MINUTES
TOWN OF AMHERST
AMHERST PLANNING BOARD MEETING
September 19, 2024
6:30 PM

The Planning Board will hold a public work session at 6:00PM in the Amherst Municipal Building, 5583 Main Street, Williamsville, NY 14221 on the same date.

This meeting is being video recorded.

ROLL CALL

Attendee Name	Organization	Title	Status	Arrived
Michael Chmiel	Town of Amherst	Chair	Present	
John B. Davis	Town of Amherst	Board Member	Absent	
Harbinder Gill	Town of Amherst	Board Member	Present	
Dal Giuliani	Town of Amherst	Board Member	Present	
Carrie H. Kahn	Town of Amherst	Board Member	Present	
Brittany Lee Penberthy	Town of Amherst	Board Member	Present	
Joseph P. Raffaele Jr.	Town of Amherst	Board Member	Absent	
Dan Howard	Town of Amherst	Planning Director	Present	
Daniel J. Ulatowski	Town of Amherst	Assistant Planning Director/ZEO	Present	
Scott Marshall	Town of Amherst	Principal Planner	Present	
James Quinn	Town of Amherst	Assistant Planner	Present	
Amy Carrato	Town of Amherst	Community Development Assistant	Present	

Jacqualine Berger	Town of Amherst	Councilmember	Present	
Samuel A. Alba	Town of Amherst	Interim Town Attorney	Present	

Note: There will be no public hearing or opportunity to speak for the projects listed under the Unfinished Business section of this agenda.

Please note the following time limits for speakers at public hearings:

- **Presentation by Petitioner: 15 minutes**
- **Rebuttal by neighborhood/resident spokesperson: 15 minutes**
- **Individual speakers: 3 minutes**

PUBLIC HEARINGS

SITE PLANS & RELIEF FROM CONDITIONS OF SITE PLANS

1. PROPOSED AMHERST DEVELOPMENT PARK - BUILDING ADDITION, SP-1988-11P
Property located at 6000-6020 N. Bailey Avenue (BCD)
Benderson Development Co. LLC, Petitioner

Proposed 10,069 square foot building addition to the western end of #6010 Bailey Avenue and reconfiguration/expansion to the parking area on the north side of the development south of Romney Road to provide additional 139 parking spaces on site bringing the total parking to 591 spaces. The petitioner has indicated that they will also be requesting a waiver of required sidewalks along Romney Road.

September 19, 2024

James Boglioli, Esq., Benderson Development Co. LLC, represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Boglioli stated Benderson is not moving forward with the previous Delta Sonic site plan and shopping centers are located nearby but are not a part of this site plan.

No further comments were heard on this proposal.

Following discussion, Ms. Penberthy moved to adjourn the request. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

RESULT:	**ADJOURNED [UNANIMOUS]**	**Next: 10/17/2024 6:30 PM**
MOVER:	Brittany Lee Penberthy, Board Member	
SECONDER:	Dal Giuliani, Board Member	
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy	
ABSENT:	Davis, Raffaele Jr.	

2. PROPOSED LOU GEHRIG AMHERST PARK - PARKING LOT EXPANSION, SP-1990-08J
Property located at 50 Dann Road & 550 Smith Road
Town of Amherst, Petitioner

Proposal to Expand and reconstruction, paving, and re-striping of two (2) existing parking lots at Lou Gehrig Amherst Park to provide for 354 vehicle parking spaces. One parking lot is accessed from Dann Road and the other from Smith Road. Additional work includes installation of storm drainage (catch basins and pipes), installation of paved parking, curbing and pathway lights, and landscaping throughout. The petitioner is also requesting a waiver of required sidewalks along Smith and Dann Roads.

Jesse Wendel, Wendel Companies, represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Wendel showed the flow of the one-way entrance and exit in the parking lot and stated stripping could be added for pedestrian walkways.

No further comments were heard on this proposal. The hearing was closed.

Following discussion, Mr. Giuliani moved to approve the Negative Declaration. The motion was seconded by Ms. Penberthy and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

Following the approval of the Negative Declaration, Ms. Penberthy moved to approve the Smith and Dan Road sidewalk waiver request. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

Following the approval of the sidewalk waiver request, Ms. Penberthy moved to approve the request based on the resolution. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Brittany Lee Penberthy, Board Member
SECONDER:	Dal Giuliani, Board Member
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy
ABSENT:	Davis, Raffaele Jr.

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

3. PROPOSED SKETCH PLAN REVIEW FOR A 27-LOT SUBDIVISION, ASHLEY GREEN PHASE II, SUB-2024-01SK
Property located at 10060 Transit Rd. (portion)
DJC Land Inc., Petitioner

Proposed subdivision of 8.97± acres of land into 27 lots for detached single-family homes. A proposed 60 foot public right-of-way is shown roughly through the center of the site connecting Transit Road to the proposed terminus of the “Ashley Green” subdivision to the west on the east side of Town Ditch 26D-1. Proposed lots range in size from 7,540 sq. ft. to 23,671 sq. ft. and have frontages that range in size from 52 ft. to 124 ft.

August 27, 2024

Ken Zollitsch, Greenman-Pedersen, Inc., represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Zollitsch stated DJC Land Inc. is under contract to purchase the property but doesn't have a letter from the current land owners yet, they are aware of the downstream sewer capacity issues and intend to move forward with the subdivision process while working with the Engineering Department on the sewer issues, will provide a stub street for future connection to the north and south, and access to Transit Road will be provided.

Susan Kobus, 1079 Smith Road; Fran Daumeb, 418 Glen Oak Drive; and Steve Massaro, 1116 Smith Road spoke in opposition of the proposal.

No further comments were heard on this proposal.

Following discussion, Mr. Gill moved to keep the public hearing open and adjourn the request. The motion was seconded by Mr. Raffaele and carried. Ayes 4, Noes 0, Absent 3 (Davis, Giuliani, Penberthy).

September 19, 2024

Ken Zollitsch, Greenman-Pedersen, Inc., represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Zollitsch stated the proposed single-family homes are allowed by code and is less dense then townhomes that were previously considered for this site, the overall plan always included different levels of housing and he is unsure if the petitioner will seek condo status.

Dan Rosenthal, 1200 Smith Road, and Steve Massaro, 1116 Smith Road, spoke in opposition of the proposal.

No further comments were heard on this proposal. The hearing was closed.

Following discussion, Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Mr. Gill and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dal Giuliani, Board Member
SECONDER:	Harbinder Gill, Board Member
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy
ABSENT:	Davis, Raffaele Jr.

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

None

MISCELLANEOUS

None

OTHER COMMUNICATIONS

None

All public hearings are completed and closed at the termination of public discussion for each agenda item unless otherwise specified by the Chair.

UNFINISHED BUSINESS

Note: All public hearings have been completed. There will be no public hearings for items listed under this section.

SITE PLANS & RELIEF FROM CONDITIONS OF SITE PLANS

None

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

None

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

None

MISCELLANEOUS

None

OTHER COMMUNICATIONS

None

DIRECTOR'S REPORT

MINUTES APPROVAL

August 27, 2024

Ms. Penberthy moved to approve the minutes. The motion was seconded by Ms. Kahn and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

ADJOURNMENT

The Planning Board meeting of September 19, 2024 was adjourned at 7:29 pm.

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 09/19/24 06:30 PM
Department: Planning
Category: Site Plan and Relief from Conditions of Site Plan
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 28252 A

TABLED

PLANNING BOARD ITEM (ID # 28252)

Proposed Amherst Development Park - Building Addition, SP-1988-11P

Property located at 6000-6020 N. Bailey Avenue (BCD)
Benderson Development Co. LLC, Petitioner

Proposed 10,069 square foot building addition to the western end of #6010 Bailey Avenue and reconfiguration/expansion to the parking area on the north side of the development south of Romney Road to provide additional 139 parking spaces on site bringing the total parking to 591 spaces. The petitioner has indicated that they will also be requesting a waiver of required sidewalks along Romney Road.

September 19, 2024

James Boglioli, Esq., Benderson Development Co. LLC, represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Boglioli stated Benderson is not moving forward with the previous Delta Sonic site plan and shopping centers are located nearby but are not a part of this site plan.

No further comments were heard on this proposal.

Following discussion, Ms. Penberthy moved to adjourn the request. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

ATTACHMENTS:

- SP-1988-11P_application_091924 (PDF)
- SP-1988-11P_drawings_091924 (PDF)
- SP-1988-11P_application updated 090924_091924 (PDF)
- SP-1988-11P_drawings updated 090924_091924 (PDF)

RESULT:	**ADJOURNED [UNANIMOUS]**	**Next: 10/17/2024 6:30 PM**
MOVER:	Brittany Lee Penberthy, Board Member	
SECONDER:	Dal Giuliani, Board Member	
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy	
ABSENT:	John B. Davis, Joseph P. Raffaele Jr.	

TOWN OF AMHERST

APPLICATION & REVIEW PROCEDURE

MAJOR SITE PLAN

MATERIALS MUST BE PROVIDED IN AN ELECTRONIC FORMAT THAT CONTAINS PDF FILES OF THE APPLICATION, EAF, SITE PLAN DRAWING SET SURVEY, LANDSCAPE PLAN, PRELIMINARY BUILDING FLOO PLANS / ELEVATIONS & ANY OTHER SUPPORTING INFORMATION. THIS MUST BE SUBMITTED WITH YOUR APPLICATION. APPLICATIONS WILL NOT BE TRANSMITTED WITHOUT THIS ELECTRONIC INFORMATION.

THIS ALSO APPLIES TO REVISED MATERIALS THAT AR SUBMITTED.

This application package includes the following:

- Application Procedures
- Application Form & Checklist
- Stormwater Pollution Prevention Plan Checklist
- Appendix A Town of Amherst EAF Addendum
- Appendix B Criteria for Required 8½" x 11" Sketches
- Appendix C Erie Sewer District No. 5 – Commercial / Industrial New & Existing Buildings Requirements

- IMPORTANT-

1. A pre-submittal consultation with Planning Department staff is *strongly recommended* prior to submitting an application. The pre-submittal meeting gives the applicant an opportunity to discuss with staff such items as:
   - classifying the action as a major site plan, minor site plan, or minor site plan adjustment;
   - determining what specific information will be required to be submitted with the application;
   - identifying and discussing issues that must be addressed as part of the SEQR review;
   - identifying any potential variances required to implement the project as proposed.

   An appointment is required for all meetings with Planning Department staff.

2. This site plan petition is subject to the requirements of 6 NYCRR Part 617, State Environmental Quality Review Act (SEQR), and Chapter 104 of the Town of Amherst Code, as amended. The Planning Board cannot make a SEQR determination unless a complete Environmental Assessment Form (EAF), including Town of Amherst EAF Addendum, and any required supplementary information such as traffic impact studies, archaeological reports, wetland delineations or geotechnical reports, are submitted. SEQR issues may be discussed with Planning Department staff at a recommended pre-submittal meeting. Unlisted Actions require a Short EAF; Type I Actions require a Full EAF. The following is a link to the NYSDEC website and fillable forms with instructions*:*
   http://www.dec.ny.gov/permits/6191.html.

3. **Review by the Town Design Advisory Board (DAB) is required for Major Site Plans located in the following Mixed-Use zoning districts:**

Traditional Infill 2.5 (TI-2.5)
Traditional Infill 4 (TI-4)
Shallow Corridor 3 (SC-3)
Deep Corridor 3 (DC-3)
Deep Corridor 5 (DC-5)
Center 2.5 (CTR-2.5)
Center 5 (CTR-5)
Center 8 (CTR-8)

The application for DAB review is required to be filed in conjunction with the major site plan application.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

4. The application shall be executed or consented to in writing by the owner of the property.

5. **Any variances from the Zoning Board of Appeals, or any decision from the Town Board (e.g. removal of deed restrictions) must be obtained prior to action by the Planning Board on a Site Plan application.**

6. Submittal of an application grants permission to Town staff and Planning Board members to access the parcel(s) under consideration.

7. All site plan drawings must be prepared by a Registered Architect, Professional Engineer, Landscape Architect, or Land Surveyor (as applicable) licensed to practice in New York State.

8. If you wish to include a Coordinated Sign Plan application with the site plan petition, a separate application must be completed. Contact the Planning Department for a copy of a Coordinated Sign Plan application package.

9. All drawings should be no larger than 24 in. x 36 in. If site characteristics warrant larger plan sheets, they may be accepted subject to Planning Department concurrence. All drawings must also reserve a 4 in. x 6 in. area in the lower right hand corner for official Town use.

APPLICATION PROCEDURES

1. Applicant secures application package from the Planning Department, 5583 Main Street, Williamsville, NY 14221. (716) 631-7051. Forms are also available online at: www.amherst.ny.us, (keyword: Planning).

2. Applicant prepares information as required on the Site Plan Submittal Checklist, attached. NOTE: Some proposals may not require all items on the checklist; please verify with the Planning Department.

3. Applicant schedules an appointment with the Planning Department to review the following:
   - a complete set of site plan drawings, preliminary building elevations and floor plans (no larger than 24" x 36" in size)
   - Environmental Assessment Form (EAF) & Town EAF Addendum
   - any supporting reports and materials
   - verification from the Town Assessor that the address in the application is correct

4. Applicant schedules an application submittal appointment with the Planning Department. NO SITE PLAN WILL BE ACCEPTED FOR REVIEW WITHOUT A PRE-SET SUBMITTAL APPOINTMENT.

5. At the submittal appointment, applicant provides fourteen (14) complete and collated sets of drawings and application information to the Planning Department **(materials will not be accepted unless folded into 9" x 12" in size),** including**:**
   - application form
   - Environmental Assessment Form (EAF)
   - supporting reports / materials
   - complete set of site plan drawings, preliminary building elevations and floor plans (**at least one (1) set of drawings must bear a raised or wet seal and signature of the design professional** who prepared the plans; the remaining copies may be submitted with a facsimile of the seal and signature)
   - digital files of all materials in pdf format
   - an 8½" x 11" reduction of the sketch plan or plat drawing (see Appendix B)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

6. After approval for filing by the Planning Department, applicant submits all necessary fees to the Town Clerk. **(See Schedule of Fees on first page of application and make checks payable to: Town of Amherst.)**

7. The applicant returns a copy of the filing receipt to the Planning Department.

8. The Planning Department transmits remaining thirteen (13) copies of the application and supporting materials to:
   - Assessor
   - Commissioner of Building
   - Town Engineer
   - Superintendent of Highways
   - Traffic/Safety Board
   - Fire Chiefs' Association
   - Plumbing Division
   - Right-of-Way Agent
   - Police Department (if applicable)
   - Zoning Enforcement Officer
   - Other Town and outside agencies, as applicable

9. Within 30 days of its receipt of the complete application for Site Plan approval, each agency completes its review and notifies the Planning Department in writing of its comments or recommendations as required by Ordinance.

10. The applicant may be required to submit revised plans, reports, or materials to address review agency comments. The procedures for submittal of revised plans are as follows:

    - A cover letter addressing all comments received to date is required.
    - "Highlight" the area of change on the drawings and provide a notation describing the change.
    - Revised plans/materials are required. Planning staff should be contacted to determine the number of sets needed.
    - All revised plans and materials must also be provided in an electronic format that contains pdf files of the revised information.

11. The Planning Board reviews the EAF to determine whether a Draft Environmental Impact Statement (DEIS) is required. The petitioner will be advised in the event that a DEIS is required and afforded the opportunity to prepare it. If the petitioner declines, the Planning Board will prepare the DEIS at the petitioner's expense. The public hearing will be held on the DEIS concurrently with the Planning Board hearing on the application.

12. Planning Board Meeting Procedures:

    The applicant or representative presents the project at the public hearing before the Planning Board and is available to answer any questions. The Planning Board may take any of the following actions:

    - Adjourn the hearing to a future Planning Board meeting (hearing remains open).
    - Close the hearing and table action on the site plan to a future Planning Board meeting. (The Planning Board may remove the item from the agenda until such time as all required information is provided.)
    - Close the hearing and make a decision on the site plan.

    All determinations on matters before the Planning Board are made after all public hearings on that meeting's agenda are completed.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

13. A copy of the Planning Board's determination will be provided to the applicant, his / her representative, the Building Commissioner and the Town Clerk approximately 1 week following the Planning Board meeting at which it was heard.

14. If the Planning Board approves a Site Plan with conditions, the Planning Department will work with the applicant to ensure that all conditions of the approval are satisfactorily addressed. When all conditions are satisfied, the applicant submits **seven (7) final copies** of the complete set of all site plan drawings, folded into 9" x 12". For site plans in the Mixed-Use zoning districts, building elevations will also be required.

    All 7 sets must have original wet seals and include the required 4 in. x 6 in area in the lower right hand corner for official Town use. These drawings will be stamped and signed "Approved" by the Planning Director and transmitted to Town Departments for their files and use.

15. A building permit will not be issued by the Building Department until the stamped and signed Site Plan is issued by the Planning Director.

NOTE: Please check with the Planning Department to determine the deadline date for filing applications. Due to the public hearing notice requirements and department reviews, no site plan application will be placed on the Planning Board agenda after the deadline for filing has closed. Scheduling may be delayed if an application is incomplete.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Major Site Plan Review

For Official Use

File #: _____ **Acreage** _____ **Fee $** _____

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Received by Planning Department _____ RECEIVED BY DATE

Fee Paid to Town Clerk _____ RECEIVED BY DATE

Site Plan Review		**Fill In Applicable Fees**
1 acre or less	$1,250.00	_____
Each additional acre or fraction thereof	$ 650.00/acre	_____
Amendments to Site Plans	$1,200.00	_____
Request for Relief of / Change to Conditions of Site Plan Approval	$1,200.00	_____
Request for Extension of Site Plan Approval	$ 450.00	_____
Stormwater Pollution Prevention Plan		
1 - 4.99 Acres	$ 500.00	_____
5 - 10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	$ 15.00	_____
	TOTAL FEE:	**$**_____

To Be Completed By Applicant

Petitioner:

Name: Benderson Development Company, LLC

Address: 570 Delaware Avenue

Buffalo , New York 14202

city state zip code

Phone: 716-878-9626 Fax: _____

E Mail: _____

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAJOR SITE PLAN APPLICATION (con't) ***Page 2***

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney)**:**

Name: James A. Boglioli

Address: 570 Delaware Avenue

Buffalo , New York 14202
city state zip code

Phone: 716-878-9626 Fax:

E Mail: jmb@benderson.com

Project Location (must be verified by Town Assessor's Office)**:**

Address: 6000 - 6040 North Bailey Avenue

SBL No(s): 54.14-1-12.211, 54.14-1-12.211/A, 54.14-1-12.211/B

Project Name: Two Building additions 5,441sf & 14,554sf

Project Description: Please see the attached letter of intent

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAJOR SITE PLAN APPLICATION (con't) ***Page 3***

If this petition is an amendment to a previously approved site plan, please describe the proposed changes (include type and size of existing structures and number of existing parking spaces):

Please see the attached letter of intent

	existing	proposed	total
Gross Floor Area (non-residential):	246,740	266,735	+19,995
Gross Floor Area Residential:	N/A	N/A	N/A
Number of Residential Units:	N/A	N/A	N/A
Number of Parking Spaces:	452	688	+236

Acreage of Parcel: 17.43

(list each parcel separately)

Frontage on Public Roads: Romney: 945'

(list each road separately) N. Bailey: 445.6'

Existing Zoning District(s) R-D

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Site Plan Submittal Requirements and Checklist

The following checklist outlines the information required by the Planning Department to accept a Site Plan application for review. ***It is strongly recommended that you make an appointment with Planning Staff to determine which items apply to your application***.

Item No.	Item	Submitted	Official use
I Basic Drawing Information			
1.0	**Drawing size not to exceed 24" x 36"**		
2.0	**Title of Drawing**		
3.0	**Name and address of Applicant**		
4.0	**Name of person preparing drawing**		
5.0	**Wet seal/raised seal and signature of NYS licensed architect, engineer, landscape architect, or surveyor (as applicable)**		
6.0	**Project address**		
7.0	**Zoning of subject property and adjacent parcels**		
8.0	**North point, scale, date, and revision date(s)**		
9.0	**4" x 6" reserved area in lower right hand corner for official Town use**		
II Structures, Paved Areas, & Open Space			
1.0	**Existing and Proposed Streets**		
1.1	Names of all existing and proposed streets		
1.2	Width and radii of proposed curb-cuts		
1.3	Existing curb-cuts on adjacent and opposite properties		
1.4	Show ROW width, pavement dimensions, lane widths, pavement markings, and proposed signage on proposed streets		
1.5	Show proposed ROW consistent with planned NYSDOT, Erie County, or Town road projects (if applicable)		
1.6	Show location of proposed cross access to adjacent parcels along with a draft easement		
1.7	Designation of Fire Lanes (if applicable)		
1.8	Fire apparatus access roads		
1.9	Label any proposed roads as public or private		
1.10	Location and dimensions of sidewalks		
1.11	Typical cross sections and profiles of proposed streets, pedestrian walkways, and bikeways		
2.0	**Proposed Structures**		
2.1	Location and complete dimensions of proposed structures		
2.2	Setback dimensions of structure(s) to all property lines		
2.3	Proposed use of structures		
2.4	Gross square feet area of each structure		
2.5	Location of all building entrances		
2.6	Indicate type of roof construction/materials		
2.7	Location, height, and design detail of existing and proposed fences and walls		
2.8	Location of light standards and building mounted lights		
2.9	Location of dumpster and detail of dumpster enclosure with gate		
2.10	Layout and dimensions of the lot(s) proposed for development		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.	Item	Submitted	Official use
II Structures, Paved Areas, & Open Space (cont'd)			
3.0	**Floor Plans with individual rooms and spaces labeled** (fully dimensioned)		
4.0	**Building elevations with height dimensions from finished grade to the highest point of the roof and to midpoint of gable or hip of a pitched roof.** (fully dimensioned)		
4.1	Show screening of mechanical equipment		
5.0	**Parking/Loading/Stacking Areas**		
5.1	Location and complete dimensions of all paved areas		
5.2	Setback dimensions of all paved areas to property lines		
5.3	Dimension of typical parking space and drive aisles		
5.4	Location and layout of handicapped parking spaces & access aisles		
5.5	Detail of vertical signage for handicapped parking and access aisles		
5.6	Indicate minimum parking requirement & number of spaces provided		
5.7	Proposed signage for directing and guiding traffic		
5.8	Curb cut permits from NYS, Erie County, or Town (if applicable)		
5.9	Pedestrian connections (from proposed structures to public sidewalk network)		
6.0	**Location and proposed development of all open spaces, including parks, playgrounds, and open reservations**		
III Utilities and Drainage			
1.0	**Engineers Report** (bound separately from the Stormwater Pollution Prevention Plan [SWPPP])		
1.1	Stamped/sealed and signed by NYS licensed architect or professional engineer		
1.2	Proposed water service sizing, RPZ pressure and fire safety flow and pressure calculations		
1.3	Proposed sanitary sewer facility load calculations (avg. & peak flows) including calculation of the peaking factor		
1.4	Proposed storm drainage facility calculations (see information included with this application)		
2.0	**Grading Plan**		
2.1	Existing and proposed grades indicated (proposed grades may not exceed 1 on 3)		
3.0	**Water Service**		
3.1	Location, size and material of existing and proposed facilities		
3.2	Location of existing and proposed fire hydrant location(s)		
3.3	Indicate use of sprinklers, location of Fire Department connection, and proposed fire protection systems		
3.4	Existing and proposed meter/RPZ size and location		
3.5	Applicable construction details		
4.0	**Sanitary Sewers**		
4.1	Locations, sizes, slopes, inverts, and materials of all existing and proposed facilities		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.		Submitted	Official use
III Utilities and Drainage (cont'd)			
4.2	Applicable construction details		
4.3	Proposed water/oil/grease interceptor sizing calculations by a professional engineer (if applicable)		
5.0	**Storm Drainage**		
5.1	Locations, sizes, slopes, inverts, and materials of existing and proposed storm drainage facilities		
5.2	Connection of roof drains to proposed drainage system		
5.3	Applicable Town Standard construction details		
5.4	Existing and proposed swales and ditches		
5.5	Detention area cross-section and high-level elevations		
5.6	County and State approval for tie-in to existing sewers		
6.0	**Stormwater Pollution Prevention Plan (SWPPP) as applicable** (bound separately from the Engineer's Report) **See attached checklist.**		
7.0	**Natural Gas Service**		
8.0	**Location of transformers, generators and other mechanical equipment; include detail drawings (if applicable)**		
9.0	**Downstream Sanitary Capacity Analysis (DSCA) Report** (must be submitted if proposed average flows are greater than 2,500 gallons per day)		
9.1	The DSCA Report must include a detailed downstream sewer capacity analysis and the calculations of and commitment to (via Developer commitment letter) the required financial contribution to the Town's I/I mitigation fund based on peak flow conditions. The contribution must be based on $250 per gallon per minute of mitigated flow		
IV Lighting Plan			
1.0	**Photometric plan showing light spread in foot candles at property lines**		
1.1	Detail of all light standards, including dimension of height from finished grade		
1.2	Detail of all exterior lighting fixtures		
V Landscape Plan			
1.0	**Wet/raised seal and signature of a licensed Landscape Architect**		
2.0	**Provide a calculation of the total Parking area and a calculation of interior parking area in square feet and as a percentage**		
3.0	**Indicate location, size, number and type of proposed landscape materials**		
4.0	**Indicate location, type and size of <u>all</u> existing trees 4" caliper or larger and indicate which will be removed or retained**		
VI Other Required Information/General Requirements			
1.0	**Complete boundary survey that includes all existing structures, acreage, legal description with reference to a property line, street, or other known feature, and easements plotted to scale by a NYS licensed land surveyor**		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.		Submitted	Official Use
VI Other Required Information/General Requirements (cont'd)			
1.1	Copies of all easements, reciprocal access agreement or similar leag documents		
2.0	**Topographic Survey with a 30 ft. buffer outside all property lines by a NYS licensed land surveyor**		
3.0	**Draft of any deed restrictions, covenants, provisions for home associations and common ownership, and reciprocal easement agreements (as applicable).**		
4.0	**For assessment purposes, state intent to apply for condominium status (if applicable).**		
5.0	**Completed and signed Environmental Assessment Form**		
5.1	Soil boring report and geotechnical report prepared by a qualified Professional Engineer (if applicable)		
5.2	Traffic Impact Study (if applicable)		
5.3	Archaeological survey (if applicable		
5.4	Wetland Delineation report (if applicable)		
6.0	**Show existing zoning(s) of both the subject property and adjacent parcels on the Site Plan and the Landscape Plan**		
7.0	**Location of NYSDEC wetlands (including buffer area) and/or federal wetlands; indicate jurisdictional status**		
8.0	**Location of Floodway and floodplain** (if applicable)		
9.0	**Documentation pertaining to any conditions of zonings, including copies of required deed restrictions; indicate date of rezoning and the parcel address under which it was rezoned (if applicable)**		
10.0	**Documentation related to any required variances granted by the ZBA**		
11.0	**For residential site plans, provide a statement from the appropriate school district that adequate school sites and facilities are available.**		
12.0	**8 1/2" X 11" reduction of primary site plan drawing (see appendix "B" of application package for specifications)**		
13.0	**A CD containing a PDF of all site plan drawings (Must also be provided with revised drawings)**		
VII Additional Required Information for Projects in the Mixed Use Districts			
1.0	**Design Advisory Board Application**		
1.1	Required for Major Site Plan		
1.2	Required at the Planning Directors Discretion for Minor Site Plans		
2.0	**Block & Street Network Plan**		
2.1	Designation of Core, Local & Alley streets		
2.2	Dimensions of Blocks		
3.0	**Block Usage Plan (as applicable)**		
3.1	Designation of site usage for each block including open space areas		
4.0	**Phasing Plan**		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

For official use only:

_____
Approved/Date

X:\Current_Planning\Application Forms 2013 Working Doc\Major Site Plan\Site Plan Submittal Requirements and Checklist (3).doc

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

TOWN OF AMHERST
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
-- ADDENDUM --

1. For each applicable category of proposed <u>new</u> structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

   _____ Geotechnical report attached _____ Not applicable

3. Is your property located: On Youngs Road between Dodge and Klein Roads? □ Yes □ No
   On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? □ Yes □ No

   If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? □ Yes □ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
   _____
   _____

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: □ Yes □ No

   Describe_____
   _____

   (Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per peak hour upon completion of project_____
   Source: _____

8. Will blasting occur during construction? □ Yes □ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? □ Yes □ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:
    _____ average flow _____ peak flow.

    (Average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

11. Based on the Town's *2011 Reconnaissance Level Survey of Historic Resources,* is your property 'blue-rated' for historic significance? □ Yes □ No

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NY 14202
716.886.0211.P 716.886.2269.F

November 15, 2023

VIA HAND DELIVERY
Robert J. Gilmour., Chair
Members of the Planning Board
Town of Amherst
5583 Main Street
Williamsville, NY 14221

Re: Application for Site Plan Approval
6000 – 6040 North Bailey Ave, Amherst, New York (BDC: 1723)

Dear Chair Gilmour and Members of the Planning Board:

In connection with the above-referenced property, Benderson Development Company, LLC and Delta Sonic Carwash Systems, Inc. is seeking to relocate its office from downtown Buffalo to Amherst. As part of this relocation, both companies are seeking to relocate approximately 250 employes to Amherst. In addition, Delta Sonic is proposing to locate its various warehouse locations in Western New York to the property which includes, research and development, warehousing, fabrication, and soap blending uses.

The Subject Property

As the Planning Board is aware, Amherst Development Park is a business park located in the Research and Development (RD) zoning district. It maintains frontage on North Bailey Ave. and Romney Road and is improved with five buildings. An aerial photograph of the property is attached as **Exhibit A**. To the north, across Romney Road, is the Boulevard, a large shopping center in the SC zoning district. To the west, abutting the Subject Property, is the Boulevard South, another shopping center in the SC zoning district. To the east, across N. Bailey Road will be another large development anchored by Costco and Dick's and located in the SC zoning district. To the south is an office building and the Boulevard towers, located within the CTR-5 and MFR-5 zoning districts, respectively. The properties located to the north, east and west of the Subject Property are all owned by Benderson Development.

The Proposed Project

In order to accommodate the new offices and the Delta Sonic warehouse, Benderson is proposing the following changes:

- A 5,441 s.f. building expansion to connect the existing 26,709 s.f. and 35,826 s.f. buildings located along Romney Road in the northwest corner of the Subject Property to accommodate the new offices.
- A 14,554 s.f. building expansion to connect the existing 34,632 s.f. and 59,591 s.f. buildings located along rear of the property in the southwest corner of the Subject Property to accommodate Delta Sonic's warehouse uses.
- The reconfiguration of the parking field along Romney Road to add an additional row of parking against Romney Road and the reconfiguration of the parking to the south to add an extra row of parking along the southern property line.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NY 14202
716.886.0211.P 716.886.2269.F

- The reconfiguration of the area between the two buildings (office and warehouse) to add outdoor greenspace, patio area and parking, as well as to re-work the loading docks to the southerly building.

- Additional site, utility, landscaping, sidewalk and other enhancements in connection with the above - referenced changes.

- Upgrading of the building façade to accommodate the new development.

Conclusion

We look forward to working with the Town on this project. We believe this project represents a great development opportunity for this area that is consistent with the previous development of the property. If there are any questions regarding this letter or the enclosed documentation, please feel free to contact me at (716) 878-9626 or jamesboglioli@benderson.com.

Thank you,
BENDERSON DEVELOPMENT COMPANY, LLC
James A. Boglioli
James A. Boglioli, Esq.
Director, Right to Build – Northeast US

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Exhibit A

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)


1723 - Amherst Development Park
Romney Dr
Romney Dr
Romney Dr
Romney Dr

TOWN OF AMHERST
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
-- ADDENDUM --

1. For each applicable category of proposed new structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
Odessa silt loam	Severe	Severe	Severe	Severe	Severe

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

   X Geotechnical report attached _____ Not applicable
   Report will be submitted as soon as it is completed

3. Is your property located: On Youngs Road between Dodge and Klein Roads? ☐ Yes ☑ No
   On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? ☐ Yes ☑ No

   If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? ☐ Yes ☑ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
   Blvd Consumer Square; Amherst Commerce park; Maple Crossing; Blvd South (TJ Maxx Plaza);
   1401 - 1405 Niagara Falls Blvd; 3980 Maple Road; 50 Keph Drive; 1715 & 1721 Niagara Falls Blvd

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: ☐ Yes ☑ No

   Describe_____
   _____

   (Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per peak hour upon completion of project 77 TOTAL TRIPS
   Source: ITE - Trip Generation Manual

8. Will blasting occur during construction? ☐ Yes ☑ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? ☐ Yes ☑ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:
    2,000 GPD average flow 12.7 GPM peak flow.

    (Average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

11. Based on the Town's *2011 Reconnaissance Level Survey of Historic Resources,* is your property 'blue-rated' for historic significance? ☐ Yes ☑ No

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information

Name of Action or Project:
Proposed Building Additions & Site Modifications

Project Location (describe, and attach a location map):
6000-6040 North Bailey Ave, Town of Amherst, Erie County

Brief Description of Proposed Action:
The proposed action consists of two building additions (5,441 SF and 14,554 SF) to connect the western most buildings on the north and south sides of the site, replacement of existing Town of Amherst storm pipes, expansion of the existing parking field, new drainage improvements, paving, landscaping and site lighting. The existing loading area between the new additions will be modified to provide at grade pedestrian access points, additional parking and outdoor amenity areas.

Name of Applicant or Sponsor:	Telephone: 716-878-9626
Benderson Development Company, LLC	E-Mail: jamesboglioli@benderson.com

Address:
570 Delaware Ave

City/PO:	State:	Zip Code:
Buffalo	New York	14202

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Town of Amherst Planning Board; Town of Amherst Zoning Board of Appeals; Town of Amherst Building Permit; NYSDEC Stormwater Permit	☐	☑

3.a. Total acreage of the site of the proposed action? 17.43 acres
b. Total acreage to be physically disturbed? 3.29 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 31.64 acres

4. Check all land uses that occur on, adjoining and near the proposed action.
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
☐ Parkland

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	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☑	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify:	NO ☑	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO ☑	YES ☐	
b. Are public transportation service(s) available at or near the site of the proposed action?	☐	☑	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☐	☑	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: N/A Utilize existing services	NO ☐	YES ☑	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: Connect to existing on-site water services	NO ☐	YES ☑	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: Connect to existing on-site sanitary service	NO ☐	YES ☑	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO ☑	YES ☐	
b. Is the proposed action located in an archeological sensitive area?	☑	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO ☑	YES ☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:	☑	☐	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:
☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional
☐ Wetland ☑ Urban ☑ Suburban

15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO ☑	YES ☐
16. Is the project site located in the 100 year flood plain?	NO ☑	YES ☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☑ NO ☐ YES	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: ☐ NO ☑ YES On-site storm management through a series of catch basins		

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	NO	YES
18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: On-site stormwater runoff to underground detention system (31,000 CF)	☐	☑
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	☑	☐

I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor name: David Zuppelli Date: 11.15.2023

Signature: David Zuppelli

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

STORMWATER POLLUTION PREVENTION PLAN
for
CONSTRUCTION ACTIVITIES

At

Amherst Development Park
6000-6040 North Bailey Ave
Town of Amherst, Erie County, New York

Prepared for

Benderson Development Company, LLC

570 Delaware Avenue
Buffalo, NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

November 2023



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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Section 101 - Scope

Section 102 - Project Name and Location

Section 103 - Operator's Name and Address

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- **Section 112.1** - Stabilization Practices
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Section 120 – Storm Water Control Facility Maintenance

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Appendix A Site Location Maps

Appendix B NYSDEC Notice of Intent (NOI)

Appendix C MS4 SWPPP Acceptance Form

Appendix D Engineer's Report

Appendix E NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001

Appendix F Forms

- Contractor's Certification
- Owner/Operator Certification
- SWPPP Preparer Certification
- NYSDEC Letter of Acknowledgment

Appendix G NYSDEC Notice of Termination (NOT)

Town of Amherst Level 1 Inspection – Post Construction Stormwater Management

Appendix H Construction Documents

Appendix I Standard Erosion Control Details

Appendix J NYSDEC Stormwater Management Inspection Lists

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101 SCOPE

A. **PURPOSE:** Benderson Development Company, LLC 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 Benderson Development Company, LLC; and/or liquidated damages. This section provides a descriptive explanation of Benderson Development Company, LLC 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 F of this report.

Approval from a regulated, traditional land use control MS4:

1. An **owner or operator** of a construction activity that is not 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

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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.

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.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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;

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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.

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.

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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

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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.

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 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.

The Town of Amherst - Notice of Termination Requirement: Prior to submitting the NOT, the Town of Amherst requires a Level 1 inspection of all stormwater management practices. See Appendix G: Town of Amherst Level 1 Inspection – Post Construction Stormwater Management.

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102 PROJECT NAME AND LOCATION

Amherst Development Park

6000-6040 North Bailey Ave

Town of Amherst, County of Erie, New York

42.996°N, 78.817°W

Estimated Area of Site ≈ 17.14 acres

Estimated Area to be Disturbed by Construction Activities ≈ 6.95+/- acres

A general location map is included as Appendix A.

103 OPERATOR'S NAME AND ADDRESS

Benderson Development Company, LLC

570 Delaware Ave.

Buffalo, NY 14202

Contact Person: Matt Oates

Telephone: 716-878-9397

104 PROJECT DESCRIPTION

This project is a site redevelopment of the existing Amherst Development Park located on the south side of Ridge Lea Road and on the west side of North Bailey Ave in the Town of Amherst. The site is located north of Meyer Road and east of Niagara Falls Boulevard. The Boulevard Consumer Square is located north and west of the project site, Amherst Commerce Park is located east of the project site and Boulevard Towers Apartments are located south of the project site. The site is currently fully developed and occupied by existing commercial buildings that will remain. Proposed construction will include two building additions and parking lot/driveway expansions. Site construction will also include utility improvements and new stormwater management areas. The overall site is 17.14 of which 6.95 acres will be disturbed by construction activities. The project site is currently zoned R-D.

Soil disturbing activities will include:

A. Construction of temporary construction exit points

B. Clearing & grubbing of the site within disturbance limits

C. Installation of stormwater management 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

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H. Construction of buildings

This project is owned by Benderson Development Company, LLC and will be developed by Benderson Development Company, LLC The work area consists of approximately 6.95+/- 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" = 85. The post-construction runoff curve number for the site will be "CN" = 95. Approximately 6.95+/- acres total will be disturbed by construction activities.

See soils information located in Appendix I.

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

The runoff generated from this site will discharge to an unnamed open/closed drainage system north of the site that discharges to Ellicott Creek and ultimately the Niagara River.

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

No critical habitats have been determined to be on the site.

111 WETLANDS AND/OR OTHER SURFACE WATERS

No wetlands or other surface waters are located on the site

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.

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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.

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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 STORM WATER MANAGEMENT

Refer to Appendix D, Engineer's Report

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

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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

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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.

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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 Amherst. All changes to the SWPPP must be approved by the Town of Amherst prior to applying changes to the SWPPP in the field.

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

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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

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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

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- 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.

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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

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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 Amherst. 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.

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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

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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 bioretention areas shall match the frequencies listed on the “Bioretention Operation, Maintenance and Management 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.

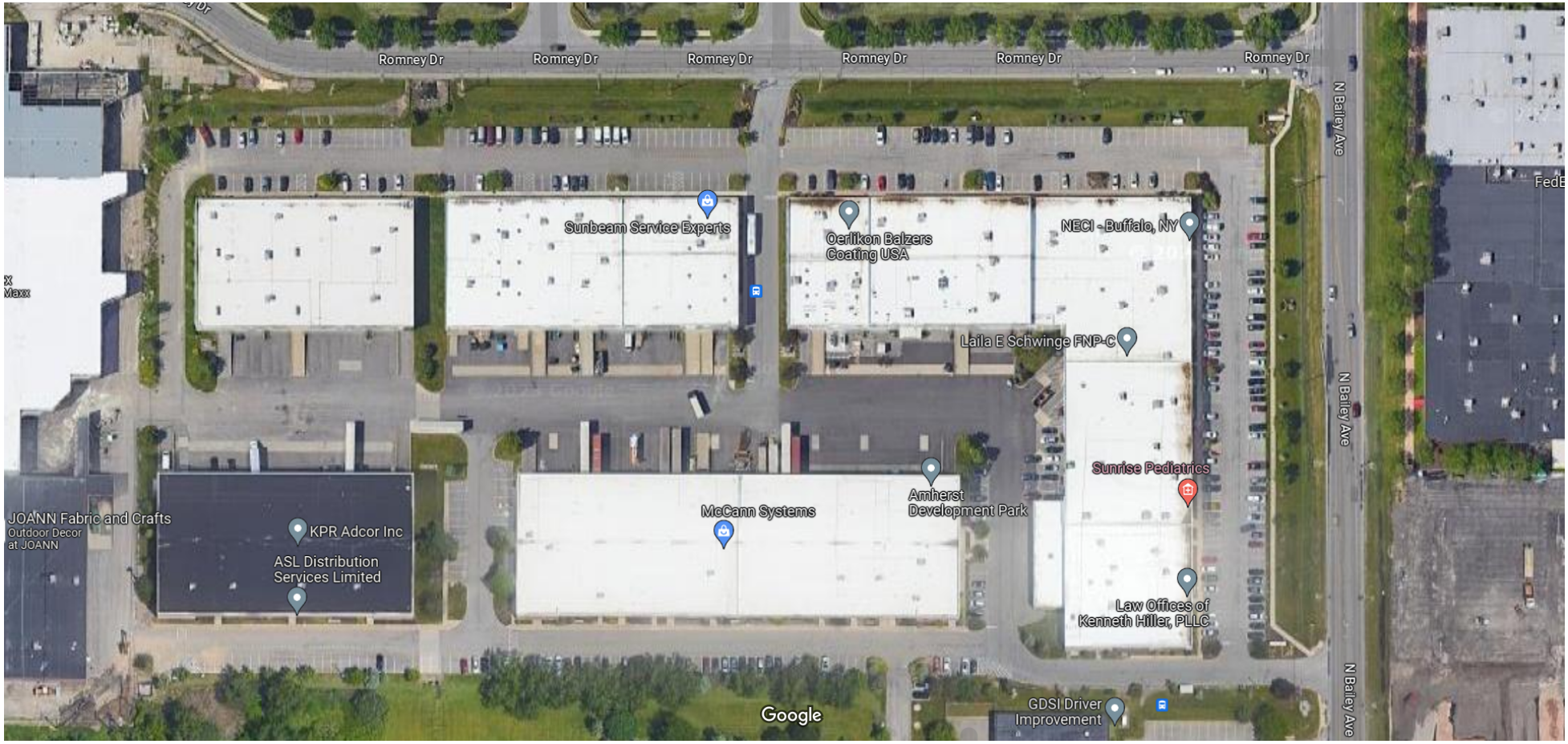
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Appendix A

Site Location Maps

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Google Maps romney road

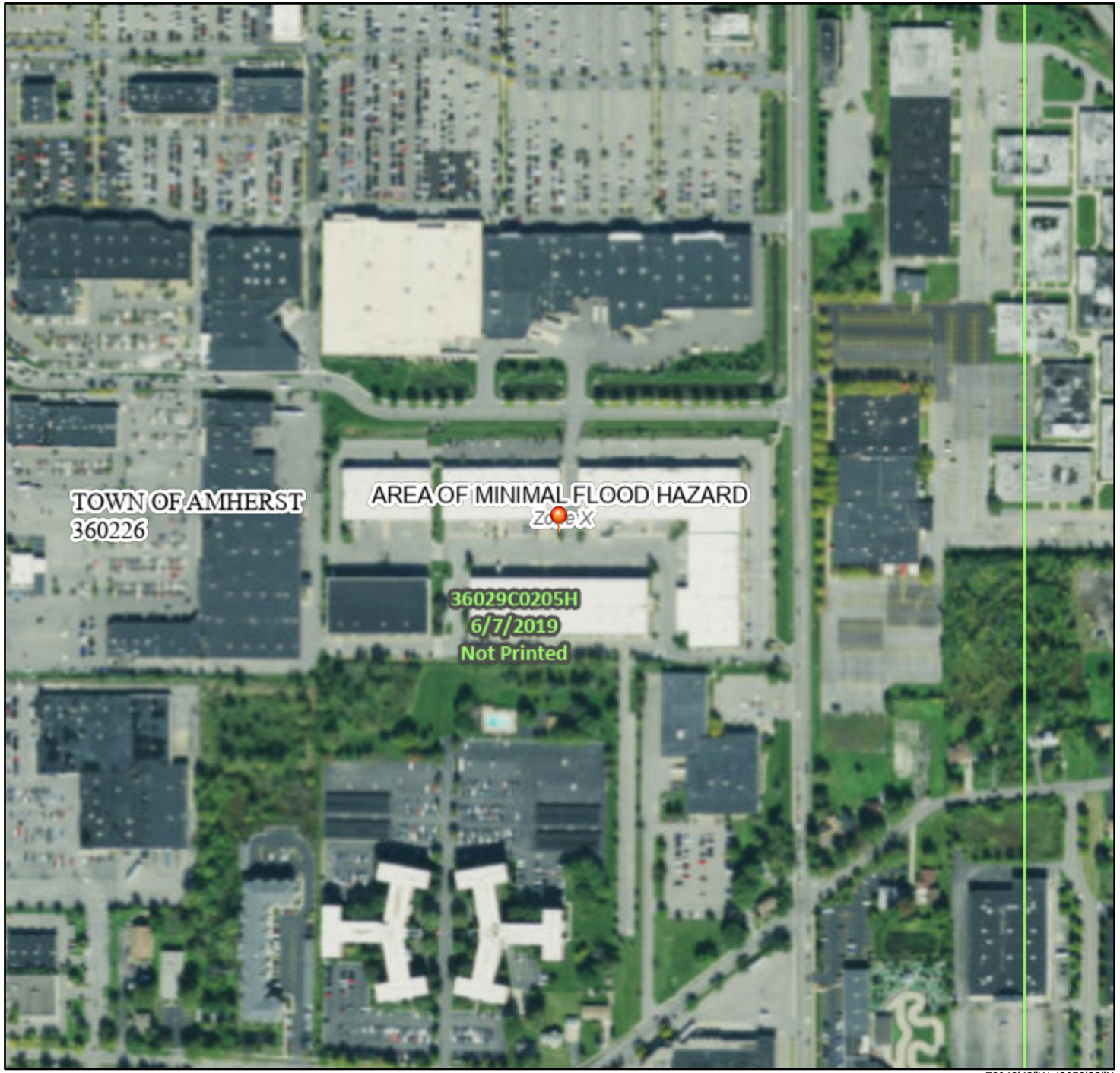


Imagery ©2023 Airbus, CNES / Airbus, Maxar Technologies, New York GIS, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2023 100 ft

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National Flood Hazard Layer FIRMette

78°49'19"W 43°N



78°48'42"W 42°59'33"N

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

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 (BF *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, V*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazar as of 1% annual chance flood with a depth less than one foot or with d areas of less than one square mil
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk du Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zo*
  - Effective LOMRs
  - Area of Undetermined Flood Haza
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 Cross Sections with 1% Annual Ch
  - 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 appro point selected by the user and does not r 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 ma was exported on 11/13/2023 at 9:45 AM and does not reflect changes or amendments subsequent to this date an time. The NFHL and effective information may change or become superseded by new data over time.

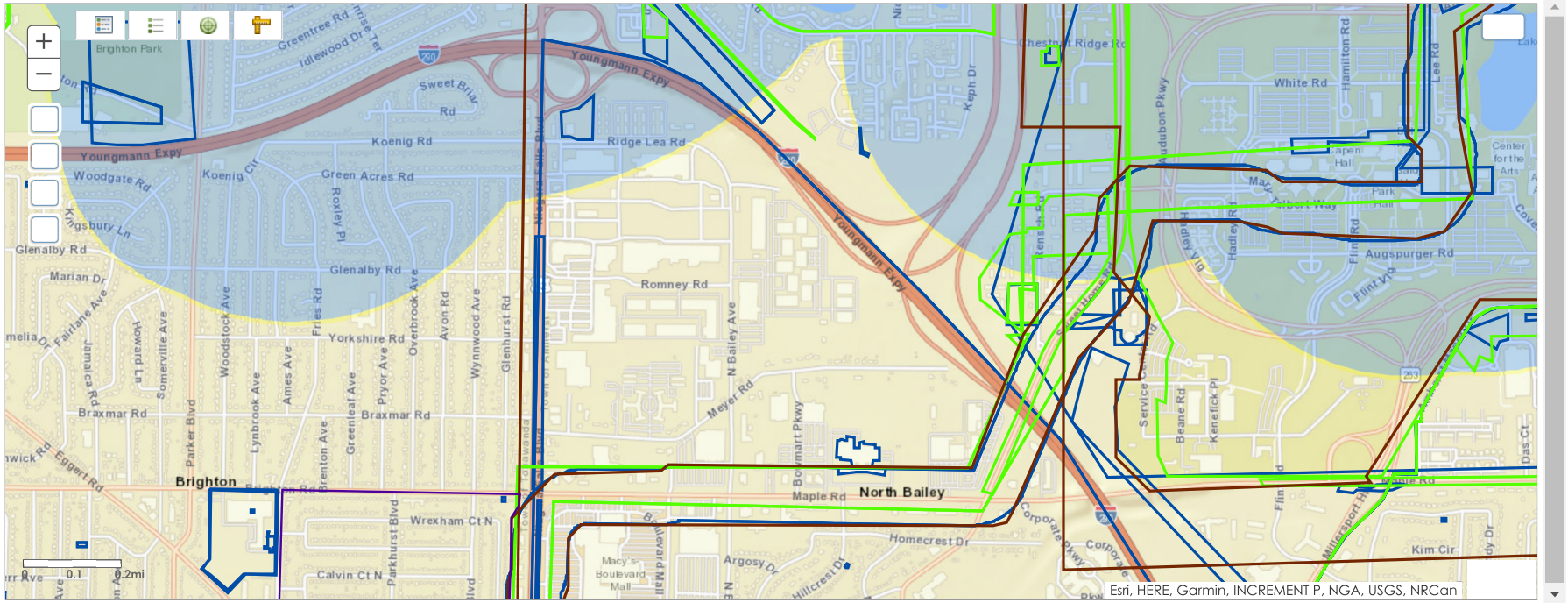
This map image is void if the one or more of the following n elements do not appear: basemap imagery, flood zone labe legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized area regulatory purposes.

