard Park Rd, Slade Ave, Ridge Rd
West Seneca, NY

Mr. Schieber:

On behalf of our client, Benchmark Streamline, LLC, we are submitting the following information and documents for a Site Plan Review Application. This letter shall also serve as the Letter of Intent for this project.

Please find enclosed the following items:

(12) Copies of the Site Plan Application Form, dated 7/22/26
(12) Copies sets of West Seneca Exchange civil plan set w/ survey full size (24" x 36"), dated and sealed 7/20/26
(12) Copies sets of Land Development Plans Costco Wholesale w/ survey full size (24" x 36"), dated and sealed 7/17/26
(3) Copies of the West Seneca Exchange SWPPP, dated July 2026
(3) Copies of the West Seneca Exchange Engineer's Report, dated July 2026
(3) Copies of the Costco Wholesale Stormwater Management Report, dated July 17, 2026
(12) copies of Costco Wholesale Colored Building Elevations, (11"x17"), dated February 2026
(12) copies of Costco Wholesale Colored Fuel Elevations(11"x17"), dated February 2026
(1) Application fee check for the amount of $17,350.00, check #
(1) Escrow Engineering Review fee check for the amount of $5,000.00, check #

It should be noted all documents listed above will also be provided to the Town electronically.

The project is a redevelopment of the site previously occupied by the Seneca Mall. This phase includes the development of a 158,000 sf Costco Wholesale building which will also include an accessory fueling facility along with the major infrastructure for approximately 225,000 sf of future commercial buildings; the existing Tops Markets will remain. The project will include associated utility improvements, parking improvements, landscaping and signage. Once specific tenants are secured, supplemental submittals will be made detailing the future commercial development. Access to the site will continue to be from Orchard Park Road and Slade Avenue. The site was recently rezoned to C-2(s).

Site Access

The project will utilize driveway connections from Orchard Park Road and Slade Avenue for site access. The existing signalized driveway across from Wegmans on Orchard Park Road and the existing signalized driveway on Slade Avenue will be upgraded. An additional signalized driveway will be installed across from the existing driveway to the Ellicott Development parcel to the west. Off-site roadway improvements and modifications to Orchard Park Road and Slade Avenue are also proposed, as shown on the Site Plan. These improvements were designed in accordance with the recommendations in the Traffic Report prepared by Passaro. All driveway and off-site improvement plans have been submitted to Erie County Highway (Slade Ave) and NYSDOT (Orchard Park Road/Ridge Road) for their review.

Grading/Storm Drainage

The project site is currently graded towards existing drainage structures throughout the site and drains to the existing surrounding public storm sewer infrastructure. It is the intent to grade and slope the proposed parking areas to proposed onsite catch basins and to reuse the existing storm connections. There is not currently any storm water management on site.

The proposed redevelopment will collect and convey stormwater through a system of catch basins, yard drains, manholes, HDPE storm sewer pipe, and a wet pond designed to accommodate the ultimate build out of the site. The project will require coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001) because the area of disturbance exceeds 1 acre and will be reviewed under the NYSDEC redevelopment guidelines. The proposed stormwater management system provides the required Water Quality Volume (WQv) treatment and peak flow attenuation in accordance with Town of West Seneca and NYSDEC requirements before discharging to the existing storm sewer system and ultimately to Cazenovia Creek.

Water/Sewer/Utilities

Utility upgrades for the project include significant modifications to the existing private water and sewer mains on site.

A looped private water main system will utilize the existing water connection at Orchard Park Road and add a new connection to the main on Slade Avenue. The proposed buildings will connect to the on site private main. The proposed Costco will reuse the existing water connection on Ridge Road. Private hydrants will be installed throughout the site to provide fire protection, Buildings will be sprinklered where required by the NYS Building Code. All connections to the public mains will have backflow preventers and meters approved by ECWA.

The majority of the existing private sanitary sewer system will be replaced, with the connection at Slade Avenue being reused. The existing Tops will tie into this new private on-site system. The future buildings along Slade Avenue will tie directly to the public main on Slade Avenue. A downstream sanitary sewer capacity analysis (DSCA) was completed and previously submitted to the town as part of the rezoning process. The DSCA did not indicate any capacity issues and I/I mitigation will be provided as part of the project in accordance with NYSDEC and Town requirements.

The proposed buildings will connect to the public gas, electric and telephone infrastructure in the adjacent right of ways.

Wetlands/Flood Plain

State or Federal Wetlands are not present on site, nor are 100-year or 500-year floodplain.

If you should have any questions regarding this letter, please contact me at (716) 550-3342. Thank you.

Sincerely,



Christopher Wood, PE | President, Civil Engineering

TOWN OF WEST SENECA

APPLICATION FOR SITE PLAN REVIEW APPROVAL

TO BE COMPLETED BY APPLICANT

DATE 07/22/26 FILE # 2026-007

PROJECT NAME Seneca Mall Redevelopment

PROJECT LOCATION (Include address and distance to nearest intersection) Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave 0 Orchard Park Road

APPLICANT Benchmark Streamline, LLC PH/FAX 716-876-0160

ADDRESS 4053 Maple Road Amherst, NY 14226

PROPERTY OWNER same as applicant PH/FAX

ADDRESS same as applicant

ENGINEER/ ARCHITECT Carmina Wood Design PH/ FAX 716-842-3165

ADDRESS 80 Silo City Row, Suite 100, Buffalo, NY 14203

SBL # 143.05-1-27.11, 143.05-1-27.12, 134.17-1-1, 134.17-1-2, 134.17-1-3, 134.17-1-4, 134.17-1-5, 134.17-1-6, 134.17-1-7, 143.05-1-28, 143.05-1-29, 143.05-1-30.1, 143.05-1-32.1, 143.05-1-33

PROJECT DESCRIPTION (Include all uses and any required construction)
Redevelopment of the site previously occupied by the Seneca Mall to include approximately 500,000 sf of new commercial buildings (shopping center, retail, restaurant, fast food with drive-thru), the existing Tops Markets will remain. The project will also include a fueling facility which is accessory to one of the anchor tenants.

SIZE OF LOT (acres) 56 +/- ACREAGE TO BE REZONED 56 +/-

ADJACENT ROAD NAMES AND AMOUNT OF FRONTAGE ON EACH
Orchard Park Road: 1,385 lf Slade Ave: 2,225 lf Ridge Road: 470 lf

EXISTING ZONING C-2(s) PROPOSED ZONING N/A

EXISTING USE(S) ON PROPERTY grocery store, vacant

PROPOSED USE(S) ON PROPERTY commercial (shopping center, retail, restaurant, fast food with drive-thru, fuel facility)

EXISTING USE(S) AND ZONING ON ALL PROPERTY WITHIN 500 FEET
hotel, education, banking, grocery store, dispensary, single family residential
M-1, M-1(s), C-1, C-2, C-2(s), R-60-A, R-65

PUBLIC SEWER YES ✓ NO ___ PUBLIC WATER YES ✓ NO ___

VARIANCES AND OTHER APPROVALS OR PERMITS REQUIRED

Site Plan Approval, Building Permit

APPLICATIONS WILL NOT BE ACCEPTED WITHOUT COMPLETION OF ALL REQUIREMENTS LISTED HEREIN

TO BE COMPLETED BY THE TOWN OF WEST SENECA

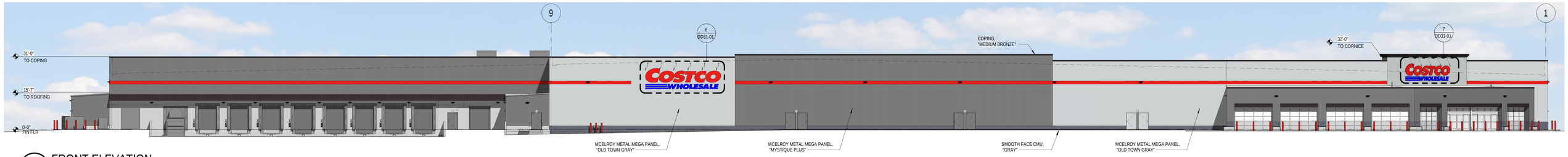
DATE RECEIVED 7/22/26 BY JKS

PLANNING BOARD MEETING DATE 8-13-26

TOWN BOARD MEETING DATE NA

TOWN BOARD RESOLUTION DATE NA

NON – REFUNDABLE FILING FEE (Payable to the Town Clerk): $



1 FRONT ELEVATION

SCALE: 1/16" = 1'-0"



2 RIGHT ELEVATION

SCALE: 1/16" = 1'-0"



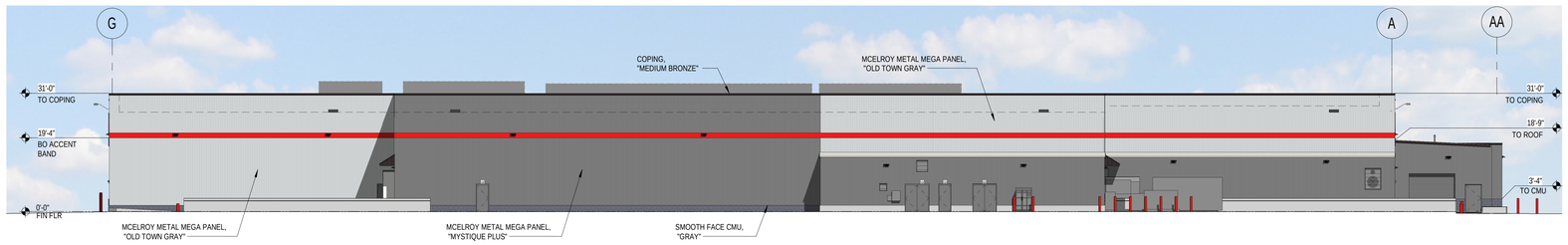
3 GRID-S.2 WALL ELEVATIONS

SCALE: 1/16" = 1'-0"



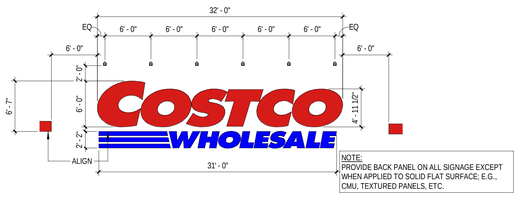
4 REAR ELEVATION

SCALE: 1/16" = 1'-0"



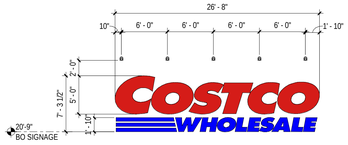
5 LEFT ELEVATION

SCALE: 1/16" = 1'-0"



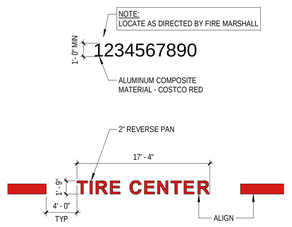
6 BUILDING SIGNAGE

SCALE: 1/8" = 1'-0" 0425 (SUPPLIED AND INSTALLED BY MBS)



7 ENTRY SIGNAGE

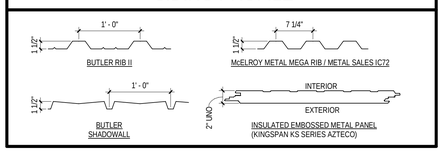
SCALE: 1/8" = 1'-0" 0425 (SUPPLIED AND INSTALLED BY MBS)



8 LOCATION SIGNAGE

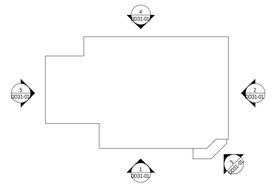
SCALE: 1/8" = 1'-0" 0425 (SUPPLIED AND INSTALLED BY MBS)

SIDING PROFILE



SIGNAGE AREA TABULATION (WALL SIGNAGES)

QTY	SIGN	SIZE	AREA (SF) EA	TOTAL SF
3	COSTCO WHOLESALE	6'-0" "C"	251 SF	753
1	COSTCO WHOLESALE	5'-0" "C"	174 SF	174
1	TIRE CENTER	17'-4" X 1'-9"	31 SF	31
TOTAL SIGNAGE AREA				958



WEST SENECA, NY

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
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24-5890-01
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COLOR BUILDING ELEVATIONS

DD31-01.

COSTCO WHOLESALE

WEST SENECA, NY

COLOR BUILDING ELEVATIONS

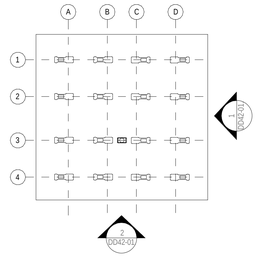
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1 CANOPY AND DISPENSER ISLAND

SCALE: 1/4" = 1'-0"



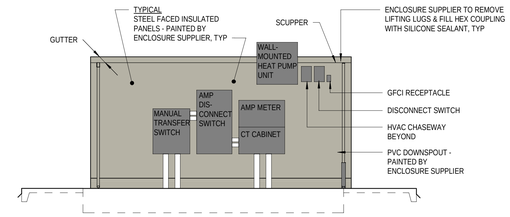
KEYPLAN

SCALE: 1" = 10'-0"



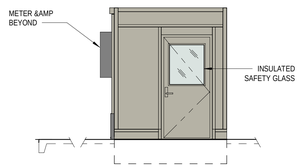
2 CANOPY AND DISPENSER ISLAND

SCALE: 1/4" = 1'-0"



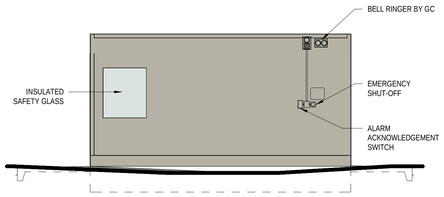
3 SIDE FACING AWAY FROM CANOPY

SCALE: 1/4" = 1'-0"



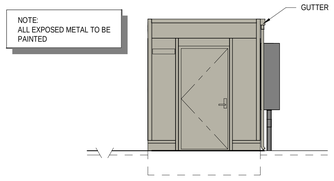
4 ELECTRICAL ENTRY

SCALE: 1/4" = 1'-0"



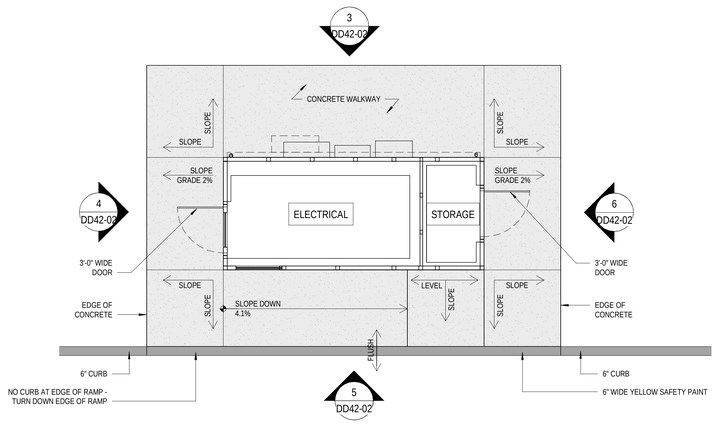
5 SIDE FACING CANOPY

SCALE: 1/4" = 1'-0"



6 STORAGE ENTRY

SCALE: 1/4" = 1'-0"



7 CONTROLLER ENCLOSURE PLAN

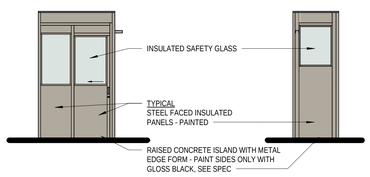
SCALE: 1/4" = 1'-0"



SIGNAGE SHALL NOT PROJECT GREATER THAN 12" FROM WALL SURFACE

8 CANOPY SIGNAGE

SCALE: 1/2" = 1'-0"



9 WARMING HUT

SCALE: 1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE

#	ITEM	MATERIAL	FINISH	COLOR	MANUFACTURER / NOTES
1	FASCIA	ENG. ARCH. PANEL	PRE-FINISED	TAUPE DARK	METAL SPAN - MEGA RIB
2	CONTROLLER ENCLOSURE	METAL	KYNAR 500	YOKE WHITE PCTT80125	PPG
3	ROOF	METAL	POWDER COATED	YELLOW GREY RAL 7034	PPG
4	COLUMN	METAL	POWDER COATED	MS19 SILVER PCT73106	PPG

KEYNOTES

1	PRE-FINISHED METAL FASCIA PANEL - SUPPLIED AND INSTALLED BY CANOPY SUPPLIER UNDER SEPARATE CONTRACT
2	COLUMN - SUPPLIED AND INSTALLED BY CANOPY SUPPLIER UNDER SEPARATE CONTRACT
3	ACCESSIBLE MULTIPRODUCT DISPENSER
4	CONCRETE-FILLED METAL FORMED GUARD AT ENDS OF ISLANDS - TOP OF GUARD AT 30" ABOVE TRAFFIC SURFACE - PAINT SIDES ONLY WITH GLOSS BLUE.
5	RAISED CONCRETE ISLAND WITH METAL EDGE FORM - PAINT SIDES ONLY WITH GLOSS BLACK.
6	WASTE RECEPTOR, BOLT DOWN, CENTER OF EACH ISLAND (SOIC)
7	CANOPY FASCIA SIGN LIGHT FIXTURE (SOIC)
8	FIRE EXTINGUISHER AND CABINETS MOUNTED ON ENTRANCE SIDE OF COLUMNS - FIRE EXTINGUISHER CABINET TO BE: BROOKS MODEL # MARK II, RED CABINET WITH CLEAR COVER (OR EQUAL) - FIRE EXTINGUISHER AND CABINET, BY GC
9	VIDEO CAMERA - VERIFY LOCATION WITH OWNER CONSTRUCTION PROJECT MANAGER. GC SHALL RUN CONDUIT AND INSTALL 3" ROUND OR OCTAGONAL J-BOX FOR MOUNTING CAMERAS.
10	CAULK PERIMETER OF DISPENSER BASE WITH PETROLEUM RESISTANT SEALANT, TYPICAL
11	RAIN LEADERS
12	FUEL INDICATOR LIGHT SYSTEM
13	COPING BOTTOM AND TOP OF FASCIA PANEL - COLOR MEDIUM BRONZE
14	NO SMOKING / STOP ENGINE SIGNAGE (SOIC)

COSTCO WHOLESALE
WEST SENECA, NY

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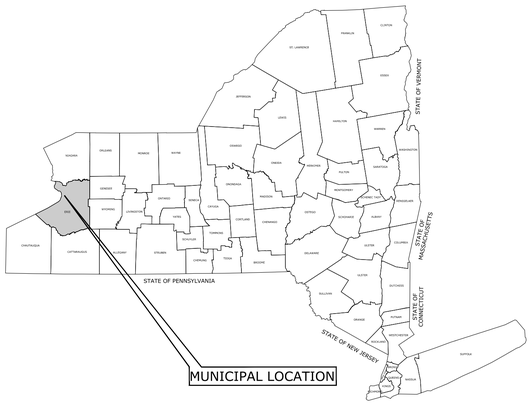
COSTCO WHOLESALE

WEST SENECA, NY

COLORED FUEL ELEVATIONS

FEBRUARY 2026

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LOCATION MAP

N.T.S.

LAND DEVELOPMENT PLANS
ISSUED FOR PERMITTING

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK



VICINITY MAP

SCALE: 1"=800'

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SE-1	LIGHTING PLAN

CAD FILE: G2401824-00

BL PROJECT NUMBER: 2401824

PREPARED FOR:

TOWN OF WEST SENECA
1250 UNION ROAD WEST SENECA, NY 14224

PREPARED BY:

BL Companies

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

355 Research Parkway
Meriden, CT 06450
(203) 630-1406

ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

DEVELOPER:

CALIBER COMMERCIAL BROKERAGE LLC
394 E HENRIETTA ROAD
ROCHESTER NY, 14620

OWNER:

S & R COMPANY OF WEST SENECA
PO BOX 1027
BUFFALO NY, 14240

STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

DATES

ISSUE DATE: 07/17/2026

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SITE WORK GENERAL NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.

2. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT SPECIFICATION MANUAL; COSTCO CORPORATION STANDARDS, MUNICIPAL STANDARDS AND SPECIFICATIONS, COUNTY STANDARDS AND SPECIFICATIONS, NEW YORK DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, 2010 ADA STANDARDS, AND STATE BUILDING CODE IN THE ABOVE REFERENCED INCREASING HIERARCHY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.

3. REFER TO OTHER PLANS BY OTHER DISCIPLINES, DETAILS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER AND ARCHITECT IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS, SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO BIDDING.

4. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.

5. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.

6. CONTRACTOR SHALL SUBMIT AN AS-BUILT TOPOGRAPHIC SURVEY PREPARED AND STAMPED BY A LICENSED LAND SURVEYOR TO DESIGN ENGINEER. AT THE COMPLETION OF CONSTRUCTION. AS-BUILT SURVEY SHALL COMPLY WITH ALL NPDES NOTICE OF TERMINATION REQUIREMENTS, MUNICIPAL ORDINANCE REQUIREMENTS AND INCLUDE ALL SITE ELEMENTS, TOPOGRAPHY, STORM WATER MANAGEMENT FACILITY STRUCTURES/BASINS AND LANDSCAPE ELEMENTS.

7. THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.

8. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION, TRENCHING, AND TRENCH PROTECTION REQUIREMENTS.

9. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL OR COUNTY OR STATE RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. THE CONTRACTOR SHALL VERIFY THE SIZE LOCATION AND INVERT UPON COMMENCEMENT OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF ANY AND ALL UTILITIES ENCOUNTERED AND DISCONNECTED AS A RESULT OF THE CONSTRUCTION ACTIVITIES.

10. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK 72 HOURS BEFORE COMMENCEMENT OF WORK AT (800) 962-7962 OR AT 811 AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROPOSED UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS. STREET LIGHTING AND TRAFFIC SIGNALS LOCATED WITHIN THE PUBLIC RIGHT-OF WAY MAY NOT BE MARKED OUT, AND A SEPARATE CONTACT MUST BE MADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY/ALL WORK TO RELOCATE ANY/ALL STREET LIGHTING EQUIPMENT TO MAINTAIN SYSTEM.

11. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.

12. SHOULD CONFLICTING INFORMATION BE FOUND WITHIN THE CONTRACT DOCUMENTS, IT IS INCUMBENT UPON THE CONTRACTOR TO REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. FOR BUDGETING PURPOSES, THE CONTRACTOR SHALL CARRY THE COST OF THE HIGHER QUALITY/QUANTITY OF WORK UNTIL SUCH TIME THAT A CLARIFICATION IS RENDERED.

13. ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS OR PLAN SET ELECTRONIC POSTINGS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRADES. IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN SETS OR COMPLETE PLAN SET ELECTRONIC POSTINGS FOR USE IN BIDDING AND CONSTRUCTION.

14. ALL NOTES AND DIMENSION DESIGNATED AS "TYPICAL" OR "TYP" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.

15. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.

16. BL COMPANIES WILL PREPARE FINAL CONSTRUCTION DOCUMENTS SUITABLE FOR BIDDING AND CONSTRUCTION. PROGRESS SETS OF THESE DOCUMENTS ARE NOT SUITABLE FOR THOSE PURPOSES. IF CLIENT ELECTS TO SOLICIT BIDS OR ENTER INTO CONSTRUCTION CONTRACTS UTILIZING CONSTRUCTION DOCUMENTS THAT ARE NOT YET FINAL, CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY COSTS OR DELAY ARISING AS A RESULT.

17. THE CONTRACTOR SHALL NOT PROCEED WITH ANY MODIFICATIONS TO THE DESIGN PLANS UNTIL THE WORK HAS BEEN APPROVED. ANY WORK DONE WITHOUT THE APPROVAL OF THE ENGINEER AND/OR CLIENT MAY BE DEEMED UNACCEPTABLE.

18. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

19. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGCENIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT AND OBTAIN FROM COUNTY AND MUNICIPAL SOURCES ALL CONSTRUCTION PERMITS, INCLUDING ANY STATE DOT PERMITS, SEWER AND WATER CONNECTION PERMITS, AND ROADWAY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.

20. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS AND MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.

21. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE SEDIMENT AND EROSION CONTROL PLAN.

22. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING, AND THE RAISED CONCRETE SIDEWALKS, LANDINGS, RAMPS, AND STAIRS.

23. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.

24. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.

25. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TEMPORARY WALKWAYS, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS OR AS REQUIRED BY THE OWNER. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AND PEDESTRIAN WALKWAYS FOR USE AT ALL TIMES UNLESS WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY IS GRANTED.

26. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.

27. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.

28. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.

29. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.

30. PAVEMENT MARKING KEY:

    4" SYDL 4" SOLID YELLOW DOUBLE LINE
    4" SYL 4" SOLID YELLOW LINE
    4" SWL 4" SOLID WHITE LINE
    12" SWSB 12" SOLID WHITE STOP BAR
    4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30' SPACE

31. PARKING SPACES SHALL BE STRIPED WITH 4" SWL; HATCHED AREA SHALL BE STRIPED WITH 4" SWL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR ADA ACCESSIBLE SPACES SHALL BE PAINTED WHOTE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.

32. ALL NON-THERMOPLASTIC PAVEMENT MARKINGS SHALL HAVE TWO COATS APPLIED. PAVEMENT MARKINGS SHALL BE REFLECTIVE IN ACCORDANCE WITH STATE DOT SPECIFICATIONS.

33. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH STATE DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.

34. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS, SWALE, PAVEMENT MARKINGS, OR SIGNAGE DISTURBED DURING DEMOLITION AND/OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER, AND TO THE SATISFACTION OF THE OWNER AND THE MUNICIPALITY.

35. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON DRAWING TITLED "ALTA/NSPS LAND TITLE SURVEY"; SCALE 1"=40', DATED 11/15/2024, BY BL COMPANIES INC.

36. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.

37. AN EROSION CONTROL BOND IS REQUIRED TO BE POSTED BY THE CONTRACTOR BEFORE THE START OF ANY ACTIVITY ON OR OFF SITE. THE AMOUNT OF THE EROSION CONTROL BOND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.

38. A DEMOLITION PERMIT IS REQUIRED FOR EXISTING BUILDINGS.

39. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.

40. THERE ARE NO WETLANDS LOCATED ON THE SITE AS INDICATED BY BL COMPANIES MAPPING.

41. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.

42. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE ROADWAY BY METHOD APPROVED BY THE AUTHORITY HAVING JURISDICTION OR DOT AS APPLICABLE FOR THE LOCATION OF THE WORK.

43. ALL ADA DESIGNATED PARKING STALLS, ACCESS AISLES AND PEDESTRIAN WALKWAYS SHALL CONFORM TO THE CURRENT VERSION OF THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN AND ANSI STANDARDS AND AS MAY BE SUPERCEDED BY THE STATE BUILDING CODE.

44. CONSTRUCTION OCCURRING ON THIS SITE SHALL COMPLY WITH NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS, AND CHAPTER 16 OF NFPA 1 UNIFORM FIRE CODE.

45. THE CONTRACTOR IS TO MAINTAIN FIRE DEPARTMENT ACCESS TO THE SITE AT ALL TIMES.

46. ALL BUILDINGS, INCLUDING FOUNDATION WALLS AND FOOTINGS AND BASEMENT SLABS INDICATED ON THE DEMOLITION PLAN ARE TO BE REMOVED FROM THE SITE. CONTRACTOR SHALL SECURE ANY PERMITS, PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

47. SEDIMENT AND EROSION CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND/OR DEMOLITION PLAN SHALL BE INSTALLED BY THE DEMOLITION CONTRACTOR PRIOR TO START OF DEMOLITION AND CLEARING AND GRUBBING OPERATIONS.

48. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL, BY AN APPROVED HAULER. HAULER SHALL COMPLY WITH ALL REGULATORY REQUIREMENTS.

49. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR THE DEMOLITION AND DISPOSAL OF THE DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF ALL BUILDING DEMOLITION DEBRIS IN AN APPROVED OFF-SITE LANDFILL.

50. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL ABATEMENT CONTRACTOR.

51. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.

52. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY PROVIDER TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR AT THE MAIN, AS REQUIRED BY THE UTILITY PROVIDER, OR AS OTHERWISE NOTED OR SHOWN ON THE CONTRACT DRAWINGS. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED. THE CONTRACTOR SHALL PAY ALL UTILITY PROVIDER FEES FOR ABANDONMENTS AND REMOVALS.

53. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

54. THE DEMOLITION CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF THE WORK OR UNTIL THE COMMENCEMENT OF WORK BY THE SITE CONTRACTOR, WHICHEVER OCCURS FIRST, AS REQUIRED OR DEEMED NECESSARY BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE SITE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS AND FOR INSTALLATION OF ANY NEW SEDIMENT AND EROSION CONTROLS AS PER THE SEDIMENT AND EROSION CONTROL PLAN, AT THAT TIME.

55. THE CONTRACTOR SHALL PUMP OUT BUILDING FUEL AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY A LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH STATE REQUIREMENTS.

56. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.

57. EXISTING WATER SERVICES SHALL BE DISCONNECTED AND CAPPED AT MAIN IN ACCORDANCE WITH THE REQUIREMENTS OF THE WATER UTILITY PROVIDER. REMOVE EXISTING ONSITE WATER PIPING TO BE ABANDONED TO RIGHT OF WAY LINE UNLESS OTHERWISE SHOWN ON DEMOLITION PLANS OR AS REQUIRED BY THE WATER UTILITY PROVIDER TO BE REMOVED TO MAIN.

58. EXISTING SANITARY LATERAL SHALL BE PLUGGED WITH NON-SHRINK GROUT AT CURB LINE OR AT MAIN CONNECTION IN ACCORDANCE WITH THE SANITARY UTILITY PROVIDER REQUIREMENTS. REMOVE EXISTING LATERAL PIPING FROM SITE UNLESS OTHERWISE SHOWN ON DEMOLITION PLANS OR AS REQUIRED BY THE SANITARY UTILITY PROVIDER.

59. DOMESTIC GAS SERVICES SHALL BE CAPPED AND SERVICE LINES PURGED OF RESIDUAL GAS IN ACCORDANCE WITH THE GAS UTILITY PROVIDER REQUIREMENTS. WORK TO BE COORDINATED BY AND PAID FOR BY THE CONTRACTOR. REMOVE EXISTING SERVICE PIPING ON SITE. ANY PROPANE TANKS SHALL BE PURGED OF RESIDUAL GAS BY PROPANE SUPPLIER. CONTRACTOR SHALL COORDINATE THIS WORK AND PAY NECESSARY FEES.

60. THE CONTRACTOR SHALL PROVIDE DISCONNECT NOTIFICATION TO THE MUNICIPALITY ENGINEERING DEPARTMENT, TELECOMMUNICATIONS UTILITY PROVIDER, GAS UTILITY PROVIDER, ELECTRIC UTILITY PROVIDER, SANITARY UTILITY PROVIDER, AND WATER UTILITY PROVIDER AT LEAST THREE WEEKS PRIOR TO BEGINNING DEMOLITION.

61. THE CONTRACTOR IS RESPONSIBLE FOR SECURING A DEMOLITION PERMIT FROM THE MUNICIPALITY BUILDING DEPARTMENT AND MUST FURNISH THE REQUIRED APPLICATION MATERIAL AND PAY ALL FEES.

62. BACK FILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS IN LOCATIONS NOT SUBJECT TO FURTHER EXCAVATION WITH SOIL MATERIAL APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER AND COMPACT, FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION. DEMOLISHED BUILDING FOUNDATION AREA AND BASEMENT IF PRESENT TO BE BACKFILLED WITH GRAVEL FILL OR MATERIAL SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT IN LIFT THICKNESS SPECIFIED IN THE GEOTECHNICAL REPORT, COMPACT TO 95% MAX. DRY DENSITY PER ASTM D1557 AT MOISTURE CONTENT SPECIFIED IN GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATION. EMPLOY WATERING EQUIPMENT FOR DUST CONTROL.

63. THE CONTRACTOR SHALL REPAIR PAVEMENTS BY INSTALLING TEMPORARY AND PERMANENT PAVEMENTS IN PUBLIC RIGHTS OF WAYS AS REQUIRED BY LOCAL GOVERNING AUTHORITIES AND THE STATE AND PER PERMIT REQUIREMENTS DUE TO DEMOLITION AND PIPE REMOVAL ACTIVITIES.

64. THE CONTRACTOR SHALL CUT AND REMOVE AT LUMINARE AND SIGN LOCATIONS ANY PROTRUDING CONDUITS TO 24" BELOW GRADE. THE CONTRACTOR SHALL REMOVE ALL CABLE AND CONDUCTORS FROM REMAINING LIGHTING AND SIGNING CONDUITS TO BE ABANDONED. ANY REMAINING LIGHTING TO REMAIN IN PLACE SHALL BE RECIRCUITED OR REWIRED AS NECESSARY TO REMAIN IN OPERATION.

65. NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE CIVIL ENGINEER IS PERFORMED. THE CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS. THE CONTRACTOR SHALL HAVE DIG SAFELY NEW YORK MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.

66. THE CONTRACTOR SHALL ARRANGE FOR AND INSTALL TEMPORARY OR PERMANENT UTILITY CONNECTIONS WHERE INDICATED ON PLAN OR AS REQUIRED. MAINTAIN UTILITY SERVICES TO BUILDINGS OR TO SERVICES TO REMAIN. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS FOR INSTALLATION AND PAY UTILITY PROVIDER FEES.

67. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION OR UTILITY DISCONNECTIONS UNTIL AUTHORIZED TO DO SO BY THE OWNER.

68. THE CONTRACTOR OR DEMOLITION CONTRACTOR SHALL INSTALL TEMPORARY SHEETING OR SHORING AS NECESSARY TO PROTECT EXISTING AND NEW BUILDINGS, STRUCTURES AND UTILITIES DURING CONSTRUCTION AND DEMOLITION. SHEETING OR SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THIS STATE AND EVIDENCE OF SUCH SUBMITTED TO THE OWNER PRIOR TO INSTALLATION.

69. NO SALVAGE SHALL BE PERMITTED UNLESS PAID TO THE OWNER AS A CREDIT.

70. ANY EXISTING POTABLE WELL AND ANY EXISTING SEPTIC TANKS/ABSORPTION AREAS SHALL BE ABANDONED AND REMOVED PER THE SARATOGA COUNTY DEPARTMENT OF HEALTH AND HEALTH CODE REQUIREMENTS.

71. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO SEDIMENT AND EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.

72. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.

73. FILL WITHIN FORMER BUILDING FOUNDATION SHALL BE CHECKED BY TEST PIT AND PROOF-ROLLING AND SHALL BE OBSERVED BY THE OWNER'S GEOTECHNICAL ENGINEER. SUBGRADE SHALL BE FORMED WITH REMOVAL AND REPLACEMENT OF FILL AND REMOVAL AND REPLACEMENT OF UNSUITABLE AND SOFT SUBGRADE MATERIAL AS REQUIRED BY THE GEOTECHNICAL ENGINEER. SEE GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATIONS FOR FURTHER DESCRIPTION.

74. THE CONTRACTOR SHALL COMPACT FILL IN LIFT THICKNESS PER THE GEOTECHNICAL REPORT UNDER ALL PARKING, BUILDING, DRIVE, AND STRUCTURE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

75. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SUBGRADE IS ROUGH GRADED.

76. VERTICAL DATUM IS NY WEST ZONE - NAD 83

77. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE MUNICIPALITY AGENT PRIOR TO THE START OF WORK ON THE SITE.

78. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE NYSDEC AND THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, LATEST EDITION. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE SEDIMENT AND EROSION CONTROL PLAN CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY THE LOCAL MUNICIPALITIES, OR SOIL CONSERVATION DISTRICT WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.

79. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN LIFT THICKNESSES PER THE PROJECT GEOTECHNICAL REPORT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT MOISTURE CONTENT INDICATED IN PROJECT GEOTECHNICAL REPORT.

80. ALL DISTURBANCE INCURRED TO MUNICIPAL, COUNTY, AND STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE MUNICIPALITY, COUNTY AND STATE AS APPLICABLE FOR THE LOCATION OF THE WORK.

81. ALL CONSTRUCTION WITHIN A DOT RIGHT OF WAY SHALL COMPLY WITH ALL DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

82. THE UTILITY PLAN DETAILS SITE INSTALLED PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO DRAWINGS BY WARE MALCOMB FOR BUILDING CONNECTIONS. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT.

83. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL PROPOSED UTILITY CROSSINGS AND EARTHWORK OVER EXISTING UTILITIES TO REMAIN. TEST PITS SHALL BE USED TO DETERMINE THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES. THE CONTRACTOR SHALL CONTACT THE CIVIL ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN UTILITIES.

84. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.

85. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.

86. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.

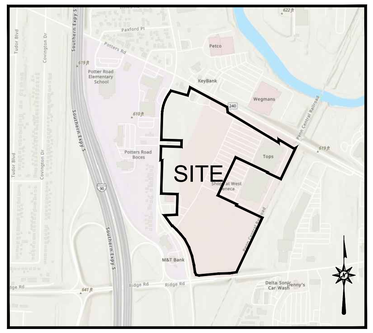
87. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE OWNER HAVING JURISDICTION.

88. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.

89. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED WHERE PERMITTED, WHICH SHALL INCLUDE CONCRETE ENCASEMENT OF PIPING UNLESS OTHERWISE DIRECTED BY THE UTILITY PROVIDERS AND CIVIL ENGINEER.

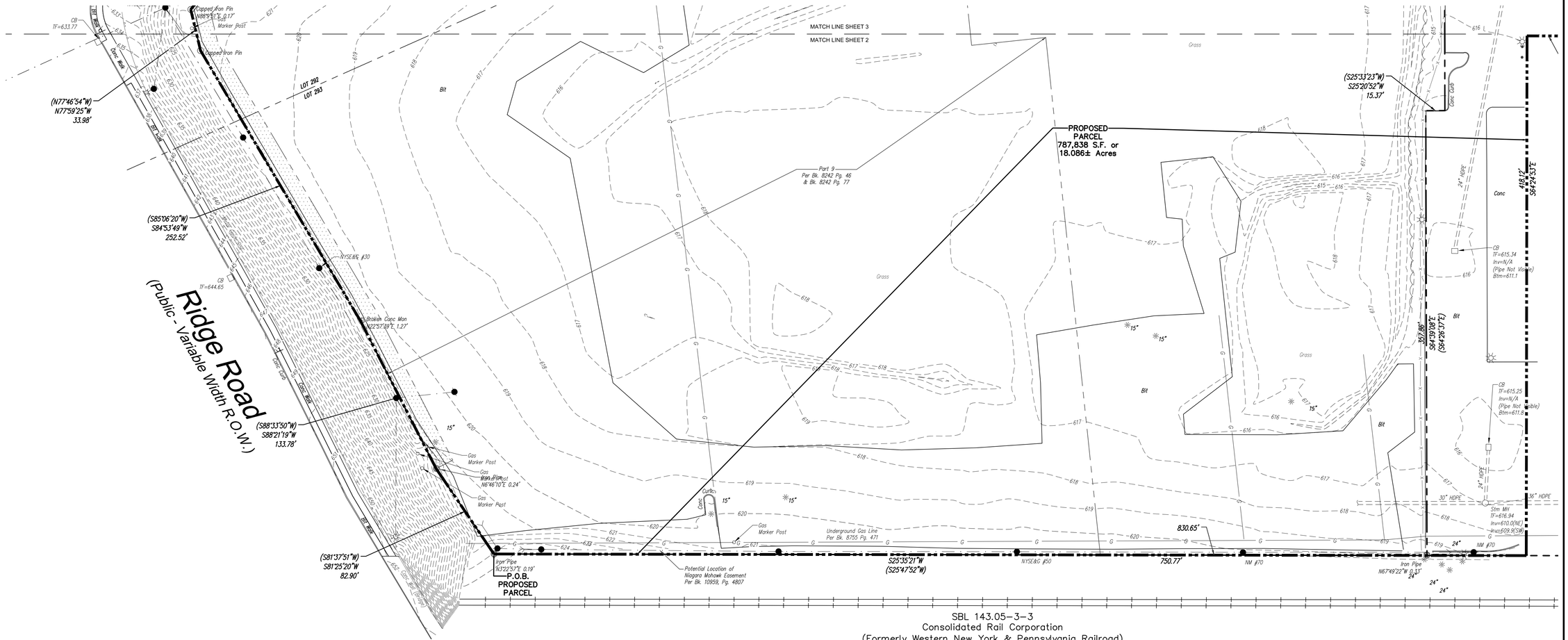
90. RELOCATION OF UTILITY PROVIDER FACILITIES SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.

91. THE CONTRACTOR SHAL


SITE
Potter Road Elementary School
Potters Road Bridge
Petco
SkyBank
Wegmans
Tops
M&T Bank
Delta Sonic Tommy's Car Wash
Ridge Rd
Transit Rd
Harlem Rd
Cheektowaga Central
Cheektowaga Sloan
Union Rd
Dodge Rd
Ellicott Creek
Cheektowaga Creek
Cheektowaga Creek Tributary
Cheektowaga Creek Tributary
Cheektowaga Creek Tributary

LEGEND

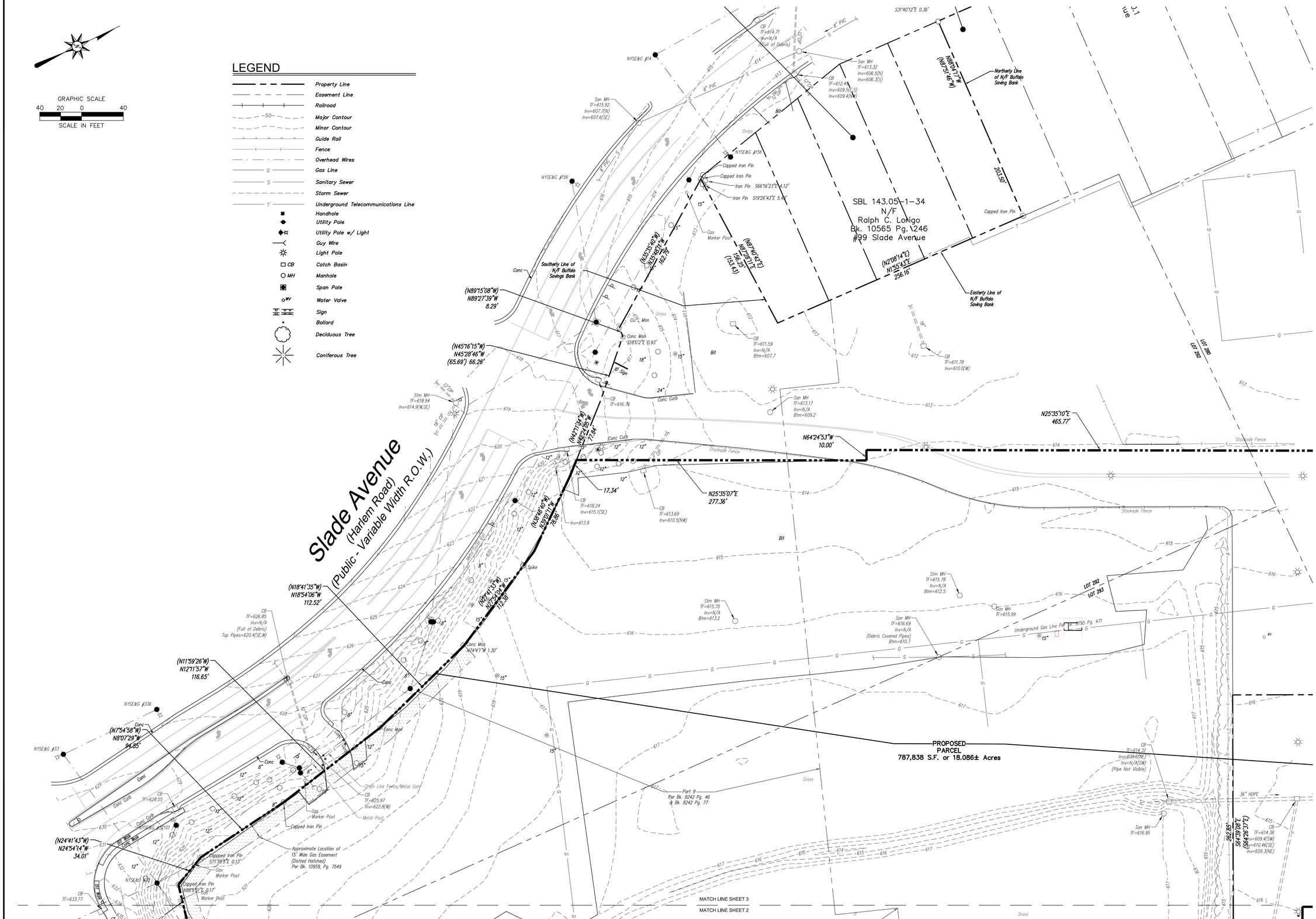
Property Line		Handhole	
Easement Line		Utility Pole	
Railroad		Utility Pole w/ Light	
Major Contour	50	Guy Wire	
Minor Contour		Light Pole	
Guide Rail		CB	Catch Basin
Fence	X X	MH	Manhole
Overhead Wires		Span Pole	
Gas Line	G	WV	Water Valve
Sanitary Sewer	S	Sign	
Storm Sewer		Bollard	
Underground Telecommunications Line	T	Deciduous Tree	
		Coniferous Tree	


MATCH LINE SHEET 3
MATCH LINE SHEET 2
Ridge Road
(Public - Variable Width R.O.W.)
PROPOSED PARCEL
787,838 S.F. or
18.086± Acres
P.O.B.
PROPOSED PARCEL
Part 9
Per Bk. 8242 Pg. 46
& Bk. 8242 Pg. 77
LOT 292
LOT 293
(N77°46'54"W)
N77°59'25"W
33.98'
(S85°06'20"W)
S84°53'49"W
252.52'
(S88°33'50"W)
S88°21'19"W
133.78'
(S81°37'51"W)
S81°25'20"W
82.90'
(S25°33'23"W)
S25°20'52"W
15.37'
S25°35'21"W
(S25°47'52"W)
750.77'
830.65'
418.12'
S84°24'53"E
357.86'
S84°39'08"E
(S84°26'37"E)
Iron Pipe
N67°49'22"W 0.33'
Iron Pipe
N3°22'57"E 0.19'
Capped Iron Pin
N89°51'E 0.17'
Marker Post
Capped Iron Pin
Broken Conc Mon
N22°57'39"E 1.27'
Gas
Marker Post
Iron Pipe
N6°46'10"E 0.24'
Gas
Marker Post
Gas
Marker Post
Potential Location of
Niagara Mohawk Easement
Per Bk. 10959, Pg. 4807
Underground Gas Line
Per Bk. 8755 Pg. 471
NYSE&G #30
NYSE&G #50
NM #70
NM #70
CB
TF=633.77
CB
TF=644.65
CB
TF=615.34
Inv=N/A
(Pipe Not Visible)
Btm=611.1
CB
TF=615.25
Inv=N/A
(Pipe Not Visible)
Btm=611.8
Stm Mh
TF=616.94
Inv=610.0(NE)
Inv=609.9(SW)
Conc Curb
Conc
24" HDPE
30" HDPE
36" HDPE
Bit Path
Bit
Grass
Conc
Curbs
Guide Rail
Guide Rail
Guide Rail
Fence
Fence
Fence

GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

LEGEND

- Property Line
- Easement Line
- Railroad
- 50 Major Contour
- Minor Contour
- Guide Rail
- X Fence
- Overhead Wires
- G Gas Line
- S Sanitary Sewer
- Storm Sewer
- T Underground Telecommunications Line
- Handhole
- Utility Pole
- Utility Pole w/ Light
- Guy Wire
- Light Pole
- CB Catch Basin
- MH Manhole
- Span Pole
- WV Water Valve
- Sign
- Bollard
- Deciduous Tree
- Coniferous Tree



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Layout: ALT & NSPS(1)

Xref's: ; XY240182401 ; XC240182401

Architecture
Engineering
Environmental
Land Surveying
BL Companies
355 Research Parkway
Meriden, CT 06450
(203) 630-1406

COSTCO WHOLESALE FACILITY

SLADE AVENUE AND RIDGE ROAD
WEST SENECA, ERIE COUNTY, NEW YORK

REVISIONS

No.	Date	Desc.
1	2/6/25	Updated Title Commitment
2	3/3/25	Updated Per Client Comments
3	6/29/26	Updated Title Commitment
4	7/7/2026	Updated Per Comments
5	7/7/2026	Updated Title Commitment
6	7/8/2026	Updated Title Commitment

Surveyed	TF
Drawn	BM, KKS
Reviewed	DS
Scale	1"=40'
Project No.	2401824
Date	12/09/2024
Field Book	-
CAD File:	AL240182401

Title

ALTA/NSPS LAND TITLE SURVEY

Sheet No. 3 of 5

AL-1

SCHEDULE A DESCRIPTION

The land referred to herein below is situated in the Town of West Seneca, County of Erie, State of New York, and is described as follows:

Beginning at a point on the northerly right–of–way line of Ridge Road (variable width, public), said point being the intersection with the northwesterly line of SBL 143.05–3–3, now or formerly Consolidated Rail Corporation, and running thence: Along the said northerly right–of–way line of Ridge Road, the following courses and distances:

1. South 81°25'20" West a distance of 82.90 feet to a point;
2. South 88°21'19" West a distance of 133.78 feet to a point;
3. South 84°53'49" West a distance of 252.52 feet to a point;
4. North 77°59'25" West a distance of 33.98 feet to a point;

Thence along the easterly line of Slade Avenue (variable width, public), the following courses and distances:

1. North 24°54'14" West a distance of 34.01 feet to a point;
2. North 08°07'29" West a distance of 94.85 feet to a point;
3. North 12°11'57" West a distance of 116.65 feet to a point;
4. North 18°54'06" West a distance of 112.52 feet to a point;
5. North 27°54'04" West a distance of 112.38 feet to a point;
6. North 39°01'11" West a distance of 78.86 feet to a point;
7. North 42°24'05" West a distance of 17.34 feet to a point;

Passing over, into, and through SBL 143.05–1–28.1 and SBL 143.05–1–42, now or formerly Benchmark Streamline LLC the following courses and distances:

1. North 25°35'07" East a distance of 277.36 feet to a point;
2. North 64°24'53" West a distance of 10.00 feet to a point;
3. North 25°35'10" East a distance of 465.77 feet to a point;
4. South 64°24'53" East a distance of 168.17 feet to a point;
5. South 25°35'07" West a distance of 11.25 feet to a point;
6. South 64°24'53" East a distance of 268.33 feet to a point;
7. South 25°35'07" West a distance of 36.80 feet to a point;
8. South 64°24'53" East a distance of 418.12 feet to a point;

Thence along the northwesterly line of SBL 143.05–3–3, now or formerly Consolidated Rail Corporation, South 25°35'21" West a distance of 830.65 feet to the point of beginning,

Having an area of 787,838 square feet, 18.086 acres, more or less.