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CRIS Cultural Resource Information System

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Version 1.2.18

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Appendix B

NYSDEC Notice of Intent (NOI)

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NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
Benderson Development Company

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Oates

Owner/Operator Contact Person First Name
Matt

Owner/Operator Mailing Address
570 Delaware Ave

City
Buffalo

State: NY Zip: 14202 -

Phone (Owner/Operator): 7168780397 Fax (Owner/Operator): ___ - ___ - ____

Email (Owner/Operator)
MattOates@benderson.com

FED TAX ID
16-1549911 (not required for individuals)

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Project Site Information

Project/Site Name

Amherst Development Park

Street Address (NOT P.O. BOX)

6000-6040 North Bailey Ave

Side of Street

○ **North** ○ **South** ○ **East** ● **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Town of Amherst

State: NY | Zip: 14226- | County: Erie | DEC Region: 9

Name of Nearest Cross Street

Romney Road

Distance to Nearest Cross Street (Feet)

0

Project In Relation to Cross Street

○ **North** ● **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel

54.14-1-19.1

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

-7 | | | 8 | 8 | 1 | 7

Ex. -73.749

Y Coordinates (Northing)

4 | 2 | 9 | 9 | 6 | | |

Ex. 42.652

2. What is the nature of this construction project?

○ **New Construction**

● **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

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3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use	Post-Development Future Land Use
○ FOREST	○ SINGLE FAMILY HOME
○ PASTURE/OPEN LAND	○ SINGLE FAMILY SUBDIVISION
○ CULTIVATED LAND	○ TOWN HOME RESIDENTIAL
○ SINGLE FAMILY HOME	○ MULTIFAMILY RESIDENTIAL
○ SINGLE FAMILY SUBDIVISION	○ INSTITUTIONAL/SCHOOL
○ TOWN HOME RESIDENTIAL	○ INDUSTRIAL
○ MULTIFAMILY RESIDENTIAL	● COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
○ INDUSTRIAL	○ ROAD/HIGHWAY
● COMMERCIAL	○ RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	○ BIKE PATH/TRAIL
○ RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
○ BIKE PATH/TRAIL	○ PARKING LOT
○ LINEAR UTILITY	○ CLEARING/GRADING ONLY
○ PARKING LOT	○ DEMOLITION, NO REDEVELOPMENT
○ OTHER	○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
	○ OTHER

Number of Lots

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
17.1	7.0	3.9	5.9

5. Do you plan to disturb more than 5 acres of soil at any one time? ● **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

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

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date	End Date
03/01/2024	01/01/2025

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9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name: Ellicott Creek

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ● Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ● Yes ○ No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ Yes ● No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ Yes ● No
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ Yes ● No
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ Yes ● No

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15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ● Yes ○ No ○ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

Town of Amherst & NYSDOT

open/closed stormwater drainage system

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ● No ○ Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ Yes ● No

19. Is this property owned by a state authority, state agency, federal government or local government? ○ Yes ● No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ Yes ● No

21. 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 ○ No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ● Yes ○ No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ● Yes ○ No

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24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer: Carmina Wood Design

Contact Name (Last, Space, First): Wood, Christopher

Mailing Address: 487 Main Street Suite 600

City: Buffalo

State: NY Zip: 14203-

Phone: 7168422165 Fax: - -

Email: cwood@carminawooddesign.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name: Christopher **MI**:

Last Name: Wood

Signature:

Date: 11/16/2023

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25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ● Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ● Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ● Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ● Rock Outlet Protection
- ○ Streambank Protection

Other

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Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ● **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. 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 (2010 version).

- ● 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).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

0.749 **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

7738089822

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)	
RR Techniques (Area Reduction)				
○ Conservation of Natural Areas (RR-1)		and/or		
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or		
○ Tree Planting/Tree Pit (RR-3)		and/or		
○ Disconnection of Rooftop Runoff (RR-4)		and/or		
RR Techniques (Volume Reduction)				
○ Vegetated Swale (RR-5)				
○ Rain Garden (RR-6)				
○ Stormwater Planter (RR-7)				
○ Rain Barrel/Cistern (RR-8)				
○ Porous Pavement (RR-9)				
○ Green Roof (RR-10)				
Standard SMPs with RRv Capacity				
○ Infiltration Trench (I-1)				
○ Infiltration Basin (I-2)				
○ Dry Well (I-3)				
○ Underground Infiltration System (I-4)				
○ Bioretention (F-5)			1.97	
○ Dry Swale (O-1)				
Standard SMPs				
○ Micropool Extended Detention (P-1)				
○ Wet Pond (P-2)				
○ Wet Extended Detention (P-3)				
○ Multiple Pond System (P-4)				
○ Pocket Pond (P-5)				
○ Surface Sand Filter (F-1)				
○ Underground Sand Filter (F-2)				
○ Perimeter Sand Filter (F-3)				
○ Organic Filter (F-4)				
○ Shallow Wetland (W-1)				
○ Extended Detention Wetland (W-2)				
○ Pond/Wetland System (W-3)				
○ Pocket Wetland (W-4)				
○ Wet Swale (O-2)				

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Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ Hydrodynamic	
○ Wet Vault	
○ Media Filter	
● Other WQ Structure	3.92

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name TBD

Manufacturer TBD

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0.094 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ● **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

0.056 **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

0.655 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

0.749

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ● **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

0.230 **acre-feet**

CPv Provided

0.230 **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

20.51 **CFS**

Post-development

13.54 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

41.10 **CFS**

Post-development

25.60 **CFS**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● Yes ○ No

If Yes, Identify the entity responsible for the long term Operation and Maintenance

Benderson Development Company

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

-RRv is required for any new impervious within a redevelopment project
-Onsite soils with slow infiltration rates (Hydrologic soil group "D")

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][ ].[ ]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ● **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [N][Y][R][ ][ ][ ][ ][ ][ ]

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: Matt

MI:

Print Last Name: Oates

Owner/Operator Signature:

Date: / /

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix C

MS4 SWPPP Acceptance Form

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Benderson Development, LLC
2. Contact Person:	Matt Oates
3. Street Address:	570 Delaware Ave
4. City/State/Zip:	Buffalo, NY 14202
II. Project Site Information	
5. Project/Site Name:	Amherst Development Park
6. Street Address:	6000-6040 North Bailey Ave
7. City/State/Zip:	Amherst, NY 14226
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:	Town of Amherst
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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 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. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix D

Engineer's Report

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

ENGINEER'S REPORT

for

Amherst Development Park

6000-6040 North Bailey Ave
Town of Amherst, Erie County, New York

Prepared for

Benderson Development Company, LLC

570 Delaware Avenue
Buffalo, NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

November 2023



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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Section 2 - Stormwater Drainage System

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Appendix C - Storm Sewer Drainage Calculations

- Water Quality and Runoff Reduction Calculations
- Stormwater Runoff Summaries and Runoff Delineation Maps
- HydroCAD Analysis

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Section 1 – Location & Description

This project is a site redevelopment of the existing Amherst Development Park located on the south side of Ridge Lea Road and on the west side of North Bailey Ave in the Town of Amherst. The site is located north of Meyer Road and east of Niagara Falls Boulevard. The Boulevard Consumer Square is located north and west of the project site, Amherst Commerce Park is located east of the project site and Boulevard Towers Apartments are located south of the project site. The site is currently fully developed and occupied by existing commercial buildings that will remain. Proposed construction will include two building additions and parking lot/driveway expansions. Site construction will also include utility improvements and new stormwater management areas. The overall site is 17.14 of which 6.95 acres will be disturbed by construction activities. The project site is currently zoned R-D.

Section 2 – Stormwater Drainage System

The existing site is generally flat. An existing open/closed drainage system onsite drains north to an open swale along the north side of Romney Rd. Three existing 3'x5' arch stormwater conveyance pipes are also located onsite within a 30' wide Town of Amherst Drainage easement. These conveyance pipes flow from the south property line to north and discharge into the open swale along Romney Rd. The existing swale flows east along Romney Rd and north along North Bailey Ave and outlets to an existing stormwater management pond located adjacent to Interstate 290. Runoff from the pond is then conveyed north via open and closed drainage systems and discharges to Ellicott Creek and ultimately the Niagara River. All proposed stormwater runoff from the project site will continue to discharge to the existing stormwater system along Romney Road.

This project is subject to the Boulevard Central Special Stormwater Design Conditions adopted by the Town of Amherst. In addition to the requirements of the NYSDEC SPDES General Permit, the project must also provide the following criteria for Projected Growth Redevelopment Scenarios and Enhanced Phosphorus Removal:

- Provide 10% escalation of proposed peak flow when compared to existing conditions peak flows.
- Median curve number (CN) to compute existing conditions.
- Water Quality volume based on the 1-year, 24-hour storm according to Chapter 10 of the NYSDEC Stormwater Management Design Manual.

For purposes of the runoff analysis and the stormwater drainage system design, portions of the project site were classified as "Redevelopment" per NYSDEC Stormwater Management Design Manual Chapter 9 requirements. The nature of this construction project will be a "Redevelopment" with an increase in impervious area. The proposed stormwater management system was designed to attenuate proposed runoff to existing conditions prior to discharge.

The proposed stormwater drainage system will consist of a combination of overland sheet flow and HDPE pipe channel flow connected by a series of drainage inlets located throughout the project site. Proposed stormwater runoff will be collected and conveyed to an underground stormwater chamber detention area onsite and discharged via outlet control pipes to the existing stormwater system along Romney Road.

The bioretention areas will provide Runoff Reduction and Water Quality volume requirements for "New Development" areas. The filter area planting soil depth varies throughout the bioretention areas but maintains a minimum of at least 18 inches of soil. The 18 inches of soil is an acceptable deviation per the NYSDEC where existing grades prevent the full 2.5'-4' foot soil depth. A series of 6" underdrains below the planting soil will be located throughout the bioretention areas connected by overflow drainage inlets to convey runoff directly to the closed stormwater management system. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas.

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: No existing natural features exist onsite.
2. Calculation of Water Quality Volume (WQv) for site. See "Storm Sewer Drainage Calculations".

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3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity. Bioretention areas were incorporated into the site design to provide required RRv and WQv for "New Development" areas. See "Storm Sewer Drainage Calculations".
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. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas. See "Storm Sewer Drainage Calculations".
5. Design of volume and peak rate control practices where required. See "Storm Sewer 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.

Water Quality:
The NYSDEC requires water quality treatment prior to discharge. This will be achieved by the application of bioretention areas and water quality treatment structures. The total WQv provided was 0.749 ac-ft and equal to the required WQv of 0.749 ac-ft. The required water quality volume was calculated based on the proposed 6.95 acres of proposed development area.

Runoff Reduction Volume:
The NYSDEC requires reduction of the total water quality volume by green infrastructure techniques and SMPs to replicate pre-development hydrology. Bioretention areas were incorporated into the site layout to provide the required RRv for contributing runoff areas in the WQv. The RRv provided was 0.094 ac-ft and greater than the required RRv min. of 0.056 ac-ft. The required runoff reduction volume was calculated based on 3.03 acres of proposed "new development" area that includes 1.97 acres of "new impervious" area.

100% of the required WQv was not reduced due to the followings site specific limitations: Drainage areas with impermeable soils, Type D. In addition, below is a summary of how each green infrastructure technique was evaluated and determined to be feasible or infeasible:

1. Conservation of natural areas: no natural existing features present onsite.
2. Sheetflow to riparian buffers or filter strips: no riparian buffers possible on the site; filter strips not feasible given the limited area for development.
3. Vegetated Open Swales: swales were not feasible given the limited area for development.
4. Tree Plantings: new trees were planted throughout the site.
5. Disconnection of Roof Top Runoff: disconnection not feasible for these types of projects.
6. Stream Daylighting: is not feasible given the limited area for development.
7. Rain Garden: bioretention areas installed throughout site.
8. Green Roof: the proposed use of the building makes this an unfeasible practice.
9. Stormwater Planter: this method is not recommended for these types of projects.
10. Rain Barrels & Cisterns: collected water would not be used for irrigation.
11. Porous Pavement: porous pavement is not recommended for areas with impermeable soils (Type D) and areas with sediment laden runoff (salting in winter months).

Channel Protection:
The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 10,004 cf will be accommodated in the stormwater detention areas onsite.

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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 13.54 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

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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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 25.60 cfs, which is below the existing peak 100-year runoff of 41.10 cfs.

Town of Amherst:
The Town requires that the 25-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event *under the 10% escalation scenario*. Storage of this storm will be provided within the onsite stormwater detention areas. At the 25-year storm event the stormwater drainage system will allow discharge of 19.34 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

Design Criteria:
Storm pipes: 10-year storm
RUNOFF ANALYSIS OF PROPOSED DEVELOPMENT AREA:

STORM EVENT	EXISTING RUNOFF (cfs)	PROPOSED RUNOFF (cfs)	10% ESCALATION (cfs)
1 YEAR	8.12	7.30	8.03
2 YEAR	11.64	9.40	10.34
5 YEAR	16.25	11.90	13.09
10 YEAR	20.51	13.54	14.89
25 YEAR	27.36	18.03	19.83
50 YEAR	33.68	21.83	24.01
100 YEAR	41.10	25.60	28.16

WATER QUALITY SUMMARY:
WQv REQUIRED = 0.749 AC-FT
RRv MIN. REQUIRED = 0.056 AC-FT
RRv PROVIDED WITHIN BIORETENTION AREAS = 0.094 AC-FT
WQv PROVIDED WITHIN BIORETENTION AREAS = 0.234 AC-FT
WQv PROVIDED BY TREATMENT STRUCTURES = 0.515 AC-FT
TOTAL WQv PROVIDED = 0.749 AC-FT

BIORETENTION FILTER AREA SUMMARY:
FILTER AREA = 9,266 SF

See attached “Storm Sewer Drainage Calculations” for additional information.

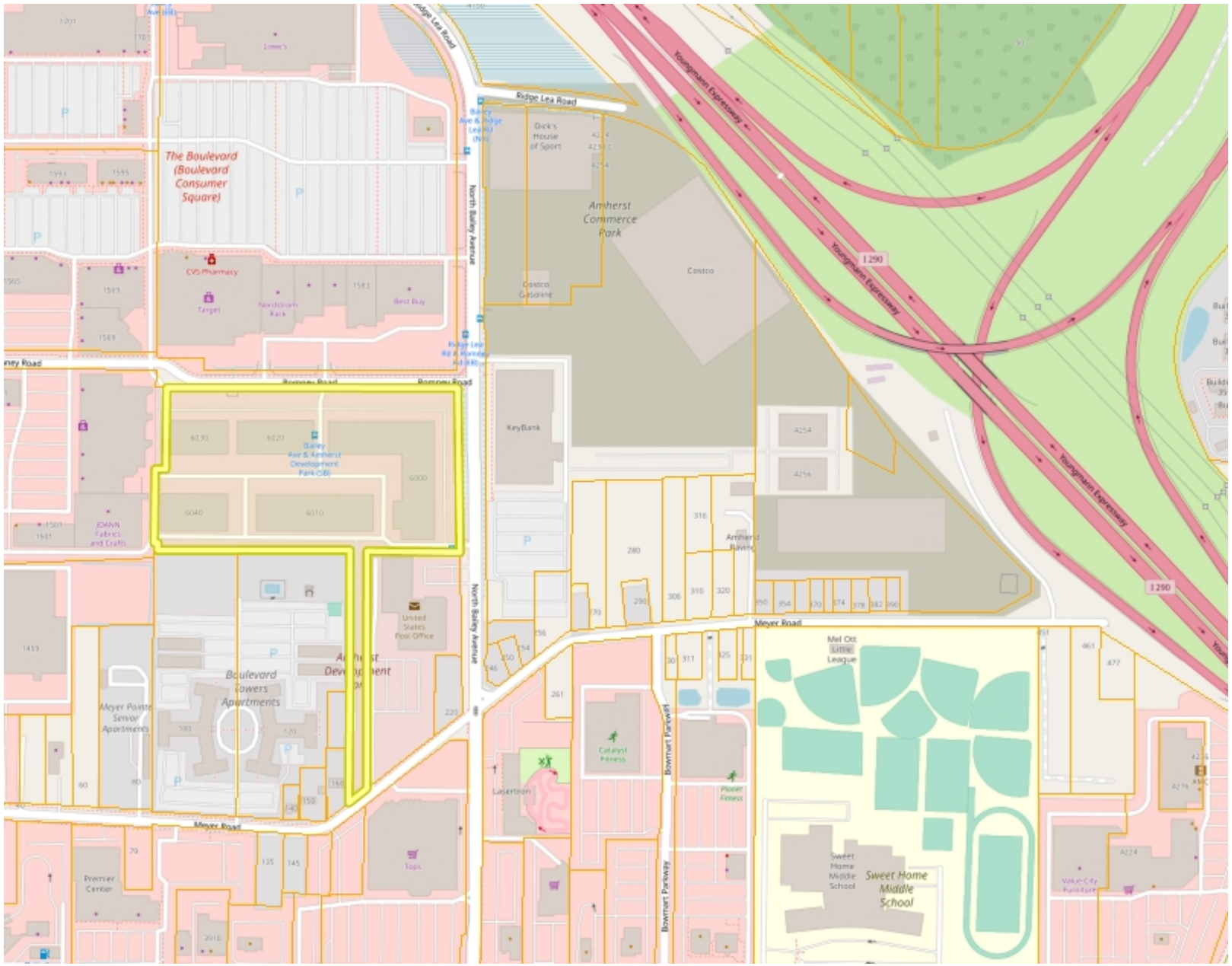
Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix A

Location Maps

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Erie County On-Line Mapping Application





Legend

- Parcels

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

0 0.14 0.3 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
THIS MAP IS NOT TO BE USED FOR NAVIGATION

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

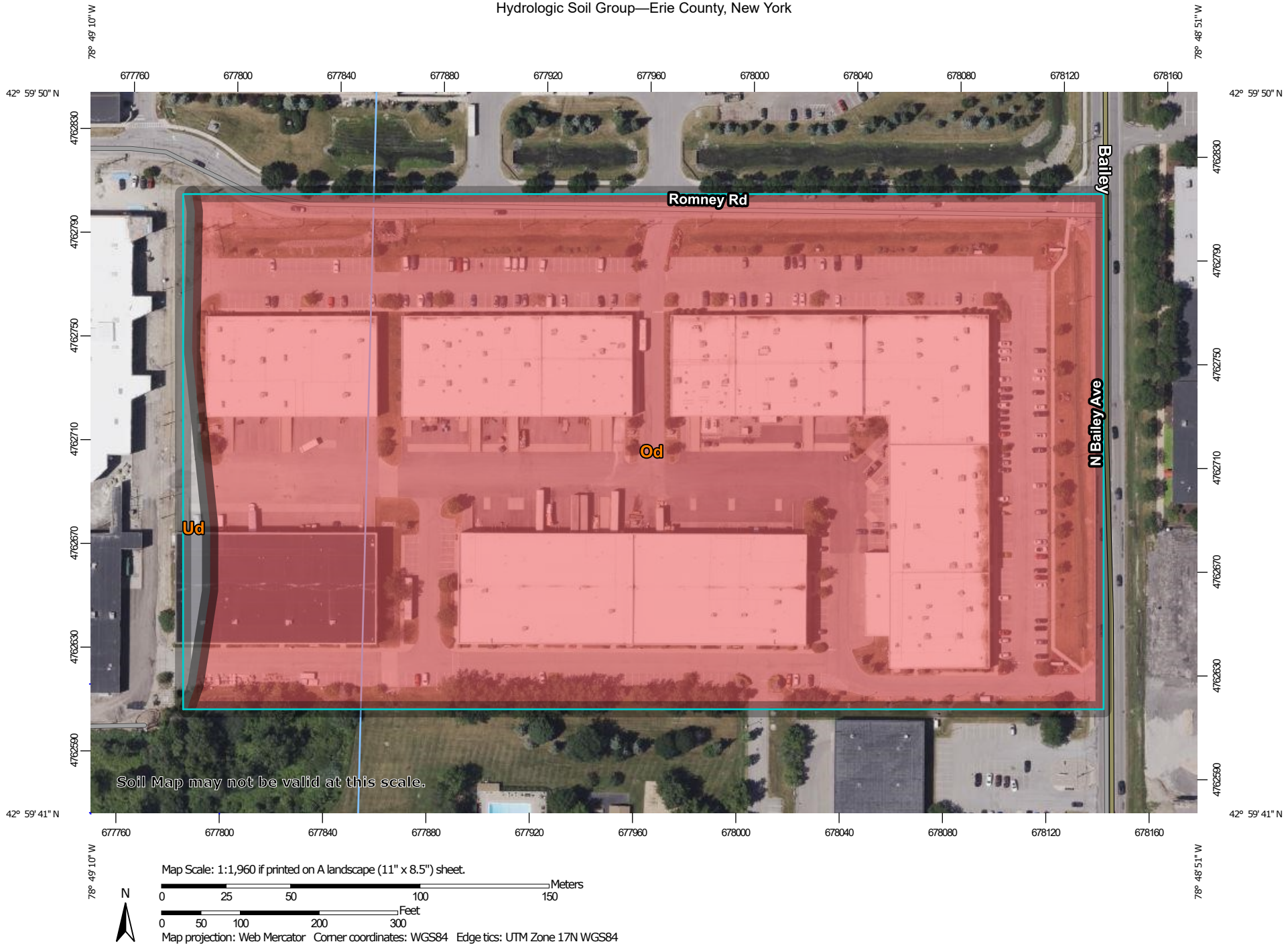
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Appendix B

Web Soil Survey – Hydrologic Soils Group

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Hydrologic Soil Group—Erie County, New York



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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 23, Sep 5, 2023

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

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

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.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Od	Odessa silt loam, 0 to 3 percent slopes	D	17.2	98.2%
Ud	Urban land		0.3	1.8%
Totals for Area of Interest			**17.6**	**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

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Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix C

Storm Sewer Drainage Calculations

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Water Quality and Runoff Reduction Calculations

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

WATER QUALITY REQUIRED FOR PROPOSED DEVELOPMENT AREA Area, Acres = 6.95

(Note: Reference Chap. 9 NYSDEC Stormwater Design Manual)

"Redevelopment Activity", Acres = 3.92 "New development", Acres = 3.03

(existing, disturbed impervious area)

Total proposed impervious, Acres = 5.89

"New" impervious, Acres = 1.97

Water Quality Volume (WQv) WQv Required = 1-Year, 24-Hour Design Storm

See Attached Worksheet & HydroCAD "WQ1" & "WQ2":

WQ1, Proposed Overall Development Area, ac-ft =	0.749
WQ2, Redevelopment Area, ac-ft =	0.515
Flow Through Alt. Practice = 100% WQv for Redevelopment, ac-ft =	0.515
WQ3, New Development Area, ac-ft =	0.234
Total WQv Required, ac-ft =	0.749

Note: Runoff Reduction Volume (RRv) sizing criteria not required for "Redevelopment Activity" portion of project.

See attached Bioretention Worksheet for RRv sizing for "New Development" portion of project.

RRv PROVIDED FOR PROPOSED DEVELOPMENT AREA (See NYSDEC worksheets)

Min. RRv Req'd, cf = 2,446

Min. RRv Req'd, ac-ft = 0.056

(P=1 yr storm event =1.80 in)

	WQv, cf	RRv, cf
Bioretention Area	10,193	4,077
WQ Treatment Structure(s)	22,433	0
TOTAL, cf	32626.45	4077
TOTAL, ac-ft	0.749	0.094

WQ & RR SUMMARY (ac-ft):

TOTAL WATER QUALITY PROVIDED FOR PROPOSED DEVELOPMENT AREA 0.749

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)

Revised_/_/_

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD

DESIGN

24-4099 AMHERST DEVELOPMENT PARK 11/14/23

WATER QUALITY VOLUME FOR ENHANCED PHOSPHORUS REMOVAL

* WQ_v = 1-YR, 24-HR DESIGN STORM (HYDROCAD)

① PROPOSED OVERALL DEVELOPMENT AREA = 6.95 AC

GREENSPACE =
IMPERVIOUS =
$T_c \leq 5.0$ MIN

→ 1-YR, 24-HR HYDROCAD RUNOFF VOLUME

WQ_1 = 0.749 AC-FT
(SEE ATTACHED "WQ1" HYDROCAD)

② REDEVELOPMENT AREA = 3.92 AC (EXISTING IMPERVIOUS)

1-YR, 24-HR HYDROCAD RUNOFF VOLUME = 0.515 AC-FT
(SEE ATTACHED "WQ2" HYDROCAD)

PER NYSDEC STORMWATER DESIGN MANUAL 10.3.6

* PERFORMANCE CRITERIA: OPTIONS
  1. USE 25% WQ_v OF REDEVELOPMENT AREA FOR SMP'S
  2. USE 75% WQ_v OF REDEVELOPMENT AREA FOR VOLUME BASED ALTERNATIVE PRACTICE
  3. USE 100% WQ_v OF REDEVELOPMENT AREA FOR FLOW THROUGH ALT. PRACTICE

USE OPTION ③

WQ_2 = 0.515 AC-FT

③ NEW DEVELOPMENT AREA =

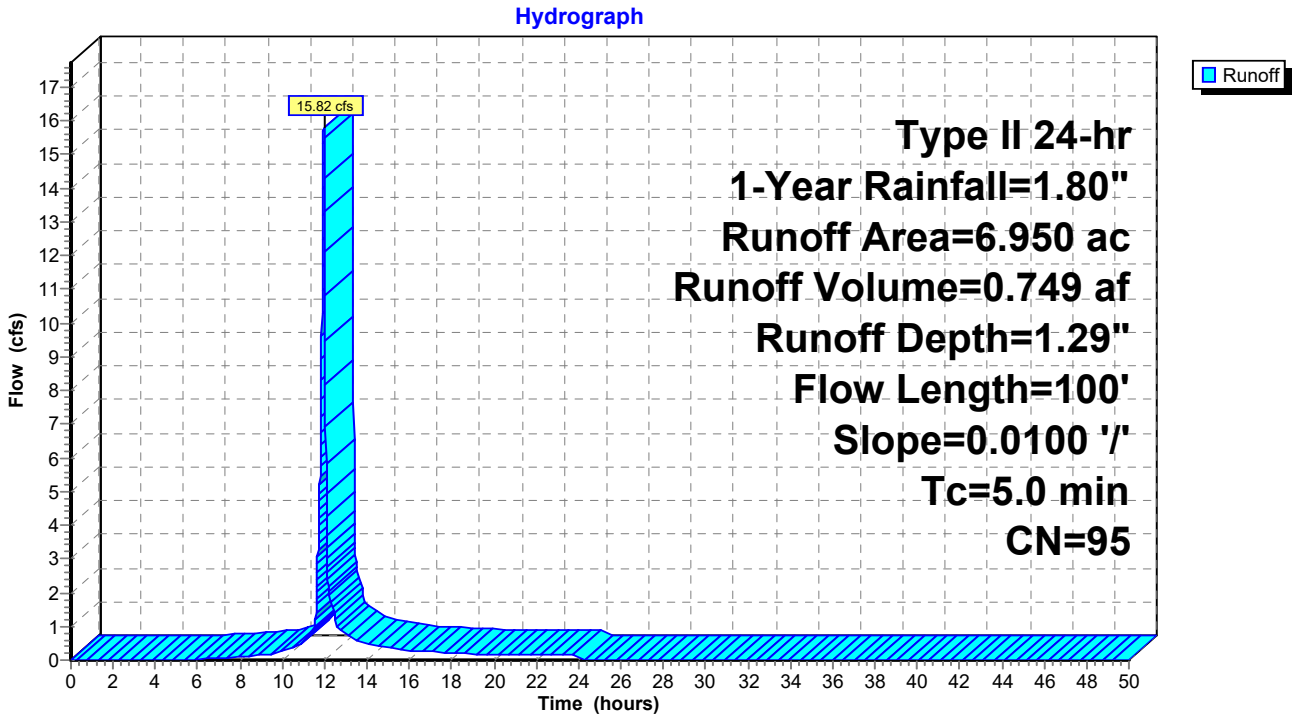
WQ_3 = 0.749 AC-FT − 0.515 AC-FT = 0.234 AC-FT

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

23-4099 Proposed WQv
Prepared by Carmina Wood Morris, PC
HydroCAD® 10.20-2g s/n 05019 © 2022 HydroCAD Software Solutions LLC

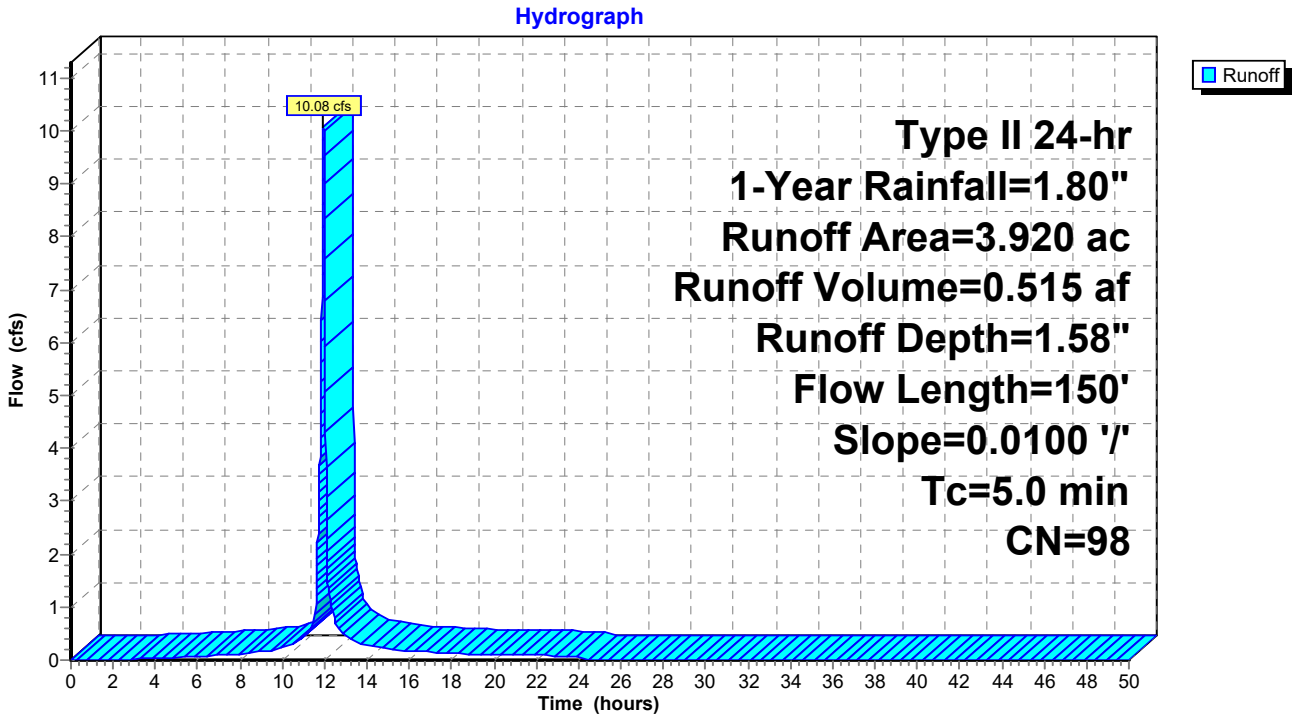
Type II 24-hr 1-Year Rainfall=1.80"
Printed 11/14/2023

Subcatchment WQ1: Proposed Site - Overall Area



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Subcatchment 2S: Proposed Site - Redevelopment Area



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

WATER QUALITY TREATMENT STRUCTURE SIZING CALCULATIONS

Area, Acres = 3.92

Water Quality Volume (WQv)

WQv (ac-ft)= 0.515

WQv (cf)= 22,433

Water Quality Peak Flow Calculation for Flow Through Practices

Q, WQv in Watershed Inches = (WQv/A)x12 = 1.577

P = 1.8

"Rational Method" CN Value = $1000/[10 + 5P + 10Q - 10(Q^2 + 1.25\,QP)^{½}]$

CN= 98

Initial Abstration: Table 4-I, Ia = 0.041

Ia/P Ratio = 0.023

Tc (HydroCAD), min.= 5

Tc (HydroCAD), hr.= 0.1

Unit Peak Discharge, qu (csm/in) 1000

Peak Discharge (Qp) = qu * A * WQv

Where: A = drainage area, in square miles

WQv = Water Quality Volume, in watershed inches

qu = the unit peak discharge, in cfs/mi²/inch

Qp, (cfs) = 9.656

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Chapter 4 Graphical Peak Discharge Method

This chapter presents the Graphical Peak Discharge method for computing peak discharge from rural and urban areas. The Graphical method was developed from hydrograph analyses using TR-20, "Computer Program for Project Formulation—Hydrology" (SCS 1983). The peak discharge equation used is:

$$q_p = q_u A_m Q F_p \qquad \text{[eq. 4-1]}$$

where:

q_p = peak discharge (cfs)
q_u = unit peak discharge (csm/in)
A_m = drainage area (mi^2)
Q = runoff (in)
F_p = pond and swamp adjustment factor

The input requirements for the Graphical method are as follows: (1) T_c (hr), (2) drainage area (mi^2), (3) appropriate rainfall distribution (I, IA, II, or III), (4) 24-hour rainfall (in), and (5) CN. If pond and swamp areas are spread throughout the watershed and are not considered in the T_c computation, an adjustment for pond and swamp areas is also needed.

Peak discharge computation

For a selected rainfall frequency, the 24-hour rainfall (P) is obtained from appendix B or more detailed local precipitation maps. CN and total runoff (Q) for the watershed are computed according to the methods outlined in chapter 2. The CN is used to determine the initial abstraction (I_a) from table 4-1. I_a / P is then computed.

If the computed I_a / P ratio is outside the range in exhibit 4 (4-I, 4-IA, 4-II, and 4-III) for the rainfall distribution of interest, then the limiting value should be used. If the ratio falls between the limiting values, use linear interpolation. Figure 4-1 illustrates the sensitivity of I_a / P to CN and P.

Peak discharge per square mile per inch of runoff (q_u) is obtained from exhibit 4-I, 4-IA, 4-II, or 4-III by using T_c (chapter 3), rainfall distribution type, and I_a / P ratio. The pond and swamp adjustment factor is obtained from table 4-2 (rounded to the nearest table value). Use worksheet 4 in appendix D to aid in computing the peak discharge using the Graphical method.

Figure 4-1 Variation of I_a / P for P and CN

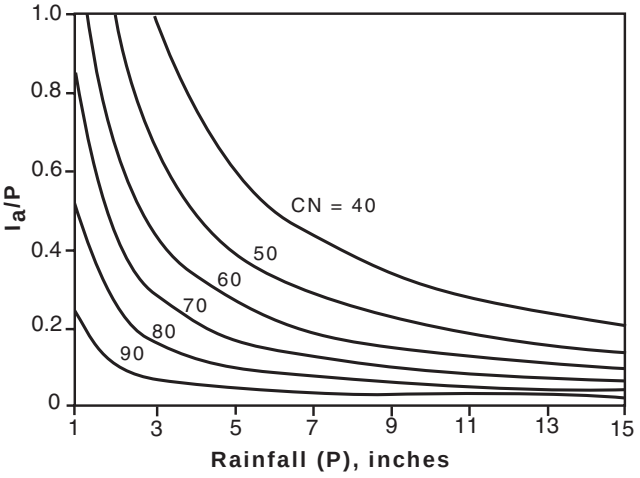
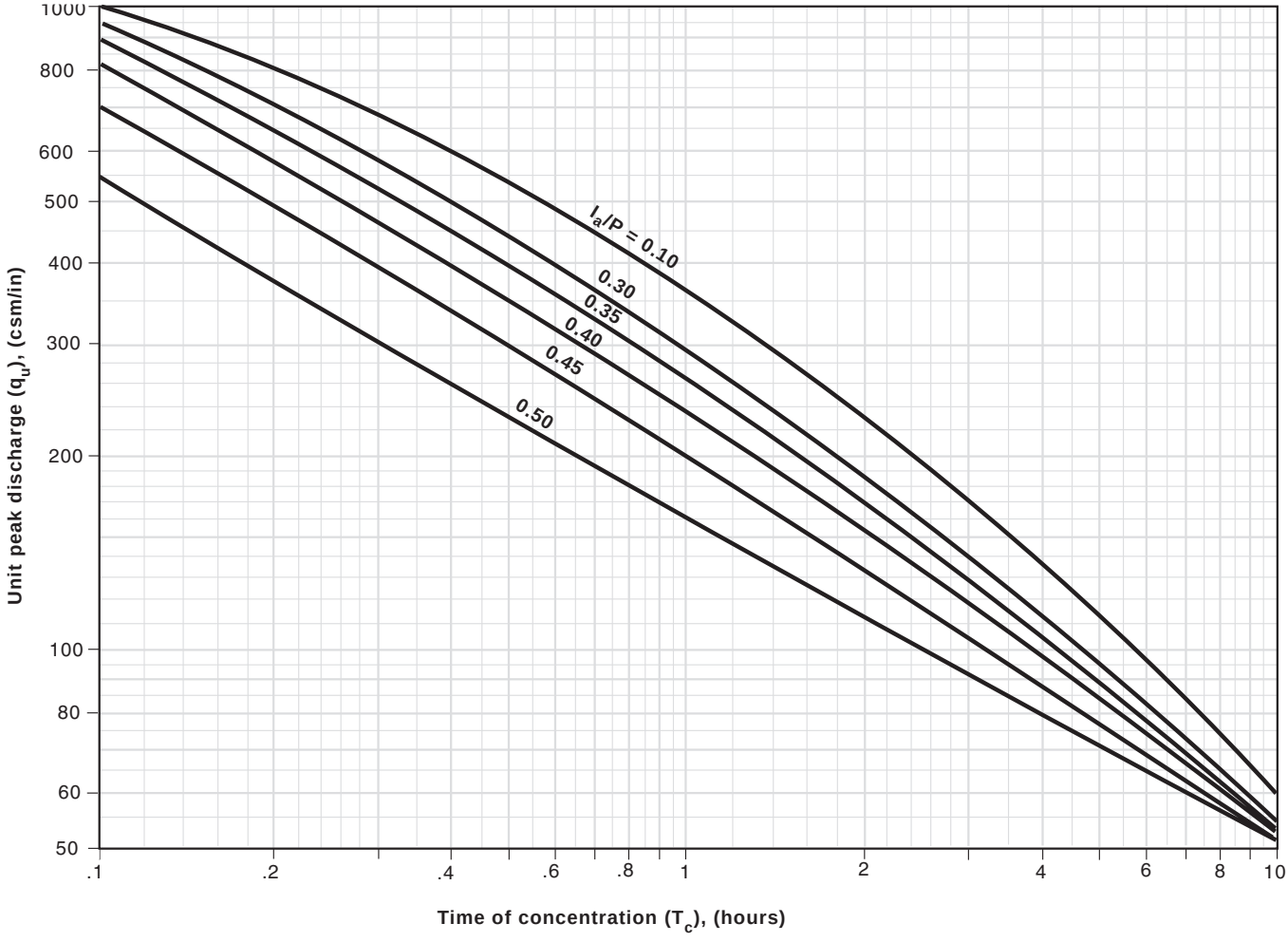


Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	70	0.857
41	2.878	71	0.817
42	2.762	72	0.778
43	2.651	73	0.740
44	2.545	74	0.703
45	2.444	75	0.667
46	2.348	76	0.632
47	2.255	77	0.597
48	2.167	78	0.564
49	2.082	79	0.532
50	2.000	80	0.500
51	1.922	81	0.469
52	1.846	82	0.439
53	1.774	83	0.410
54	1.704	84	0.381
55	1.636	85	0.353
56	1.571	86	0.326
57	1.509	87	0.299
58	1.448	88	0.273
59	1.390	89	0.247
60	1.333	90	0.222
61	1.279	91	0.198
62	1.226	92	0.174
63	1.175	93	0.151
64	1.125	94	0.128
65	1.077	95	0.105
66	1.030	96	0.083
67	0.985	97	0.062
68	0.941	98	0.041
69	0.899		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Exhibit 4-II Unit peal discharge (q_u) for NRCS (SCS) type II rainfall distribution



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:		
P=	1.80	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	3.03	1.97	65%	0.64	12,575	
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	3.03	1.97	65%	0.64	**12,575**	**Subtotal 1**
Total	3.03	1.97	65%	0.64	**12,575**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	3.03	1.97	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**3.03**	**1.97**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	3.03	1.97	65%	0.64	12,575
Subtract Area	-3.03	-1.97			
WQv adjusted after Area Reductions	**0.00**	**0.00**	0%	0.05	0
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.00	0.00	0%	0.05	**0**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**3.03**	20%
Total Area	3.03	
Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	1.97	*acre*
Precipitation	1.8	*in*
Rv	0.95	
Minimum RRv	**2,446**	***ft3***
	0.06	af

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	3.03	1.97	0.65	0.64	12574.68	1.80	
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	65%	0.64	12,575	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate		*in/hour*	
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		12,575	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.25	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**11432**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	96.25	*ft*	
Filter Length	96.27	*ft*	
Filter Area	9265.9875	*ft^2*	
Actual Volume Provided	10193	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	N/A
RRv	4,077			
RRv applied	**4,077**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	8,498	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	*ft^3*	This volume is directed another practice	
Sizing √	Error		*Check to be sure Area provided ≥ Af*	

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Stormwater Runoff Summaries and Runoff Delineation Maps

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New York
Location	New York, United States
Latitude	42.996 degrees North
Longitude	78.817 degrees West
Elevation	170 feet
Date/Time	Mon Nov 13 2023 09:29:03 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.41	0.50	0.66	0.82	1.00	**1yr**	0.71	0.93	1.13	1.34	1.56	1.80	2.09	**1yr**	1.60	2.01	2.42	2.91	3.39	**1yr**
2yr	0.30	0.47	0.58	0.77	0.96	1.18	**2yr**	0.83	1.08	1.34	1.59	1.87	2.18	2.46	**2yr**	1.93	2.36	2.78	3.31	3.80	**2yr**
5yr	0.36	0.56	0.70	0.94	1.20	1.48	**5yr**	1.03	1.35	1.67	1.98	2.30	2.65	3.00	**5yr**	2.34	2.89	3.37	3.97	4.54	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.76	**10yr**	1.22	1.61	1.98	2.34	2.70	3.07	3.49	**10yr**	2.72	3.36	3.90	4.56	5.19	**10yr**
25yr	0.48	0.76	0.96	1.33	1.77	2.20	**25yr**	1.53	2.01	2.48	2.90	3.32	3.73	4.27	**25yr**	3.30	4.10	4.74	5.48	6.20	**25yr**
50yr	0.54	0.87	1.11	1.55	2.09	2.60	**50yr**	1.81	2.39	2.94	3.42	3.88	4.33	4.97	**50yr**	3.83	4.78	5.49	6.30	7.10	**50yr**
100yr	0.61	0.99	1.28	1.82	2.48	3.10	**100yr**	2.14	2.84	3.49	4.04	4.55	5.03	5.79	**100yr**	4.45	5.57	6.36	7.24	8.13	**100yr**
200yr	0.71	1.15	1.49	2.14	2.95	3.68	**200yr**	2.54	3.39	4.14	4.77	5.33	5.84	6.75	**200yr**	5.17	6.49	7.37	8.32	9.31	**200yr**
500yr	0.85	1.39	1.82	2.64	3.70	4.62	**500yr**	3.19	4.27	5.19	5.93	6.57	7.13	8.26	**500yr**	6.31	7.95	8.96	10.01	11.14	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.42	0.57	0.70	0.87	**1yr**	0.61	0.85	0.86	1.15	1.44	1.62	1.90	**1yr**	1.44	1.83	2.08	2.63	3.10	**1yr**
2yr	0.29	0.45	0.55	0.75	0.92	1.06	**2yr**	0.80	1.04	1.16	1.42	1.71	2.10	2.35	**2yr**	1.86	2.26	2.67	3.19	3.66	**2yr**
5yr	0.33	0.51	0.63	0.86	1.10	1.26	**5yr**	0.95	1.23	1.38	1.67	2.01	2.43	2.71	**5yr**	2.15	2.60	3.03	3.61	4.08	**5yr**
10yr	0.36	0.55	0.68	0.95	1.23	1.42	**10yr**	1.06	1.39	1.56	1.87	2.26	2.71	3.01	**10yr**	2.40	2.89	3.32	3.95	4.41	**10yr**
25yr	0.41	0.62	0.77	1.10	1.45	1.67	**25yr**	1.25	1.64	1.81	2.18	2.64	3.12	3.44	**25yr**	2.76	3.31	3.73	4.42	4.84	**25yr**
50yr	0.45	0.68	0.84	1.21	1.63	1.88	**50yr**	1.41	1.84	2.02	2.43	2.95	3.47	3.82	**50yr**	3.07	3.67	4.05	4.82	5.18	**50yr**
100yr	0.49	0.74	0.92	1.33	1.83	2.12	**100yr**	1.58	2.07	2.25	2.70	3.31	3.88	4.21	**100yr**	3.43	4.05	4.39	5.25	5.53	**100yr**
200yr	0.53	0.80	1.02	1.47	2.06	2.40	**200yr**	1.77	2.34	2.49	2.99	3.69	4.34	4.65	**200yr**	3.84	4.47	4.74	5.69	5.88	**200yr**
500yr	0.60	0.90	1.16	1.68	2.39	2.81	**500yr**	2.06	2.74	2.83	3.40	4.23	5.08	5.31	**500yr**	4.50	5.11	5.18	6.32	6.32	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.46	0.56	0.75	0.93	1.07	**1yr**	0.80	1.05	1.20	1.41	1.70	1.93	2.33	**1yr**	1.71	2.24	2.61	3.09	3.63	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.16	**2yr**	0.86	1.13	1.28	1.56	1.86	2.28	2.58	**2yr**	2.02	2.48	2.95	3.48	4.03	**2yr**
5yr	0.39	0.60	0.74	1.02	1.30	1.53	**5yr**	1.12	1.50	1.68	2.06	2.44	2.88	3.31	**5yr**	2.55	3.18	3.75	4.36	5.04	**5yr**
10yr	0.46	0.71	0.88	1.22	1.58	1.89	**10yr**	1.37	1.84	2.09	2.55	3.01	3.45	4.01	**10yr**	3.05	3.86	4.52	5.17	6.02	**10yr**
25yr	0.58	0.89	1.10	1.58	2.07	2.51	**25yr**	1.79	2.45	2.79	3.39	3.98	4.40	5.18	**25yr**	3.89	4.98	5.84	6.52	7.63	**25yr**
50yr	0.69	1.05	1.31	1.88	2.53	3.11	**50yr**	2.18	3.04	3.47	4.22	4.91	5.28	6.28	**50yr**	4.68	6.04	7.10	7.79	9.17	**50yr**
100yr	0.83	1.25	1.56	2.26	3.10	3.85	**100yr**	2.68	3.77	4.33	5.24	6.07	6.33	7.62	**100yr**	5.60	7.33	8.59	9.30	10.98	**100yr**
200yr	0.99	1.48	1.88	2.72	3.80	4.78	**200yr**	3.28	4.67	5.42	6.54	7.50	7.57	9.24	**200yr**	6.70	8.88	10.46	11.13	13.20	**200yr**
500yr	1.25	1.87	2.40	3.49	4.96	6.37	**500yr**	4.28	6.22	7.30	8.75	9.94	9.62	11.94	**500yr**	8.52	11.48	13.59	14.13	16.77	**500yr**

Powered by ACIS Northeast Regional Climate Center

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

24-4099 AMHERST DEVELOPMENT PARK 11/15/23

STORMWATER DRAINAGE ANALYSIS

-PROJECTED GROWTH REDEVELOPMENT SCENARIO-

- USE MEDIAN CURVE NUMBER (CN) FOR EXISTING RUNOFF AREAS

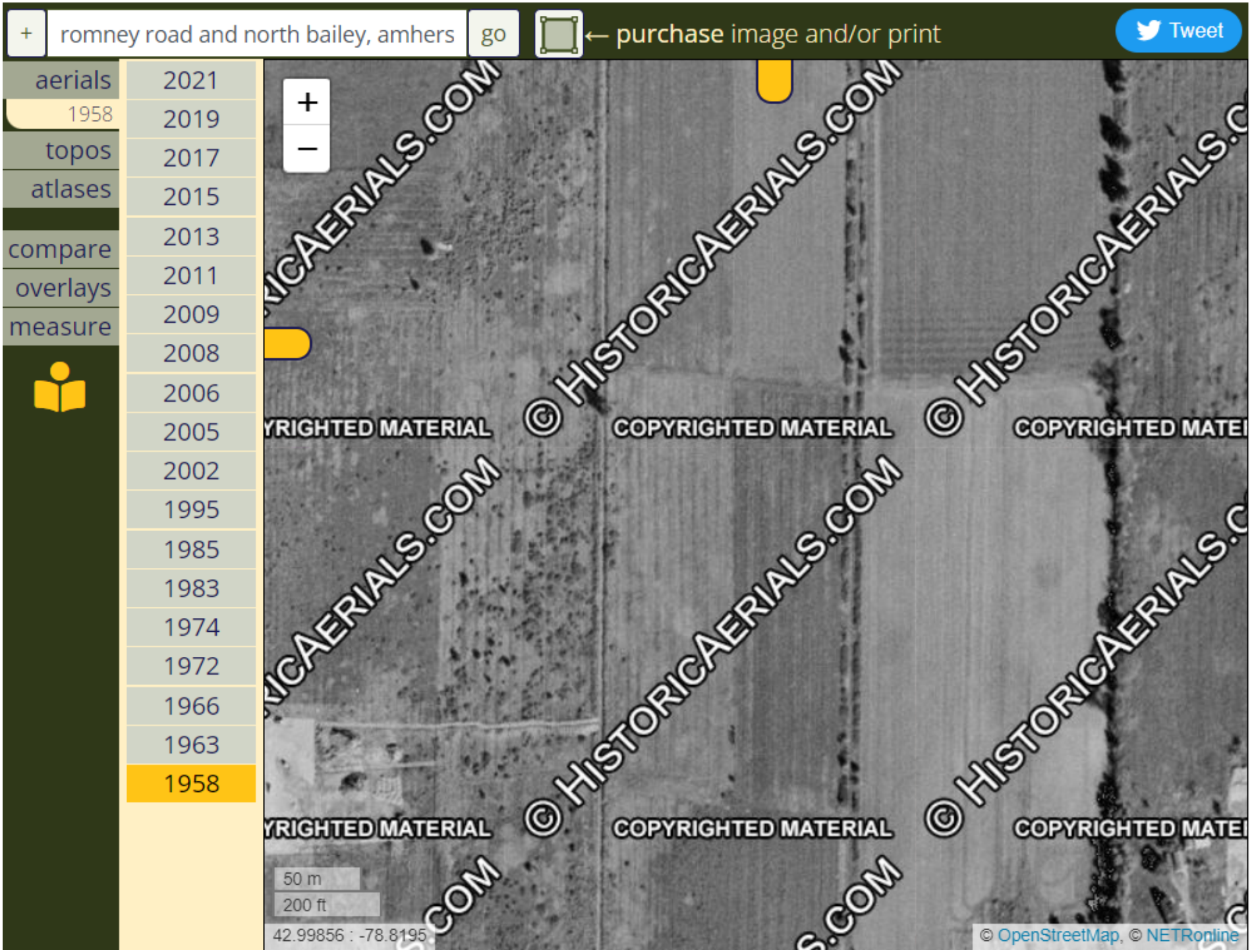
  50% RUNOFF RATE EXISTING LAND COVER
  50% PRIOR TO DEVELOPMENT (1958 HISTORIC AERIAL)
  MEADOW / FARM FIELD

- TOTAL EXISTING AREA = 6.95 AC.