SURVEY RELATED EXCEPTIONS, SCHEDULE B, SECTION II:

REFERENCE NUMBER	RECORDING REFERENCE	DESCRIPTION	STATUS ON PLAT
8	~~BK. 7501 PG. 310~~	~~EASEMENT IN FAVOR OF NEW YORK TELEPHONE COMPANY~~	~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
9	~~BK. 7501 PG. 312~~	~~EASEMENT IN FAVOR OF NEW YORK TELEPHONE COMPANY~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
10	BK. 8134 PG. 20 BK. 8242 PG. 108 BK. 8242 PG. 77 BK. 8242 PG. 46	EASEMENT AGREEMENT, AS AMENDED BY AMENDMENT TO DEED AND EASEMENT AGREEMENT, AND ASSIGNED BY ASSIGNMENT.	RECIPROCAL VEHICULAR AND PEDESTRIAN PARKING AND ACCESS EASEMENTS. RIGHT OF WAY FOR PEDESTRIAN AND VEHICULAR ACCESS, INGRESS AND EGRESS TO AND FROM ANY AND ALL PUBLIC ROADS, EXCEPTING RESERVED SPACES TO BUFFALO SAVINGS BANK PER PARKING AND ACCESS PLAN. PARKING AND ACCESS PLAN NOT PROVIDED. – EXACT LOCATION CANNOT BE DETERMINED FROM RECORD DOCUMENT
11	~~BK. 7641 PG. 629~~	~~COVENANTS AND RESTRICTION SET FORTH~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~LOCATION OF AREA OF RESTRICTIONS AND COVENANTS SHOWN. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
12	BK. 3231 PG. 563	EASEMENT	LOCATION OF ELECTRIC EASEMENT CANNOT BE DETERMINED FROM RECORD DOCUMENT. UTILITY POLE, ANCHOR WIRE RACK AND WIRE EXTEND EASTERLY FROM RIDGE ROAD (HARLEM AVENUE).
13	~~BK. 7501 PG. 308~~	~~EASEMENT~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
14	BK. 7501 PG. 311	EASEMENT	LOCATION OF TELECOMMUNICATION EASEMENT CANNOT BE DETERMINED FROM RECORD DOCUMENT.
15	~~BK. 7503 PG. 153~~	~~EASEMENT~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
16	~~BK. 7534 PG. 619~~	~~EASEMENT~~	~~UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
17	~~BK. 7570 PG. 377~~	~~EASEMENT~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND ELECTRIC LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
18	~~BK. 8031 PG. 45~~	~~EASEMENT~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
19	~~BK. 8221 PG. 237~~	~~RIGHT OF WAY~~	~~UNDERGROUND TELEPHONE LINE SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
20	BK. 8755 PG. 471	RIGHT OF WAY	UNDERGROUND GAS LINE SHOWN PER SKETCH IN BK. 8755 PG. 471
21	~~BK. 10884 PG. 9781~~	~~RIGHT OF WAY~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~APPROXIMATE LOCATION OF 15' WIDE GAS RIGHT OF WAY SHOWN. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
22	~~BK. 10904 PG. 7554~~	~~RIGHT OF WAY~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~2–15' GAS RIGHT OF WAY EASEMENTS – LOCATIONS SHOWN HEREON. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
23	~~BK. 10907 PG. 480~~	~~RIGHT OF WAY~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~WATER RIGHT OF WAY EASEMENT – LOCATION SHOWN HEREON. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
24	~~BK. 10912 PG. 9760~~	~~EASEMENT~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~THE EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORD DOCUMENT. APPROXIMATE LOCATION OF ELECTRIC EASEMENT SHOWN PER MAP REF. A. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
25	BK. 10959 PG. 4807	EASEMENT IN FAVOR OF NIAGARA MOHAWK POWER CORPORATION	LOCATION CANNOT BE DETERMINED FROM RECORD DOCUMENT. EXHIBIT A DESCRIBING EASEMENT AREA NOT PROVIDED. MAP REF. A DEPICTS UTILITY POLES, OVERHEAD WIRES AND APPURTENANCES FOR EASEMENT ALONG THE EASTERLY PROPERTY LINE – SHOWN HEREON
26	BK. 10959 PG. 7549	RIGHT OF WAY IN FAVOR OF NATIONAL FUEL GAS DISTRIBUTION	APPROXIMATE LOCATION OF 15' WIDE GAS EASEMENT SHOWN HEREON
27	BK. 11425 PG. 3546	EASEMENT IN FAVOR OF NEW YORK STATE ELECTRIC & GAS CORPORATION	EXACT LOCATION CANNOT BE DETERMINED FROM DESCRIPTION AND ATTACHED SKETCH. LOCATION OF INSTALLED UTILITY POLES AND ANCHORS SHOWN HEREON.
28	BK. 11435 PG. 5462	DECLARATION OF RECIPROCAL EASEMENTS AND AGREEMENTS	LOCATION OF ACCESS EASEMENT SHOWN HEREON. RECIPROCAL UTILITY EASEMENT FOR INGRESS, EGRESS AND ACCESS TO AND FROM ANY UTILITY FACILITIES BLANKET IN NATURE.
29	BK. 11439 PG. 7520 BK. 10955 PG. 9162	REINSTATED AND AMENDED RECIPROCAL EASEMENT, OPERATION AND MAINTENANCE AGREEMENT, WHICH REINSTATES RECIPROCAL EASEMENT AGREEMENT BUT EXCLUDES CERTAIN PARCELS NOT INSURED HEREUNDER	EXCLUDED PARCEL SHOWN HEREON PER EXHIBIT B. RECIPROCAL INGRESS/EGRESS AND PARKING EASEMENT ACROSS ALL PARKING AREAS LOCATED ON SHOPPING CENTER TO BENEFIT ALL PARCELS. UTILITY EASEMENT – BLANKET IN NATURE. PERMISSIBLE BUILD AREA – SHOWN HEREON REQUIRED LANDLORD IMPROVEMENTS LIMITS – SHOWN HEREON
30	~~BK. 10872 PG. 3975~~ ~~BK. 10900 PG. 8297~~	~~MEMORANDUM OF LEASE MADE BY AND BETWEEN S&R COMPANY OF WEST SENECA AND TOPS MARKET, INC~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~LEASE AREA SHOWN PER BK. 10900 PG. 8297 – NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
31	~~BK. 11440 PG. 4286~~	~~MEMORANDUM OF OPTION AGREEMENT MADE BY AND BETWEEN NS RETAIL HOLDINGS, LLC AND BENCHMARK STREAMLINE LLC~~	INTENTIONALLY DELETED PARCEL HAS BEEN DELETED FROM ORDER ~~EXHIBIT A SHOWN HEREON. APPROXIMATE LOCATION OF RELEASE PARCEL AS DEPICTED ON EXHIBIT B SHOWN HEREON. NOT LOCATED ON PROPOSED COSTCO PARCEL.~~
32	BK. Q 368 PG. 5841	UCC FINANCING STATEMENT	FINANCING STATEMENT – NOT SURVEY RELATED
33	N/A	SURVEY MADE BY RONALD LEWIS L.S. IN AFFILIATION WITH BL COMPANIES DATED DECEMBER 9, 2024, LAST REVISED _____, PROJECT NO. 2401824, CONSISTING OF 5 SHEETS (THE "SURVEY")	A. STOCKADE FENCE EXTENDS UNDETERMINED DISTANCE WEST OF THE WESTERLY RECORD LINE. B. RECIPROCAL INGRESS/EGRESS ROADWAY TRAVERSES LAND ALONG THE WESTERLY SIDE. C. STOCKADE FENCE ENCROACHES GAS LINE EASEMENT (BK 8755 PG 471) D. OVERHEAD UTILITY LINES TRAVERSE LAND AT TWO LOCATIONS. POLICY EXCEPTS RIGHTS, EASEMENTS AND ENCROACHMENTS, FOR UTILITY POLES, WIRES, LINES, GUY WIRES, PIPES, DRAINS, AND SIMILAR INSTALLATIONS, TOGETHER WITH SUCH RIGHTS AS MAY EXIST TO OPERATE, MAINTAIN AND REPAIR THE SAME.
34	BK 11456 PG. 5592	PERMANENT EASEMENT IN FAVOR OF ERIE COUNTY WATER AUTHORITY	34' WATERLINE EASEMENT – NOT LOCATED ON PROPOSED COSTCO PARCEL.

THIS SURVEY WAS PREPARED WITH REFERENCE TO A COMMITMENT OF TITLE ISSUED BY CHICAGO TITLE INSURANCE COMPANY, HAVING A COMMITMENT NO. CT24–02332–NCS, WITH AN EFFECTIVE DATE OF DECEMBER 31, 2025, REVISED 6/29/2026, REVISED ADDITIONALLY 7/7/2026. EXCEPTIONS 1 THROUGH 7 ARE NOT SURVEY RELATED AND HAVE NOT BEEN COMMENTED ON AS A PART OF THIS SURVEY.

Architecture
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(203) 630-1406

COSTCO WHOLESALE FACILITY
SLADE AVENUE AND RIDGE ROAD
WEST SENECA, ERIE COUNTY, NEW YORK

Discs:
1 2/20/25 Updated Title Commitment
2 3/3/25 Updated Per Client Comments
3 6/29/26 Updated Title Commitment
4 6/30/26 Updated Per Client Comment
5 7/7/2026 Updated Title Commitment
6 7/8/2026 Updated Title Commitment

REVISIONS
No. Date

Surveyed	TF
Drawn	BM, KKS
Reviewed	DS
Scale	
Project No.	2401824
Date	12/09/2024
Field Book	-
CAD File:	AL240182401

Title

ALTA/NSPS LAND TITLE SURVEY

Sheet No. 4 of 5

AL-1

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Layout: ALT-2ABS (ESRI.ttf)

Xref (s) : XY240182401 , XC240182401-10

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LEGEND

- Property Line
- Easement Line
- Railroad
- 50 Major Contour
- Minor Contour
- Guide Rail
- X X Fence
- Overhead Wires
- G Gas Line
- S Sanitary Sewer
- Storm Sewer
- T Underground Telecommunications Line
- Handhole
- Utility Pole
- Utility Pole w/ Light
- Guy Wire
- Light Pole
- CB Catch Basin
- MH Manhole
- Span Pole
- WV Water Valve
- Sign
- Bollard
- Deciduous Tree
- Coniferous Tree
- 29 Permissible Build Area Per Bk. 10872 Pg. 9162
- 29 Required Landlord Improvements Limits Per Bk. 10872 Pg. 9162

Slade Avenue (Harlem Road) (Public - Variable Width R.O.W.)

Ridge Road (Public - Variable Width R.O.W.)

PROPOSED PARCEL 787,838 S.F. or 18.086± Acres

PROPOSED PARCEL 787,838 S.F. or 18.086± Acres

MATCH LINE SHEET 3

MATCH LINE SHEET 2

P.O.B. PROPOSED

GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

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COSTCO WHOLESALE FACILITY

SLADE AVENUE AND RIDGE ROAD
WEST SENECA, ERIE COUNTY, NEW YORK

REVISIONS

No.	Date	Desc.
1	2/20/25	Updated Title Commitment
2	3/3/25	Updated Per Client Comments
3	6/26/26	Updated Title Commitment
4	7/2/26	Updated Title Commitment
5	7/7/2026	Updated Per Comments
6	7/8/2026	Updated Title Commitment

Surveyed	TF
Drawn	BM, KKS
Reviewed	DS
Scale	1"=40'
Project No.	2401824
Date	12/09/2024
Field Book	-
CAD File:	AL240182401

Title

ALTA/NSPS LAND TITLE SURVEY

Sheet No. 5 of 5

AL-1

Xref (s) - XC\240182401 - XC\240182401-10

ZONING INFORMATION

LOCATION: WEST SENECA, ERIE COUNTY, NEW YORK			
ZONE: M-1 (MANUFACTURING)			
USE: RETAIL (PERMITTED USE), WAREHOUSE (PERMITTED USE), GAS STATION (SPECIAL PERMIT USE)			
ITEM	REQUIREMENTS	PROPOSED	VARIANCE
MINIMUM LOT AREA	NONE REQUIRED	787,828 S.F. (18.08 AC.)	NO
MINIMUM LOT WIDTH	NONE REQUIRED	760 FEET	NO
MINIMUM LOT FRONTAGE	NONE REQUIRED	1,840 FEET	NO
MINIMUM FRONT SETBACK	25 FEET OR 50 FEET WHEN OPPOSITE ANY R DISTRICT	159 FEET	NO
MINIMUM SIDE SETBACK	10 FEET	45 FEET	NO
MINIMUM REAR SETBACK	10 FEET	N/A	NO
MAXIMUM BUILDING HEIGHT	40 FEET	±33 FEET	NO
MAXIMUM BUILDING COVERAGE	NONE REQUIRED	24 PERCENT	NO

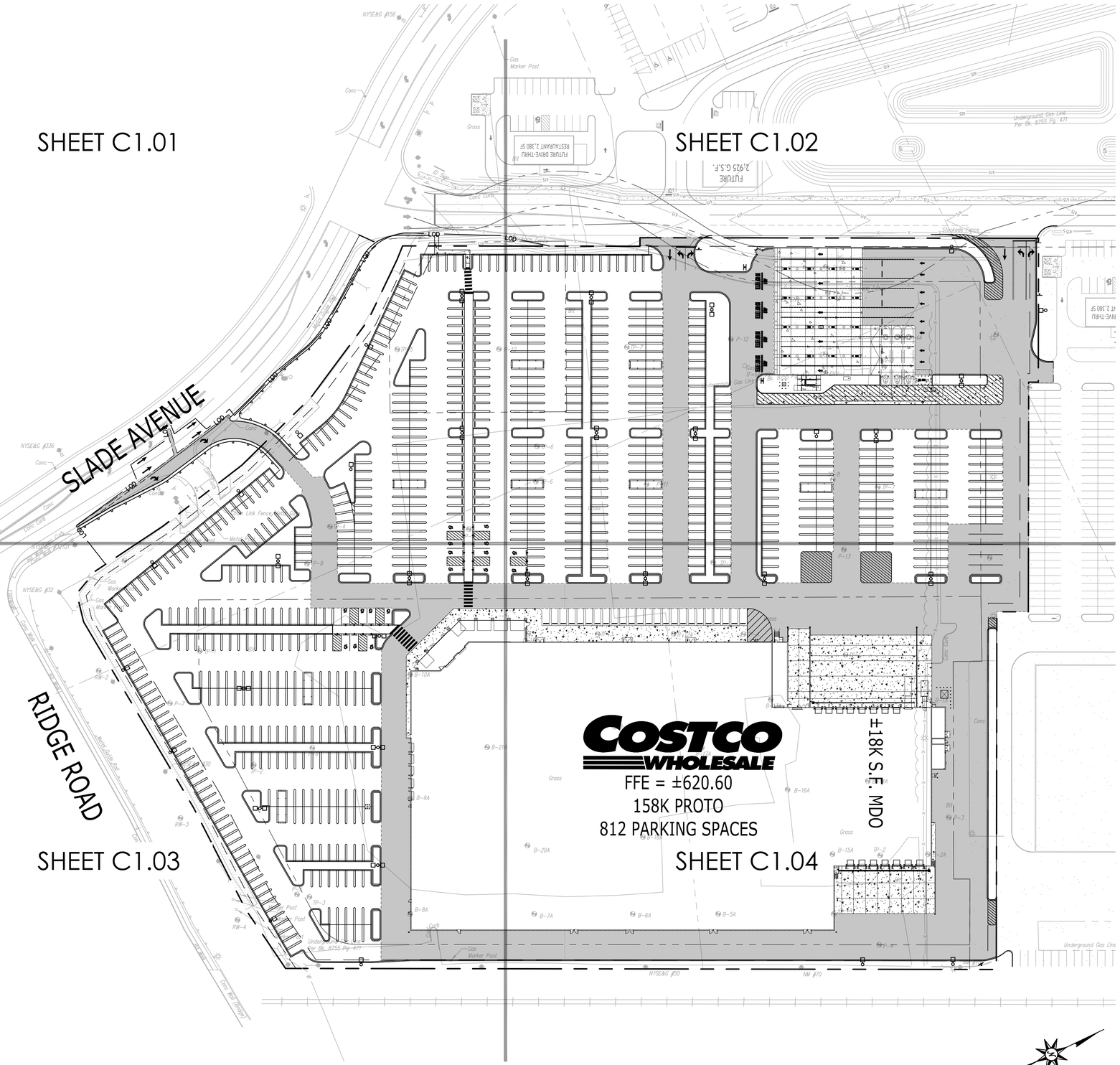
PARKING INFORMATION

ITEM	REQUIREMENTS	PROPOSED	VARIANCE
BUILDING SIZE	NONE REQUIRED	187,050 S.F.	NO
PARKING REQUIRED	RETAIL: 5 SPACES PER EVERY 1000 S.F. OF GROSS FLOOR AREA (160,000 S.F.) = 800 SPACES TIRE CENTER: 3 SPACES FOR EACH SERVICE BAY = 15 SPACES WAREHOUSE: 1 SPACE FOR EACH 1000 S.F. OF GROSS FLOOR AREA USED FOR SUCH PURPOSED, BUT SHALL NOT BE LESS THAN 1 SPACE FOR EACH 2 EMPLOYEES AND NEED NOT BE MORE THAN 1 FOR EACH 1.5 EMPLOYEES (18,000 SF) = 18 SPACES TOTAL REQUIRED: 833	812 SPACES	YES
MINIMUM ADA PARKING SPACES REQUIRED	17 SPACES	17 SPACES	NO
MINIMUM LOADING SPACES	RETAIL: 3 SPACES FOR GROSS FLOOR AREA OVER 50,000 S.F. WAREHOUSE: 2 SPACES FOR GROSS FLOOR AREA UNDER 40,000 S.F.	5 SPACES	NO
MINIMUM PARKING DIMENSIONS	9 FEET X 18 FEET	10 FEET X 20 FEET	NO
MINIMUM AISLE WIDTH	NONE REQUIRED	24 FEET - 2-WAY	NO
MINIMUM FRONT SETBACK	10 FEET	10 FEET	NO
MINIMUM SIDE SETBACK	NONE REQUIRED	10 FEET	NO
MINIMUM REAR SETBACK	NONE REQUIRED	28 FEET	NO
MINIMUM INTERIOR LANDSCAPING	10' WIDE MEDIANS BETWEEN PARKING BLOCKS DRIVE AISLES AND LANDSCAPED ISLANDS SHALL BE INSTALLED SO THAT NOT MORE THAN 20 PARKING SPACES IN A SINGLE ROW OR 40 IN A DOUBLE ROW GO UNINTERRUPTED 1 SHADE TREE PER 10 PARKING SPACES	10' WIDE MEDIANS NOT PROVIDED BETWEEN EVERY PARKING BLOCK MORE THAN 20 PARKING SPACES IN A ROW WITHOUT INTERRUPTION FOR 812 PARKING SPACES, 82 SHADE TREES ARE REQUIRED AND PROVIDED	YES
MINIMUM BICYCLE PARKING	10% OF REQUIRED VEHICLE PARKING (MAXIMUM OF 20 BICYCLE SPACES)	20 SPACES	NO

SIGN LEGEND

SIGN NO.	MUTCD NO.	LEGEND
A	R1-1	STOP 30"
B	R7-8	$ FINE FOR UNAUTHORIZED PARKING VEHICLE TOWED AT OWNER'S EXPENSE
C	R7-8P	VAN ACCESSIBLE
D	R5-1	DO NOT ENTER
E	R3-8	ONE WAY

NOTE: ALL HANDICAP ACCESSIBLE PARKING STALL SIGNAGE TO BE INSTALLED IN PIPE BOLLARDS (SEE DETAIL) AND BE IN FULL COMPLIANCE WITH THE LATEST BUILDING CODE.



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STATE OF NEW YORK
MICHELLE M. CARLSON
LICENSED PROFESSIONAL ENGINEER
093051

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS

No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

CAD File:
C2401824-10

Title
OVERALL SITE PLAN

Sheet No.
C1.00

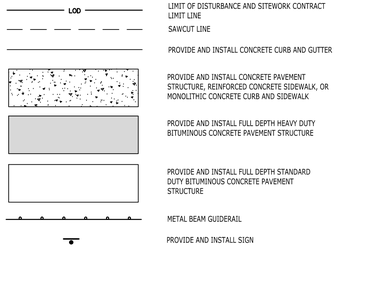
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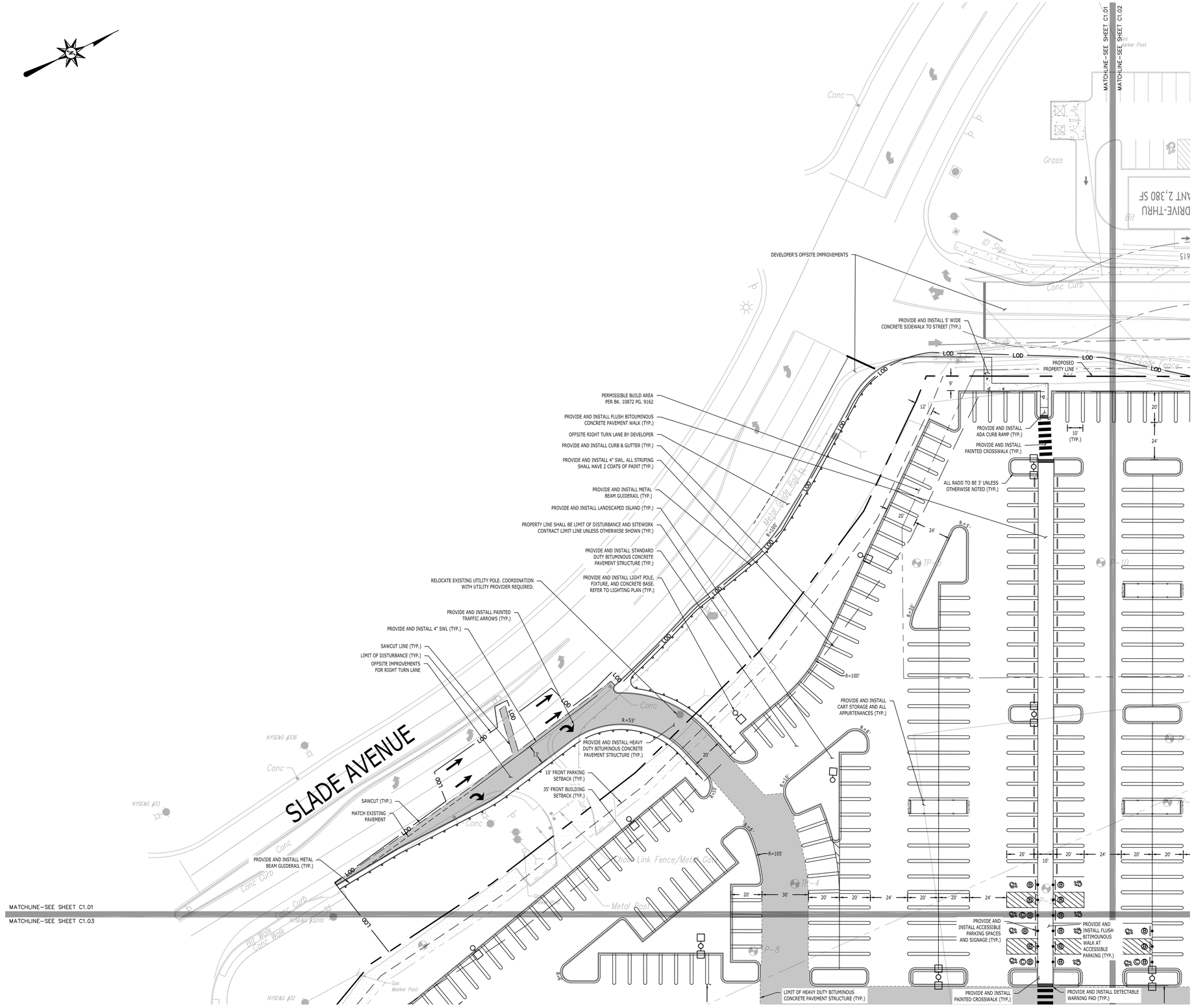
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SITE PLAN LEGEND

- PROPERTY LINE
- EASEMENT LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- PROVIDE AND INSTALL CONCRETE CURB AND GUTTER
- PROVIDE AND INSTALL CONCRETE PAVEMENT STRUCTURE, REINFORCED CONCRETE SIDEWALK, OR MONOLITHIC CONCRETE CURB AND SIDEWALK
- PROVIDE AND INSTALL FULL DEPTH HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE
- PROVIDE AND INSTALL FULL DEPTH STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE
- METAL BEAM GUIDERAIL
- PROVIDE AND INSTALL SIGN



KEY MAP



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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS

No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026

CAD File: C2401824-10

Title

SITE PLAN

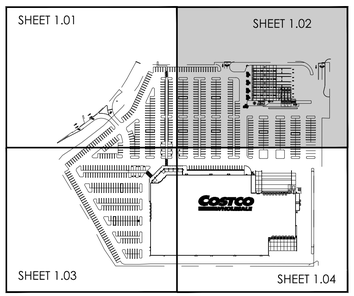
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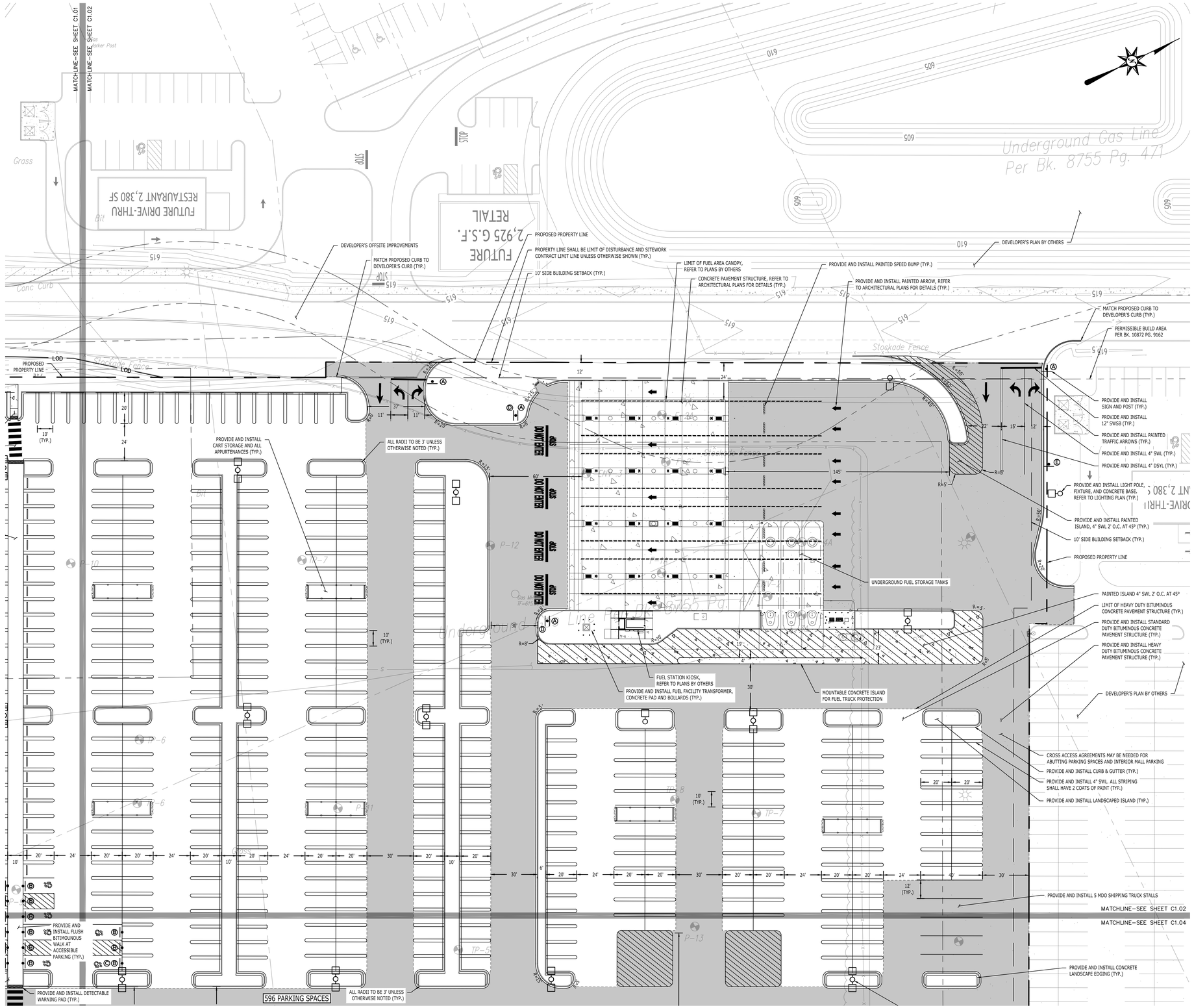
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SITE PLAN LEGEND

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- PROVIDE AND INSTALL SIGN



KEY MAP



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GRAPHIC SCALE
30 15 0 30
SCALE IN FEET

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093051

7/17/2026

COSTCO WHOLESALE
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WEST SENECA, NEW YORK

REVISIONS
No. Date Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-10

Title
SITE PLAN

Sheet No.
C1.02

Xref (s) : XY2401824-01 ; XC2401824-02 ; XR2401824-03 ; XM2401824-04.dwg

7/17/2026, JLYNN, G:\JOBS\24\18\2401824\DWG\C2401824-10.DWG,C1.02 24X36 30SC.

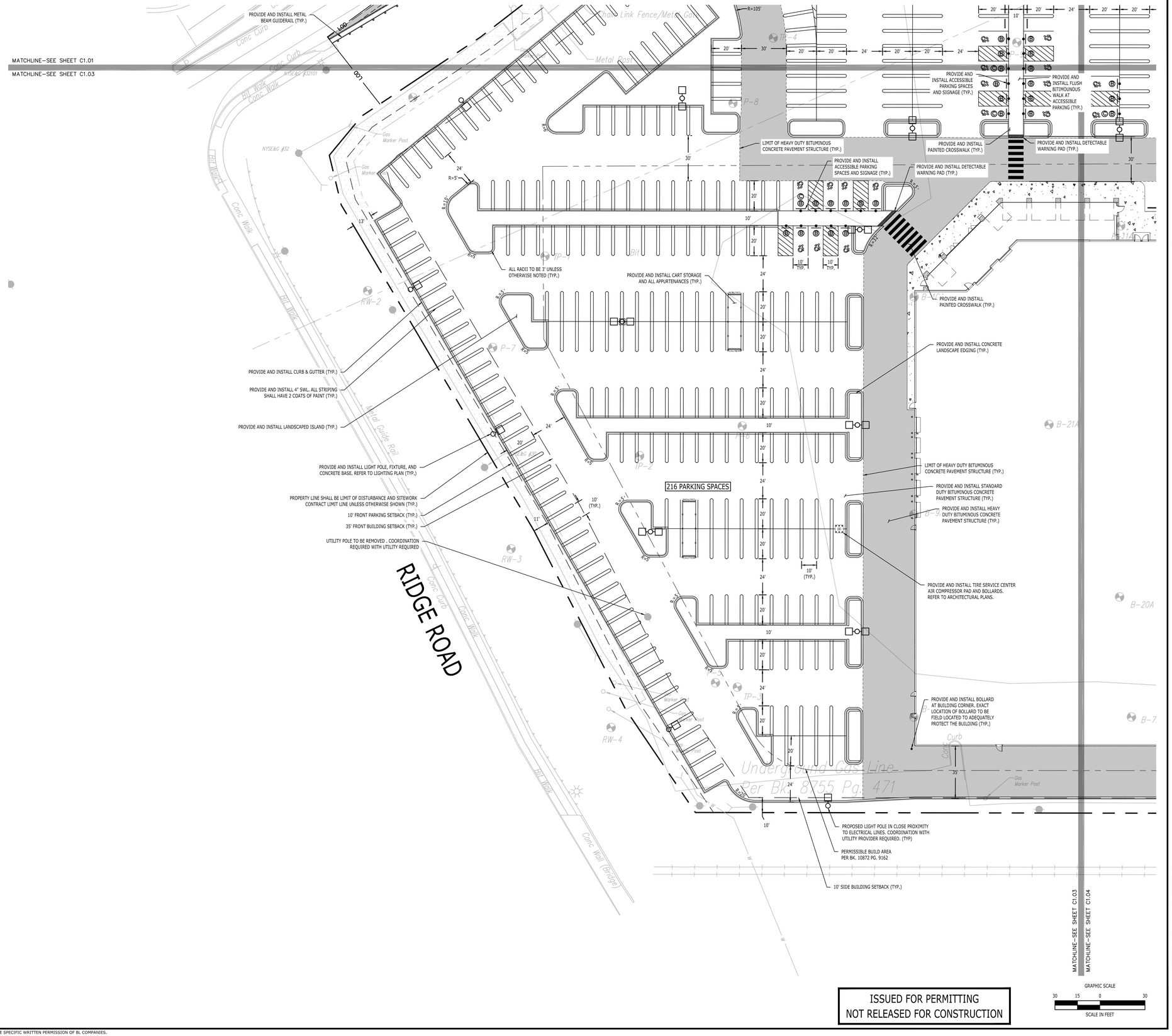
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SITE PLAN LEGEND

- PROPERTY LINE
- EASEMENT LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- PROVIDE AND INSTALL CONCRETE CURB AND GUTTER
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- METAL BEAM GUIDERAIL
- PROVIDE AND INSTALL SIGN

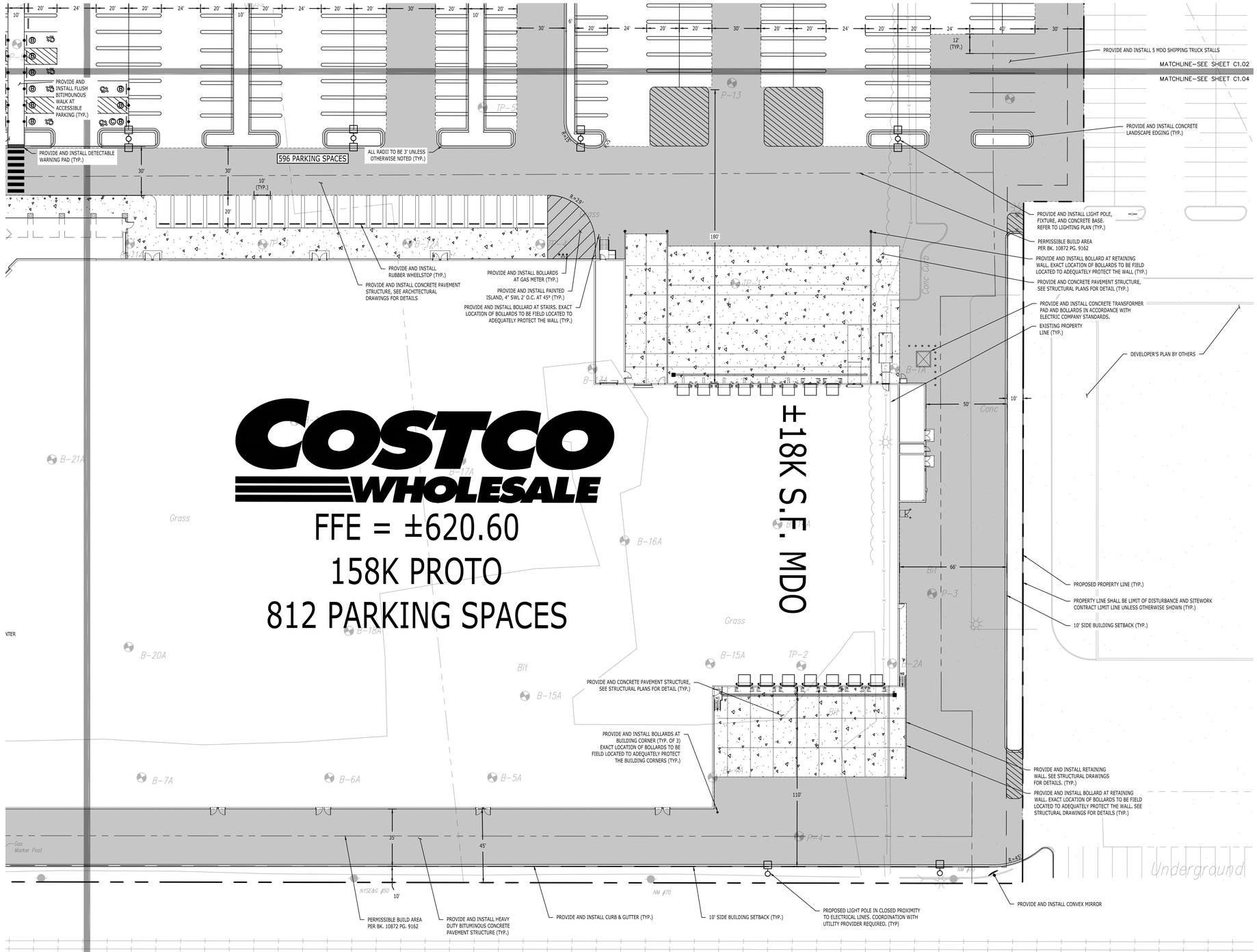


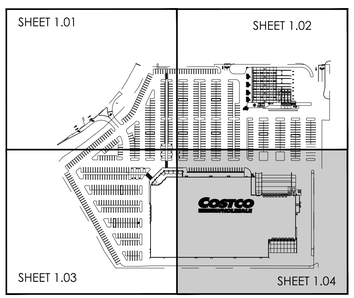
KEY MAP


MATCHLINE–SEE SHEET C1.01
MATCHLINE–SEE SHEET C1.03
PROVIDE AND INSTALL METAL BEAM GUIDERAIL (TYP.)
LOD
Conc Curb
Conc Curb
Bit Walk
Conc Walk
NYSEAG #32
Gas Marker Post
Bit Walk
Conc Walk
Bit Walk
Metal Guide Rail
NYSEAG #30
Chain Link Fence/Metal Gate
Metal Post
Gas Marker Post
Gas Marker Post
Gas Marker

SITE PLAN LEGEND

- PROPERTY LINE
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- LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE (LOD)
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- METAL BEAM GUIDERAIL
- PROVIDE AND INSTALL SIGN





KEY MAP

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GRAPHIC SCALE
30 15 0 30
SCALE IN FEET

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7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-10

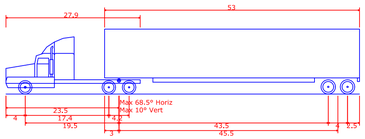
Title
SITE PLAN

Sheet No.
C1.04

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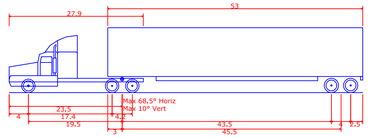
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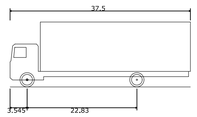
US - COSTCO - FUEL - MED

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°



WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°



US - COSTCO - MDO

Overall Length	37.500ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.455ft
Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	31.80°



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GRAPHIC SCALE
60 30 0 60
SCALE IN FEET

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7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS

No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

CAD File: C2401824-10

Title

OVERALL TRUCK TURNING PLAN

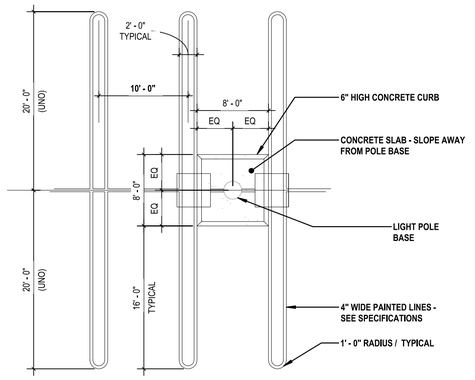
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C1.20

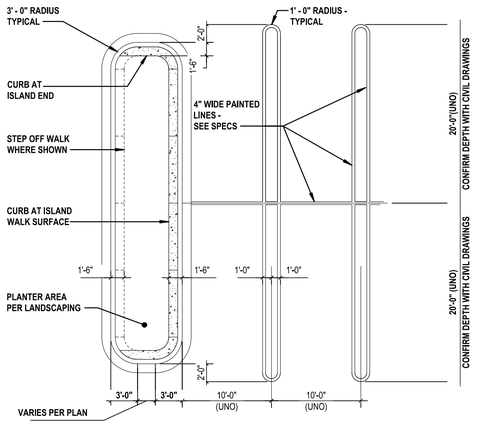
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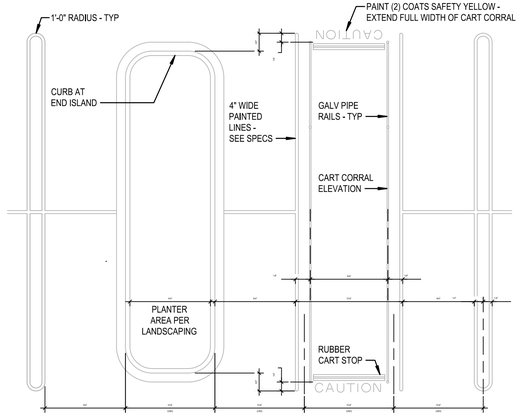
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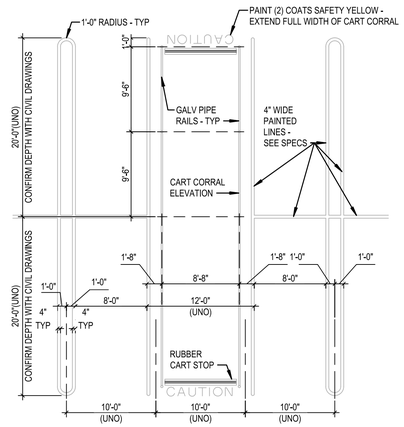
ISLAND AT LIGHT POLE



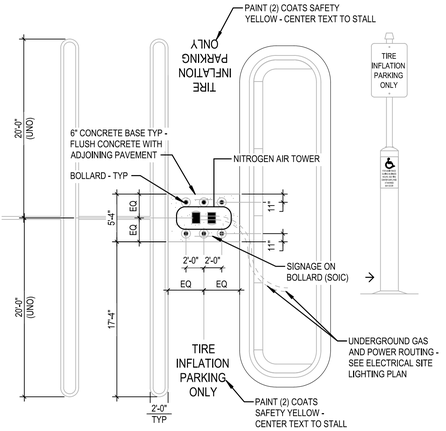
END ISLAND CURBS



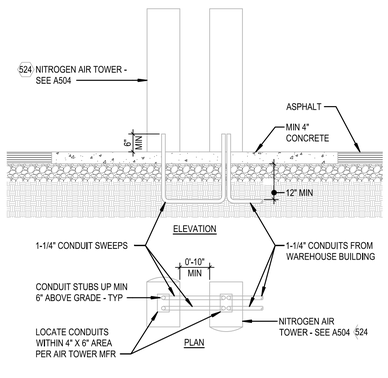
MIDDLE ISLAND AT CART CORRAL



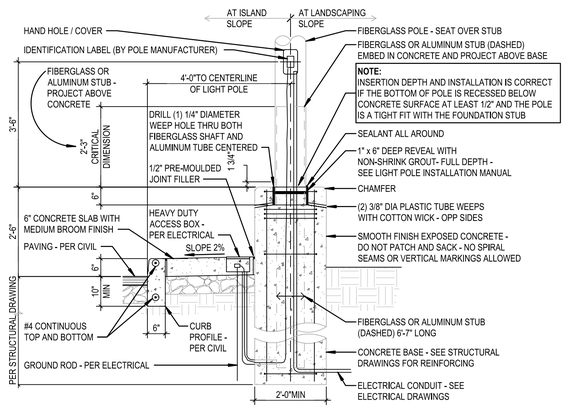
CART CORRAL & TYPICAL PARKING STALL



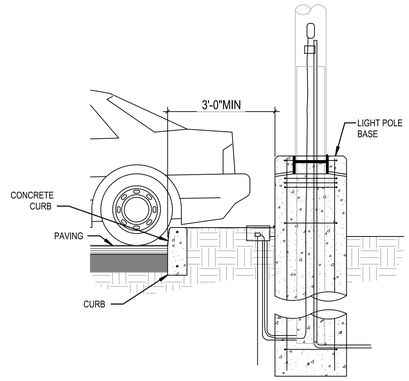
TIRE INFLATION STATION



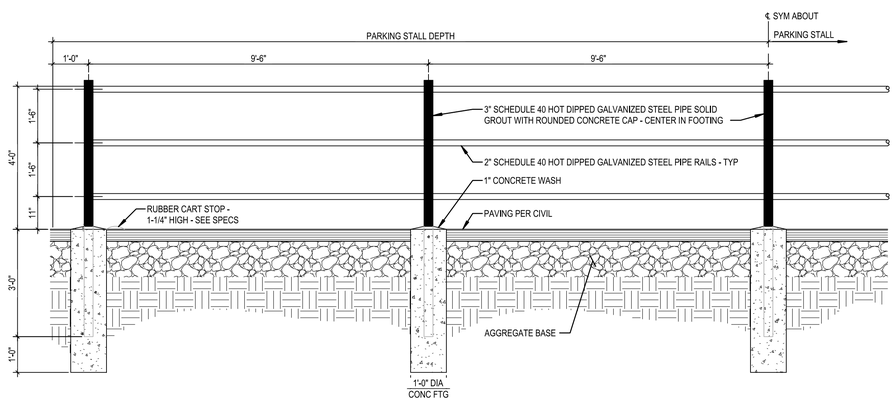
NITROGEN AIR TOWER ENLARGED DETAIL



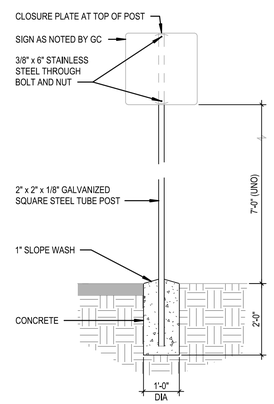
LIGHT POLE BASE AT CONCRETE ISLAND/LANDSCAPING



LIGHT POLE LOCATION WHERE PARKING OCCURS



CART STORAGE



SITE SIGNAGE POST

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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER
7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS
No. Date Desc.

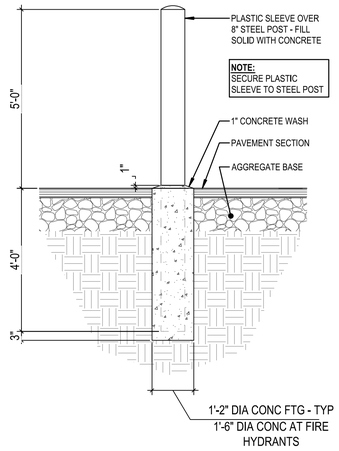
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Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title
SITE DETAILS

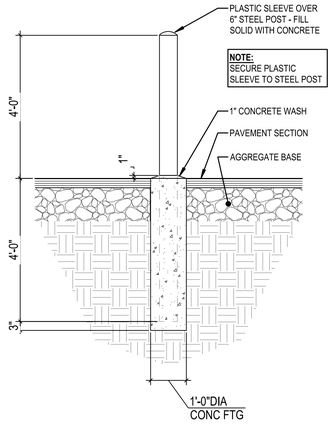
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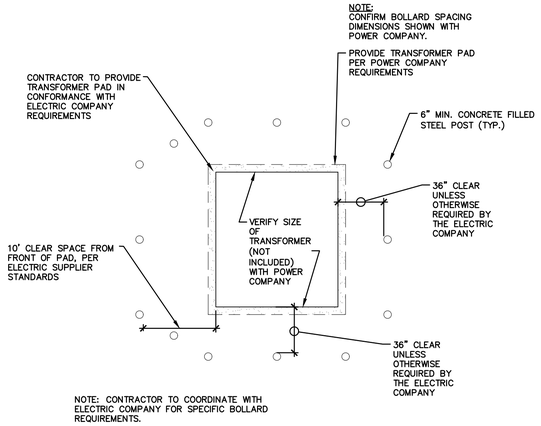
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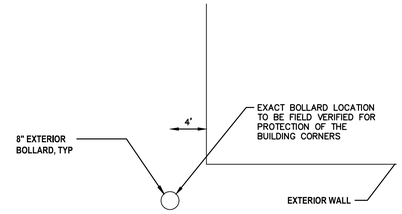
5-FOOT TALL EXTERIOR BOLLARD



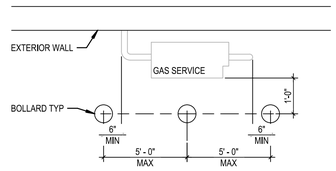
TYPICAL EXTERIOR BOLLARD



BOLLARDS AT TRANSFORMER

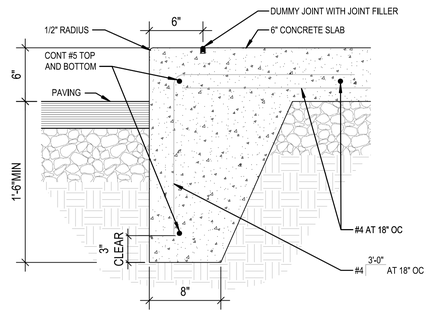


BOLLARD AT BUILDING CORNER

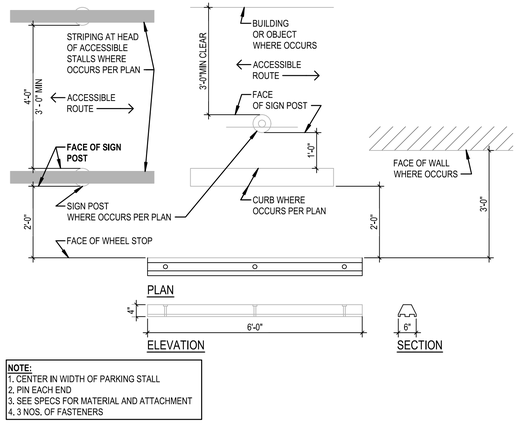


NOTES:
1. CONFIRM BOLLARD REQUIREMENT WITH UTILITY COMPANY.
2. ADDITIONAL BOLLARDS MAY BE REQUIRED TO PROTECT THE ENTIRE GAS SERVICE ASSEMBLY

BOLLARD AT GAS SERVICE

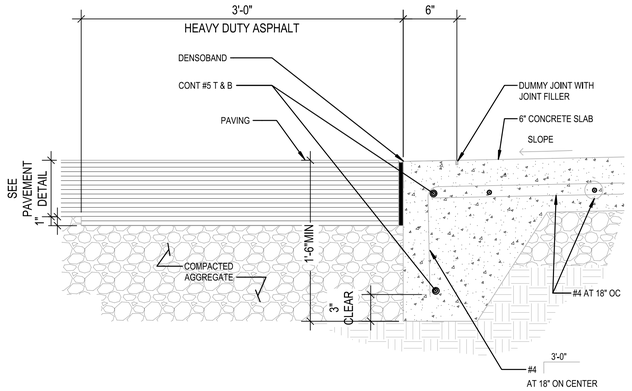


EDGE OF SIDEWALK AT PAVEMENT

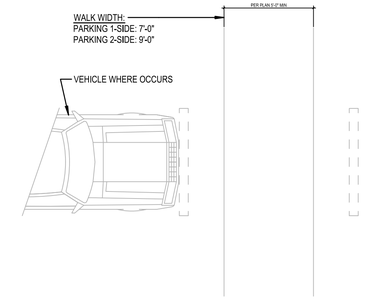


NOTE:
1. CENTER IN WIDTH OF PARKING STALL
2. PIN EACH END
3. SEE SPECS FOR MATERIAL AND ATTACHMENT
4. 3 NOS. OF FASTENERS

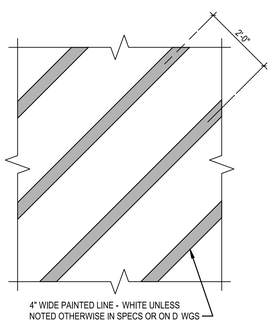
WHEEL STOP



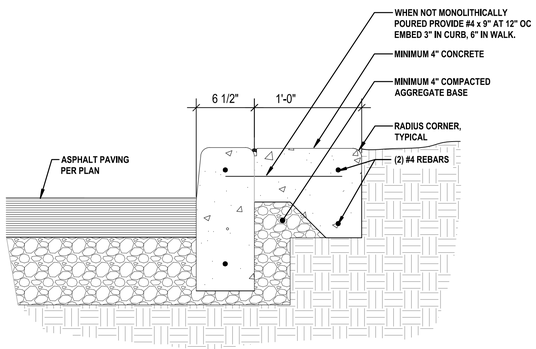
FLUSH CURB AT PAVEMENT



ACCESSIBLE PATH TO PUBLIC WAY

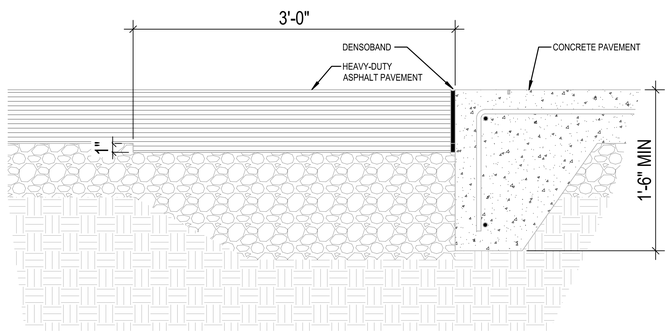


PAINTED STRIPE

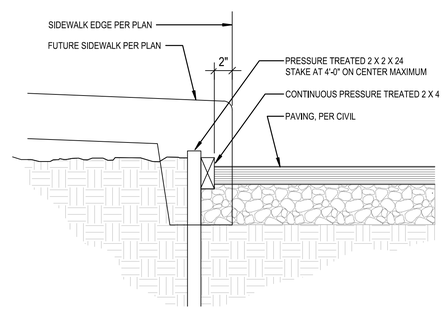


CONCRETE LANDSCAPE EDGING

NOTE: IF LANDSCAPING EDGING IS NOT POURED MONOLITHICALLY, THE TOP OF CURB AND LANDSCAPING EDGING SHALL BE FLUSH WITH JOINT SEALED.



ASPHALT TO CONCRETE PAVEMENT



TEMPORARY EDGE OF PAVEMENT

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MICHELLE M. CARLSON
LICENSED PROFESSIONAL ENGINEER
093051

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS No.	Date	Desc.