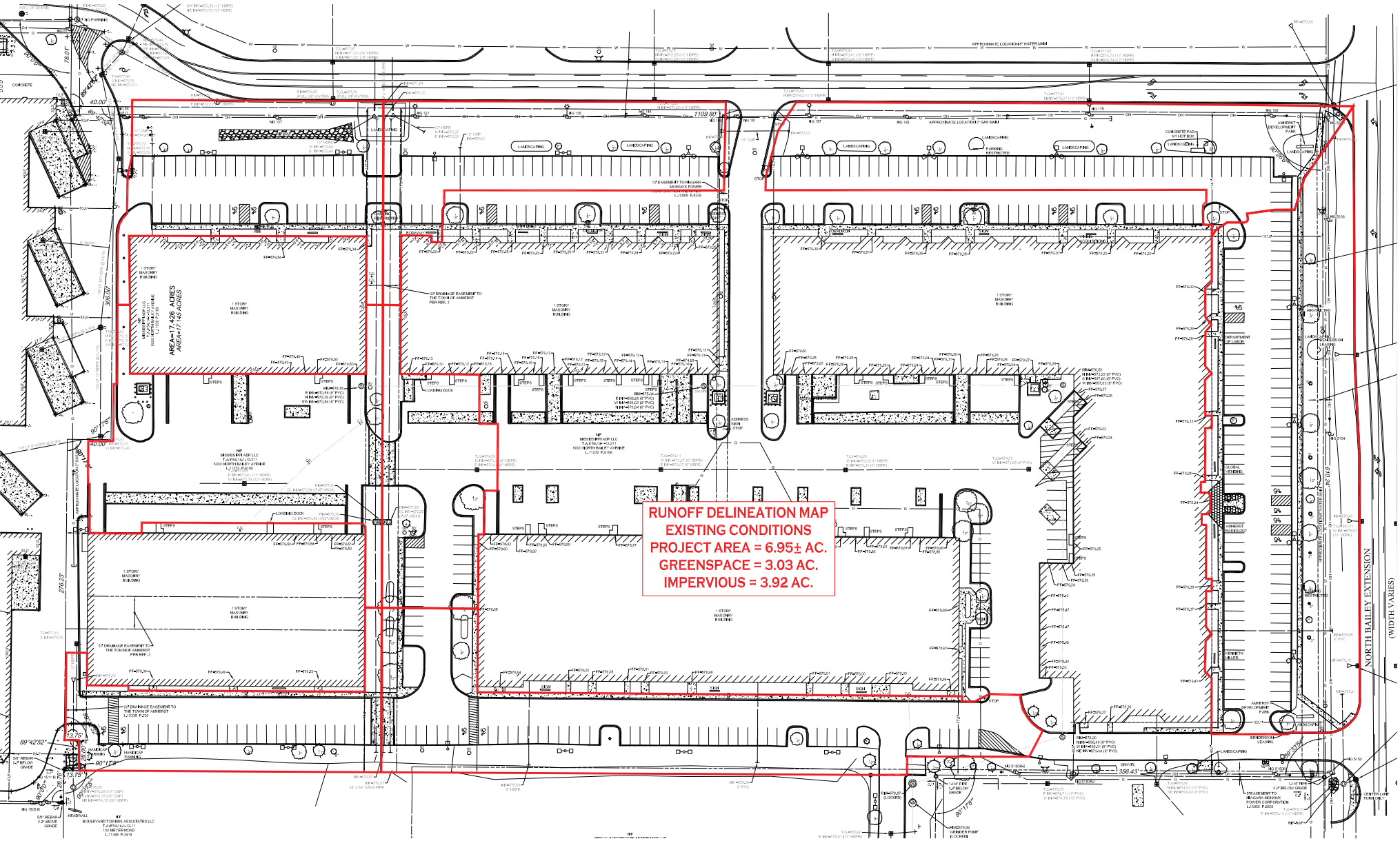
  GRASS/LANDSCAPED = 3.03 AC.
  IMPERVIOUS = 3.92 AC.

(15) APPLY MEDIAN CN: MEADOW/FARM FIELD = 3.48 AC.
GRASS/LANDSCAPED = 1.52 AC.
IMPERVIOUS = 1.95 AC.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

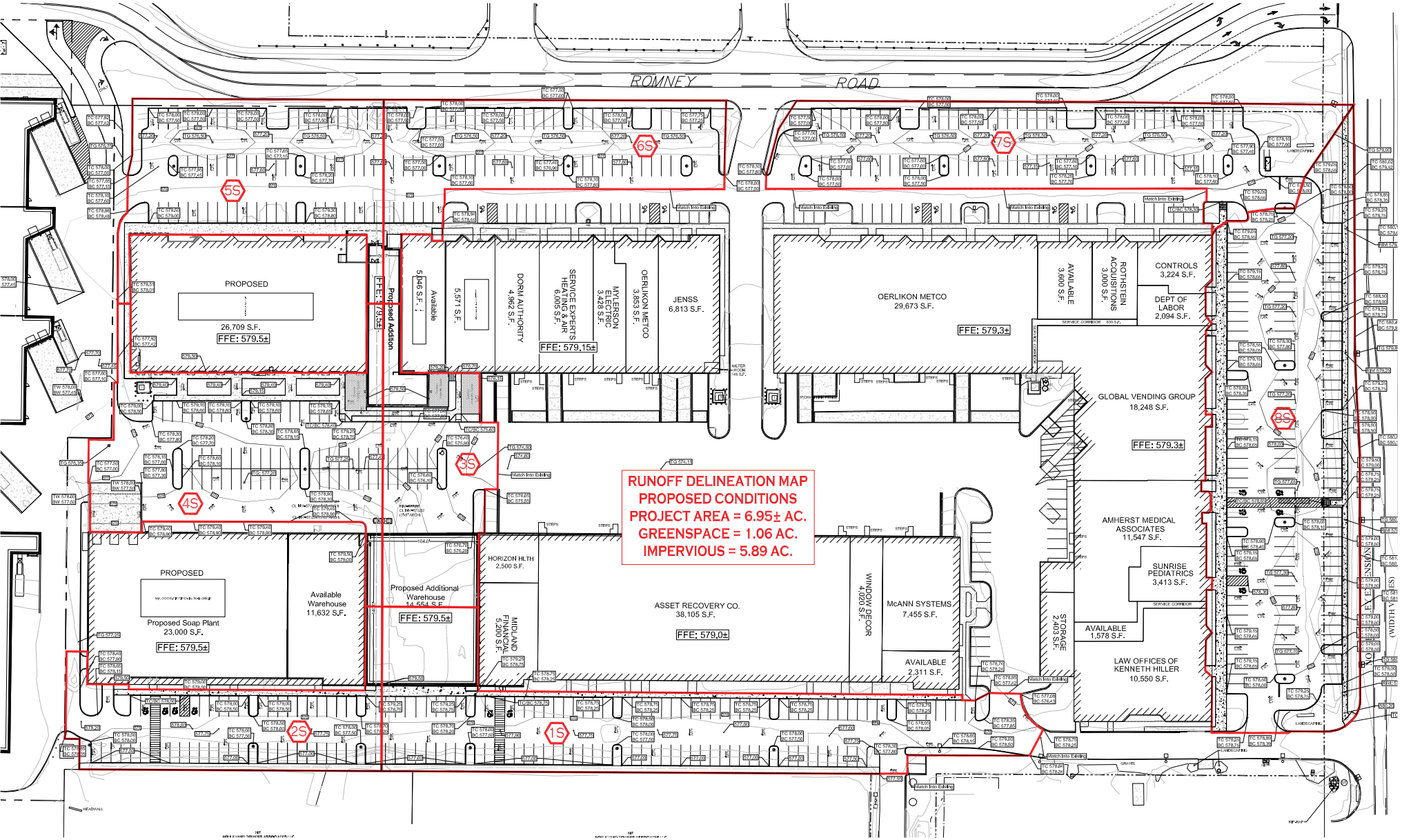


Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Events for Subcatchment 1S: Existing Site

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	1.80	8.12	0.378	0.65
2-Year	2.18	11.64	0.538	0.93
5-Year	2.65	16.25	0.752	1.30
10-Year	3.07	20.51	0.954	1.65
25-Year	3.73	27.36	1.285	2.22
50-Year	4.33	33.68	1.595	2.75
100-Year	**5.03**	**41.10**	**1.967**	**3.40**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

23-4099 Proposed *Type II 24-hr 100-Year Rainfall=5.03"*
Prepared by Carmina Wood Morris, PC Printed 11/15/2023
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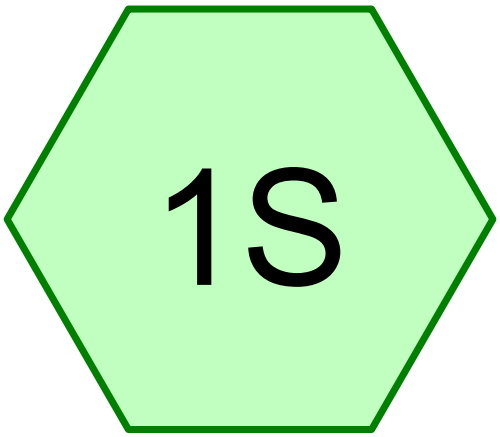
Events for Pond 1P: Detention Storage & Outlet

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)	10% Escalation (cfs)
1-Year	15.93	7.30	572.35	10,004	8.03
2-Year	20.03	9.40	572.49	12,348	10.34
5-Year	25.06	11.90	572.66	15,215	13.09
10-Year	29.54	13.54	572.83	17,843	14.89
25-Year	36.53	18.03	573.09	21,706	19.83
50-Year	42.86	21.83	573.37	25,076	24.01
100-Year	**50.20**	**25.60**	**573.83**	**29,010**	28.16

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

HydroCAD Analysis

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Existing Site

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Subcat Reach Pond Link

Routing Diagram for 23-4099 Existing
Prepared by Carmina Wood Morris, PC, Printed 11/15/2023
HydroCAD® 10.20-2g s/n 05019 © 2022 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	1.80	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.07	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.73	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.03	2

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.520	84	50-75% Grass cover, Fair, HSG D (1S)
1.950	98	Impervious (1S)
3.480	78	Meadow, non-grazed, HSG D (1S)
6.950	**85**	**TOTAL AREA**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.000	HSG D	1S
1.950	Other	1S
6.950		**TOTAL AREA**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchmen Numbers
0.000	0.000	0.000	1.520	0.000	1.520	50-75% Grass cover, Fair	1S
0.000	0.000	0.000	0.000	1.950	1.950	Impervious	1S
0.000	0.000	0.000	3.480	0.000	3.480	Meadow, non-grazed	1S
0.000	**0.000**	**0.000**	**5.000**	**1.950**	**6.950**	**TOTAL AREA**	

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=0.65"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=8.12 cfs 0.378 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.378 af Average Runoff Depth = 0.65"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

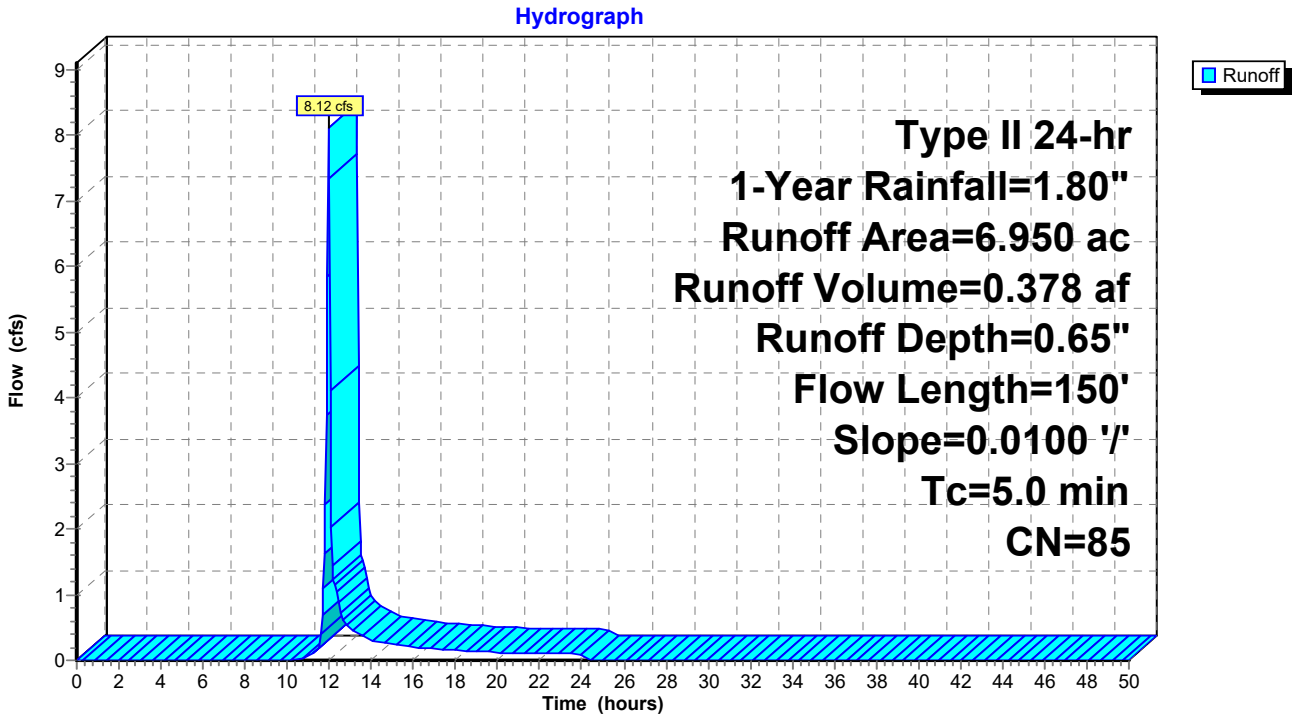
Runoff = 8.12 cfs @ 11.96 hrs, Volume= 0.378 af, Depth= 0.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=1.65"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=20.51 cfs 0.954 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.954 af Average Runoff Depth = 1.65"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

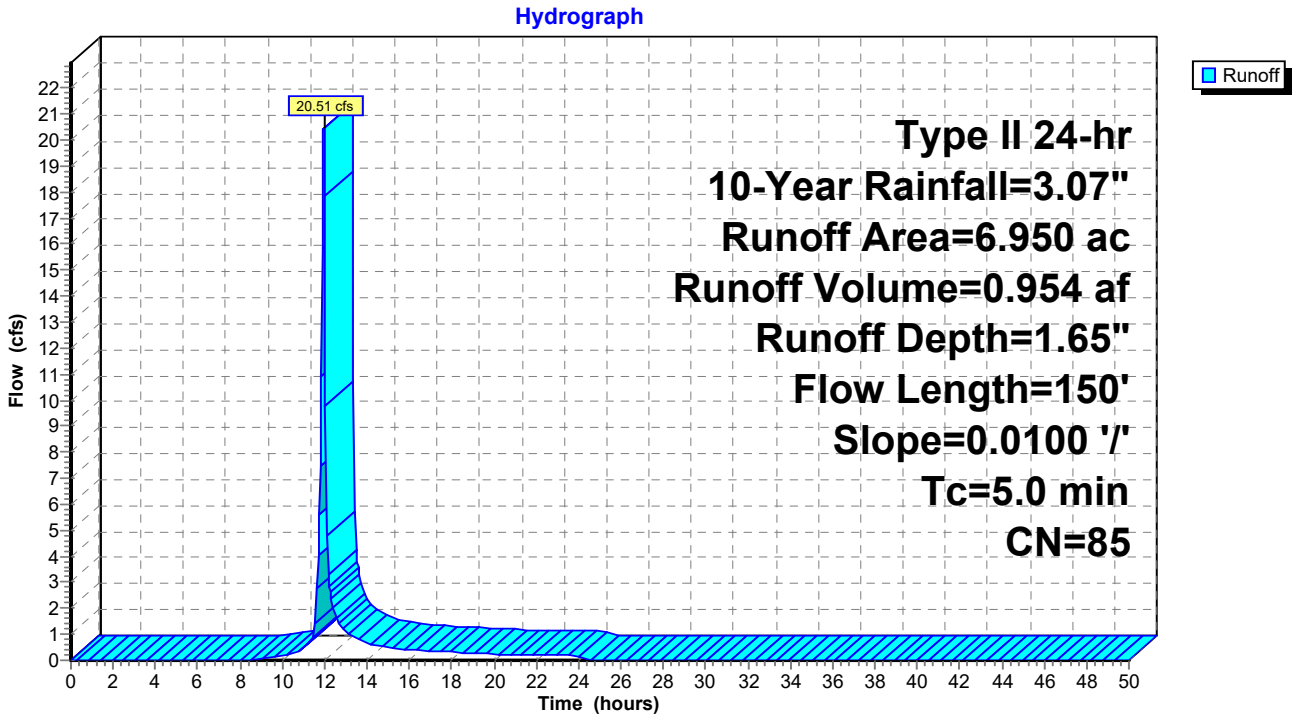
Runoff = 20.51 cfs @ 11.96 hrs, Volume= 0.954 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=2.22"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=27.36 cfs 1.285 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.285 af Average Runoff Depth = 2.22"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

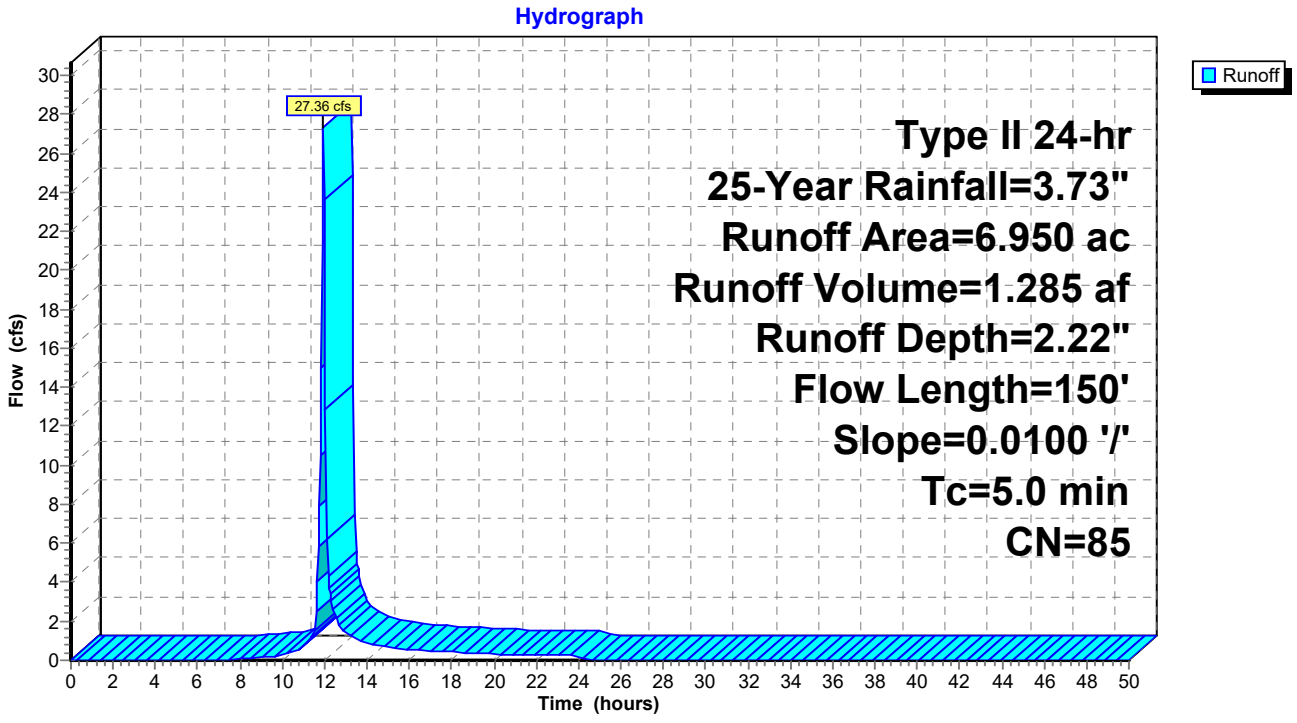
Runoff = 27.36 cfs @ 11.96 hrs, Volume= 1.285 af, Depth= 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=3.40"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=41.10 cfs 1.967 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.967 af Average Runoff Depth = 3.40"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

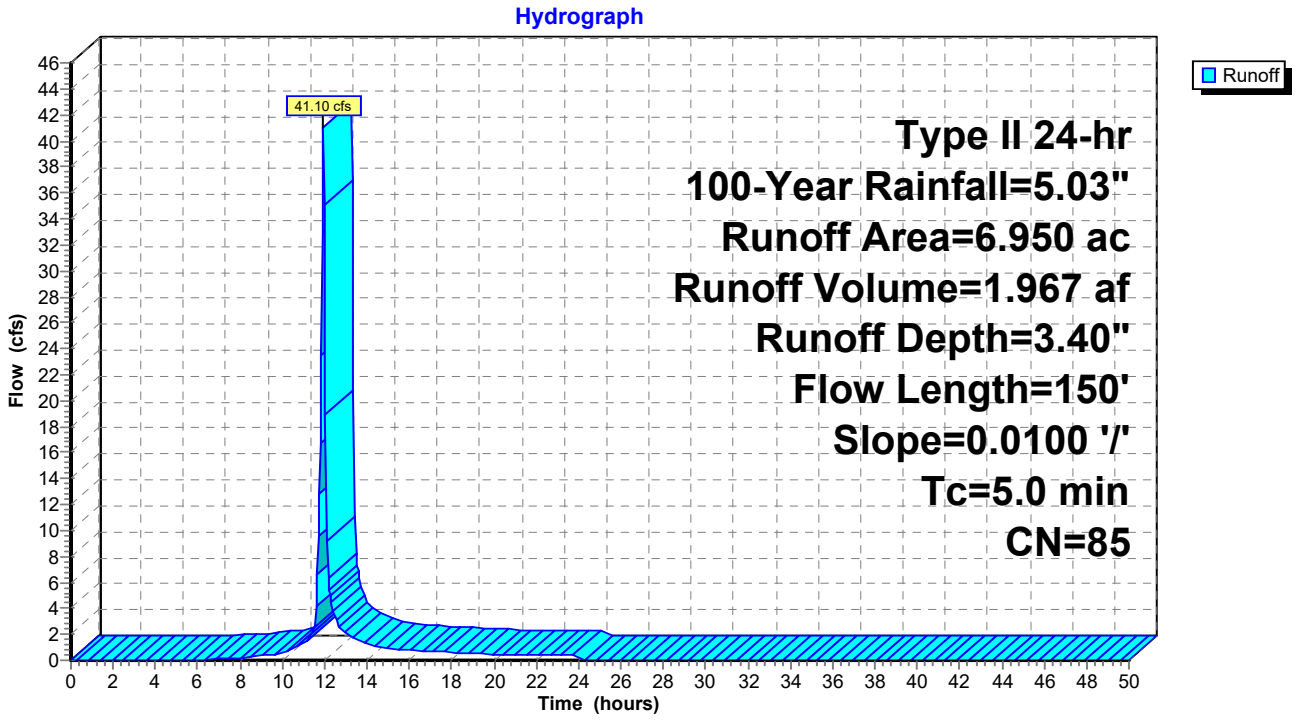
Runoff = 41.10 cfs @ 11.95 hrs, Volume= 1.967 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.03"

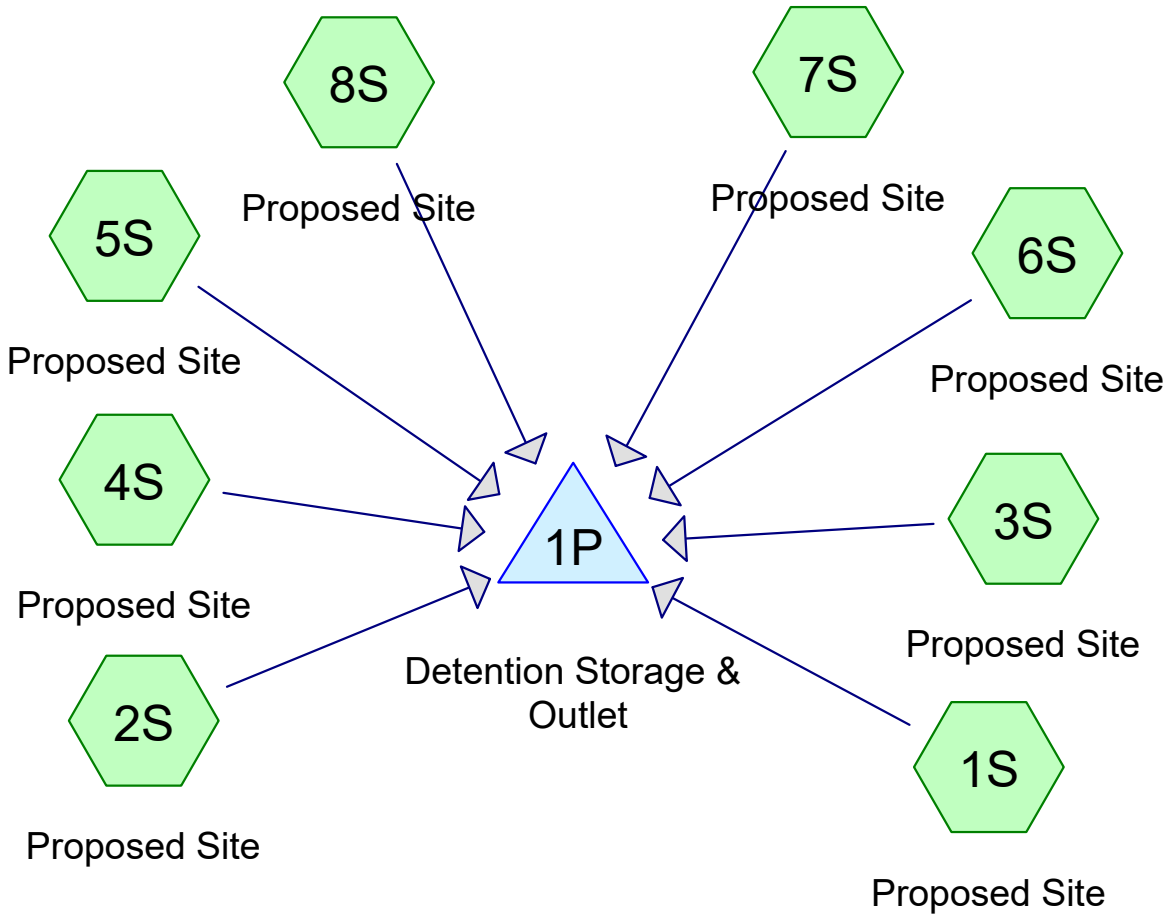
	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Subcat Reach Pond Link

Routing Diagram for 23-4099 Proposed
Prepared by Carmina Wood Morris, PC, Printed 11/15/2023
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Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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	1.80	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.07	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.73	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.03	2

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.060	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
5.890	98	Impervious, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
6.950	**95**	**TOTAL AREA**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
6.950	HSG D	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	Other	
6.950		**TOTAL AREA**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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	1.060	0.000	1.060	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	0.000	0.000	5.890	0.000	5.890	Impervious	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	**0.000**	**0.000**	**6.950**	**0.000**	**6.950**	**TOTAL AREA**	

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	1P	571.50	571.50	10.0	0.0000	0.013	0.0	12.0	0.0

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=2.67 cfs 0.129 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=1.29"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=1.21 cfs 0.057 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=1.48"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=1.22 cfs 0.060 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=2.12 cfs 0.102 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=1.69 cfs 0.082 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=1.29"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=1.53 cfs 0.072 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=1.21"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=2.10 cfs 0.098 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=1.21"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=3.40 cfs 0.158 af

Pond 1P: Detention Storage & Outlet Peak Elev=572.35' Storage=10,004 cf Inflow=15.93 cfs 0.759 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=7.30 cfs 0.756 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.759 af Average Runoff Depth = 1.31"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

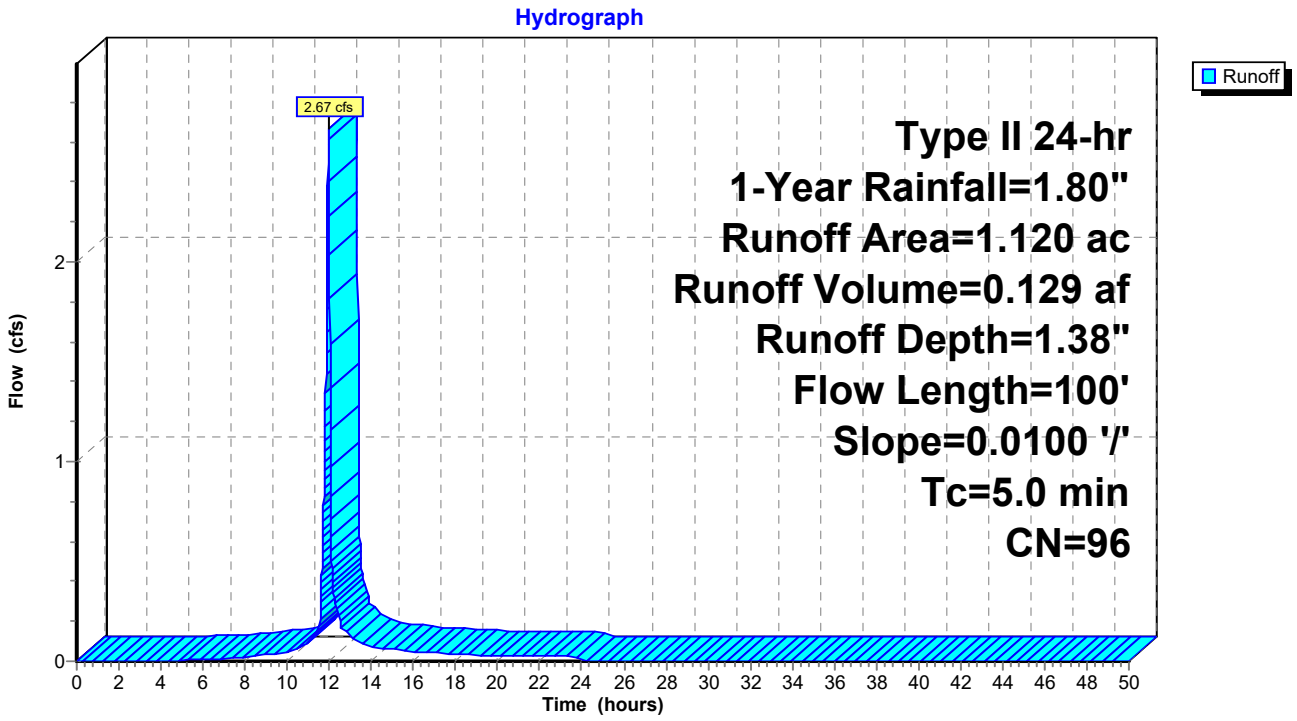
Runoff = 2.67 cfs @ 11.96 hrs, Volume= 0.129 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

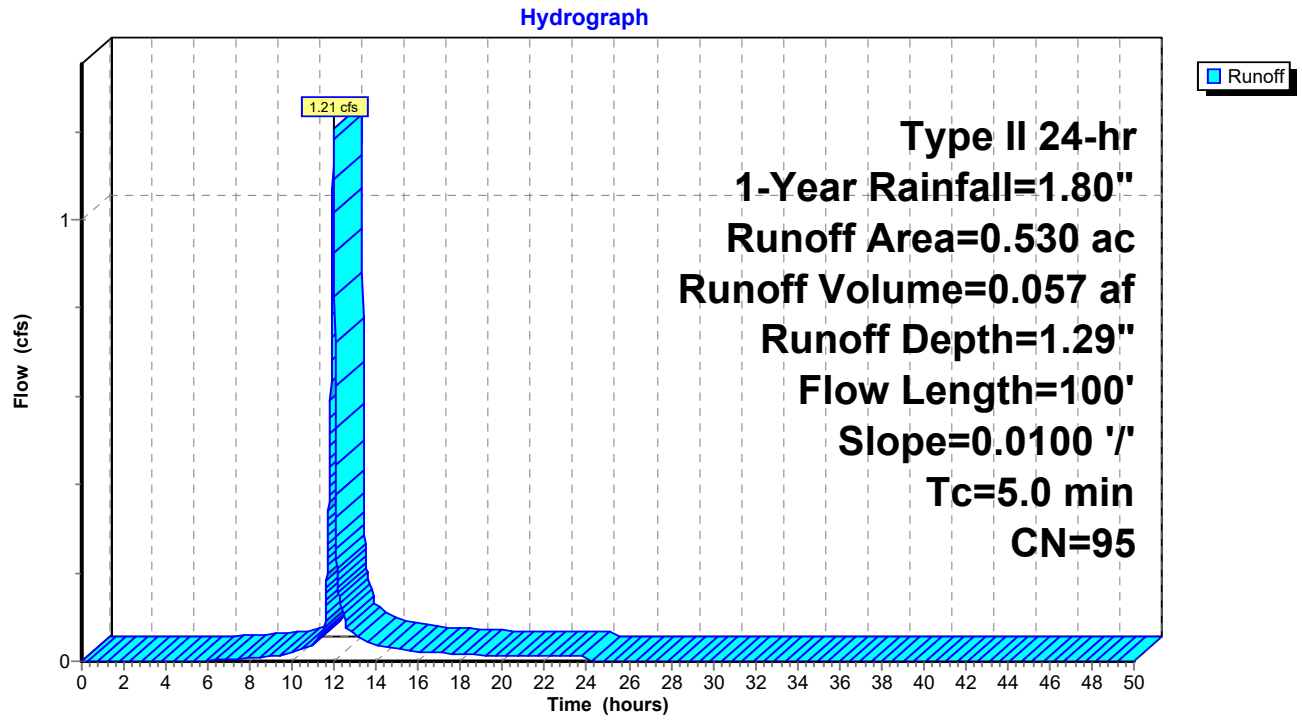
Runoff = 1.21 cfs @ 11.96 hrs, Volume= 0.057 af, Depth= 1.29"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

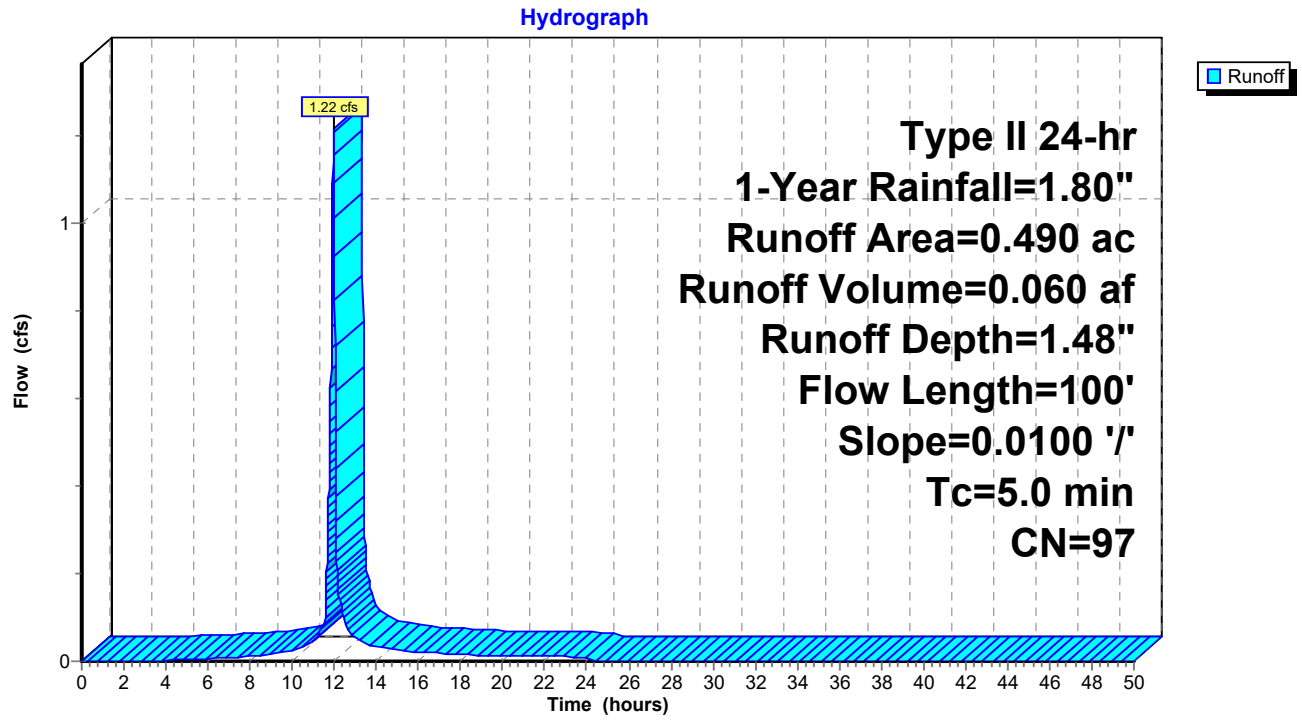
Runoff = 1.22 cfs @ 11.96 hrs, Volume= 0.060 af, Depth= 1.48"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

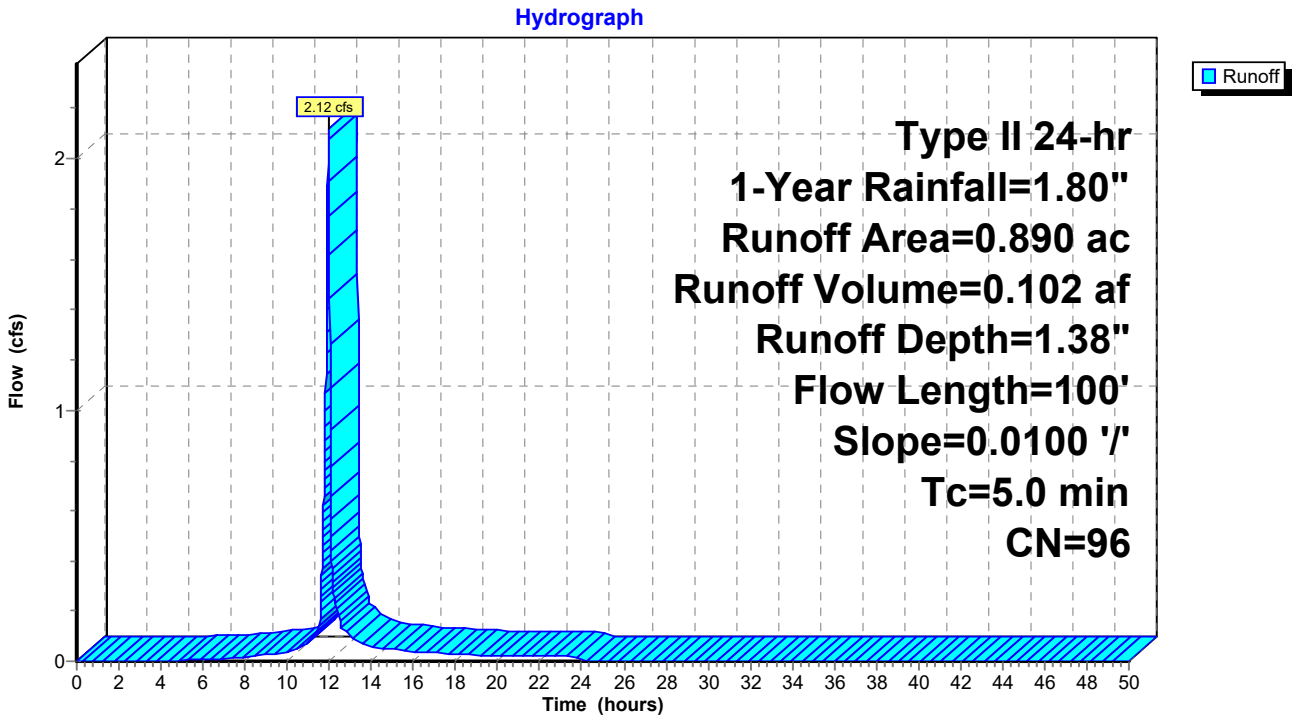
Runoff = 2.12 cfs @ 11.96 hrs, Volume= 0.102 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

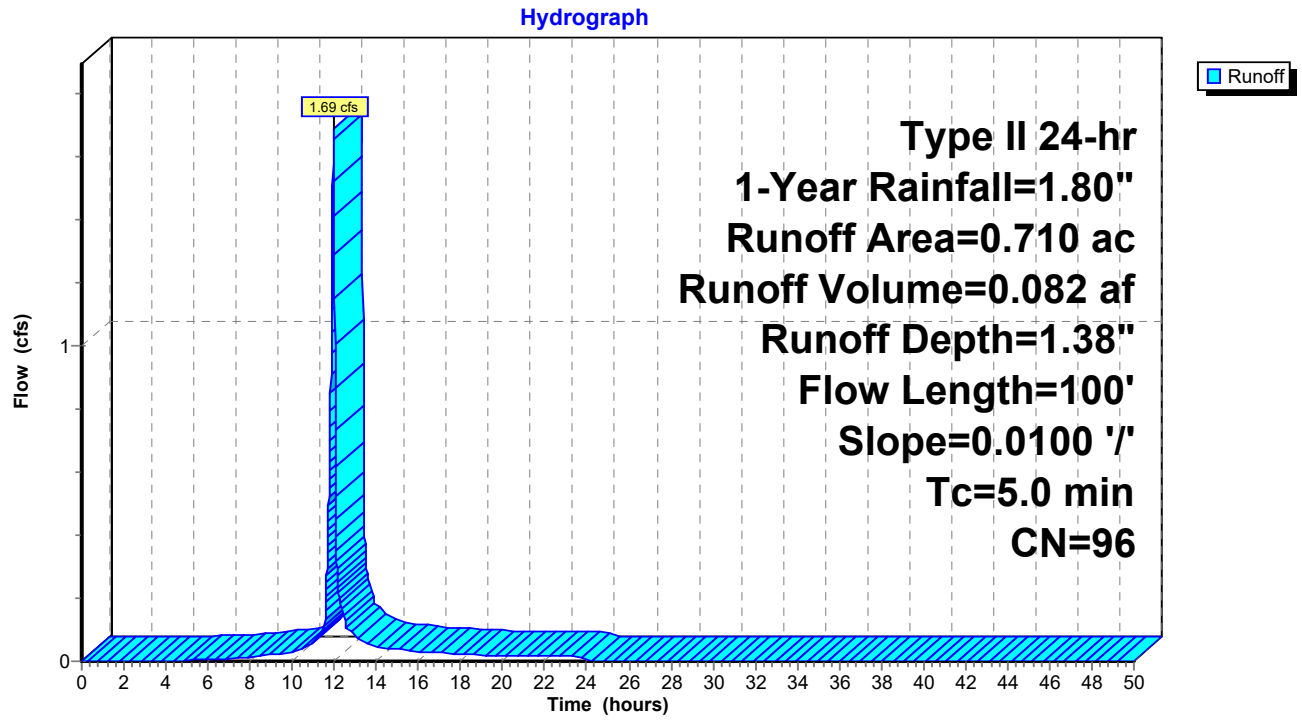
Runoff = 1.69 cfs @ 11.96 hrs, Volume= 0.082 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

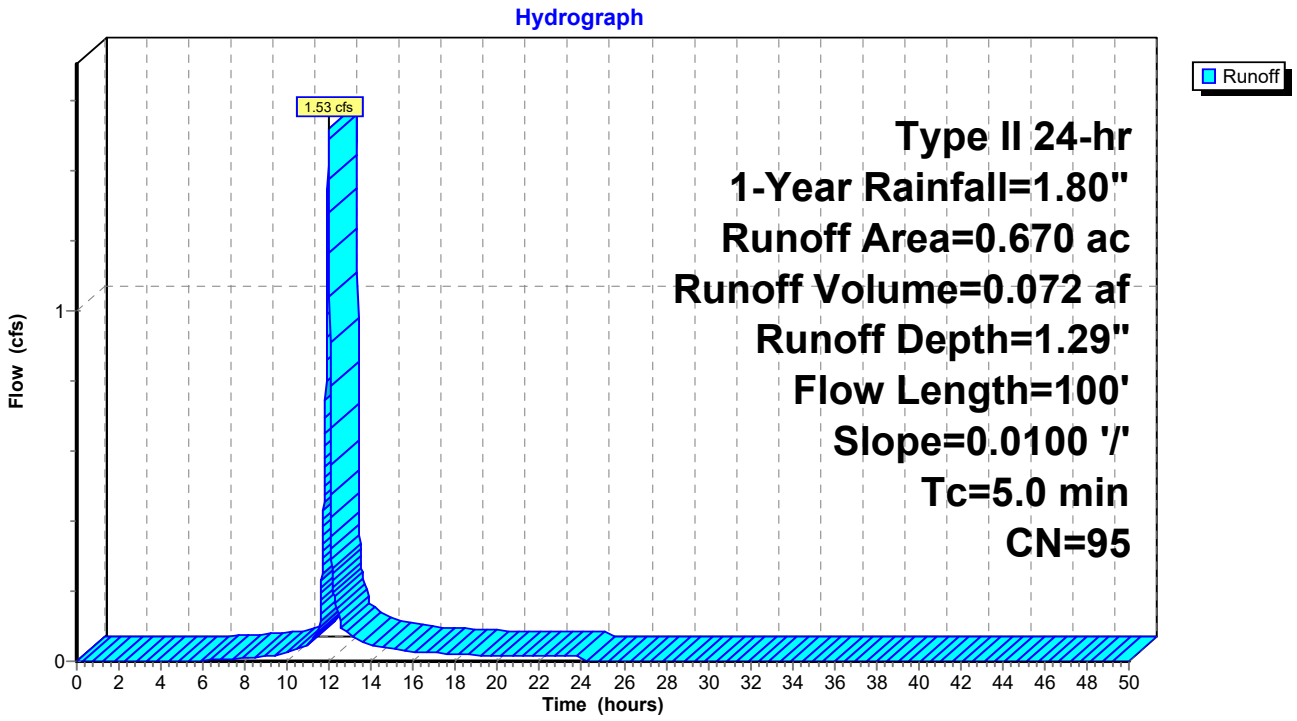
Runoff = 1.53 cfs @ 11.96 hrs, Volume= 0.072 af, Depth= 1.29"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

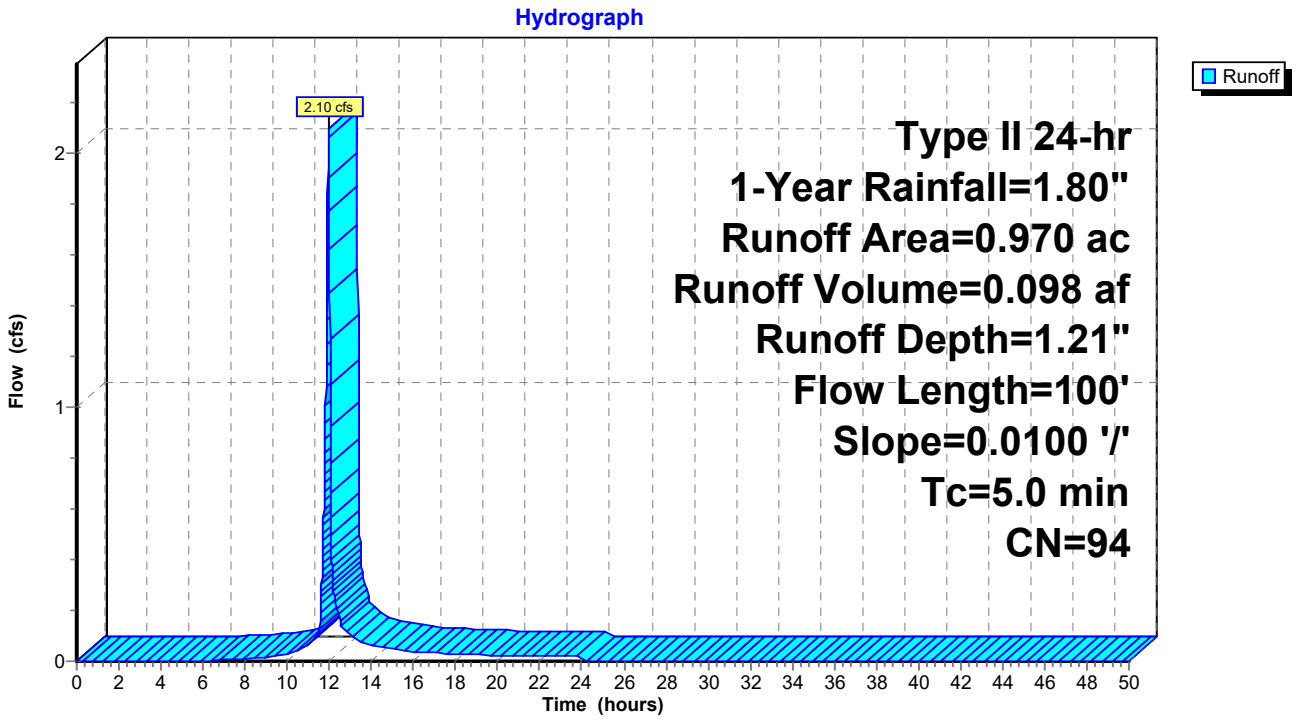
Runoff = 2.10 cfs @ 11.96 hrs, Volume= 0.098 af, Depth= 1.21"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

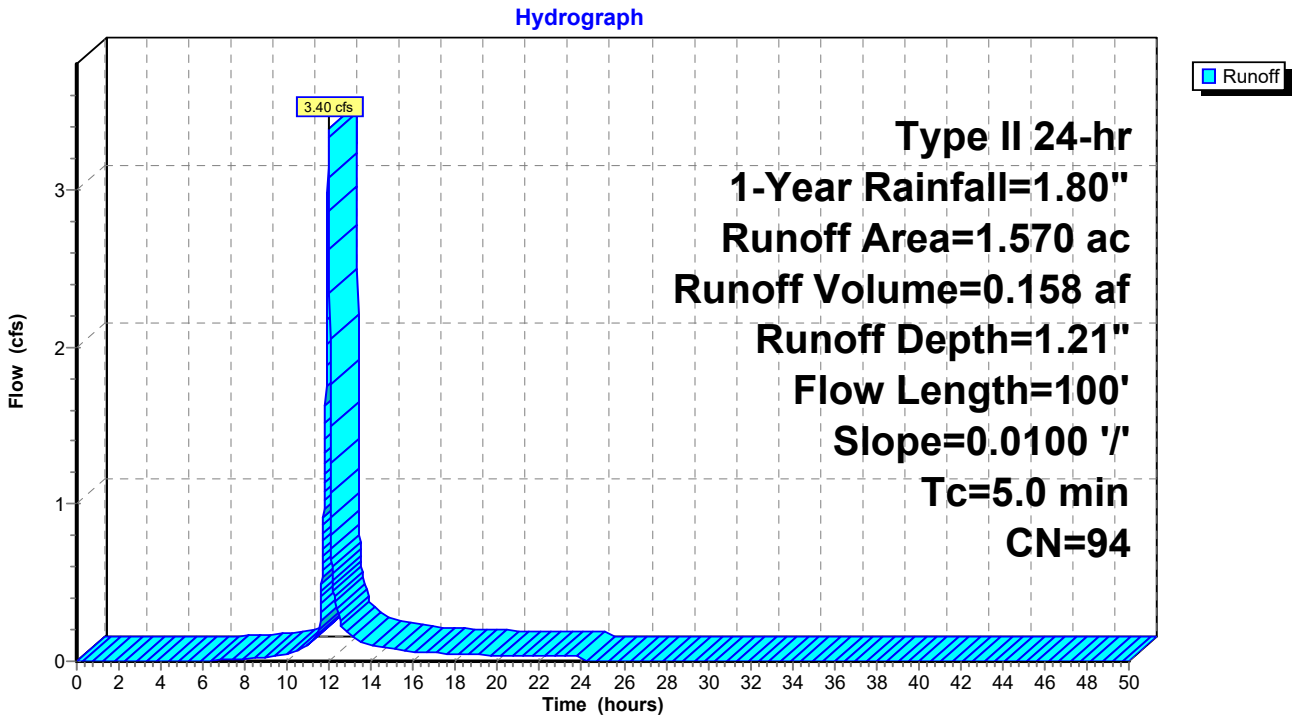
Runoff = 3.40 cfs @ 11.96 hrs, Volume= 0.158 af, Depth= 1.21"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 1.31" for 1-Year event
Inflow = 15.93 cfs @ 11.96 hrs, Volume= 0.759 af
Outflow = 7.30 cfs @ 12.05 hrs, Volume= 0.756 af, Atten= 54%, Lag= 5.3 min
Primary = 7.30 cfs @ 12.05 hrs, Volume= 0.756 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 572.35' @ 12.05 hrs Surf.Area= 20,584 sf Storage= 10,004 cf

Plug-Flow detention time= 55.9 min calculated for 0.756 af (100% of inflow)
Center-of-Mass det. time= 53.4 min (847.4 - 793.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=7.30 cfs @ 12.05 hrs HW=572.35' (Free Discharge)
↑**1=Outlet Pipe** (Barrel Controls 7.30 cfs @ 2.78 fps)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

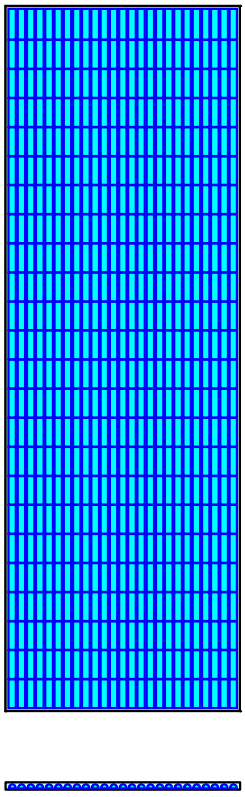
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