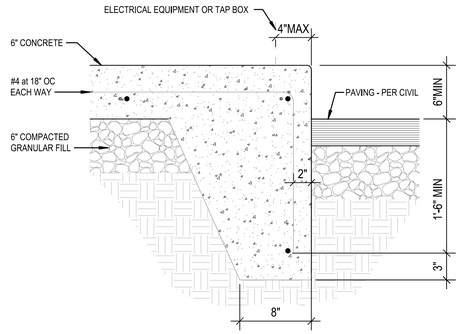
Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-110	

Title
SITE DETAILS

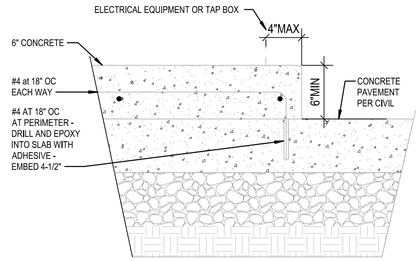
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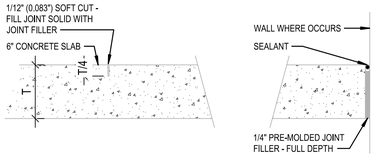


AT ASPHALT PAVEMENT



AT CONCRETE PAVEMENT

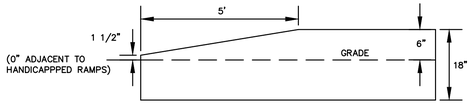
EXTERIOR EQUIPMENT PAD



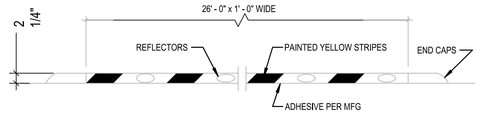
A **SHRINKAGE JOINT**

B **ISOLATION JOINT**

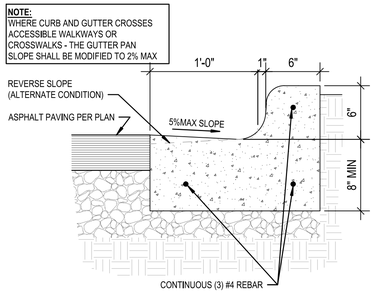
CONCRETE WALKS - JOINTS



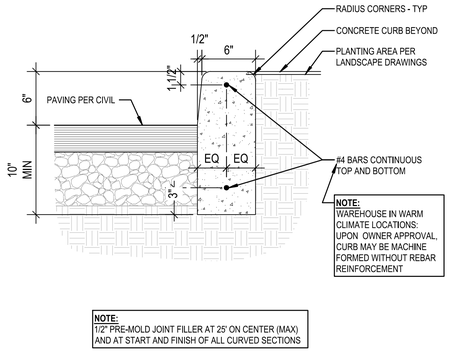
TRANSITION CURB



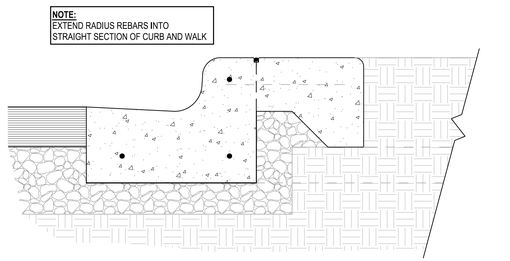
SPEED BUMP



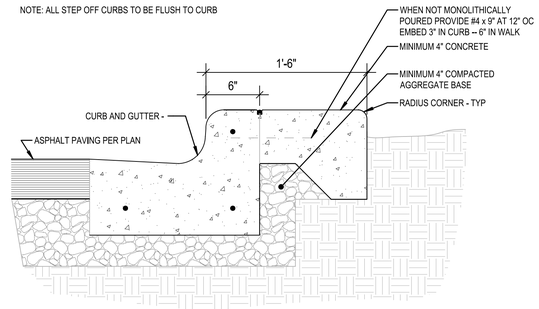
CONCRETE CURB AND GUTTER



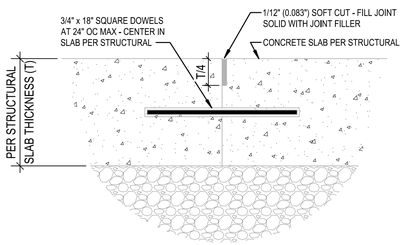
CAST-IN-PLACE CONCRETE CURB



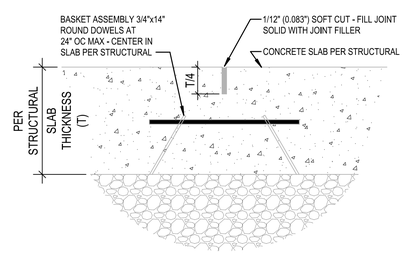
CURB AND GUTTER AT ISLAND END



CURB AND GUTTER AT ISLAND WALK



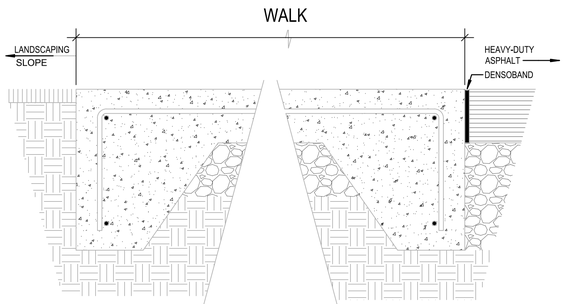
B **CONSTRUCTION JOINT**



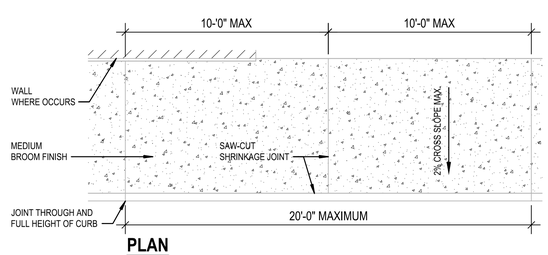
A **SHRINKAGE JOINT**

NOTE:
SEE STRUCTURAL FOR JOINT
LOCATION AND REINFORCING

DOCK AND COMPACTOR SLAB ONLY



WALK AT LANDSCAPE



PLAN

NOTE:
PROVIDE 6" CONCRETE WITH #4 AT 18" OC AT WALKS THAT CONNECTS TO:
1. ENTRY SLAB (SEE A704)
2. STOOPS OR BUILDING

CONCRETE WALKS AT BUILDING

ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

Architecture
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Land Surveying

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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS		
No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

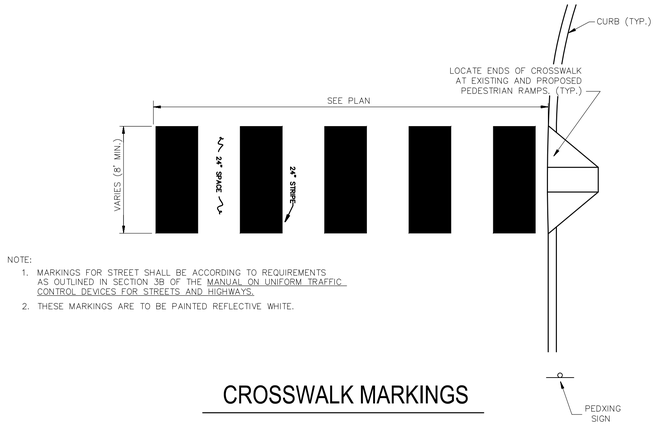
Title
SITE DETAILS

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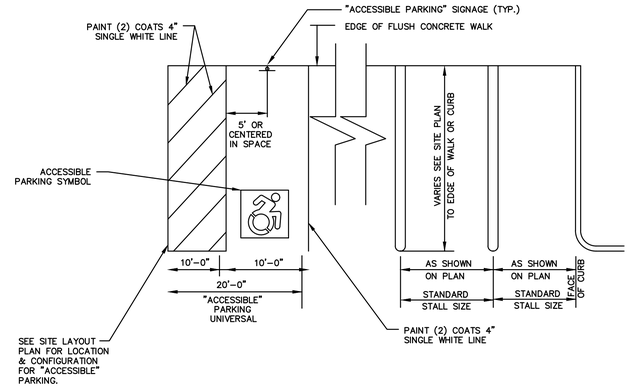
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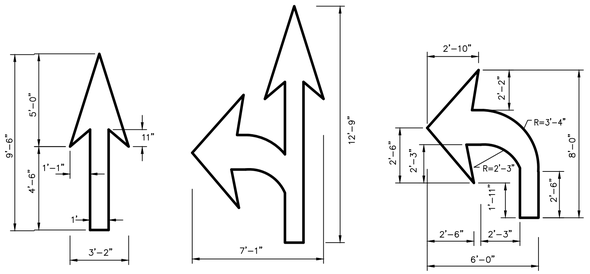
NOTE:
1. MARKINGS FOR STREET SHALL BE ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE MARKINGS ARE TO BE PAINTED REFLECTIVE WHITE.

CROSSWALK MARKINGS



TYPICAL ACCESSIBLE AND STANDARD PARKING SPACES

1210

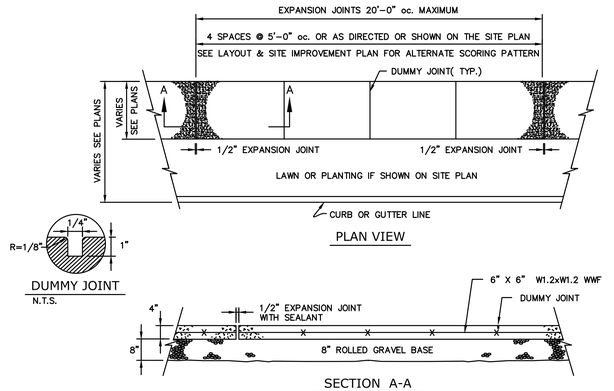


12.5 S.F. REFER TO ADJACENT VIEWS FOR DIMENSIONS 15.5 S.F.
27.0 S.F.

(WHITE)
(ARROWS TO BE CENTERED IN TRAVEL LANE)

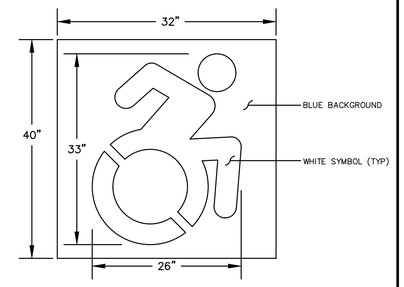
PAVEMENT ARROW DETAILS

BLPC–006



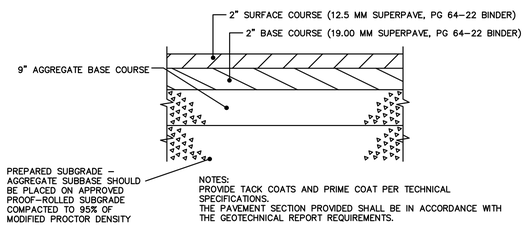
CONCRETE SIDEWALK DETAIL

BLSR–001



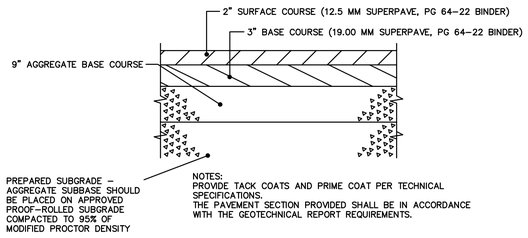
NOTE: HANDICAP SYMBOL TO ADHERE TO STATE BUILDING CODE, LATEST EDITION

HANDICAP SYMBOL



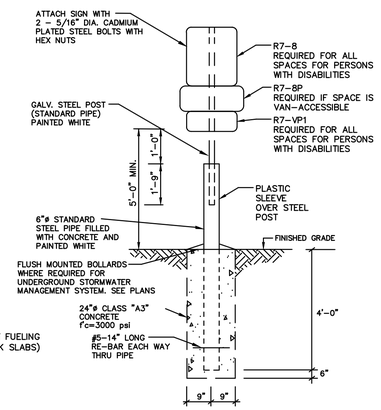
NOTES:
PROVIDE TACK COATS AND PRIME COAT PER TECHNICAL SPECIFICATIONS.
THE PAVEMENT SECTION PROVIDED SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REQUIREMENTS.

STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE



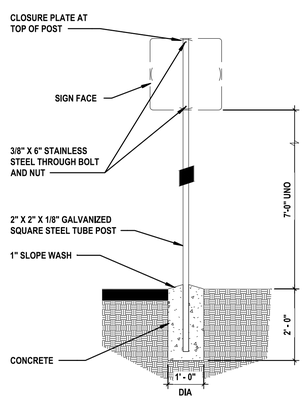
NOTES:
PROVIDE TACK COATS AND PRIME COAT PER TECHNICAL SPECIFICATIONS.
THE PAVEMENT SECTION PROVIDED SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REQUIREMENTS.

HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE

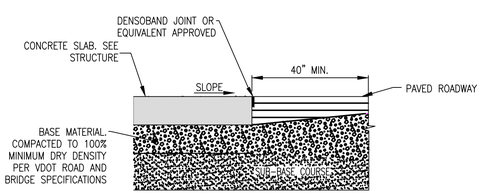


NOTES:
HANDICAP SYMBOL TO ADHERE TO STATE BUILDING CODE, LATEST EDITION.
FLUSH MOUNTED BOLLARDS WHERE REQUIRED FOR UNDERGROUND STORMWATER MANAGEMENT SYSTEM. SEE PLANS.

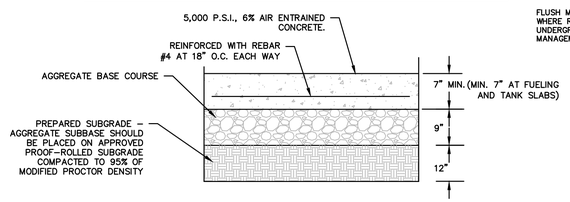
HANDICAP SIGN BOLLARD DETAIL



STOP SIGN



CONCRETE SLAB MATCH AT ASPHALT PAVEMENT



NOTE:
1. THE PAVEMENT SECTION PROVIDED SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REQUIREMENTS.
2. FOR USE AT FUEL FACILITY UNLESS OTHERWISE NOTED AS STRUCTURAL SLAB

HEAVY DUTY CONCRETE PAVEMENT STRUCTURE

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MICHELLE M. CARLSON
LICENSED PROFESSIONAL ENGINEER
093051

7/17/2026

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SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS		
No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-110	

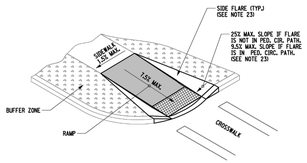
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SITE DETAILS

Sheet No.
C1.103

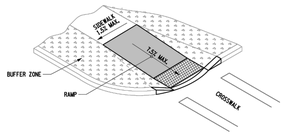
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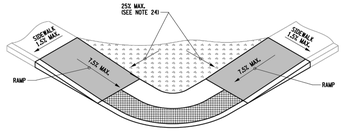
CURB RAMP



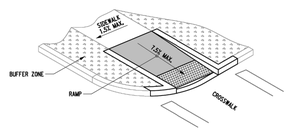
RAMP SIDE OPTION A_S FLARED CONCRETE



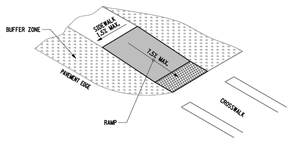
RAMP SIDE OPTION B_S GRADED EARTH



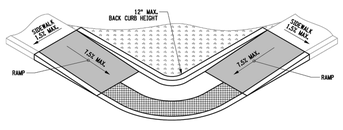
RAMP BACK OPTION A_S GRADED EARTH AND TURF



RAMP SIDE OPTION C_S RETURN CURB



RAMP SIDE OPTION D_S UNCURBED INTERSECTION



RAMP BACK OPTION B_S BACK CURB

PARALLEL RAMP BACK TREATMENTS

RAMP SIDE CONFIGURATIONS

NOTES:
1. ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON STANDARD SHEET 608-01, SHEET 1 OF 12.
2. A COMBINATION OF RAMP SIDE CONFIGURATIONS CAN BE USED.

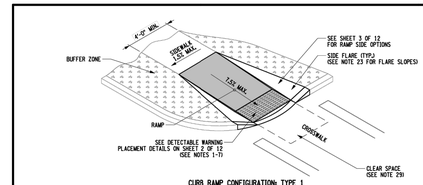
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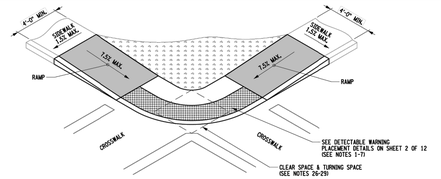
PEDESTRIAN FACILITIES (SHEET 3 OF 12)

APPROVED AUGUST 18, 2021	ISSUED UNDER EI 21-024
/S/ RICHARD WILDER, P.E. DEPUTY CHIEF ENGINEER (DESIGN)	608-01

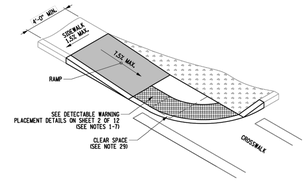
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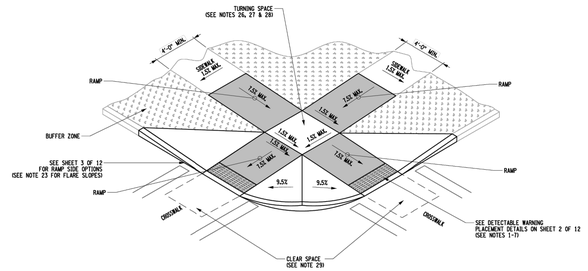
CURB RAMP CONFIGURATION: TYPE 1



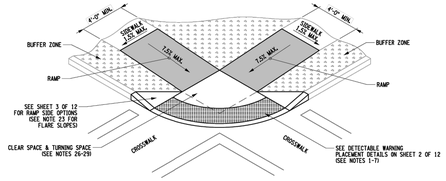
CURB RAMP CONFIGURATION: TYPE 4



CURB RAMP CONFIGURATION: TYPE 2



CURB RAMP CONFIGURATION: TYPE 5



CURB RAMP CONFIGURATION: TYPE 3

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON STANDARD SHEET 608-01, SHEET 1 OF 12 UNLESS OTHERWISE NOTED

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U.S. CUSTOMARY STANDARD SHEET

PEDESTRIAN FACILITIES (SHEET 4 OF 12)

APPROVED AUGUST 18, 2021	ISSUED UNDER EI 21-024
/S/ RICHARD WILDER, P.E. DEPUTY CHIEF ENGINEER (DESIGN)	608-01

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METAL BEAM GUIDE RAIL

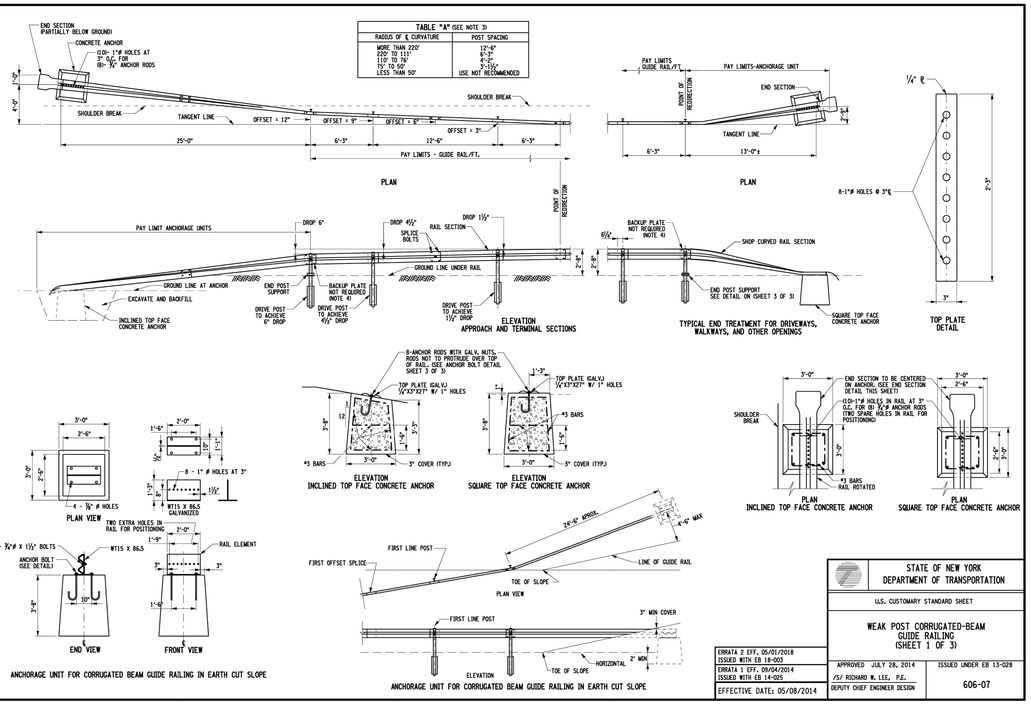


TABLE "A" (SEE NOTE 3)	
RADIUS OF ℄ CURVATURE	POST SPACING
MORE THAN 220'	12'-6"
200' TO 111'	6'-3"
110' TO 76'	4'-2"
75' TO 50'	3'-1½"
LESS THAN 50'	USE NOT RECOMMENDED

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DEPARTMENT OF TRANSPORTATION

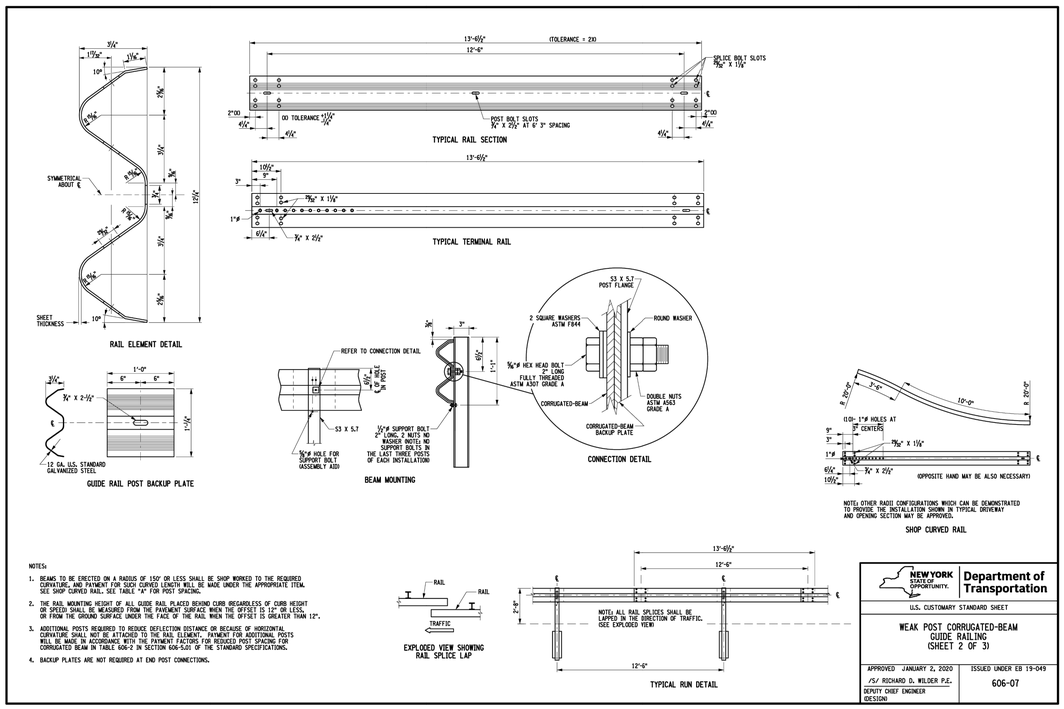
U.S. CUSTOMARY STANDARD SHEET

WEAK POST CORRUGATED-BEAM GUIDE RAILING (SHEET 1 OF 3)

APPROVED JULY 28, 2014	ISSUED UNDER EB 13-028
/S/ RICHARD W. LEE, P.E. DEPUTY CHIEF ENGINEER DESIGN	606-07

ERRATA 2 EFF. 05/01/2018 ISSUED WITH EB 18-003
ERRATA 1 EFF. 09/04/2014 ISSUED WITH EB 14-025
EFFECTIVE DATE: 05/08/2014

FILE NAME = E606_RWY_BEAM_01.dgn
DATE/TIME = 8/5/2021 10:08:08 AM
USER = mcochar



NOTES:
1. BEAMS TO BE ERECTED ON A RADIUS OF 150' OR LESS SHALL BE SHOP WORKED TO THE REQUIRED CURVATURE, AND PAYMENT FOR SUCH CURVED LENGTH WILL BE MADE UNDER THE APPROPRIATE ITEM. SEE SHOP CURVED RAIL. SEE TABLE "A" FOR POST SPACING.
2. THE RAIL MOUNTING HEIGHT OF ALL GUIDE RAIL PLACED BEHIND CURB REGARDLESS OF CURB HEIGHT OR SPEED SHALL BE MEASURED FROM THE PAVEMENT SURFACE WHEN THE OFFSET IS 12" OR LESS, OR FROM THE GROUND SURFACE UNDER THE FACE OF THE RAIL WHEN THE OFFSET IS GREATER THAN 12".
3. ADDITIONAL POSTS REQUIRED TO REDUCE DEFLECTION DISTANCE OR BECAUSE OF HORIZONTAL CURVATURE SHALL NOT BE ATTACHED TO THE RAIL ELEMENT. PAYMENT FOR ADDITIONAL POSTS WILL BE MADE IN ACCORDANCE WITH THE PAYMENT FACTORS FOR REDUCED POST SPACING FOR CORRUGATED BEAM IN TABLE 606-2 IN SECTION 606-5.01 OF THE STANDARD SPECIFICATIONS.
4. BACKUP PLATES ARE NOT REQUIRED AT END POST CONNECTIONS.

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WEAK POST CORRUGATED-BEAM GUIDE RAILING (SHEET 2 OF 3)

APPROVED JANUARY 2, 2020	ISSUED UNDER EB 19-049
/S/ RICHARD D. WILDER P.E. DEPUTY CHIEF ENGINEER (DESIGN)	606-07

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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	Date	Desc.
REVISIONS		

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title

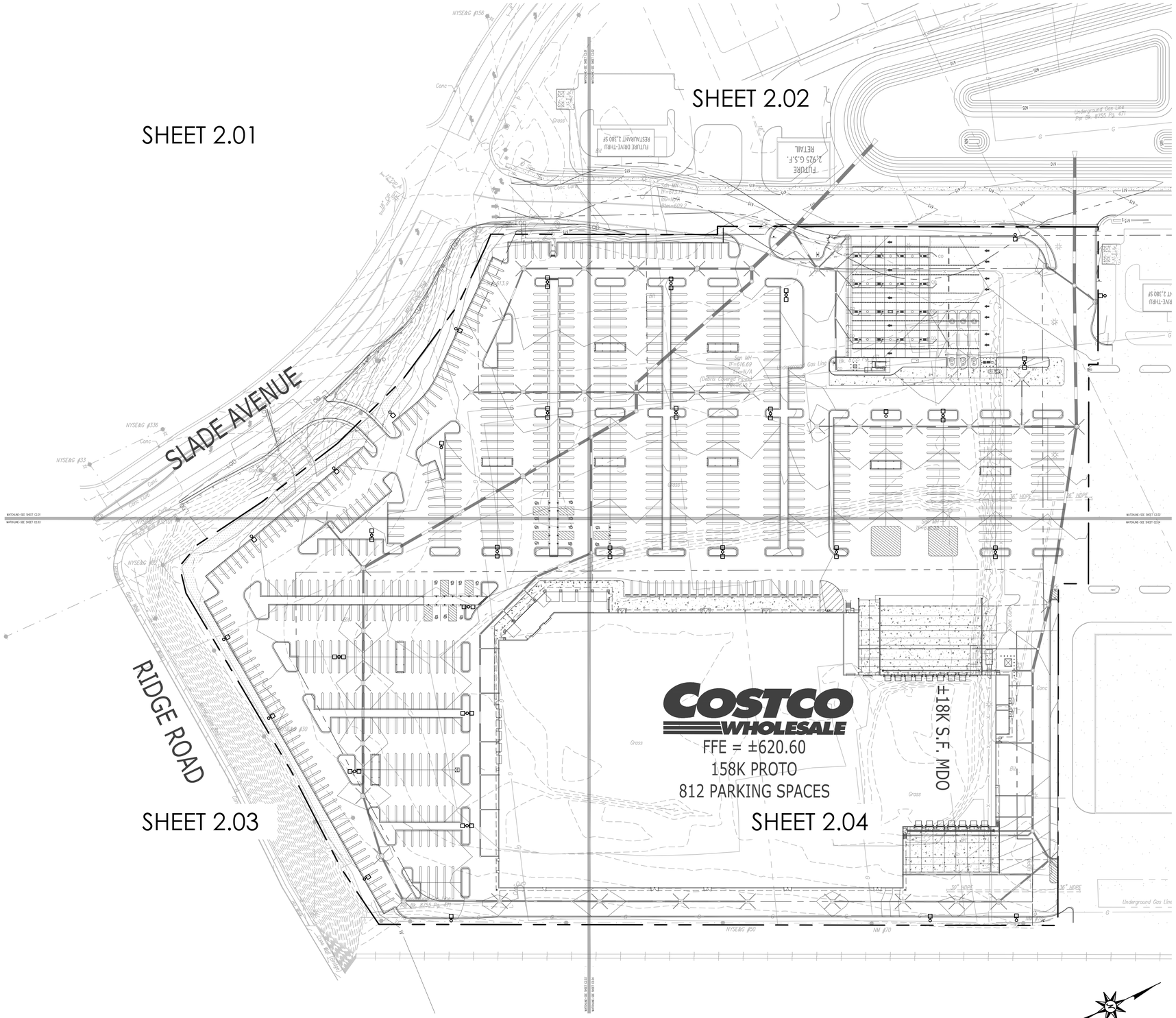
SITE DETAILS

Sheet No.

C1.104

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7/17/2026, JLYNN, G:\2024\2401824\00\DWG\C2401824-110.DWG,C1.104 24X36
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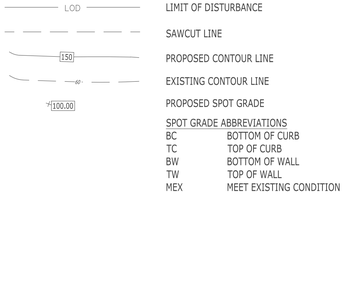

SHEET 2.01
SHEET 2.02
SLADE AVENUE
RIDGE ROAD
SHEET 2.03
SHEET 2.04
COSTCO WHOLESALE
FFE = ±620.60
158K PROTO
812 PARKING SPACES
±18K S.F. MDO
FUTURE
3,925 G.S.F.
RETAIL
RESTAURANT 2,380 SF
FUTURE DRIVE-THRU
Underground Gas Line
Per Bk. 8755 Pg. 471
Underground Gas Line
Per Bk. 8755 Pg. 471
Underground Gas Line
Per Bk. 8755 Pg. 471

GRADING LEGEND

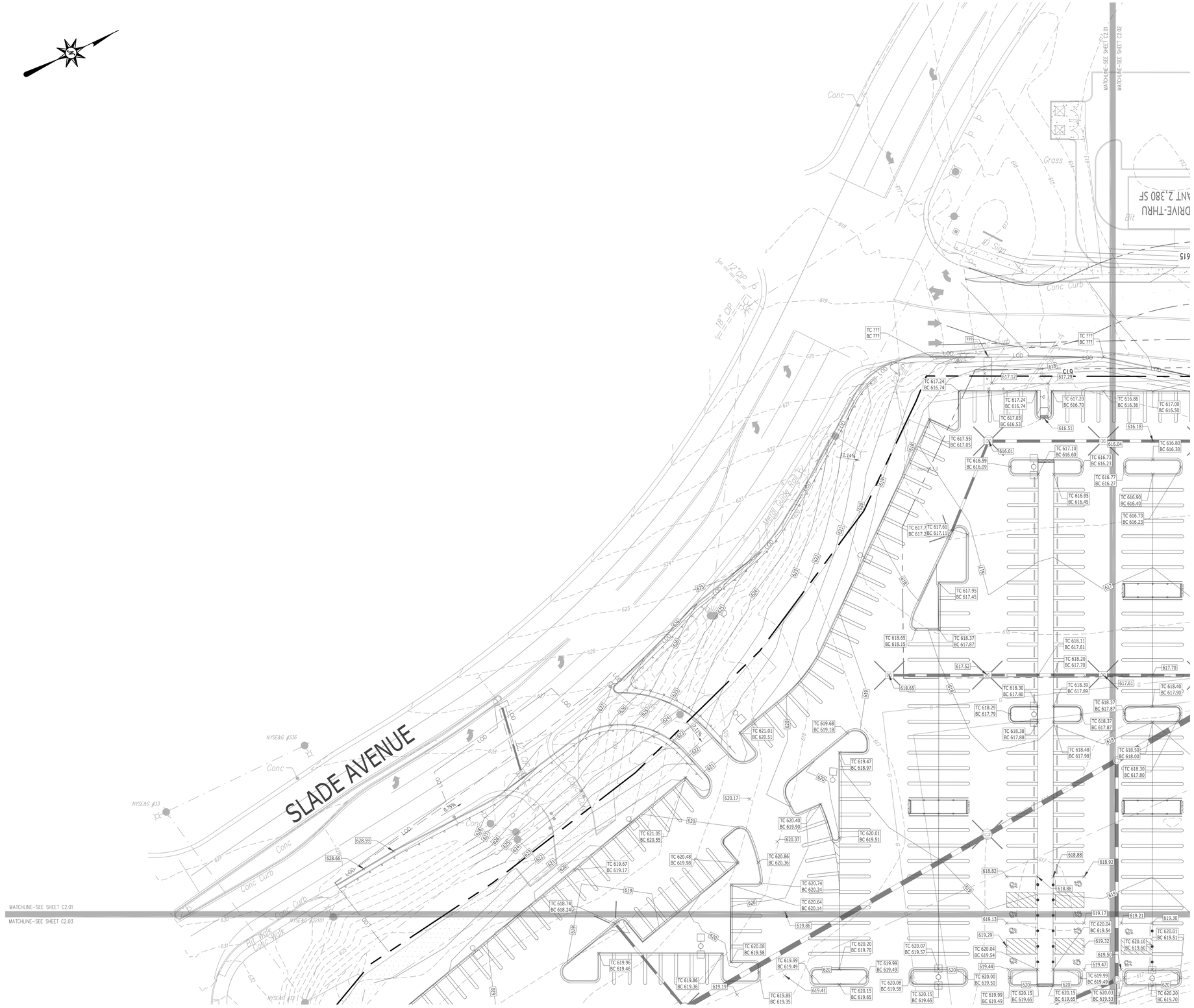
- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE
- SAWCUT LINE
- 150 — PROPOSED CONTOUR LINE
- 60 — EXISTING CONTOUR LINE
- *100.00 — PROPOSED SPOT GRADE

SPOT GRADE ABBREVIATIONS

BC	BOTTOM OF CURB
TC	TOP OF CURB
BW	BOTTOM OF WALL
TW	TOP OF WALL
MEX	MEET EXISTING CONDITION



KEY MAP



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7/17/2026

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REVISIONS

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Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-20	

Title

GRADING PLAN

Sheet No.

C2.01

Xref (s): ; XC2401824-01 ; XC2401824-02 ; XC2401824-20 ; XC2401824-21 ; XM2401824-xfer Map

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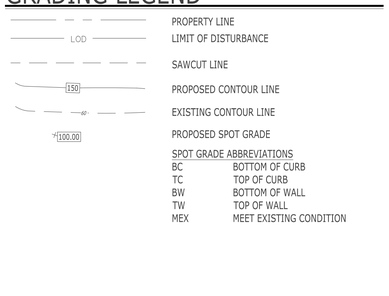
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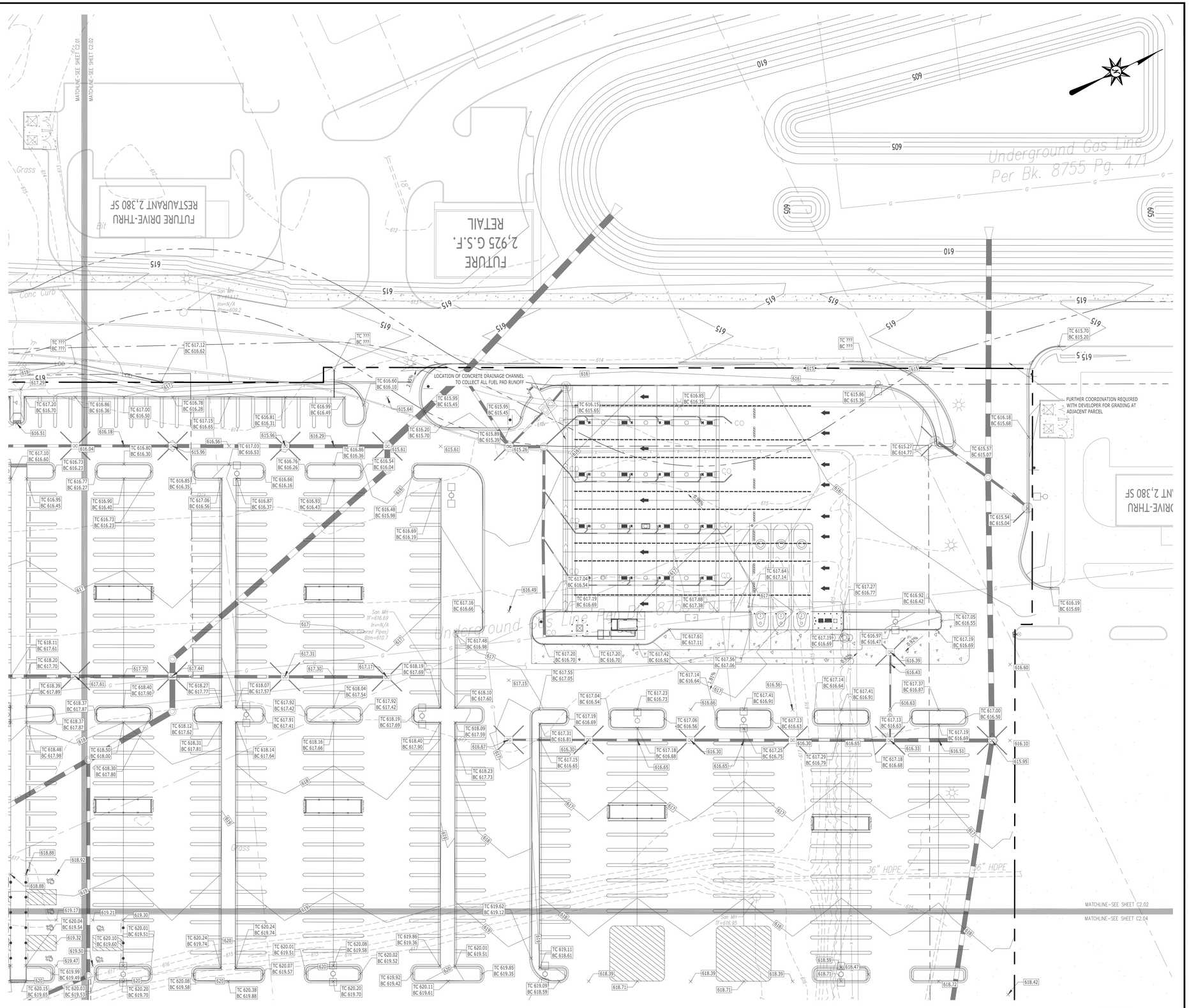
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LOD	LIMIT OF DISTURBANCE
	SAWCUT LINE
150	PROPOSED CONTOUR LINE
150	EXISTING CONTOUR LINE
*100.00	PROPOSED SPOT GRADE

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KEY MAP



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REVISIONS		
No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026

CAD File: C2401824-20

Title

GRADING PLAN

Sheet No.

C2.02

Xref's: - XC2401824L ; XC2401824-10 ; XC2401824-00 ; XC2401824-20 ; XC2401824-21 ; XC2401824-24rvMap

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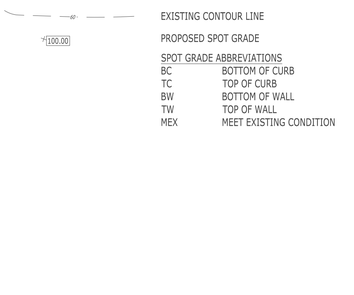
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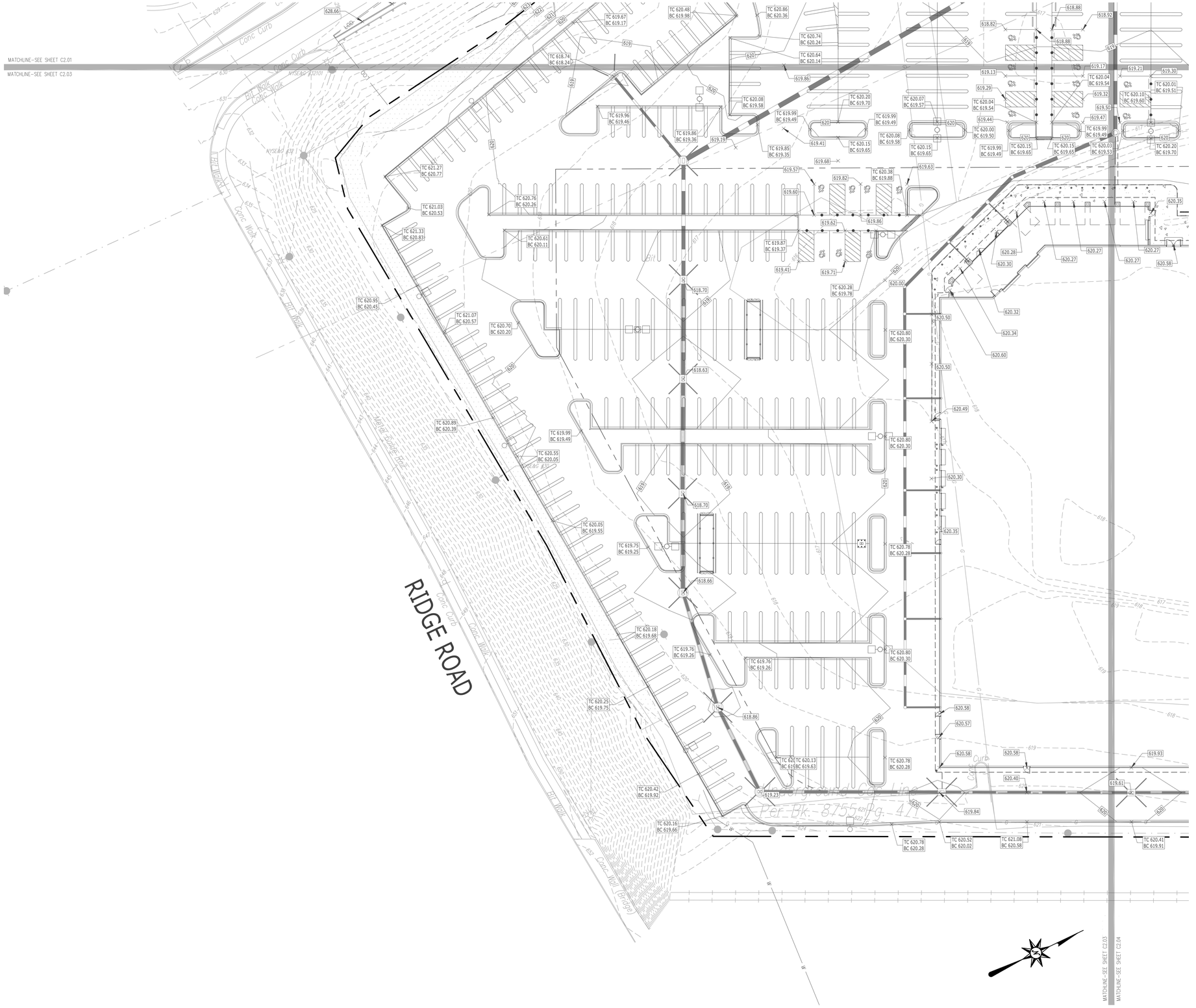
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LOD	LIMIT OF DISTURBANCE
	SAWCUT LINE
150	PROPOSED CONTOUR LINE
620	EXISTING CONTOUR LINE
*100.00	PROPOSED SPOT GRADE

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KEY MAP



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CAD File: C2401824-20

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Sheet No.: C2.03

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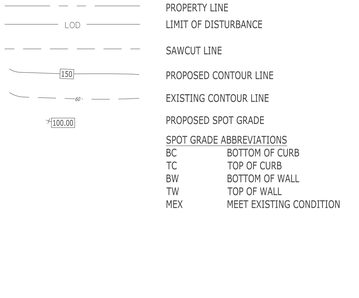
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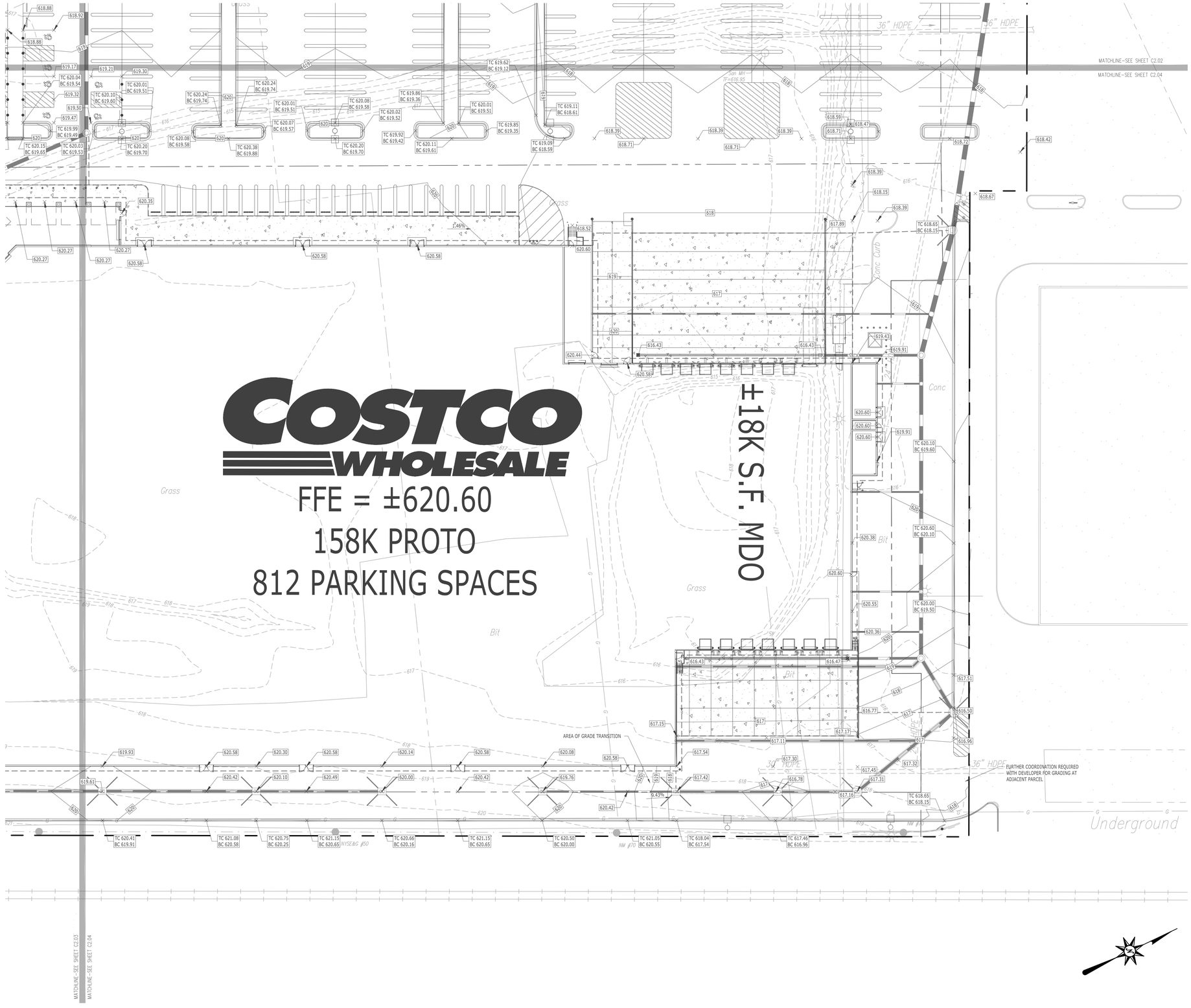
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- SAWCUT LINE
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Date	07/17/2026
CAD File: C2401824-20	

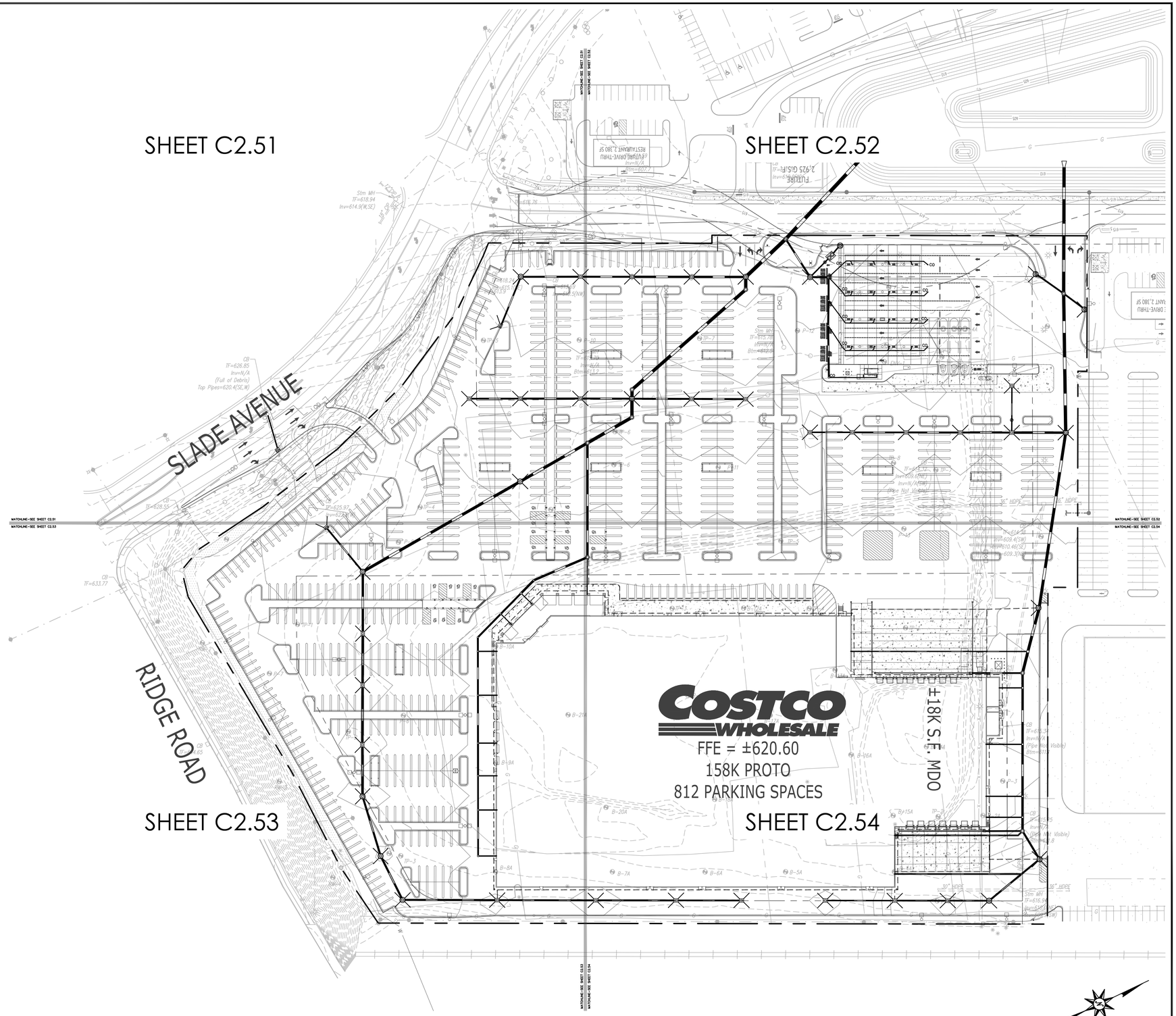
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GRADING PLAN

Sheet No.
C2.04

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GRAPHIC SCALE
60 30 0 60
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BL Companies

355 Research Parkway
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(203) 630-1406

NEW YORK STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	Date	REVISIONS Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

CAD File:
C2401824-25

Title
OVERALL DRAINAGE PLAN

Sheet No.
C2.50

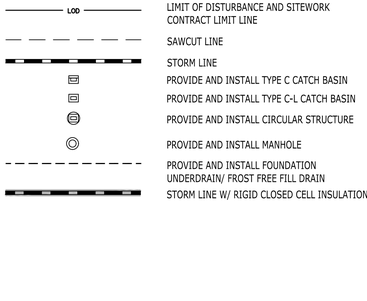
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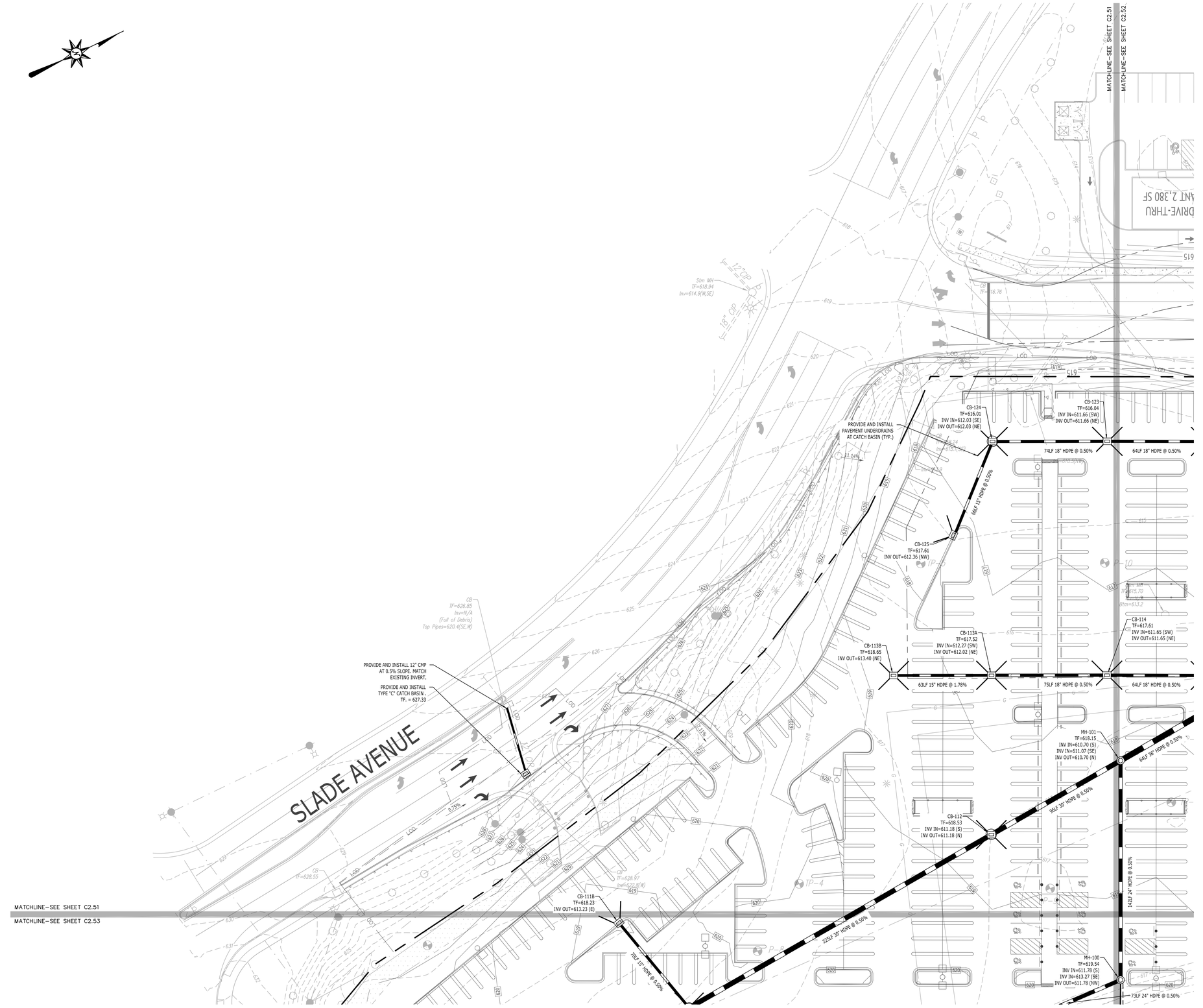
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DRAINAGE PLAN LEGEND

- PROPERTY LINE
- LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE (LOD)
- SAWCUT LINE
- STORM LINE
- PROVIDE AND INSTALL TYPE C CATCH BASIN
- PROVIDE AND INSTALL TYPE C-L CATCH BASIN
- PROVIDE AND INSTALL CIRCULAR STRUCTURE
- PROVIDE AND INSTALL MANHOLE
- PROVIDE AND INSTALL FOUNDATION UNDERDRAIN/ FROST FREE FILL DRAIN
- STORM LINE W/ RIGID CLOSED CELL INSULATION



KEY MAP



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REVISIONS

No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-25

Title

DRAINAGE PLAN

Sheet No.

C2.51

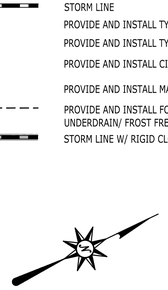
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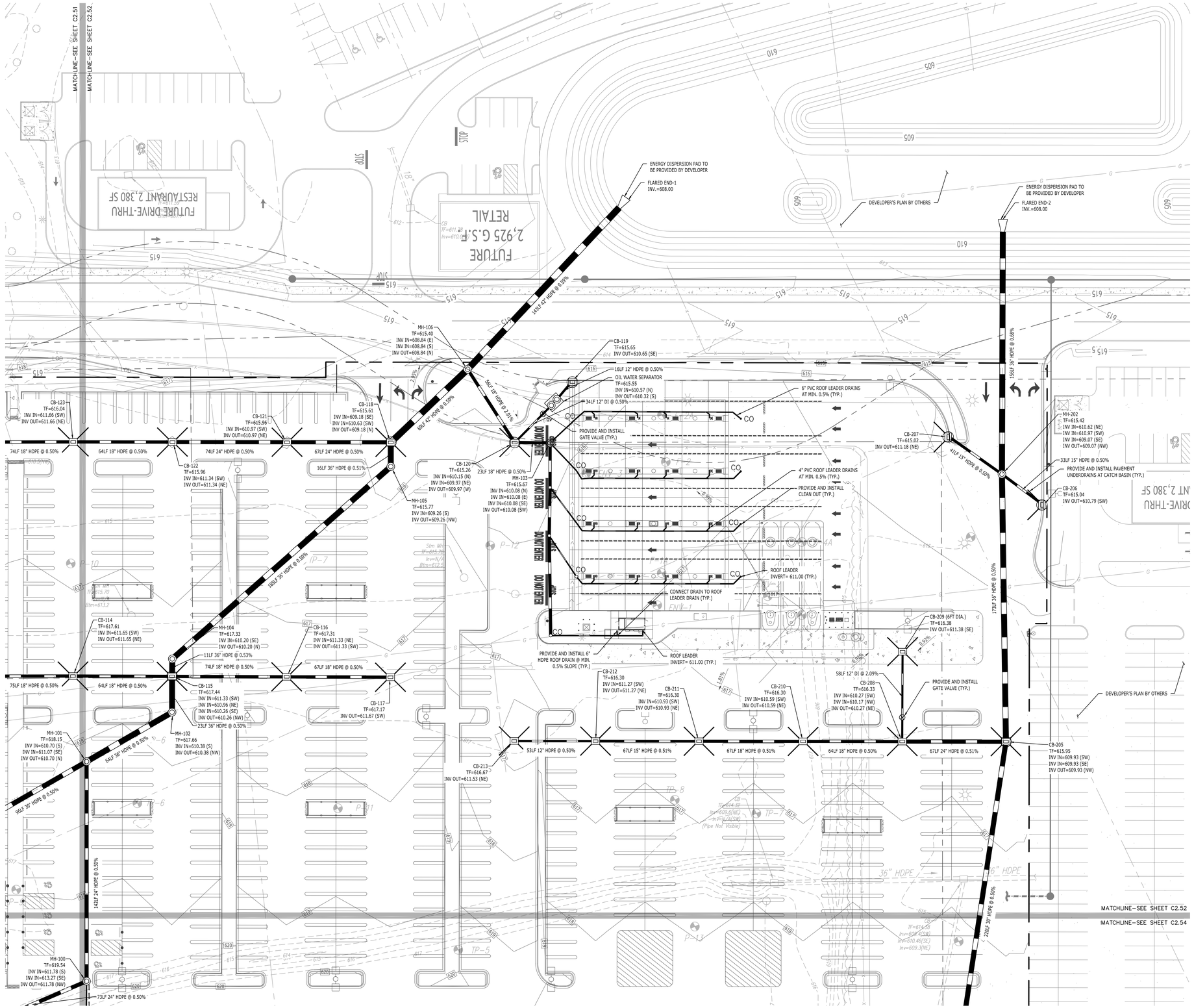
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DRAINAGE PLAN LEGEND

- PROPERTY LINE
- LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- STORM LINE
- PROVIDE AND INSTALL TYPE C CATCH BASIN
- PROVIDE AND INSTALL TYPE C-L CATCH BASIN
- PROVIDE AND INSTALL CIRCULAR STRUCTURE
- PROVIDE AND INSTALL MANHOLE
- PROVIDE AND INSTALL FOUNDATION UNDERDRAIN/ FROST FREE FILL DRAIN
- STORM LINE W/ RIGID CLOSED CELL INSULATION



KEY MAP



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REVISIONS No.	Date	Desc.

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Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-25	

Title

DRAINAGE PLAN

Sheet No.

C2.52

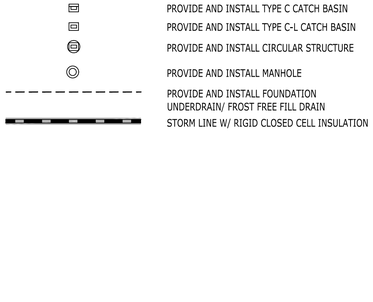
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7/17/2026, JLYNN, G:\JOBS\2401\18\2401824\DWG\C2401824-25.DWG,C2.52 24X36 305C

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DRAINAGE PLAN LEGEND

- PROPERTY LINE
- LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE (LOD)
- SAWCUT LINE
- STORM LINE
- PROVIDE AND INSTALL TYPE C CATCH BASIN
- PROVIDE AND INSTALL TYPE C-L CATCH BASIN
- PROVIDE AND INSTALL CIRCULAR STRUCTURE
- PROVIDE AND INSTALL MANHOLE
- PROVIDE AND INSTALL FOUNDATION UNDERDRAIN/ FROST FREE FILL DRAIN
- STORM LINE W/ RIGID CLOSED CELL INSULATION



KEY MAP

MATCHLINE–SEE SHEET C2.51

MATCHLINE–SEE SHEET C2.53

CB-111B
TF=618.23
INV OUT=613.23 (E)

70LF 15" HDPE @ 0.50%

225LF 30" HDPE @ 0.50%

CB-111A
TF=619.02
INV IN=612.31 (SE)
INV IN=612.88 (W)
INV OUT=612.31 (N)

MH-100
TF=619.54
INV IN=611.78 (S)
INV IN=613.27 (SE)
INV OUT=611.78 (NW)

142LF 24" HDPE @ 0.50%

73LF 24" HDPE @ 0.50%

65LF 6" HDPE @ 0.50%

23LF 24" HDPE @ 0.50%
INV IN=612.14 (S)
INV OUT=612.14 (N)

INV IN=612.25 (S)
INV IN=612.25 (E)
INV OUT=612.25 (N)

19LF 6" HDPE @ 9.68%

19LF 6" HDPE @ 8.90%
INV IN=612.43 (S)
INV IN=612.43 (E)
INV OUT=612.43 (N)

PROVIDE AND INSTALL 6" HDPE ROOF DRAIN @ MIN. 0.5% SLOPE (TYP.)

ROOF LEADER
INVERT= 614.10

71LF 24" HDPE @ 0.50%

PROVIDE AND INSTALL PAVEMENT UNDERDRAINS AT CATCH BASIN (TYP.)

CB-110
TF=618.70
INV IN=612.69 (SE)
INV OUT=612.69 (NW)

INV IN=612.63 (SE)
INV OUT=612.63 (N)

41LF 18" HDPE @ 0.50%

18LF 18" HDPE @ 0.50%

ROOF LEADER
INVERT= 614.10

36LF 18" HDPE @ 0.50%

24LF 10" HDPE @ 5.80%
INV IN=612.72 (SE)
INV IN=612.72 (NE)
INV OUT=612.72 (NW)

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

64LF 24" HDPE @ 0.50%

ROOF LEADER
INVERT= 614.10

ROOF LEADER
INVERT= 614.10

FFE = ±620.60

54LF 18" HDPE @ 0.50%

CB-109
TF=618.63
INV IN=613.01 (SE)
INV OUT=613.01 (NW)

24LF 10" HDPE @ 4.67%
INV IN=612.99 (SE)
INV IN=612.39 (NE)
INV OUT=612.99 (NW)

APPROXIMATE LOCATION OF 4" PERFORATED PVC FROST FREE FILL DRAIN (TYP.), REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION.

74LF 24" HDPE @ 0.50%

ROOF LEADER
INVERT= 614.10

55LF 18" HDPE @ 0.50%

CB-108
TF=618.70
INV IN=613.38 (SE)
INV OUT=613.38 (NW)

23LF 10" HDPE @ 7.77%
INV IN=613.29 (SE)
INV IN=612.29 (NE)
INV OUT=613.29 (NW)

ROOF LEADER
INVERT= 614.10

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

64LF 24" HDPE @ 0.50%

41LF 18" HDPE @ 0.50%

23LF 10" HDPE @ 2.60%
INV IN=613.49 (SE)
INV IN=613.49 (NE)
INV OUT=613.49 (NW)

FOUNDATION UNDERDRAIN CONNECTION
4" PVC PIPE @ MIN. 0.50% SLOPE

ROOF LEADER
INVERT= 614.10

CB-107
TF=618.66
INV IN=613.70 (E)
INV OUT=613.70 (NW)

INV IN=613.70 (SE)
INV IN=613.10 (NE)
INV OUT=613.70 (NW)

42LF 15" HDPE @ 0.50%

ROOF LEADER
INVERT= 613.50
23LF 10" HDPE @ 1.71%

71LF 18" HDPE @ 0.50%

57LF 15" HDPE @ 0.50%

PROVIDE AND INSTALL 10" HDPE ROOF DRAIN @ MIN. 0.5% SLOPE (TYP.)

CB-106
TF=618.85
INV IN=614.09 (E)
INV OUT=614.09 (W)

INV IN=613.99 (NE)
INV OUT=613.99 (NW)

ROOF LEADER
INVERT= 613.50

81LF 18" HDPE @ 0.50%

117LF 18" HDPE @ 0.50%

122LF 15" HDPE @ 0.50%

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

CB-104
TF=619.85
INV IN=614.98 (NE)
INV OUT=614.98 (SW)

CB-105
TF=619.23
INV IN=614.39 (NE)
INV OUT=614.39 (W)

CB-103
TF=619.61
INV IN=615.59 (NE)
INV OUT=615.59 (SW)

RIDGE ROAD

MATCHLINE–SEE SHEET C2.53

MATCHLINE–SEE SHEET C2.54

GRAPHIC SCALE
30 15 0 30
SCALE IN FEET

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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS		
No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-25	

Title

DRAINAGE PLAN

Sheet No.

C2.53

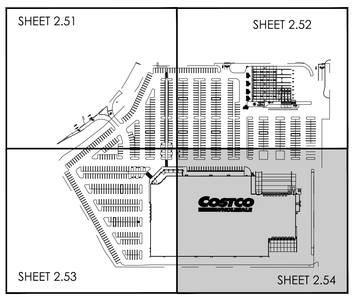
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7/17/2026, JLYNN, G:\2085\24\18\2401824\DWG\C2401824-25.DWG,C2.53 24X36 30SC.

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DRAINAGE PLAN LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- STORM LINE
- PROVIDE AND INSTALL TYPE C CATCH BASIN
- PROVIDE AND INSTALL TYPE C-L CATCH BASIN
- PROVIDE AND INSTALL CIRCULAR STRUCTURE
- PROVIDE AND INSTALL MANHOLE
- PROVIDE AND INSTALL FOUNDATION UNDERDRAIN/ FROST FREE FILL DRAIN
- STORM LINE W/ RIGID CLOSED CELL INSULATION



KEY MAP

COSTCO WHOLESALE

FFE = ±620.60

158K PROTO

812 PARKING SPACES

±18K S.F. MEZZ

MATCHLINE–SEE SHEET C2.52

MATCHLINE–SEE SHEET C2.54

MATCHLINE–SEE SHEET C2.53

MATCHLINE–SEE SHEET C2.54

MH-100
TF=619.54
INV IN=611.79 (S)
INV IN=613.27 (SE)
INV OUT=611.78 (NW)

142LF 24" HDPE @ 0.50%

73LF 24" HDPE @ 0.50%

46LF 6" HDPE @ 0.50%

PROVIDE AND INSTALL 6" HDPE ROOF DRAIN @ MIN. 0.5% SLOPE (TYP.)

ROOF LEADER INVERT= 614.10

APPROXIMATE LOCATION OF 4" PERFORATED PVC FROST FREE FILL DRAIN (TYP.). REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION.

PROVIDE AND INSTALL FOOTING DRAIN

APPROXIMATE LOCATION OF 4" PERFORATED PVC FROST FREE FILL DRAIN (TYP.). REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION.

ROOF LEADER INVERT=612.41 (TYP.)

220LF 10" HDPE @ 0.50%

CB-204
TF=618.15
INV IN=611.03 (SE)
INV OUT=611.03 (NW)

INV IN=611.31 (SE)
INV IN=611.31 (SW)
INV OUT=611.31 (NW)

TRENCH DRAIN-1
TF=616.43
INV OUT=612.63 (NE)
64LF 15" HDPE @ 1.83%

ROOF LEADER INVERT= 614.10

MH-201
TF=619.34
INV IN=611.45 (SW)
INV IN=611.45 (SE)
INV OUT=611.45 (NW)

INV IN=611.54 (SE)
INV IN=611.54 (SW)
INV OUT=611.54 (NW)
29LF 10" HDPE @ 8.87%

DEVELOPER'S PLAN BY OTHERS

70LF 24" HDPE @ 0.50%

INV IN=611.89 (SE)
INV IN=611.89 (SW)
INV OUT=611.89 (NW)

45LF 10" HDPE @ 4.88%

ROOF LEADER INVERT= 614.10

FOUNDATION UNDERDRAIN CONNECTION
4" PVC PIPE @ MIN. 0.50% SLOPE

PROVIDE AND INSTALL FOOTING DRAIN

ROOF LEADER INVERT= 614.10

191 LF 24" HDPE @ 0.50%

INV IN=612.21 (SE)
INV IN=612.21 (SW)
INV OUT=612.21 (NW)
26LF 24" HDPE @ 0.50%
45LF 10" HDPE @ 3.90%
68LF 15" HDPE @ 2.19%

45LF 10" HDPE @ 4.18%

TRENCH DRAIN-2
TF=616.47
INV OUT=613.47 (NE)

INV IN=612.34 (SE)
INV IN=612.34 (SW)
INV OUT=612.34 (NW)
17LF 24" HDPE @ 0.50%

ROOF LEADER INVERT=613.24

APPROXIMATE LOCATION OF 4" PERFORATED PVC FROST FREE FILL DRAIN (TYP.). REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION.

153LF 10" HDPE @ 0.50%

MH-200
TF=618.69
INV IN=612.43 (E)
INV IN=612.43 (S)
INV IN=612.43 (SW)
INV OUT=612.43 (NW)
8LF 10" HDPE @ 0.50%

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

INV IN=612.47 (SW)
INV OUT=612.47 (N)

41LF 18" HDPE @ 0.50%

CB-203
TF=616.57
INV IN=612.63 (S)
INV OUT=612.63 (W)

ROOF LEADER INVERT=613.56

158LF 10" HDPE @ 0.50%

INV IN=612.77 (S)
INV IN=612.77 (SW)
INV OUT=612.77 (N)

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

CB-201
TF=616.79
INV IN=613.29 (SW)
INV OUT=613.29 (NE)

52LF 15" HDPE @ 0.50%

122LF 15" HDPE @ 0.50%

100LF 15" HDPE @ 0.50%

81LF 12" HDPE @ 0.50%

86LF 12" HDPE @ 1.32%

66LF 12" HDPE @ 0.50%

51LF 12" HDPE @ 0.50%

PROVIDE AND INSTALL RIGID CLOSED CELL INSULATION (TYP.)

CB-103
TF=619.61
INV IN=615.59 (NE)
INV OUT=615.59 (SW)

CB-102
TF=620.10
INV IN=616.09 (NE)
INV OUT=616.09 (SW)

CB-101
TF=620.00
INV OUT=616.50 (SW)

PROVIDE AND INSTALL PAVEMENT UNDERDRAINS AT CATCH BASIN (TYP.)

CB-200A
TF=619.76
INV OUT=614.76 (NE)

CB-200B
TF=617.49
INV IN=613.62 (SW)
INV OUT=613.62 (NE)

CB-202
TF=617.31
INV IN=613.03 (SW)
INV OUT=613.03 (N)

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GRAPHIC SCALE
30 15 0 30
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7/17/2026

COSTCO WHOLESALE
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WEST SENECA, NEW YORK

REVISIONS
No. Date Desc.

Designed	J.J.L.
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Scale	1"=30'
Project No.	2401824
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CAD File: C2401824-25

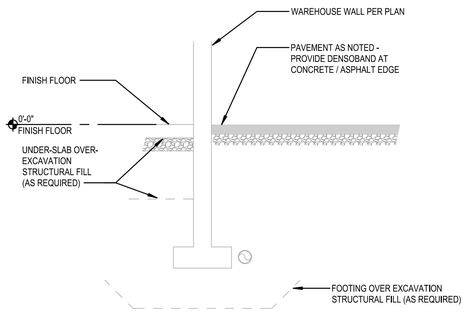
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DRAINAGE PLAN

Sheet No.
C2.54

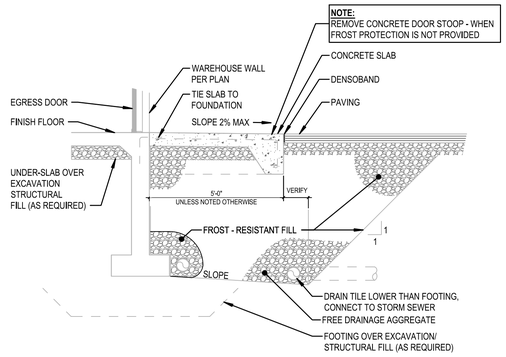
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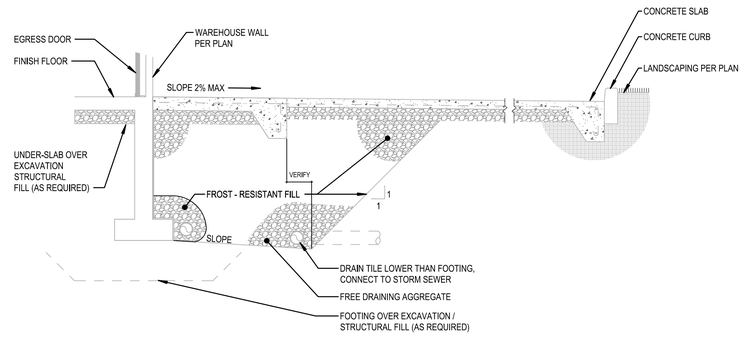
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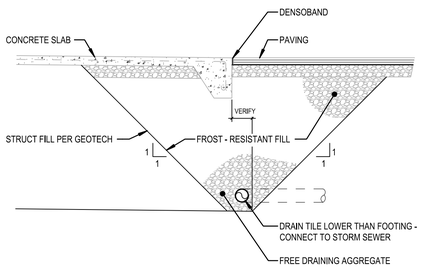
FOUNDATION DRAIN ALONG WALL



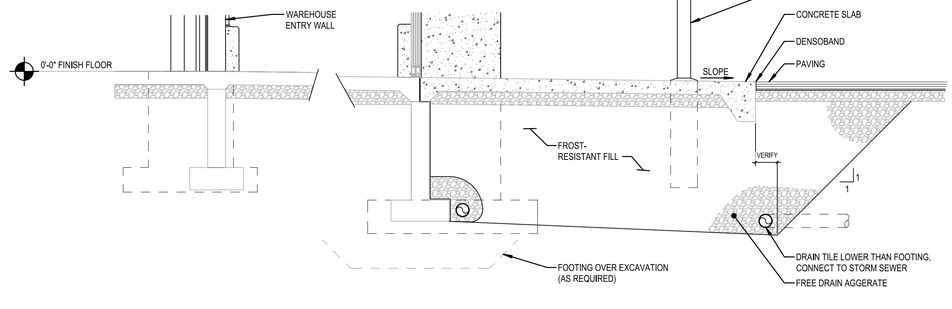
FOUNDATION AND UNDERDRAIN DETAIL AT EGRESS DOOR WITH STOOP



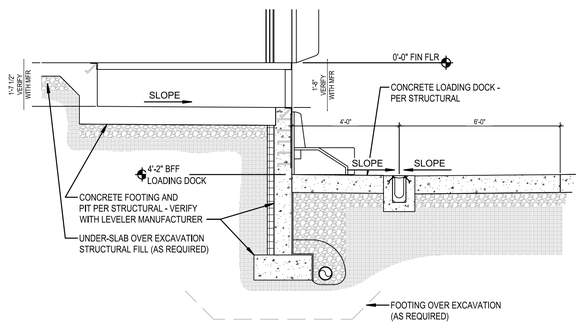
FOUNDATION AND UNDERDRAIN DETAIL AT RECEIVING DOOR



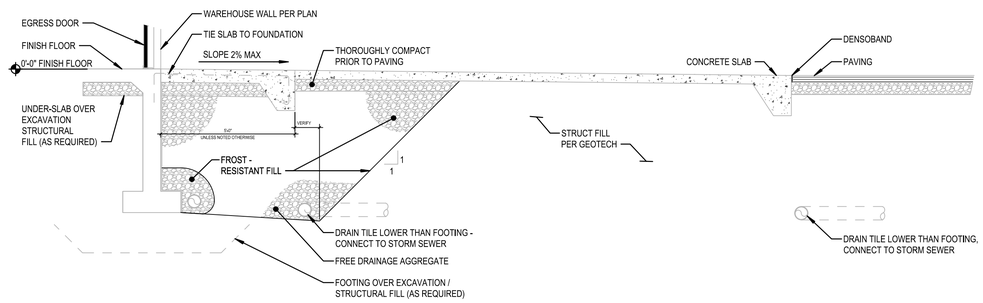
FROST PROTECTION WEDGE UNDERDRAIN AT ASPHALT EDGE



FOUNDATION AND UNDERDRAIN DETAIL AT CANOPY



FOOTING DRAIN AT LOADING DOCK



FOUNDATION AND UNDERDRAIN AT EGRESS DOOR WITH WALKWAY

FOUNDATION AND UNDERDRAIN DETAILS (SEE ARCHITECTURAL DRAWINGS FOR DETAILS, SHOWN FOR REFERENCE ONLY)

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MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS		
No.	Date	Desc.

Designed
Drawn
Reviewed
Scale
Project No.
Date
CAD File:

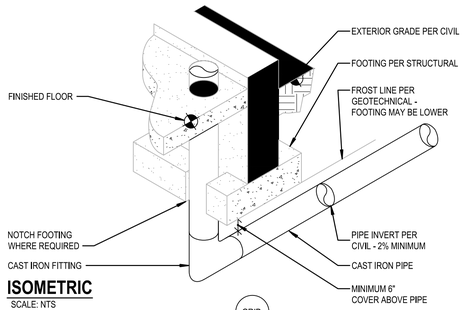
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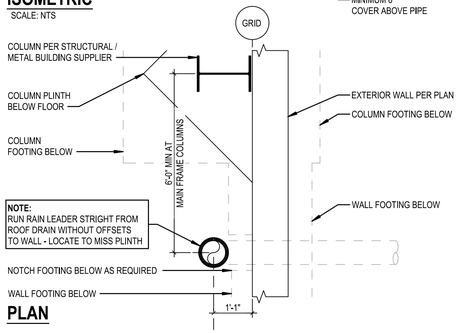
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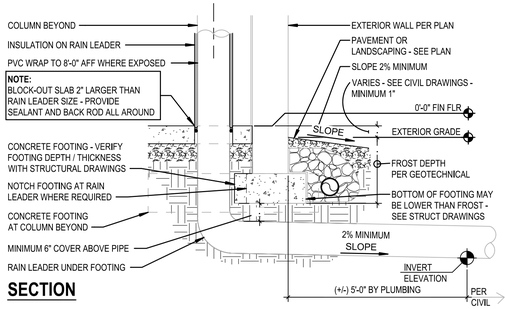
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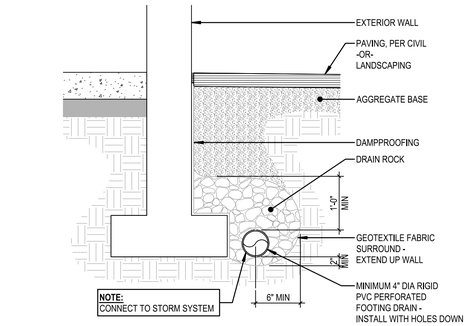


PLAN

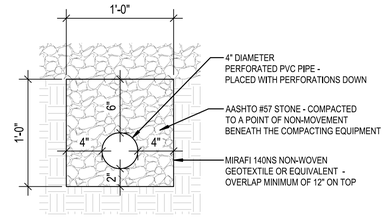


SECTION

RAIN LEADER INVERT ELEVATION

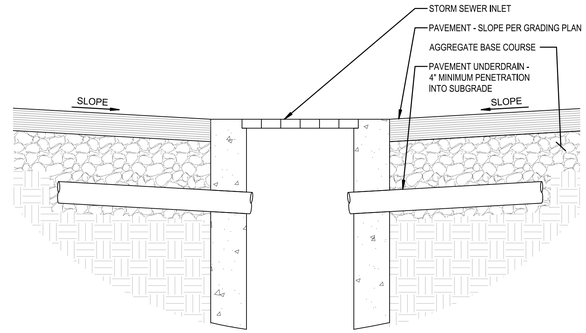


FOOTING DRAIN



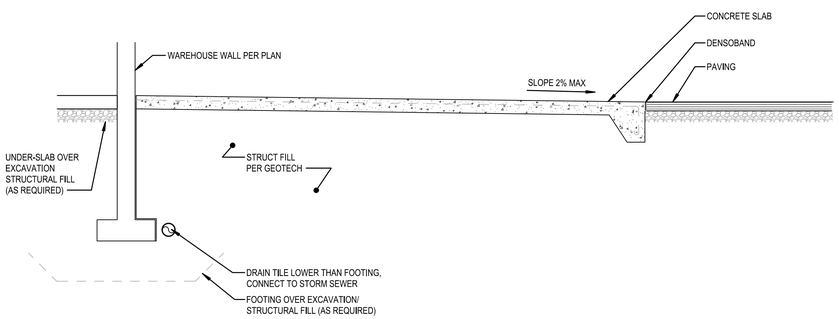
PAVEMENT UNDERDRAIN DETAIL

NOTE:
PAVEMENT UNDERDRAINS SHALL EXTEND OUT A MINIMUM OF 10 FEET FROM ALL SIDES OF INLETS BELOW PAVEMENT



SECTION

PAVEMENT UNDERDRAIN AT INLETS



WALKWAY AT PARKING

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STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS No.	Date	Desc.

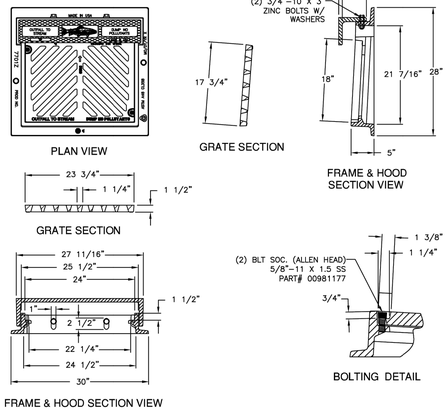
Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-110	

Title
GRADING AND DRAINAGE DETAILS

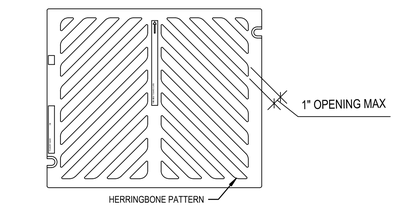
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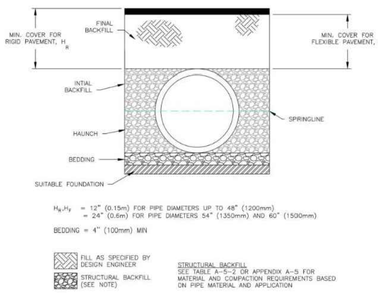


HERRINGBONE GRATE CURB INLET

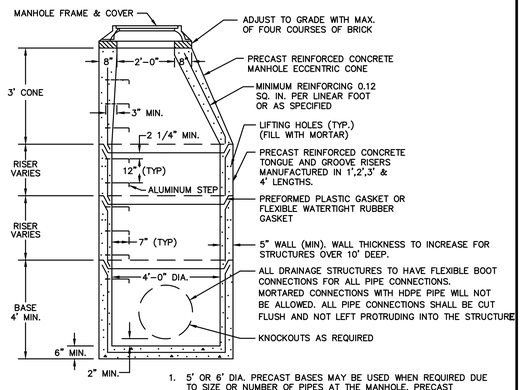


NOTES:
1. ALL INLETS ON THE COSTCO SITE SHALL HAVE A HERRINGBONE PATTERN WITH A MAXIMUM OPENING OF 1"
2. ALL INLETS SHALL BE ASPHALT COATED CAST IRON

STORM DRAIN GRATE



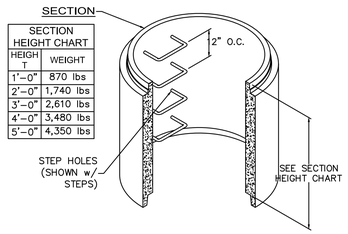
TYPICAL STORM SEWER TRENCH SECTION



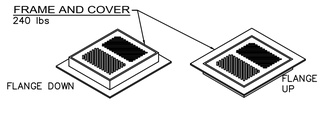
1. 5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' & 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE.
2. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKNESS SHALL START AFTER THE FIRST 10 FEET.
3. BASES AND RISERS AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

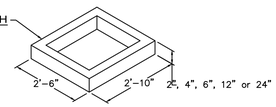
PRECAST STORM MANHOLE DETAIL

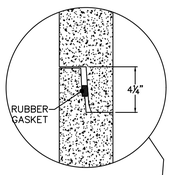
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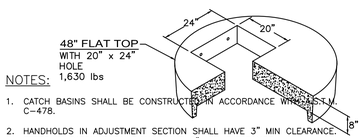


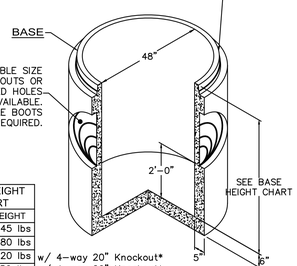
SECTION HEIGHT CHART	
HEIGHT T	WEIGHT
1'-0"	870 lbs
2'-0"	1,740 lbs
3'-0"	2,610 lbs
4'-0"	3,480 lbs
5'-0"	4,350 lbs









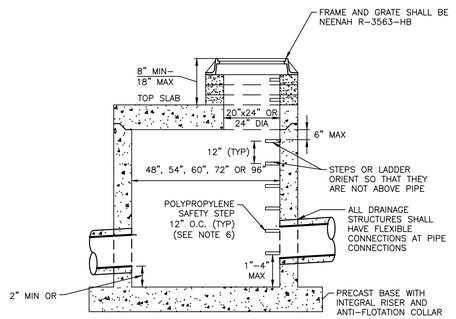


BASE HEIGHT CHART		
~~HEIGHT~~ T	WEIGHT	
2'-0"	2,745 lbs	
3'-0"	3,480 lbs	
4'-0"	4,320 lbs	w/ 4-way 20" Knockout*
5'-0"	5,150 lbs	w/ 4-way 20" Knockout*
5'-0"	4,880 lbs	w/ 4-way 26" & 34" Knockout*

* knockouts at 90°

NOTES:
1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.S.T.M. C-478.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN CLEARANCE.
3. APPLY NON-SHRINK GROUT TO INSIDE AND OUTSIDE OF ALL JOINTS, RINGS, PICK HOLES, RISERS AND FRAMES. ALL PRECAST CONCRETE SHALL BE CLASS A.
4. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAX HOLE SIZE SHALL BE 36" FOR 48" CATCH BASIN, 42" FOR 54" CB, 48" FOR 60" CB, 60" FOR 72" CB, 84" FOR 96" CB. MIN DISTANCE BETWEEN HOLES SHALL BE 8" FOR 48", 54", AND 60" CB; 12" FOR 72" AND 96" CB.
5. CONTRACTOR MUST PROVIDE CALCULATIONS FOR WALL THICKNESS SIGNED BY A LICENSED ENGINEER FOR CONFORMANCE TO STANDARDS AND HS-20 LOAD RATING.
6. HOODS SHALL BE INSTALLED ON ALL CATCH BASINS
7. ALL CATCH BASINS SHALL HAVE FLEXIBLE BOOT CONNECTIONS FOR ALL PIPE CONNECTIONS. MORTARED CONNECTIONS WITH HDPE PIPE WILL NOT BE ALLOWED.
8. ALL PIPE CONNECTIONS SHALL BE CUT FLUSH AND NOT LEFT PROTRUDING INTO THE STRUCTURE.
9. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKNESS SHALL START AFTER THE FIRST 10 FEET.
10. BASES AND RISERS AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

CATCH BASIN STRUCTURE



NOTES:
1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.S.T.M. C-478.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN CLEARANCE.
3. APPLY NON-SHRINK GROUT TO INSIDE AND OUTSIDE OF ALL JOINTS, RINGS, PICK HOLES, RISERS AND FRAMES. ALL PRECAST CONCRETE SHALL BE CLASS A.
4. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAX HOLE SIZE SHALL BE 36" FOR 48" CATCH BASIN, 42" FOR 54" CB, 48" FOR 60" CB, 60" FOR 72" CB, 84" FOR 96" CB. MIN DISTANCE BETWEEN HOLES SHALL BE 8" FOR 48", 54", AND 60" CB; 12" FOR 72" AND 96" CB.
5. CONTRACTOR MUST PROVIDE CALCULATIONS FOR WALL THICKNESS SIGNED BY A LICENSED ENGINEER FOR CONFORMANCE TO STANDARDS AND HS-20 LOAD RATING.
6. ALL CATCH BASINS SHALL HAVE FLEXIBLE BOOT CONNECTIONS FOR ALL PIPE CONNECTIONS.

ONSITE CATCH BASIN STRUCTURE- >5' PIPE COVER

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7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	REVISIONS Date	Desc.

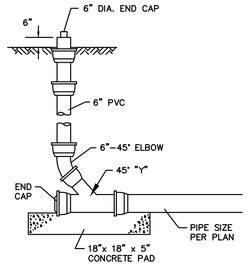
Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title
GRADING AND DRAINAGE DETAILS

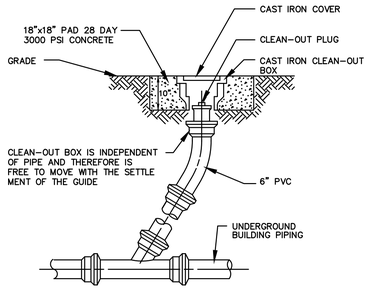
Sheet No.
C2.102

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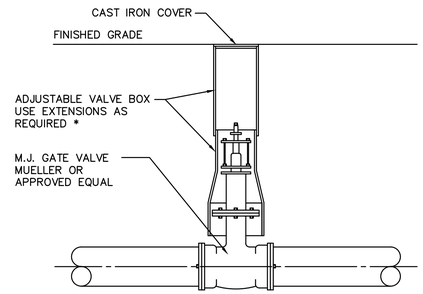
7/17/2026, K.YNN, G:\JOBS\24\1\8\2401824\03WKG\2401824-110.DWG,C2.102 24X36,



CLEANOUT DETAIL IN LANDSCAPED AREA (STORM/SANITARY)

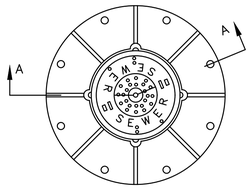


CLEANOUT DETAIL IN PAVED AREA (STORM/SANITARY)



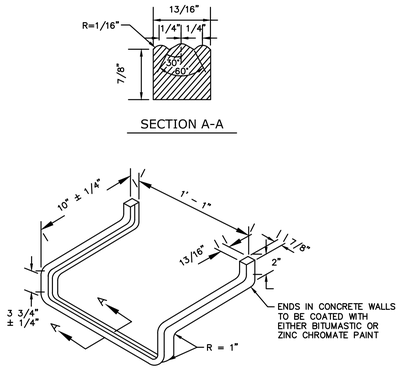
* NOTE: IF EXTENSIONS ARE NECESSARY CONTRACTOR SHALL SET "PLUMB" AND ALIGN PROPERLY FOR ACCESS TO OPERATING NUT.

GATE VALVE AND VALVE BOX DETAIL FOR OIL/WATER SEPARATOR



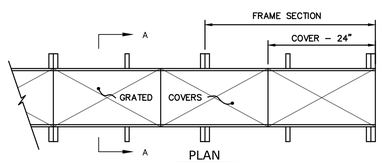
NOTES:
1. FRAME & GRATE TO BE CAMPBELL FOUNDRY COMPANY–PATTERN NUMBER 1221.
2. ALL COVERS SHALL BE PAINTED BLACK FROM THE FACTORY.

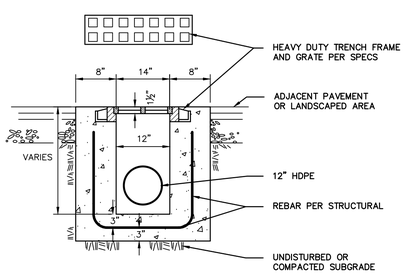
STANDARD MANHOLE FRAME AND COVER
ZDD–079

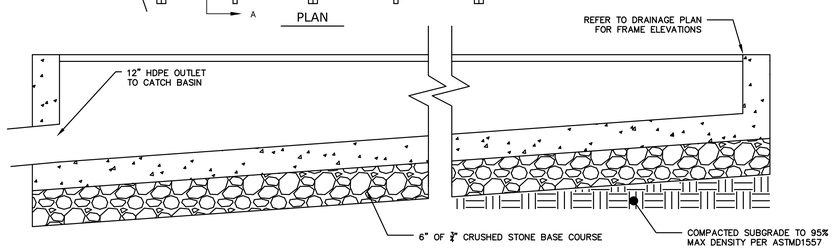


NOTE : STEPS TO BE FORGED ALUMINUM

STANDARD MANHOLE STEP
BLSS–005

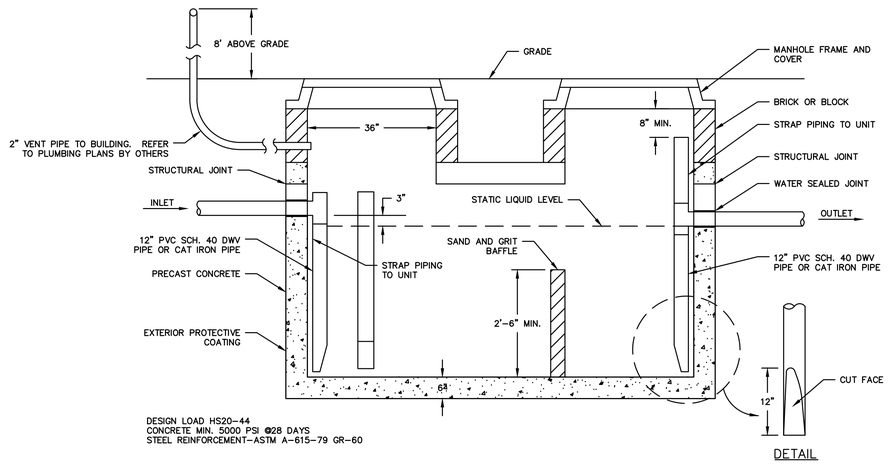






NOTE: CONTRACTOR SHALL VERIFY TRENCH DRAIN CONFORMS TO TRUCK APRON TRENCH DRAIN SHOWN ON BUILDING STRUCTURAL PLANS.

TRENCH DRAIN



DESIGN LOAD HS20–44
CONCRETE MIN. 5000 PSI @28 DAYS
STEEL REINFORCEMENT–ASTM A–615–79 GR–60

NOTES:
1. TANK SHALL HAVE A MINIMUM CAPACITY OF 1500 GALLONS. TANK SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
2. INTERIOR OF THE TANK AND EXTENSION TO GRADE MANHOLES SHALL BE COATED WITH AN EPOXY PETROLEUM RESISTANT SEALANT. EXTERIOR OF THE TANK AND EXTENSION GRADE MANHOLES SHALL BE COATED WITH A WATERPROOF FOUNDATION SEALANT. THIS INCLUDES THE TANK EXTERIORS TOP AND BOTTOM.
3. STRUCTURAL SEAM OF THE TANK SHALL BE FILLED IN WITH NON–SHRINKING CEMENT OR WATER PLUG AND COATED WITH WATERPROOF SEALANT.
4. VOIDS BETWEEN INLET AND OUTLET PIPING OF THE TANK SHALL BE GROUTED WITH NON–SHRINKING CEMENT AND COATED WITH A WATERPROOF SEALANT.
5. THE TANK SHALL HAVE EXTENSIONS TO GRADE ABOVE THE INLET AND OUTLET PIPING. THE EXTENSION SHALL HAVE FRAMES AND MANHOLE COVERS. THE MANHOLES, EXTENSIONS AND ACCESSES TO THE TANK SHALL BE AT LEAST 24 INCHES IN DIAMETER.
6. THE OUTLET PIPING SHALL UTILIZE A TEE–PIPE ON THE INTERIOR OF THE TANK. THE TEE–PIPE SHALL BE EQUIPPED WITH A STRAND PIPE RISER EXTENDING UP THE EXTENSION TO GRADE BUT NO CLOSER THAN EIGHT (8) INCHES FROM THE MANHOLE COVER. THE TEE–PIPE SHALL EXTEND SIX (6) TO TWELVE (12) INCHES FROM THE BOTTOM OF THE TANK.
7. THE INLET EXTENSION TO GRAD SHALL BE PROVIDED WITH A VENT LINE WHICH EXTENDS EIGHT (8) FEET ABOVE FINISHED GRADE AND PROPERLY SECURED TO THE BUILDING. THE SIZE OF THE VENT SHALL BE HALF THE SIZE OF THE OUTLET DISCHARGE LINE.
8. THE HORIZONTAL STRUCTURAL SEAM OF THE TANK SHALL BE LOCATED ABOVE THE STATIC LIQUID LEVEL OF THE TANK.
9. THE INCOMING PIPE SHALL NOT INCLUDE ANY SOURCES OF DOMESTIC WASTEWATER.
10. THE OUTLET PIPE SHALL BE CONNECTED TO THE STORM SEWER.
11. THE OUTLET PIPE SHALL BE AT LEAST THE SIZE OF THE INLET PIPE OR GREATER AND AT A MINIMUM SHOULD BE 4.0 INCHES IN DIAMETER.
12. IF HEAVY PIPING, SUCH AS CAST IRON IS USED, ALL PIPING MUST BE STRUCTURALLY SECURED.
13. THE CONCRETE COVERS PROVIDED BY THE OIL SEPARATOR MANUFACTURERS MUST BE REMOVED AND DISCARDED.
14. STRUCTURE DIMENSIONS ARE APPROXIMATELY: 10' IN LENGTH, 7'–6" IN WIDTH AND 5'–6" IN DEPTH. FINAL STRUCTURE DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO CONSTRUCTION.

OIL/WATER SEPARATOR

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7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	REVISIONS Date	Desc.

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Title
GRADING AND DRAINAGE DETAILS

Sheet No.
C2.103

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7/17/2026, JLYNN, G:\DRIVES\24\1824\DWG\C2401824-110.DWG,C2.103 24X36,

SHEET C3.01

SHEET C3.02

SHEET C3.03

SHEET C3.04

SLADE AVENUE

RIDGE ROAD

COSTCO WHOLESALE

FFE = ±620.60

158K PROTO

812 PARKING SPACES

±18K S.F. MDO

FUTURE 2,925 G.S.F.

FUTURE DRIVE-THRU RESTAURANT 2,380 SF

ISSUED FOR PERMITTING
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GRAPHIC SCALE
60 30 0 60
SCALE IN FEET

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REVISIONS

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Date	07/17/2026

CAD File: C2401824-30

Title

OVERALL SITE UTILITY PLAN

Sheet No.

C3.00

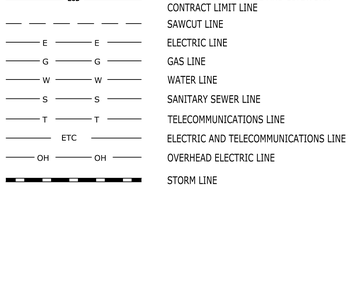
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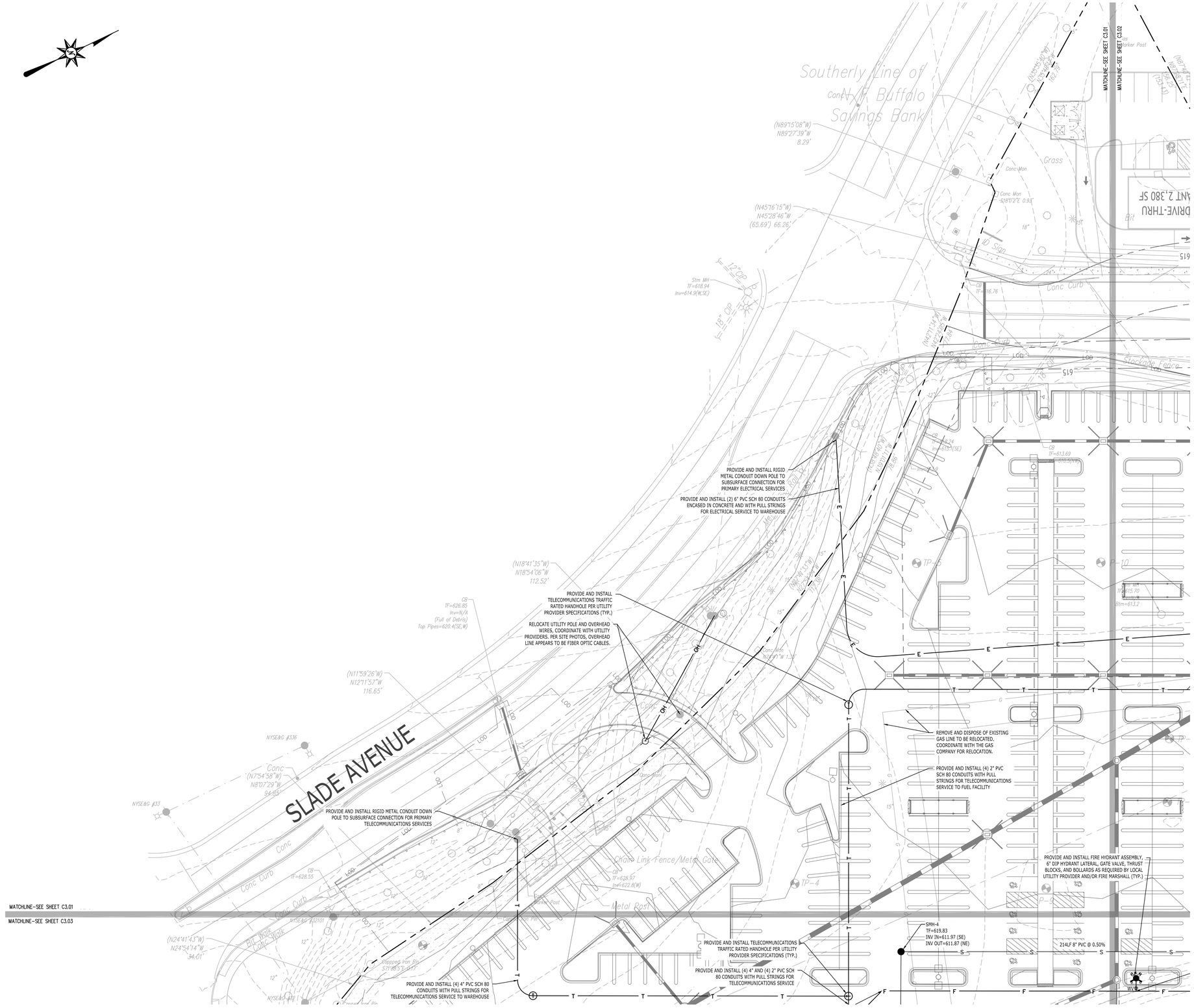
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SITE UTILITIES LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- E — ELECTRIC LINE
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER LINE
- T — TELECOMMUNICATIONS LINE
- ETC — ELECTRIC AND TELECOMMUNICATIONS LINE
- OH — OVERHEAD ELECTRIC LINE
- STORM LINE

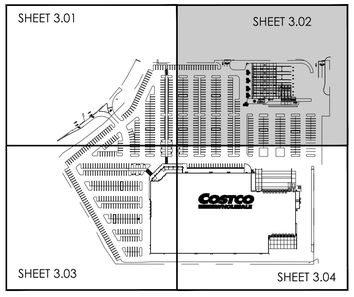


KEY MAP

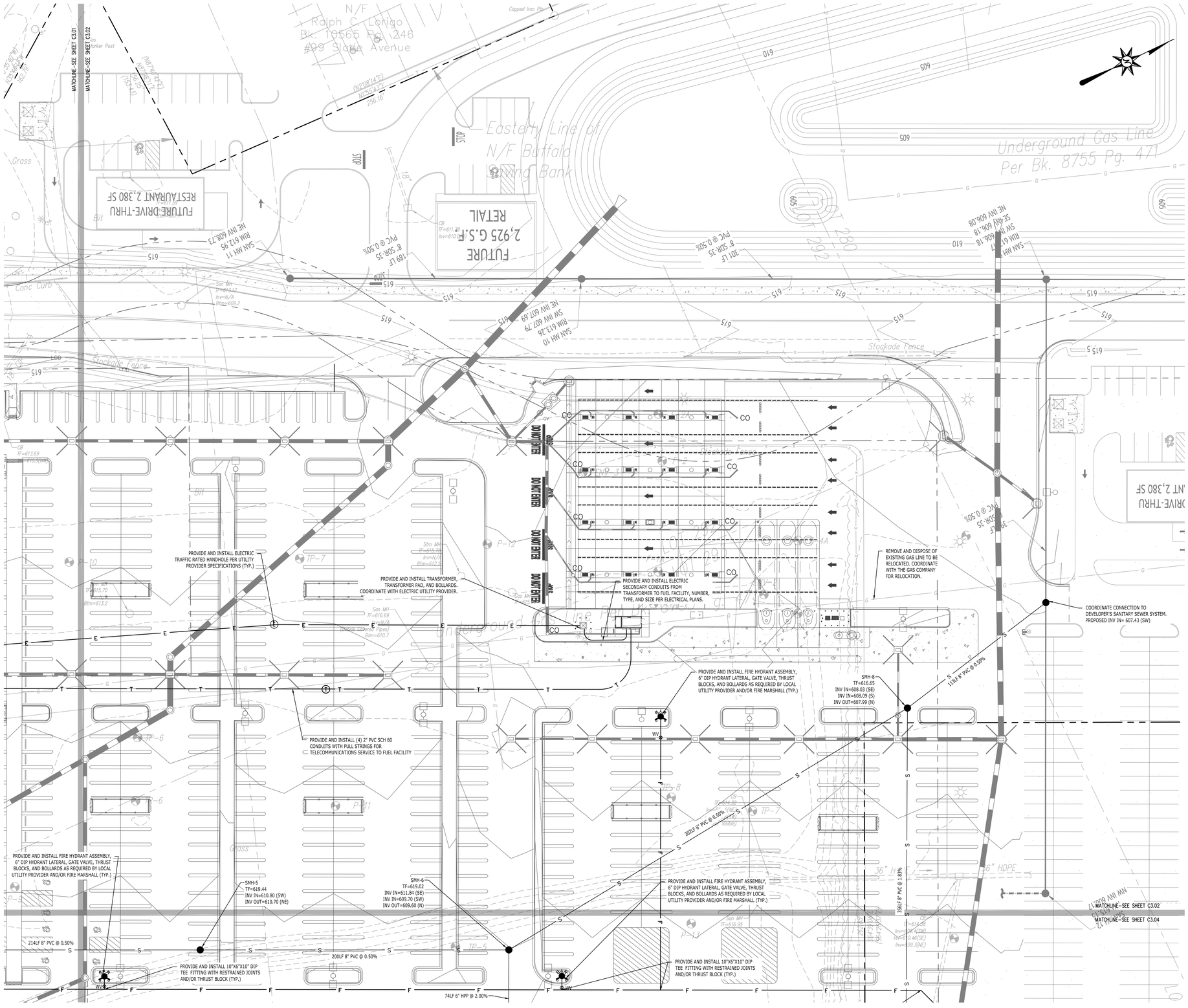

SLADE AVENUE
MATCHLINE–SEE SHEET C3.01
MATCHLINE–SEE SHEET C3.02
MATCHLINE–SEE SHEET C3.01
MATCHLINE–SEE SHEET C3.03
Southerly Line of Conc N/F Buffalo Savings Bank
(N89°15'08"W) N89°27'39"W 8.29'
(N45°16'15"W) N45°28'46"W (65.69') 66.26'
(N42°11'54"W) N42°24'25"W (65.69') 66.26'
(N18°41'35"W) N18°54'06"W 112.52'
(N11°59'26"W) N12°11'57"W 116.65'
(N24°41'43"W) N24°54'14"W 94.01'
(N78°08'40"W) N78°21'11"W 1.66'
(N78°08'40"W) N78°21'11"W 1.66'
(N78°08'40"W) N78°21'11"W 1.66

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KEY MAP



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083051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	REVISIONS Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-30

Title

SITE UTILITY PLAN

Sheet No.