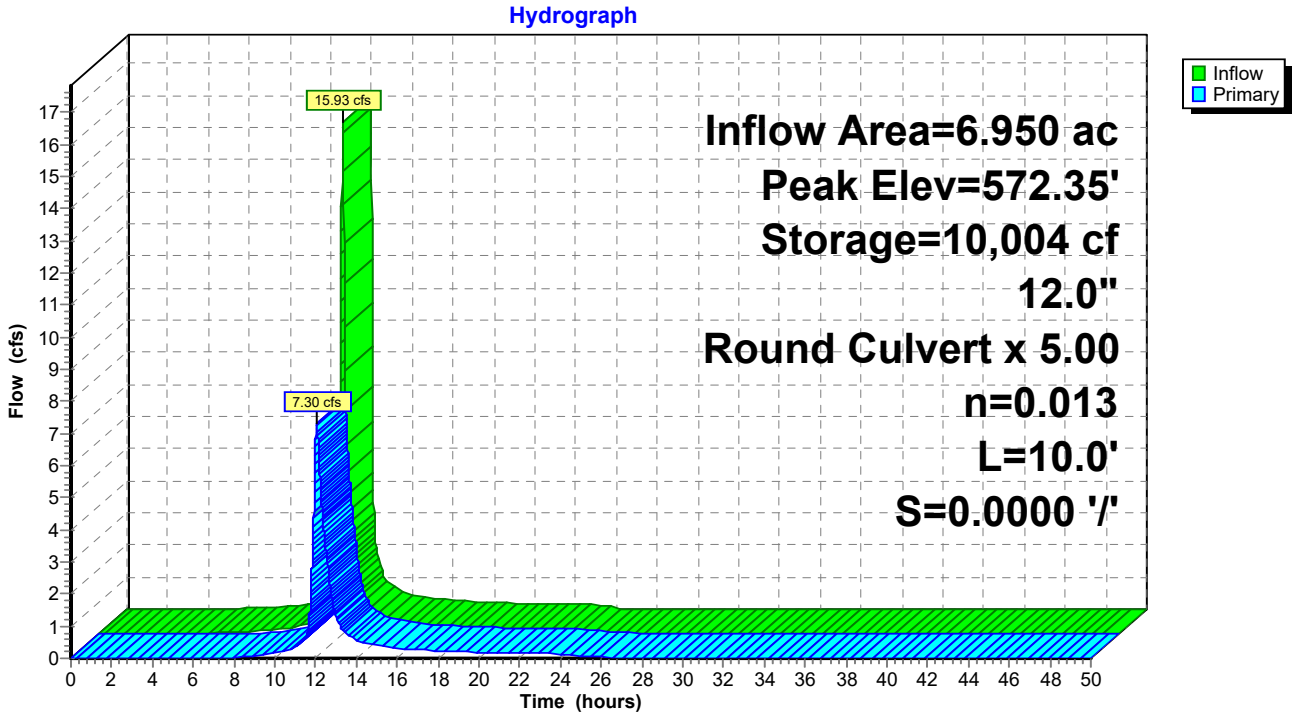
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=4.85 cfs 0.245 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=2.52"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.25 cfs 0.111 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=2.73"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=2.16 cfs 0.111 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.86 cfs 0.194 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.08 cfs 0.155 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=2.52"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.84 cfs 0.141 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=2.42"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=4.01 cfs 0.195 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=2.42"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=6.50 cfs 0.316 af

Pond 1P: Detention Storage & Outlet Peak Elev=572.83' Storage=17,843 cf Inflow=29.54 cfs 1.469 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=13.54 cfs 1.466 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.469 af Average Runoff Depth = 2.54"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

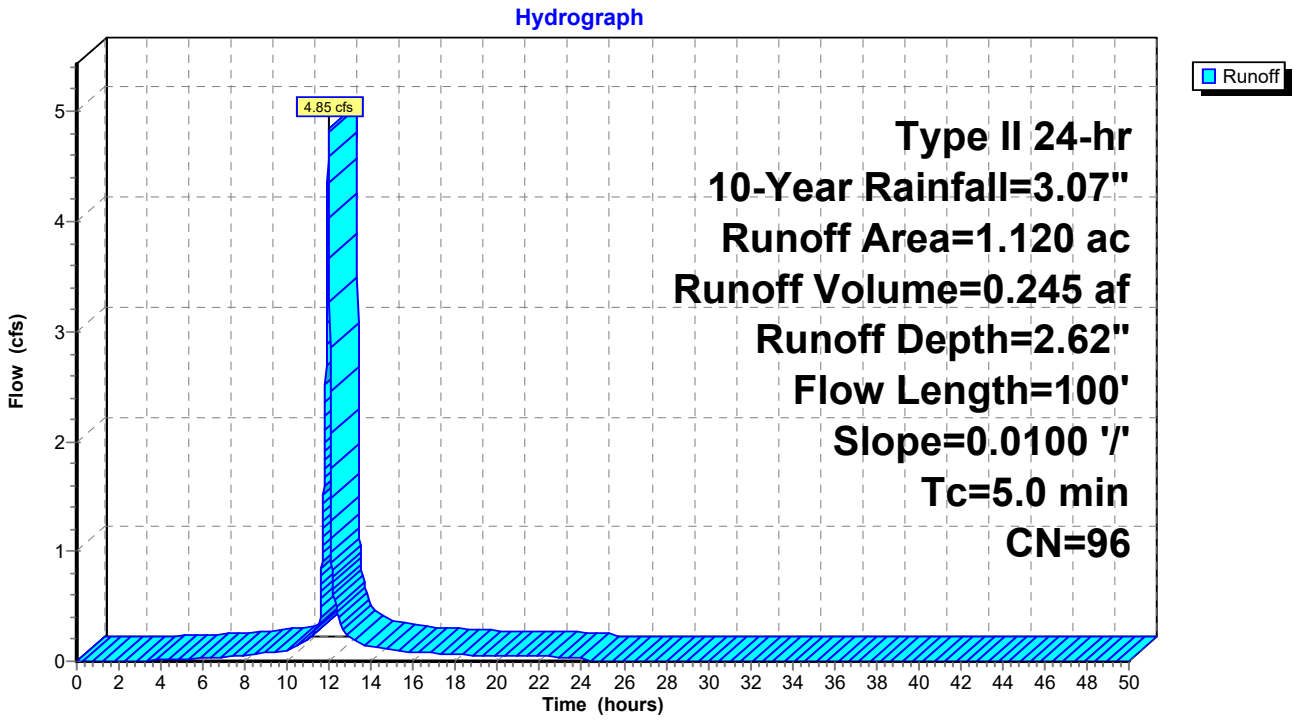
Runoff = 4.85 cfs @ 11.96 hrs, Volume= 0.245 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

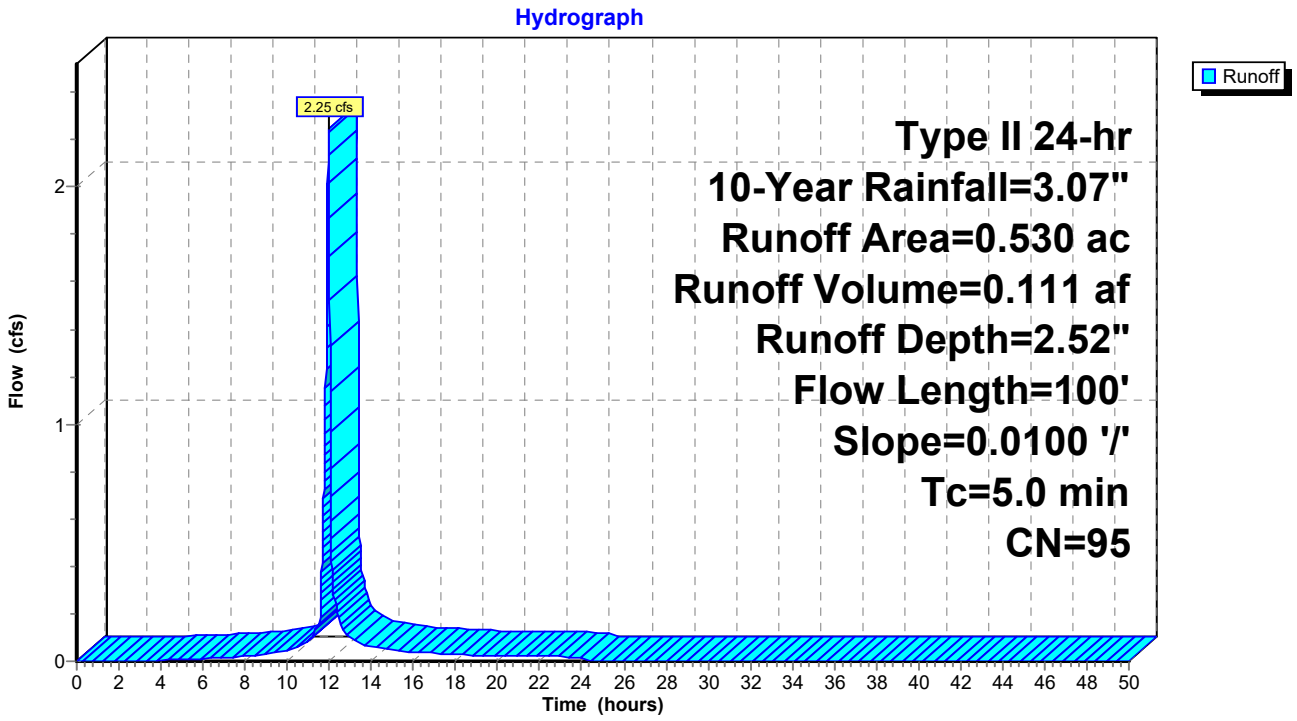
Runoff = 2.25 cfs @ 11.96 hrs, Volume= 0.111 af, Depth= 2.52"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

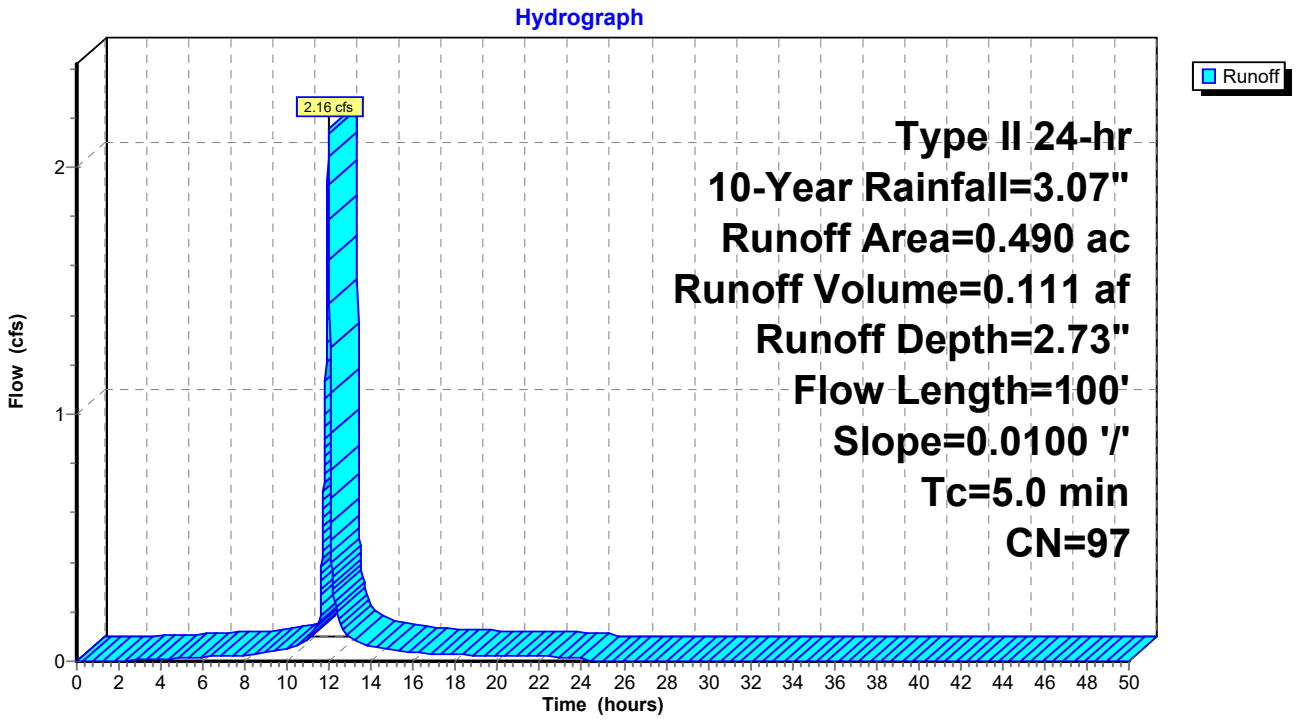
Runoff = 2.16 cfs @ 11.96 hrs, Volume= 0.111 af, Depth= 2.73"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

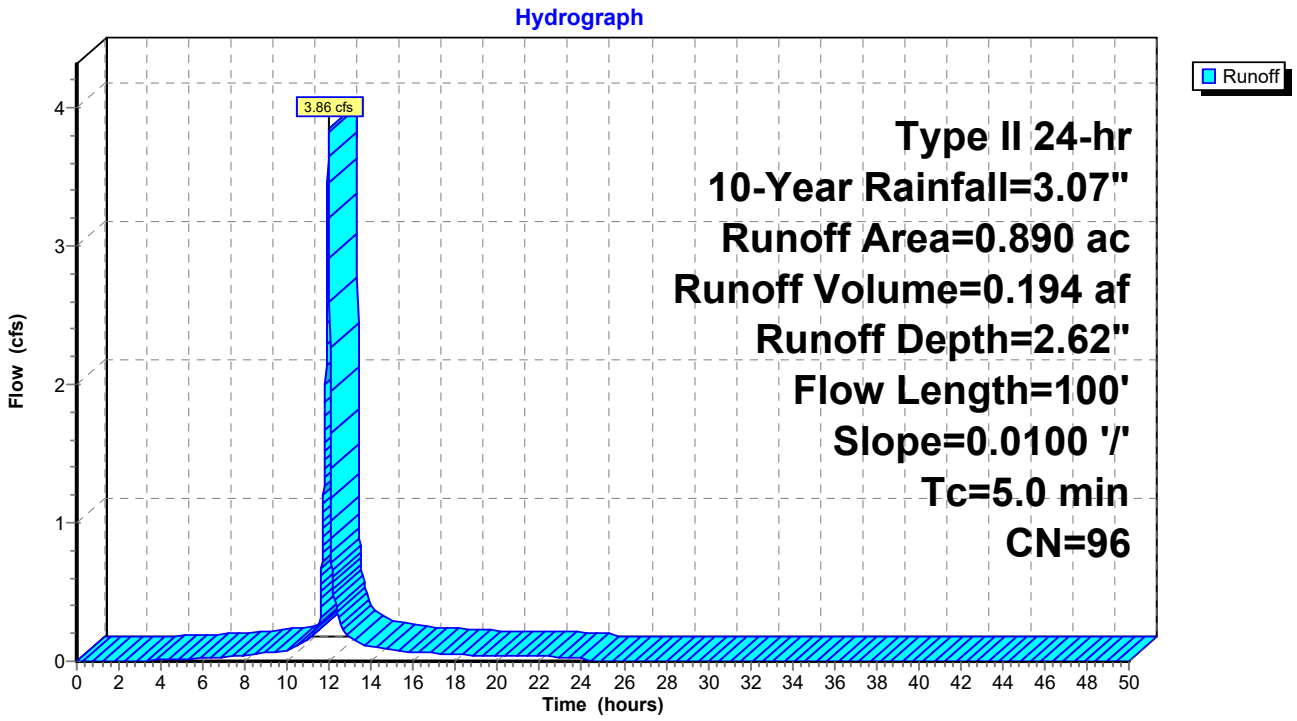
Runoff = 3.86 cfs @ 11.96 hrs, Volume= 0.194 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

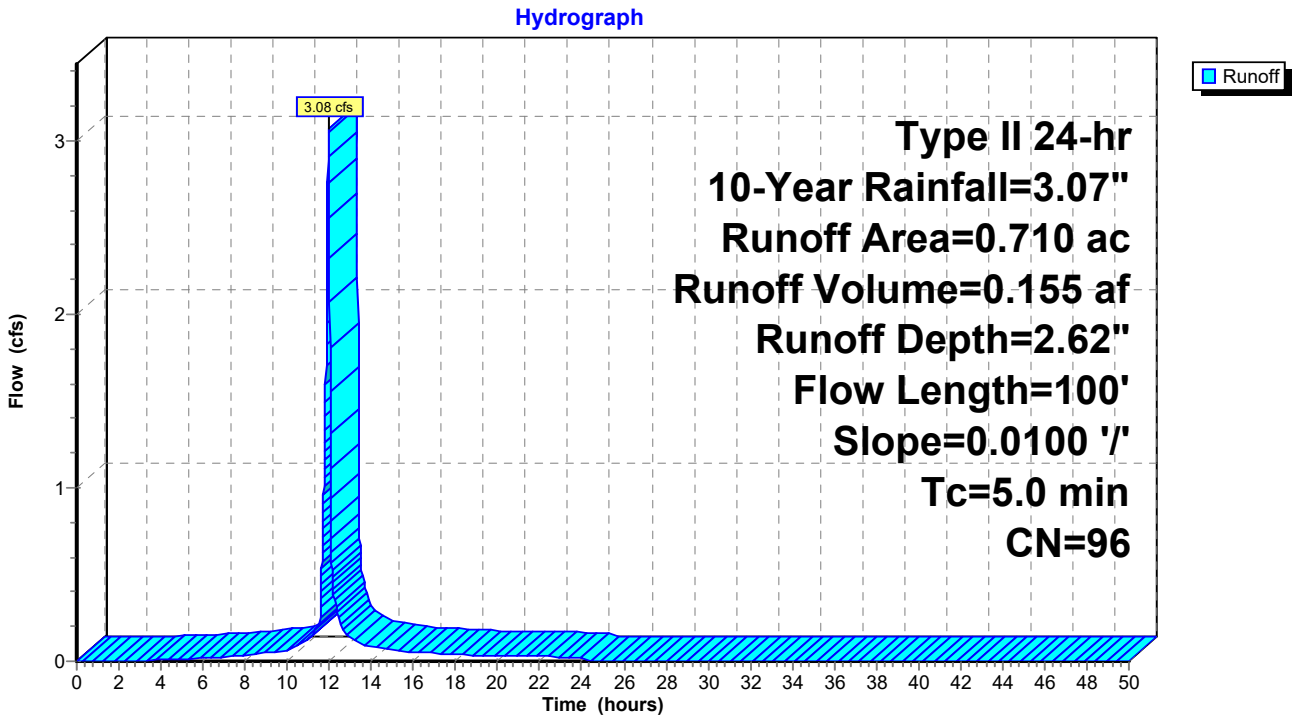
Runoff = 3.08 cfs @ 11.96 hrs, Volume= 0.155 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

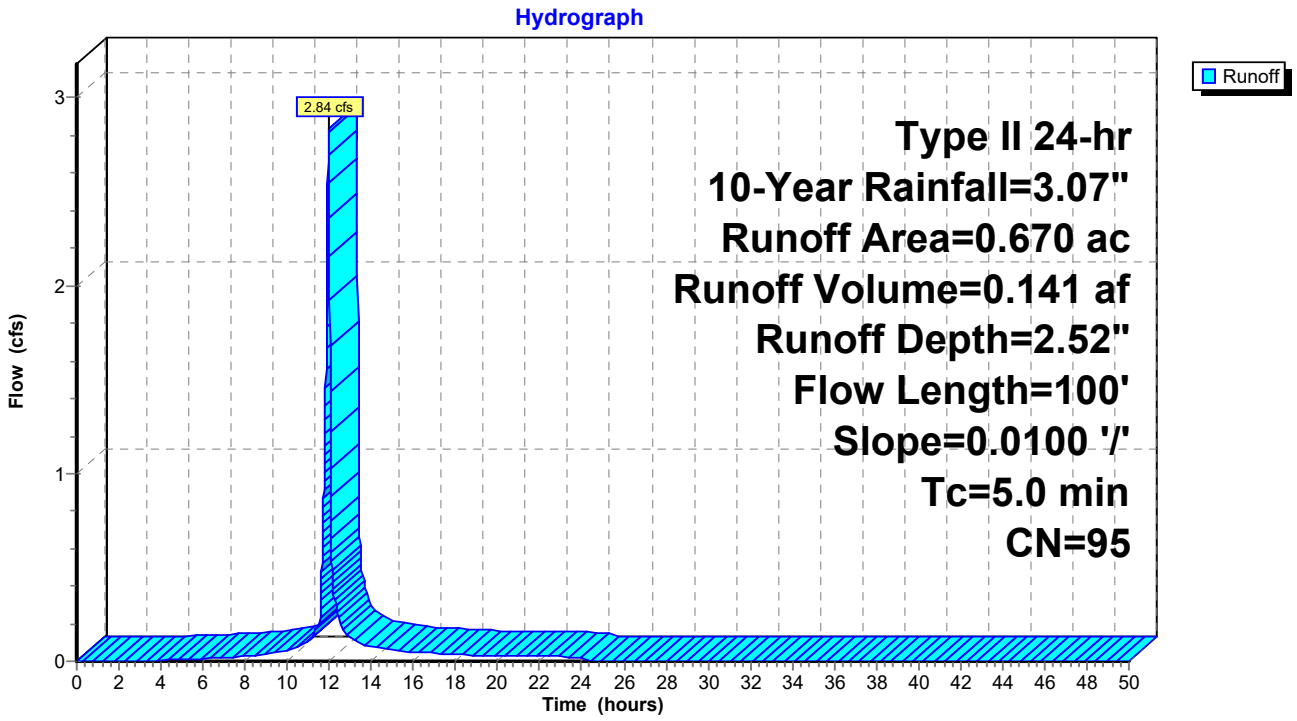
Runoff = 2.84 cfs @ 11.96 hrs, Volume= 0.141 af, Depth= 2.52"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

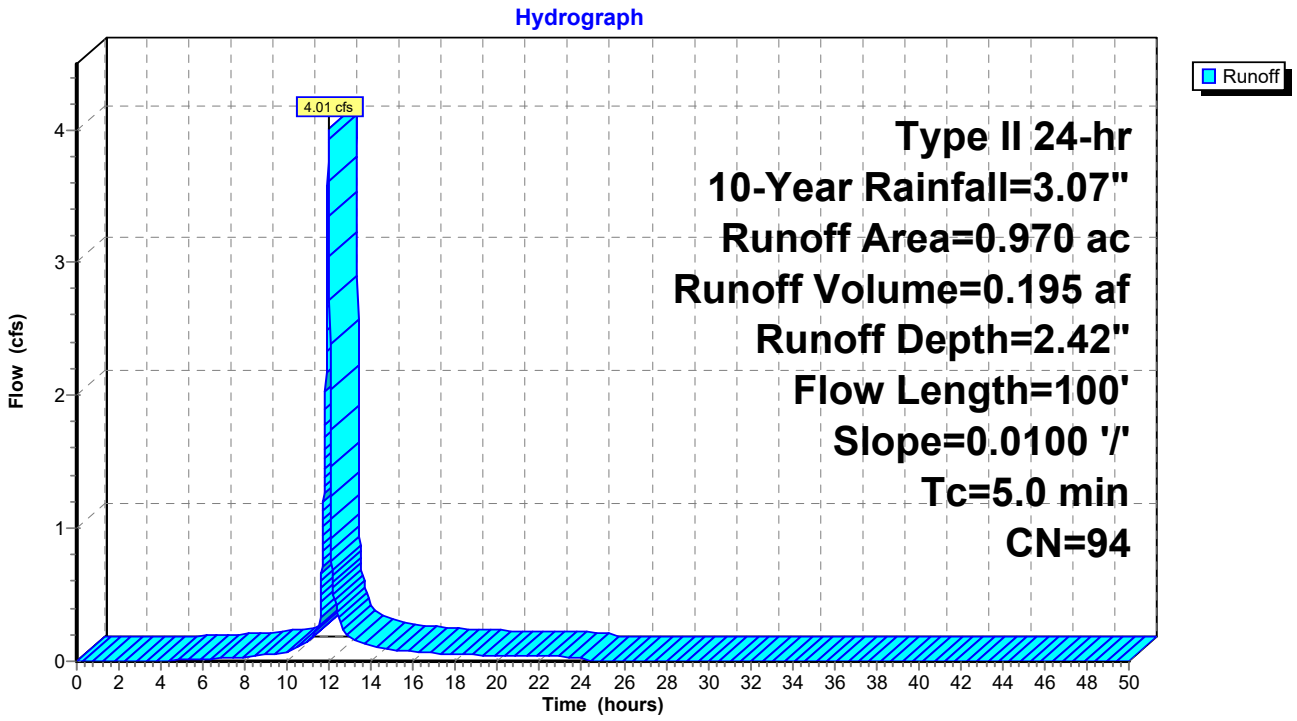
Runoff = 4.01 cfs @ 11.96 hrs, Volume= 0.195 af, Depth= 2.42"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

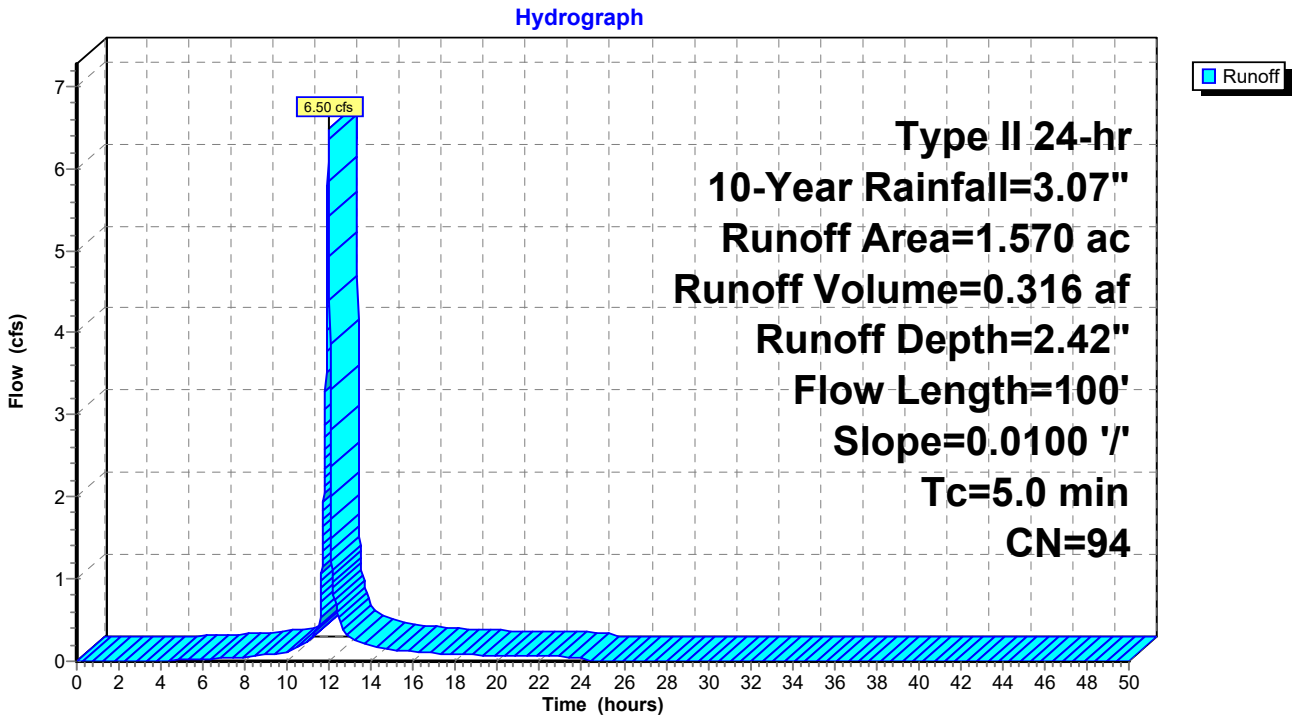
Runoff = 6.50 cfs @ 11.96 hrs, Volume= 0.316 af, Depth= 2.42"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 2.54" for 10-Year event
Inflow = 29.54 cfs @ 11.96 hrs, Volume= 1.469 af
Outflow = 13.54 cfs @ 12.04 hrs, Volume= 1.466 af, Atten= 54%, Lag= 5.3 min
Primary = 13.54 cfs @ 12.04 hrs, Volume= 1.466 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 572.83' @ 12.05 hrs Surf.Area= 20,584 sf Storage= 17,843 cf

Plug-Flow detention time= 42.6 min calculated for 1.466 af (100% of inflow)
Center-of-Mass det. time= 41.5 min (817.6 - 776.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=13.54 cfs @ 12.04 hrs HW=572.83' (Free Discharge)
↑**1=Outlet Pipe** (Barrel Controls 13.54 cfs @ 3.45 fps)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

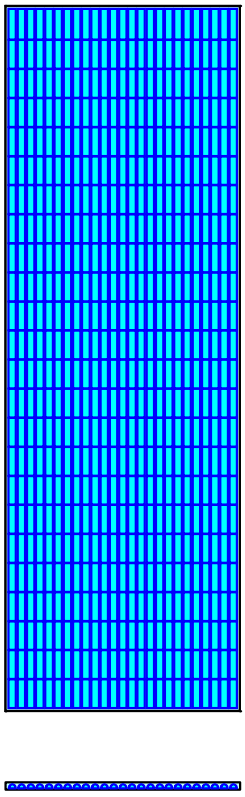
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

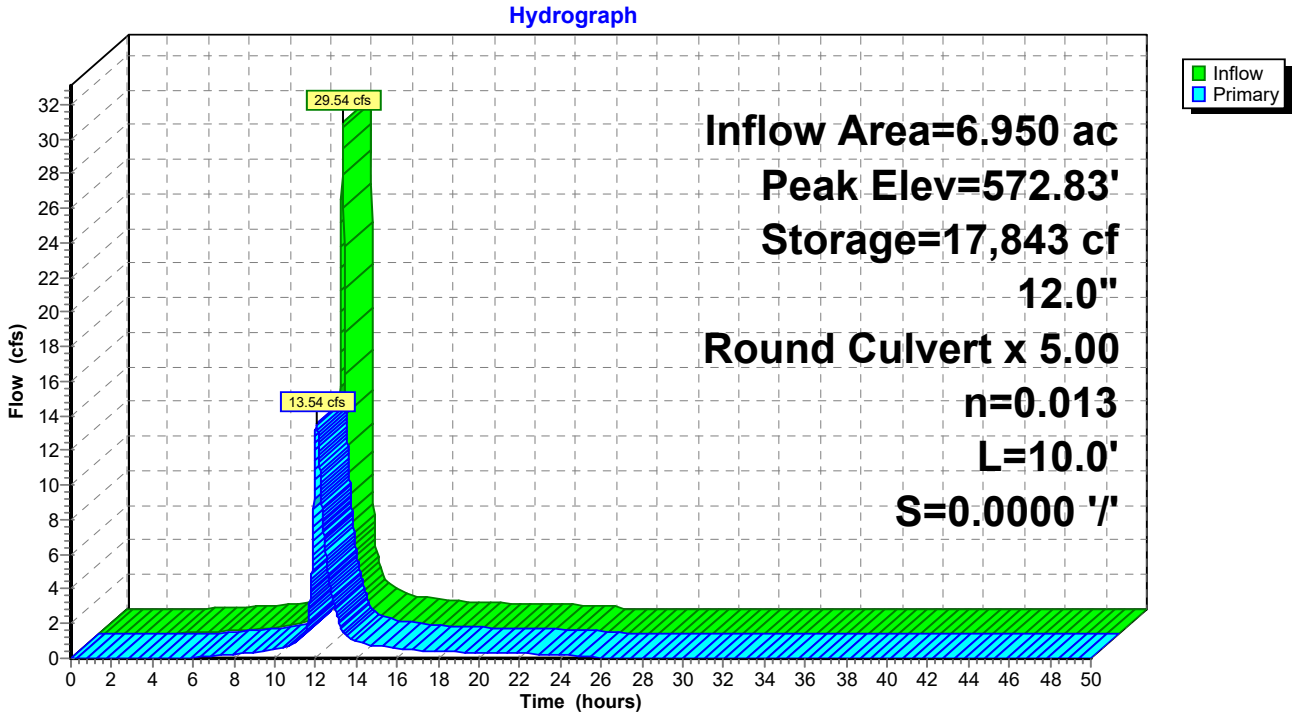
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=5.97 cfs 0.305 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=3.17"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.78 cfs 0.140 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=3.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=2.65 cfs 0.138 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=4.75 cfs 0.243 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.79 cfs 0.194 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=3.17"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=3.52 cfs 0.177 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=3.06"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=5.00 cfs 0.247 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=3.06"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=8.09 cfs 0.400 af

Pond 1P: Detention Storage & Outlet Peak Elev=573.09' Storage=21,706 cf Inflow=36.53 cfs 1.844 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=18.03 cfs 1.841 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.844 af Average Runoff Depth = 3.18"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

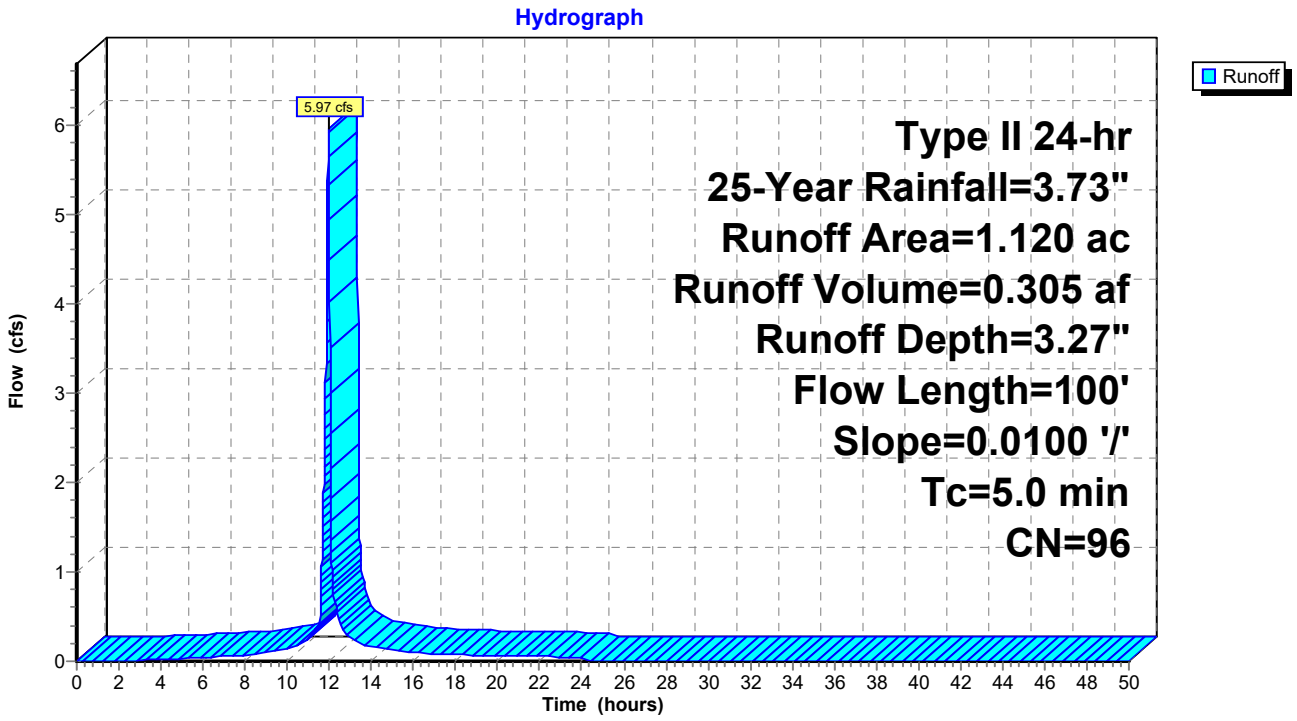
Runoff = 5.97 cfs @ 11.96 hrs, Volume= 0.305 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

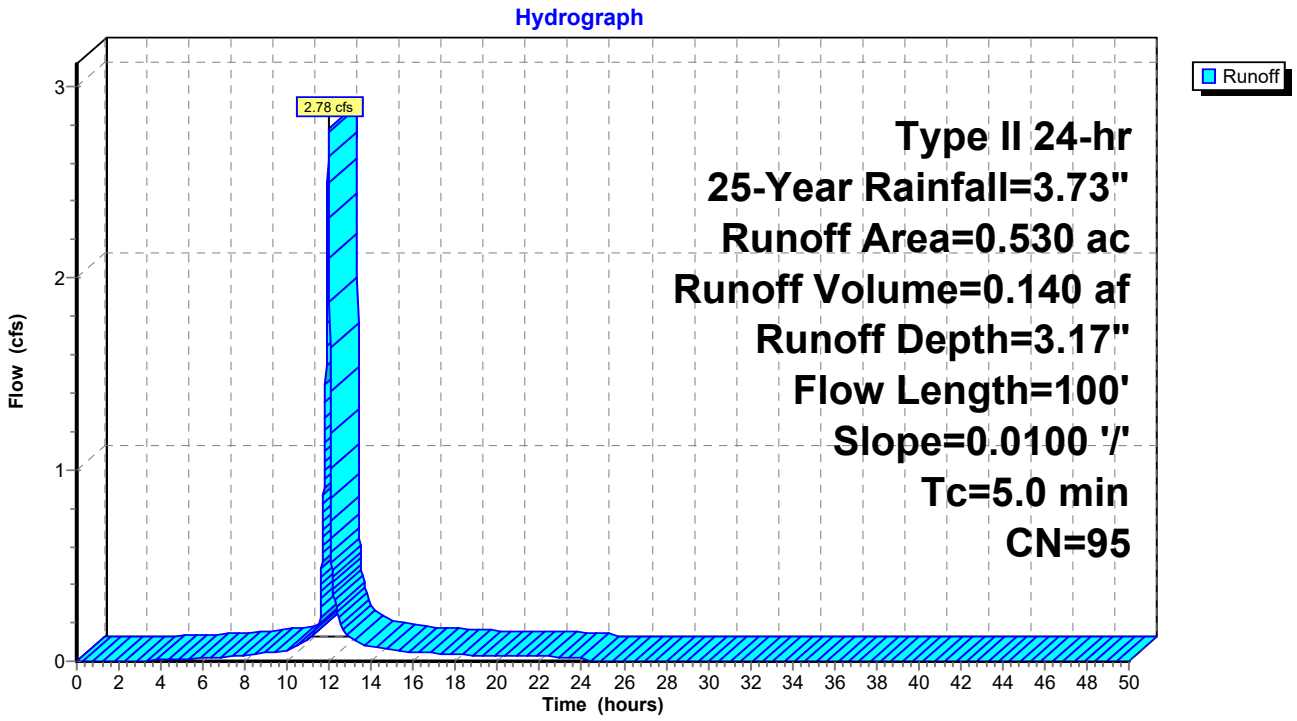
Runoff = 2.78 cfs @ 11.96 hrs, Volume= 0.140 af, Depth= 3.17"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

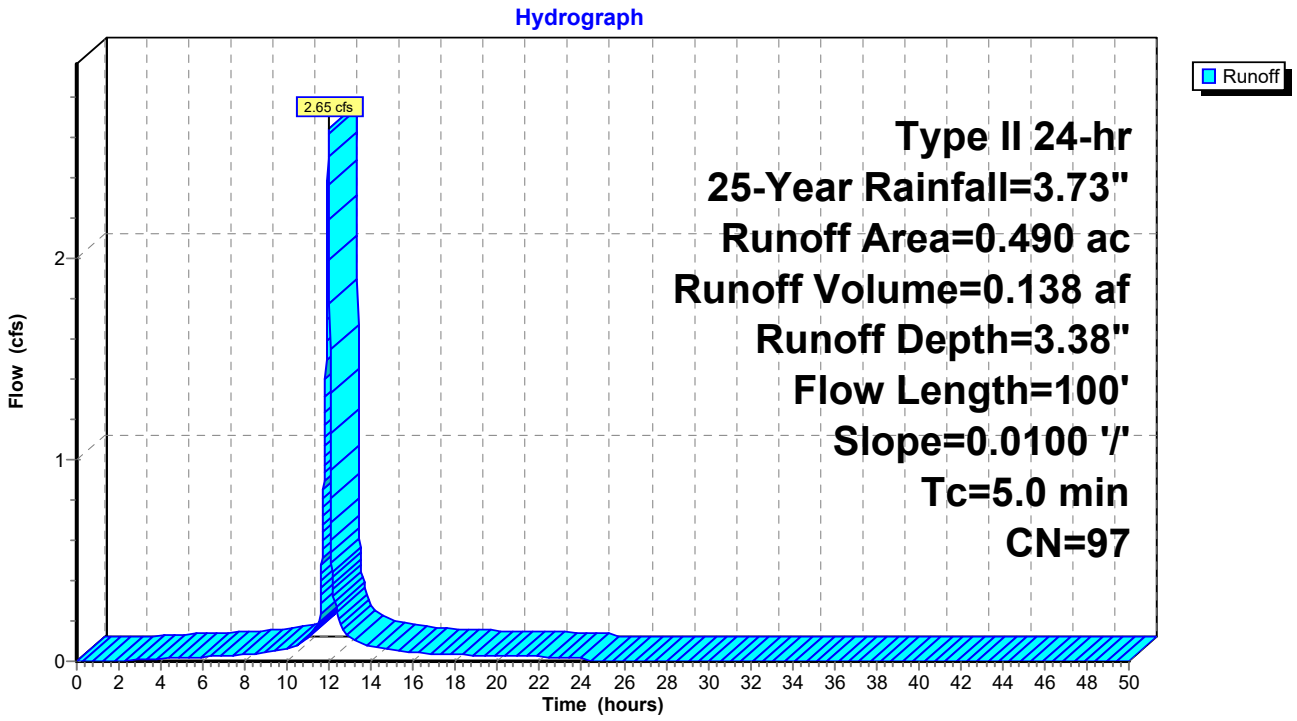
Runoff = 2.65 cfs @ 11.96 hrs, Volume= 0.138 af, Depth= 3.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

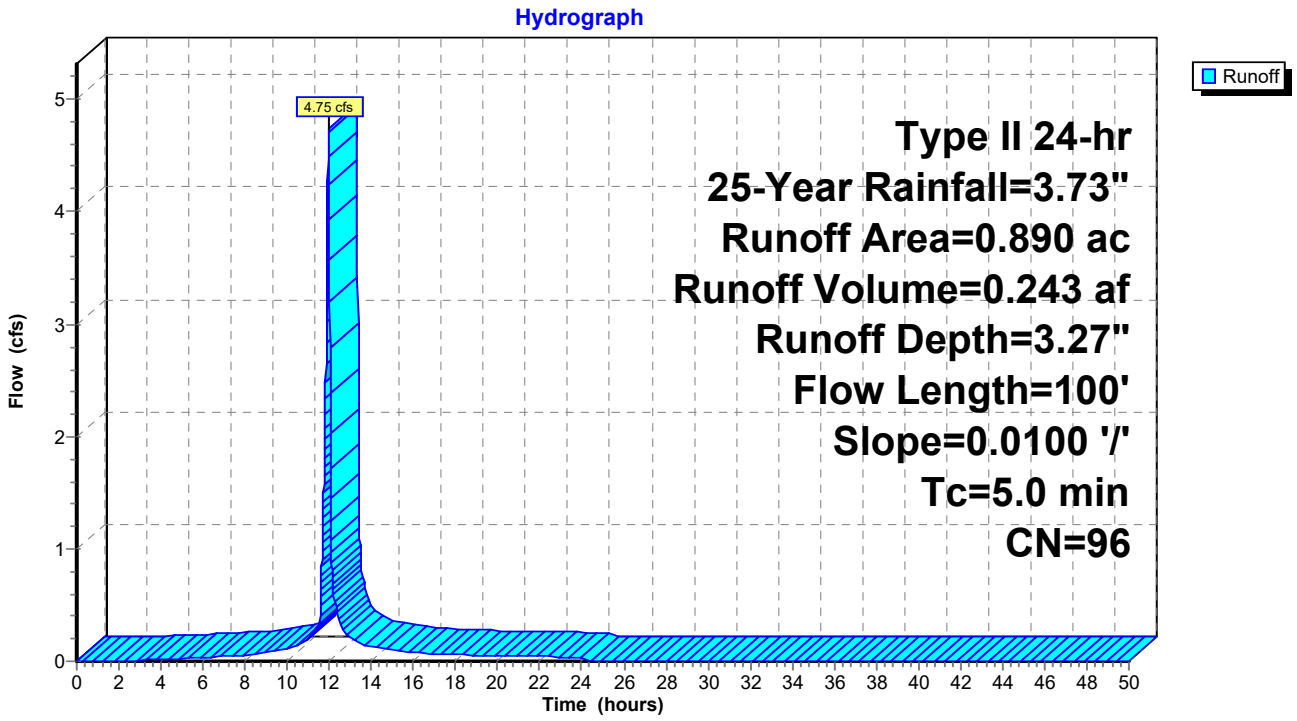
Runoff = 4.75 cfs @ 11.96 hrs, Volume= 0.243 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

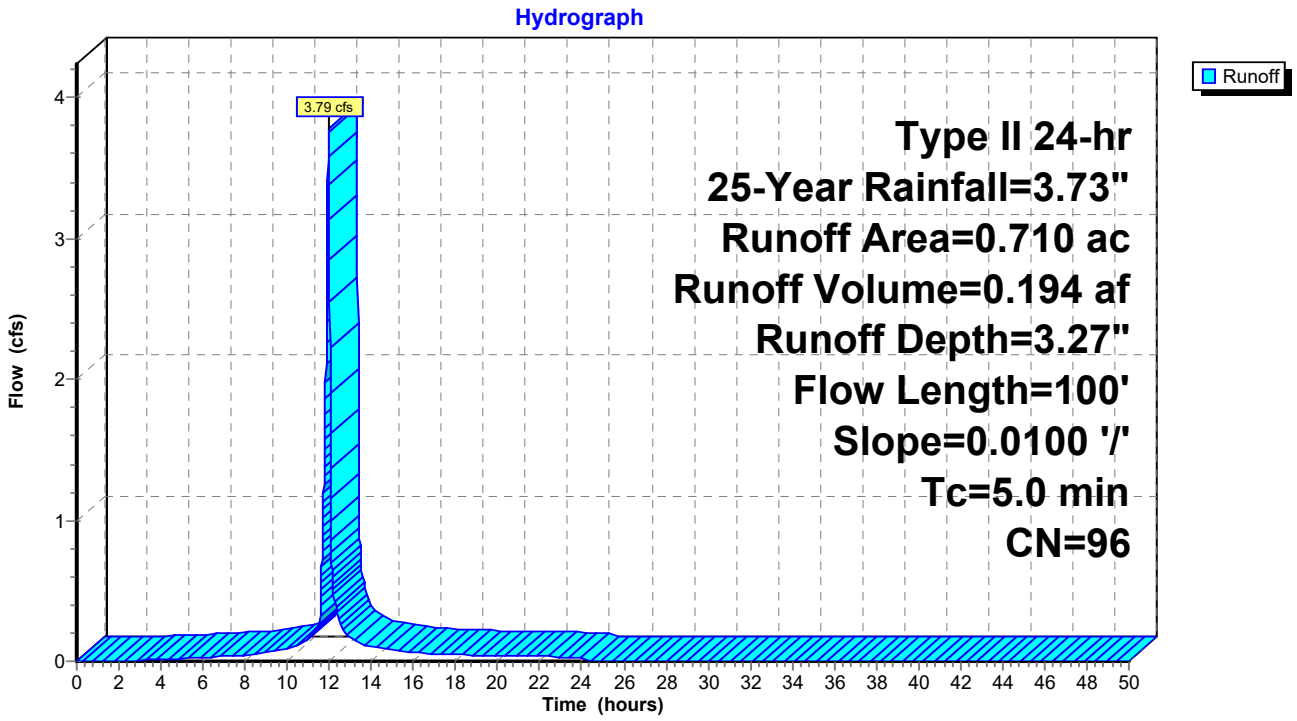
Runoff = 3.79 cfs @ 11.96 hrs, Volume= 0.194 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

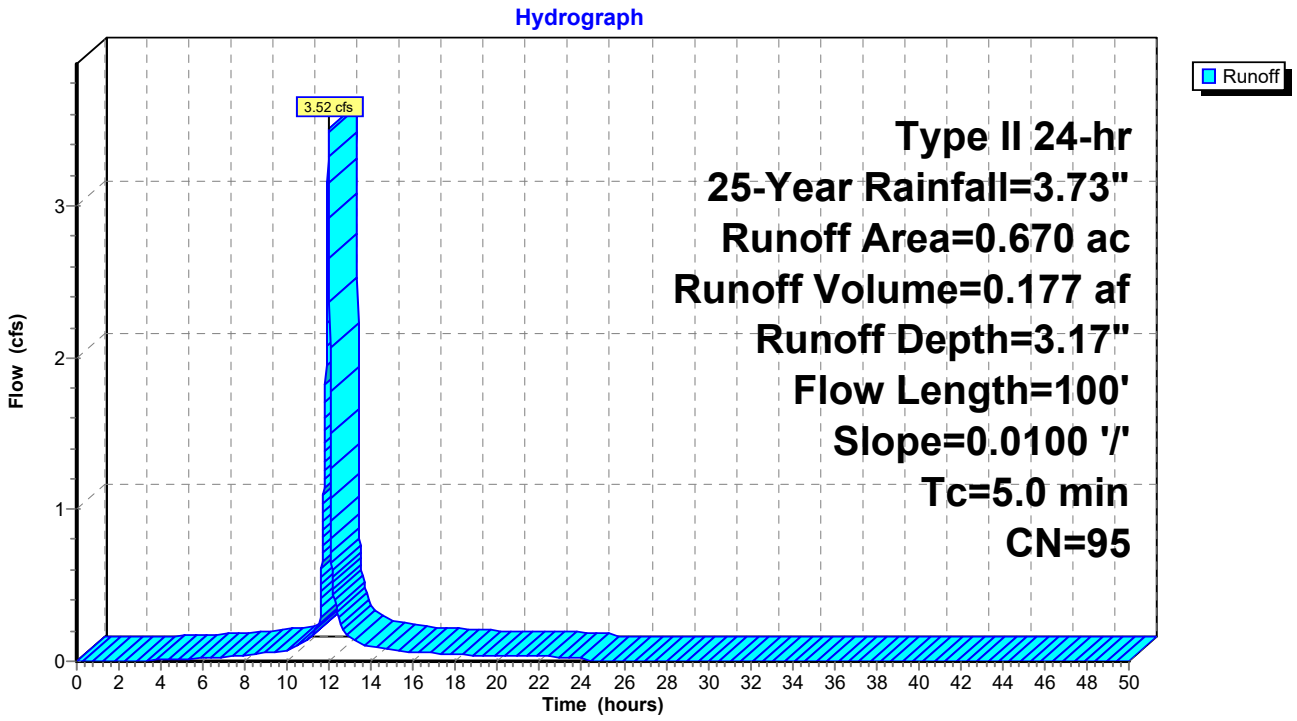
Runoff = 3.52 cfs @ 11.96 hrs, Volume= 0.177 af, Depth= 3.17"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