C3.02

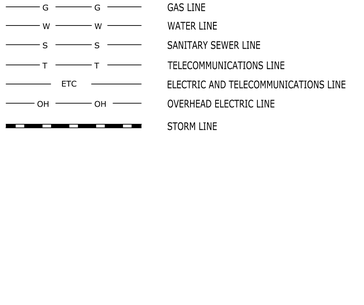
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7/17/2026, JLYNN, G:\JOBS\2401\824\10\WG\C2401824-30.DWG,C3.02 24X36 30SC.

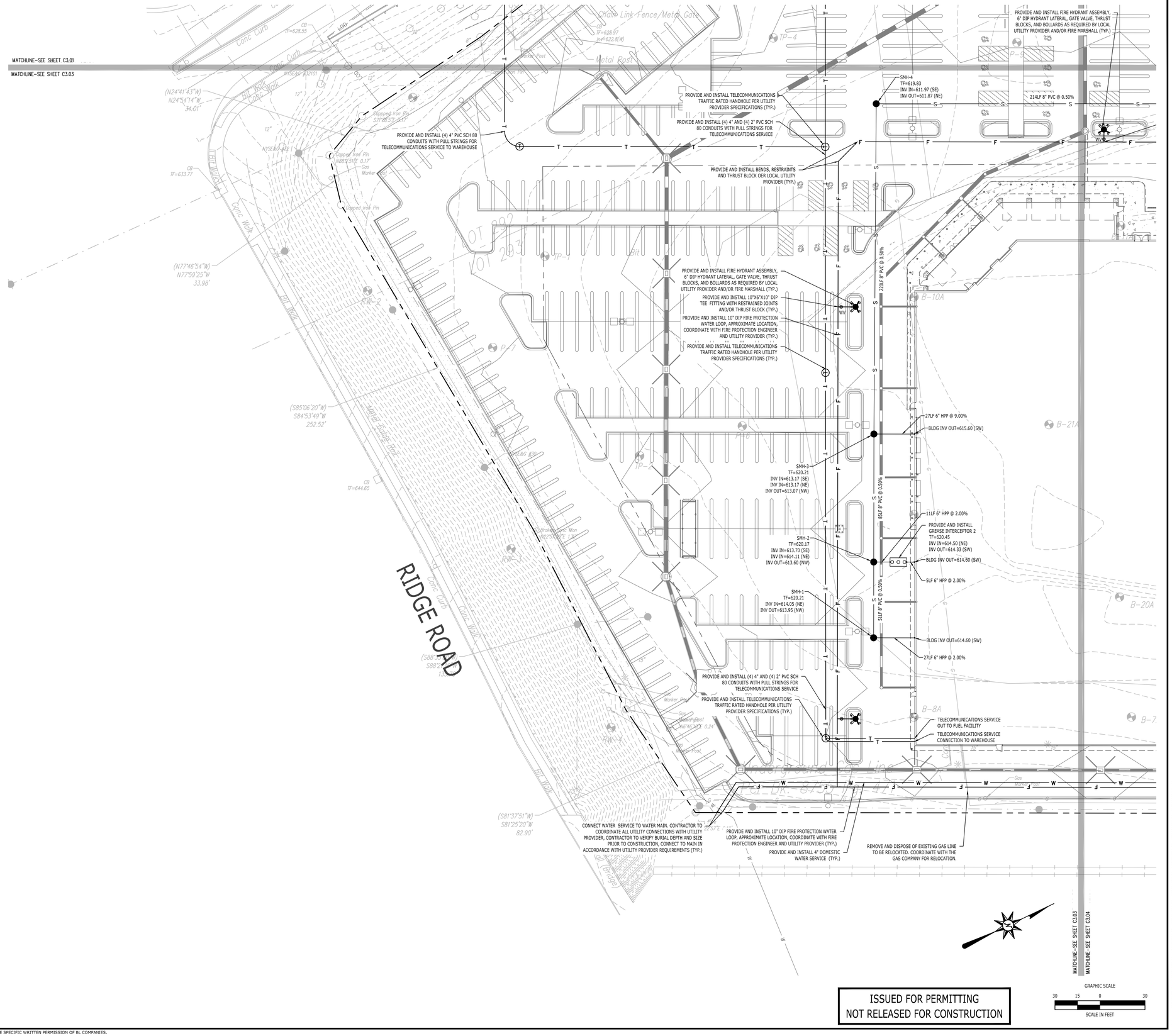
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KEY MAP



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CAD File: C2401824-30

Title

SITE UTILITY PLAN

Sheet No.

C3.03

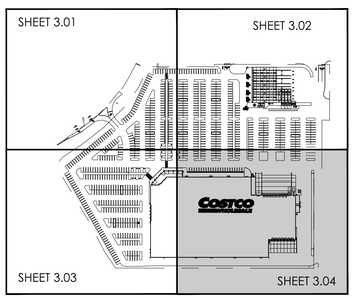
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7/17/2026, JLYNN, G:\JOBS2A\1B\2401824\DWG\C3.03 24X36 30SC.

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- OH — OVERHEAD ELECTRIC LINE
- STORM LINE



KEY MAP

COSTCO WHOLESALE

FFE = ±620.60
158K PROTO
812 PARKING SPACES

PROVIDE AND INSTALL FIRE HYDRANT ASSEMBLY, 6" DIP HYDRANT LATERAL, GATE VALVE, THRUST BLOCKS, AND BOLLARDS AS REQUIRED BY LOCAL UTILITY PROVIDER AND/OR FIRE MARSHALL (TYP.)

SMH-5
TF=619.44
INV IN=610.80 (SW)
INV OUT=610.70 (NE)

214LF 8" PVC @ 0.50%

PROVIDE AND INSTALL 10"X6"X10" DIP TEE FITTING WITH RESTRAINED JOINTS AND/OR THRUST BLOCK (TYP.)

SMH-6
TF=619.02
INV IN=611.84 (SE)
INV IN=609.70 (SW)
INV OUT=609.60 (N)

200LF 8" PVC @ 0.50%

74LF 6" HPP @ 2.00%

PROVIDE AND INSTALL FIRE HYDRANT ASSEMBLY, 6" DIP HYDRANT LATERAL, GATE VALVE, THRUST BLOCKS, AND BOLLARDS AS REQUIRED BY LOCAL UTILITY PROVIDER AND/OR FIRE MARSHALL (TYP.)

PROVIDE AND INSTALL 10"X6"X10" DIP TEE FITTING WITH RESTRAINED JOINTS AND/OR THRUST BLOCK (TYP.)

350LF 8" PVC @ 1.83%

MATCHLINE–SEE SHEET C3.02

MATCHLINE–SEE SHEET C3.04

PROVIDE AND INSTALL EXTERIOR GAS SERVICE PIPING, SIZE AND TYPE OF PIPE TO BE DETERMINED BY PROVIDER, COORDINATE WITH UTILITY PROVIDER

PROVIDE AND INSTALL BENDS, RESTRAINTS AND THRUST BLOCK OER LOCAL UTILITY PROVIDER (TYP.)

PROVIDE AND INSTALL GREASE INTERCEPTOR 1
TF=616.65
INV IN=613.49 (SE)
INV OUT=612.99 (NW)

6LF 6" HPP @ 2.00%

BLDG INV OUT=613.60 (NW)

GAS SERVICE CONNECTION TO BUILDING. PROVIDE AND INSTALL EXTERIOR GAS METER, COORDINATE WITH UTILITY PROVIDER

PROVIDE AND INSTALL TRANSFORMER PAD AND BOLLARDS. COORDINATE WITH ELECTRIC UTILITY PROVIDER.

PROVIDE AND INSTALL (2) 6" PVC SCH 80 CONDUITS ENCASED IN CONCRETE AND WITH PULL STRINGS FOR ELECTRICAL SERVICE TO WAREHOUSE

PROVIDE AND INSTALL ELECTRIC TRAFFIC RATED HANDHOLE PER UTILITY PROVIDER SPECIFICATIONS (TYP.)

PROVIDE AND INSTALL SAND SEPARATOR
TF=616.95
INV IN=614.04 (SW)
INV OUT=614.24 (NE)

PROVIDE AND INSTALL ELECTRIC SECONDARY CONDUITS FROM TRANSFORMER TO BUILDING, NUMBER, TYPE, AND SIZE PER ELECTRIC PLANS

BLDG INV OUT=614.10 (NE)

9LF 6" HPP @ 2.00%

4" DIP DOMESTIC WATER SERVICE CONNECTION TO BUILDING, PROVIDE AND INSTALL METER PER UTILITY PROVIDER REQUIREMENTS

10" DIP FIRE PROTECTION WATER SERVICE CONNECTION TO BUILDING. PROVIDE AND INSTALL METER AND EQUIPMENT PER UTILITY PROVIDER REQUIREMENTS

PROVIDE AND INSTALL GATE VALVE, VALVE BOX, AND COVER (TYP.)

PROVIDE AND INSTALL 10"X10"X10" DIP TEE FITTING WITH RESTRAINED JOINTS AND/OR THRUST BLOCK

SMH-7
TF=619.85
INV IN=614.86 (SW)
INV OUT=614.76 (NW)

PROVIDE AND INSTALL ELECTRIC TRAFFIC RATED HANDHOLE PER UTILITY PROVIDER SPECIFICATIONS (TYP.)

APPROXIMATE LOCATION OF RELOCATED GAS LINE. CONTRACTOR TO COORDINATE ALL UTILITY WORK WITH DEVELOPER AND UTILITY PROVIDER, CONTRACTOR TO VERIFY EXISTING LOCATION, PRESSURE, AND SIZE PRIOR TO CONSTRUCTION, RELOCATION IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS.

PROVIDE AND INSTALL BENDS, RESTRAINTS AND THRUST BLOCK OER LOCAL UTILITY PROVIDER (TYP.)

CONNECT TO EXISTING GAS LINE. CONTRACTOR TO COORDINATE ALL UTILITY WORK WITH DEVELOPER AND UTILITY PROVIDER, CONTRACTOR TO VERIFY BURIAL DEPTH AND SIZE PRIOR TO CONSTRUCTION, RELOCATION IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS.

PROVIDE AND INSTALL (2) 6" PVC SCH 80 CONDUITS ENCASED IN CONCRETE AND WITH PULL STRINGS FOR ELECTRICAL SERVICE TO WAREHOUSE

PROVIDE AND INSTALL RIGID METAL CONDUIT DOWN POLE TO SUBSURFACE CONNECTION FOR PRIMARY ELECTRICAL SERVICES

PROVIDE AND INSTALL 10" DIP FIRE PROTECTION WATER LOOP, APPROXIMATE LOCATION, COORDINATE WITH FIRE PROTECTION ENGINEER AND UTILITY PROVIDER (TYP.)

PROVIDE AND INSTALL 4" DOMESTIC WATER SERVICE (TYP.)

PROVIDE AND INSTALL FIRE HYDRANT ASSEMBLY, 6" DIP HYDRANT LATERAL, GATE VALVE, THRUST BLOCKS, AND BOLLARDS AS REQUIRED BY LOCAL UTILITY PROVIDER AND/OR FIRE MARSHALL (TYP.)

S25°35'21"W
750.77'
NYSEAG #50
NM #70
N67°49'22"W 0.33'
Iron Pipe

MDO

MATCHLINE–SEE SHEET C3.03

MATCHLINE–SEE SHEET C3.04

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GRAPHIC SCALE
30 15 0 30
SCALE IN FEET

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Title

SITE UTILITY PLAN

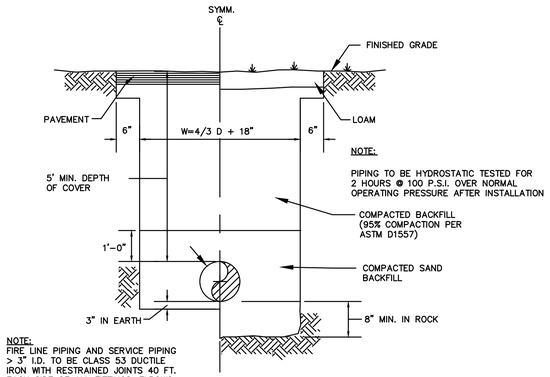
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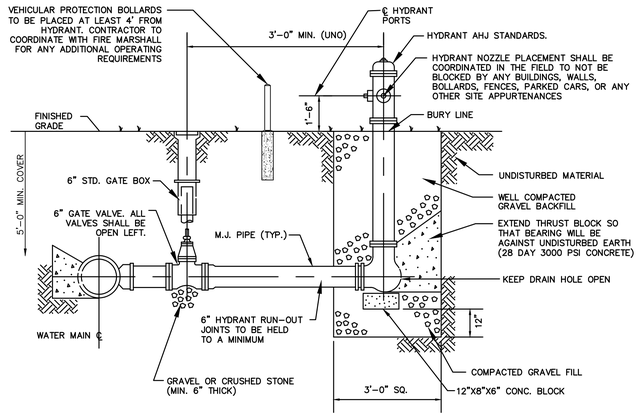
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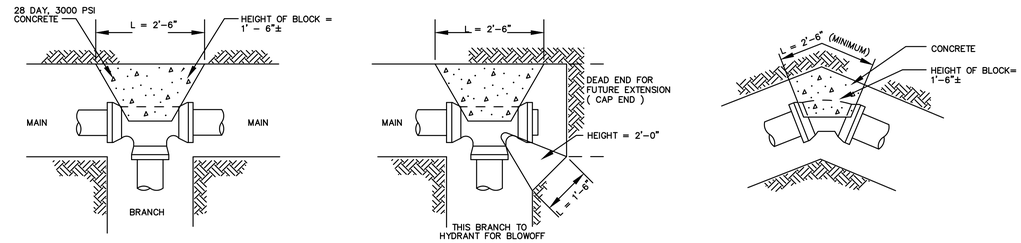
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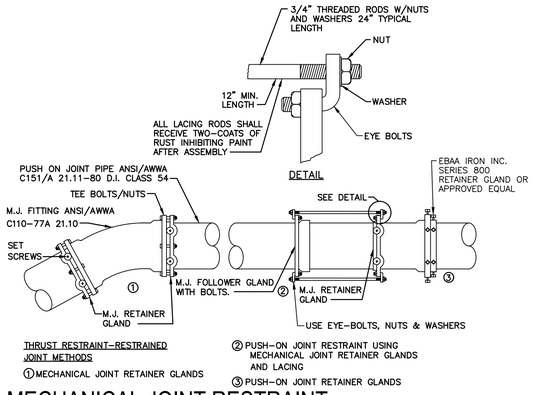
TYPICAL WATER MAIN AND SERVICE TRENCH DETAIL



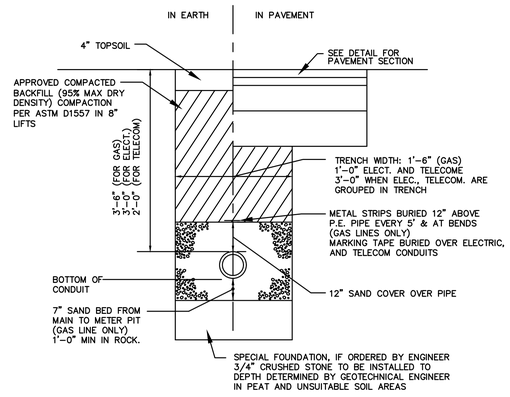
HYDRANT ASSEMBLY DETAIL



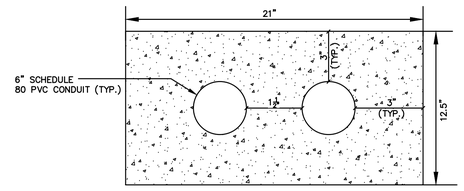
THRUST BLOCKS FOR WATER LINES



MECHANICAL JOINT RESTRAINT



TELECOM AND GAS TRENCH DETAIL



NOTES:
1. CONCRETE TO BE MINIMUM 3000 PSI
2. INSTALL SPACERS EVERY 5 FEET UNLESS OTHERWISE REQUIRED BY LOCAL ELECTRIC COMPANY

ELECTRICAL CONDUIT CONCRETE ENCASEMENT

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STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS
No. Date Desc.

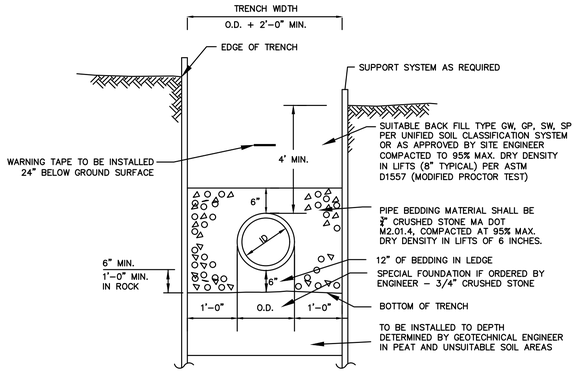
Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title
SITE UTILITY DETAILS

Sheet No.
C3.100

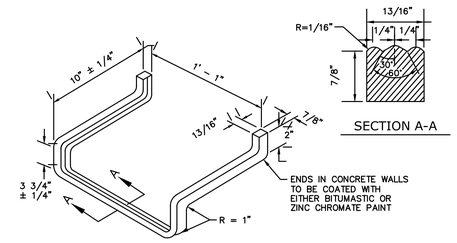
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7/17/2026, K:\WN...G:\JOBS\24\18\2401824\DWG\C2401824-110.DWG,C3.100 24x36,
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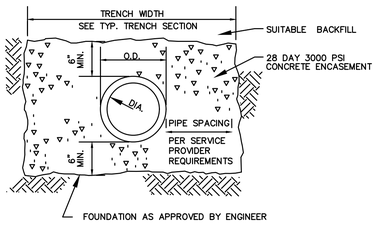
NOTE: ALL SEWER MATERIALS AND CONSTRUCTION SHALL CONFORM TO MANSFIELD FOXBOROUGH NORTON WASTEWATER DISTRICT AND THE TOWN OF SHARON.

TYPICAL SANITARY SEWER TRENCH SECTION

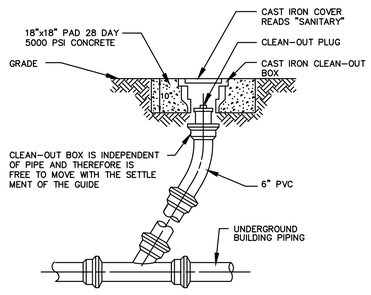


NOTE : STEPS TO BE FORGED ALUMINUM

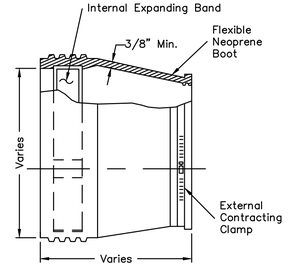
STANDARD MANHOLE STEP



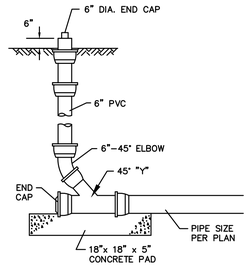
CONCRETE PROTECTION FOR PIPING



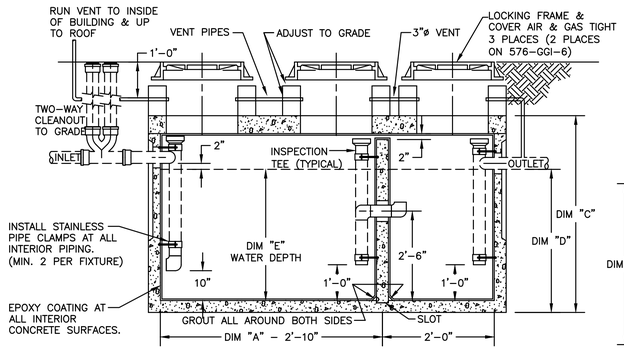
CLEANOUT DETAIL IN PAVED AREA



FLEXIBLE PIPE TO MANHOLE CONNECTION

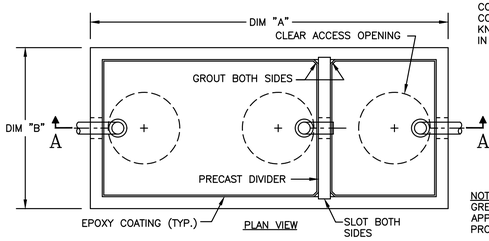


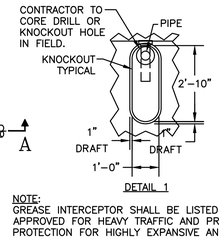
CLEANOUT DETAIL IN LANDSCAPED AREA



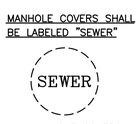
NOTES:
1. DESIGNED PER IAPMO/ANSI Z1001; MANUFACTURED PER ASTM C1613
2. CONCRETE: 28 DAY COMPRESSIVE STRENGTH F'C = 7000 PSI.
3. REBAR: ASTM A-615 GRADE 60; MESH: ASTM A-185 GRADE 65.
4. DESIGN: ACI-318-02 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
5. LOADING PER ASTM C890 FOR AASHTO HS20-44 VEHICLE LOADING.
6. FILL W/ CLEAN WATER PRIOR TO START-UP OF SYSTEM.
7. CONTRACTOR TO SUPPLY & INSTALL ALL PIPING & SAMPLING TEES.
8. GREY WATER ONLY. BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER.
9. INTERCEPTOR SHALL BE APPROVED BY ALL AUTHORITIES HAVING JURISDICTION.

	GI-1	GI-2
GALLON CAPACITY	1500	1000
UV CO. MODEL NO.	5106-GGI-6	576-GGI-6
DIM "A"	11'-2"	7'-6"
DIM "B"	5'-8"	5'-0"
DIM "C"	7'-2"	7'-8"
DIM "D"	4'-5"	5'-3"
WATER DEPTH DIM "E"	4'-0"	4'-9"





MANHOLE COVERS SHALL BE LABELED "SEWER"

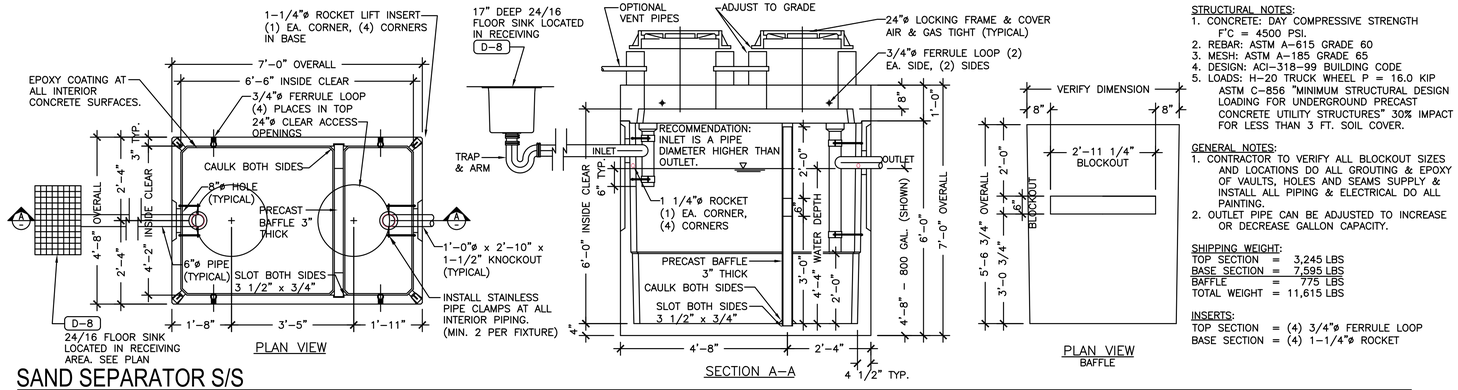


ALL MANHOLE COVERS TO BE LOCATED WITHIN DESIGNATED CONCRETE PAD AND PAINTED BLACK.

NOTE:
GREASE INTERCEPTOR SHALL BE LISTED AND LABELED AND APPROVED FOR HEAVY TRAFFIC AND PROVIDED WITH PROTECTION FOR HIGHLY EXPANSIVE AND CORROSIVE SOILS.

GREASE INTERCEPTOR DETAIL GI-1,2

SCALE: NONE



STRUCTURAL NOTES:
1. CONCRETE: DAY COMPRESSIVE STRENGTH F'C = 4500 PSI.
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-99 BUILDING CODE
5. LOADS: H-20 TRUCK WHEEL P = 16.0 KIP ASTM C-856 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" 30% IMPACT FOR LESS THAN 3 FT. SOIL COVER.

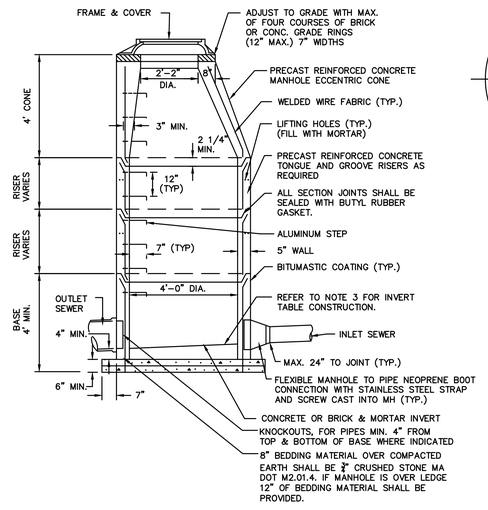
GENERAL NOTES:
1. CONTRACTOR TO VERIFY ALL BLOCKOUT SIZES AND LOCATIONS DO ALL GROUTING & EPOXY OF VAULTS, HOLES AND SEAMS SUPPLY & INSTALL ALL PIPING & ELECTRICAL DO ALL PAINTING.
2. OUTLET PIPE CAN BE ADJUSTED TO INCREASE OR DECREASE GALLON CAPACITY.

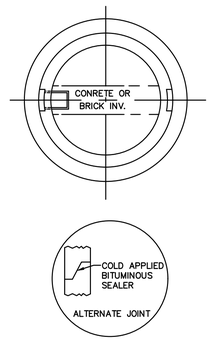
SHIPPING WEIGHT:
TOP SECTION = 3,245 LBS
BASE SECTION = 7,595 LBS
BAFFLE = 775 LBS
TOTAL WEIGHT = 11,615 LBS

INSERTS:
TOP SECTION = (4) 3/4"ø FERRULE LOOP
BASE SECTION = (4) 1-1/4"ø ROCKET

SAND SEPARATOR S/S

SCALE: NONE



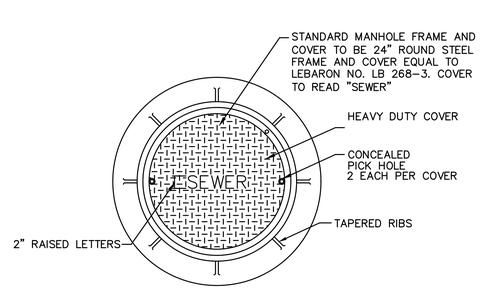


NOTES:
1. 5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' & 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE.

2. WHEN INLET SEWER INVERT TO OUTLET SEWER INVERT ELVATION EXCEEDS 24" USE DROP CONNECTION.

3. THE INVERT TABLE SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE AND BRICK AND BE PROVIDED WITH A 1-INCH WASH.

PRECAST SANITARY MANHOLE



SEWER MANHOLE FRAME AND COVER

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7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	Date	Desc.
REVISIONS		

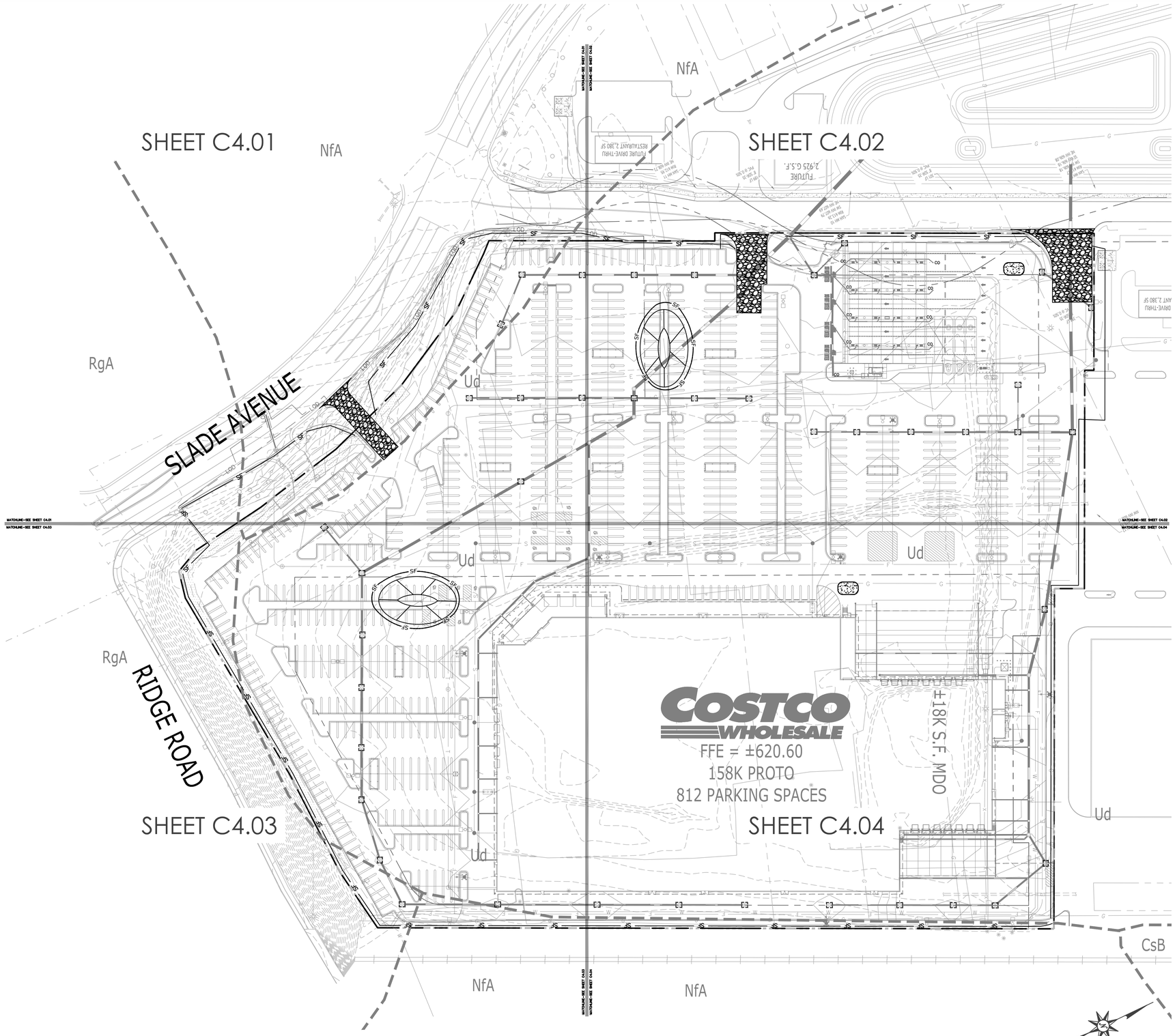
Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title
SITE UTILITY DETAILS

Sheet No.
C3.101

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7/17/2026, JLYNN, G:\JOBS\2401824\REVISIONS\2401824-110.DWG,C3.101, 24X36



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No.	Date	Desc.

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Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

CAD File: C2401824-40

Title

OVERALL EROSION AND SEDIMENT CONTROL PLAN

Sheet No.

C4.00

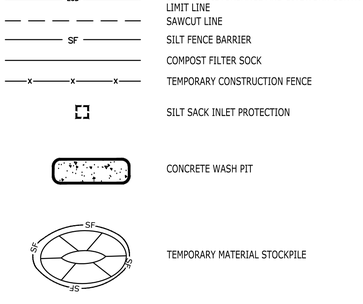
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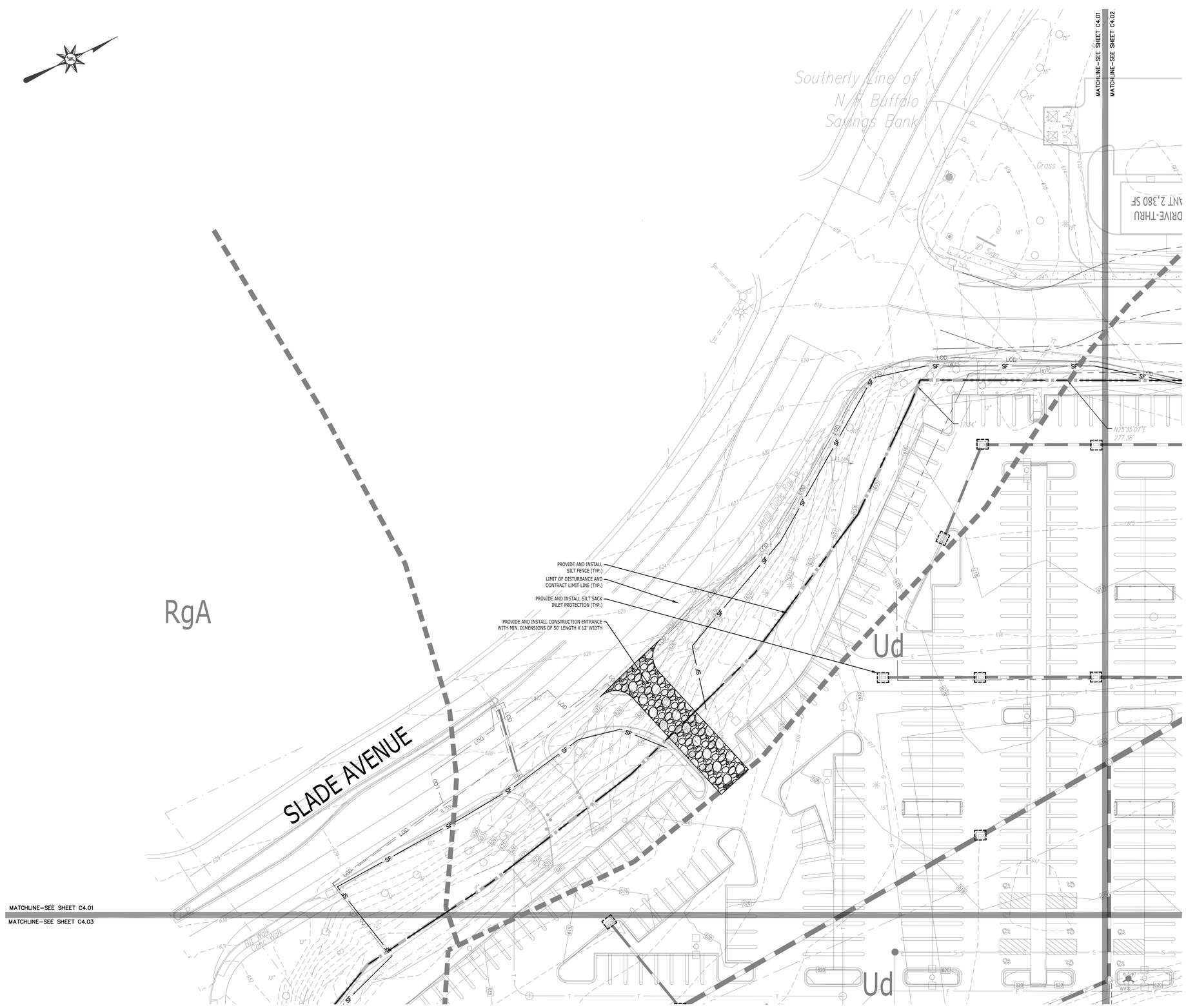
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EROSION CONTROL LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- SF — SILT FENCE BARRIER
- COMPOST FILTER SOCK
- TEMPORARY CONSTRUCTION FENCE
- SILT SACK INLET PROTECTION
- CONCRETE WASH PIT
- TEMPORARY MATERIAL STOCKPILE
- SOIL TYPE BOUNDARY
- CONSTRUCTION ENTRANCE



KEY MAP



ISSUED FOR PERMITTING
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GRAPHIC SCALE
30 15 0 30
SCALE IN FEET

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No.	Date	Desc.

Designed	J.J.L.
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Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-40	

Title

EROSION AND SEDIMENT CONTROL PLAN

Sheet No.

C4.01

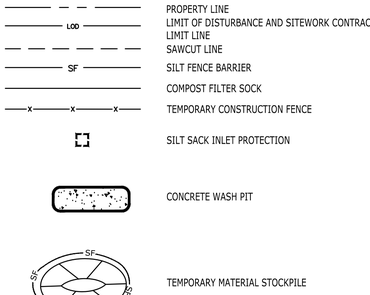
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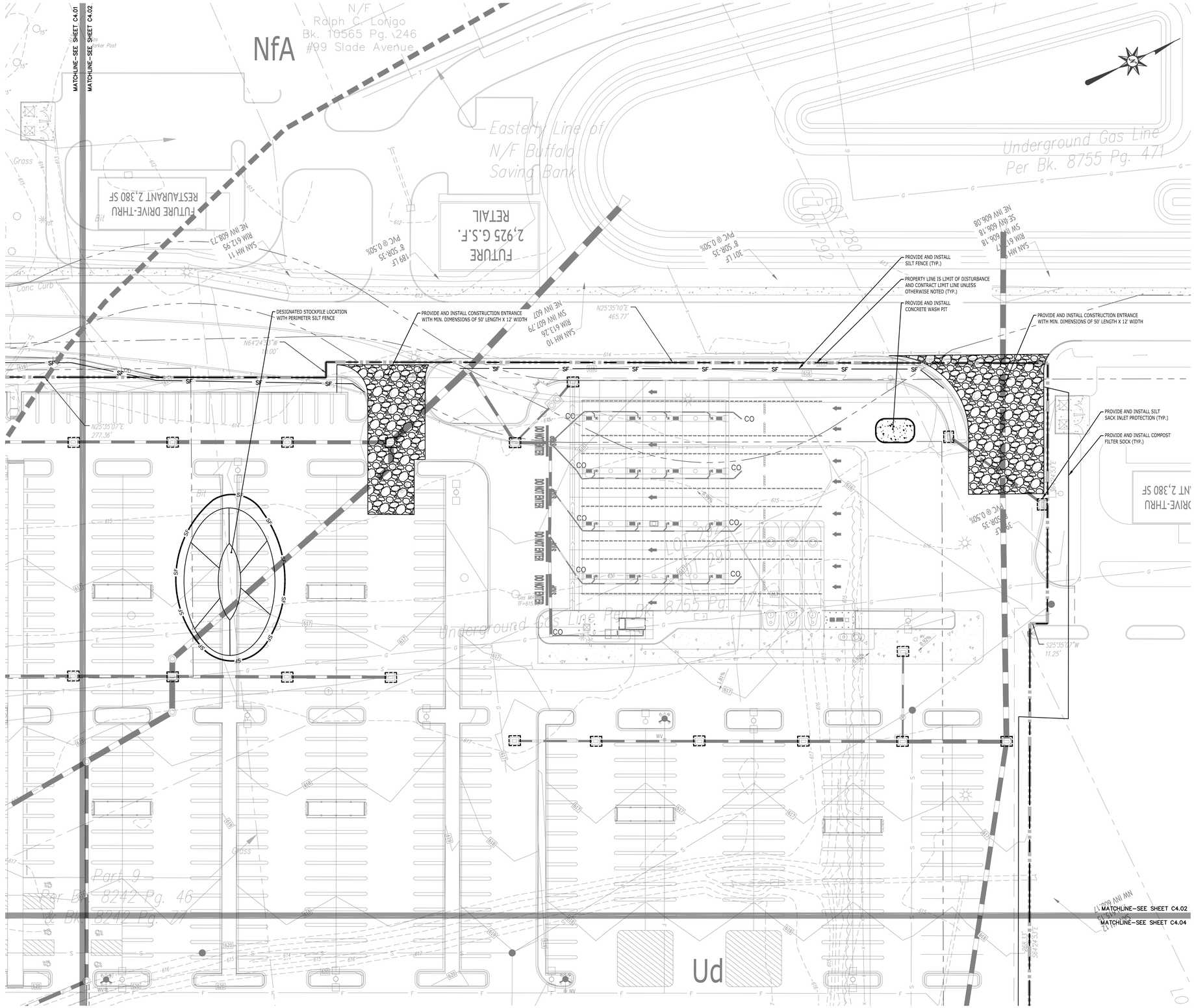
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- SOIL TYPE BOUNDARY
- CONSTRUCTION ENTRANCE



KEY MAP



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SCALE IN FEET

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Title

EROSION AND SEDIMENT CONTROL PLAN

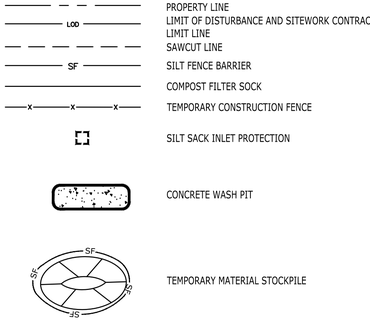
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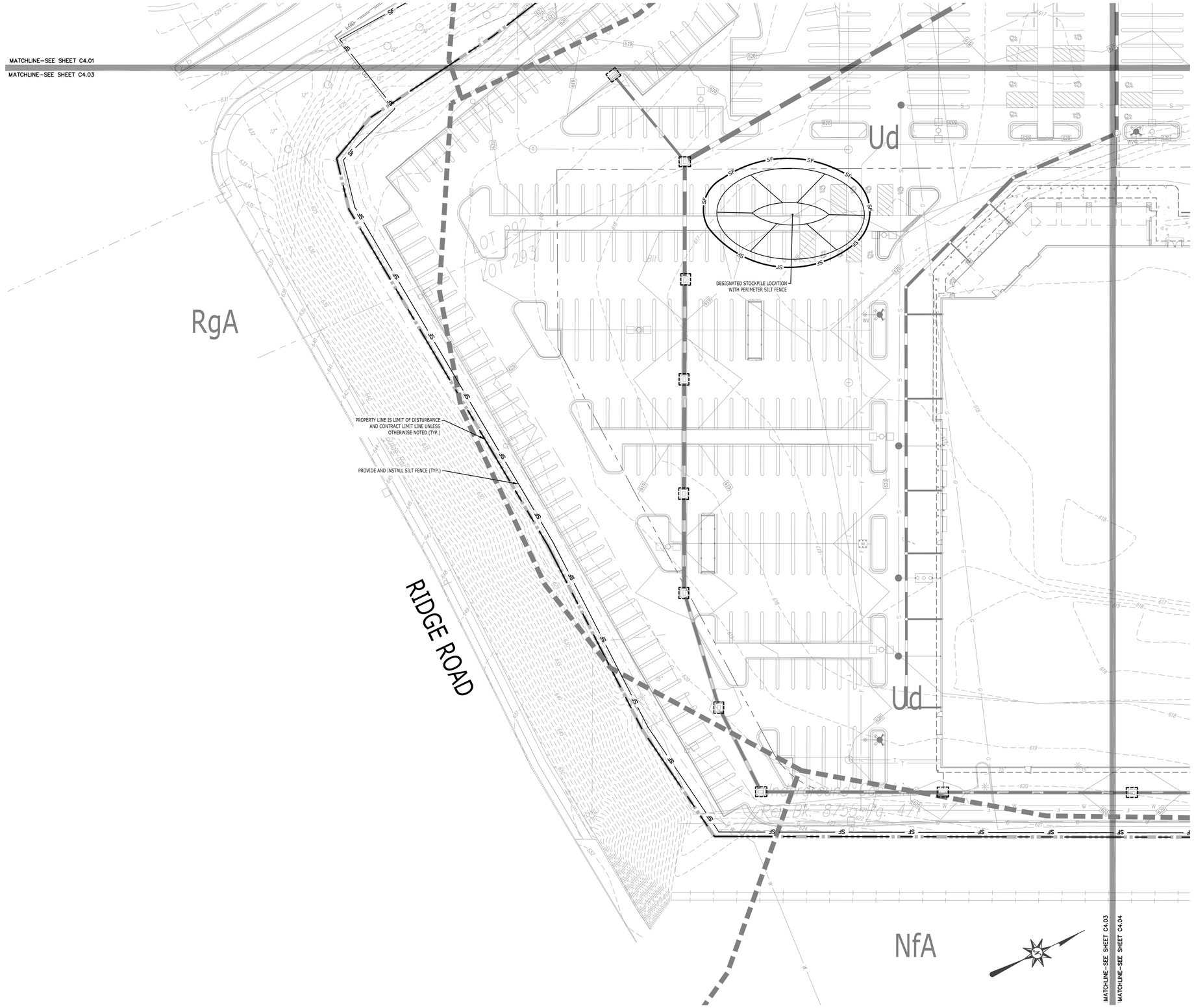
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EROSION CONTROL LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- SF — SILT FENCE BARRIER
- COMPOST FILTER SOCK
- x x x — TEMPORARY CONSTRUCTION FENCE
- SILT SACK INLET PROTECTION
- CONCRETE WASH PIT
- TEMPORARY MATERIAL STOCKPILE
- SOIL TYPE BOUNDARY
- CONSTRUCTION ENTRANCE



KEY MAP



ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

Architecture
Engineering
Environmental
Land Surveying

BL Companies

355 Research Parkway
Meriden, CT 06450
(203) 630-1406

STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	Date	REVISIONS Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-40	

Title
EROSION AND SEDIMENT CONTROL PLAN

Sheet No.
C4.03

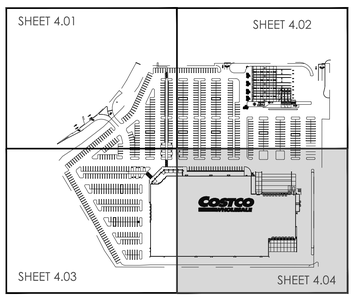
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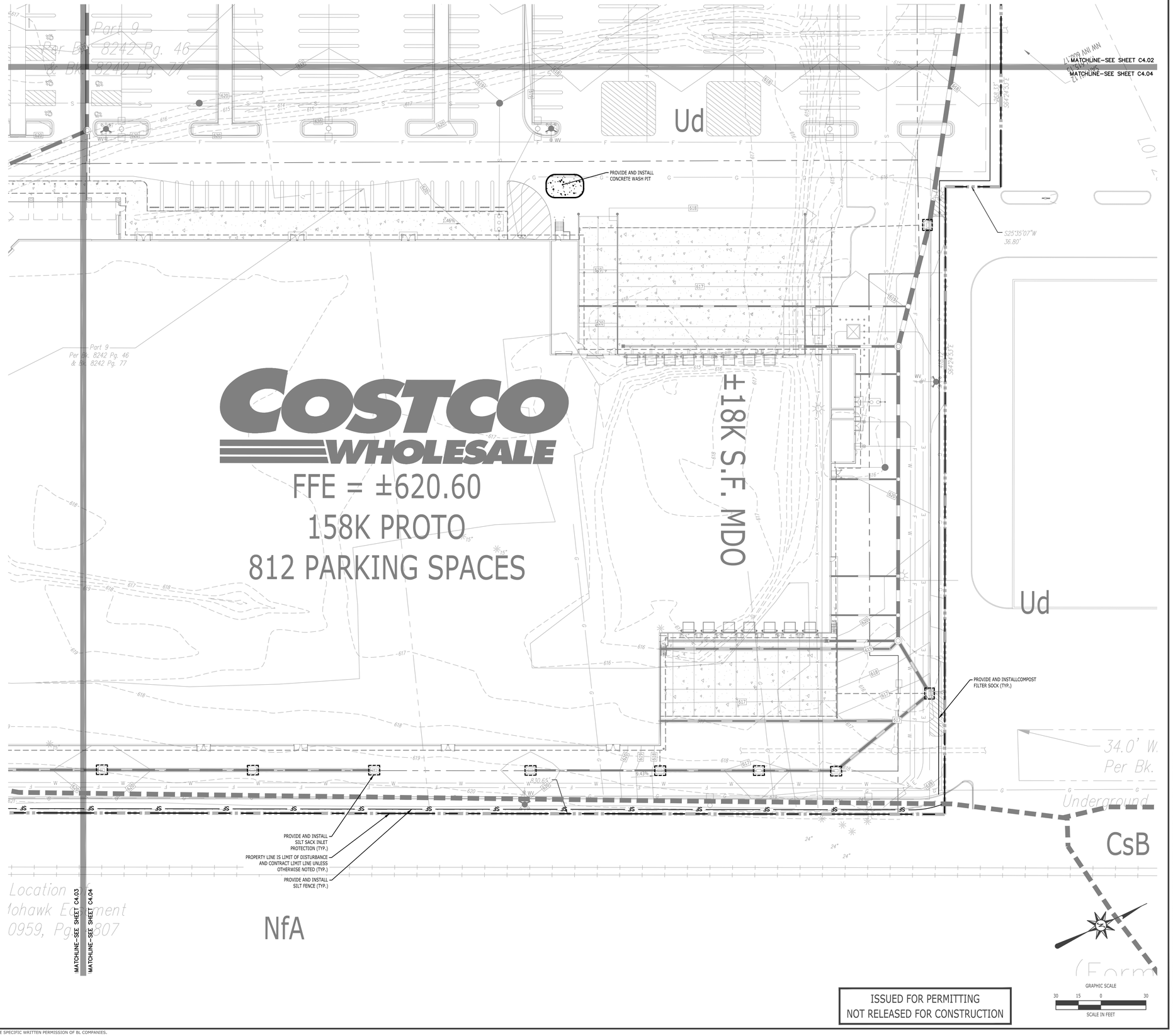
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EROSION CONTROL LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- SF — SILT FENCE BARRIER
- COMPOST FILTER SOCK
- TEMPORARY CONSTRUCTION FENCE
- SILT SACK INLET PROTECTION
- CONCRETE WASH PIT
- TEMPORARY MATERIAL STOCKPILE
- SOIL TYPE BOUNDARY
- CONSTRUCTION ENTRANCE



KEY MAP



ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

Architecture
Engineering
Environmental
Land Surveying

BL Companies

355 Research Parkway
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(203) 630-1406

STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	REVISIONS Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-40	

Title

EROSION AND SEDIMENT CONTROL PLAN

Sheet No.

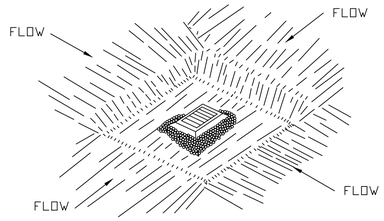
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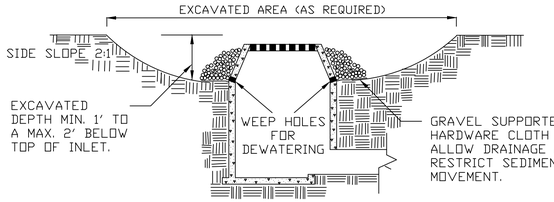
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7/17/2026, JLynn, G:\JOBS\2401\18\2401824\DWG\C2401824-40.DWG,C4.04 24X36 305C

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SYMBOL





CONSTRUCTION SPECIFICATIONS

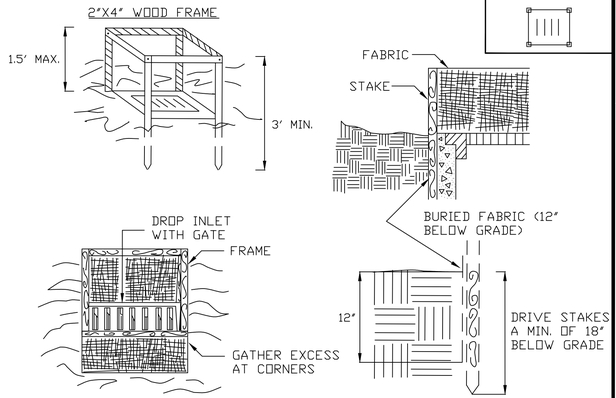
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

   MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

EXCAVATED DROP INLET PROTECTION

SYMBOL



CONSTRUCTION SPECIFICATIONS

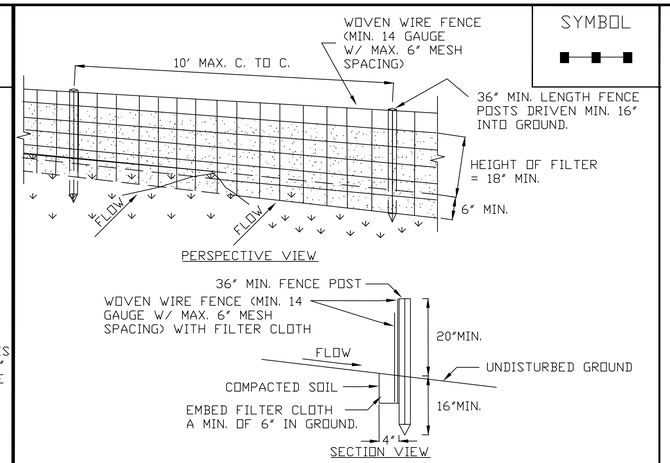
1. FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

   MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

FABRIC DROP INLET PROTECTION

SYMBOL



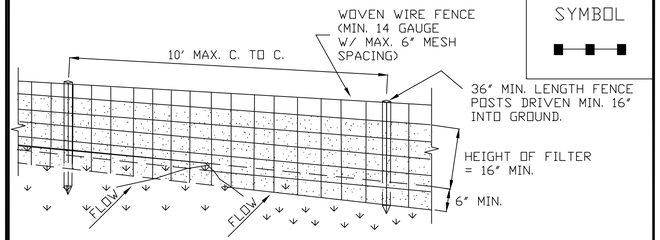
CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

REINFORCED SILT FENCE

SYMBOL



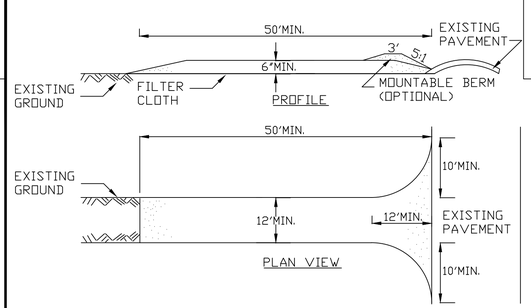
CONSTRUCTION SPECIFICATIONS

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2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

SILT FENCE

SYMBOL

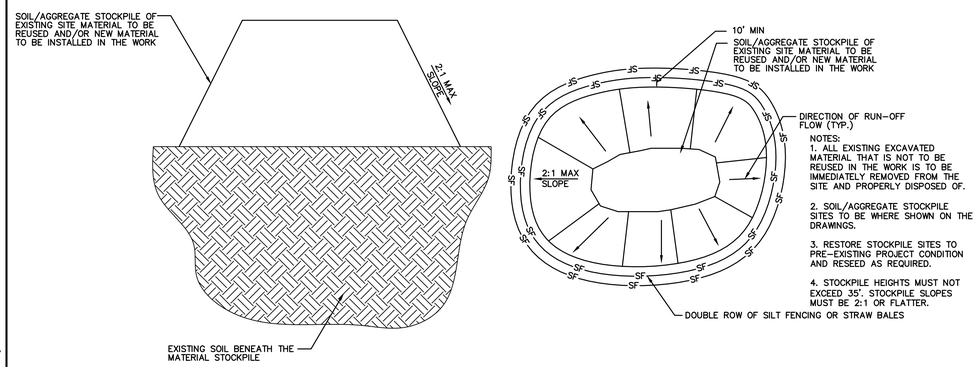


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON-STRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STABILIZED CONSTRUCTION ACCESS



MATERIALS STOCKPILE DETAIL

N.T.S. BLEC-006

ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

Architecture
Engineering
Environmental
Land Surveying

BL Companies

355 Research Parkway
Meriden, CT 06450
(203) 630-1406

STATE OF NEW YORK
MICHELLE M. CARLSON
093051
LICENSED PROFESSIONAL ENGINEER

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS		
No.	Date	Desc.

Designed	J.J.L.
Drawn	J.J.L.
Reviewed	K.A.K.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File:	C2401824-110

Title

EROSION AND SEDIMENT CONTROL PLAN DETAILS

Sheet No.

C4.100

7/17/2026, JLYNN, P:\2024\2401824\SWPPP\C2401824-110.DWG,C4.100 24X36

Xref (s) : X:\2401824-00 : inactivatedcompletedprotection : reinforcedsiltfence : sfdfence : stabilizedconstructionaccess

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PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES						
	AR	29	ACER RUBRUM 'FRANK JR.'	REDPOINTE®MAPLE	3" CAL. MIN,	B&B
	AF	34	ACER X FREEMANII 'ARMSTRONG' PARKING LOT TREE	ARMSTRONG FREEMAN MAPLE	3" CAL. MIN,	B&B
	CF	6	CORNUS FLORIDA 'CHEROKEE BRAVE'	CHEROKEE BRAVE DOGWOOD	3" CAL. MIN,	B&B
	GT	42	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' PARKING LOT TREE	SHADEMASTER HONEY LOCUST	3" CAL. MIN,	B&B
	QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL. MIN,	B&B
	ZG	33	ZELKOVA SERRATA 'GREEN VASE' PARKING LOT TREE	GREEN VASE JAPANESE ZELKOVA	3" CAL. MIN.	B&B
EVERGREEN TREES						
	PS	9	PINUS STROBUS	WHITE PINE	6'–7' HT.	B&B
	TO	22	THUJA OCCIDENTALIS 'NIGRA'	DARK GREEN ARBORVITAE	6'–7' HT.	B&B
	TP	9	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	6'–7' HT.	B&B
DECIDIOUS SHRUBS						
	CAH	128	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	24" HT. MIN.	CONT.
	CSF	101	CORNUS SERICEA 'FARROW'	ARCTIC FIRE®RED TWIG DOGWOOD	24"–30" HT. & SPD.	CONT.
	SBG	165	SPIRAEA X BUMALDA 'GOLDMOUND'	GOLD MOUND SPIREA	24" HT. MIN.	CONT.
	VDA	23	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	24"–30" HT. & SPD.	CONT.
EVERGREEN SHRUBS						
	ICS	205	ILEX CRENATA 'SOFT TOUCH'	SOFT TOUCH JAPANESE HOLLY	18"–21" HT. & SPD.	CONT.
	IGS	144	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	24"–30" HT. & SPD.	CONT.
	IMB	175	ILEX X MESERVEAE 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	30"–36" HT. & SPD.	B&B
	RER	55	RHODODENDRON X 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHODODENDRON	24"–36" HT. & SPD.	CONT.
	TMD	139	TAXUS X MEDIA 'DENSIFORMIS'	DENSE ANGLO–JAPANESE YEW	18"–24" HT. & SPD.	CONT.
GROUNDCOVER						
	JHM	351	JUNIPERUS HORIZONTALIS 'MONBER'	ICEE BLUE®CREEPING JUNIPER	12" HT. MIN.	CONT.
	RAG	156	RHUS AROMATICA 'GRO–LOW'	GRO–LOW FRAGRANT SUMAC	12" HT. MIN.	CONT.
ORNAMENTAL GRASS						
	MSA	159	MISCANTHUS SINENSIS 'ADAGIO'	ADAGIO EULALIA GRASS	3 GAL.	CONT.
	PAB	184	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	1 GAL	CONT.

NOTES:
1) ALL SUBSTITUTIONS MUST RECEIVE APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO SITE.

2) PROVIDE AND INSTALL ALL PLANTS SHOWN ON THE PLANTING PLAN DRAWINGS; THE QUANTITIES IN THE PLANT LIST ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF DISCREPANCIES OCCUR, THE LARGER QUANTITY SHALL APPLY.

3) IF THERE IS A DISCREPANCY BETWEEN BOTANICAL AND COMMON NAME, BOTANICAL NAME PREVAILS.

ZONING INFORMATION

LOCATION: WEST SENECA, NEW YORK

ZONE: M-1 (MANUFACTURING DISTRICT)

USE: RETAIL (PERMITTED USE)

ITEM	REQUIREMENTS	PROPOSED	VARIANCE
SITE LANDSCAPING SEC.120-68.B.	(2) BUILDING SETBACK AREAS ALONG STREETS, ACCESSWAYS, OR ALONG PRIVATE DRIVES SHALL BE LANDSCAPED WITH A MINIMUM OF ONE TREE FOR EVERY 40' OF LINEAR FRONTAGE. SLADE AVENUE = 532' (EXCLUDE PAVEMENT AREA) / 40 =14 TREE REQ.; RIDGE ROAD = 82' (EXCLUDE EASEMENT AREA) / 40 = 2 TREES REQ. ACCESS DRIVE = 622' (EXCLUDE PAVEMENT AREA) / 40 = 16 TREES REQ.	MIN. 1 TREE FOR EVERY 40' OF LINEAR FRONTAGE. SLADE AVENUE = 14 TREES PROP. RIDGE ROAD = 2 TREES PROP. ACCESS DRIVE = 16 TREES PROP.	NO
	(3) BUILDING SETBACK AREAS SHALL INCLUDE COMPACT MASSINGS OF ORNAMENTAL PLANT MATERIAL, SUCH AS ORNAMENTAL TREES, FLOWERING SHRUBS, PERENNIALS, AND GROUND COVERS, AT A MINIMUM OF ONE PLANT FOR EVERY 10' OF LINEAR FRONTAGE	PROPOSED LANDSCAPING EXCEEDS REQ.	NO
FOUNDATION LANDSCAPING SEC.120-68.C	(1) BUILDING FOUNDATION LANDSCAPING SHALL BE PROVIDED ALONG ALONG THE FRONT FACADE AS WELL AS ANY FACADES VISIBLE FROM PUBLIC RIGHT-OF-WAY	NO FOUNDATION PLANTINGS PROP. ALONG BUILDING FRONTAGE.	YES
MINIMUM PLANT SIZE SEC.120-68.D	(1) DECIDUOUS TREES SHALL BE ATLEAST 2.5" CAL., UNLESS LOCATED IN THE SIDE OR REAR YARD, WHERE THERE MAY BE A MINIMUM OF 1.5" CAL.	ALL PROPOSED DECIDUOUS TREES ARE MIN. 2.5" CAL.	NO
	(2) EVERGREEN TREES SHALL BE 5' IN HEIGHT, UNLESS LOCATED IN THE SIDE OR REAR YARD, WHERE THEY MAY BE A MIN. OF 4' IN HEIGHT.	ALL PROPOSED EVERGREEN TREES ARE MIN. 5' HT.	NO
	(3) DECIDUOUS SHRUBS SHALL BE ATLEAST 24" IN HEIGHT, UNLESS LOCATED IN THE SIDE OR REAR YARD, WHERE THEY MAY BE A MINIMUM OF 15" IN HEIGHT.	ALL PROPOSED DECIDUOUS SHRUBS ARE MIN. 24" HT.	NO
	(4) EVERGREEN SHRUBS SHALL BE A MINIMUM OF 18" IN HEIGHT, UNLESS LOCATED IN THE SIDE OR REAR YARD, WHERE THEY MAY BE A MINIMUM OF 12" IN HEIGHT.	ALL PROPOSED EVERGREEN SHRUBS ARE MIN. 18" HT.	NO
PARKING LOT LANDSCAPING SEC.120-68.F.	(1) PARKING LOT MEDIANS SHALL BE REQUIRED BETWEEN PARKING BLOCKS (MAXIMUM 40 PARKING SPACES). MEDIANS SHALL BE A MINIMUM OF 10 FEET IN WIDTH	10 FEET MINIMUM WIDTH LANDSCAPED MEDIANS PROVIDED, PARKING BLOCKS ARE MORE THAN 40 PARKING SPACES.	YES
	(2) AT LEAST ONE LANDSCAPED ISLAND WITH A MINIMUM WIDTH OF FIVE FEET AND MINIMUM SIZE OF 160 SQUARE FEET SHALL BE PROVIDED FOR EVERY 20 PARKING SPACES	LANDSCAPED ISLAND PROVIDED .	YES
	(3) CIRCULATORY DRIVE AISLES AND LANDSCAPED ISLANDS SHALL BE INSTALLED SUCH THAT NO MORE THAN 20 PARKING SPACES IN A SINGLE ROW, OR 40 IN A DOUBLE ROW, SHALL GO UNINTERRUPTED.	LANDSCAPED ISLANDS PROVIDED, SOME OF THEM SPACED MORE THAN 20 SPACES IN A ROW.	YES
	(5) ONE SHADE TREE SHALL BE PLANTED FOR EVERY 10 PARKING SPACES. 809 PARKING SPACES / 10 = 81 SHADE TREES REQ.	108 SHADE TREES PROP. WITHIN PARKING LOT AREA	NO

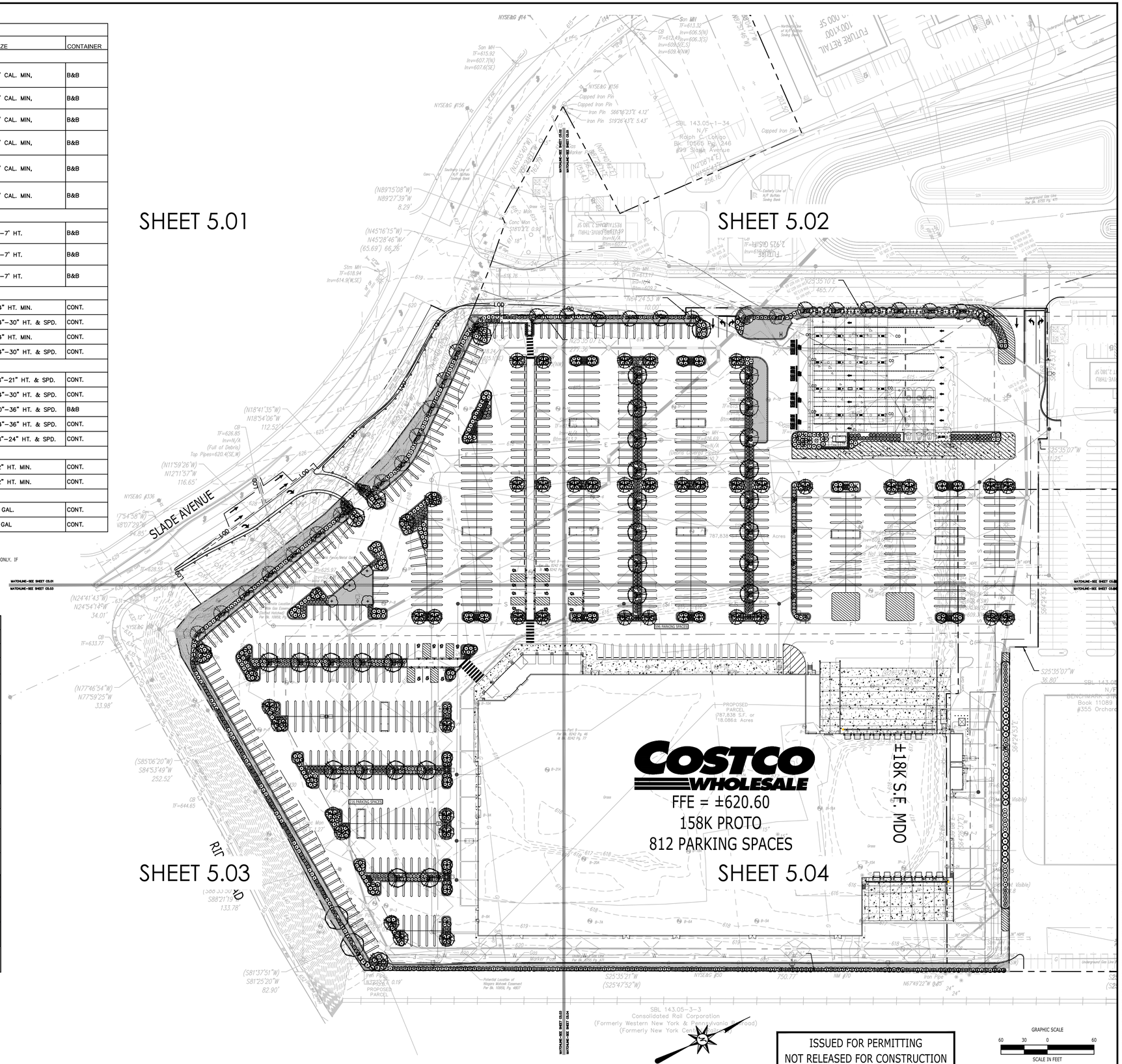
SEE SHEET C5.100 FOR LANDSCAPE NOTES AND DETAILS

SHEET 5.01

SHEET 5.02

SHEET 5.03

SHEET 5.04



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(203) 630-1406

REGISTERED LANDSCAPE ARCHITECT
DOMINICK J. CELTRUDA
903103
STATE OF NEW YORK
7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	Date	Desc.
REVISIONS		

Designed	J.C.W.
Drawn	C.B.F.
Reviewed	D.J.C.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

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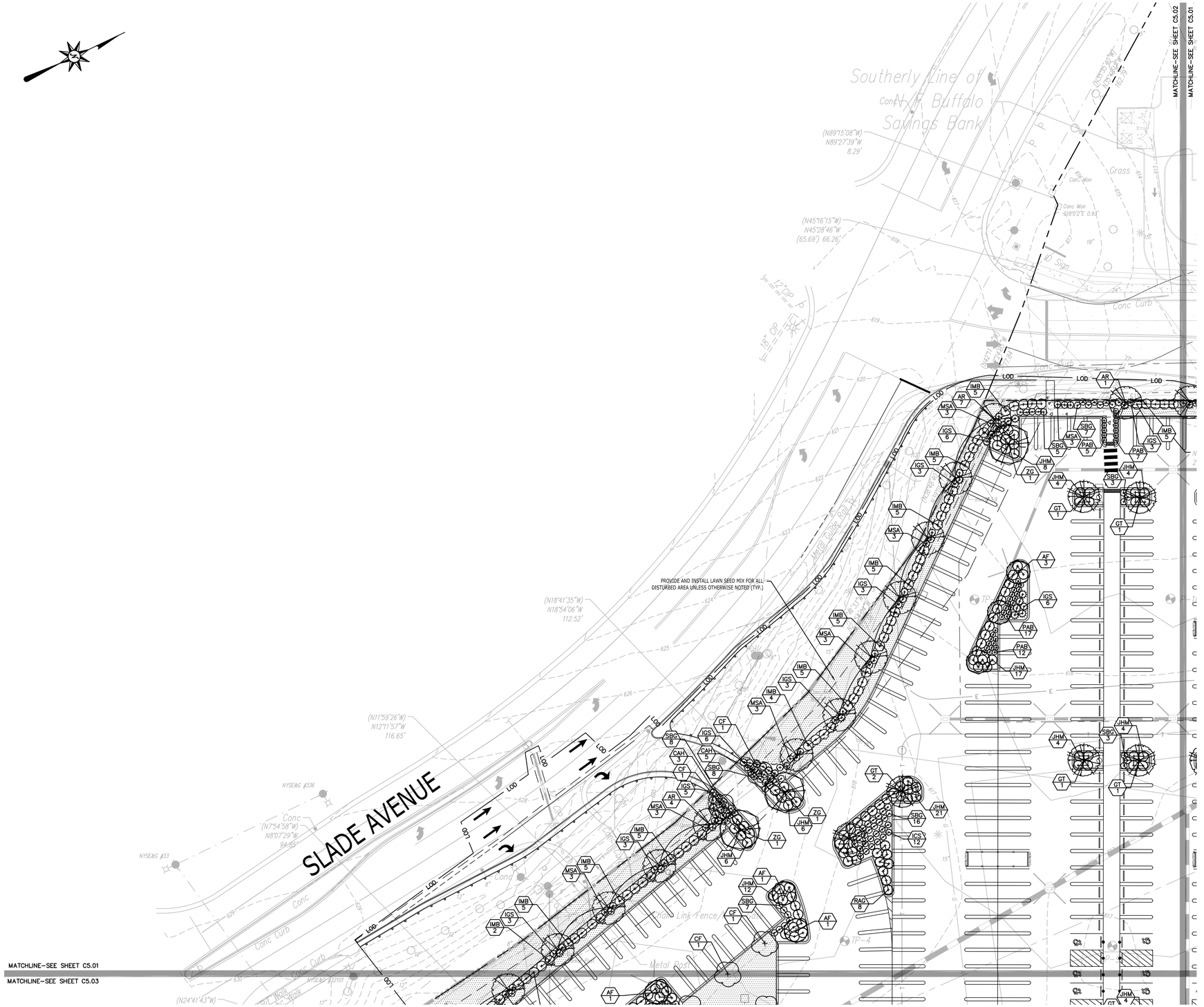
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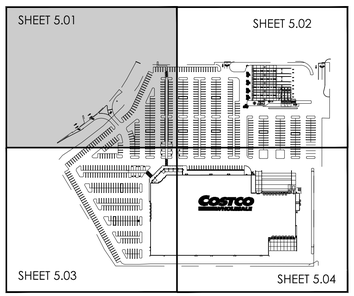
OVERALL LANDSCAPING PLAN

Sheet No.

C5.00

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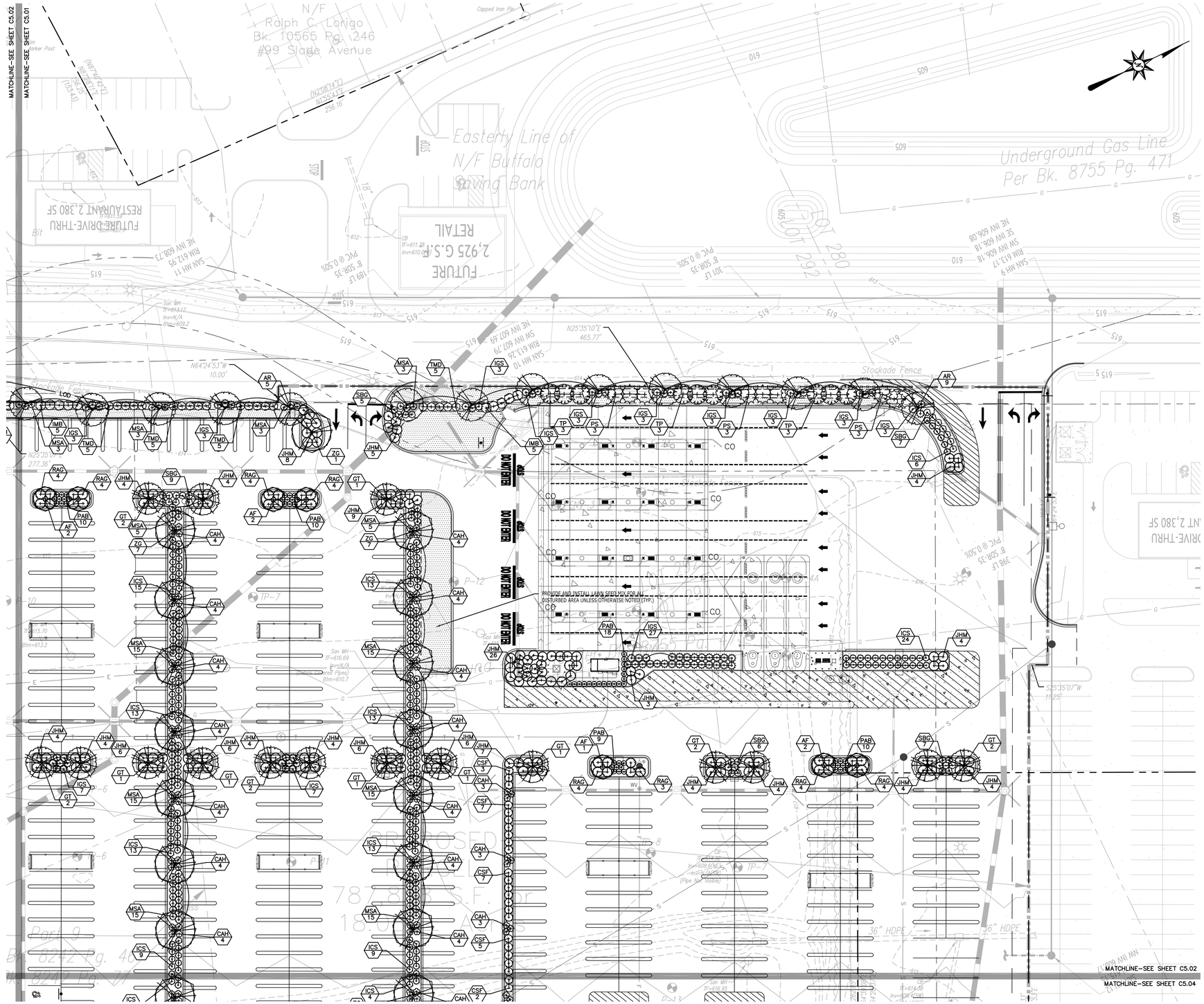
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LANDSCAPING PLAN

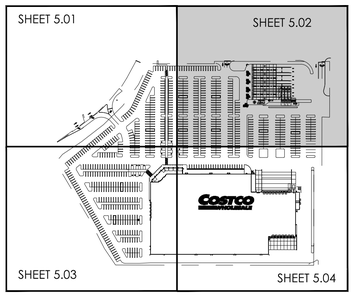
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LANDSCAPING PLAN

Sheet No.

C5.02

Xref Files: ...XY2401824R1 ; XB2401824R1 ; XC2401824-20 ; XC2401824-21 ; XC2401824-30 ; XJ2401824-00 ; XJ2401824-01 ; XM2401824-xyMap

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MATCHLINE–SEE SHEET C5.01

MATCHLINE–SEE SHEET C5.03

PROVIDE AND INSTALL LAWN SEED MIX FOR ALL DISTURBED AREA UNLESS OTHERWISE NOTED (TYP.)

216 PARKING SPACES

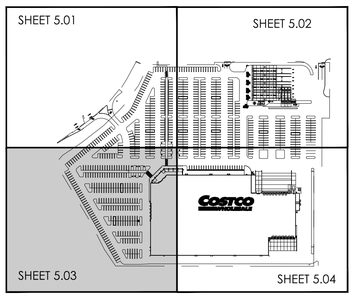
RIDGE ROAD

PROVIDE AND INSTALL LAWN SEED MIX FOR ALL DISTURBED AREA UNLESS OTHERWISE NOTED (TYP.)

P.O.B. PROPOSED PARCEL

MATCHLINE–SEE SHEET C5.03

MATCHLINE–SEE SHEET C5.04



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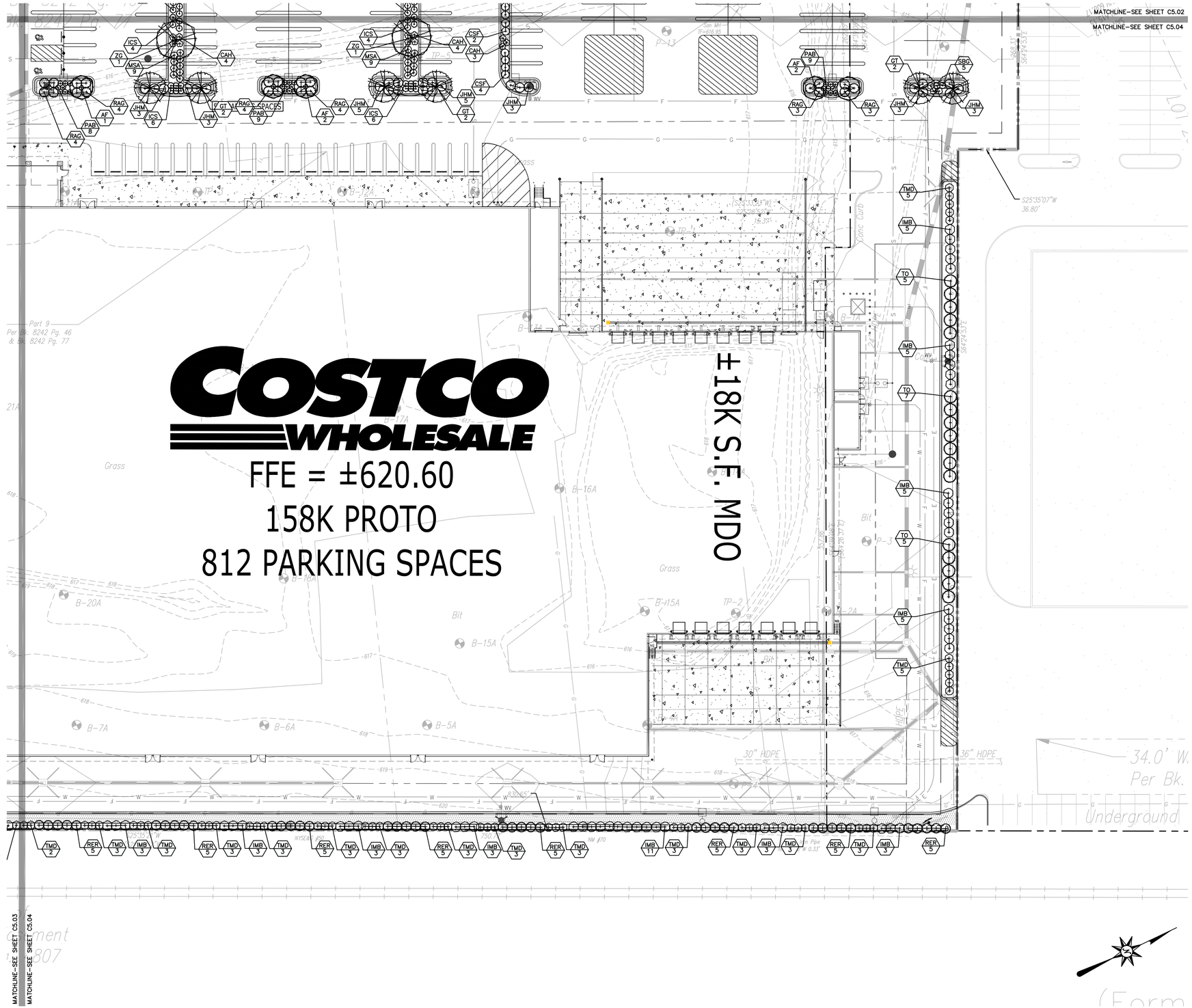
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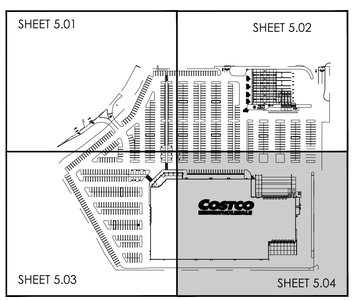
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Date	07/17/2026

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Title
LANDSCAPING PLAN

Sheet No.
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LANDSCAPE NOTES

1. THE LANDSCAPE PLAN AND DETAIL SHEET ARE FOR LANDSCAPING INFORMATION ONLY. REFER TO THE SITE PLAN, GRADING AND DRAINAGE PLAN, SITE UTILITIES PLAN, LIGHTING PLAN AND DEMOLITION PLAN FOR ALL OTHER INFORMATION.

2. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE. PRIOR TO DIGGING AND INSTALLATION OF PLANT MATERIAL, THE CONTRACTOR SHALL CONTACT 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY SYSTEM LOCATIONS.

3. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO UTILITY LOCATIONS AND SITE CONDITIONS. THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS FOR THE REVIEW, ADJUSTMENT, AND APPROVAL BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.

4. THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF TWO YEARS FOLLOWING INSTALLATION, AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY OWNER OR LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE ANY DEAD OR UNHEALTHY PLANTS AT CONTRACTOR'S EXPENSE. PLANT MATERIAL REPLACEMENTS SHALL BE GUARANTEED FOR TWO FULL YEARS FROM DATE OF REPLACEMENT. REPLACEMENT PLANTS SHALL BE THE SAME AS SPECIFIED FOR THE ORIGINAL PLANTING. REPLACEMENTS SHALL BE MADE AS MANY TIMES AS NECESSARY TO ENSURE HEALTHY PLANTS. FINAL ACCEPTANCE SHALL BE MADE IF ALL PLANTS MEET THE GUARANTEE REQUIREMENTS INCLUDING MAINTENANCE. MAINTENANCE RESPONSIBILITIES INCLUDE CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE UNTIL THE END OF THE GUARANTEE PERIOD. DURING THE LANDSCAPE MAINTENANCE PERIOD (GUARANTEE) THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF ANY SITE CONSTRAINTS (PHYSICAL, ENVIRONMENT, ETC.) OR MAINTENANCE DEFICIENCIES THAT MAY AFFECT LANDSCAPE VEGETATION ESTABLISHMENT.

5. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT.

6. PLANTS SHALL HAVE TAGS THAT IDENTIFY PLANT GENUS, SPECIES, CULTIVAR (IF APPLICABLE), PLANT COMMON NAME, NAME OF SOURCE NURSERY, AND SIZE OF PLANT FOR REVIEW OF OWNER OR LANDSCAPE ARCHITECT.

7. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT.

8. FINAL GRADES SHALL BLEND SMOOTHLY WITH EXISTING GRADES, AND TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED.

9. MULCHING
INTERIOR OF THE SITE – LANDSCAPE ISLAND STONE MULCH SHALL BE USED FOR ALL LANDSCAPE ISLANDS WITHIN PARKING LOTS AND INTERIOR OF THE SITE.THE STONE TYPE(S) SHALL BE LOCALLY SOURCED WITH DECORATIVE EARTH TONE COLOR OF TAN OR GRAY. STONE MULCH SHALL BE 1 TO 2 INCH RIVER STONE AND INSTALLED AT A THREE (3) INCH DEPTH. FILTER FABRIC SHALL BE INSTALLED BELOW THE ROCK MULCH AS A WEED BARRIER.
PERIMETER OF THE SITE – TRIPLE–SHREDDED HARDWOOD BARK MULCH, AGED AT LEAST 6 MONTHS, SHALL BE USED FOR ALL LANDSCAPE AREAS AROUND THE PERIMETER OF THE PARKING LOT AND SITE. THE BARK MULCH SHALL BE INSTALLED AT A THREE (3) INCH DEPTH. FILTER FABRIC SHALL BE INSTALLED BELOW THE BARK MULCH AS A BARRIER.

10. IF TREE STAKING IS PROPOSED, TREE STAKING MUST BE COMPLETED THE SAME DAY AS THE TREE IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED PER DETAIL.

11. LANDSCAPE PLANTING AREAS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, DEAD OR DYING PLANT MATERIAL, BLASTED ROCK, STONES GREATER THAN 1" IN DIAMETER, AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT SHALL BE REMOVED FROM AREAS TO BE LANDSCAPED AS REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS.

12. PLANTING SOIL:

DEPTH: PLANTING SOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 6" OR AS NOTED IN THE LANDSCAPE DETAILS. PLANTING SOIL SHALL BE UTILIZED IN ALL PLANTING AREAS INCLUDING SEEDED AREAS. .

TESTING: CONTRACTOR SHALL SUBMIT (2) SOIL SAMPLES PER SOIL STOCKPILE TO A CERTIFIED TESTING LABORATORY TO DETERMINE ACIDITY, ORGANIC CONTENT, MECHANICAL ANALYSIS, AVAILABLE NUTRIENTS (N,P,K,Ca,Mg,S,Fe,Mn,Zn,Cu,B,Al,Pb) AND NECESSARY AMENDMENTS TO SOIL. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS TO THE OWNER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. TEST RESULTS SHALL RECOMMEND AMENDMENTS THAT WILL ALTER THE SOIL CHARACTERISTICS SUCH THAT THE CHARACTERISTICS DESCRIBED BELOW ARE ACHIEVED AND THE SPECIFIED PLANTS (CONTRACTOR TO PROVIDE LIST TO TESTING LABORATORY) WILL ACHIEVE PROPER GROWTH THAT IS NEITHER DEFICIENT NOR EXCESSIVE. THE CONTRACTOR SHALL INCORPORATE THESE AMENDMENTS AT NO INCREASE IN CONTRACT PRICE.

CHARACTERISTICS: PLANTING SOIL MAY CONSIST OF EXISTING ON–SITE SOILS, AMENDED ON–SITE SOILS, OR IMPORTED SOILS MEETING THE FOLLOWING CRITERIA:

A. NOT TO CONTAIN MATERIALS HARMFUL TO PLANT LIFE, TO BE CLEAN, FERTILE, FRIABLE, AND WELL DRAINING. ALL PLANTING SOIL SHALL BE FREE OF ANY SUBSOIL EARTH CLODS, SODS, STONES OVER 1" IN ANY DIMENSION, STICKS, ROOTS, WEEDS, LITTER AND OTHER DELETERIOUS MATERIAL. PLANTING SOIL SHALL BE UNIFORM IN QUALITY AND TEXTURE.
B. PLANTING SOIL SHALL HAVE THE FOLLOWING OPTIMUM RANGES UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.

ORGANIC CONTENT	3% – 6% FOR LAWN OR GRASS AREAS. 4% – 8% FOR TREE AND SHRUB PLANTERS. 8%–16% FOR RETENTION OR DETENTION BASINS.
	(BY LOSS OF IGNITION AT 375 C METHOD OF TESTING)
PH	6.0 – 7.3

C. NUTRIENT LEVELS SHALL BE ACHIEVED BY THE CONTRACTOR'S ADDITION OF AMENDMENTS TO THE PLANTING SOIL TO MEET THE OPTIMUM NUTRIENT LEVELS SPECIFIED IN THE TESTING LABORATORY REPORT FOR EACH OF PLANTS TO BE INSTALLED.
D. SOIL SHALL BE COMPACTED TO A SURFACE PENETRATION RESISTANCE OF 75–125 LBS/SQ.IN.
E. SOIL MAY BE TREATED FOR WEEDS WITH PRE–EMERGENT OR POST–EMERGENT HERBICIDE, AS NEEDED AND AS APPROPRIATE FOR THE APPLICATION SEASON OR LOCATION, OR ELIMINATE GROWTH OF UNWANTED PLANT MATERIAL. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. HERBICIDE APPLICATOR MUST BE LICENSED IN THE STATE OF NEW YORK, AND PERFORM APPLICATIONS IN ACCORDANCE WITH LOCAL REQUIREMENTS, PERMITTING STIPULATIONS, AND ANY OTHER RESTRICTIONS INCLUDING AND IN EXCESS OF STATE AND FEDERAL REGULATIONS.
F. PROPOSED TOPSOIL SHALL MEET THE USDA SOILS TEXTURAL PERCENTAGES OF SAND, SILT, AND CLAY FOR FOLLOWING CLASSIFICATIONS:
– LOAM
– SANDY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS NOT LESS THAN 5%
– SANDY CLAY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS LESS THAN 28%.
G. MODIFICATION TO THE PLANTING SOIL CHARACTERISTICS DESCRIBED ABOVE MAY BE SUBMITTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT. CONTRACTOR MUST DEMONSTRATE PROPOSED CHARACTERISTICS ARE EQUAL TO OR SUPERIOR TO THE SPECIFIED CHARACTERISTICS WITH RESPECT TO SUPPORTING PLANT GROWTH, AND STORMWATER MANAGEMENT.

13. PLANTING AMENDMENTS:
APPLY FERTILIZER AND OTHER AMENDMENTS AS RECOMMENDED FOR EACH PLANTING AREA BY SOIL ANALYSIS. APPLY AMENDMENTS IN A MANNER CONSISTENT WITH MANUFACTURER'S RECOMMENDATIONS. ANY ORGANIC AMENDMENTS SHALL HAVE A pH BETWEEN 4.5 AND 5.5 UNLESS OTHERWISE RECOMMENDED.

14. PLANT REQUIREMENTS: ALL PLANTS SHALL CONFORM IN SIZE AND GRADE TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 (LATEST EDITION). ALL PLANTS SHALL MEET THE ADDITIONAL REQUIREMENTS SET FORTH BELOW AND IN WRITTEN SPECIFICATIONS AS APPLICABLE. ALL TREES AND SHRUBS SHALL HAVE BEEN GROWN AT A COMMERCIAL NURSERY WITHIN 200 MILES OF THE PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL BE HEALTHY, SYMMETRICAL, EVENLY AND DENSELY BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF BARK INJURY, DISEASE, AND INSECT PESTS. ALL TREES SHALL HAVE A STRAIGHT TRUNK WITH A SINGLE MAIN LEADER UNLESS OTHERWISE CHARACTERISTIC OF THE SPECIES OR VARIETY. THE OWNER OR LANDSCAPE ARCHITECT WILL ALLOW SUBSTITUTIONS ONLY UPON WRITTEN APPROVAL. SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED MAY BE USED IF APPROVED, BUT THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL OVERSTORY TREES PLANTED ALONG PARKING AREAS, SIDEWALKS AND PEDESTRIAN ACCESSES SHALL NOT BRANCH BELOW 7' FEET IF THE TREE CALIPER IS 3" INCHES OR GREATER. ALL PLANT MATERIALS ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE. THE CONTRACTOR SHALL COORDINATE SOURCE VISITS WITH THE LANDSCAPE ARCHITECT AND SHALL ACCOMPANY THE OWNER AND/OR LANDSCAPE ARCHITECT FOR ALL INSPECTIONS. CERTIFICATES OF COMPLIANCE WITH SPECIFICATIONS ARE REQUIRED FOR ALL PLANTS.

15. INSPECTION AND REVIEW:
ALL PLANT MATERIAL SHALL BE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE OR PLACE OF GROWTH. THE CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT ON A SCHEDULE FOR SOURCE VISITS AND ACCOMPANY THE OWNER OR LANDSCAPE ARCHITECT FOR ALL SOURCE INSPECTIONS. CERTIFICATES OF COMPLIANCE ARE REQUIRED FOR ALL PLANT MATERIALS.
PHOTOGRAPHIC REVIEW OF PLANT MATERIAL IS ACCEPTABLE IF APPROVED BY LANDSCAPE ARCHITECT. PHOTOGRAPHS MUST BE PROVIDED IN QUANTITY AND VARIETY TO ALLOW LANDSCAPE ARCHITECT SUFFICIENT INFORMATION TO MAKE A REASONABLE DETERMINATION AS TO THE PLANTS' QUALITY. OWNER AND LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT PLANT MATERIAL DELIVERED TO THE SITE BUT PREVIOUSLY ACCEPTED IF DAMAGED OR NOT PROPERLY MAINTAINED DURING THE DELIVERY PROCESS.

16. PLANTING SEASONS (UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT)

PLANTS	MID–DECEMBER THROUGH MID–MARCH
SEED MIXES	PER MANUFACTURERS RECOMMENDATIONS OR AS LISTED IN SEED MIX NOTES

17. SEEDING MIXTURES: REFER TO SEED MIX NOTES.
SEEDED AREA SHALL BE ACCEPTED WHEN SEED AREA ACHIEVES 90% COVERAGE.

18. ALL SLOPES STEEPER THAN 3:1 RECEIVING A SEED MIX SHALL BE COVERED WITH AN EROSION CONTROL BLANKET OF STRAW FIBER AND BIODEGRADABLE OR PHOTODEGRADABLE NETTING.

19. UNLESS OTHERWISE NOTED IN DRAWING SET, NEW TREELINES SHALL EQUAL CLEARING AND GRUBBING LIMIT FOR CONSTRUCTION.

20. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE SEEDED WITH THE LAWN SEED MIX.

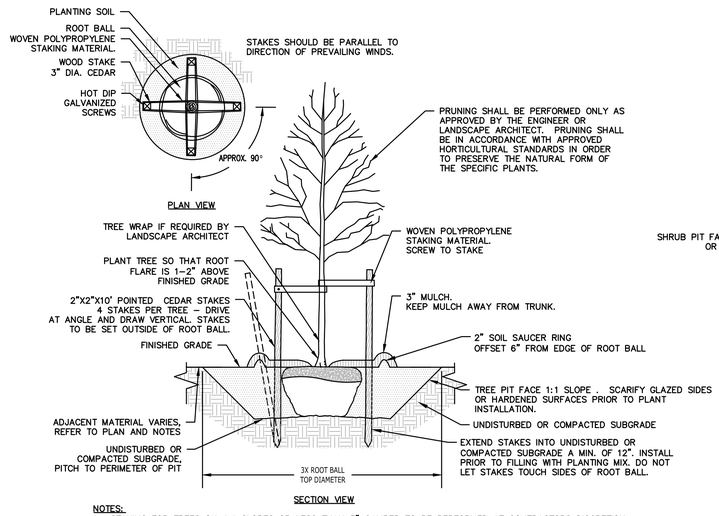
21. PROVIDE AND INSTALL LANDSCAPE EDGING AS NOTED ON DRAWING EQUAL TO ALUMINUM EDGING HEAVY DUTY STRAIGHT PROFILE EDGING: 3/16 INCH THICK BY 4 INCH HIGH, EXTRUDED ALUMINUM LANDSCAPE EDGING FOR STRAIGHT–LINE AND CURVILINEAR APPLICATIONS IN CORRUGATED STRAIGHT PROFILE. FINISH TO BE NATURAL MILL ALUMINUM.

22. TERRASORB WATER MANAGEMENT POLYMERS OR APPROVED EQUAL SHALL BE USED AS A SOIL AMENDMENT AT THE MANUFACTURER'S RECOMMENDED RATE FOR SPECIFIC TREE AND SHRUB SIZES.

23. A PERMANENT AUTOMATIC UNDERGROUND IRRIGATION SYSTEM IS TO BE PROVIDED ON A DESIGN–BUILD BASIS.

SEED MIX NOTES

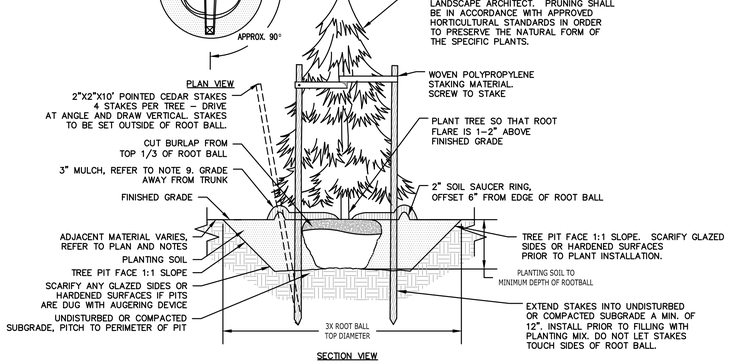
1. LAWN SEEDING MIX:
15 % PERENNIAL RYEGRASS (BLEND OF 3 IMPROVED HYBRIDS)
25 % FINE LEAF OR CREEPING FESCUE (BLEND OF 3 IMPROVED HYBRIDS)
60 % KENTUCKY BLUEGRASS (BLEND OF 3 IMPROVED HYBRIDS)
SEEDING RATE: 5 LBS/1,000 S.F.
SEEDING DATES: AUGUST 15 – OCTOBER 1 AND APRIL 15 – JUNE 30 UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.



NOTES:
1. STAKING FOR TREES ON 4:1 SLOPES OR LESS THAN 3" CALIPER TO BE PERFORMED AT CONTRACTORS DISCRETION.
2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
3. BEFORE IN HOLE, REMOVE BOTTOM OF CAGE. ONCE IN HOLE, REMOVE REST OF CAGE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL – SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC OR HAS BEEN TREATED WITH ANTI–DESICCANT, COMPLETELY REMOVE IT FROM ROOT BALL.

DECIDUOUS TREE PLANTING

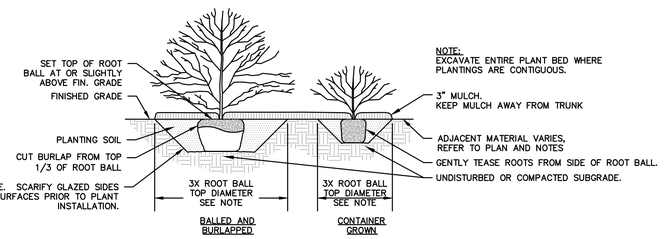
N.T.S



NOTES:
1. STAKING FOR TREES ON 4:1 SLOPES OR LESS TO BE PERFORMED AT CONTRACTOR'S DISCRETION.
2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
3. BEFORE IN HOLE, REMOVE BOTTOM OF CAGE. ONCE IN HOLE, REMOVE REST OF CAGE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL – SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC OR HAS BEEN TREATED WITH ANTI–DESICCANT, COMPLETELY REMOVE IT FROM ROOT BALL.

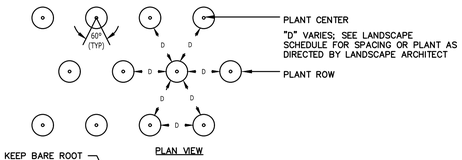
EVERGREEN TREE PLANTING

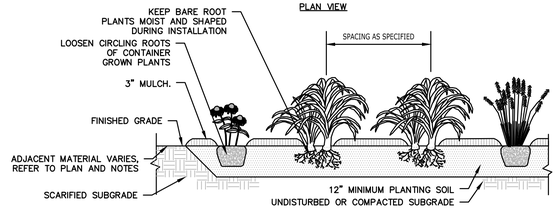
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SHRUB PLANTING

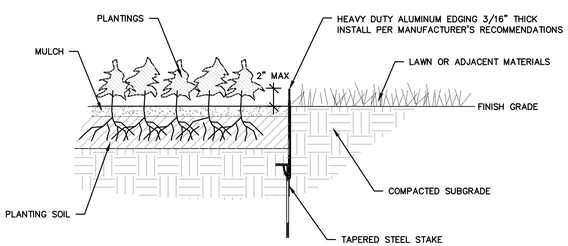
N.T.S





GROUNDCOVER PLANTING

N.T.S



ALUMINUM EDGING DETAIL

N.T.S

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REGISTERED LANDSCAPE ARCHITECT
DOMINICK J. CELTRUDA
003103
STATE OF NEW YORK
7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS

No.	Date	Desc.

Designed	J.C.W.
Drawn	C.B.F.
Reviewed	D.J.C.
Scale	NTS
Project No.	2401824
Date	01/29/2025
CAD File: C2401824-50	

Title
LANDSCAPING NOTES AND DETAILS

Sheet No.
C5.100

Xref (s) : XC2401824S1 ; XB2401824-00 ; XC2401824-20 ; XC2401824-21 ; XC2401824-30 ; XU2401824-01 ; XC2401824-10 ; XM2401824-dwMap

7/17/2026, JLYNN, G:\JOBS\2401824\2401824\DWG\C2401824-50.DWG,C5.100 24X36 NTS,

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IRRIGATION SCHEDULE

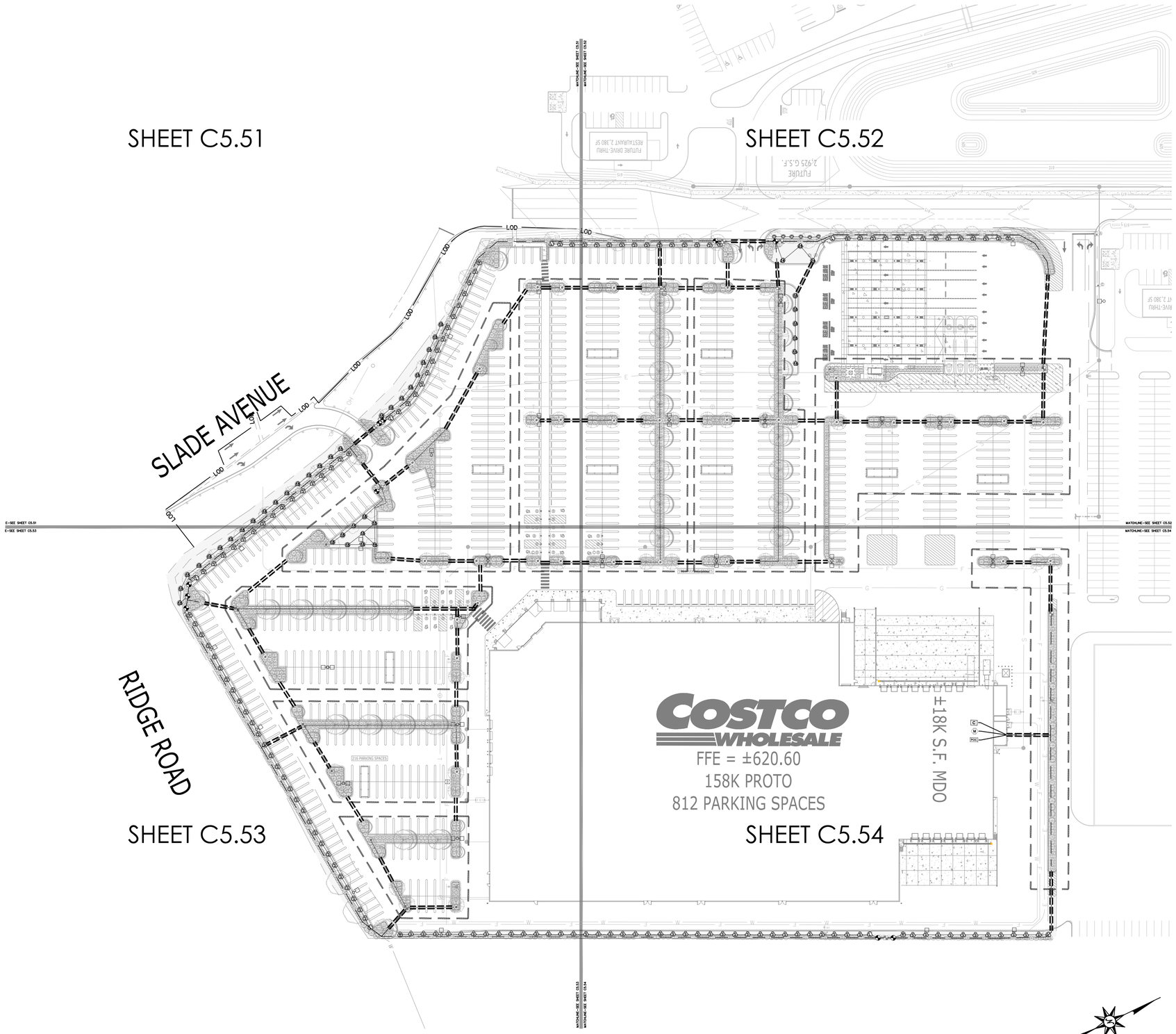
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
LST SST RST	RAIN BIRD R-VAN-STRIP 1804-S-P45 SHRUB ROTARY, 5FT.X15FT. (LCS AND RCS), 5FT.X30FT. (SST) HAND ADJUSTABLE MULTI-STREAM ROTARY W/ 1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET.	145	45
14 ADJ 14 F	RAIN BIRD R-VAN14 1804-S-P45 -75% TURF ROTARY, 8FT.-14FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET.	6	45
18 ADJ 18 F	RAIN BIRD R-VAN18 1804-S-P45 TURF ROTARY, 13FT.-18FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET.	41	45
24 ADJ 24 F	RAIN BIRD R-VAN24 1804-S-P45 TURF ROTARY, 17FT.-24FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET.	3	45

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD XCZ-100-LC 1" WIDE FLOW DRIP CONTROL KIT, FOR LIGHT COMMERCIAL USES. 1IN. PEB VALVE, WITH 1IN. PRESSURE REGULATING 40PSI BASKET FILTER. 0.3-20 GPM.	14
	PIPE TRANSITION POINT ABOVE GRADE PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER TO ABOVE GRADE INSTALLATION.	38
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFCV-06-18 XFCV ON-SURFACE LANDSCAPE DRIPLINE WITH A HEAVY-DUTY 3.5 PSI CHECK VALVE. 0.6 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. GREAT FOR ELEVATION CHANGE. SPECIFY XF INSERT FITTINGS.	30,106 LF

SYMBOL	MANUFACTURER/MODEL	QTY
	RAIN BIRD PEB-IVM 2"	10
M	RAIN BIRD EFB-CP 2"	1
C	RAIN BIRD ESP-2WIRE (120VAC)	1
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	6,192 LF
	IRRIGATION MAINLINE: PVC SCHEDULE 40	3,758 LF
	PIPE SLEEVE: 2-4" SCHEDULE 40 PVC	2,096 LF

ZONE SCHEDULE

ZONE	HEAD TYPE	GPM
1	Turf Rotary	5.76
2	Turf Rotary	18.0
3	Turf Rotary	13.7
4	Turf Rotary	12.9
5	Turf Rotary	7.44
6	Turf Rotary	8.54
7	Turf Rotary	7.2
8	Turf Rotary	6.72
9	Turf Rotary	19.1
10	All Drip	14.8
11	All Drip	14.5
12	All Drip	7.64
13	All Drip	10.9
14	All Drip	6.59
15	All Drip	11.0
16	All Drip	18.7
17	All Drip	18.0
18	All Drip	22.0
19	All Drip	20
20	All Drip	17
21	All Drip	14.6
22	All Drip	10.4
23	All Drip	14.6
24	Turf Rotary	8.72



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DOMINICK J. CELTRUDA
003103
STATE OF NEW YORK

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

No.	REVISIONS Date	Desc.