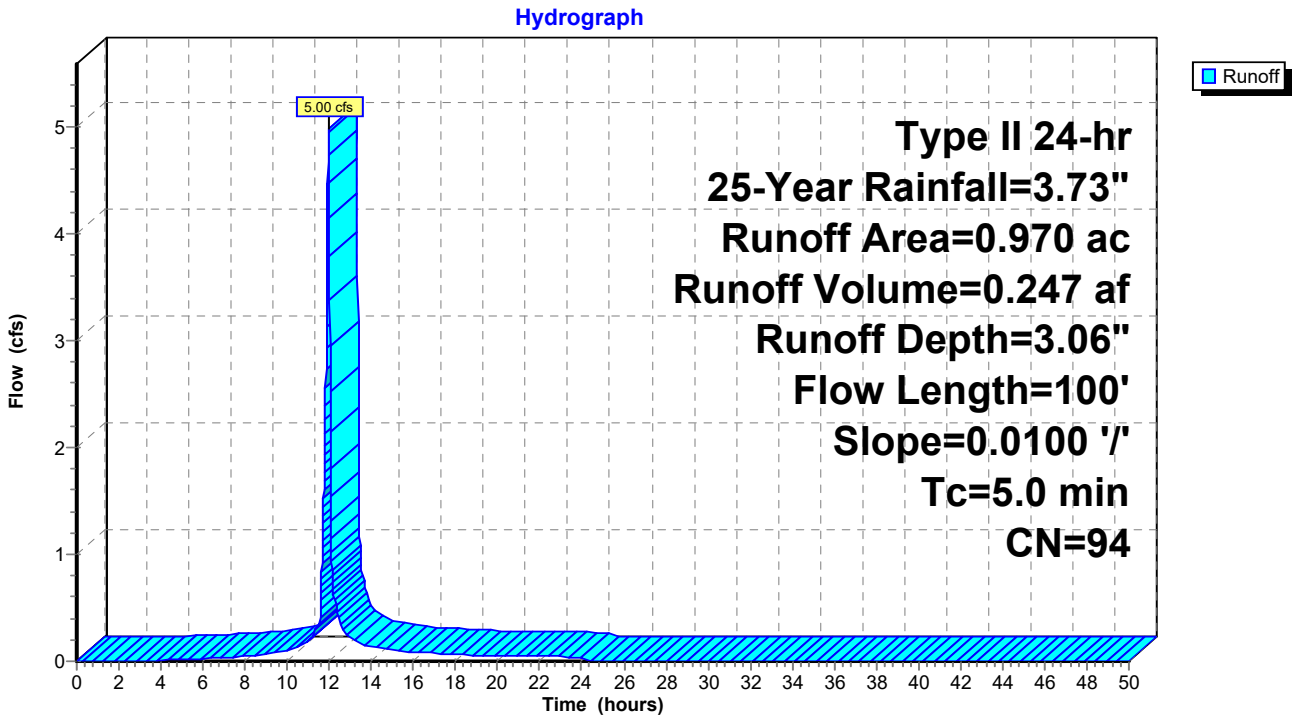
Runoff = 5.00 cfs @ 11.96 hrs, Volume= 0.247 af, Depth= 3.06"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

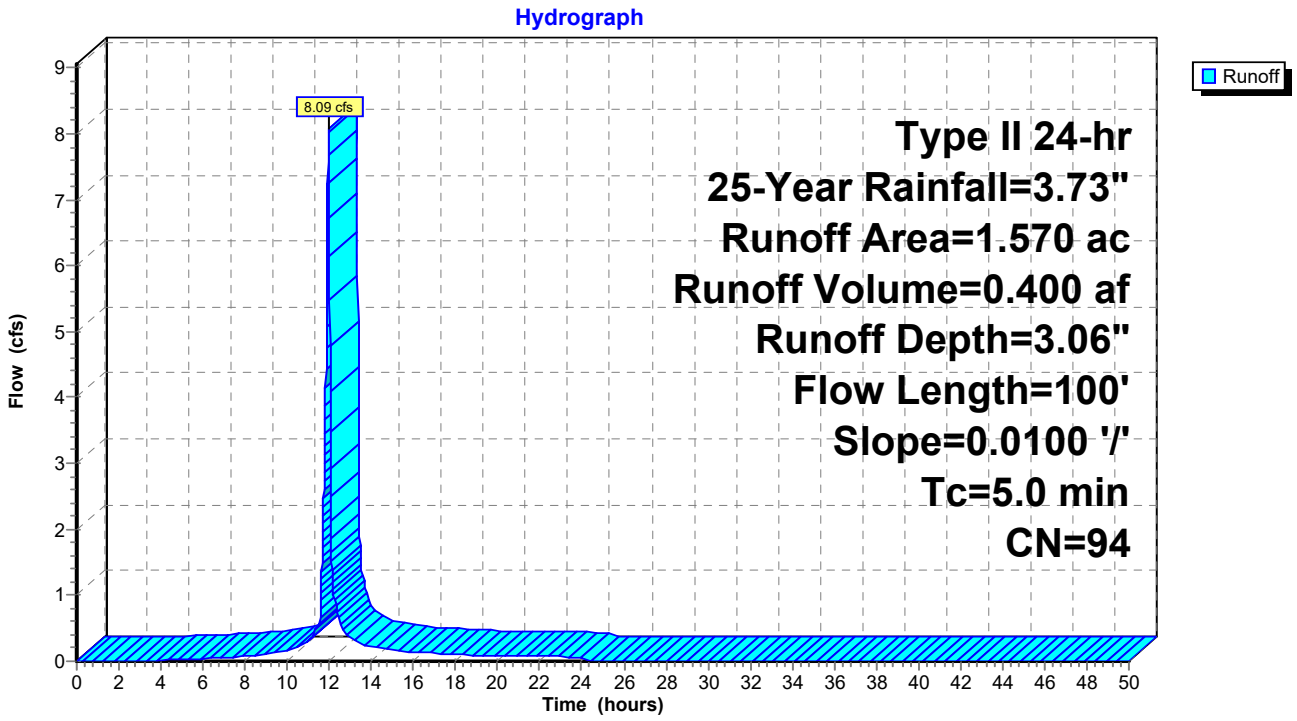
Runoff = 8.09 cfs @ 11.96 hrs, Volume= 0.400 af, Depth= 3.06"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 3.18" for 25-Year event
Inflow = 36.53 cfs @ 11.96 hrs, Volume= 1.844 af
Outflow = 18.03 cfs @ 12.04 hrs, Volume= 1.841 af, Atten= 51%, Lag= 5.1 min
Primary = 18.03 cfs @ 12.04 hrs, Volume= 1.841 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 573.09' @ 12.04 hrs Surf.Area= 20,584 sf Storage= 21,706 cf

Plug-Flow detention time= 39.0 min calculated for 1.841 af (100% of inflow)
Center-of-Mass det. time= 38.1 min (808.4 - 770.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=18.02 cfs @ 12.04 hrs HW=573.09' (Free Discharge)
↑**1=Outlet Pipe** (Barrel Controls 18.02 cfs @ 4.59 fps)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

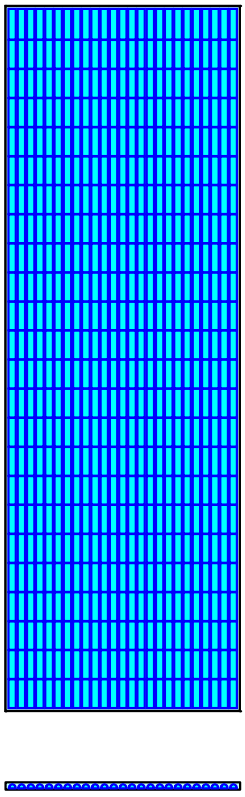
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

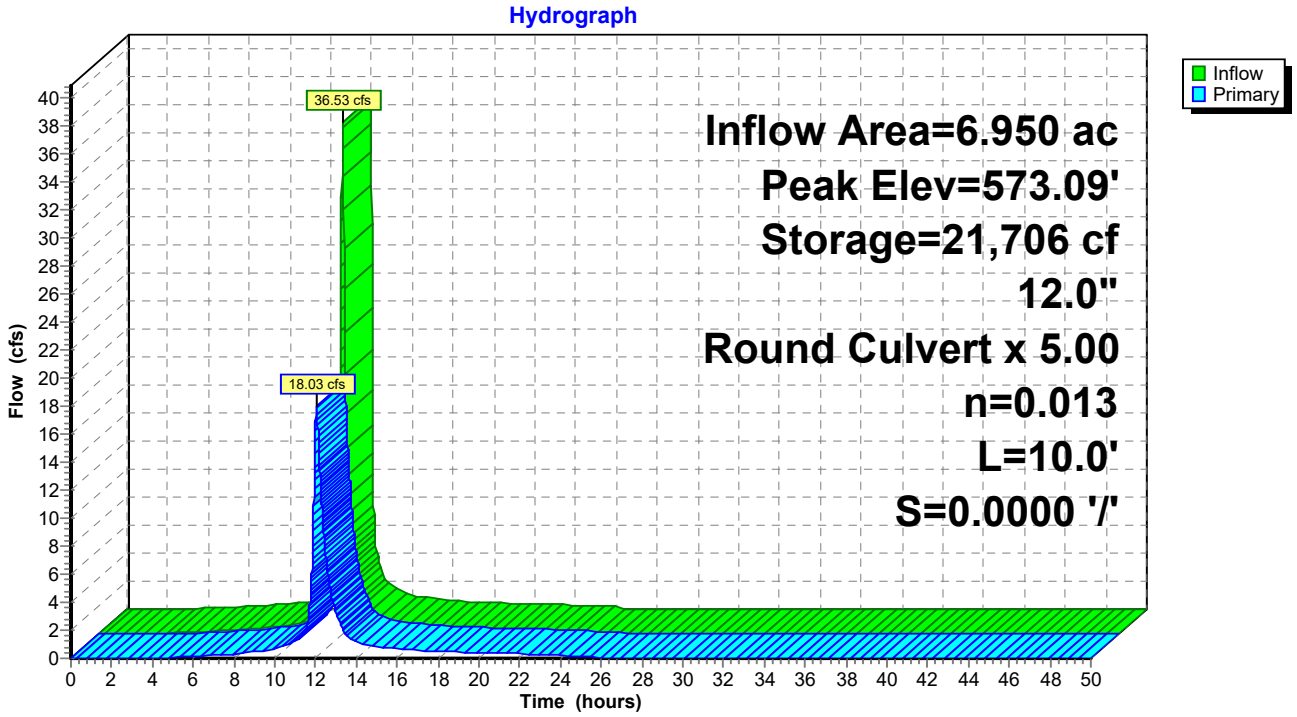
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=8.16 cfs 0.426 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=4.45"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=3.82 cfs 0.197 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=4.68"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=3.60 cfs 0.191 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=6.49 cfs 0.338 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=5.17 cfs 0.270 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=4.45"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=4.83 cfs 0.248 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=4.34"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=6.92 cfs 0.351 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=4.34"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=11.20 cfs 0.567 af

Pond 1P: Detention Storage & Outlet Peak Elev=573.83' Storage=29,010 cf Inflow=50.20 cfs 2.588 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=25.60 cfs 2.585 af

Total Runoff Area = 6.950 ac Runoff Volume = 2.588 af Average Runoff Depth = 4.47"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

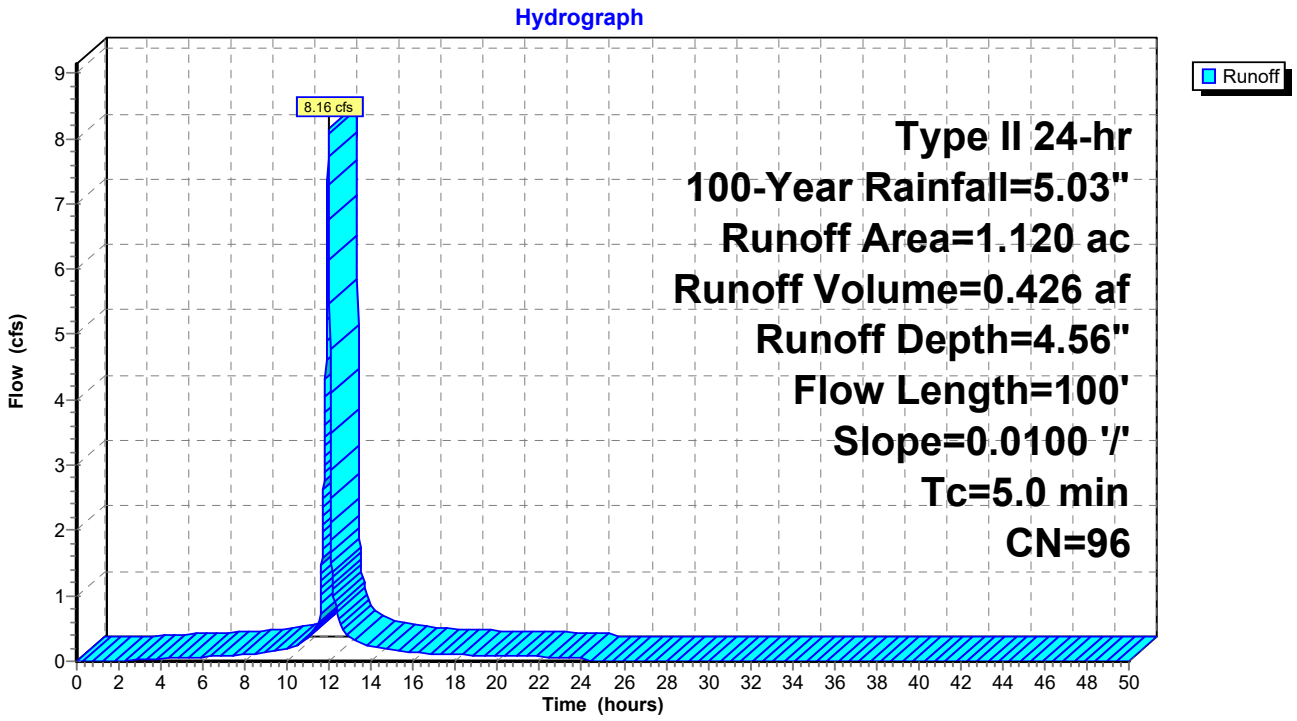
Runoff = 8.16 cfs @ 11.96 hrs, Volume= 0.426 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

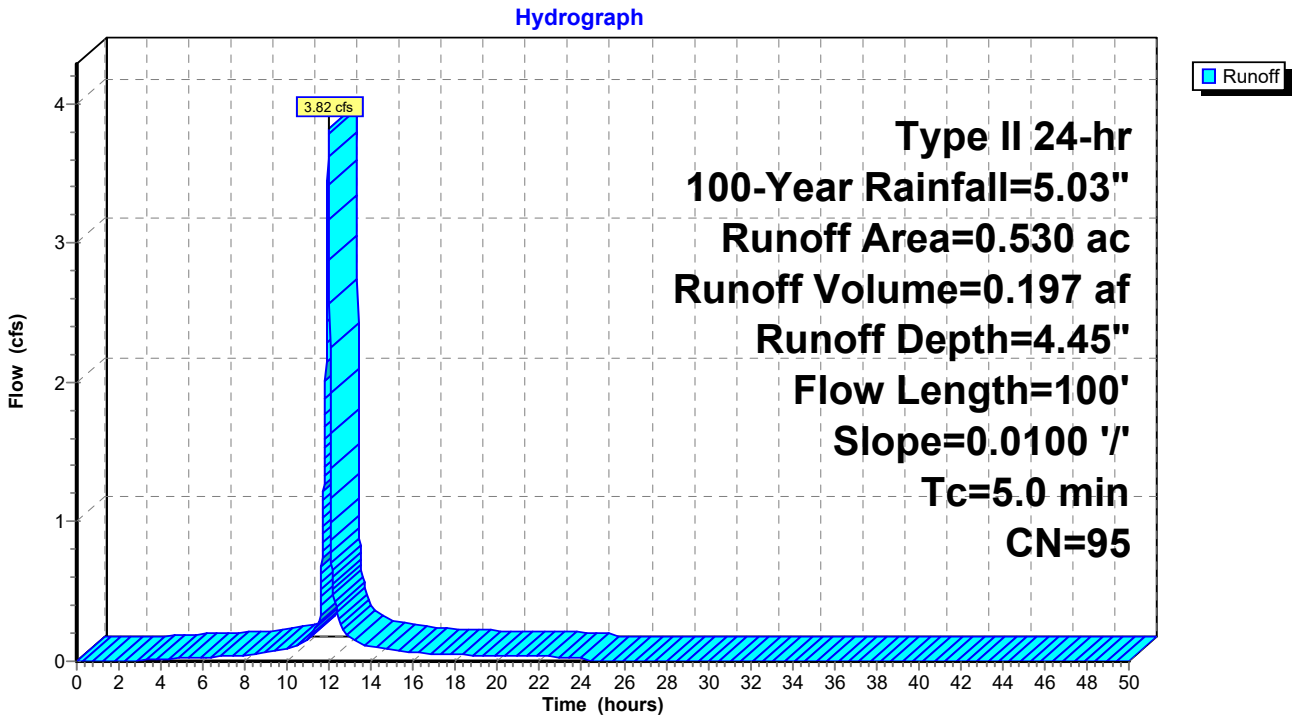
Runoff = 3.82 cfs @ 11.96 hrs, Volume= 0.197 af, Depth= 4.45"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

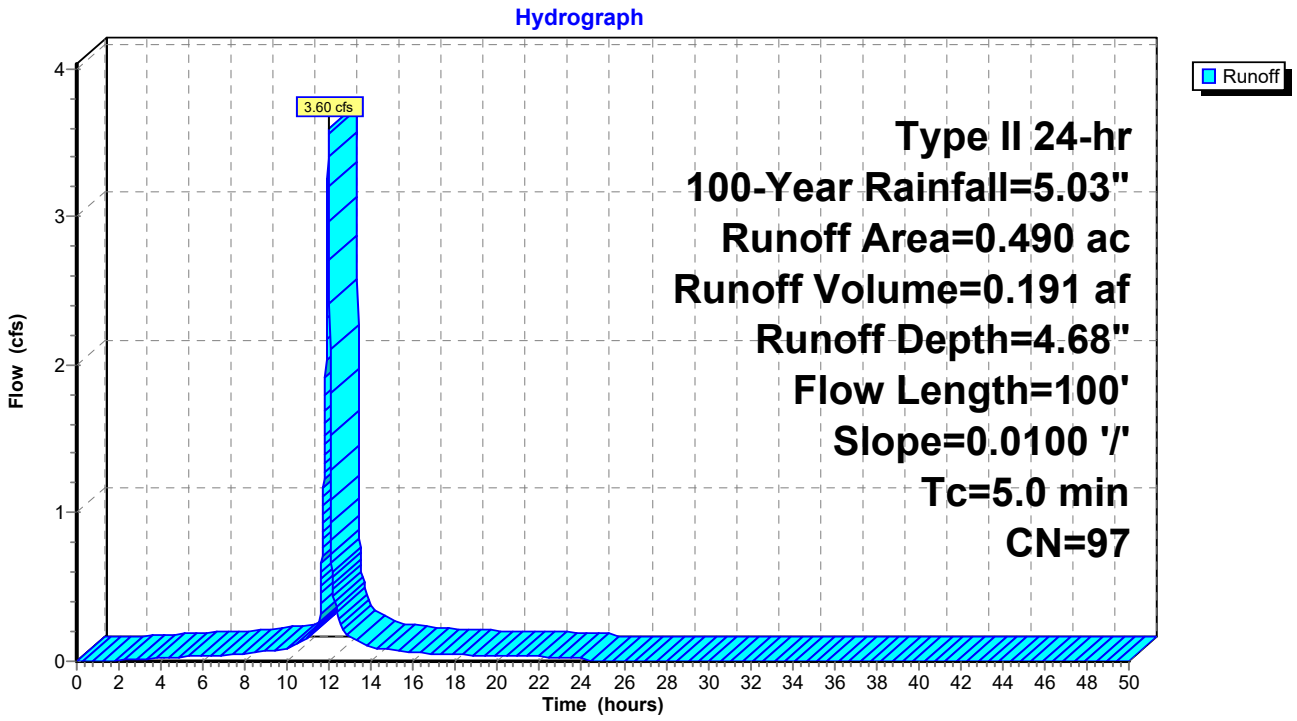
Runoff = 3.60 cfs @ 11.96 hrs, Volume= 0.191 af, Depth= 4.68"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

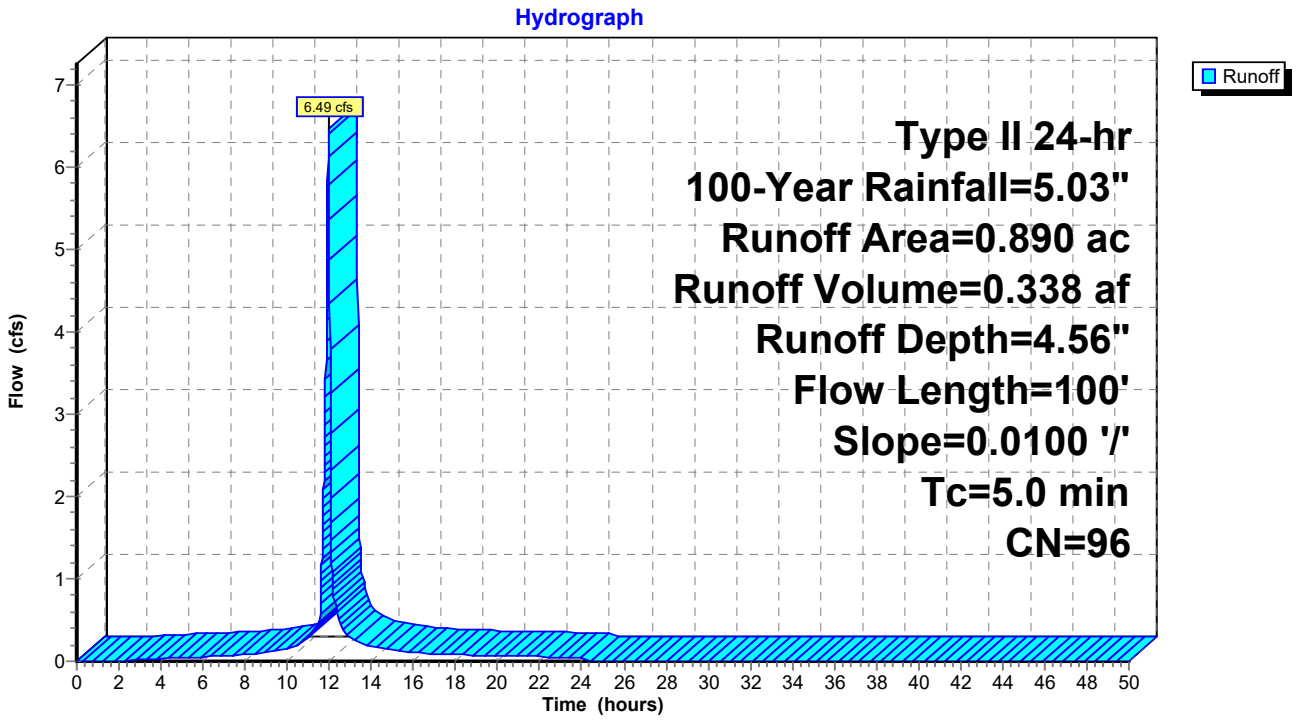
Runoff = 6.49 cfs @ 11.96 hrs, Volume= 0.338 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

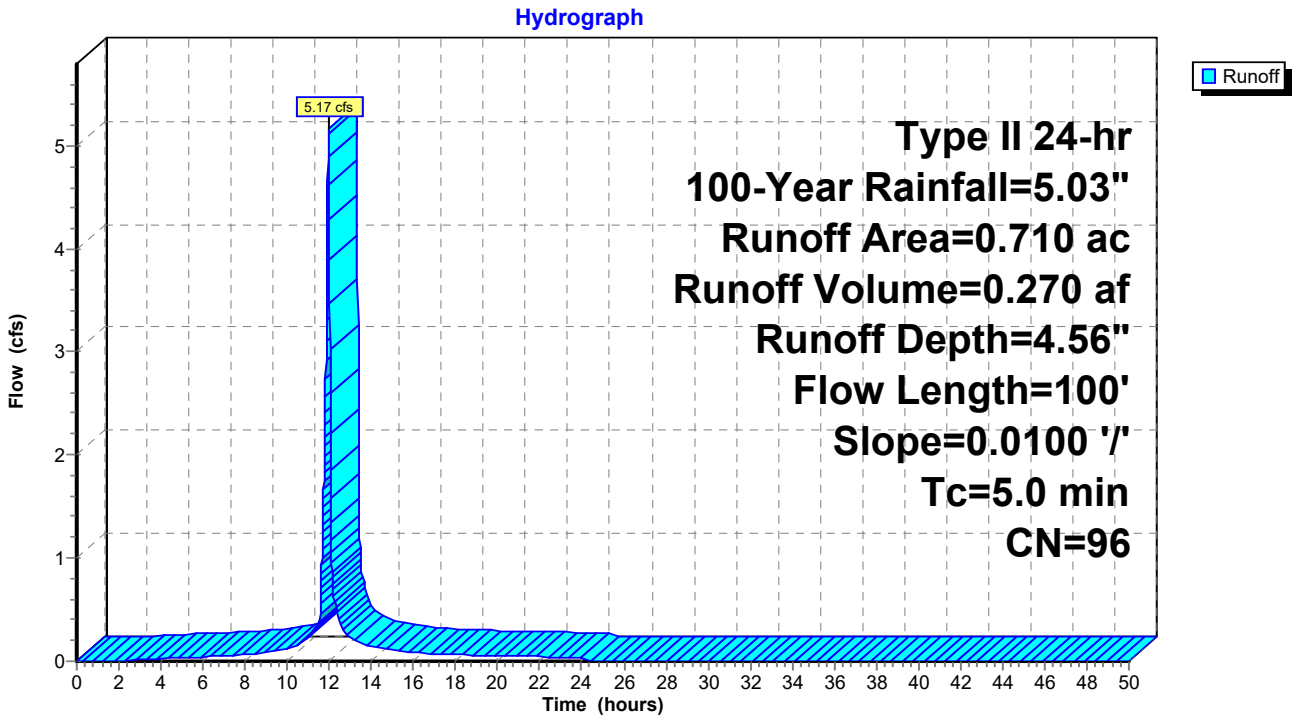
Runoff = 5.17 cfs @ 11.96 hrs, Volume= 0.270 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

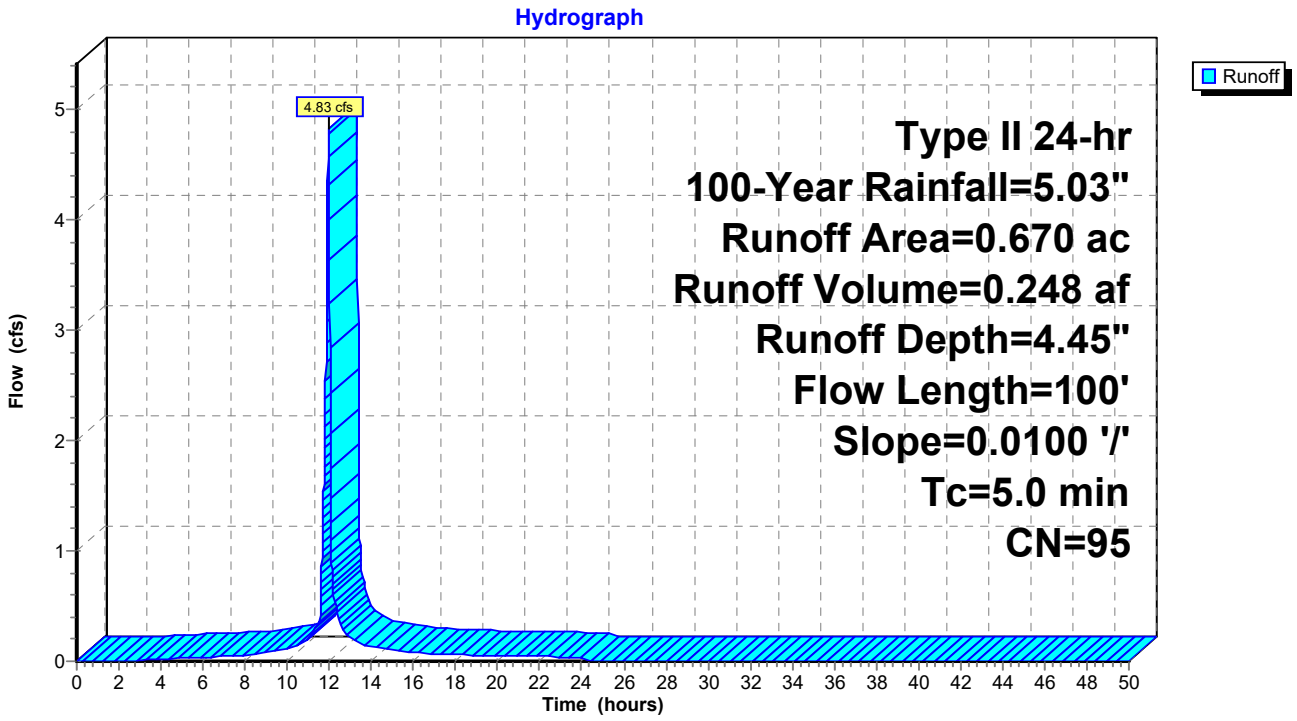
Runoff = 4.83 cfs @ 11.96 hrs, Volume= 0.248 af, Depth= 4.45"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

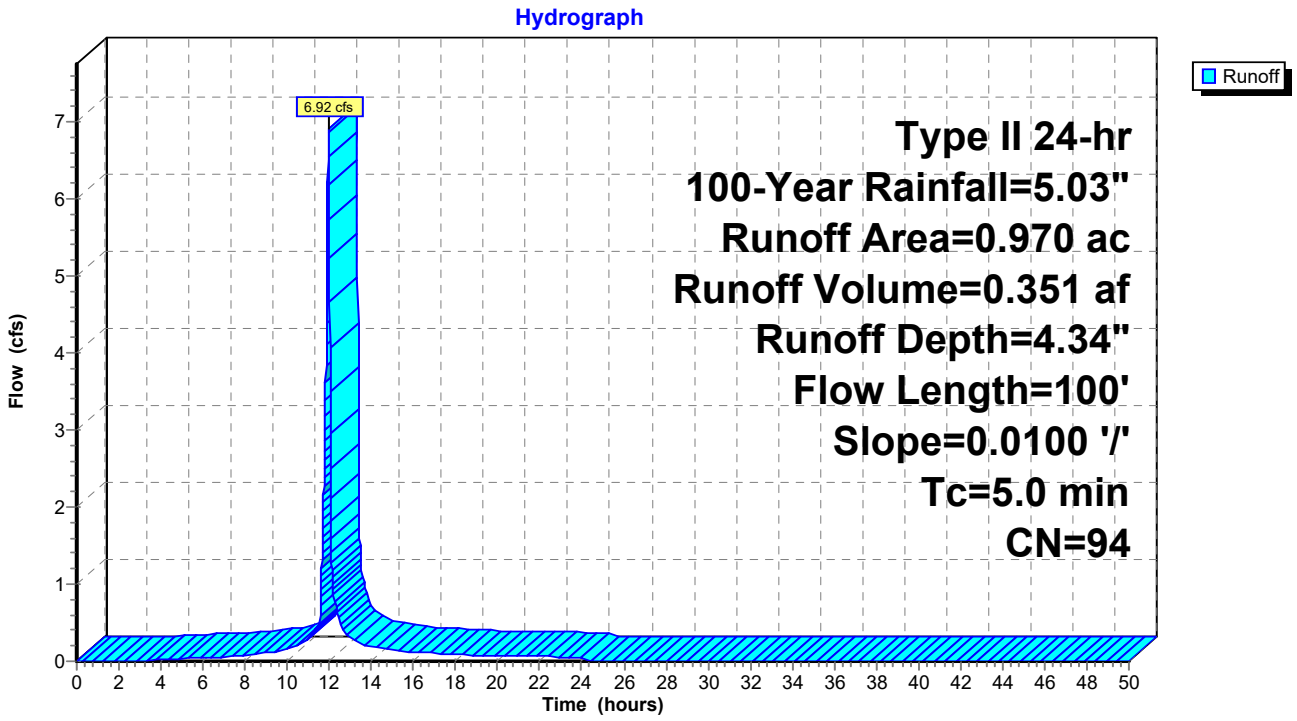
Runoff = 6.92 cfs @ 11.96 hrs, Volume= 0.351 af, Depth= 4.34"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

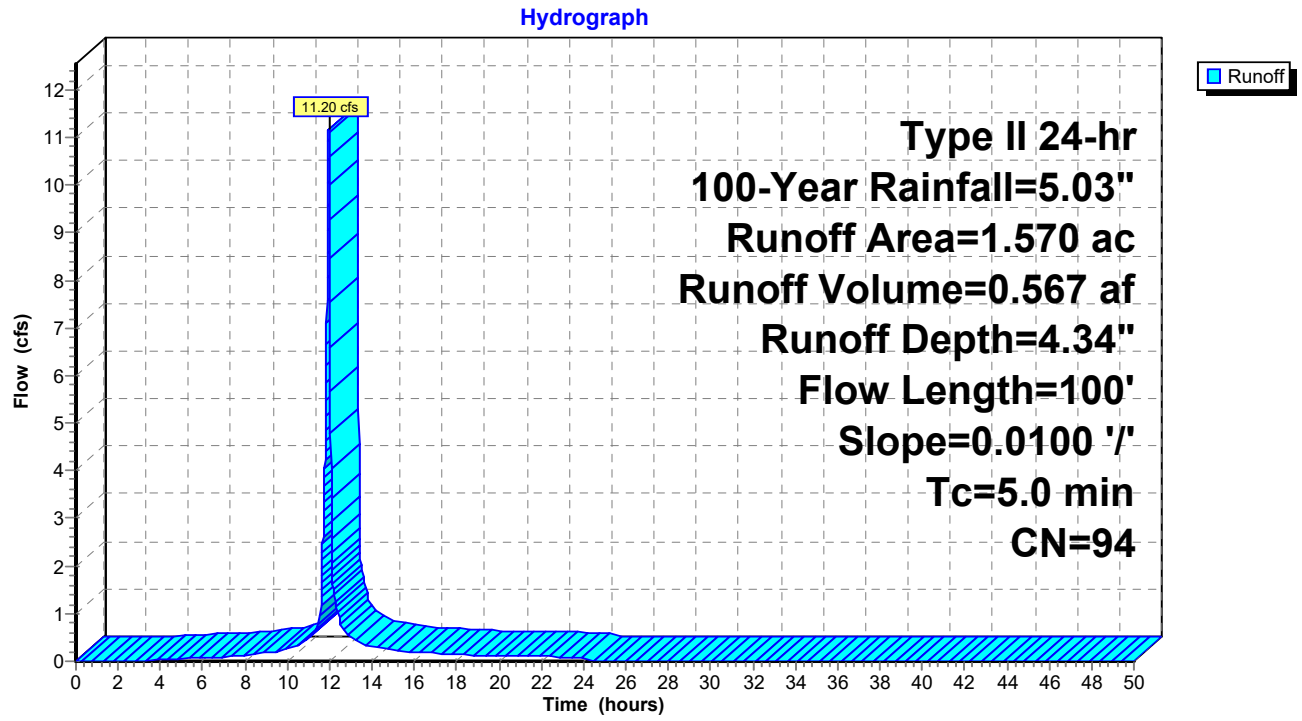
Runoff = 11.20 cfs @ 11.96 hrs, Volume= 0.567 af, Depth= 4.34"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 4.47" for 100-Year event
Inflow = 50.20 cfs @ 11.96 hrs, Volume= 2.588 af
Outflow = 25.60 cfs @ 12.04 hrs, Volume= 2.585 af, Atten= 49%, Lag= 5.0 min
Primary = 25.60 cfs @ 12.04 hrs, Volume= 2.585 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 573.83' @ 12.04 hrs Surf.Area= 20,584 sf Storage= 29,010 cf

Plug-Flow detention time= 34.5 min calculated for 2.585 af (100% of inflow)
Center-of-Mass det. time= 33.7 min (795.7 - 762.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=25.59 cfs @ 12.04 hrs HW=573.83' (Free Discharge)
↑**1=Outlet Pipe** (Inlet Controls 25.59 cfs @ 6.52 fps)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

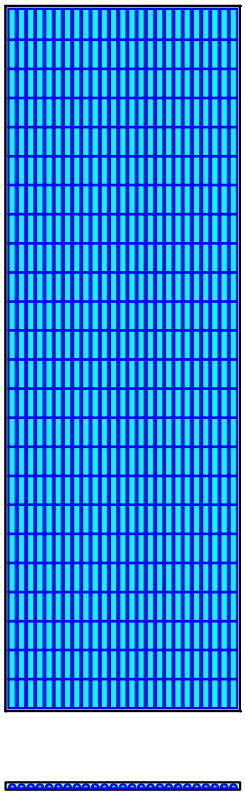
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

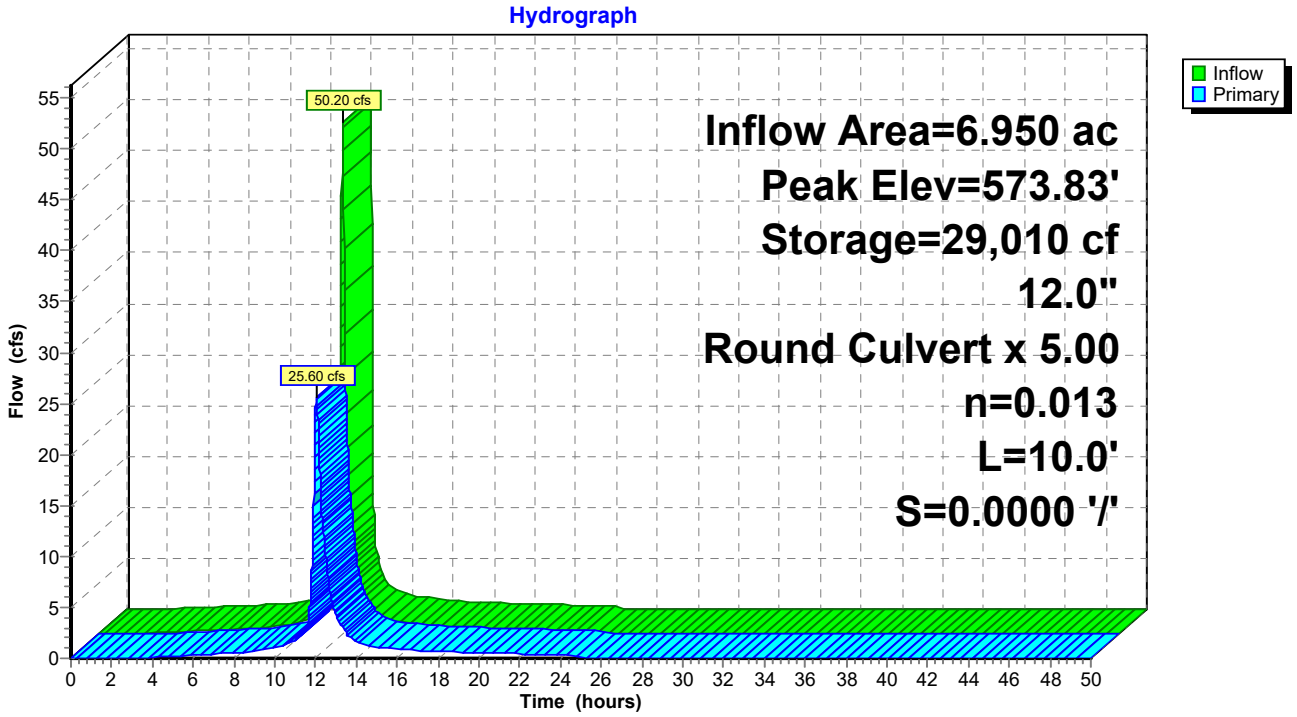
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix E

NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), 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 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, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. 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.**

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department 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.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. 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 I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, 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 the *Stormwater Pollution Prevention Plan* ("SWPPP") the reason(s) for the

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deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

(i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

(ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

(iii) *Minimize* the amount of soil exposed during *construction activity*;

(iv) *Minimize* the disturbance of *steep slopes*;

(v) *Minimize* sediment *discharge*s from the site;

(vi) Provide and maintain *natural buffer*s around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

(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;

(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 temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

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listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily 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**. 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 designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(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. **Prohibited *Discharges*.** The following *discharges* are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

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(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall 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 Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, 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 post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall 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 shall be documented in the SWPPP.

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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 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *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 discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 discharges directly 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 Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (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 shall be

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calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall 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 shall 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 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *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 *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

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c. Sizing Criteria for Redevelopment Activity

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(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 Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice 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 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

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d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions 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 *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, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall 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 standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general 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 the Department determines that a modification of the 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. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

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E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those 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”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

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operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name 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.

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8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive 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.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (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/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); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

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(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

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 prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

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B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

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must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

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b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall 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 Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained 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.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

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use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

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regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. 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. 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.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

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operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. 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 I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or 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 or 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 site;

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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*;

c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and

d. to document the final construction conditions.

5. The Department 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 shall 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 the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department 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. of this permit.

6. 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 post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions 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

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the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s 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* shall 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 construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

    a. Background information about the scope of the project, including the location, type and size of project

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b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall 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);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. 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;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. 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;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

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schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. 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*;

k. 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

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. 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. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, 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.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

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b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. 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;

   (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

   (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;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

   (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. 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 Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

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3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *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 conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

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 post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

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. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall 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 shall

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begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

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. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this 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 *trained contractor* 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. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. 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),
- New York State Erosion and Sediment Control Certificate Program holder
- 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, 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

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in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

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;

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 that involve soil disturbances between five thousand (5,000) 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.D.3 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.

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 DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

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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 DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control 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.B.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, 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.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures 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:

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(Part IV.C.4.a)

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 and pollution prevention measures that need repair or maintenance;

g. 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;

h. Description and sketch 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;

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 pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

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l. 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 this permit 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.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

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b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; 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. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

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b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices 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,

d. for post-construction stormwater management practices 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 policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. 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 Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

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Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

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). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

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E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall 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.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP 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 (5) 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.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

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(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 permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) 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. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit 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.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

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superintendent, 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 shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be 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.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. 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 shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

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include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, 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 conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

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3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, 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 reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

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(Part VII.R)

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

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APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
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)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - 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
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
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

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Definitions

All definitions in this section are solely for the purposes of this permit.

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 –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means 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 - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means 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.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, 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.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that 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

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and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that 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 - means that 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.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means 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) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

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Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term "plan" in "larger 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 (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Minimize – means 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 (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):

(i) Owned or operated by a State, city, town, 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*;*
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

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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.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means 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 –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means 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 conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means 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 - means 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 .

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Qualified Inspector - means 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 Department 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 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 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 post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means 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 Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice 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) – means 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.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

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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).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- 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),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- 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,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- 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*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means 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 – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

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Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

Streambank – as used in this permit, means 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) – means 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 post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions 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 – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that 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 Loads (TMDLs) - A TMDL is 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 on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

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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, identified in Part III.A.6., 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* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means 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.

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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 or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- 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 E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

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 watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, 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.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

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Table 1 (Continued) 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:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *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 project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- 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

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Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 E
- 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 E
- 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 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 larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- 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) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

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Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- 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 over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- 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

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APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

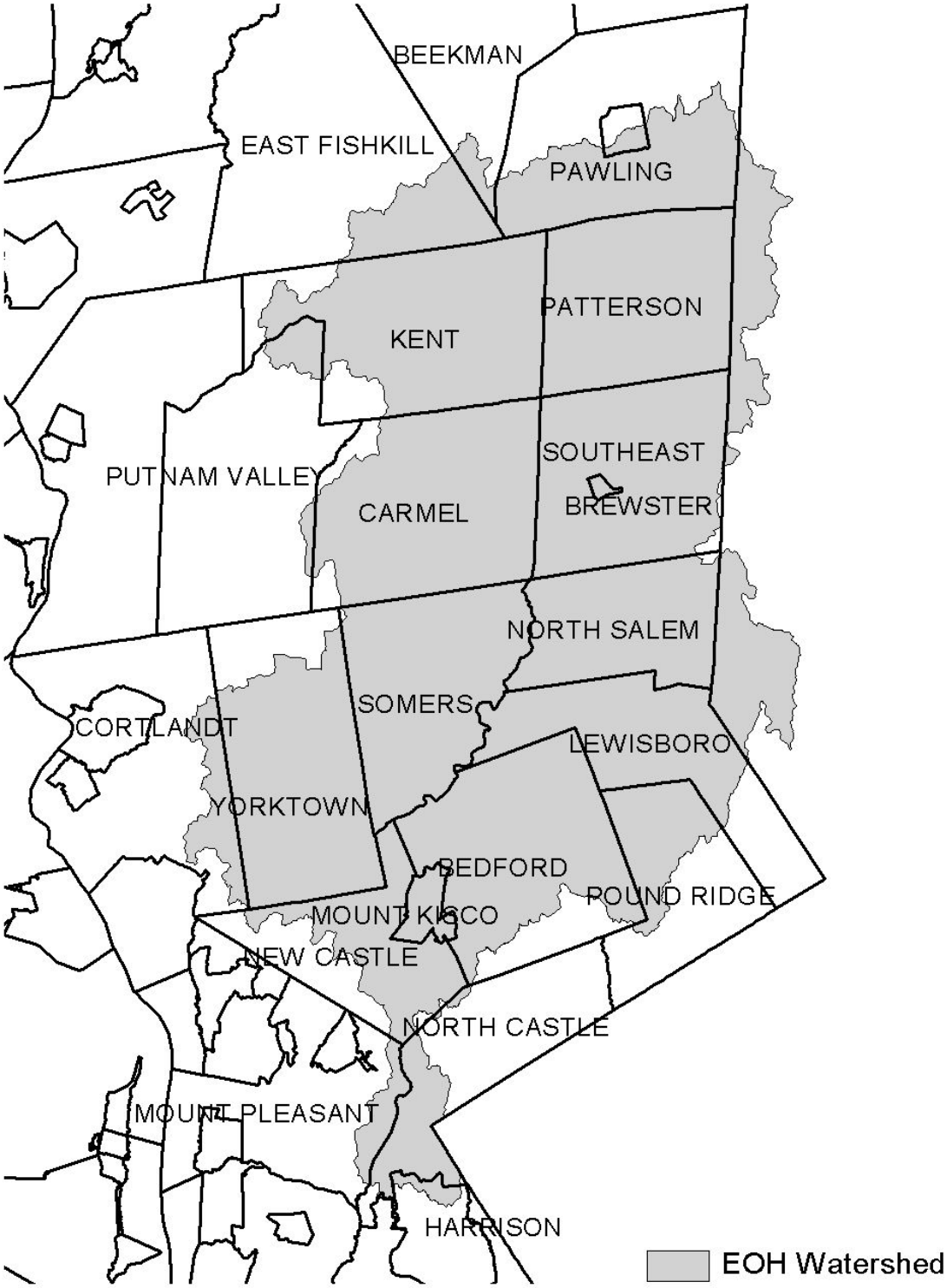
Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- 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

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Appendix C

Figure 1 - New York City Watershed East of the Hudson



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Figure 2 - Onondaga Lake Watershed



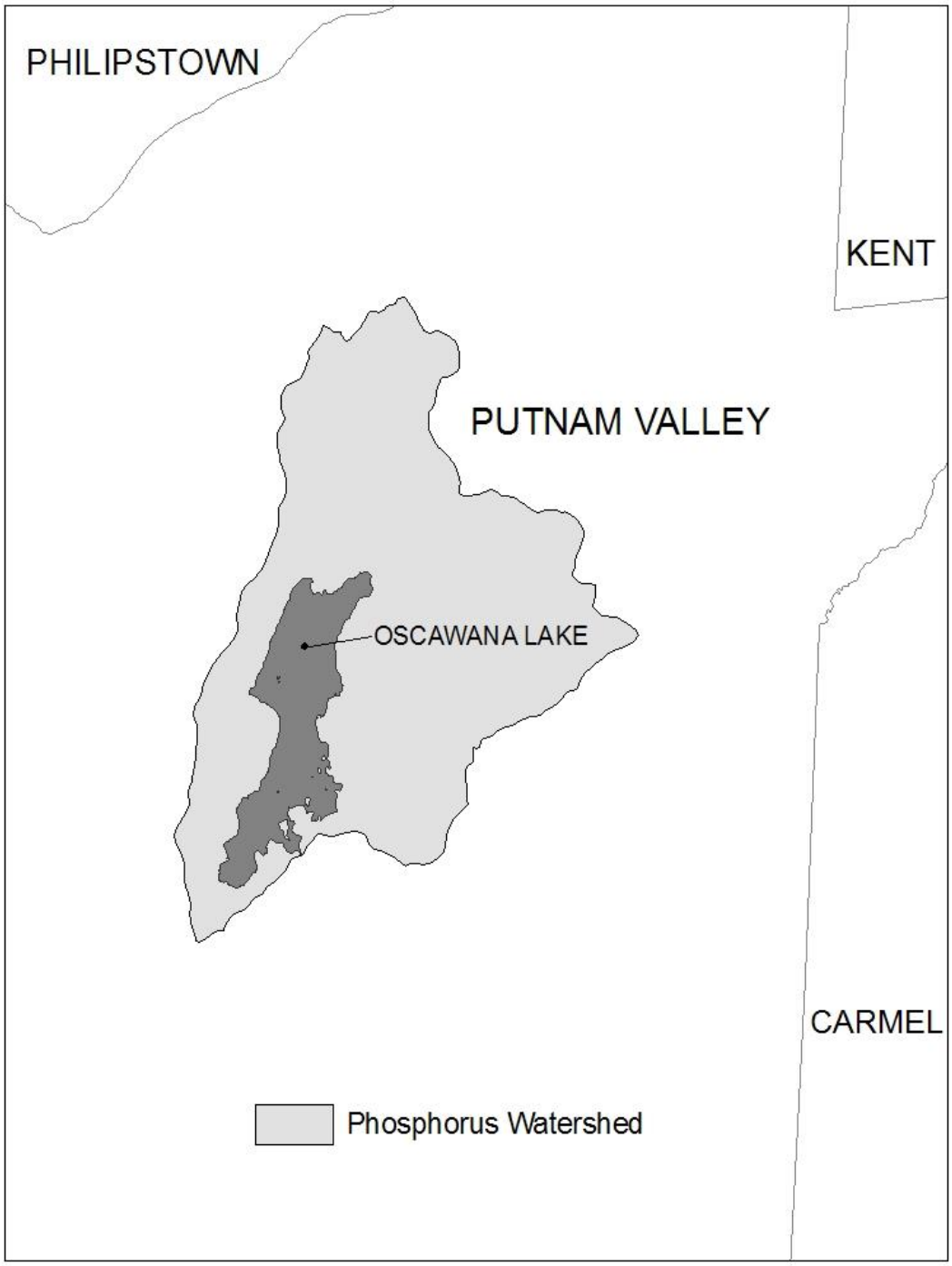
Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Figure 3 - Greenwood Lake Watershed



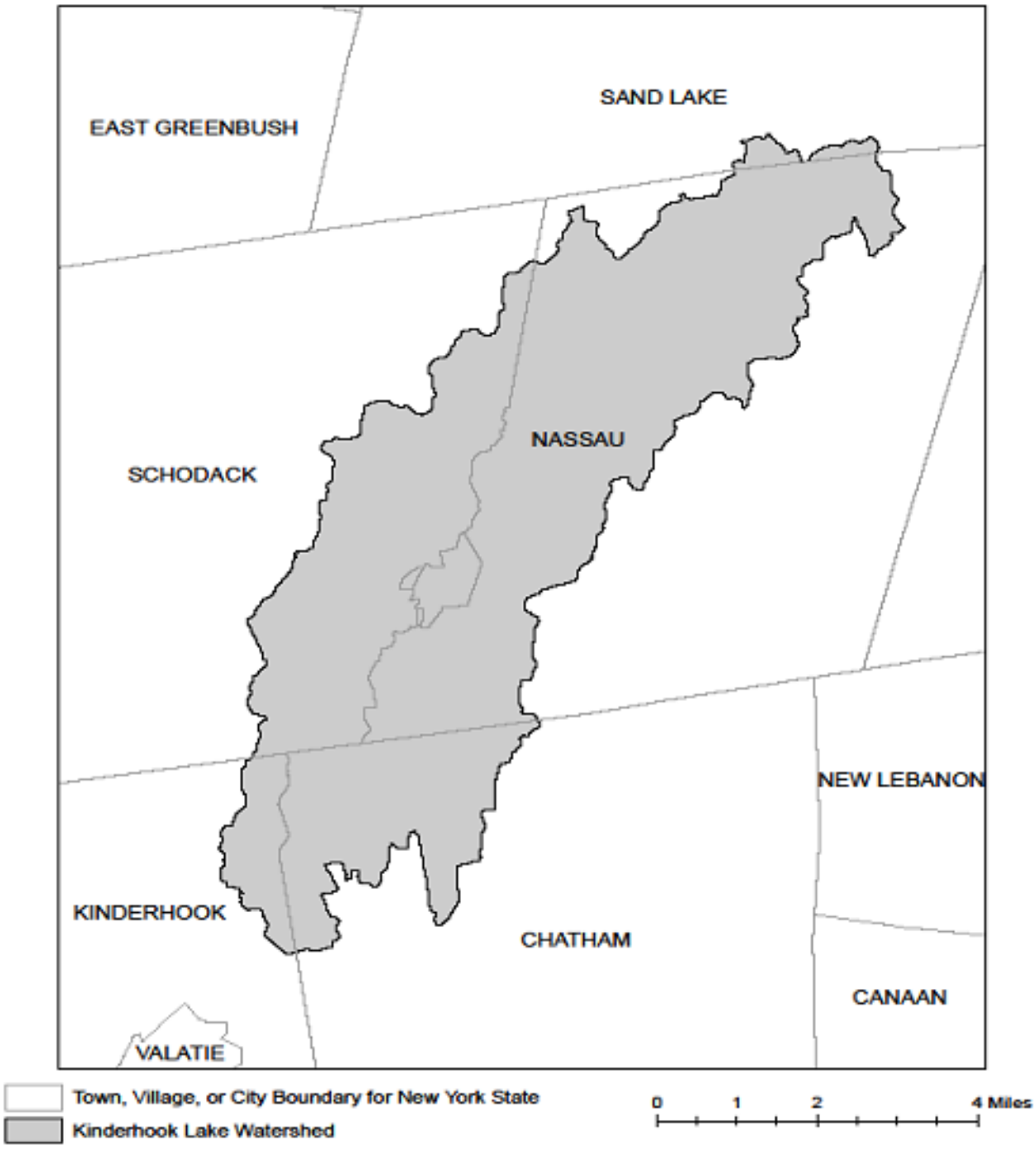
Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Figure 4 - Oscawana Lake Watershed



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Figure 5 - Kinderhook Lake Watershed



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APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

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APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

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303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

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APPENDIX F – List of NYS DEC 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	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 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	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 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	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix F

Forms

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

Amherst Development Park
6000-6040 North Bailey Ave
Amherst, NY 14226

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 Amherst.

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

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Amherst Development Park - 6000-6040 North Bailey Ave, Amherst, NY 14226

eNOI Submission Number: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Amherst Development Park - 6000-6040 North Bailey Ave, Amherst, NY 14226

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Benderson Development Company, LLC - 570 Delaware Ave - Buffalo, NY 14202

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Christopher		Wood
First name	MI	Last Name

	11-26-23
Signature	Date

Revised: January 2020

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix G

NYSDEC Notice of Termination (NOT)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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)?

_____

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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:

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Post Construction Stormwater Management

Facility Certification Form Cover Sheet

A. General Information

Use only one Cover Sheet per site with as many specific structural BMP Inspection Report attachments as needed. Please attach digital photographs of the site and structural BMPs as applicable.

Development Name:_____ Inspection Date:_____

BMP Owner:_____ Inspection Company:_____

Owner Address:_____ Company Address:_____

Owner Phone #:_____ Inspector Name:_____

Owner Email:_____ Inspector Phone #:_____

Inspector Email:_____

B. Inspection Report Attachments

The listed stormwater controls are the Structural BMPs who's Inspection Reports are to be completed per the NYS Stormwater Design Manual for this site. Please use one inspection report per BMP inspected and submit all forms together with this Cover Sheet as one single report. Also, please document the number of each structural BMP found at this site in the space below.

BMP	# of BMP	BMP	# of BMP
Micropool Extended Detention Pond (P-1)		Infiltration Basin (I-2)	
Wet Pond (P-2)		Dry Well (I-3)	
Wet Extended Detention Pond (P-3)		Surface Sand Filter (F-1)	
Multiple Pond System (P-4)		Underground Sand Filter (F-2)	
Shallow Wetland (W-1)		Perimeter Sand Filter (F-3)	
Extended Detention Wetland (W-2)		Organic Filter (F-4)	
Pond/ Wetland System (W-3)		Bioretention (F-5)	
Pocket Wetland (W-4)		Dry Swale (O-1)	
Infiltration Trench (I-1)		Wet Swale (O-2)	
Alternate Stormwater Management Practices			

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Post Construction Stormwater Management

C. Inspection Results

FAIL*

*** If any one item on the inspection form is coded as "Work needed", then the entire BMP fails inspection.**

***If a site has multiple BMPs and on fails inspection, this cover sheet is marked as fail until all items on all BMPs pass inspection.**

NOTE: Applicable BMP Inspection Reports and confirmatory digital photographs summarizing required repairs must be submitted to the Town following completion of the preliminary inspection. A re-inspection and certification must be completed within 30 days of the failed preliminary report.

PASS

NOTE: A passing inspection form should be signed below by the appropriate professional and submitted to the Town on or before the established inspection due date. Attach all applicable BMP Inspection Reports and confirmatory digital photographs accordingly.

D. Professional Certification

To be completed only when all structural BMPs at this site are functional with no outstanding maintenance issues.

I,_____, as a duly registered _____ attest that a thorough inspection has been completed for all structural BMPsthat are associated with this particular site. All inspected structural BMPs are performing properly and are in compliance with the terms and conditions of the recorded maintenance agreement for the site.

Signature:_____

Date:_____

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix H

Construction Documents

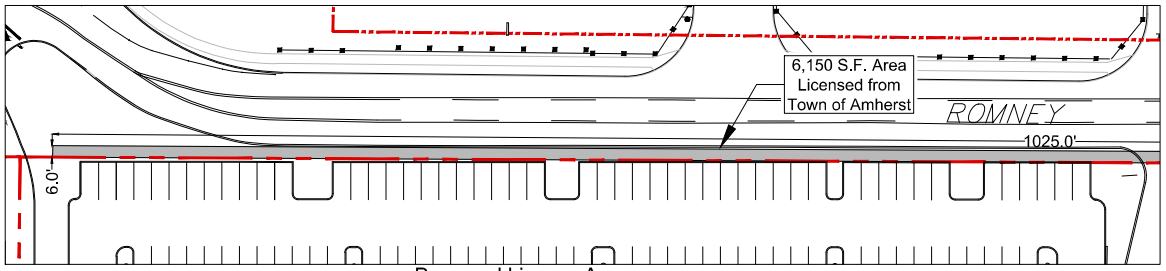
Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST, NY ZONING ANALYSIS		
	REQUIRED	PROVIDED
ZONED (RD)	R-D	R-D
MIN LOT AREA	1 AC	17.14 AC
MAX. BUILDING HEIGHT	65'	<30'
BUILDING SETBACKS:		
FRONT YARD	40'	102.3'
SIDE YARD	15'	16.7'
REAR YARD	15'	48.4'
PARKING / ROAD/AUX SETBACKS:		
FRONT - PROPERTY LINE	*25'	**0'
SIDE YARD	*10'	0'
REAR YARD	10'	**6.0'

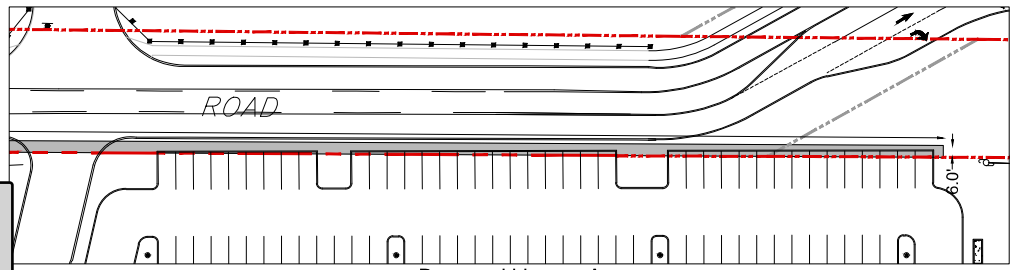
* Area to be determined to be licensed from Town of Amherst
** - Variance Required
- Curb Island Dimensions are measured from the inside of curb.

PROPOSED PARKING ANAYLSIS				
USE	CODE	S.F. USAGE	REQUIRED	PROVIDED
WAREHOUSE	1 / 1000 S.F.	181,343 SF	182 Spaces	
MEDICAL	1 / 150 S.F.	14,960 SF	100 Spaces	
RETAIL/OFFICE	1 / 200 S.F.	66,106 SF	331 Spaces	
TOTAL		262,409 SF	613 Spaces	688 Spaces
STALL SIZE			9' X 19'	9' X 19'

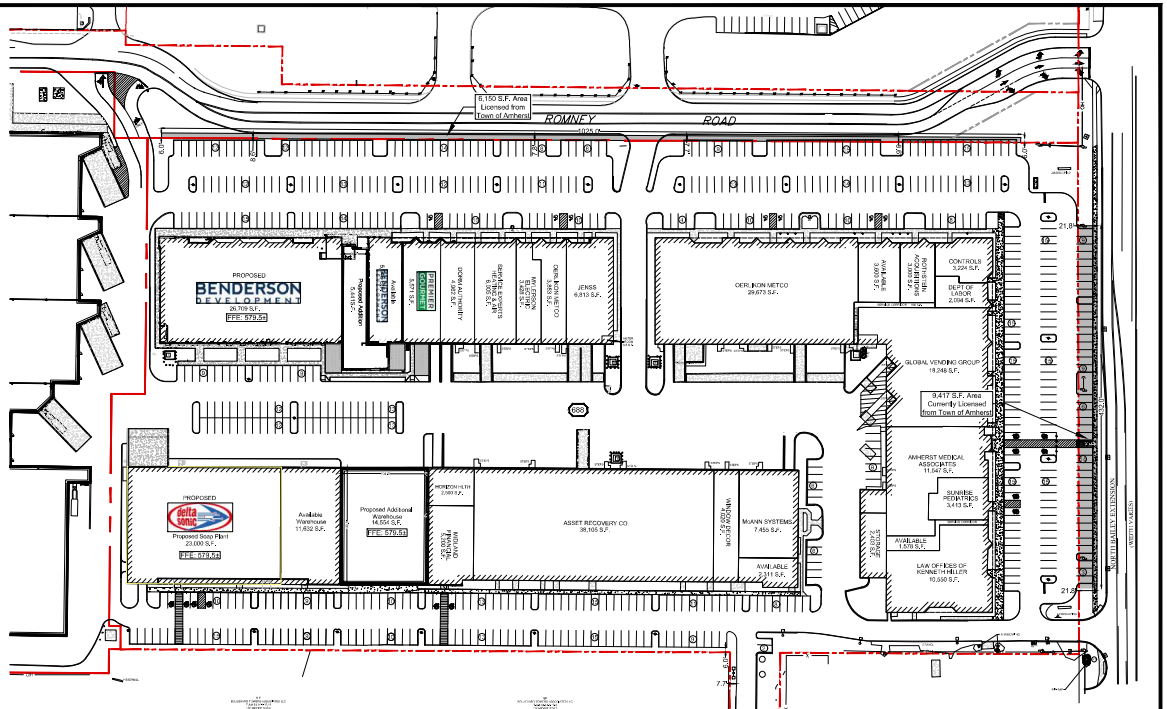
*Refer alternative parking study for site required parking



Proposed Licence Area
(1" = 30')



Proposed Licence Area
(1" = 30')



OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:
ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE
UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION 7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig

PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

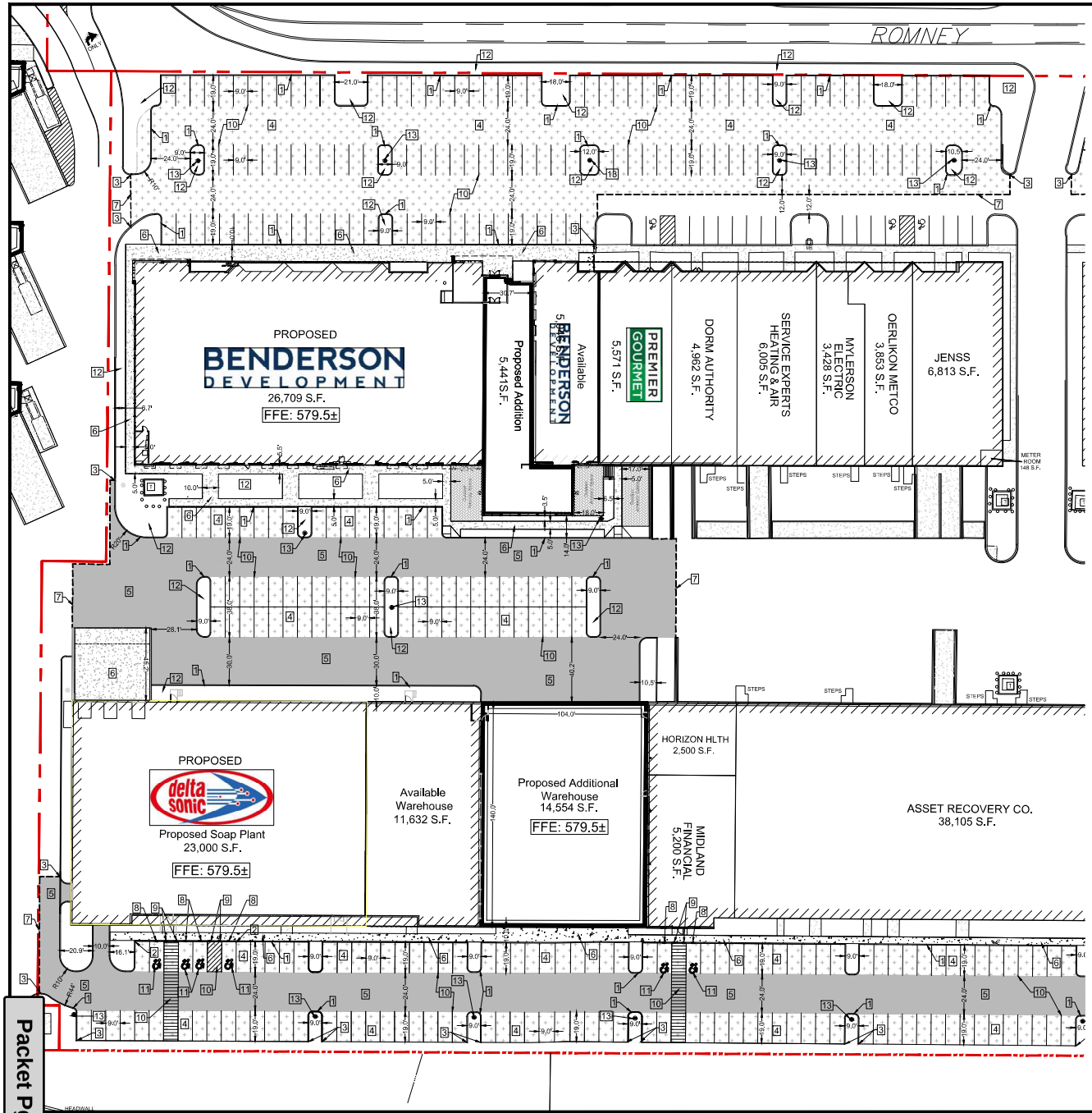
JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Overall Site Plan

SCALE: 1:70
DRAWN BY: DMZ
DRAWING NO.: C4.0
CHECKED BY: MAO
DATE: 11.06.2023

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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. CONTRACTOR SHALL 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 THE SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THEIR WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
10. SIDEWALK DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN.
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES).
    1) L. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS +28 ENCURE (WITHIN 24HRS AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
    2) DARK GREY CONCRETE SIDEWALKS SHALL HAVE CONCRETE SIDEWALKS SHALL HAVE ONE (x1) COAT: CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED AFTER PROCEDURE ABOVE (WAITING THE RELEASE AGENT OFF, APPLY 10 DAYS AFTER THIS (IF WEATHER PERMITS) APPLY ONE (1) COAT OF: CHEMMASTERS - POLYSEAL EC.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE, SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES:

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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CONSULTANT

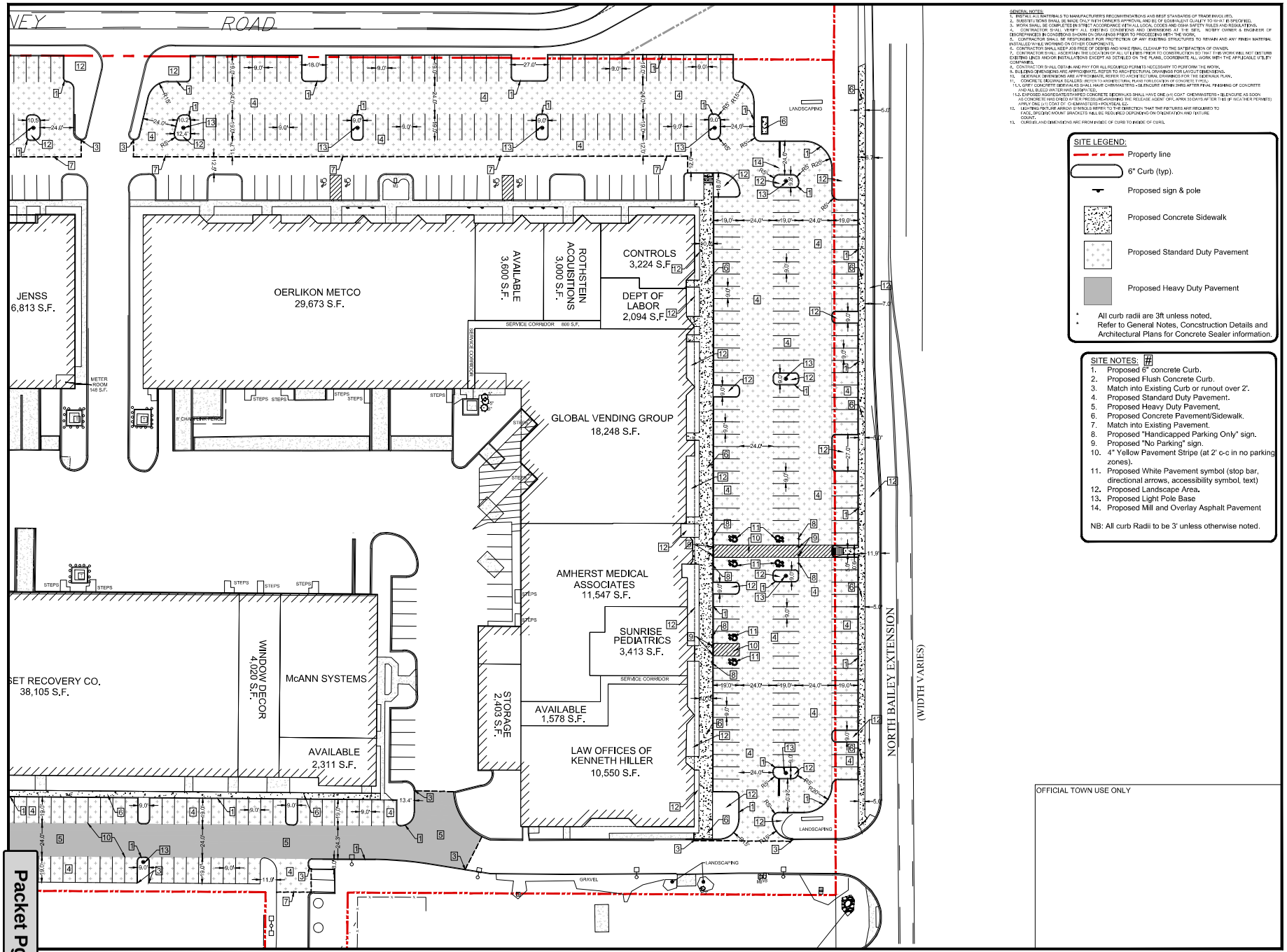
JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Detailed Site Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.
CHECKED BY: MAO
DATE: 08.16.2023
C4.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. CONTRACTOR SHALL 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 THE SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THE WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
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11. CONCRETE SIDEWALK SEALERS: REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.
    11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN (HRS) AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISPARTED.
    11.2. ALL EXPOSED AGGREGATE CONCRETE SIDEWALKS SHALL HAVE ONE (x1) COAT: CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED AFTER PROCEDURE AMONG THE RELEASE AGENT OFF, APPLY 30 DAYS AFTER THIS (IF WEATHER PERMITS) APPLY ONE (1) COAT OF: CHEMMASTERS - POLYSEAL EC.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES:

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
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5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

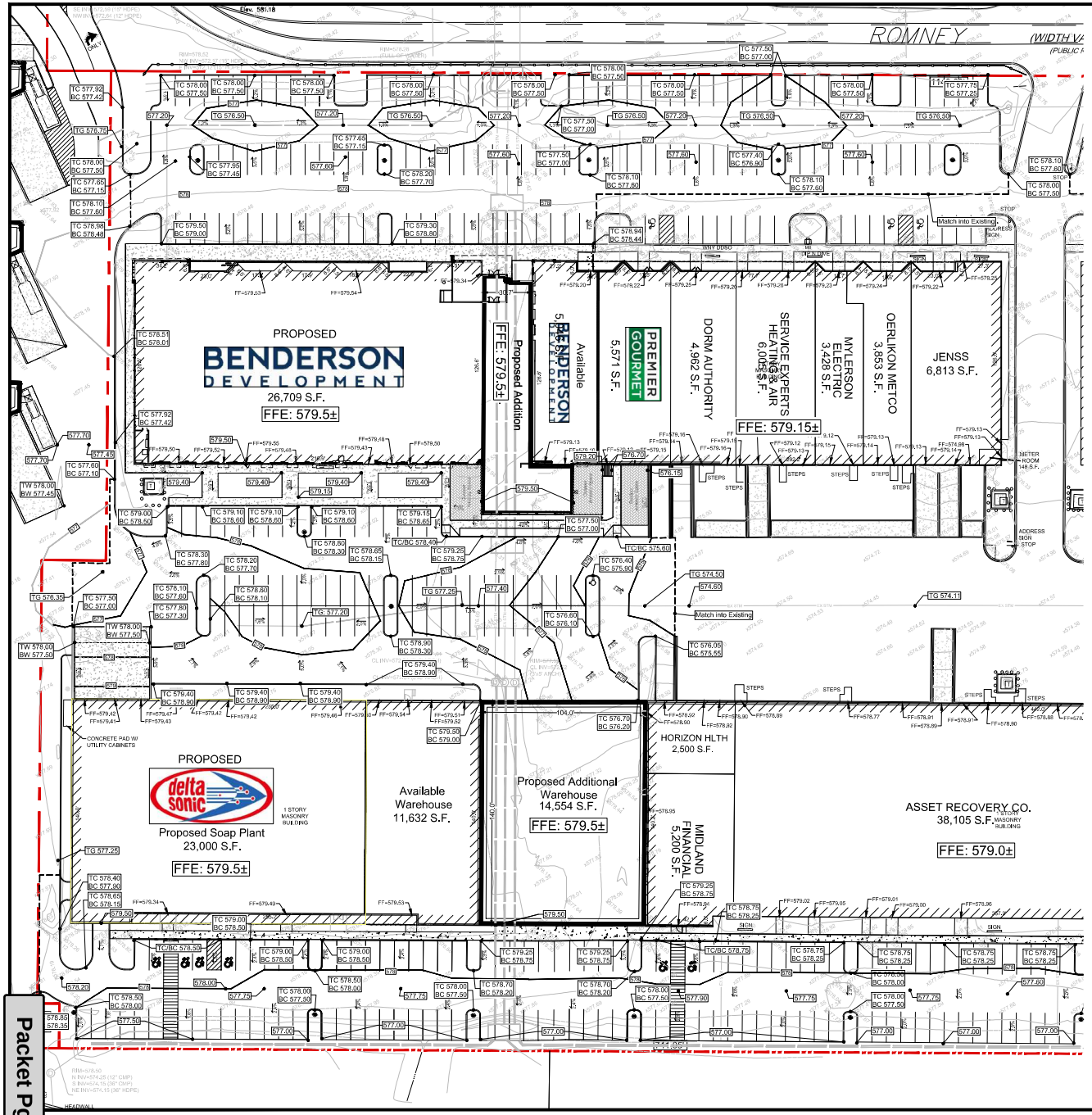
TITLE:
Detailed Site Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.
CHECKED BY: MAO
DATE: 08.16.2023

C4.

Packet Pg. 257

1.a



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. CONTRACTOR SHALL 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.
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7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
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10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN.
11. CONCRETE SIDEWALK SEALERS: REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.
    11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS +28 ENCLOSE WITHIN THREE AFTER FINAL FINISHING OF CONCRETE AND ALL BUGS WATER HAS DISAPPEARED.
    11.2. COLORED CONCRETE SIDEWALKS - COLORED CONCRETE SIDEWALKS SHALL HAVE ONE (x1) COAT CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED AFTER PROCEDURE AMONG THE RELEASE AGENT OFF, APPLY 28 DAYS AFTER FOR THIS (IF WEATHER PERMITS) APPLY ONE (x1) COAT OF: CHEMMASTERS • POLYSEAL EC.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

GRADING LEGEND:

- Property Line
- 6" Curb (typ).
- TG ## — Catch Basin - Top of Grade
- ### — Proposed Contour Line
- ##% — Slope Direction

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

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811 Know what's below. Call before you dig

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570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE: Grading Plan (West)

SCALE: 1:30

DRAWN BY: DMZ

DRAWING NO.: C5.0

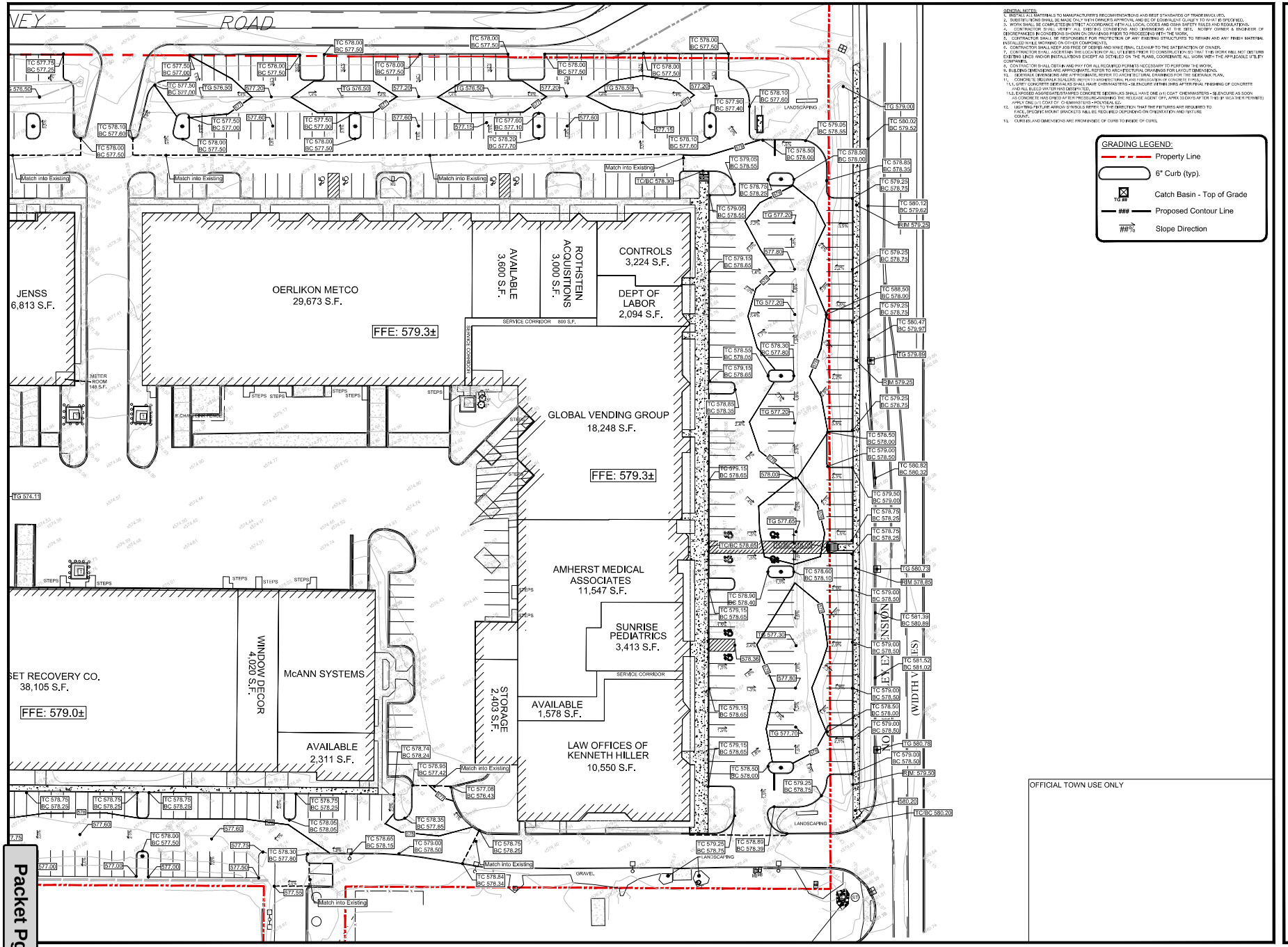
CHECKED BY: MAO

DATE: 11.08.2023

Packet Pg. 258

1.a

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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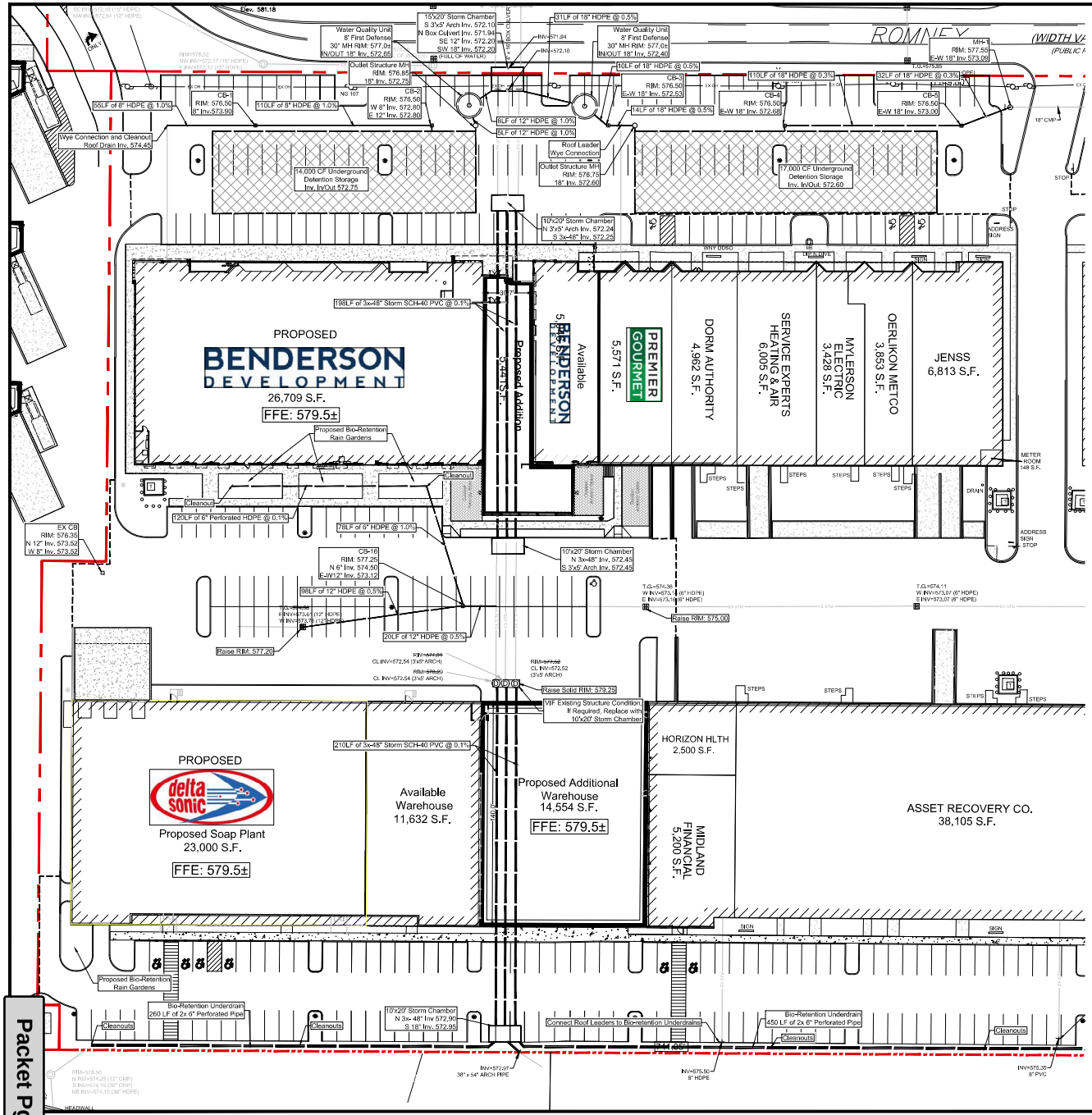
JAMES ALLEN RUMSEY
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PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Grading Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.: C5.0
CHECKED BY: MAO
DATE: 11.08.2023

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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NORTH

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570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE: Drainage Plan (West)

SCALE: 1:30

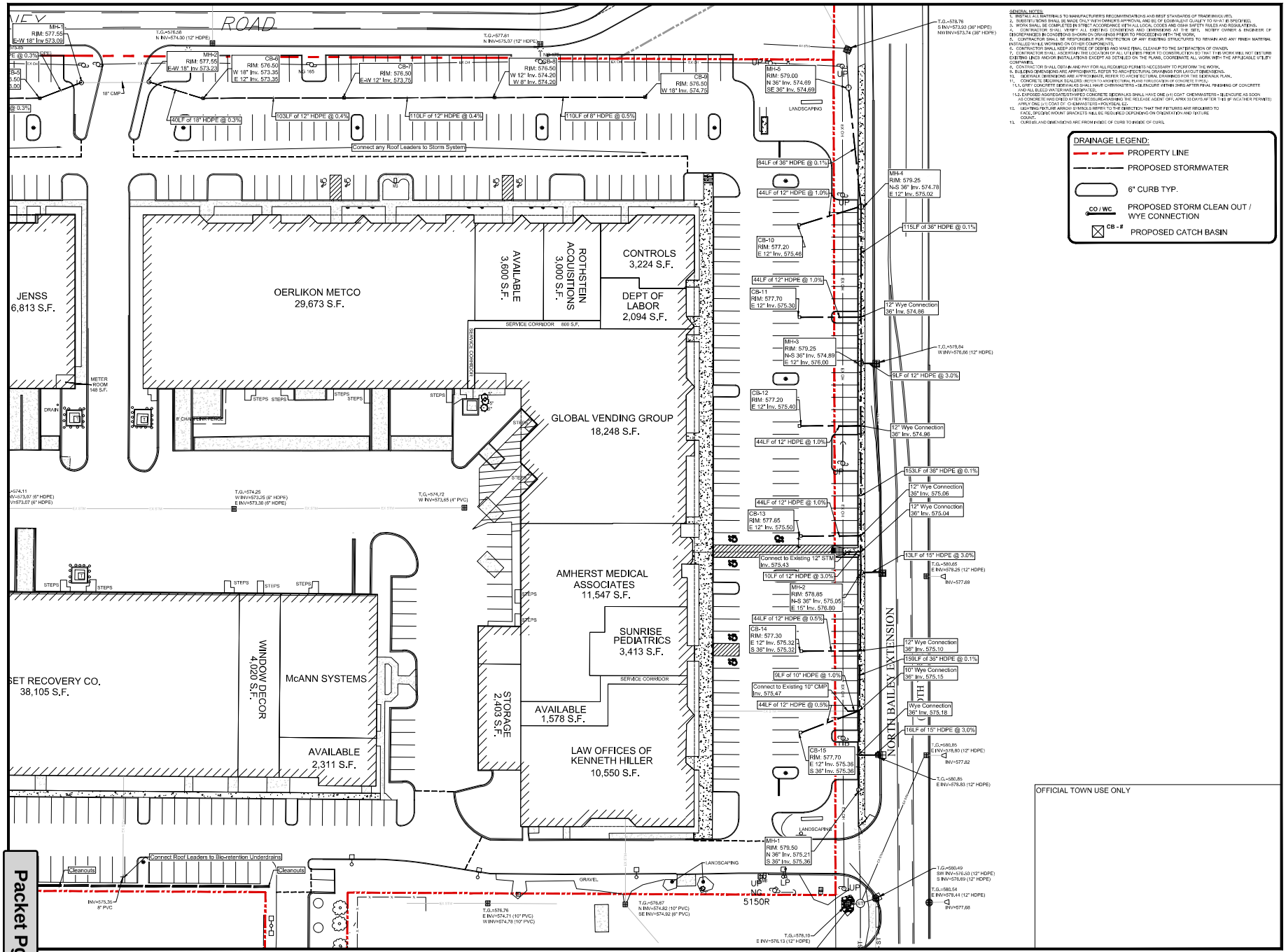
DRAWN BY: DMZ

DRAWING NO.: C5.

CHECKED BY: MAO

DATE: 11.08.2023

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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SEAL

TITLE:
Drainage Plan (East)

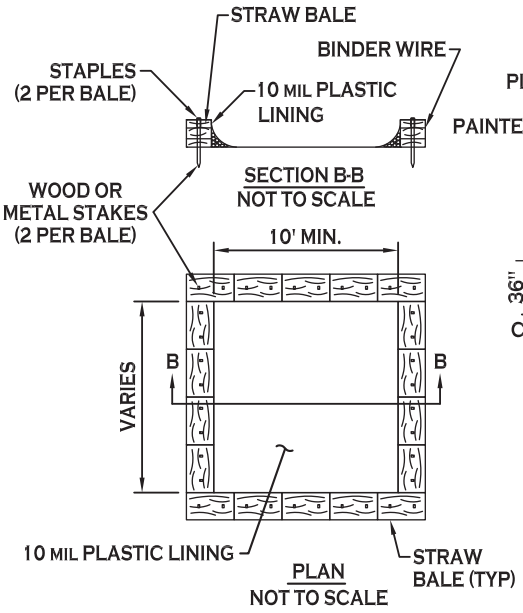
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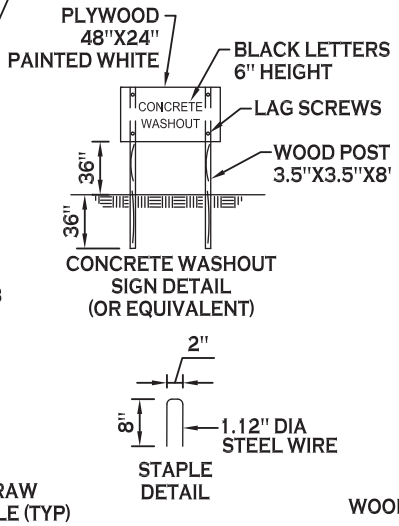
Appendix I

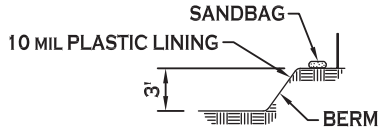
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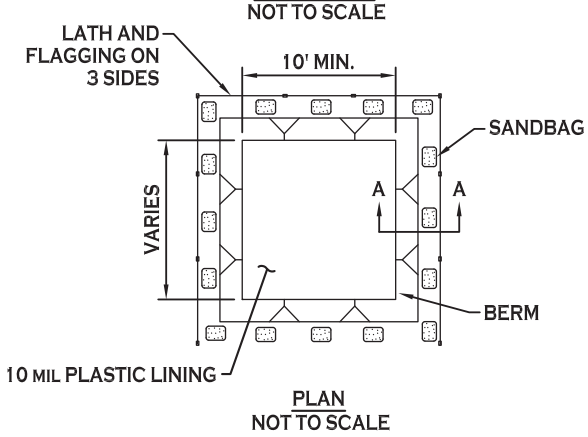
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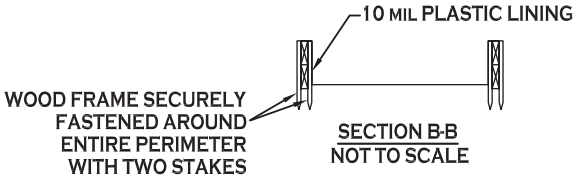
TYPE "ABOVE GRADE" WITH STRAW BALES

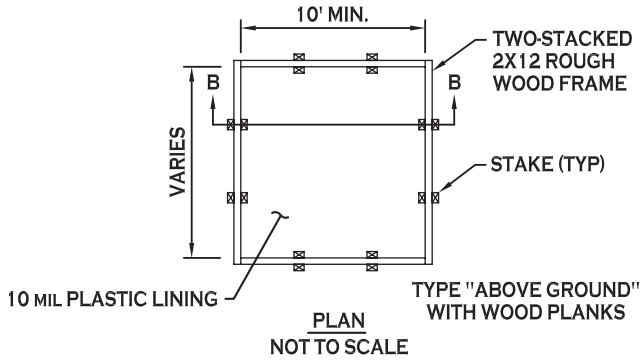






TYPE "BELOW GRADE"



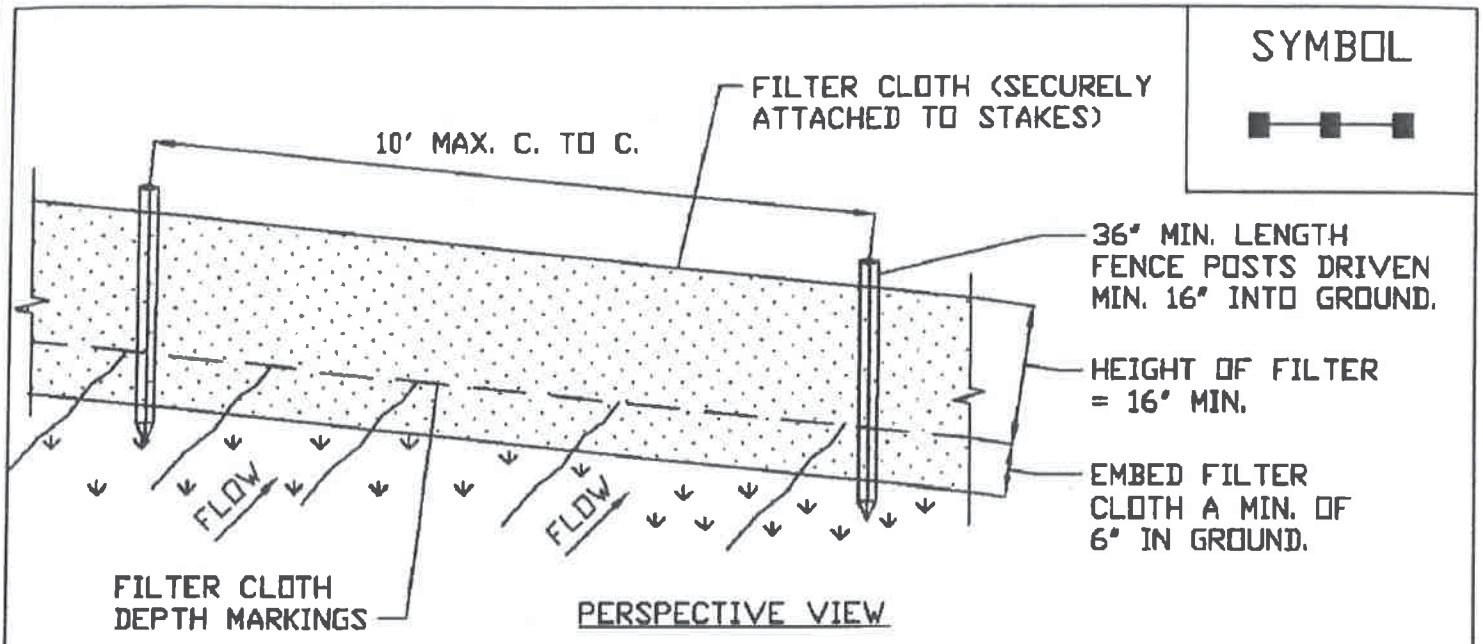


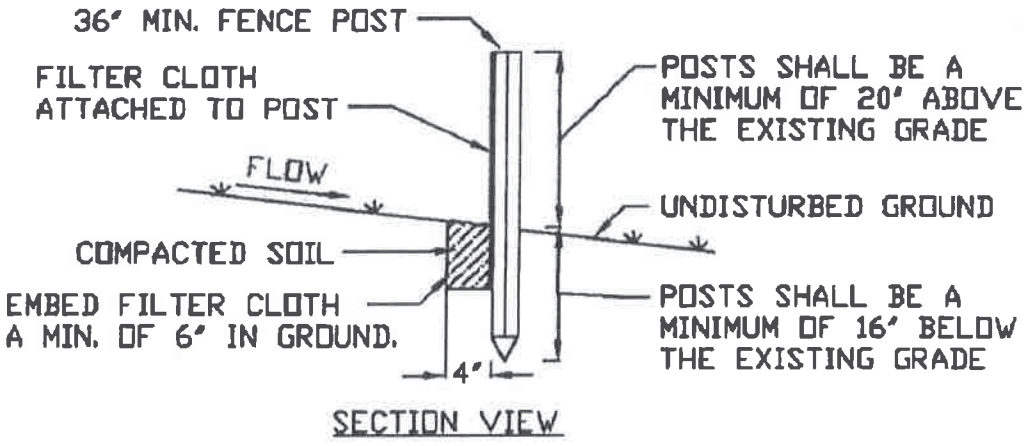
NOTES

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



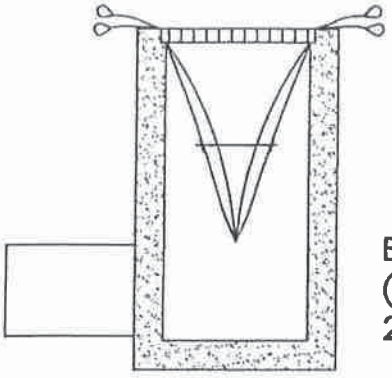


CONSTRUCTION SPECIFICATIONS

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, STABILINKA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

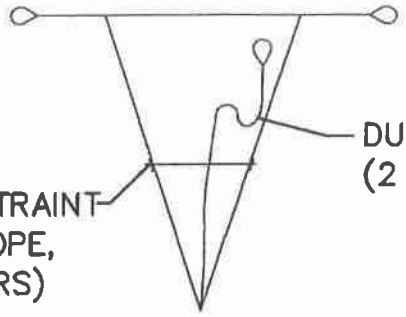
SILT FENCE (WITHOUT WIRE MESH BACKING)

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

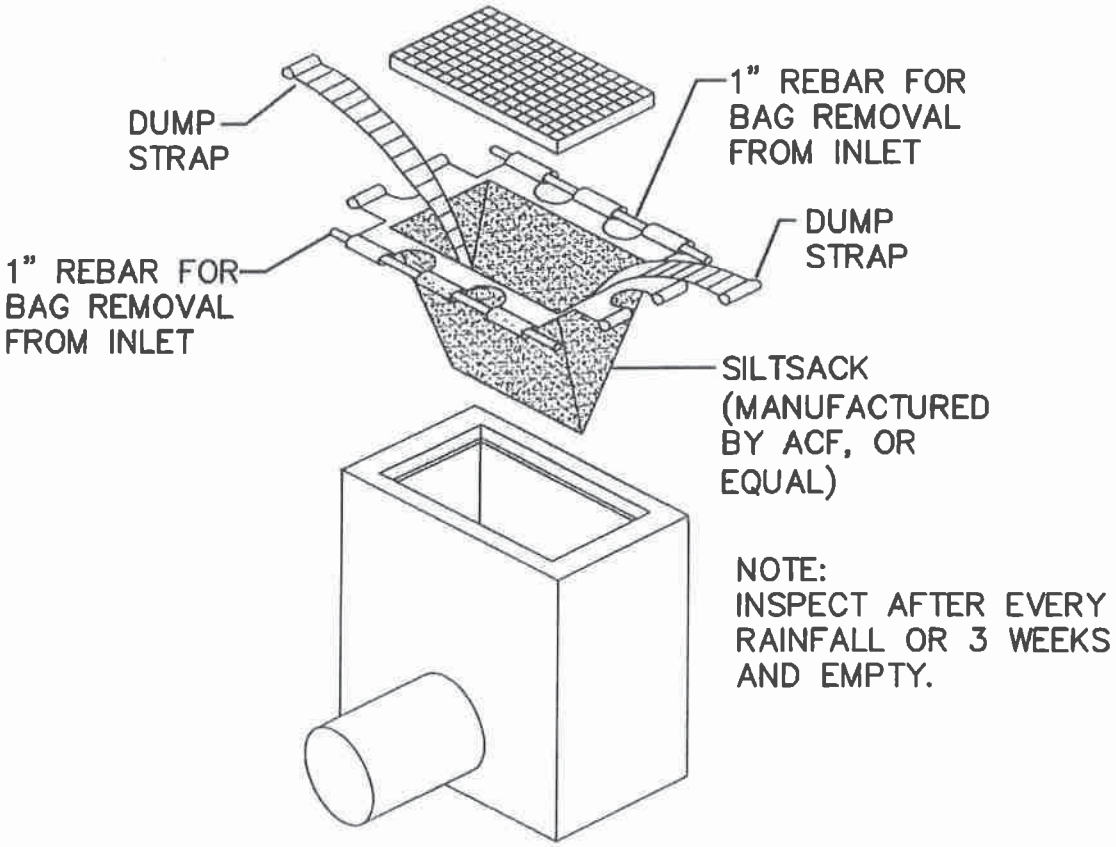


EXPANSION RESTRAINT
(1/4" NYLON ROPE,
2" FLAT WASHERS)

INSTALLATION DETAIL



BAG DETAIL

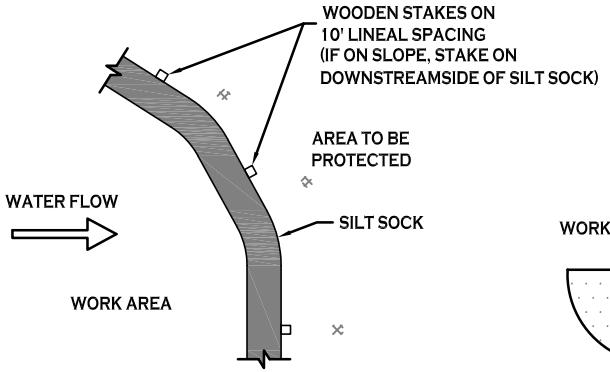


NOTE:
INSPECT AFTER EVERY
RAINFALL OR 3 WEEKS
AND EMPTY.