Designed	J.C.W.
Drawn	C.B.F.
Reviewed	D.J.C.
Scale	1"=60'
Project No.	2401824
Date	07/17/2026

CAD File: C2401824-55

Title
OVERALL IRRIGATION PLAN

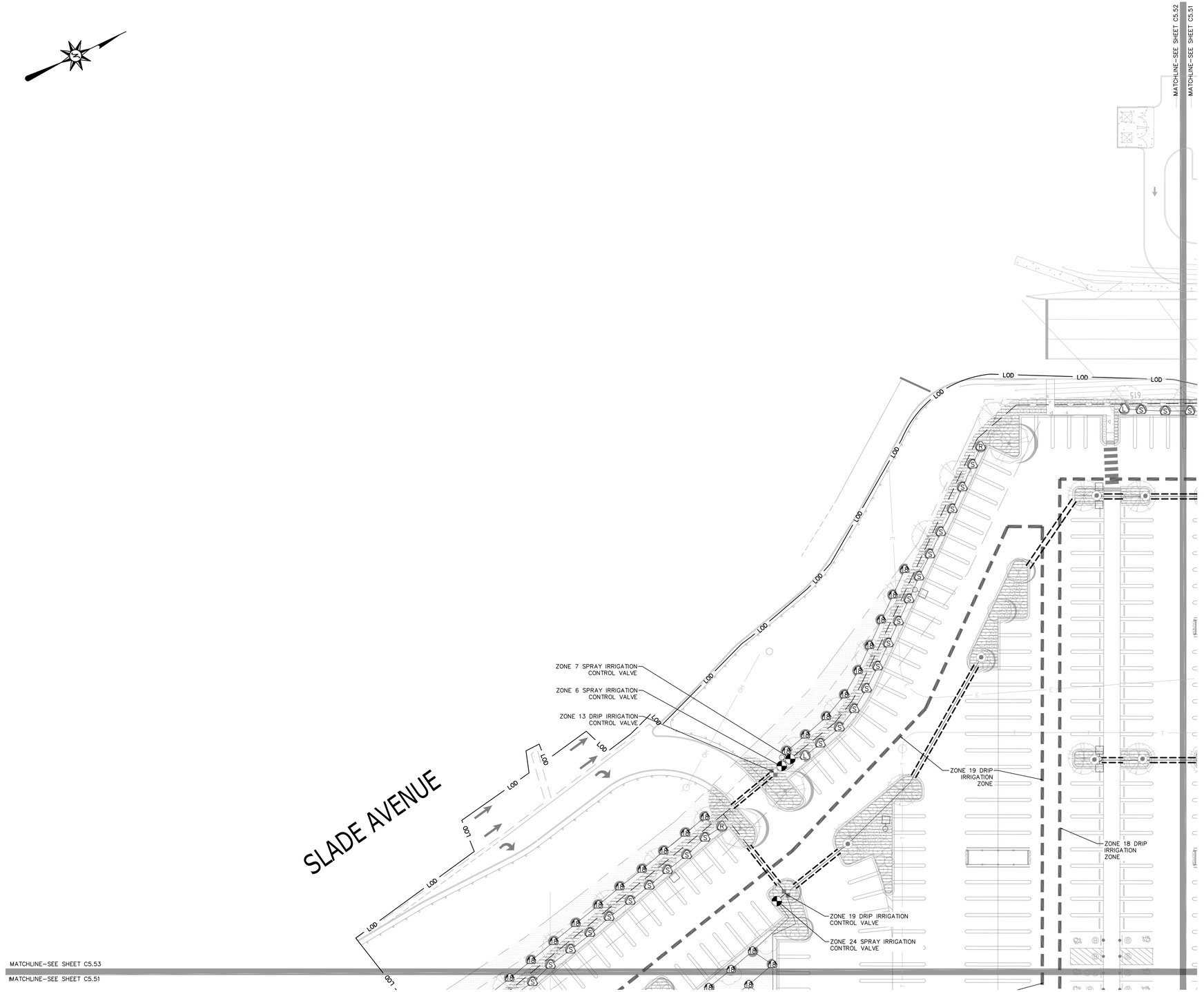
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KEY MAP



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Reviewed	D.J.C.
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Date	07/17/2026

CAD File: C2401824-55

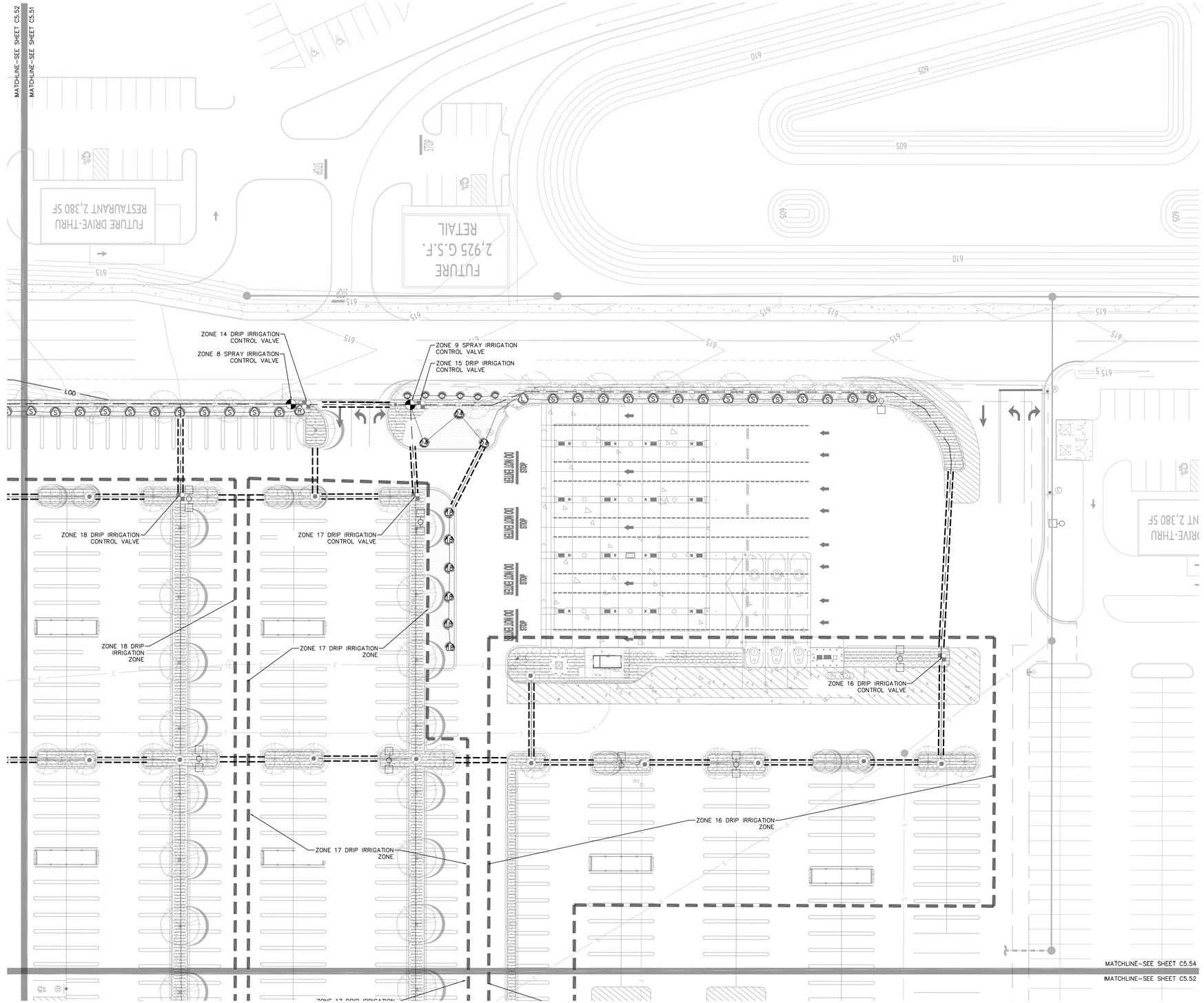
Title
IRRIGATION PLAN

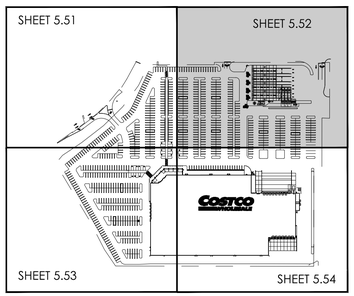
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7/17/2026, JLYNN, G:\JOBS\24\10\2401824\10\DWG\C2401824-55.DWG,C5.51 24X36 3DSC

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IRRIGATION PLAN

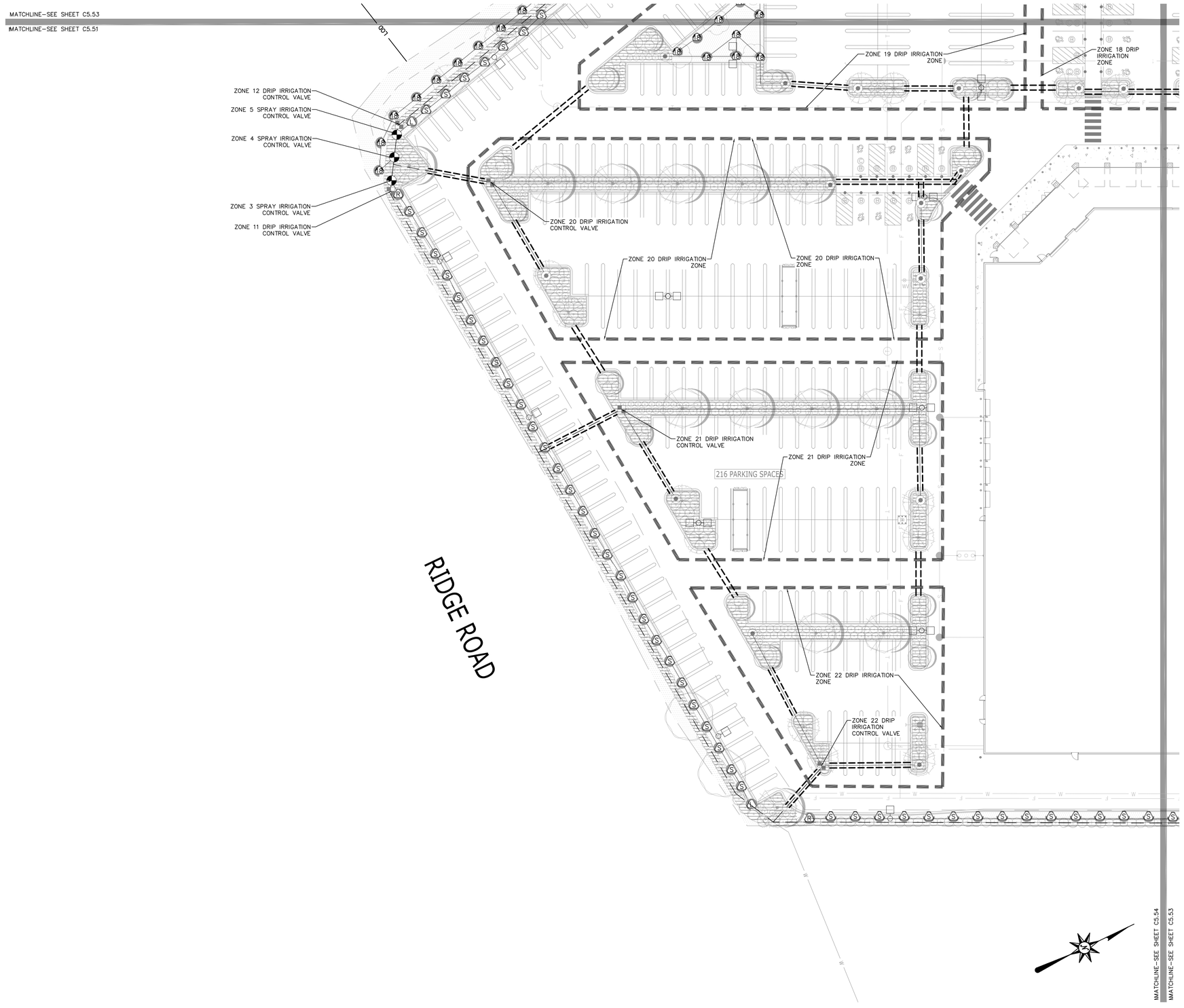
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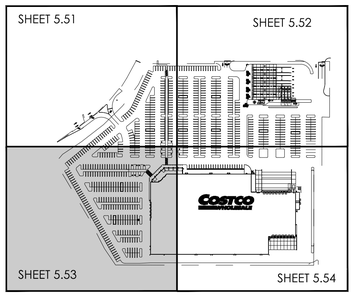
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REVISIONS

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Reviewed	D.J.C.
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Project No.	2401824
Date	07/17/2026

CAD File: C2401824-55

Title

IRRIGATION PLAN

Sheet No.

C5.53

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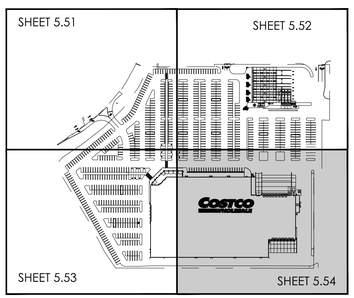
COSTCO WHOLESALE

FFE = ±620.60

158K PROTO

812 PARKING SPACES

±18K S.F. MDO



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Reviewed	D.J.C.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
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Title
IRRIGATION PLAN

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IRRIGATION PLAN NOTES (COSTCO STANDARDS)

1. THE CONTRACTOR TO PROVIDE SEPARATELY METERED WATER SERVICE FOR IRRIGATION SYSTEM.
2. THE CONTRACTOR TO PROVIDE APANA METER ON COSTCO MAINLINE DOWNSTREAM OF IRRIGATION METER, FOR COSTCO MONITORING OF WATER USE AND TO REDUCE WATER WASTE. METER TO BE OBTAINED FROM APANA.
3. TO COORDINATE WITH APANA REVIEW AND MONITORING, THE CONTROLLER SHALL BE PROGRAMMED WITH A "TEST1" PROGRAM WITH ONLY ONE (1) ZONE TO OPERATE AT A TIME, A FIVE-MINUTE DELAY BETWEEN EACH WATERING ZONE, ONLY WATER DURING OVERNIGHT HOURS (10PM -6AM, TO THE EXTENT FEASIBLE). CONTRACTOR SHALL PROVIDE CONTROLLER WATERING SCHEDULE TO COSTCO AND APANA AT COMPLETION.
4. THE CONTRACTOR TO PROVIDE A NORMALLY CLOSED, SOLENOID-OPERATED MASTER VALVE AT POINT OF CONNECTION, WIRED TO MASTER VALVE CIRCUIT ON CONTROLLER, TO REDUCE RISK OF WATER WASTE FROM LEAKS OR BREAKS IN SYSTEM.
5. THE CONTRACTOR TO PROVIDE A MINIMUM OF TWO (2) SPARE IRRIGATION CONTROL WIRES FROM THE CONTROLLER THROUGH ALL IRRIGATION ZONES FOR FUTURE USE (COLOR ORANGE). (NO SPARES REQUIRED IF TWO-WIRE SYSTEM.)
6. THE CONTRACTOR TO PROVIDE QUICK COUPLERS FOR SITE MAINTENANCE TO A REASONABLE EXTENT AROUND THE SITE: TWO (2) AT THE FUEL FACILITY, ONE (1) AT THE POINT OF CONNECTION, AND OTHERS AS NECESSARY AT APPROXIMATELY TWO HUNDRED (200) FEET (61 M) ON CENTER AROUND SITE.
7. INSTALL ALL IRRIGATION TO CREATE AN OBSTRUCTION FREE LANDSCAPE USING POP UP HEADS AND BURIED, STAKED DRIPPER LINES. STAKE DRIPPER LINES WITH MINIMUM SIX (6) INCH (152 MM) STAPLES AT MINIMUM FOUR (4) FEET (1 M) ON CENTER.
8. MAINTAIN THE FOLLOWING MINIMUM DEPTHS FOR IRRIGATION PIPING. PIPE TRENCHES SHALL BE BEDDED IN CLEAN SAND OR NATIVE MATERIAL FREE OF ROCK AND DEBRIS:
   A. MAINLINES COLD CLIMATE: EIGHTEEN (18) INCH (457.2 MM)
   B. LATERALS ALL ZONES: TWELVE (12) INCH (304.8 MM)
9. UPON COMPLETION OF MAINLINE AND PRIOR TO BACKFILL, THE CONTRACTOR TO PRESSURE TEST ENTIRE WATER-FILLED MAINLINE (WITH VALVES AND BACKFLOW CLOSED) AT ONE HUNDRED AND FIFTY (150) POUNDS PER SQUARE INCH (1034 KPA) FOR THIRTY (30) MINUTES USING A PUMP.
10. THE CONTRACTOR TO REPAIR ANY SYSTEMS WHICH EXCEED A FIVE (5) POUNDS PER SQUARE INCH (34 KPA) DROP (< ONE HUNDRED AND FORTY-FIVE (145) POUNDS PER SQUARE INCH (1000 KPA) IN THIRTY (30) MINUTES OF TESTING, UNTIL THIS STANDARD CAN BE ACHIEVED/VERIFIED.
11. IN COLD CLIMATES, IRRIGATION SYSTEM SHALL BE ANNUALLY WINTERIZED THEN RESTARTED IN THE SPRING, BASED ON LOCAL CLIMATIC CONDITIONS. RETEST ENTIRE SYSTEM AT SPRING STARTUP
12. THOROUGH QUALITY CONTROL IS REQUIRED FROM THE DEVELOPER, LANDSCAPE AND IRRIGATION DESIGNER, GENERAL CONTRACTOR, AND SUBCONTRACTORS IN ORDER TO PROVIDE ACCEPTABLE INSTALLATION OF ALL WORK.
13. WHEN A DEVELOPER / SELLER IS RESPONSIBLE FOR PROVIDING LANDSCAPING, THEY SHALL BE RESPONSIBLE FOR ACHIEVING ALL REQUIREMENTS HEREIN, BOTH DURING DESIGN AND THROUGH CONSTRUCTION, INCLUDING PERIODIC REVIEW OF THE CONTRACTOR'S WORK. REVIEW BY A COSTCO WHOLESALE REPRESENTATIVE OR LANDSCAPE CONSULTANT SHALL OCCUR PRIOR TO FINAL ACCEPTANCE. TYPICAL CONSTRUCTION CHECK LISTS ARE INCLUDED AS EXHIBITS FOR REVIEW AND DOCUMENTATION OF CRITICAL ITEMS DURING CONSTRUCTION.
14. THE CONTRACTOR TO PROVIDE COMPLETE AS-BUILT IRRIGATION DRAWINGS TO CLEARLY IDENTIFY THE INSTALLED LOCATIONS OF ALL IRRIGATION EQUIPMENT AND PIPE ROUTES.
15. THE FOLLOWING ITEMS SHALL BE CLEARLY IDENTIFIED AND DIMENSIONED AT A MINIMUM ON THE AS-BUILT DOCUMENTS:
   A. POINTS OF CONNECTION FOR WATER AND ELECTRICAL, ALL VALVES (CONTROL, ISOLATION / GATE, QUICK COUPLING, DRAIN), MAINLINE PIPING, CONTROL WIRING ROUTES, WIRE SPLICE BOXES, AND ANY OTHER IRRIGATION EQUIPMENT ON SITE.
   B. PROVIDE COLOR-CODED CONTROLLER CHART TO CLEARLY IDENTIFY EACH ZONE BY SEPARATE COLOR AND NUMBER, ON A REDUCED, REPRODUCIBLE DRAWING, ONE FOR EACH CONTROLLER. COLOR CONTROLLER CHART MUST BE MOUNTED WITHIN OR ADJACENT TO CONTROLLER.
16. THE DEVELOPER / CONTRACTOR SHALL PROFESSIONALLY MAINTAIN ALL LANDSCAPING FOR A MINIMUM PERIOD OF ONE (1) YEAR FOLLOWING ACCEPTANCE BY COSTCO WHOLESALE. IF THE JURISDICTION REQUIRES A TWO (2) YEAR OR LONGER WARRANTY, THE DEVELOPER / CONTRACTOR MAINTENANCE AND WARRANTY SHALL BE EXTENDED TO MATCH THE JURISDICTIONAL REQUIREMENTS.
17. CONTRACTOR'S BONDS SHALL BE EXTENDED TO MATCH THE MAINTENANCE AND WARRANTY PERIOD.
18. THE DEVELOPER / CONTRACTOR SHALL PROVIDE A LANDSCAPING AND IRRIGATION MAINTENANCE MATRIX, WHICH DOCUMENTS THE MAINTENANCE PLAN, PRIOR TO FINAL ACCEPTANCE BY COSTCO WHOLESALE.

IRRIGATION PLAN NOTES (GENERAL)

1. SYSTEM IS DESIGNED FOR UP TO 25 GPM PER ZONE. PRESSURE REQUIRED AT THE INLET TO THE 2" RPD IS 75 PSI MINIMUM.
2. PRESSURE SHALL BE VERIFIED PRIOR TO THE COMMENCEMENT OF WORK. A BOOSTER PUMP SHALL BE PROVIDED BY THE IRRIGATION INSTALLER IN THE EVENT THE PRESSURE IS NOT ADEQUATE ENOUGH TO RUN THIS SYSTEM.
3. FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. DESIGN IS DIAGRAMMATIC. INSTALLER SHALL FIELD LOCATE ALL ITEMS WITHOUT COMPROMISING THE INTEGRITY OF THIS DESIGN. ANY CHANGES TO THE NUMBER OF HEADS OR VALVES, OR TO THE HYDRAULICS SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF WORK. PIPE ROUTING, HEAD AND VALVE PLACEMENT SHALL BE THE RESPONSIBILITY OF THE INSTALLER, USING THIS DESIGN AS A GUIDE.
5. AVERAGE RUN TIMES PER ZONE TO ACHIEVE 1" OF WATER PER WEEK IS AS FOLLOWS:
   A. ROTATOR: 25 MINUTES PER DAY (MIN/DAY);
   B. DRIPPERLINE: 35 MIN/DAY;
   C. TREE RING: 45 MIN./DAY.
   D. END USER SHALL PROPERLY ADJUST RUN TIMES FOR CHANGING FIELD AND SEASONAL CONDITIONS. CONTROLLER TO BE PROGRAMMED FOR MULTIPLE ZONES AT ONCE.
6. IRRIGATION INSTALLER IS RESPONSIBLE FOR, BUT NOT LIMITED TO THE COMPLETE INSTALLATION OF THIS IRRIGATION SYSTEM. FOLLOW ALL APPLICABLE CODES AND LAWS. CONTACT A UTILITY MARKING COMPANY PRIOR TO THE COMMENCEMENT OF WORK. IRRIGATION WORK TO INCLUDE ATTACHING TO THE WATER SUPPLY, VERIFYING THE PRESSURE & REPORTING RESULTS TO THE G.C., CONTROLLER INSTALLATION, BACKFLOW PREVENTOR INSTALLATION, RAIN SENSOR INSTALLATION, DRIP, SPRINKLERS, PIPE & WIRE, VALVES, AND RELATED ITEMS.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE POINT OF CONNECTION, 115 VAC POWER FOR THE CONTROLLER, SLEEVING & CONDUIT, AND RELATED ITEMS.
8. THE IRRIGATION SYSTEM SHALL NOT OPERATE UNTIL THE WATER CONNECTION HAS BEEN MADE TO THE WATER MAIN.
9. WARRANTY: THE ENTIRE IRRIGATION SYSTEM WILL BE UNCONDITIONALLY GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL INSPECTION (AND ACCEPTANCE).
10. IN ADDITION TO MINOR ADJUSTMENTS, SYSTEM COMPONENTS INCLUDING ELECTRICAL CONTROLS, LINES, VALVES, SPRAY HEADS OR OTHER WORKING PARTS SHALL BE REPAIRED OR REPLACED WITHOUT COST TO THE OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE.
11. SUBMITTALS:
   A. PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL DATA AND INSTALLATION INSTRUCTIONS FOR IRRIGATION SYSTEM AND ACCESSORIES.
   B. QUALIFICATION DATA: INSTALLER SHALL HAVE (5) YEARS MINIMUM EXPERIENCE IN RELATED PROJECTS.
   C. AS-BUILT DRAWINGS: CONTRACTOR TO PREPARE AND SUBMIT AS-BUILT DRAWINGS SHOWING INSTALLED CONDITIONS.
   D. OPERATION AND MAINTENANCE DATA: FOR IRRIGATION SYSTEMS, TO INCLUDE IN EMERGENCY, OPERATION AND MAINTENANCE MANUALS.
12. THE CONTRACTOR SHALL VERIFY SITE CONDITIONS, INCLUDING UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL REPAIR ANY DAMAGE TO SITE.
13. THE CONTRACTOR SHALL ADJUST ARC AND THROW OF IRRIGATION HEADS TO AVOID OVERSPRAY ONTO WALKS.
14. THE CONTRACTOR SHALL COORDINATE SCHEDULE AND INSTALLATION OF THE IRRIGATION SYSTEM WITH THE CONSTRUCTION MANAGER AND OWNER'S REPRESENTATIVE.
15. PIPE INSTALLATION:
   A. PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH MANUFACTURER'S NAME, SIZE, SCHEDULE, TYPE, AND WORKING PRESSURE. SIZE PIPE TO ENSURE ADEQUATE PRESSURE COVERAGE, AND TO KEEP VELOCITIES UNDER 5 FEET PER SECOND.
   B. OVER-EXCAVATE TRENCHES 2" AND BRING BACK TO INDICATED DEPTH BY FILLING WITH FINE, ROCK-FREE SOIL OR SAND. COVER PIPE BOTH TOP AND SIDES WITH 2" OF LIKE MATERIAL. IN NO CASE SHALL THERE BE LESS THAN 2" OF ROCK-FREE SOIL OR SAND SURROUNDING PIPE.
   C. INSTALL WARNING TAPE DIRECTLY ABOVE PRESSURE PIPING, 12 INCHES BELOW FINISHED GRADES, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENT AND SLABS.
   D. UNLESS OTHERWISE INDICATED ON DRAWINGS, INSTALL MAIN LINES AND LATERAL LINES CONNECTING POP-UP SPRINKLERS WITH A MINIMUM COVER OF 18" (MAIN LINES) AND 12" (LATERAL LINES) BASED ON FINISHED GRADE.
   E. INSTALL PIPE UNDER ROADWAYS, SIDEWALKS AND CONCRETE PADS IN 4" PVC SLEEVES, UNLESS OTHERWISE NOTED.
16. SPRINKLER INSTALLATION:
   A. SET SPRINKLER HEADS AND QUICK-COUPLING VALVES PERPENDICULAR TO FINISH GRADE.
   B. SET LAWN SPRINKLER HEADS ADJACENT TO EXISTING WALKS, CURBS, AND OTHER PAVED AREAS TO GRADE. SET SPRINKLER HEADS INSTALLED IN LAWN AREAS, WHERE TURF HAS NOT YET BEEN ESTABLISHED, 4" ABOVE PROPOSED FINISH GRADE. LOWER HEADS INSTALLED IN THIS MANNER TO GRADE WHEN TURF IS SUFFICIENTLY ESTABLISHED. SUCH LOWERING OR HEADS SHALL BE PART OF ORIGINAL CONTRACT WITH NO ADDITIONAL COST TO OWNER.
17. DRAINING. SYSTEM SHALL BE CONSTRUCTED AND INSTALLED IN A MANNER TO ACCOMMODATE DRAINING BY "BLOWING OUT" THE SYSTEM AT THE END OF THE SEASON IN ORDER TO PROTECT THE SYSTEM FROM FREEZE DAMAGE.
18. IRRIGATION SYSTEM AND CONTROLLER SHALL MEET MANUFACTURER'S SPECIFICATIONS AND LOCAL CODES FOR GROUNDING AND SURGE PROTECTION.
19. SYSTEM SHALL INCLUDE FLOW SENSING AND SHUT-OFF EQUIPMENT TO DETECT EXCESSIVELY HIGH FLOWS AND TO SHUT THE SYSTEM DOWN.
20. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS AND LOCAL ORDINANCES.
21. TESTING:
   A. CONDUCT TESTING IN PRESENCE OF OWNER AND/OR OWNER'S REPRESENTATIVE
   B. HYDROSTATIC TEST: TEST WATER PIPING, JOINTS AND VALVES, BEFORE BACKFILLING TRENCHES, TO A HYDROSTATIC PRESSURE OF NOT LESS THAN 150 PSI.
   C. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, OPERATE CONTROLLERS AND AUTOMATIC CONTROL VALVES TO CONFIRM PROPER SYSTEM OPERATION.
   D. AFTER COMPLETION OF GRADING AND PLANTING AREAS, CAREFULLY ADJUST SPRINKLER HEADS SO THEY WILL BE FLUSH WITH OR NOT MORE THAN 1/2" ABOVE FINISH GRADES.
   E. INSTALLER TO ADJUST ALL HEADS AT COMPLETION OF ALL SITE WORK FOR PROPER COVERAGE, OPERATION, THROW, ETC.
   F. THE CONTRACTOR SHALL DRAIN THE IRRIGATION SYSTEM DURING THE FIRST FALL FOLLOWING THE COMPLETION OF INSTALLATION.
   G. THE CONTRACTOR SHALL INSPECT AND TEST THE ENTIRE IRRIGATION SYSTEM DURING THE FIRST SPRING FOLLOWING THE COMPLETION OF INSTALLATION AND MAKE REPAIRS AS NECESSARY TO PROVIDE A FULLY OPERATIONAL SYSTEM.

ISSUED FOR PERMITTING
NOT RELEASED FOR CONSTRUCTION

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Architecture
Engineering
Environmental
Land Surveying

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REGISTERED LANDSCAPE ARCHITECT
DOMINICK J. CELTRUDA
003103
STATE OF NEW YORK

7/17/2026

COSTCO WHOLESALE
SLADE AVENUE
WEST SENECA, NEW YORK

REVISIONS No.	Date	Desc.

Designed	J.C.W.
Drawn	C.B.F.
Reviewed	D.J.C.
Scale	1"=30'
Project No.	2401824
Date	07/17/2026
CAD File: C2401824-55	

Title

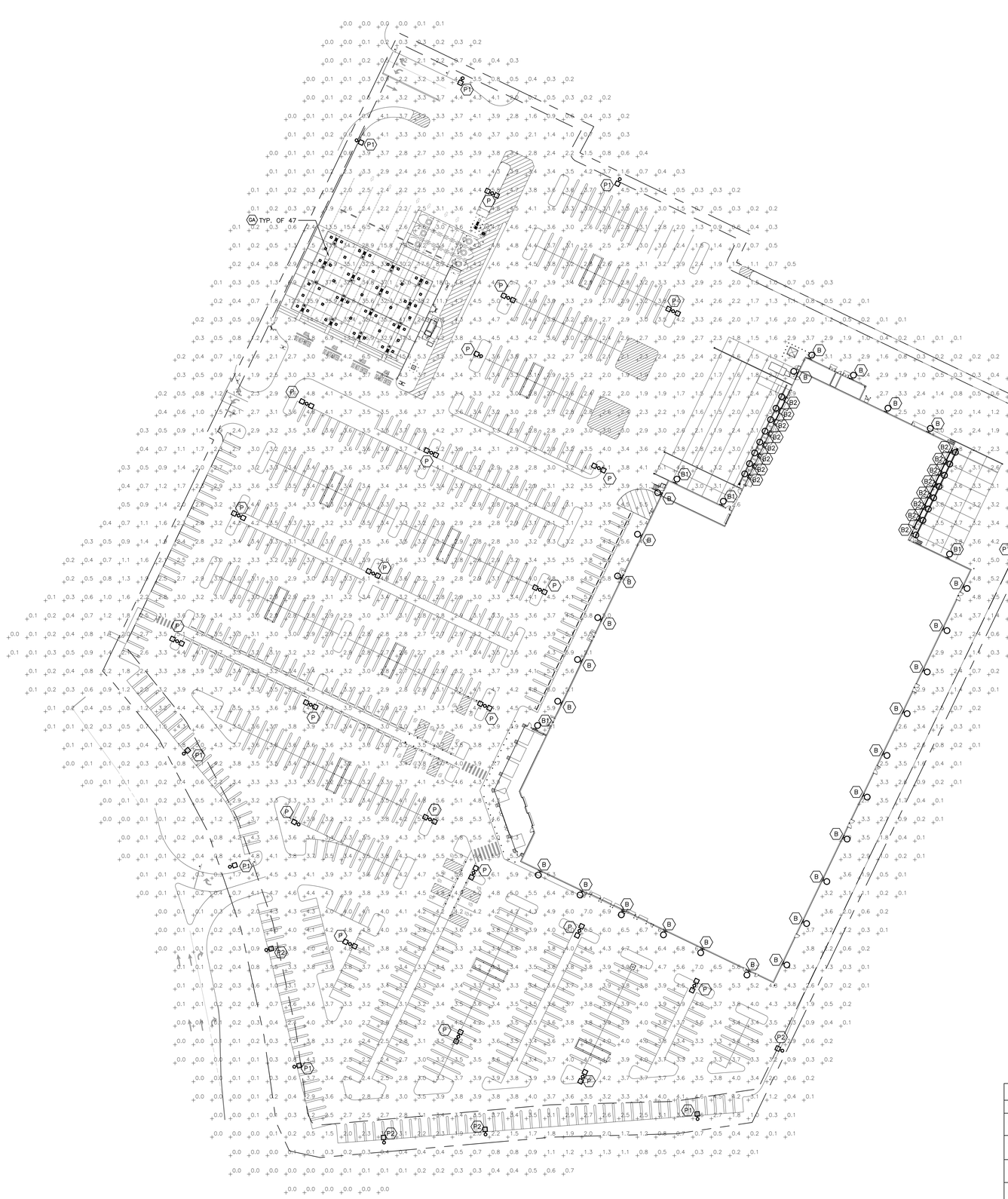
IRRIGATION NOTES

Sheet No.

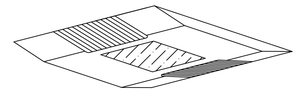
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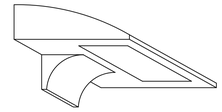
Xref ID: : XY2401824D1 ; XC2401824-01 ; XBM2401824-01 ; XC2401824-02 ; XC2401824-21 ; XC2401824-30 ; XL2401824-01 ; XL2401824-02 ; XM2401824-KeyMap



SITE PHOTOMETRIC PLAN
SCALE: 1" = 50'-0"

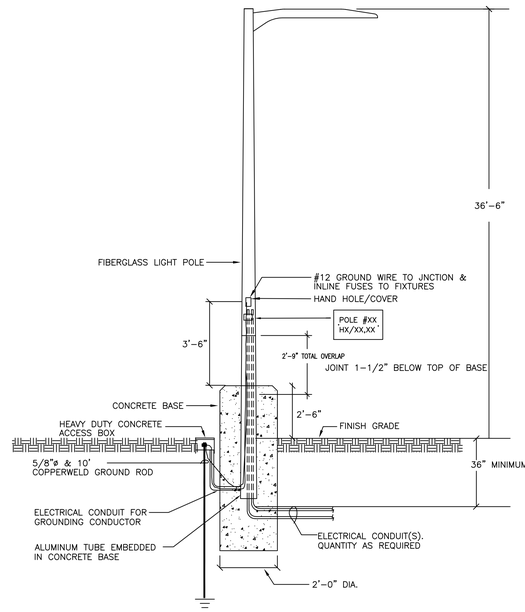


TYPICAL FUEL FACILITY – LED (GA)
NO SCALE



TYPICAL WALLPACKS DETAILS (B, B1, B2 & B3)
SCALE: NTS

SYMBOL LEGEND
- WALLPACK
- POLE LIGHT
- GAS CANOPY LIGHT



NOTE: PROVIDE CONCRETE J-BOX AS REQUIRED.
THIS DETAIL IS FOR ELECTRICAL CONDUITS ROUTING ONLY.
SEE STRUCTURAL DRAWINGS S0.2 FOR DETAILS.

POLE DETAIL
SCALE: NTS

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	NUMBER	LAMPS	MOUNT	WATT	REMARKS	COLOR
B	LITHONIA	DSXW2-LED-P6-40K-T2M -MVOLT-DDBXD	LED	WALL	71	~14 & 20' MOUNTING HEIGHT. EC TO SUPPLY MOUNTING ACCESSORIES SUCH AS PBBW(SURFACE MOUNTED BACKBOX) AS NEEDED.	4000K
B1	LITHONIA	DSXW2-LED-P6-40K-T4M -MVOLT-DDBXD	LED	WALL	71		
B2	LITHONIA	DSXW1-LED-P3-40K-T4M -MVOLT-DDBXD	LED	WALL	21		
GA	CREE	SPY250-C-4L-57K7-F-UL-XX-XXX	LED	SURFACE	31	~18' MOUNTING HEIGHT, SURFACE SYMMETRIC DOWN LIGHT	5700K
P	COOPER	GALN-SA8B-740-U-5WQ-BZ	LED	POLE	325	~36' AFG ON POLE. NUMBER OF HEADS SHALL BE PER PLAN. SEE DETAIL SHEET SE-1.	4000K
P1	COOPER	GALN-SA8B-740-U-SL4-HSS-BZ	LED	POLE	325		
P2	COOPER	GALN-SA4B-740-U-SL3-HSS-BZ	LED	POLE	164		
P3	COOPER	GALN-SA4B-740-U-T2R-HSS-BZ	LED	POLE	164		

FOR QA REVIEW, NOT FOR CONSTRUCTION

DRAWN: NV/JGM CHECKED: ANT/JGM
REVISION DATE:
ISSUE DATE: FEBRUARY 2025
ARCHITECT REFERENCE NO:
PROJECT NO:25-068

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DD PACKAGE

WEST SENECA, NY

SITE PLAN

SE-1

STORMWATER MANAGEMENT REPORT

For the proposed:

Proposed Development

Slade Avenue

West Seneca, New York

Prepared for:

Costco Wholesale

Issued: July 17, 2026



07/17/2016

Architecture
Engineering
Environmental
Land Surveying

BL Companies

PREPARED BY
BL Companies
355 Research Parkway
Meriden, CT 06450

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2.0 UTILITY CONNECTIONS 6

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APPENDICES

Appendix A – Figures and Supporting Documentation

Figure 1 – Location Map

Figure 2 – FEMA Map

Figure 3 – NRCS Soil Map

NOAA Atlas 14 Storm Data (Depth)

NOAA Atlas 14 Storm Data (Intensity)

Appendix B – Conveyance Modeling Results

EXECUTIVE SUMMARY

The proposed Costco Project includes the redevelopment of an existing parcel located northeast of the intersection of Slade Avenue and Ridge Road in the City of West Seneca, Erie County, New York. The Project consists of the construction of an approximately 187,050-square-foot retail warehouse building and a 16-pump fuel facility providing 32 fueling positions.

The proposed development will also include associated parking facilities, utility infrastructure, stormwater management facilities, and landscaping improvements. The Project is located within the West Seneca Exchange master-planned development and will utilize the stormwater quantity and quality controls proposed as part of the overall master development. The Project parcel encompasses approximately 787,828 square feet (18.10 acres) of the 55.57-acre master development area. The total limit of disturbance required to complete the Project is approximately 19.14 acres, including off-site roadway improvements.

The Costco site improvements have been designed in coordination with Carmina Wood Design, the Engineer of Record for the master development. Stormwater runoff from the Costco parcel will be conveyed to and managed within a shared development stormwater basin. A comprehensive stormwater analysis for the overall development is included in the Carmina Wood Design Engineer's Report. BL Companies and Carmina Wood Design have coordinated the stormwater conveyance design for the Costco Project to ensure compliance with all applicable regulatory requirements and design standards.

Utility services for the Project will be provided through a combination of public and private utility infrastructure. Water demand and sanitary sewer analyses are included in the Carmina Wood Design Engineer's Report. BL Companies and Carmina Wood Design have worked collaboratively to coordinate utility demands and verify that sufficient capacity is available to serve the proposed development.

This report, in conjunction with the BL Companies design plans and supporting documentation prepared by Carmina Wood Design, provides a detailed engineering summary of the proposed site's functionality and demonstrates compliance with all applicable local and state regulations, standards, and design requirements.

1.0 SITE INFORMATION

1.1 SITE CONDITIONS

The Project parcel is located northeast of the intersection of Slade Avenue and Ridge Road in the City of West Seneca, Erie County, New York. The existing site is predominantly comprised of a vacant building pad and associated parking areas remaining from a previous development.

Under existing conditions, the majority of the site consists of gently sloping terrain that conveys stormwater runoff to an existing closed drainage system connected to the stormwater infrastructure serving developments located northeast of the Project site. Existing stormwater swales within the former building pad area provide additional conveyance to the closed drainage system. Steeper grades are present along the site's frontage on Slade Avenue and Ridge Road, accommodating approximately 30 feet of elevation change between the roadway surfaces and the developable portions of the site. Within the proposed development limits, topographic variation is generally moderate, with elevations ranging from approximately 624 feet in the southwest portion of the site to 615 feet in the northwest portion.

Off-site runoff enters the Project site from multiple sources, including flow originating at the top of curb along Ridge Road and Slade Avenue, as well as runoff conveyed from the existing railroad corridor located east of the site.

The proposed development will include construction of the retail warehouse building, fuel facility, paved parking areas, landscaped areas, pedestrian sidewalks, site utilities, and a stormwater management system. Development of the site will require demolition and removal of existing utility infrastructure, pavement, landscaping, hardscape features, and other site improvements, as well as clearing and grubbing of existing vegetated areas within the limits of disturbance.

1.1.1 SITE SOILS

The soils in the area of the Property are classified by United States Department of Agriculture Natural Resources Conservation Service and consist primarily of type “B”, “C” and “D” rated soils, with “D” rated soils in areas of urban land and wetlands. Please refer to Appendix A, Figure 3: NRCS Soil Survey Map with Hydrologic Soil Group Data, for soils and their classifications in the project area.

Soils located within the project area from the soil report are as follows:

Map Unit Symbol	Map Unit Name	Hydrologic Soil Group Rating
RgA	Rhinebeck Silt Loam, 0 to 3 Percent Slopes	C/D
NfA	Niagara Silt Loam, 0 to 3 Precent Slopes	C/D
Ud	Urban Land	Unavailable

1.1.2 EXISTING GEOTECHNICAL FINDINGS

A pre-development site characterization and assessment of soil and geology of the site was conducted by Whitestone Associates Engineering & Geology on August 8, 2025.

The geotechnical report indicates that the site generally consists of topsoil or asphaltic concrete overlaying existing fill between 2 feet and 13 feet deep, which is underlain by a lacustrine deposit (generally silt and clay), itself underlain by glacial till, then bedrock.

The full Geotechnical Report can be provided upon request.

1.2 NATURAL RESOURCES

ENVIRONMENTAL CONCERNS

Based on the preliminary environmental review performed by Terracon, the Project Site and adjacent areas are identified as having a high likelihood of potential environmental concerns. These findings are consistent with historical use of the site and adjacent property.

ENDANGERED AND THREATENED SPECIES

Based on information accessed from The New York State Department of Environmental Conservation's (NY DEC) Natural Heritage Program database, the Project Site does not fall within the mapped habitat zone for any endangered species.

1.3 RECEIVING SURFACE WATERS

The Project Site falls within the Cazenovia Creek-Buffalo River watershed which is not listed as impaired within the New York State's 2020/2022 Section 303(d) list. There are no established Total Maximum Daily Loads (TMDLs) for this receiving water.

1.4 FEMA FLOODPLAIN

The site is not located in a FEMA floodplain. Per the FEMA Flood Insurance Rate Map Numbers 36029C0333H for Erie County, New York, map effective date: June, 7, 2019 the site resides inside Zone X (areas determined to be outside the 0.2% annual chance floodplain).

Flood Insurance Rate Maps are included in Appendix A for reference.

2.0 STORMWATER MANAGEMENT STANDARDS AND PERFORMANCE CRITERIA

The proposed stormwater management system has been designed in general conformance with the current Town of West Seneca regulations and the New York State Stormwater Management Design Manual.

The overall stormwater management system for the development has been analyzed by Carmina Wood Design, and the results are documented in the Engineer's Report. BL Companies provided drainage patterns, drainage area delineations, and impervious coverage data to support the stormwater modeling. The proposed site has been designed to maintain existing drainage patterns and avoid adverse impacts to adjacent properties.

The New York State Department of Environmental Conservation (NYSDEC) Stormwater Management Design Manual identifies five primary stormwater management criteria that must be addressed during project design: Water Quality, Runoff Reduction Volume, Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. Because the proposed stormwater system serves as a component of the larger master-planned stormwater management system, compliance with these design criteria is addressed within the Master Plan Stormwater Management Report.

The proposed storm drainage system has been sized to convey the 25-year design storm to the respective discharge points without ponding or hydraulic surcharge above catch basin or manhole grate elevations. Rainfall intensities were developed using the applicable NOAA precipitation data. A minimum pipe diameter of 12 inches is proposed throughout the Costco project area.

Runoff coefficients for each drainage area were calculated as weighted averages based on the proportion of impervious and pervious surfaces contributing runoff. Impervious surfaces, including asphalt pavement, concrete pavement, and building roof areas, were assigned a Rational Method runoff coefficient (C-value) of 0.90. Pervious surfaces, including landscaped and lawn areas, were assigned a runoff coefficient of 0.30.

Tailwater elevations at stormwater management facilities and flared end sections were established based on the computed 25-year design storm water surface elevation within the receiving basin to which each outlet discharges.

The proposed storm drainage system was modeled using StormCAD Version 8i (Bentley Systems, formerly Haestad Methods) utilizing the Rational Method. Supporting hydraulic calculations are provided in Appendix B.

2.0 UTILITY CONNECTIONS

The proposed Costco development will be served by a combination of public and private utility infrastructure. Utility capacity, service connections, and overall coordination have been completed in conjunction with the respective utility providers and Carmina Wood Design.

Sanitary sewer service will be provided through the existing on-site private sewer system. New 8-inch sanitary sewer laterals will be installed to serve the proposed Costco building. The private sewer collection system has been sized to accommodate the projected peak sanitary flows generated by the development. The shared private sewer system ultimately discharges to the municipal public sanitary sewer system.

Domestic water and fire protection service will be provided from an existing water service stub located along the southern portion of the site adjacent to Ridge Road. Hydraulic modeling has been completed to verify that the proposed system can satisfy both domestic water demands and required fire flow criteria. The proposed water distribution system will consist of 10-inch, 12-inch, and 3-inch ductile iron water mains. All water system components and appurtenances will be designed and constructed in accordance with applicable municipal standards and specifications.

Electrical, natural gas, and telecommunications services have been coordinated with the respective utility providers. Final service routing, connection points, and utility layouts will be finalized as the project progresses through final design and utility permitting.

3.0 SITE CONSTRUCTION AND EROSION CONTROLS

The proposed erosion and sediment control plan will be implemented in two phases throughout construction.

Phase 1 consists of installing the initial perimeter erosion and sediment control measures prior to the commencement of any earth-disturbing activities. These measures include filter socks at existing storm drainage inlets, stabilized rock construction entrances, and silt fence installed around the limits of disturbance to prevent sediment from leaving the project site.

During Phase 2, the perimeter erosion and sediment control measures and stabilized construction entrances will remain in place throughout construction. All newly constructed storm drainage inlets will be protected with approved inlet protection devices until the contributing drainage areas have been permanently stabilized. Areas that have reached final grade shall be promptly stabilized with a minimum of six (6) inches of topsoil, followed by seeding and mulch. Slopes steeper than 3H:1V shall be stabilized with wildlife-friendly erosion control matting composed of all-natural materials with no photodegradable synthetic components prior to the application of seed and mulch.

Topsoil stripped during construction shall be stockpiled on-site for reuse. All topsoil stockpiles shall be temporarily stabilized with seed and surrounded by filter socks or other approved sediment control measures to minimize erosion and prevent off-site sediment transport.

Any dewatering associated with trench excavation, stormwater management facilities, or other construction activities shall be conducted in a manner that prevents sediment discharge and avoids the creation of accelerated erosion.

Throughout construction, all erosion and sediment control best management practices (BMPs) shall be inspected at least once per week and after each significant rainfall event. Any damaged or ineffective BMPs shall be repaired, replaced, or supplemented within 24 hours of the inspection or rainfall event to maintain their effectiveness.

Refer to the project plans for the complete construction sequence and erosion and sediment control requirements.

4.0 CONCLUSIONS & RECOMMENDATION

With the implementation of the proposed stormwater management system for this project, in conjunction with the master-planned stormwater management system constructed as part of the overall development, the proposed project will not result in adverse impacts to on-site conditions, downstream properties, or off-site storm drainage systems. The combined stormwater management system has been designed to mitigate post-development peak runoff rates in accordance with the project design criteria. The on-site storm drainage collection system has been sized to convey the 25-year design storm without ponding or hydraulic surcharge above catch basin or manhole grate elevations.

This report has been prepared to supplement the accompanying project plans and to provide the technical basis for the stormwater management design presented herein. Based on the analyses performed and the proposed design, it is our opinion that the stormwater management system has been designed in general conformance with the applicable requirements of the Town of West Seneca and the New York State Stormwater Management Design Manual.

APPENDIX A

FIGURES AND SUPPORTING DOCUMENTATION



Architecture
Engineering
Environmental
Land Surveying

BL Companies

COSTCO

SLADE AVENUE
WEST SENECA, NEW YORK

Designed	A.J.C.
Drawn	A.J.C.
Reviewed	J.A.B.
Scale	1"=1000'
Project No.	2401824
Date	05/13/2026
CAD File:	EXH2401824-01-FIG1

FIGURE 1

LOCATION MAP

4/20/2026, ACROWLEY, G:\JOBS24\18\2401824\DWG\EXH2401824-01-FIG1.DWG.FIG1 8.5X11 1000SC.

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Base map information shown on this FIRM was derived from multiple sources, including the New York State Office of Cyber Security & Critical Infrastructure Coordination, and the USDA's Farm Service Agency, Aerial Photography Field Office, dated 2015.