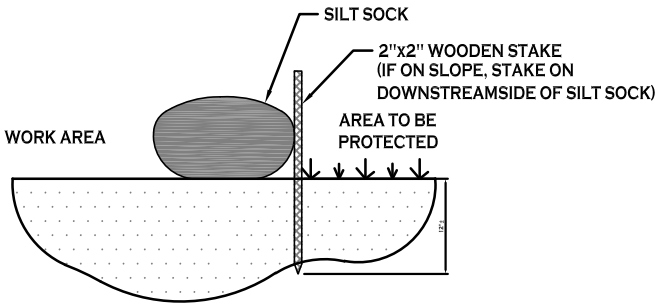
SILT SACK DETAIL

NOT TO SCALE

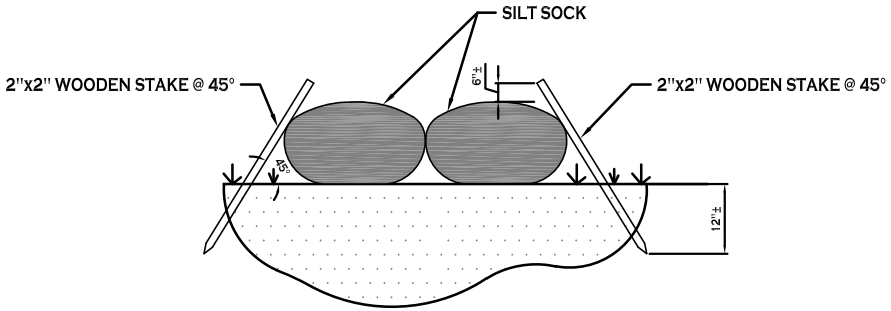
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PLAN VIEW



SECTION VIEW



SECTION VIEW @ JOINT OVERLAP

NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

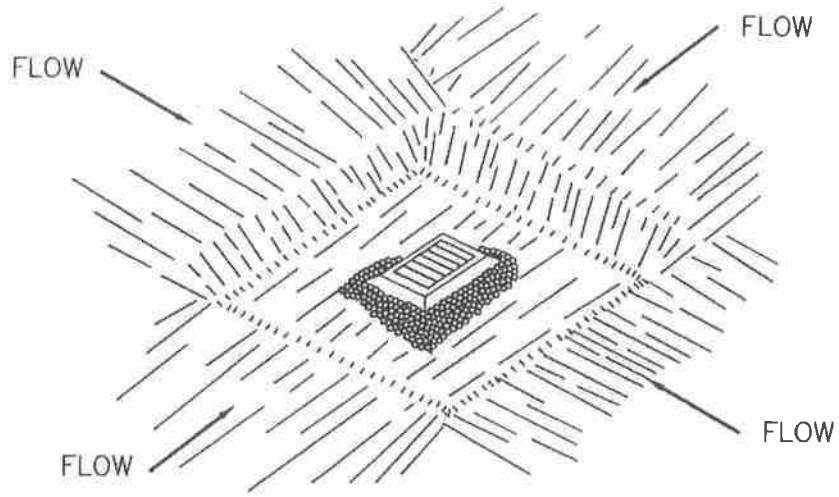
CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED $\frac{1}{2}$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

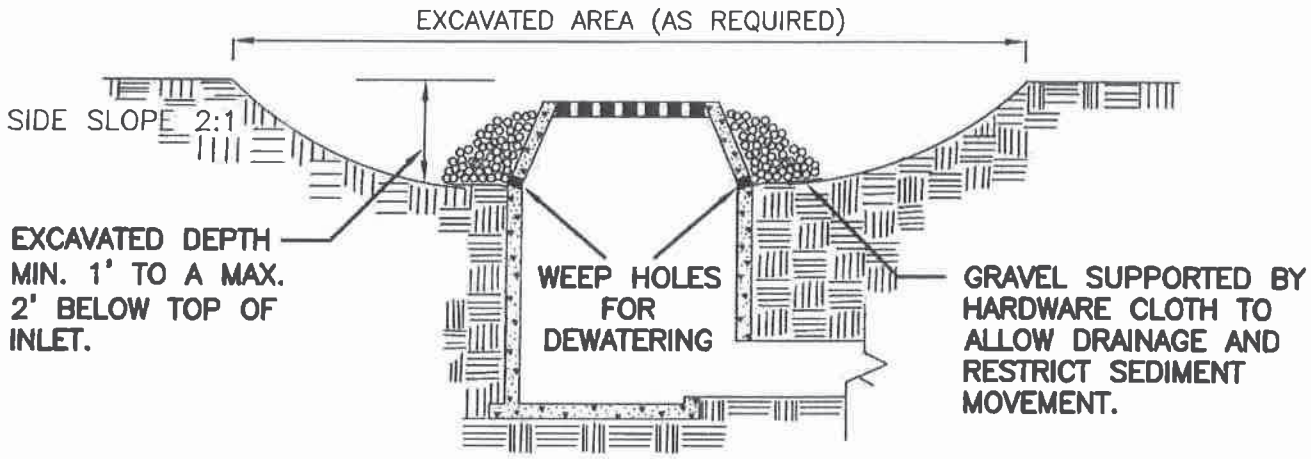
SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

N.T.S.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)





CONSTRUCTION SPECIFICATIONS

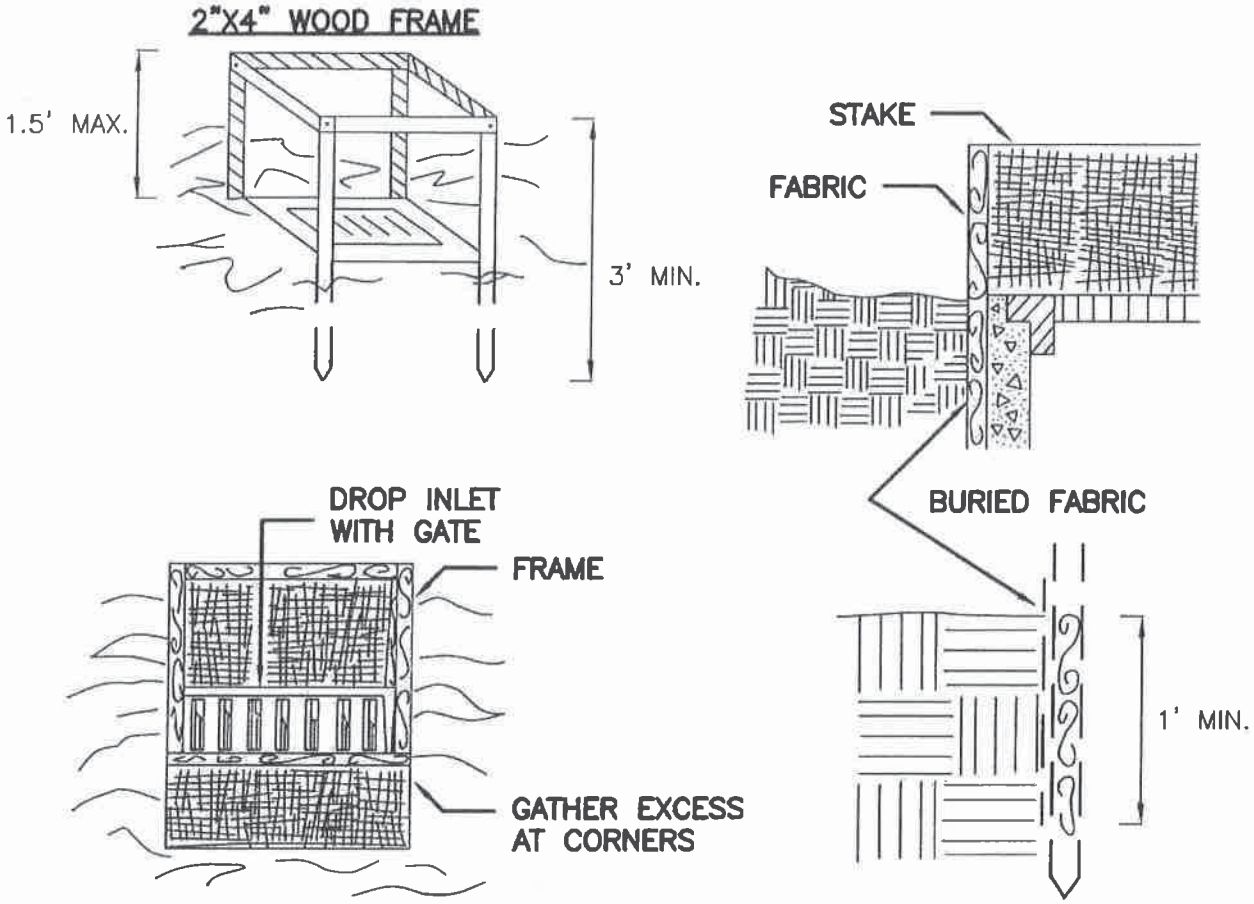
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



CONSTRUCTION SPECIFICATIONS

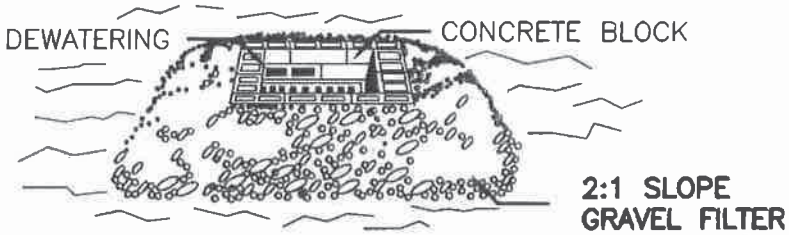
1. FILTER FABRIC SHALL HAVE AN EOS OF 40–85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH 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

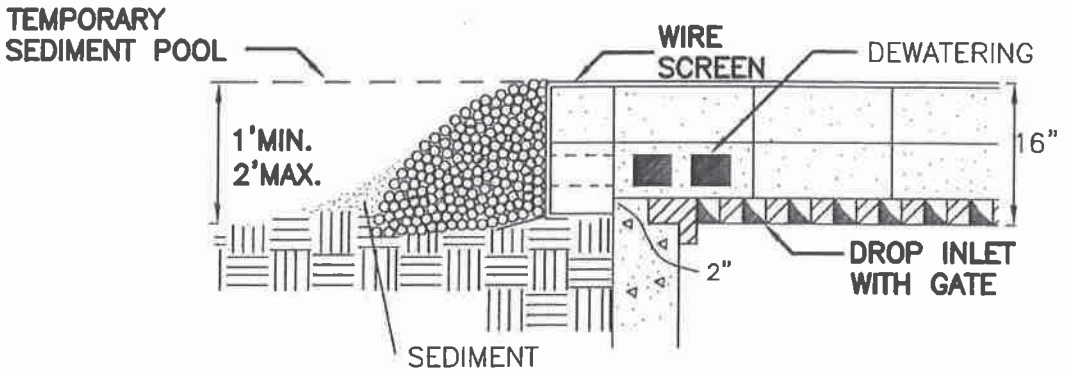
INLET PROTECTION DETAIL 2

NOT TO SCALE

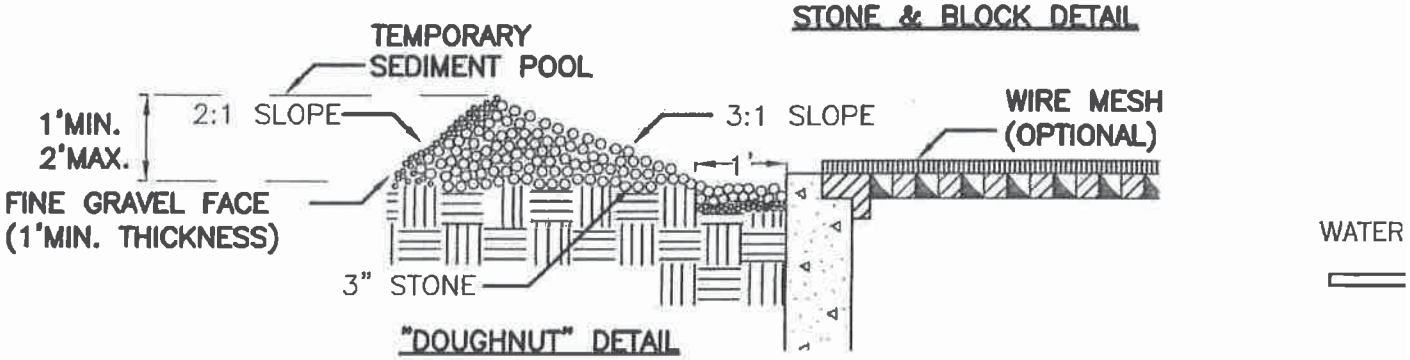
Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



STONE & BLOCK PLAN VIEW



STONE & BLOCK DETAIL



"DOUGHNUT" DETAIL

CONSTRUCTION SPECIFICATIONS

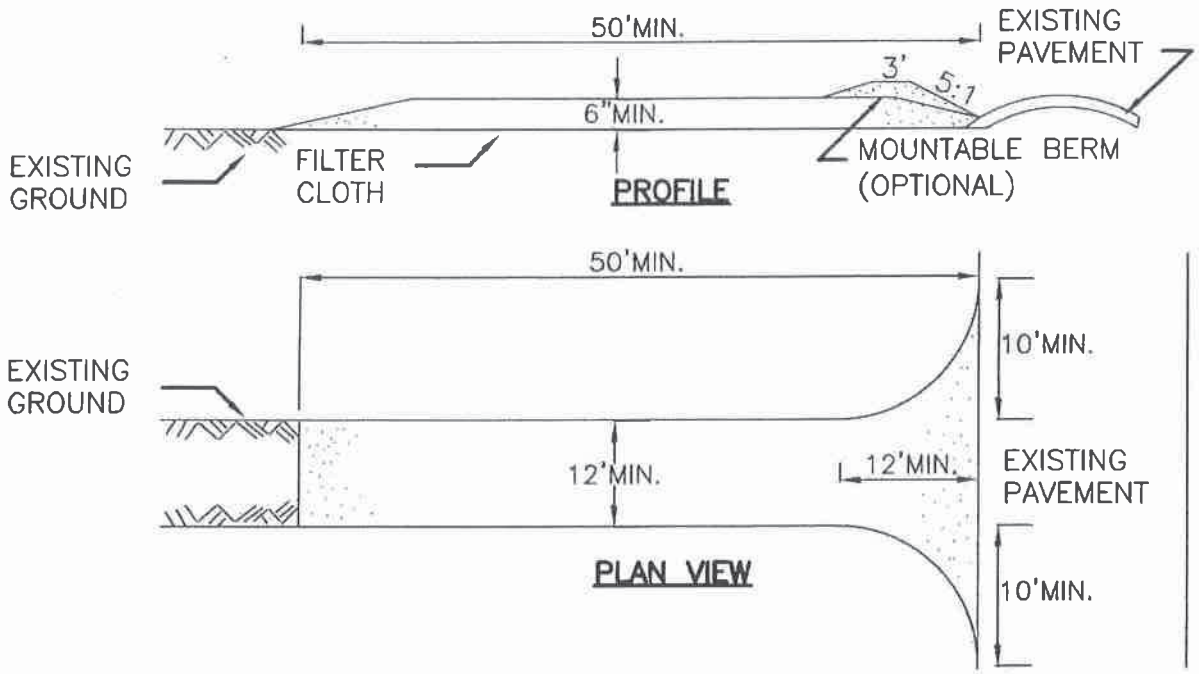
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 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

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



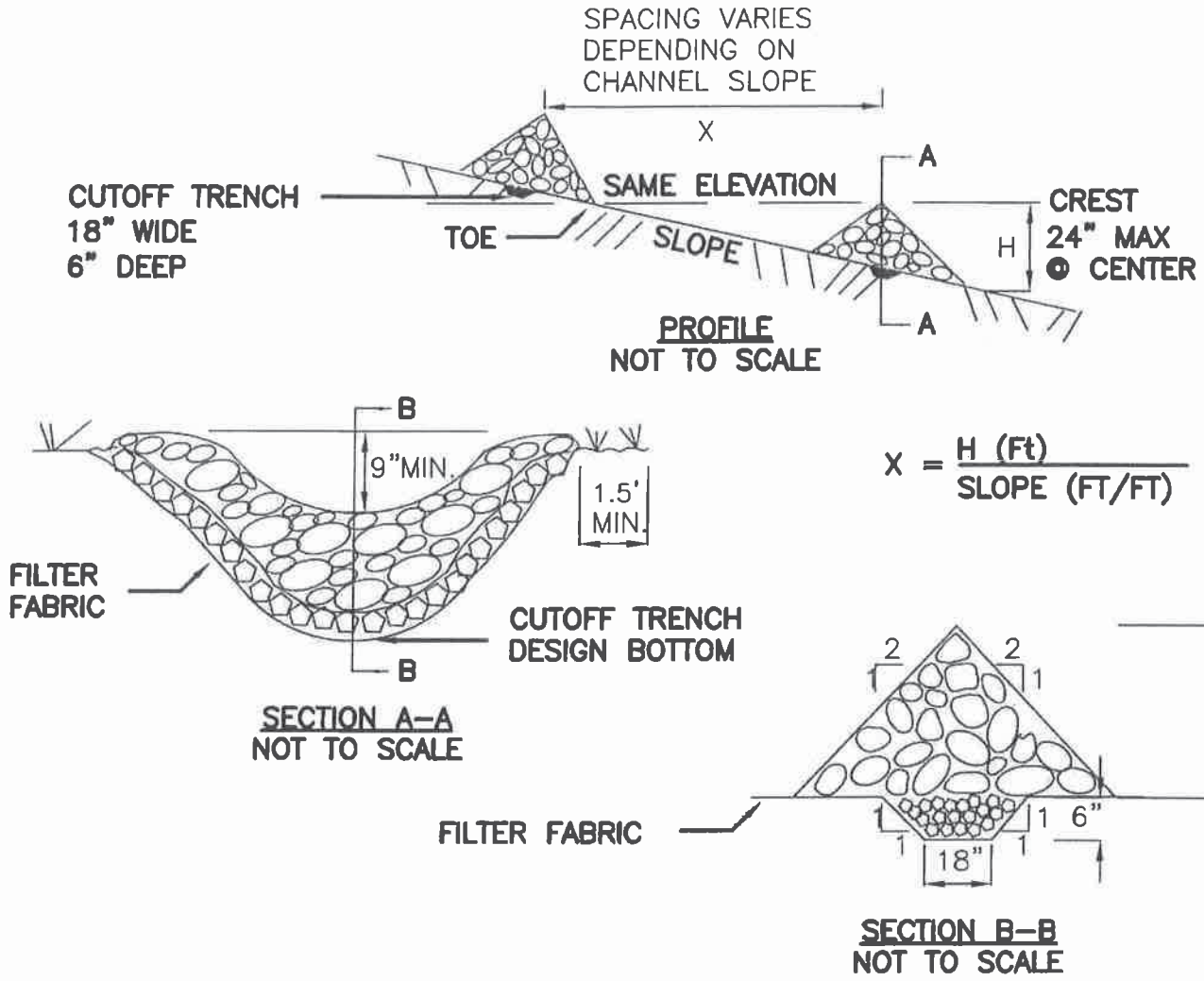
CONSTRUCTION SPECIFICATIONS

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 CON–STRUCTION 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

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

STONE CHECK DAM DETAIL

NOT TO SCALE

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix J

NYSDEC Stormwater Management Inspection Lists

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

STORMWATER CONTROL FACILITY
MAINTENANCE AGREEMENT

Stormwater Management Facility Inspection Procedures

Post Construction Operation & Maintenance:

1. On a quarterly basis, perform the following:
   a. Inspect catch basins, manholes and storm piping for debris and accumulation of sediment.
   b. Remove and properly dispose of any collected debris from structures.
   c. Flush storm sewers with water, if necessary, to remove accumulated sediment.
   d. Check all rip rap stone for erosion and re-stone, if necessary, to prevent further erosion.
   e. Inspect grass and landscaped areas for un-vegetated areas or areas with less than 80% healthy stand of grass and reseed and mulch as necessary. Water areas daily if reseeded between July and August.

2. Maintain all lawn areas by regular mowing, including the grass slopes of the detention basins. Any eroded areas shall be re-graded, seeded and mulched immediately.

3. Inspect detention basins for debris and sediment accumulation two times per year (spring and fall). Debris and sediment accumulation should be removed from the basin every five to six years or with sediment buildup over 6" in depth. Remove and properly dispose of any collected debris and sediment.

4. The bioretention area shall be maintained as required in the NYSDEC Stormwater Management Design Manual and as a component of the property landscaping and shall be maintained on a regular basis. Sediment must be removed when accumulation depth exceeds on inch. Any erosion of the bioretention berm must be repaired as soon as possible to prevent diversion around the bioretention area.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Comments:

Actions to be Taken:

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Comments:

Actions to be Taken:

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

ENGINEER'S REPORT

for

Proposed 5K Retail/Restaurant
7470 Transit Road
Town of Amherst, NY 14221

Prepared for

Benderson Development Company, LLC
570 Delaware Avenue,
City of Buffalo NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

11/2023



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Table of Contents

Written Engineer's Report

Section 1 - Location & Description
Section 2 - Water Service
Section 3 - Sanitary Sewer Service
Section 4 - Storm Sewer Service

Appendices

Appendix A Site Location Map

Appendix B Sanitary Sewer and Water Demand Calculations

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Section 1 - Location & Description

This project is a redevelopment of a 0.76 acre site located on the east side of Transit Road just north of Tennyson Road, in the Town of Amherst, and is currently zoned G-B General Business. Construction will consist of a proposed 5,153 sf mixed use (1,153 SF Restaurant & 4,000 SF Retail) building with an associated parking area, utility, lighting, and landscaping improvements. Currently at the proposed site location there is an ex. restaurant building, with associated utilities & an ex. parking lot. The ex. building, associated utilities, and ex. parking lot areas are all to be removed within the scope of work for this site. The area to be disturbed for this project is approximately 0.70 acres total when construction is completed.

Section 2 - Water Service

Water service for the proposed building will be tapped off an ex. 6" ECWA water main, located along the north side of Tennyson Road. The proposed domestic service will be a 2" type 'k' copper, and it will run north approx. 15 LF into the proposed building. Inside the proposed building mechanical room the 2" domestic service will have a meter (by ECWA) and RPZ installed. Heat & lighting will be provided within the building to prevent freezing & for testing. Drainage due to testing or failure of the RPZ will be to the outside ground via a through-wall drain to the outside. Water inside the building will be used for typical domestic uses.

Domestic Summary:	
Peak Operating Demand:	3.03 gpm
Water Main:	6" on Tennyson Road
Static Pressure:	47 psi (ECWA)
Friction Loss:	0.0 psi
Loss through meter/RPZ:	13.0 psi
Elevation Loss:	0.0 psi
Pressure after RPZ:	34.0 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

The proposed 6" sanitary sewer service will connect to the ex. 18" V.T.P. Town of Amherst sanitary sewer located within the middle of Tennyson Road. The proposed service will consist of approximately 51 LF of a 6" SDR-35 PVC sanitary sewer lateral at a min. slope of 1.0%.

Design Parameters

Retail:	0.1 gpd x 4,000 sf =	400 gpd
Restaurant:	35 gpd x 20 seats =	700 gpd

Total site sanitary demand:		= 1,100 gpd	
Peak sanitary demand:	1,100 gpd * 4.41	= 4,852 gpd	*use peaking factor of 4.41

The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC. Refer to Attachment A for peaking factor calculation.

Section 4 - Storm Sewer Service

The ex. site currently sheet drains in multiple directions within the parking lot areas to catch basin structures that collect and convey the stormwater to an ex. underground leech field storm system. Ex. building roof leaders are connected into this stormwater system. This ex. underground stormwater system, all associated catch basins, storm water piping, & ex. building roof leaders are all to be removed as part of the proposed site work.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

The proposed onsite storm sewer system for this development project consists of smooth interior and perforated HDPE pipes connected by a series of catch basins. Proposed building roof leaders will be connected into the perforated HDPE piping installed around the perimeter of the proposed building. The stormwater system will ultimately outlet into the ex. Town of Amherst stormwater catch basin located along the south side of Tennyson Road.

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

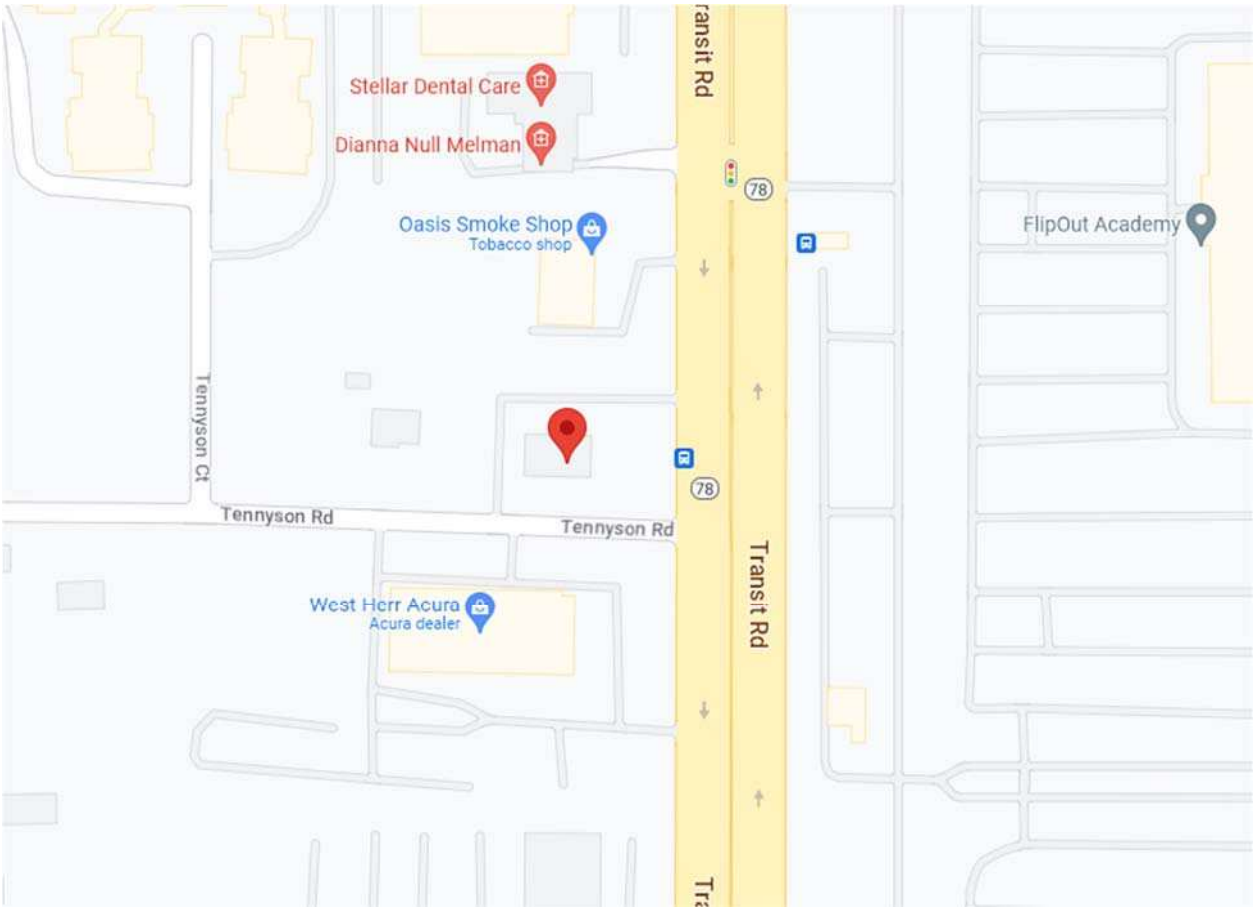
Appendix A

Site Location Map

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix A

Site Location Map



Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix B

Sanitary Sewer and Water Demand Calculations

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.311 Date: 11/6/2023
Project Name: Proposed 5K Bldg Rev. _/_/_
Project Address: 7470 Transit Road, Amherst NY
Subject: Sanitary Sewage & Water Demand Calcs
Sheet: 1 of 1

1.a

Sanitary Sewage Demand Calculations:

Average Daily Flow
Proposed 5K Building:

Retail =	0.1	gpd	x	4,000	sf	=	400	gpd		*Retail = 0.1 gpd/SF
Restaurant =	35	gpd	x	20	seats	=	700	gpd		*Restaurant = 35 gpd/seat

Total Site Sanitary Demand: = 1,100 gpd

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 1,100 gpd / 100 gpcd = 11 per capita

Population (P) = 11 people

Peaking Factor : (18 +ÖP) / (4 + ÖP) where P is in thousands

Peaking Factor = 4.41

Peak Sanitary Demand = 1,100 x 4.41 = 4,852 gpd

Water Demand Calculations (domestic):

Proposed 5K Building:

1,100 gpd x 1.1 = 1,210 gpd *use 110% of sewage demand

*use 1.8 peaking factor and assume a 12 hour day

1,210 gpd x 1day/12hr x 1hr/60min = 1.68 gpm

1.68 gpm x 1.8 = 3.03 gpm Q_{peak}

Headlosses:

Q_{peak} = 3.03 gpm
Pipe = 2 inch Type 'K' Copper C = 130
Length = 15 LF

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(15)(3.03)^{1.85}}{(130)^{1.85}\ (2)^{4.866}} = 0.01 \text{ ft} = 0.00 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss through meter = 1 psi
Loss through RPZ = 12 psi
Total Losses = 13.00 psi
Static Pressure = 47 psi (Per ECWA flow test 02/05/2021)
Residual Pressure Following RPZ = 47.0 - 13.0 = 34.00 psi

Attachment: SP-1988-11P_application_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

PROPOSED SITE MODIFICATIONS

Amherst Development Park
6000 - 6040 N.Bailey Ave, Amherst, NY
BDC Property # 1723
SITE DEVELOPMENT DRAWINGS

INDEX OF DRAWINGS

DWG. #	DRAWING NAME	REVISION	DATE
C1.0	COVER SHEET	1	11.16.2023
C2.0	EXISTING SURVEY		
C3.00	DEMOLITION & EROSION CONTROL PLAN WEST	1	11.16.2023
C3.01	DEMOLITION & EROSION CONTROL PLAN EAST		
C3.10	DEMOLITION & EROSION CONTROL PLAN DETAILS		
C4.0	OVERALL SITE PLAN		
C4.10	DETAILED SITE PLAN WEST	1	11.16.2023
C4.11	DETAILED SITE PLAN EAST		
C4.20	CONSTRUCTION DETAILS		
C5.00	GRADING PLAN WEST	1	11.16.2023
C5.01	GRADING PLAN EAST		
C5.10	DRAINAGE PLAN WEST	1	11.16.2023
C5.11	DRAINAGE PLAN EAST		
C5.20	DRAINAGE DETAILS		
C6.00	UTILITY PLAN WEST	1	11.16.2023
C6.01	UTILITY PLAN EAST		
C6.10	UTILITY DETAILS		
C7.0	LANDSCAPING PLAN		
C8.0	LIGHTING PLAN		

OWNER/DEVELOPER:

NAME: BENDERSON DEVELOPMENT COMPANY, LLC
ADDRESS: 570 DELAWARE AVENUE, BUFFALO, NY 14202
CONTACT: DAVID ZUPPELLI
PHONE: 716 - 878 - 9683

BENDERSON DEVELOPMENT COMPANY, LLC
570 Delaware Ave.
Buffalo, New York 14202

SURVEYOR

NAME: KHEOPS ARCHITECTURE, ENGINEERING & SURVEY, DCP
ADDRESS: 300 PEARL STREET, BUFFALO, NY 14202
CONTACT: -
PHONE: 716-849-8739

UTILITIES:

NATURAL GAS
NAME/TITLE: WILLIAM SCHNEIDER
COMPANY/DEPT: NATURAL FUEL GAS
ADDRESS: -
PHONE: 716 - 696 - 6460

TELEPHONE COMPANY
NAME/TITLE: JOHN HECKMAN
COMPANY/DEPT: VERIZON
ADDRESS: -
PHONE: 716 - 840 - 8603

ELECTRIC
NAME/TITLE: -
COMPANY/DEPT: NATIONAL GRID
ADDRESS: -
PHONE: -

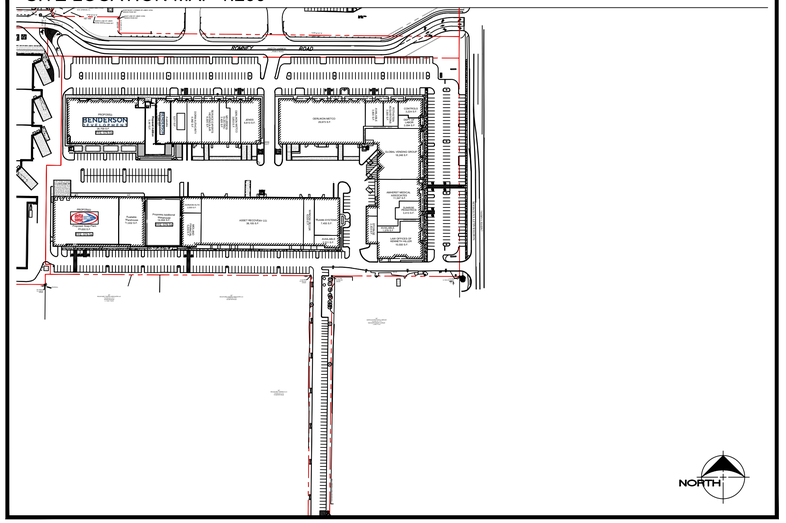
DIG SAFELY NEW YORK
PHONE: 1 - 800 - 962 - 7962 OR (811)

AGENCIES:

ENGINEERING DEPARTMENT
NAME/TITLE: JEFF BURROUGHS
COMPANY/DEPT: TOWN OF AMHERST, NY - ENGINEERING DPT
ADDRESS: 1100 NORTH FOREST RD, WILLIAMSVILLE, NY
PHONE: 716 - 631 - 7154 EX 7418

BUILDING & PLUMBING DEPARTMENT
NAME/TITLE: -
COMPANY/DEPT: TOWN OF AMHERST, NY - BUILDING DPT
ADDRESS: 5583 MAIN STREET, WILLIAMSVILLE, NY 14221
PHONE: 716 - 631 - 7080

SITE LOCATION MAP 1:200



REGIONAL LOCATION MAP NTS



OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	11.16.2023	DZ	SWPPP Update

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

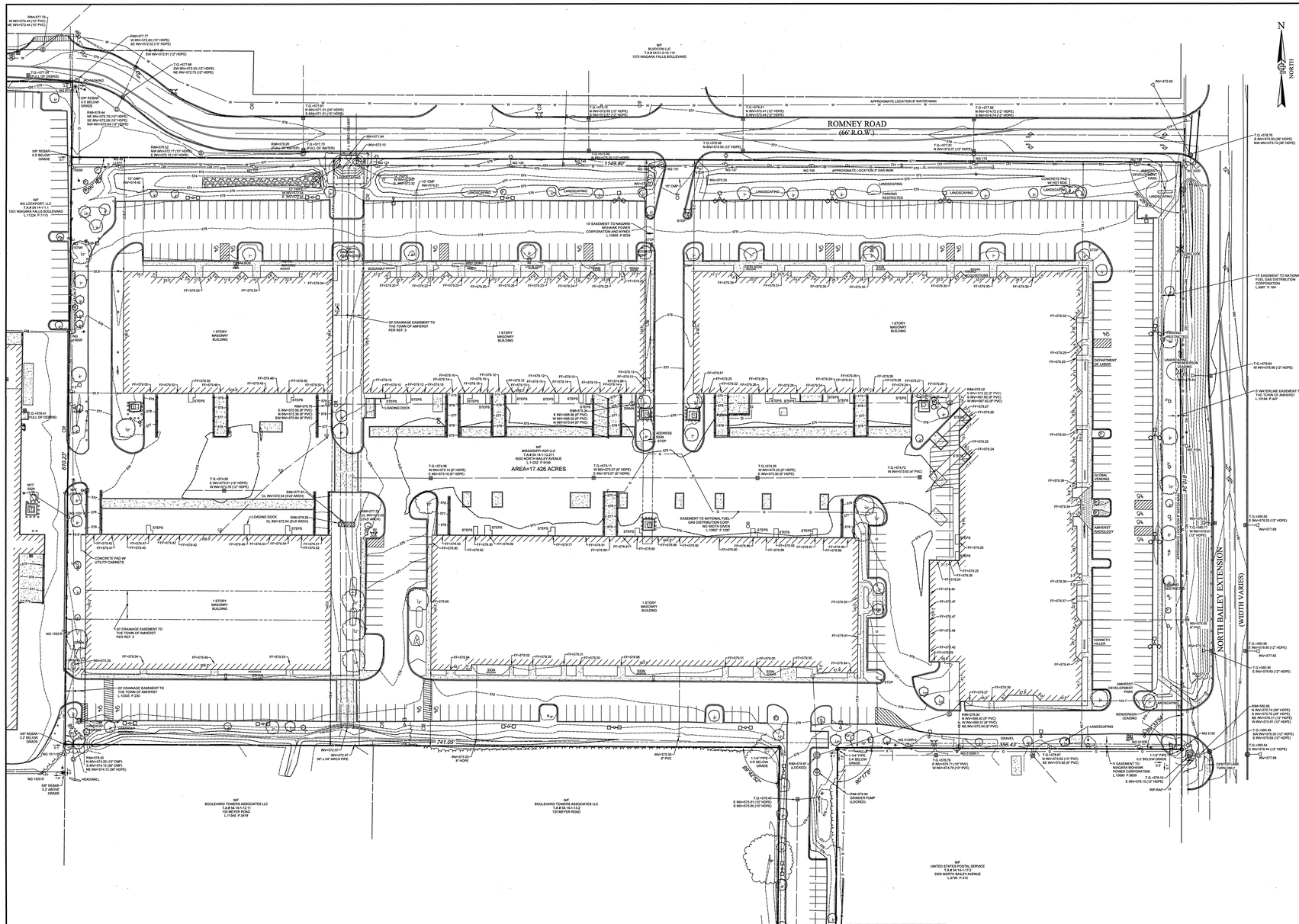
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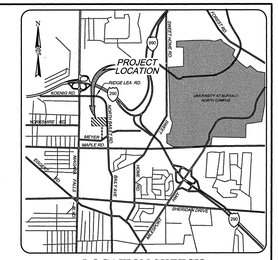


TITLE:
COVER SHEET

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.
C1.0

Attachment: SP-1988-11P drawings 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)





LOCATION SKETCH

NOT TO SCALE

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
- EXISTING SPOT ELEVATION @ X
- CONCRETE PAD/ CONCRETE SIDEWALK

SYMBOL LEGEND

DRAINAGE MANHOLE		ELECTRIC MANHOLE	
INLET DRAINAGE MANHOLE		ELECTRIC METER	
CATCH BASIN	T	TELEPHONE MANHOLE	
END SECTION		TELEPHONE PEDESTAL	
END OF PIPE	PH	PHONE BOOTH	
MANHOLE		PEDESTRIAN POLE	
SANITARY MANHOLE	TRAF. CONT. CAB.	TRAFFIC CONTROL CABINET	
CLEAN OUT		LAMP POST	
GAS VALVE		LIGHT POLE	
GAS SERVICE		UTILITY POLE WITH LIGHT	
GAS METER	FLAG POLE	FLAG POLE	
WATER VALVE	MB	MAILBOX	
WATER SERVICE		BOLLARD	
HYDRANT		POST	
WATER METER		SIGN	
CABLE TV PEDESTAL	CTV	SIGN	
SIGNAL POLE		UTILITY POLE	
TURNING ARROW		GUY WIRE	
HANDICAP		PULL BOX	
STOP BAR	STOP	ELECTRIC PULL BOX	
TREE DECIDUOUS		TELEPHONE PULL BOX	
TREE CONIFEROUS		TRAFFIC PULL BOX	
BUSH		TRANSFORMER	

EASEMENT NOTES
T.A.# 54.14-1-12.211

1. EASEMENT MADE BY BOULEVARD POWER CO. TO NEW YORK TELEPHONE COMPANY RECORDED OCTOBER 30, 1968 IN LIBER 7527 OF DEEDS, PAGE 543. (NOT PLOTTABLE)
2. EASEMENT MADE BY MARIET DEVELOPMENT CORPORATION OF NEW YORK TO NIAGARA MOHAWK POWER CORPORATION RECORDED SEPTEMBER 11, 1967 IN LIBER 7392 OF DEEDS, PAGE 474. (DOES NOT AFFECT PREMISES)
3. RIGHT OF WAY MADE BY MARIET DEVELOPMENT CORPORATION OF NEW YORK TO IROQUOIS GAS CORPORATION RECORDED SEPTEMBER 29, 1967 IN LIBER 7399 OF DEEDS, PAGE 98. (NOT PLOTTABLE)
4. EASEMENT FROM NIAGARA BOULEVARD TOWERS, INC TO NIAGARA MOHAWK POWER CORPORATION AND NEW YORK TELEPHONE CO. RECORDED ON AUGUST 29, 1968 IN LIBER 7506 OF DEEDS, PAGE 503. (NOT PLOTTABLE)
5. EASEMENT RESERVED BY BOULEVARD TOWERS CO. CONTAINED IN DEED RECORDED ON JULY 28, 1988 AT LIBER 9895 OF DEEDS, PAGE 528.

SURVEY NOTES

1. TOPOGRAPHY SHOWN FROM A FIELD SURVEY BY COSTICH ENGINEERING ON 5/4/2021 HORIZONTAL AND VERTICAL DATA OBTAINED THROUGH NYSDOT CORS NETWORK REFERENCED TO THE FOLLOWING MONUMENT

HAMBURG CORS STATION
-LATITUDE: 42-43-37.82029 (N) } NAD 83 (CORS)
-LONGITUDE: 078-54-54.28808 (W)
-ELLIP HEIGHT: 212.508 METERS } NAVD 88 (CORS)

REFERENCES

1. THE DEEDS AS SHOWN ON FILE AT THE ERIE COUNTY CLERKS OFFICE.
2. ALTA/NSPS LAND TITLE SURVEY PREPARED FOR DDR - PROJECT SABRE PROJECT, PREPARED BY BOCK & CLARK, HAVING PROJECT NO. 2015043N-003, DATED 1/26/2016.
3. ALTA/NSPS LAND TITLE SURVEY 6000-6040 NORTH BAILEY AVENUE, PREPARED BY TVGA CONSULTANTS, HAVING JOB NO. 2006.0095.00, DATED 6/12/2006.

UTILITY INFORMATION

UTILITY INFORMATION PER UFPO DESIGN TICKET # 04261-000-825-00 DATED APRIL 29, 2021

1. CHARTER COMMUNICATIONS BUFFALO	317-575-7800 X2	NO CONFLICT
2. ERIE COUNTY WATER AUTHORITY	716-655-8207	UTILITIES PLOTTED
3. LIGHTOWER FIBER TECHNOLOGIES	888-632-0931 X2	NO RESPONSE
4. NATIONAL FUEL GAS - TONAWANDA	716-857-7431	UTILITIES PLOTTED
5. NATIONAL GRID - WEST - ELECTRIC	315-428-6319	NO CONFLICT
6. SUNOCO PIPELINE LP	713-989-7079	NO RESPONSE
7. TOWN OF AMHERST	716-631-7413	UTILITIES PLOTTED
8. VERIZON / BUFFALO	315-937-2515	UTILITIES PLOTTED

SITE DATA

T.A.# 54.14-1-12.211

1. EXISTING ZONING: RD - RESEARCH AND DEVELOPMENT DISTRICT
2. BULK REQUIREMENTS:

	REQUIRED
MIN. LOT AREA (SF)	1 ACRE
MAX LOT COVERAGE	NONE REQUIRED
MIN. LOT WIDTH (FT)	35
MAX. BUILDING HEIGHT (FT)	65 FEET
MIN. FRONT YARD SETBACK (FT)	20 FEET FOR BUILDINGS UP TO 35 FEET IN HEIGHT; 30 FEET FOR BUILDINGS GREATER THAN 35 FEET IN HEIGHT
MIN. SIDE YARD SETBACK (FT)	0 TO 10 FEET FOR BUILDINGS UP TO 30 FEET IN HEIGHT; 25 FEET FOR BUILDINGS GREATER THAN 30 FEET IN HEIGHT; PLUS 3 FEET FOR EACH 1 FOOT OF HEIGHT OVER 35 FEET
MIN. REAR YARD SETBACK (FT)	15 FEET FOR BUILDINGS UP TO 30 FEET IN HEIGHT; 25 FEET FOR BUILDINGS GREATER THAN 30 FEET IN HEIGHT; PLUS 3 FEET FOR EACH 1 FOOT OF HEIGHT OVER 35 FEET

CERTIFICATION

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

THIS MAP WAS PREPARED FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED ON MAY 12, 2021 AND FROM THE REFERENCE(S) LISTED HEREON. NO SEARCH OF RECORDS, OTHER THAN THOSE REFERENCED, WAS MADE FOR EASEMENTS OR ENCUMBRANCES AFFECTING THIS PARCEL.

By: Daniel T. Hirbik, N.Y.S. L.S., No. 050449 Date: 6-7-2021

Dig Safely. New York. Call 811 before you dig

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

40 0 20 40 80 100

(IN FEET)
1 inch = 40 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 WHERE APPROPRIATE) TO ALTER AN ITEM ON THIS DOCUMENT. IN ANY WAY 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. HIRBIK — L.S. NO. 050449 — LICENSED LAND SURVEYOR

PROJECT ENGINEER	M.O.R.
DRAWN BY	G.M.S.
BOUNDARY	G.M.S.
TOPOGRAPHIC	G.M.S.
DATE	6/1/2021
SCALE	1"=40'

COSTICH ENGINEERING
217 LAKE AVENUE
ROCHESTER, NY 14608
(585) 458-3020

- CIVIL ENGINEERING
- LAND SURVEYING
- LANDSCAPE ARCHITECTURE

TITLE OF PROJECT: 1723/5256 AMHERST DEVELOPMENT

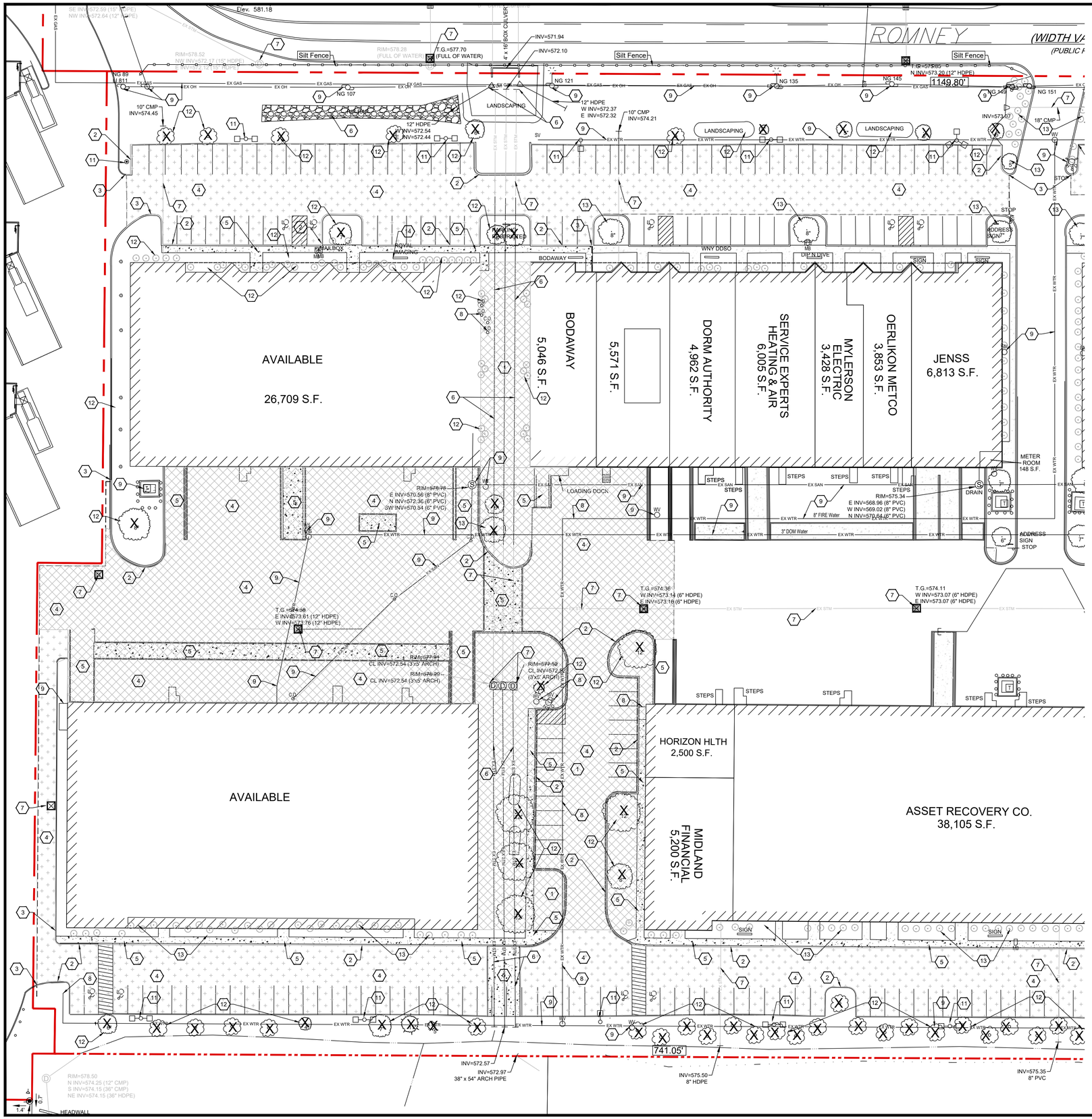
TITLE OF DRAWING: EXISTING FEATURES

LOCATION OF PROJECT: TAX PARCEL NO. 54.14-1-12.211
TOWN LOT 81, TOWNSHIP 13, RANGE 7,
HOLLAND LAND COMPANY'S SURVEY;
TOWN OF AMHERST, COUNTY OF ERIE, STATE OF NEW YORK

CLIENT: BENDERSON DEVELOPMENT CO., INC.
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202

DWG # 8084
VA110
SHEET 1 OF 1

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.)
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13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

DEMOLITION LEGEND:

- Property Line
- EX ELEC — Existing Electric
- EX GAS — Existing Gas
- EX WTR — Existing Water
- EX OH — Existing Overhead Utility
- EX SAN — Existing Sanitary
- EX STM — Existing Storm
- EX TC — Existing Telecoms
- Saw Cut Line
- Silt Fence/Sock
- Inlet Protection
- X — Tree Removal
- Existing area to be removed.
- Existing Asphalt Pavement to be Removed. Sub-base to Remain.