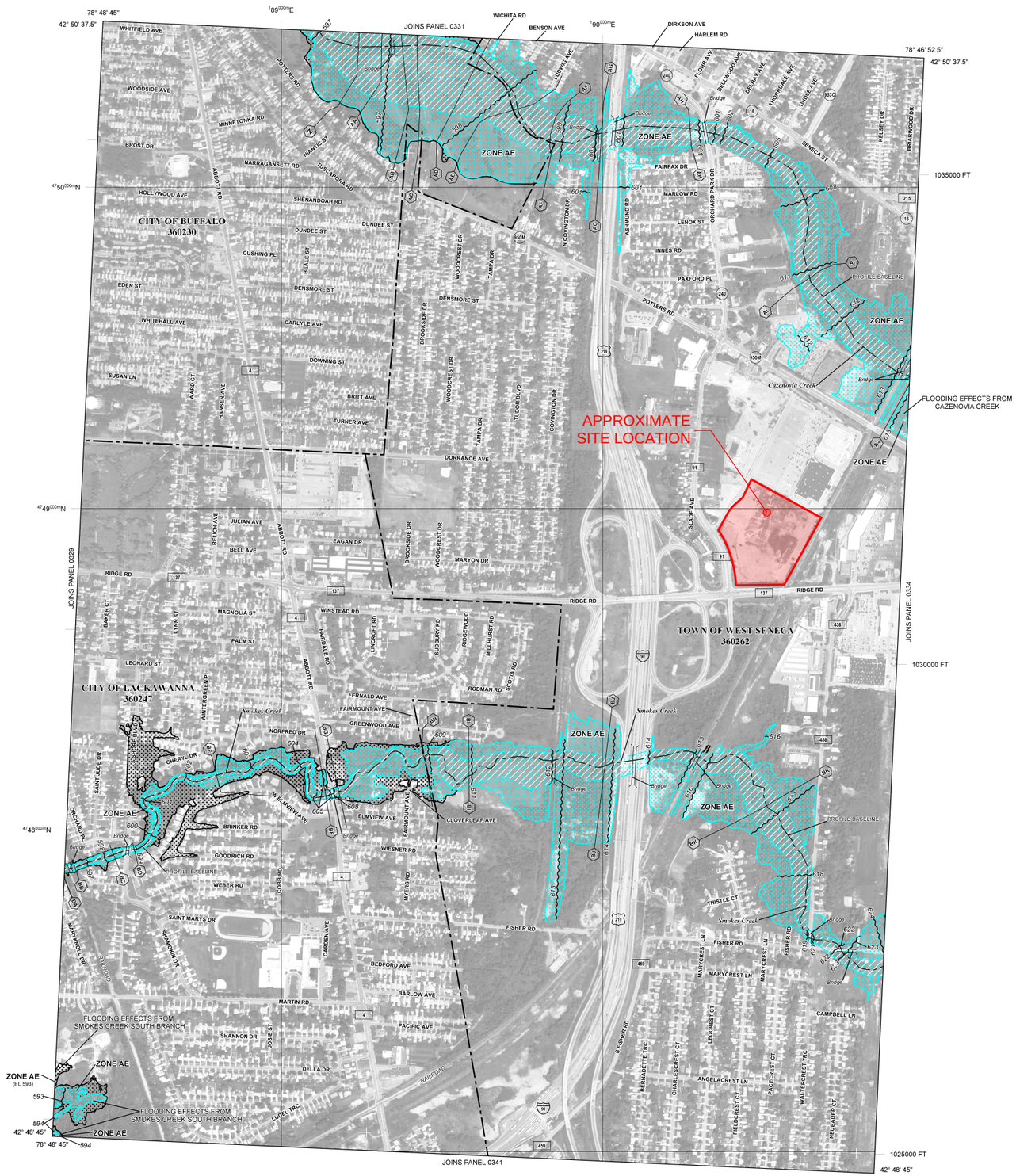
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: New York State Plane West Zone (FIPS Zone 3103), Transverse Mercator projection
- 4489000m N — 1000-meter Universal Transverse Mercator grid values, zone 18
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 26, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
June 7, 2019 - to add or change Special Flood Hazard Areas.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0333H

FIRM

FLOOD INSURANCE RATE MAP

ERIE COUNTY, NEW YORK (ALL JURISDICTIONS)

PANEL 333 OF 807
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUFFALO, CITY OF	360230	0333	H
LACKAWANNA, CITY OF	360247	0333	H
WEST SENECA, TOWN OF	360262	0333	H

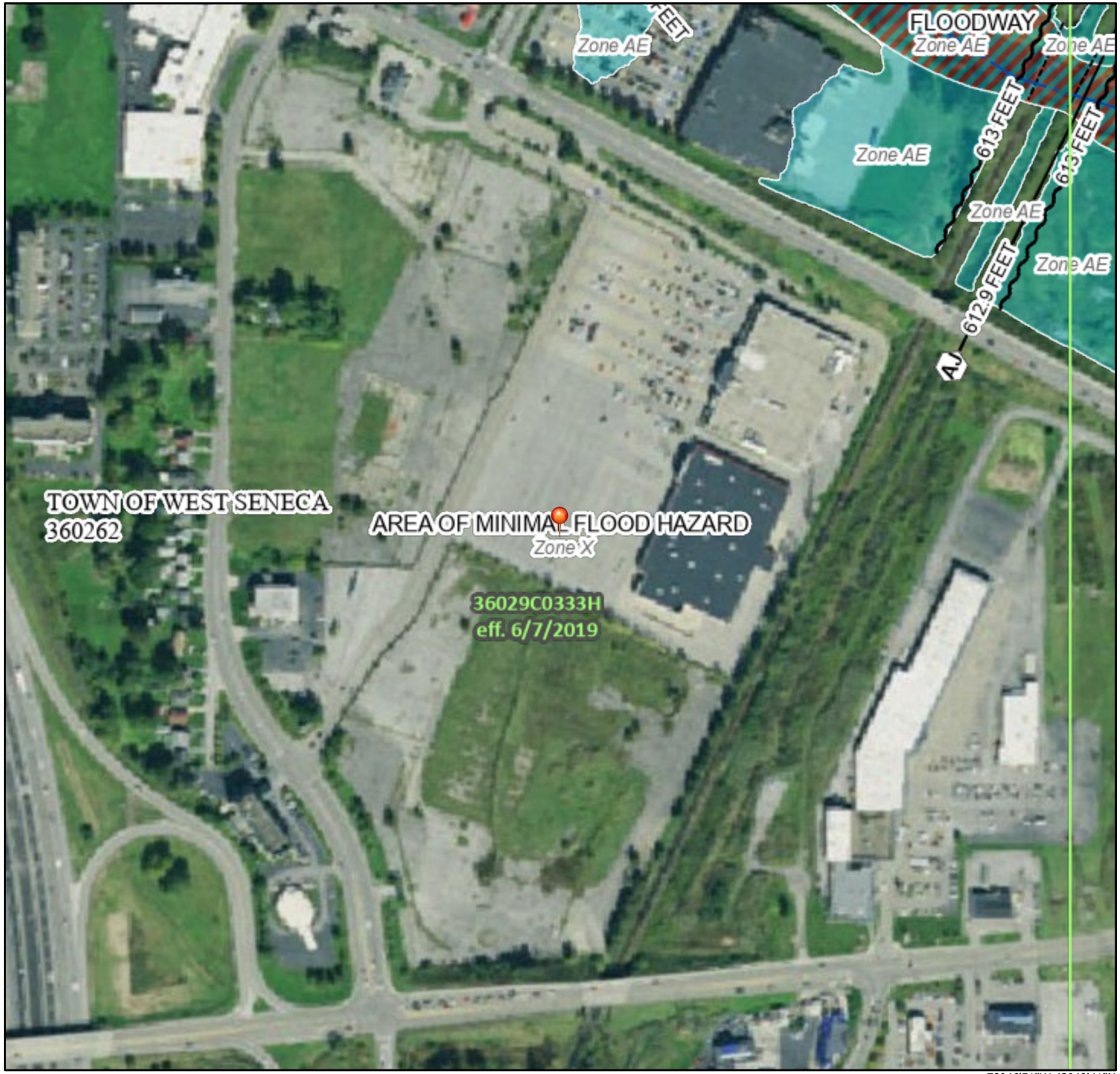
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36029C0333H
MAP REVISED
JUNE 7, 2019

Federal Emergency Management Agency

National Flood Hazard Layer FIRMette

78°47'28"W 42°50'8"N



78°46'51"W 42°49'41"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

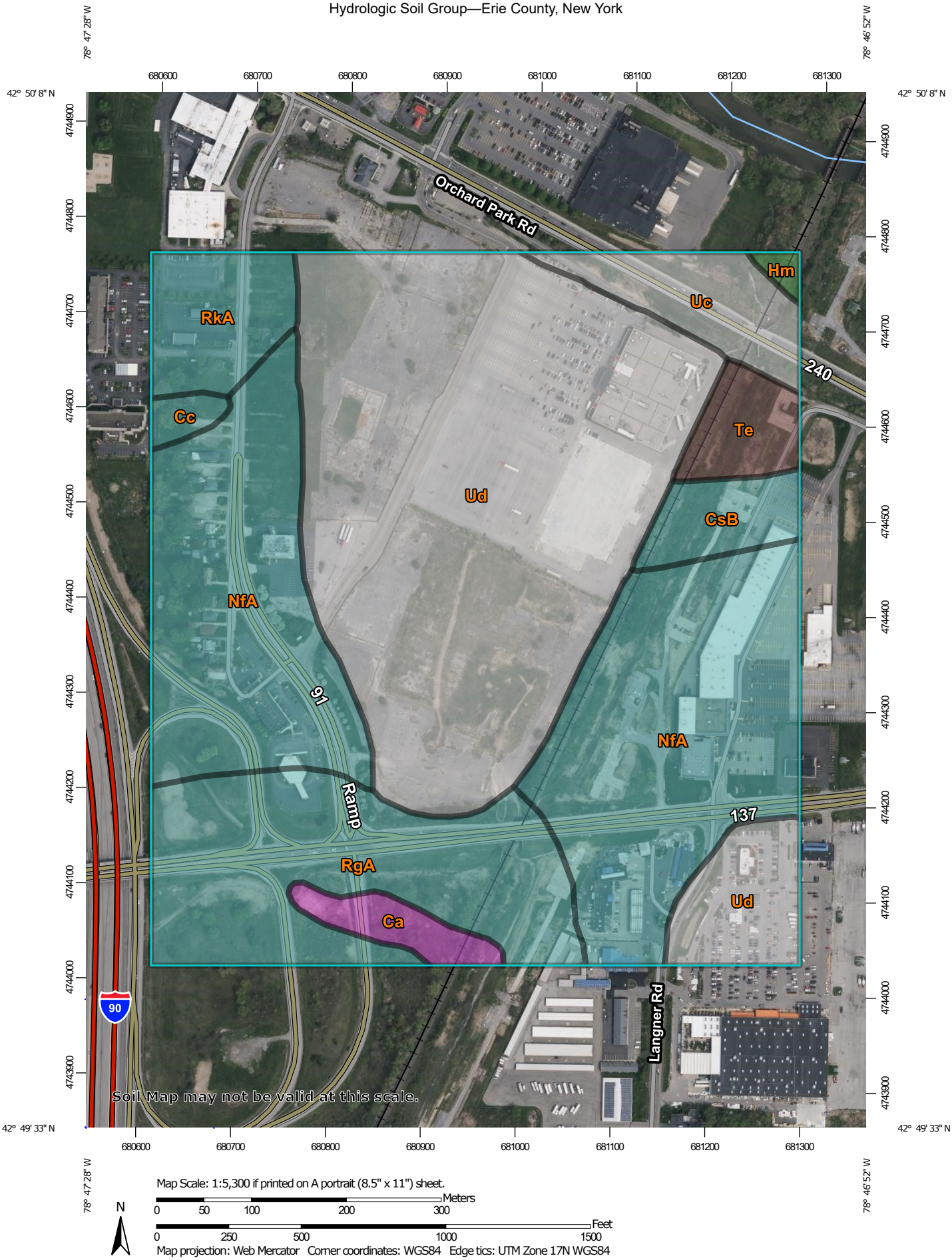
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/25/2024 at 9:46 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


78° 47' 28" W
78° 46' 52" W
42° 50' 8" N
42° 49' 33" N
680600
680700
680800
680900
681000
681100
681200
681300
4744900
4744800
4744700
4744600
4744500
4744400
4744300
4744200
4744100
4744000
4743900
Orchard Park Rd
Hm
Uc
RkA
240
Cc
Te
Ud
CsB
NfA
91
NfA
Ramp
137
RgA
Ca
Ud
90
Langner Rd
Soil Map may not be valid at this scale.
Map Scale: 1:5,300 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 250 500 1000 1500
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 25, Sep 4, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	D	2.2	1.7%
Cc	Canandaigua silt loam	C/D	0.9	0.7%
CsB	Collamer silt loam, 3 to 8 percent slopes	C/D	3.1	2.5%
Hm	Hamlin silt loam	B	0.4	0.3%
NfA	Niagara silt loam, 0 to 3 percent slopes	C/D	39.0	30.7%
RgA	Rhinebeck silt loam, 0 to 3 percent slopes	C/D	17.9	14.1%
RkA	Rhinebeck gravelly loam, 0 to 3 percent slopes	C/D	5.1	4.0%
Te	Teel silt loam	B/D	2.9	2.3%
Uc	Udorthents, smoothed		4.9	3.9%
Ud	Urban land		50.7	39.9%
Totals for Area of Interest			**127.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOAA Atlas 14, Volume 10, Version 3
Location name: Buffalo, New York, USA*
Latitude: 42.8302°, Longitude: -78.786°
Elevation: 619 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**3.35** (2.71-4.13)	**4.03** (3.26-4.98)	**5.15** (4.14-6.37)	**6.06** (4.86-7.57)	**7.33** (5.65-9.56)	**8.28** (6.23-11.0)	**9.29** (6.74-12.9)	**10.4** (7.10-14.8)	**12.1** (7.88-17.8)	**13.5** (8.56-20.3)
10-min	**2.38** (1.93-2.93)	**2.86** (2.31-3.52)	**3.64** (2.93-4.51)	**4.30** (3.44-5.35)	**5.20** (4.00-6.78)	**5.87** (4.42-7.84)	**6.58** (4.78-9.13)	**7.40** (5.03-10.5)	**8.59** (5.59-12.6)	**9.57** (6.06-14.4)
15-min	**1.86** (1.51-2.30)	**2.24** (1.81-2.76)	**2.86** (2.30-3.54)	**3.37** (2.70-4.20)	**4.08** (3.14-5.32)	**4.60** (3.46-6.14)	**5.16** (3.75-7.16)	**5.80** (3.95-8.22)	**6.73** (4.38-9.89)	**7.51** (4.75-11.3)
30-min	**1.29** (1.04-1.59)	**1.55** (1.26-1.91)	**1.98** (1.60-2.45)	**2.34** (1.87-2.91)	**2.83** (2.18-3.69)	**3.20** (2.40-4.26)	**3.58** (2.60-4.97)	**4.03** (2.74-5.71)	**4.67** (3.04-6.86)	**5.21** (3.30-7.81)
60-min	**0.823** (0.667-1.02)	**0.992** (0.803-1.22)	**1.27** (1.02-1.57)	**1.50** (1.20-1.86)	**1.81** (1.39-2.36)	**2.05** (1.54-2.73)	**2.29** (1.67-3.18)	**2.58** (1.76-3.65)	**2.99** (1.95-4.39)	**3.33** (2.11-5.00)
2-hr	**0.509** (0.415-0.624)	**0.616** (0.502-0.756)	**0.791** (0.642-0.973)	**0.937** (0.755-1.16)	**1.14** (0.881-1.47)	**1.29** (0.973-1.71)	**1.44** (1.06-1.99)	**1.63** (1.11-2.29)	**1.90** (1.24-2.76)	**2.12** (1.34-3.15)
3-hr	**0.379** (0.310-0.462)	**0.460** (0.376-0.562)	**0.592** (0.482-0.726)	**0.702** (0.568-0.866)	**0.853** (0.664-1.10)	**0.967** (0.733-1.28)	**1.09** (0.796-1.50)	**1.23** (0.840-1.72)	**1.43** (0.936-2.08)	**1.60** (1.02-2.38)
6-hr	**0.225** (0.186-0.273)	**0.275** (0.226-0.333)	**0.356** (0.291-0.433)	**0.423** (0.344-0.518)	**0.515** (0.403-0.662)	**0.584** (0.446-0.768)	**0.657** (0.485-0.901)	**0.744** (0.511-1.04)	**0.873** (0.573-1.26)	**0.982** (0.626-1.45)
12-hr	**0.131** (0.108-0.158)	**0.160** (0.132-0.193)	**0.207** (0.171-0.250)	**0.246** (0.202-0.300)	**0.300** (0.236-0.384)	**0.340** (0.262-0.446)	**0.384** (0.285-0.524)	**0.435** (0.300-0.603)	**0.514** (0.338-0.737)	**0.581** (0.372-0.850)
24-hr	**0.077** (0.065-0.093)	**0.093** (0.078-0.112)	**0.119** (0.099-0.143)	**0.141** (0.116-0.170)	**0.170** (0.135-0.217)	**0.192** (0.149-0.250)	**0.216** (0.162-0.294)	**0.245** (0.170-0.337)	**0.290** (0.191-0.413)	**0.328** (0.211-0.477)
2-day	**0.047** (0.039-0.055)	**0.054** (0.046-0.065)	**0.068** (0.056-0.081)	**0.078** (0.065-0.094)	**0.093** (0.074-0.118)	**0.104** (0.081-0.135)	**0.116** (0.087-0.157)	**0.131** (0.091-0.179)	**0.154** (0.102-0.218)	**0.174** (0.112-0.252)
3-day	**0.035** (0.029-0.041)	**0.040** (0.034-0.048)	**0.049** (0.041-0.058)	**0.056** (0.047-0.067)	**0.066** (0.053-0.083)	**0.074** (0.057-0.095)	**0.082** (0.062-0.110)	**0.092** (0.064-0.125)	**0.107** (0.071-0.151)	**0.120** (0.077-0.173)
4-day	**0.028** (0.024-0.033)	**0.032** (0.027-0.038)	**0.039** (0.033-0.047)	**0.045** (0.037-0.053)	**0.053** (0.042-0.066)	**0.058** (0.045-0.075)	**0.064** (0.048-0.086)	**0.072** (0.050-0.097)	**0.083** (0.055-0.117)	**0.093** (0.060-0.133)
7-day	**0.019** (0.016-0.023)	**0.022** (0.019-0.026)	**0.026** (0.022-0.031)	**0.030** (0.025-0.035)	**0.034** (0.028-0.043)	**0.038** (0.030-0.048)	**0.042** (0.031-0.055)	**0.046** (0.032-0.062)	**0.052** (0.035-0.073)	**0.057** (0.037-0.082)
10-day	**0.016** (0.013-0.018)	**0.018** (0.015-0.021)	**0.021** (0.018-0.024)	**0.023** (0.020-0.028)	**0.027** (0.022-0.033)	**0.030** (0.023-0.037)	**0.033** (0.024-0.043)	**0.036** (0.025-0.048)	**0.040** (0.027-0.056)	**0.043** (0.028-0.062)
20-day	**0.011** (0.009-0.013)	**0.012** (0.010-0.014)	**0.014** (0.012-0.016)	**0.016** (0.013-0.018)	**0.018** (0.014-0.022)	**0.020** (0.015-0.024)	**0.021** (0.016-0.027)	**0.023** (0.016-0.031)	**0.025** (0.017-0.035)	**0.027** (0.018-0.039)
30-day	**0.009** (0.008-0.010)	**0.010** (0.008-0.012)	**0.011** (0.010-0.013)	**0.013** (0.011-0.015)	**0.014** (0.012-0.017)	**0.016** (0.012-0.019)	**0.017** (0.013-0.022)	**0.018** (0.013-0.024)	**0.020** (0.013-0.028)	**0.021** (0.014-0.030)
45-day	**0.007** (0.006-0.009)	**0.008** (0.007-0.009)	**0.009** (0.008-0.011)	**0.010** (0.009-0.012)	**0.012** (0.009-0.014)	**0.013** (0.010-0.016)	**0.014** (0.010-0.017)	**0.015** (0.010-0.019)	**0.016** (0.011-0.022)	**0.017** (0.011-0.024)
60-day	**0.006** (0.006-0.008)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.009** (0.007-0.010)	**0.010** (0.008-0.012)	**0.011** (0.008-0.013)	**0.012** (0.009-0.015)	**0.012** (0.009-0.016)	**0.013** (0.009-0.018)	**0.014** (0.009-0.020)

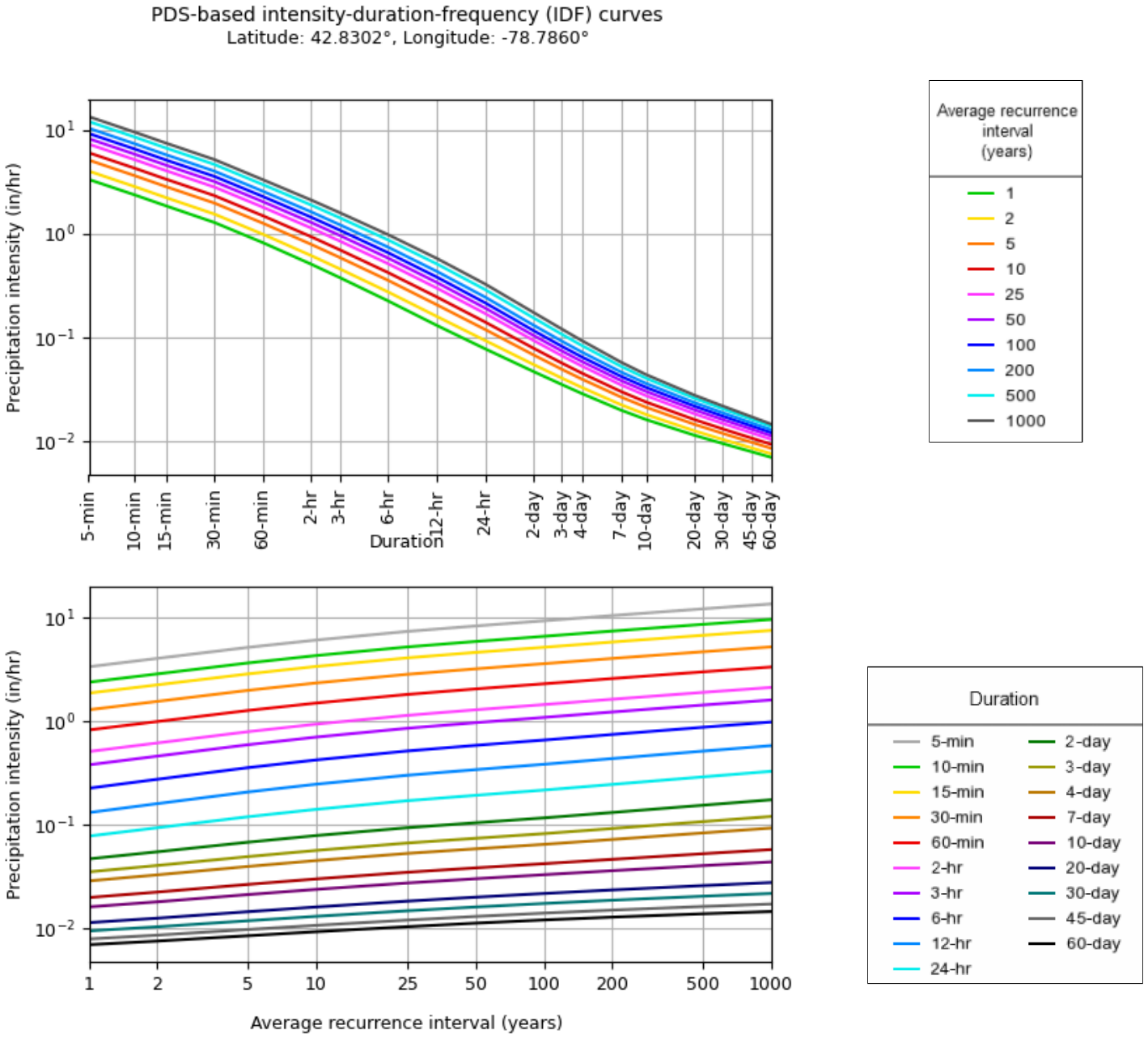
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Mon Apr 20 13:55:10 2026

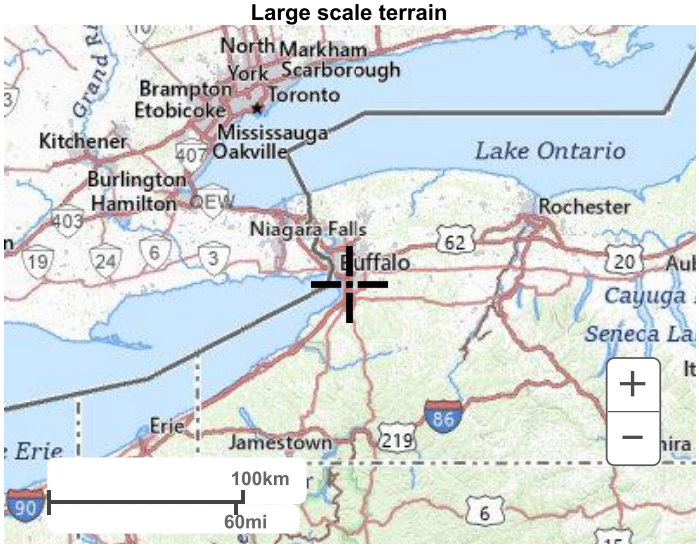
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Maps & aerials

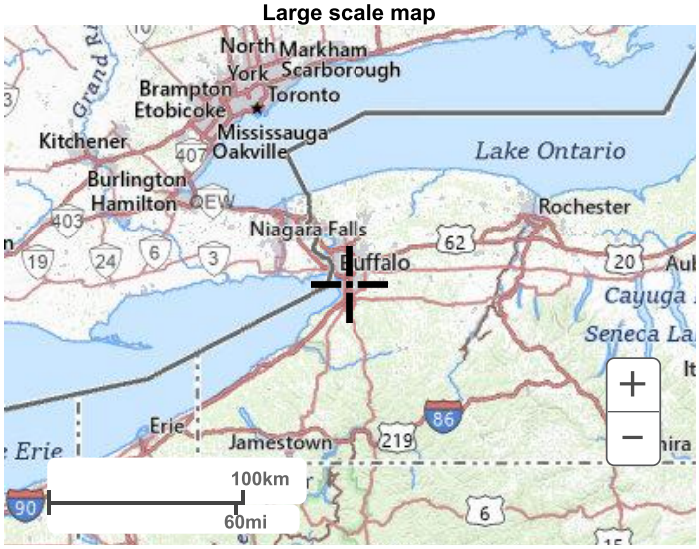
Small scale terrain



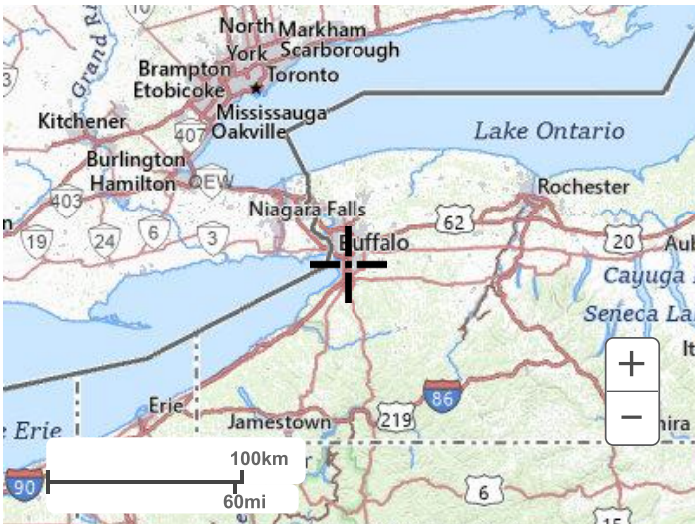
Large scale terrain



Large scale map



Large scale aerial



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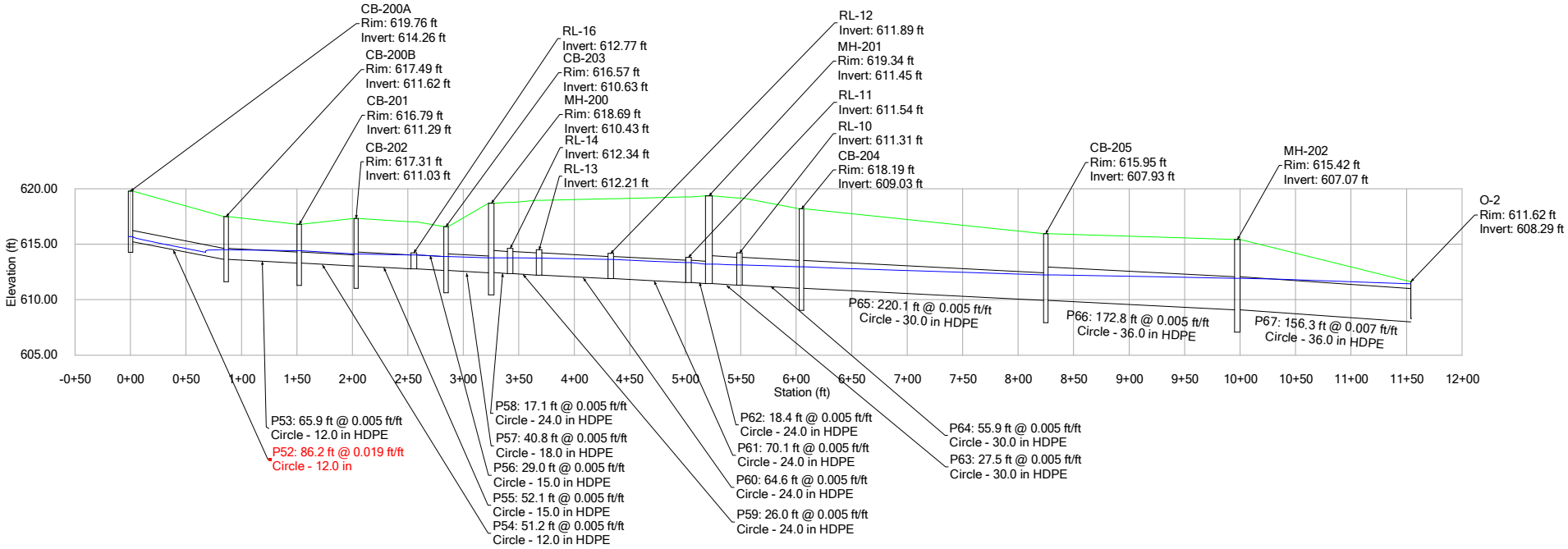
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

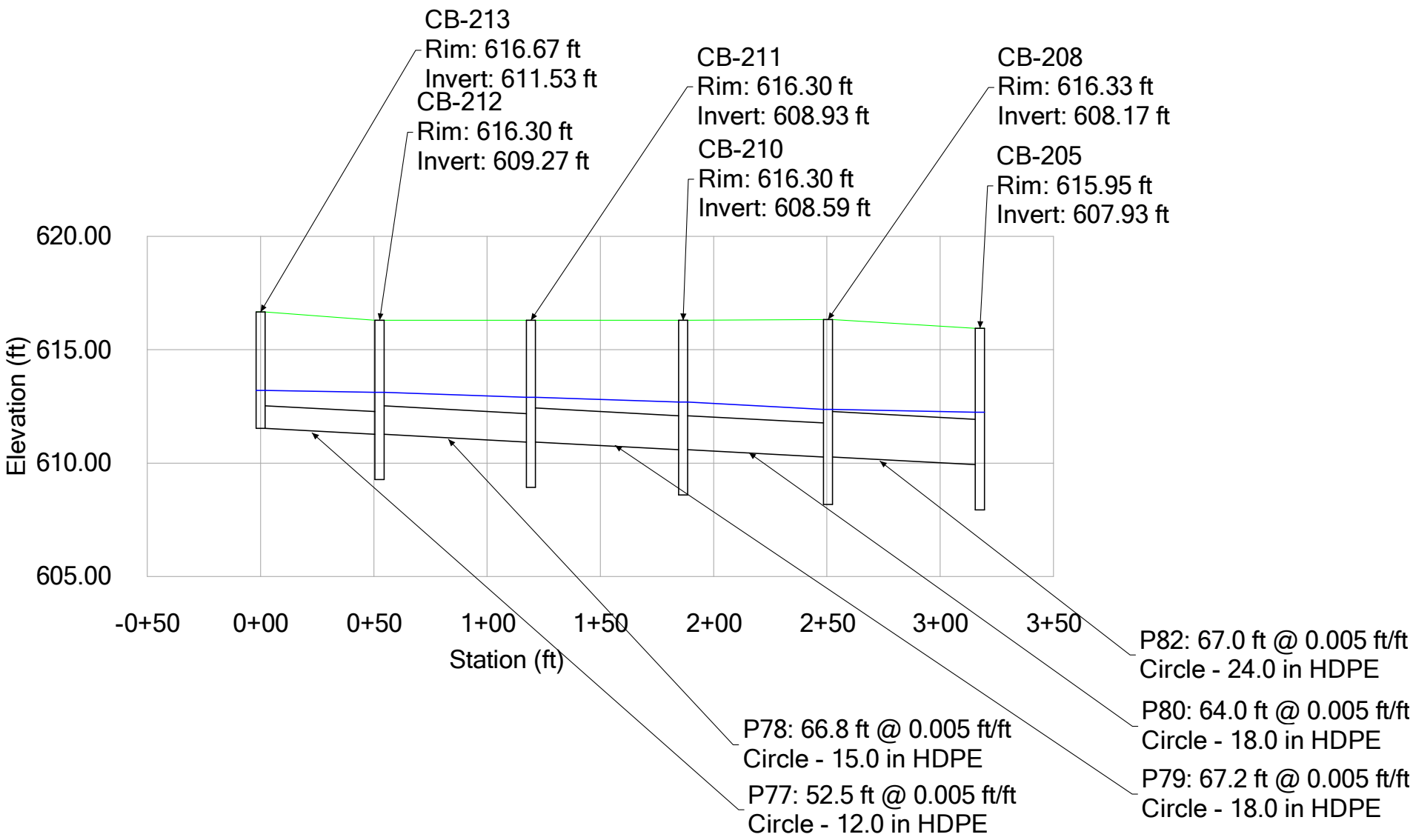
APPENDIX B

CONVEYANCE MODELING RESULTS

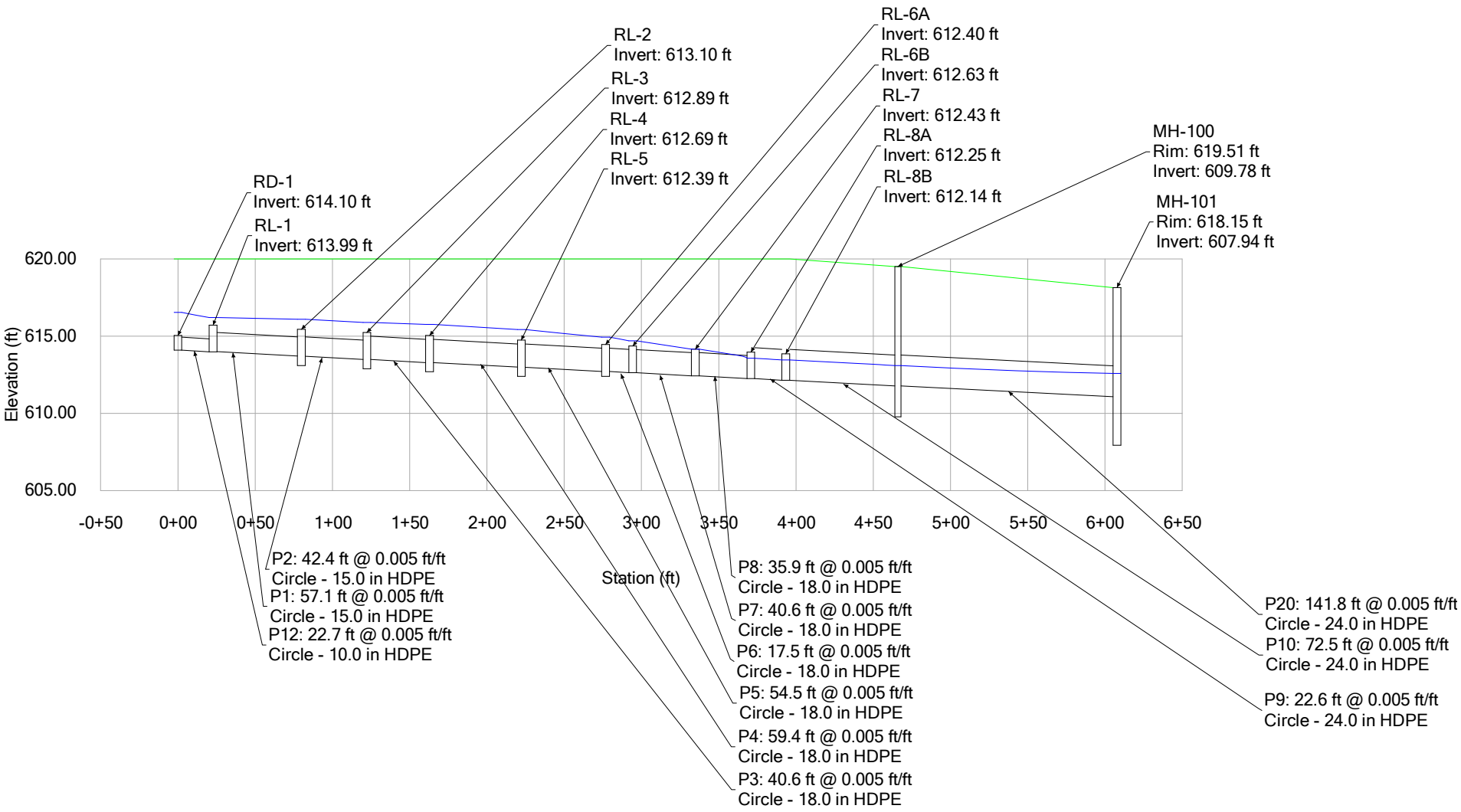
Profile Report
Engineering Profile - CB-200A TO O-2 (C-DAT-2401824-StormCAD-2026-07-14.stsw)



Profile Report
Engineering Profile - CB-213 TO CB-205 (C-DAT-2401824-StormCAD-2026-07-14.stsw)

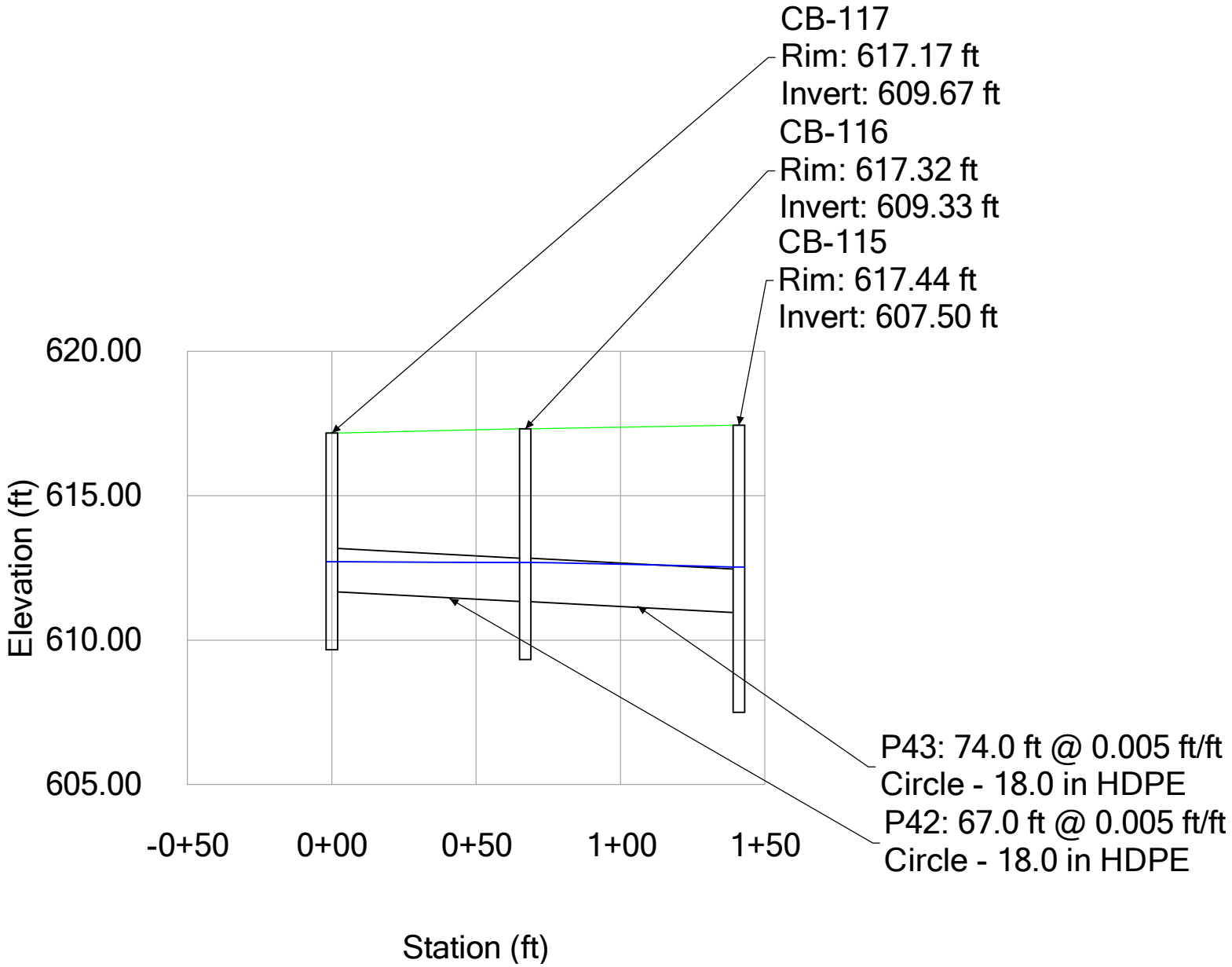


Profile Report
Engineering Profile - RD-1 TO MH-101 (C-DAT-2401824-StormCAD-2026-07-14.stsw)



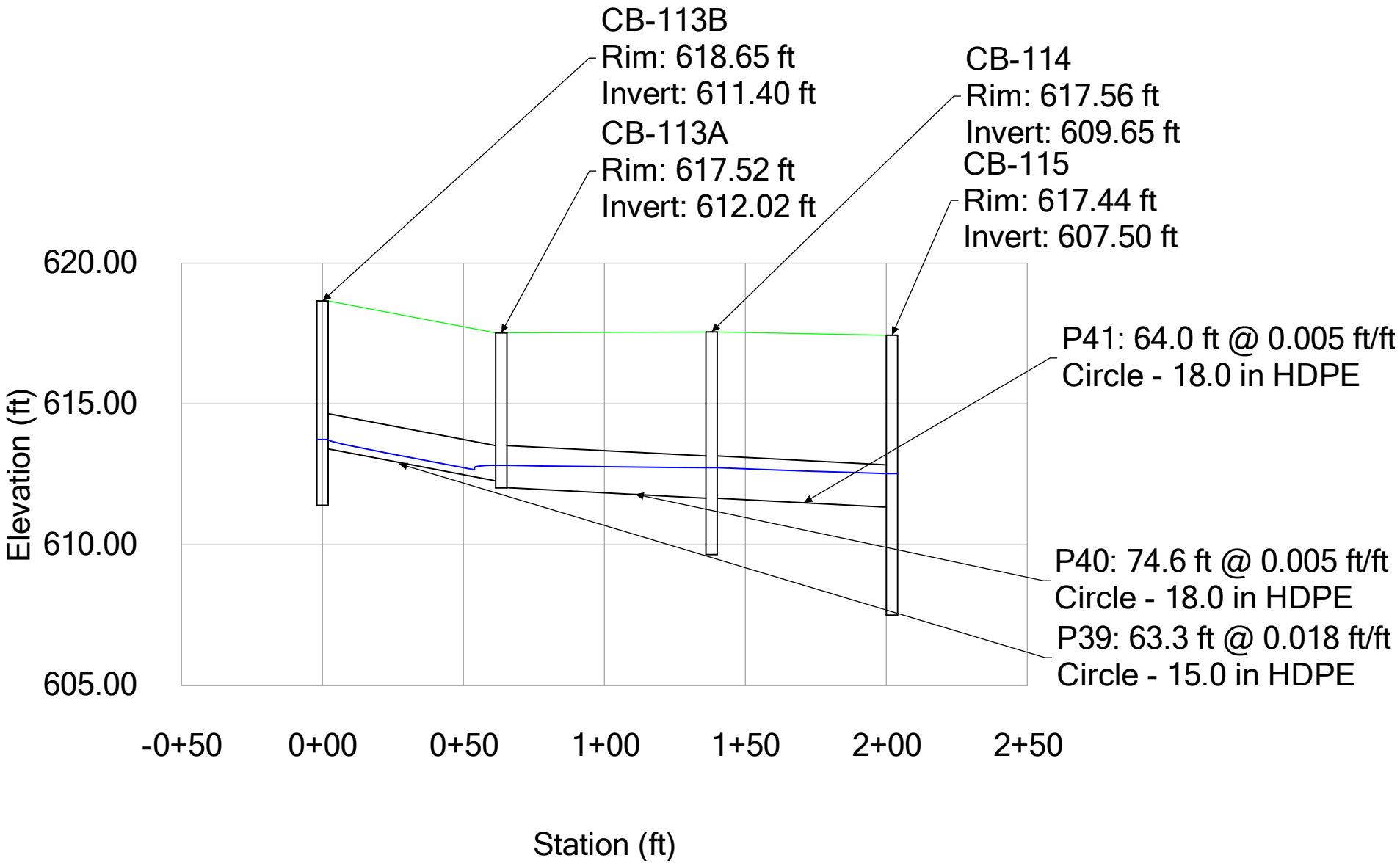
Profile Report

Engineering Profile - CB-117 TO CB-115 (C-DAT-2401824-StormCAD-2026-07-14.stsw)



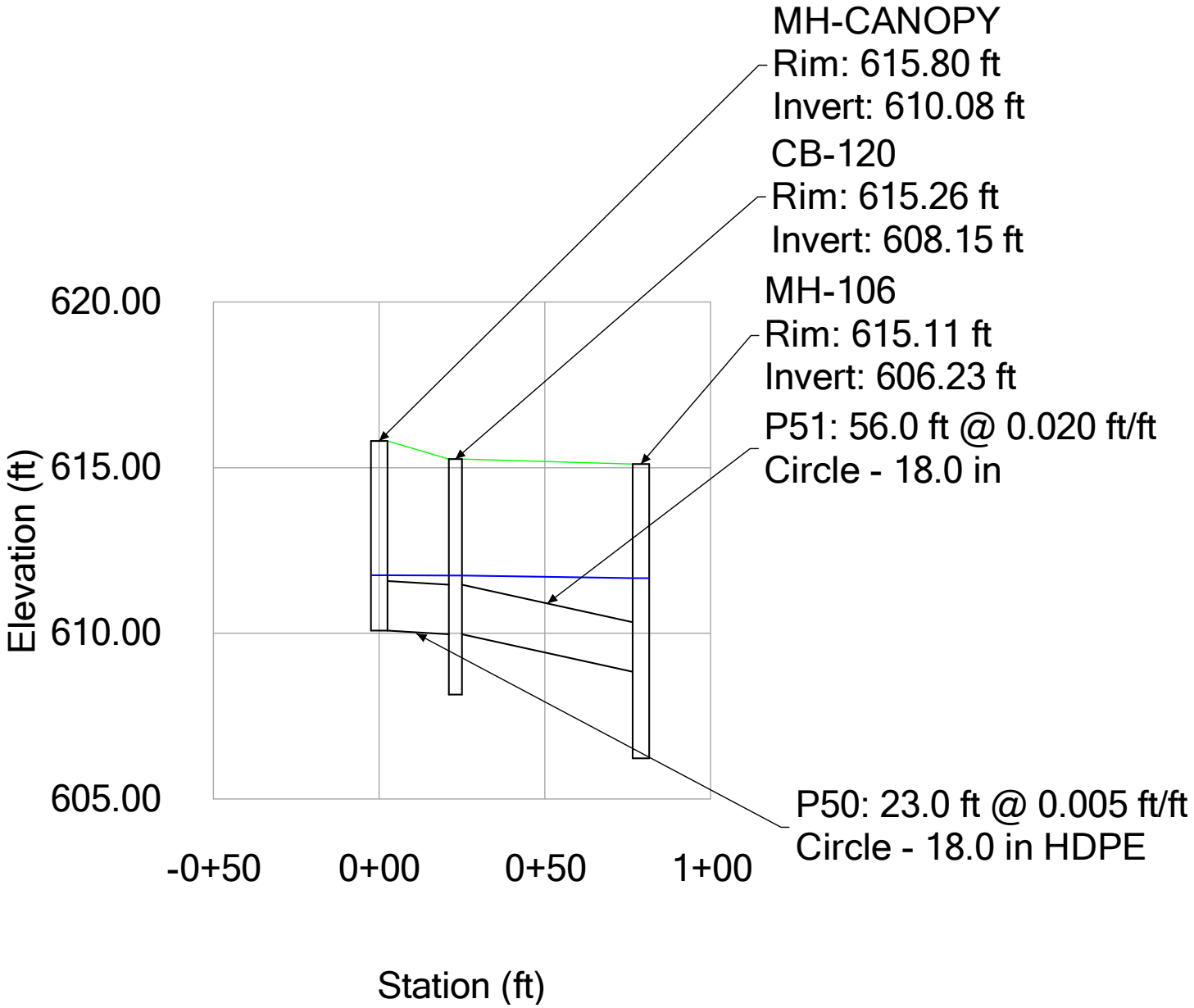
Profile Report

Engineering Profile - CB-113B TO CB-115 (C-DAT-2401824-StormCAD-2026-07-14.stsw)

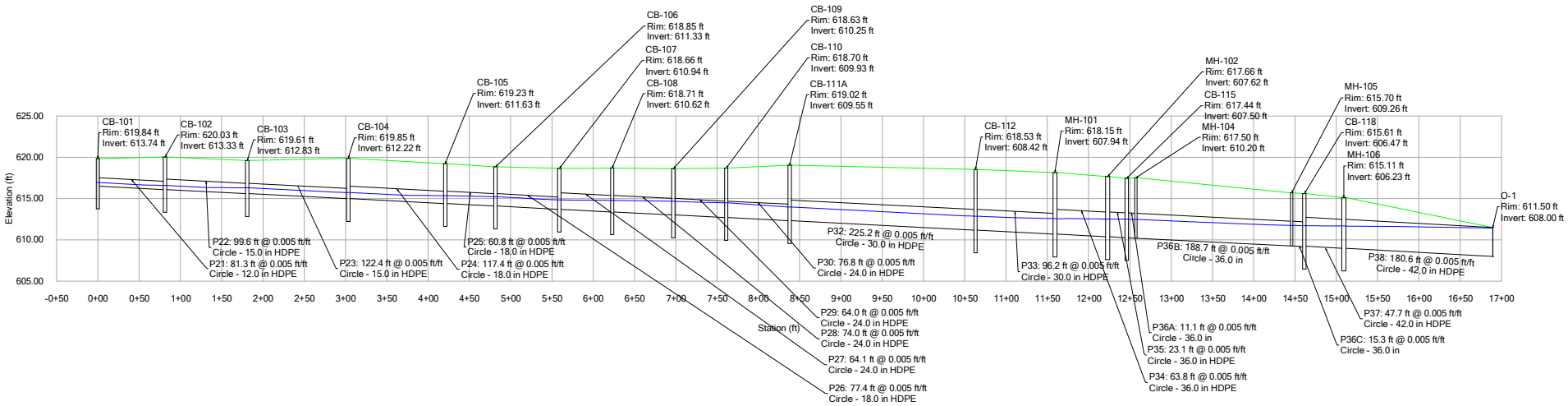


Profile Report

Engineering Profile - MH-CANOPY MH-106 (C-DAT-2401824-StormCAD-2026-07-14.stsw)



Profile Report
Engineering Profile - CB-100 TO O-1 (C-DAT-2401824-StormCAD-2026-07-14.stsw)



TOWN OF WEST SENECA

APPLICATION FOR SITE PLAN REVIEW APPROVAL

TO BE COMPLETED BY APPLICANT

DATE 07/22/26 FILE #_____

PROJECT NAME Seneca Mall Redevelopment

PROJECT LOCATION (Include address and distance to nearest intersection) Former Seneca Mall, SE corner of Orchard Park Rd & Slade Ave 0 Orchard Park Road

APPLICANT Benchmark Streamline, LLC PH/FAX 716-876-0160

ADDRESS 4053 Maple Road Amherst, NY 14226

PROPERTY OWNER same as applicant PH/FAX _____

ADDRESS same as applicant

ENGINEER/ ARCHITECT Carmina Wood Design PH/ FAX 716-842-3165

ADDRESS 80 Silo City Row, Suite 100, Buffalo, NY 14203

SBL # 143.05-1-27.11, 143.05-1-27.12, 134.17-1-1, 134.17-1-2, 134.17-1-3, 134.17-1-4, 134.17-1-5, 134.17-1-6, 134.17-1-7, 143.05-1-28, 143.05-1-29, 143.05-1-30.1, 143.05-1-32.1, 143.05-1-33

PROJECT DESCRIPTION (Include all uses and any required construction)
Redevelopment of the site previously occupied by the Seneca Mall to include approximately 500,000 sf of new commercial buildings (shopping center, retail, restaurant, fast food with drive-thru), the existing Tops Markets will remain. The project will also include a fueling facility which is accessory to one of the anchor tenants.

SIZE OF LOT (acres) 56 +/- ACREAGE TO BE REZONED 56 +/-

ADJACENT ROAD NAMES AND AMOUNT OF FRONTAGE ON EACH
Orchard Park Road: 1,385 lf Slade Ave: 2,225 lf Ridge Road: 470 lf

EXISTING ZONING C-2(s) PROPOSED ZONING N/A

EXISTING USE(S) ON PROPERTY grocery store, vacant

PROPOSED USE(S) ON PROPERTY commercial (shopping center, retail, restaurant, fast food with drive-thru, fuel facility)

EXISTING USE(S) AND ZONING ON ALL PROPERTY WITHIN 500 FEET
hotel, education, banking, grocery store, dispensary, single family residential
M-1, M-1(s), C-1, C-2, C-2(s), R-60-A, R-65

PUBLIC SEWER YES ✔ NO ___ PUBLIC WATER YES ✔ NO ___

VARIANCES AND OTHER APPROVALS OR PERMITS REQUIRED

Variance for total parking count, potentially other variances. Site Plan Approval, Building Permit

APPLICATIONS WILL NOT BE ACCEPTED WITHOUT COMPLETION OF ALL REQUIREMENTS LISTED HEREIN

TO BE COMPLETED BY THE TOWN OF WEST SENECA

DATE RECEIVED _____ BY _____

PLANNING BOARD MEETING DATE _____

TOWN BOARD MEETING DATE _____

TOWN BOARD RESOLUTION DATE _____

NON – REFUNDABLE FILING FEE (Payable to the Town Clerk): $