DEMOLITION NOTES: (#)

1. Existing Area to be Cleared.
2. Existing Curb to be removed.
3. Limits of Curb Removal.
4. Existing Asphalt Pavement to be removed.
5. Existing Concrete Sidewalk/ Pavement/ Ramps to be removed.
6. Existing Storm Drainage/CB to be removed.
7. Existing Storm Drainage/CB to remain and be protected during Construction.
8. Existing Utility Structure to be removed.
9. Existing Utility Structure to remain and be protected during Construction.
10. Existing Pylon Sign to remain and be protected during Construction.
11. Existing Light Pole Base to be Relocated
12. Existing Landscaping to be Removed
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14. Existing Bollard/Signage to be removed.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	11.16.2023	DZ	SWPPP Update

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

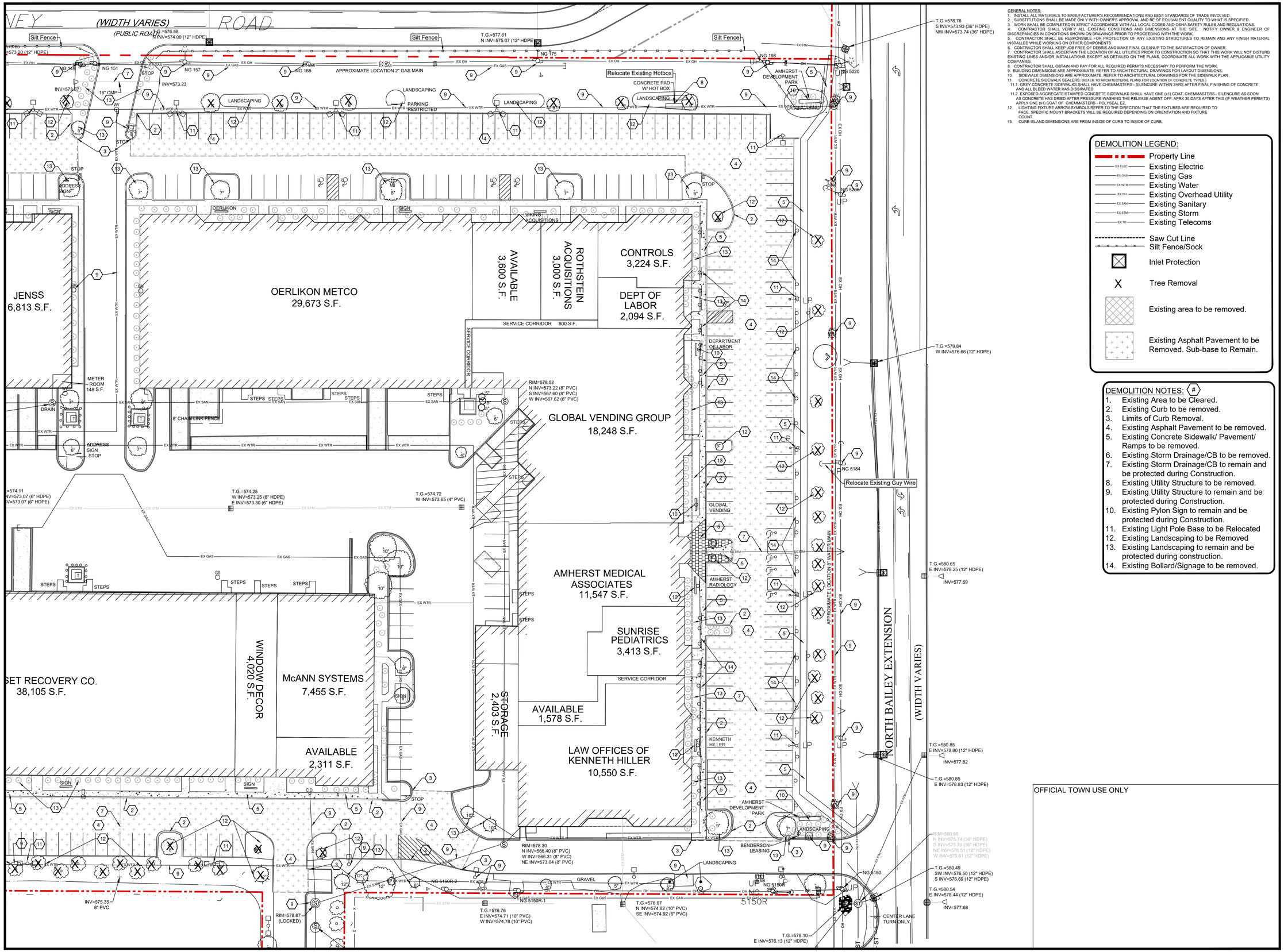
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE: Demolition and Erosion Control Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C3.00

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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No.	DATE	BY	REMARKS

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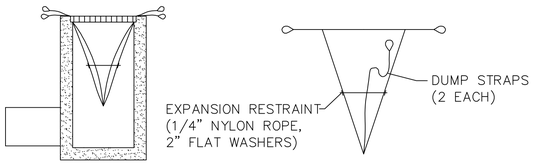
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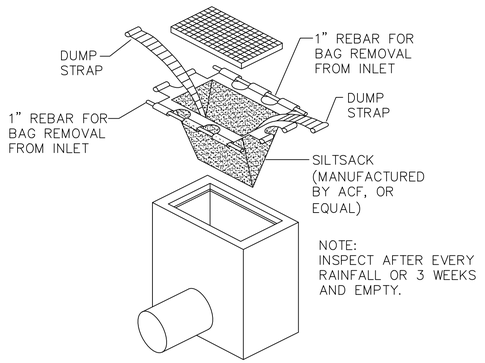
TITLE:
Demolition and Erosion Control Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C3.01

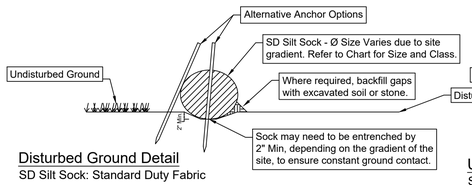
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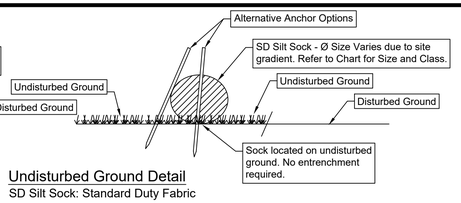
INSTALLATION DETAIL BAG DETAIL



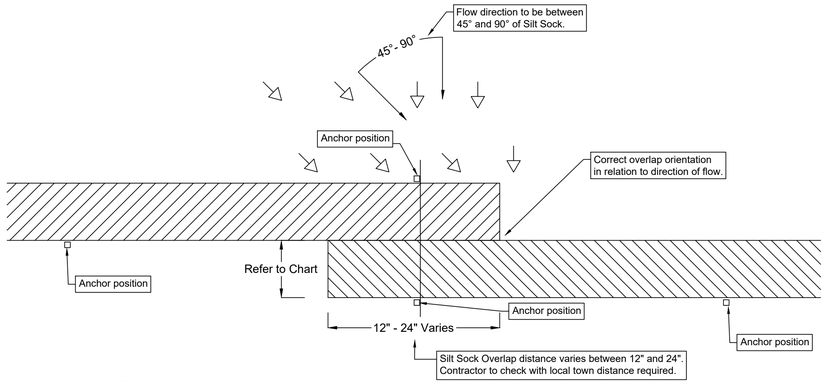
SILT SACK DETAIL
N.T.S.



Disturbed Ground Detail
SD Silt Sock: Standard Duty Fabric



Undisturbed Ground Detail
SD Silt Sock: Standard Duty Fabric



Overlap Detail - PLAN
1) Anchors required at the overlap section are to stay outside the Silt Sock and not pierce through the material. See alternative anchor positons in details above.

Anchor at Overlaped Ends - SECTION

Size & Class Chart			
	Diameter		
Gradient	8"	12"	18"
0 - 2%	30	55	75
2.1 - 5%	25	40	55
5.1 - 10%	15	30	40
10.1 - 33%	10	15	20
> 33%	5	10	15

SD SILT SOCK DETAIL
SD Silt Sock: Standard Duty Fabric

Notes:
1 - Do not use sock below the normal watermark or perpendicular to flow in river and where the maximum incline is greater than 50%.
2 - Contractors should be aware of federal, state and local laws, rules regulations or permit requirements for the use of Silt Socks on site.
3 - Sock should be positioned on the outline of the area to be protected, but must be installed between 45° to 90° from directions of flow.
4 - Sock may be required to be entrenched a minimum of 2" on disturbed ground to ensure constant ground contact.
5 - All gaps and ruts must be backfilled with soil or sock material.
6 - Sock overlap should be in the direction of the flow. Overlap amount will be between 12" and 24". Contractor to check with local town for requirements.
7 - If sediment collects to 1/2 the height of the sock, then a second sock may be stacked immediately up slope of the original instead of removing the sediment.
8 - Sock joint is where two sock sections meet on a level grade, overlap and adjoining ends, tightening the ends together, and anchoring through each end. Where two sections meet on un-level ground, j-hook higher elevated end, anchor, and begin new section just below. Back fill any gaps.
9 - Sock should be inspected and repaired as needed.
10 - If ruts begin under the sock they should be backfilled with soil and compacted so that the ground and sock have continuous contact.
11 - If sock rolls out of place, the sock should be repositioned and secured with additional anchors.
12 - Tears in the Sock fabric may be repaired by wrapping a new piece of fabric over the sock and securing, or by place a second sock immediately up slope with the required overlap beyond deformation.
13 - A section of sock should be replaced whenever it has weakened to such an extent that the efficiency is reduced or diminished. Weakening can occur because the natural mesh fabric breaks down over time of from being moved/dragged on site.
14 - Sock should be replaced when sediment has built up and has been removed three times.
15 - All sediment in disturbed area next to sock must be removed and correctly disposed of before the sock can be removed.
16 - When removing, cut sock open and spread the filler material around. The netting should be removed from site.
17 - Sock should be installed before works commence on site.

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No.	DATE	BY	REMARKS

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ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL



TITLE: Demolition and Erosion Control Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C3.10

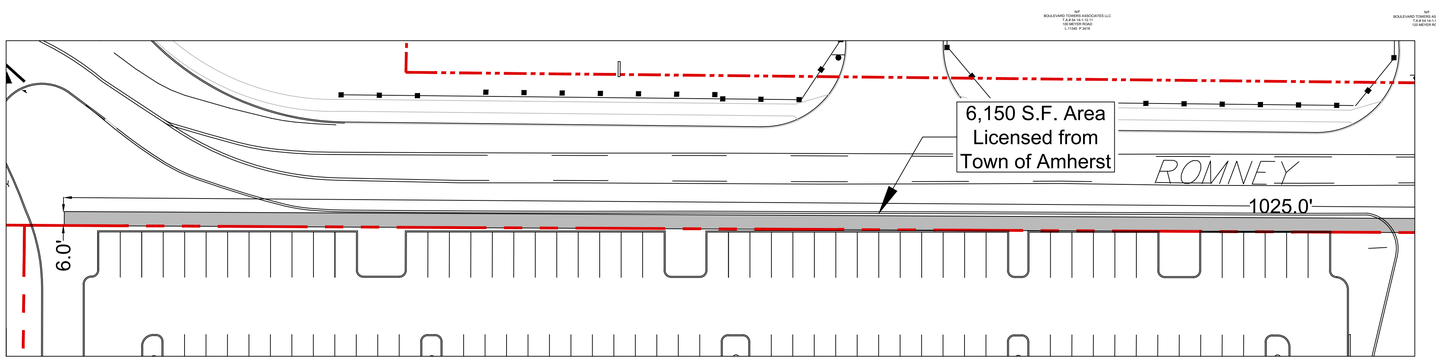
Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST, NY ZONING ANALYSIS		
	REQUIRED	PROVIDED
ZONED (RD)	R-D	R-D
MIN LOT AREA	1 AC	17.14 AC
MAX. BUILDING HEIGHT	65'	<30'
BUILDING SETBACKS:		
FRONT YARD	40'	102.3'
SIDE YARD	15'	16.7'
REAR YARD	15'	48.4'
PARKING / ROAD/AUX SETBACKS:		
FRONT - PROPERTY LINE	*25'	**0'
SIDE YARD	*10'	0'
REAR YARD	10'	**6.0'

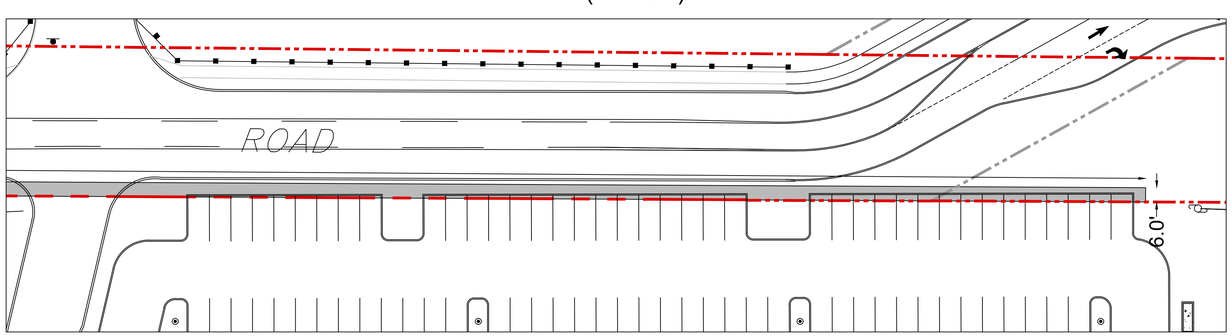
* Area to be determined to be licensed from Town of Amherst
** - Variance Required
- Curb Island Dimensions are measured from the inside of curb.

PROPOSED PARKING ANAYLSIS				
USE	CODE	S.F. USAGE	REQUIRED	PROVIDED
WAREHOUSE	1 / 1000 S.F.	181,343 SF	182 Spaces	
MEDICAL	1 / 150 S.F.	14,960 SF	100 Spaces	
RETAIL/OFFICE	1 / 200 S.F.	66,106 SF	331 Spaces	
TOTAL		262,409 SF	613 Spaces	688 Spaces
STALL SIZE			9' X 19'	9' X 19'

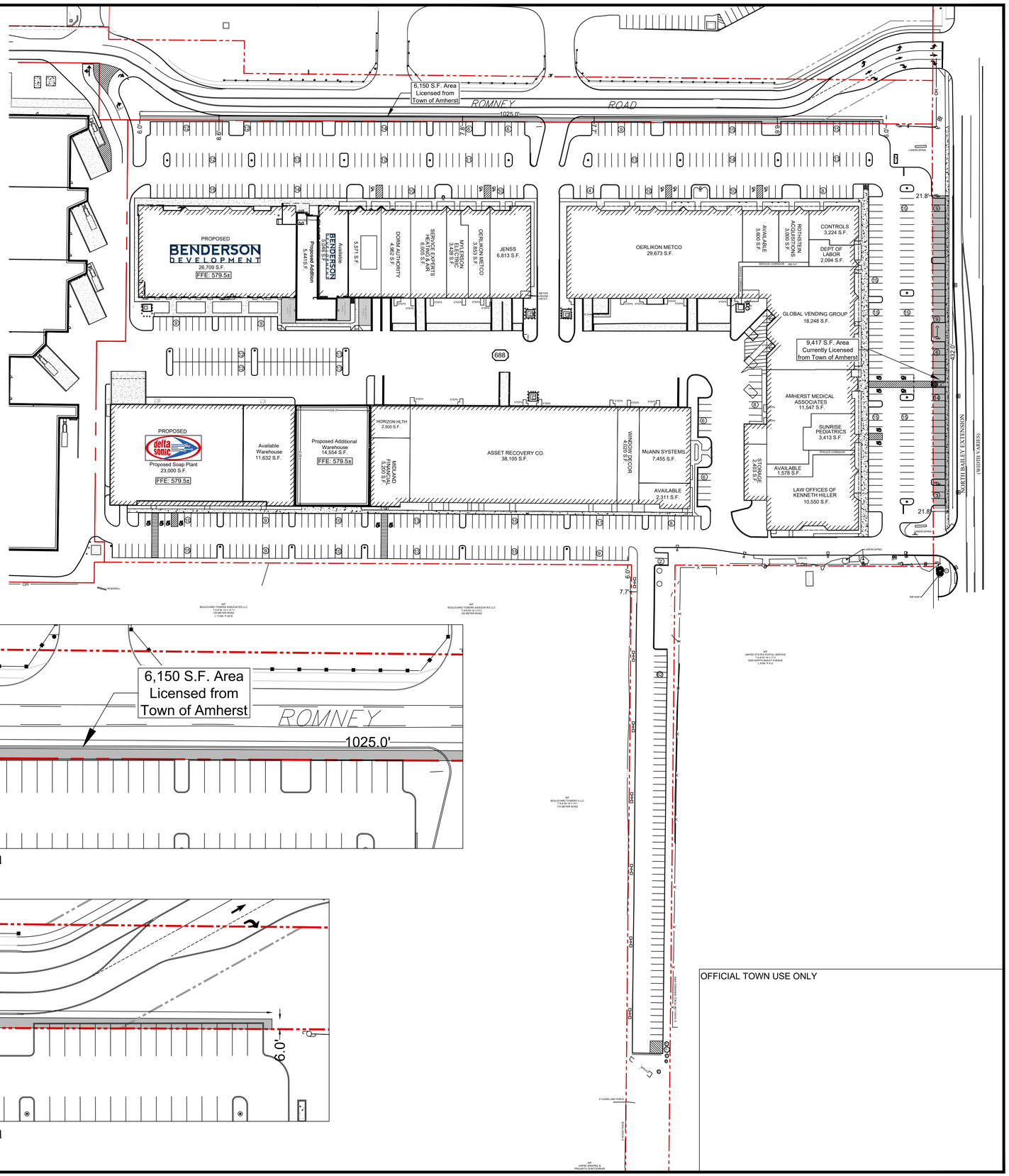
*Refer alternative parking study for site required parking



Proposed Licence Area
(1" = 30')



Proposed Licence Area
(1" = 30')



OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

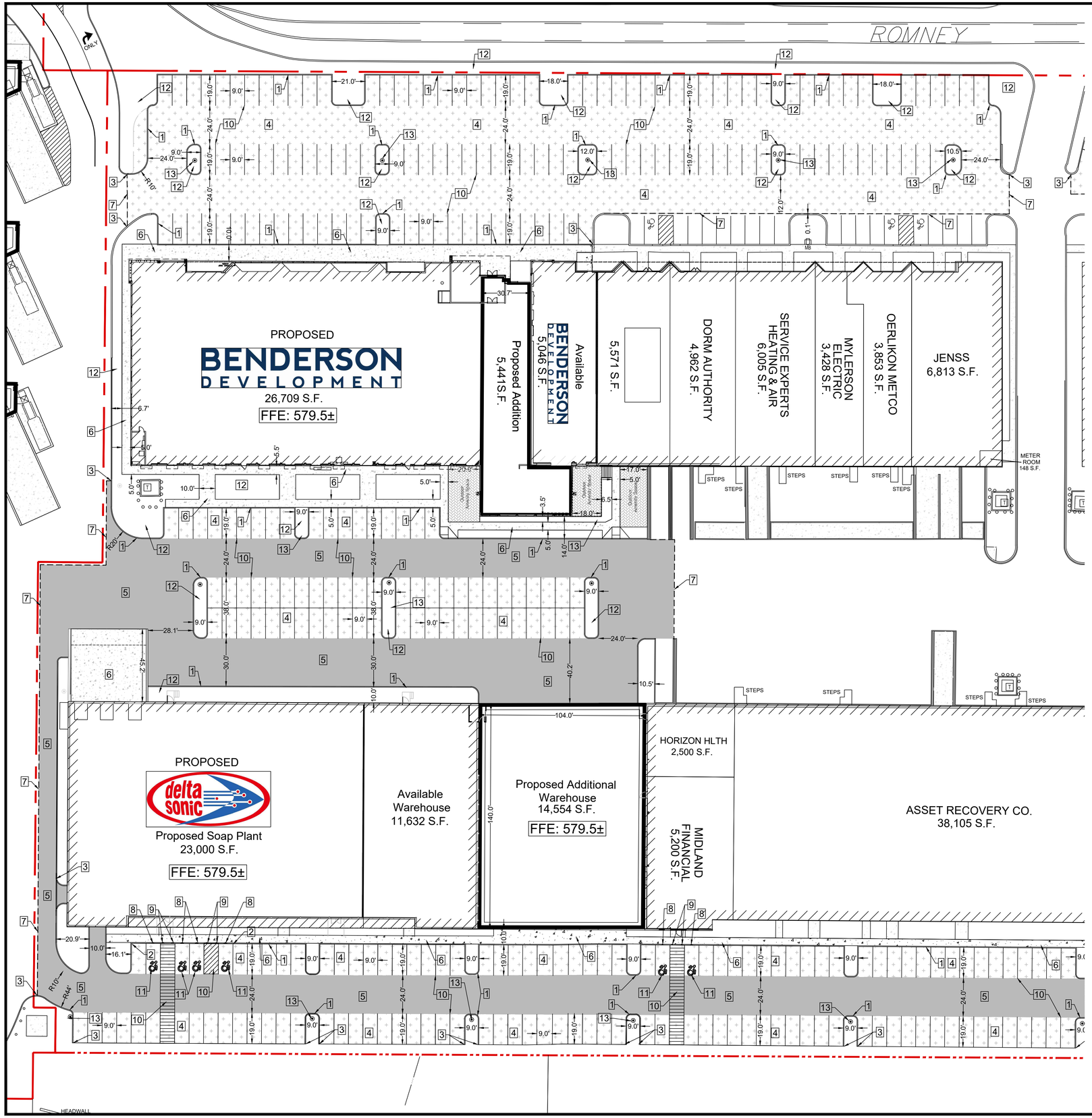
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 039179 STATE OF NEW YORK

TITLE:
Overall
Site Plan

SCALE: 1:70
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C4.0

Attachment: SP-1988-11P drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURERS 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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN .
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.)
    11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN 2HRS AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
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12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES: #

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	11.16.2023	DZ	SWPPP Update

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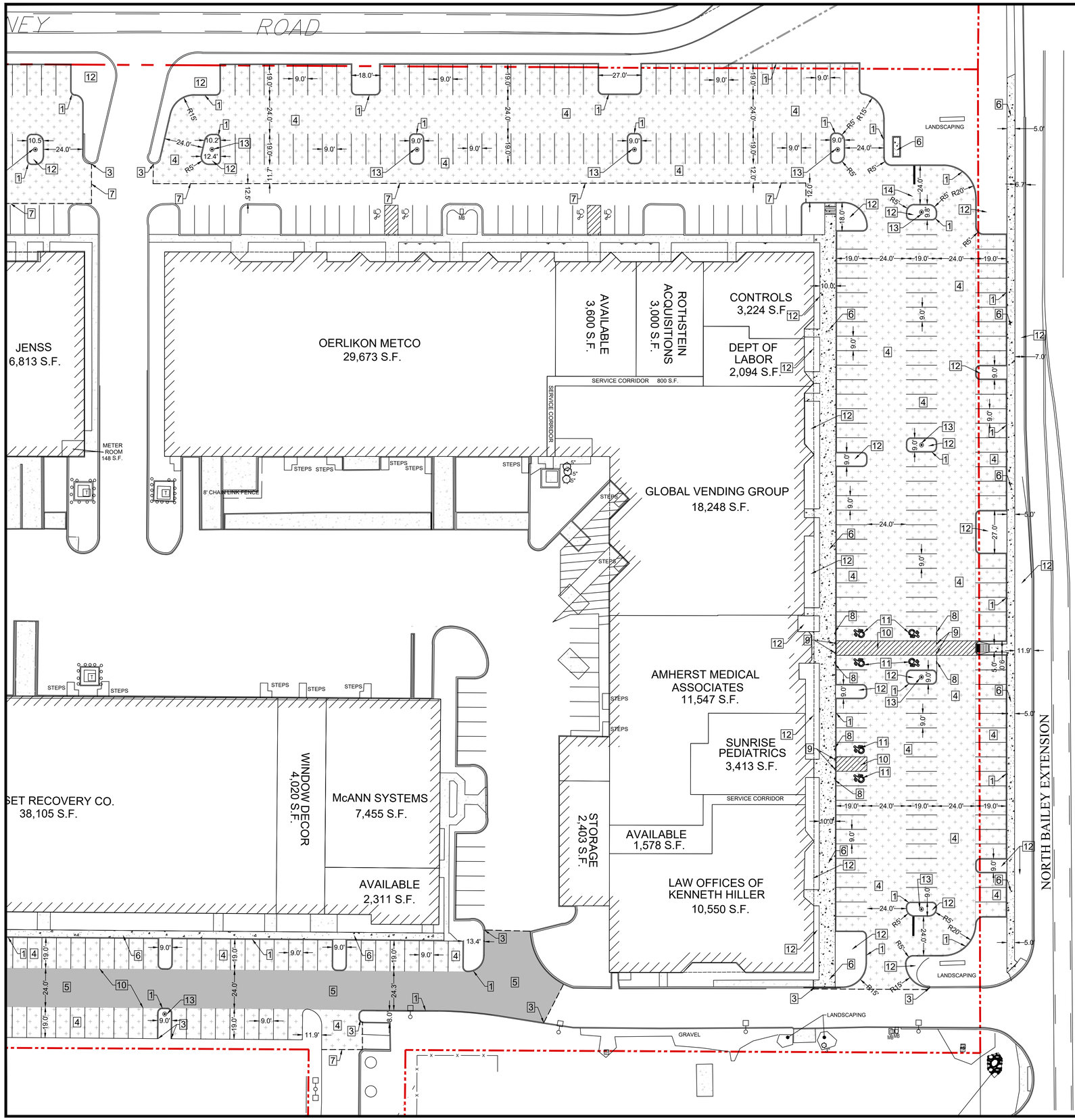
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:
Detailed Site Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C4.10

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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DRAWING REVISIONS:

No.	DATE	BY	REMARKS

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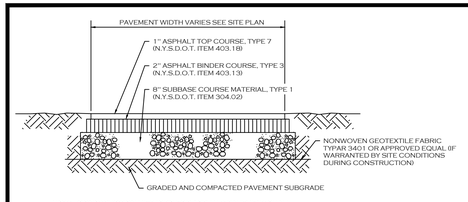
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 031139 STATE OF NEW YORK

TITLE:
Detailed Site Plan (East)

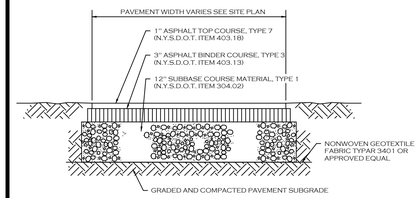
SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C4.11

Attachment: SP-1988-11P drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



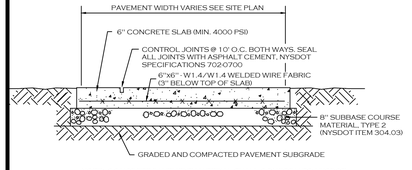
NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

STANDARD DUTY ASPHALT SECTION



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

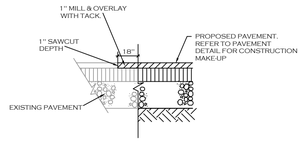


NOTE: CONCRETE PAVEMENT MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 502-3.

CONCRETE SIDEWALK SEALERS:
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REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES FOR SIDEWALKS.

CONCRETE PAVEMENT (INC DUMPSTER)



PAVEMENT TRANSITION DETAIL
(ASPHALT PAVEMENT)

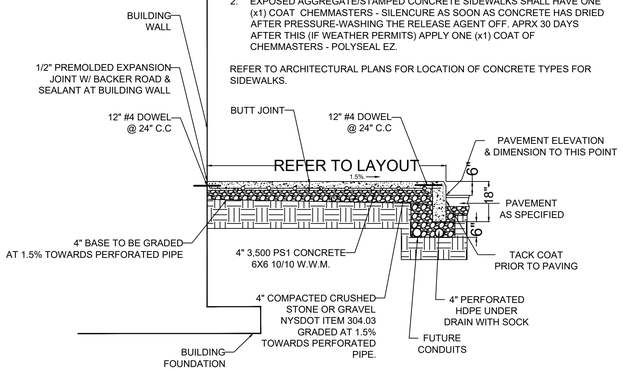
SIDEWALK CURB RAMP DETAIL

NOTES:
1. (1.5% SIDEWALK) GRADES ARE FOR REPRESENTATION ONLY. REFER TO LAYOUT FOR PROPOSED GRADES.

NOTES:
1. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3
2. BUTT JOINTS TO BE AT 5'-0" O.C. BOTH WAYS- SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.

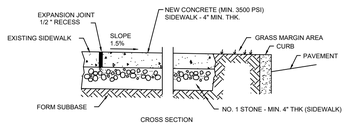
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REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES FOR SIDEWALKS.



BUILDING SIDEWALK DETAIL

CONTRACTOR TO VERIFY WITH OWNER ON CURB DETAIL

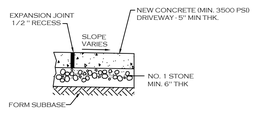


NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
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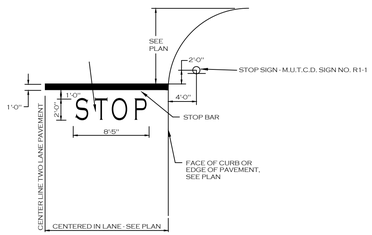
REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES FOR SIDEWALKS.

STANDARD CONCRETE SIDEWALK

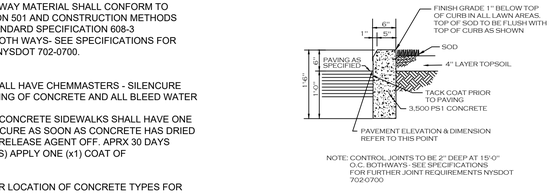


NOTES:
1. CONTROL JOINTS TO BE AT 10'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.

RPZ ENCLOSURE PAD

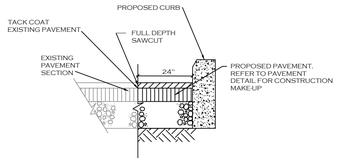


STOP BAR DETAIL

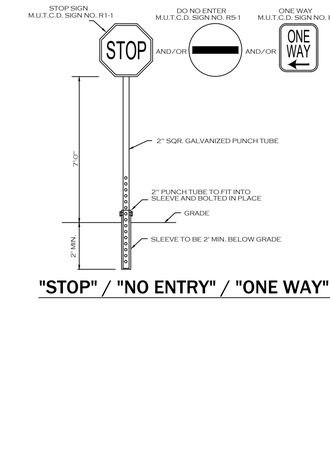


NOTE: CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700

TYPE "A" CONCRETE CURB

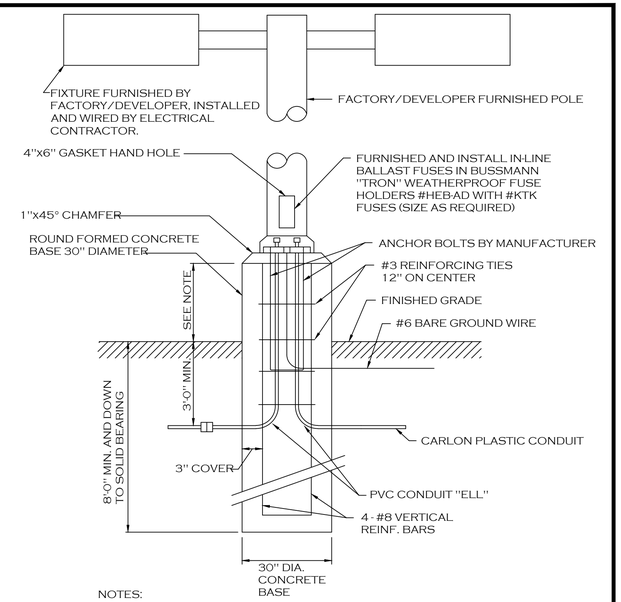


CURB AND PAVEMENT TRANISTION DETAIL



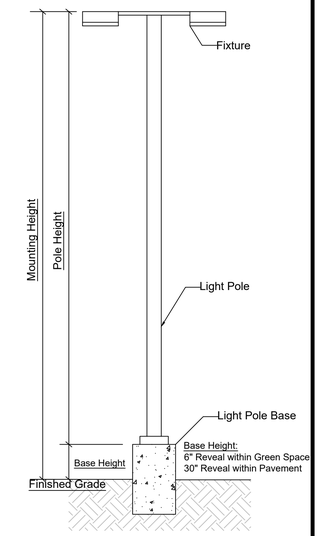
HANDICAP / NO PARKING SIGNS

"STOP" / "NO ENTRY" / "ONE WAY" SIGNS

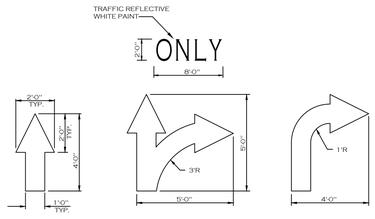


NOTES:
1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN
2. FOR LIGHT FIXTURE ORDERING INFORMATION SEE SITE LIGHTING PLAN
3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE:
IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION
IN PAVEMENT: 30" ABOVE GRADE
IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

LIGHT POLE FOUNDATION



Light Pole Mounting



INTERNATIONAL ACCESSIBILITY SYMBOL

PAINTED TRAFFIC ARROWS

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

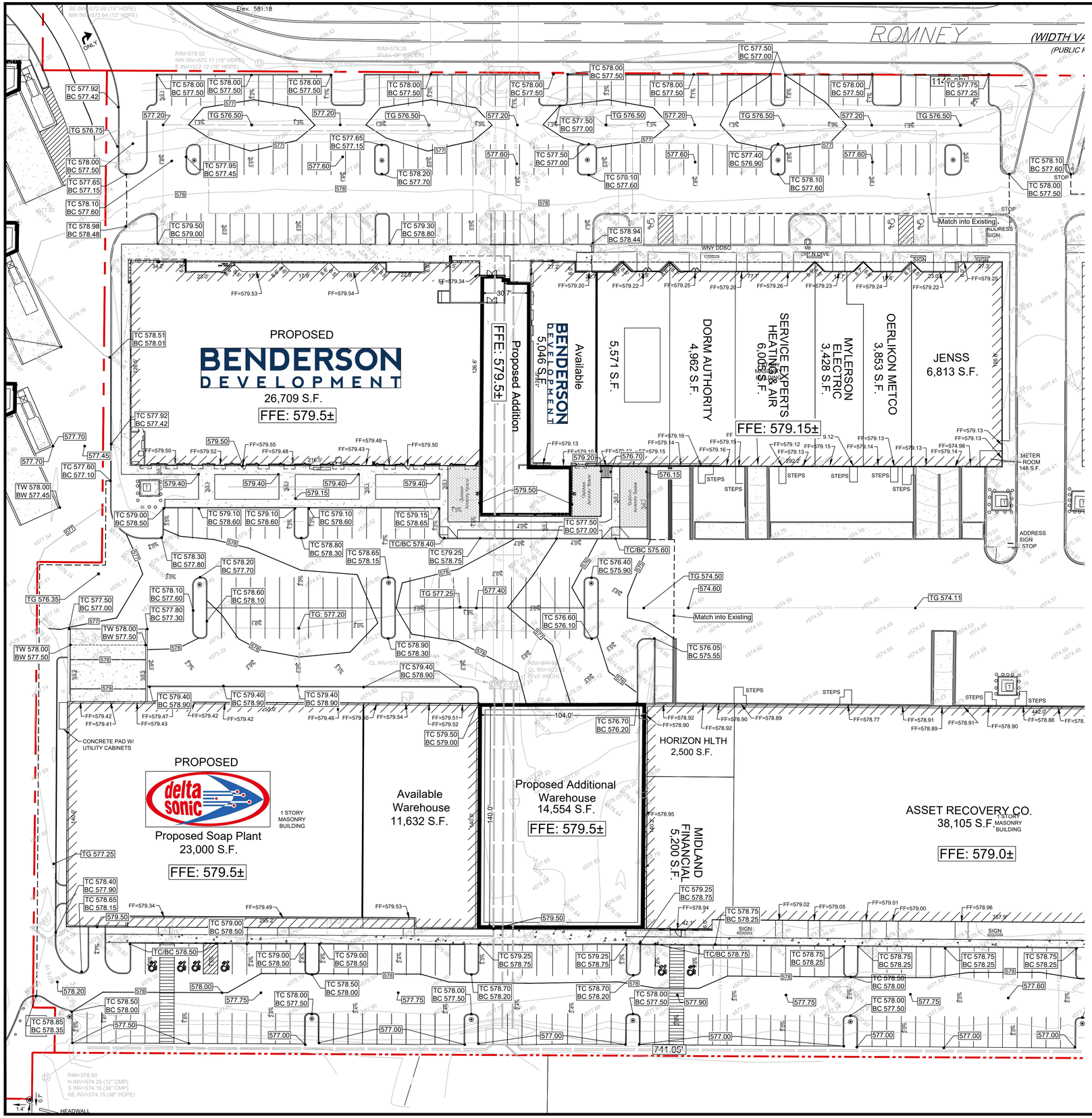
SEAL



TITLE: Construction Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C4.20

Attachment: SP-1988-11P_drawings_091924 (2825 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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GRADING LEGEND:

- Property Line
- 6" Curb (typ).
- TG ## — Catch Basin - Top of Grade
- ### — Proposed Contour Line
- ##% — Slope Direction

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	11.16.2023	DZ	SWPPP Update

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CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 035109 STATE OF NEW YORK

TITLE:
Grading Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C5.00

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ROAD

JENSS
6,813 S.F.

OERLIKON METCO
29,673 S.F.

FFE: 579.3±

AVAILABLE
3,600 S.F.

ROTHSTEIN ACQUISITIONS
3,000 S.F.

CONTROLS
3,224 S.F.

DEPT OF LABOR
2,094 S.F.

SERVICE CORRIDOR 800 S.F.

SERVICE CORRIDOR

METER ROOM
148 S.F.

8' CHAIN LINK FENCE

GLOBAL VENDING GROUP
18,248 S.F.

FFE: 579.3±

AMHERST MEDICAL ASSOCIATES
11,547 S.F.

SUNRISE PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

AVAILABLE
1,578 S.F.

LAW OFFICES OF KENNETH HILLER
10,550 S.F.

STORAGE
2,403 S.F.

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

SET RECOVERY CO.
38,105 S.F.

FFE: 579.0±

EX. (WIDTH VARIES)

LANDSCAPING

GRAVEL

Match into Existing

STEPS

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No.	DATE	BY	REMARKS

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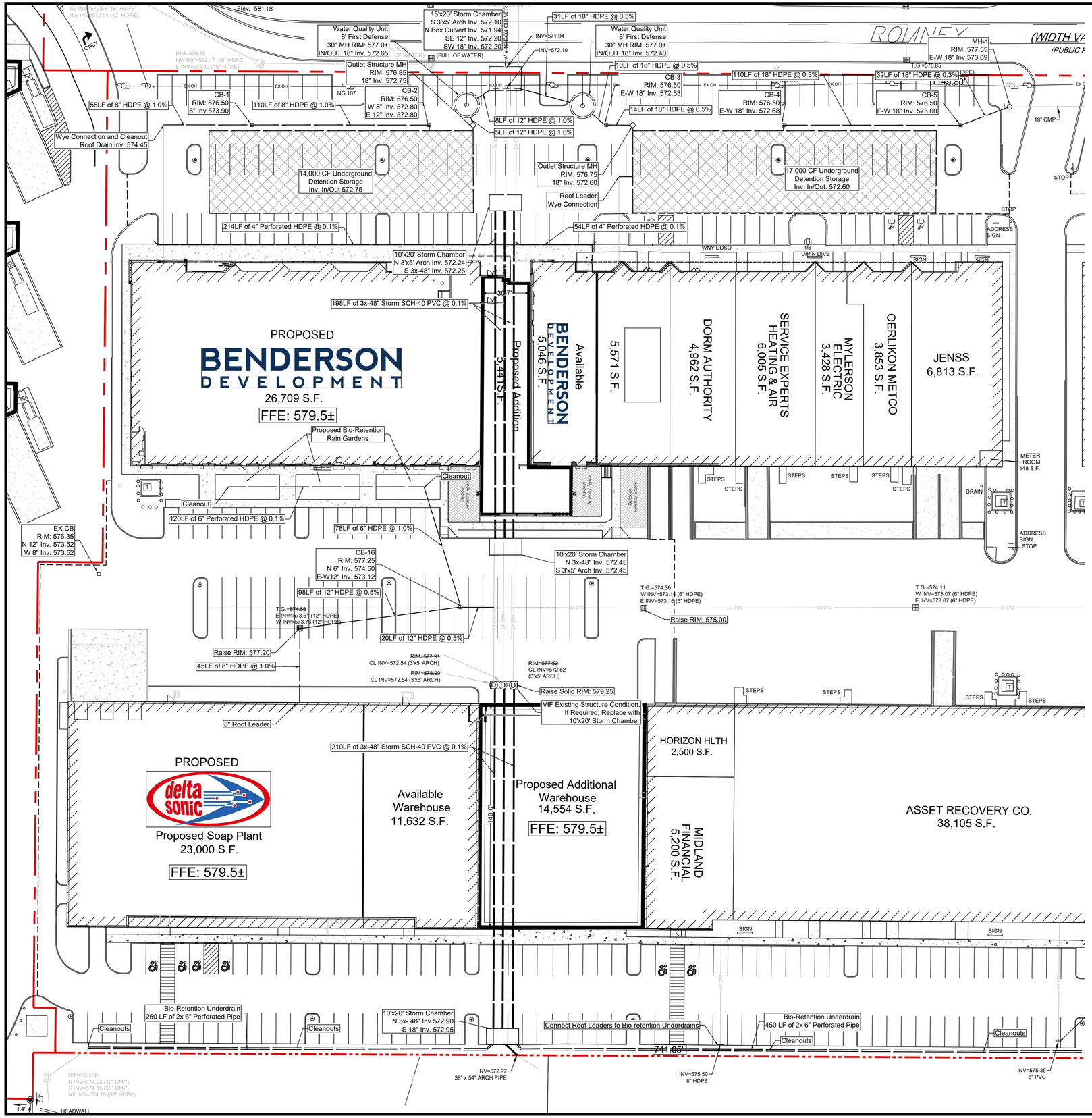
REGISTERED ARCHITECT JAMES ALLEN RUMSEY 031709 STATE OF NEW YORK

TITLE:

Grading Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C5.01

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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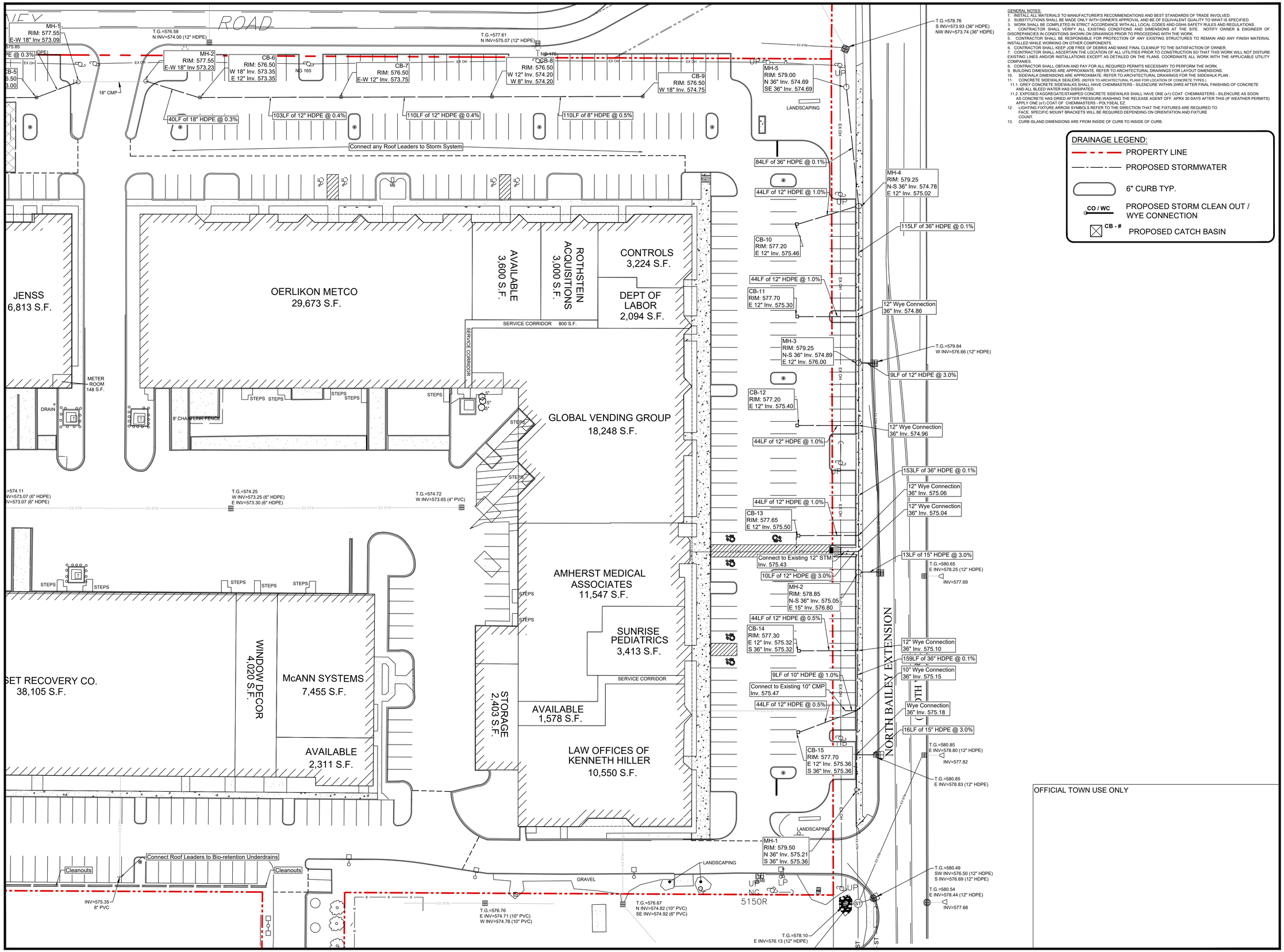
REGISTERED ARCHITECT JAMES ALLEN RUMSEY 039 STATE OF NEW YORK

TITLE:

Drainage Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C5.10

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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DRAINAGE LEGEND:

- PROPERTY LINE
- PROPOSED STORMWATER
- 6" CURB TYP.
- CO / WC — PROPOSED STORM CLEAN OUT / WYE CONNECTION
- CB - # — PROPOSED CATCH BASIN

OFFICIAL TOWN USE ONLY

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No.	DATE	BY	REMARKS

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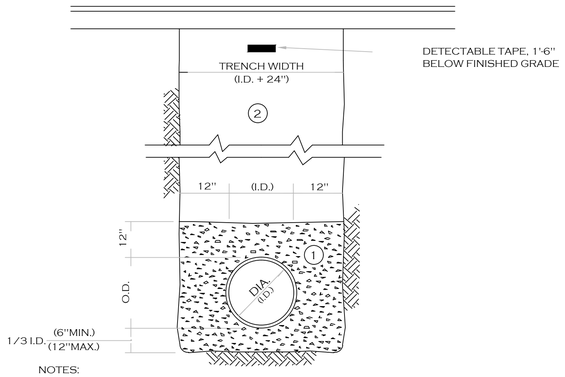
REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:

Drainage Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C5.11

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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)

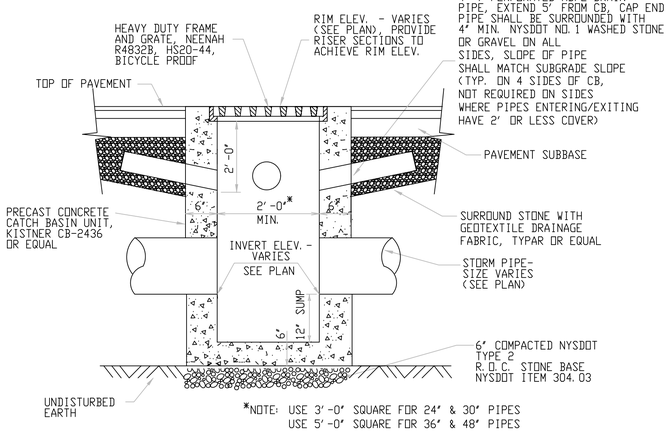
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

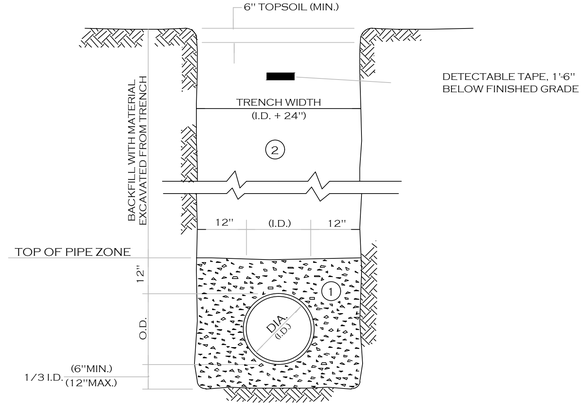
(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERAIL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

TRENCH SECTION IN PAVED AREAS



TYPICAL PRECAST CATCH BASIN



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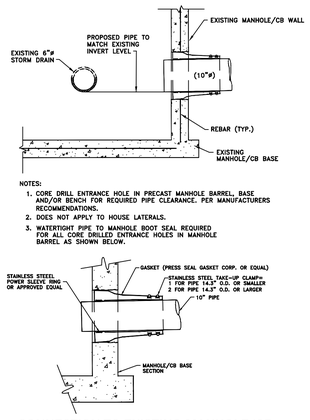
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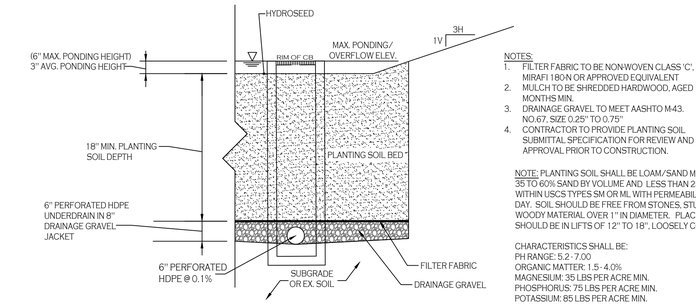
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

TRENCH SECTION IN UNPAVED AREAS



CONNECTION TO EXISTING MANHOLE/CB



BIORETENTION AREA - TYPICAL SECTION

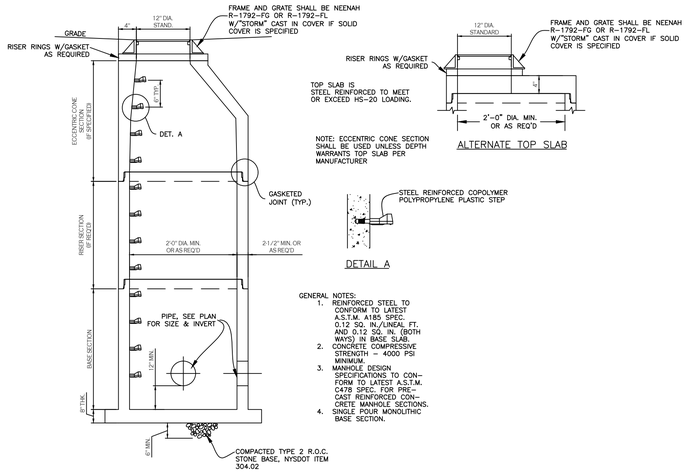
NOTES:
1. FILTER FABRIC TO BE NON-WOVEN CLASS 'C', MIRAFI 180N OR APPROVED EQUIVALENT
2. MULCH TO BE SHREDDED HARDWOOD, AGED 12 MONTHS MIN.
3. DRAINAGE GRAVEL TO MEET AASHTO M-43, NO.67, SIZE 0.25" TO 0.75"
4. CONTRACTOR TO PROVIDE PLANTING SOIL SUBMITTAL SPECIFICATION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

NOTE: PLANTING SOIL SHALL BE LOAM/SAND MIX CONTAINING A MINIMUM OF 35 TO 60% SAND BY VOLUME AND LESS THAN 25% CLAY. 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. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED.

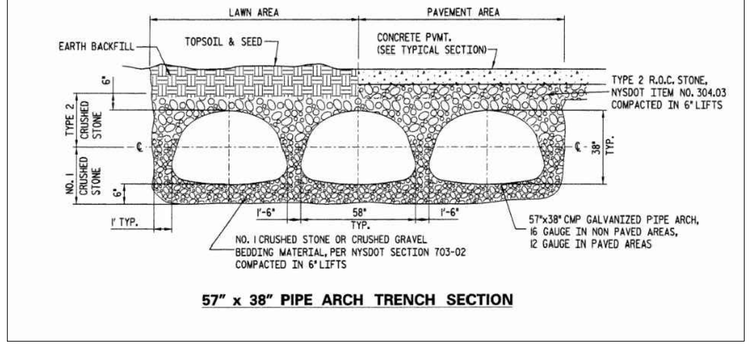
CHARACTERISTICS SHALL BE:
PH RANGE: 5.2 - 7.00
ORGANIC MATTER: 1.5 - 4.0%
MAGNESIUM: 35 LBS PER ACRE MIN.
PHOSPHORUS: 75 LBS PER ACRE MIN.
POTASSIUM: 85 LBS PER ACRE MIN.
SOLUBLE SALTS: 500 PPM
CLAY: 10 TO 25%
SILT: 30 TO 55%
SAND: 35 TO 60%

BIO-RETENTION AREA SEEDING SPEC (NORTHEAST WETLAND GRASS SEED MIX):

SEED MIXTURE	VARIETY	PERCENT BY NO. OF SEEDS
CREEPING BENTGRASS	AGROSTIS STOLONIFERA	63.0
ROUGH BLUEGRASS	POA TRIVIALIS	17.0
MEADOW FOXTAIL	ALOPECURUS ARUNDINACEUS	11.0
ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	4.5
DEERTONGUE	PANICUM CLANDESTINUM	4.5



TYPICAL STORM MANHOLE DETAIL



57" x 38" PIPE ARCH TRENCH SECTION

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

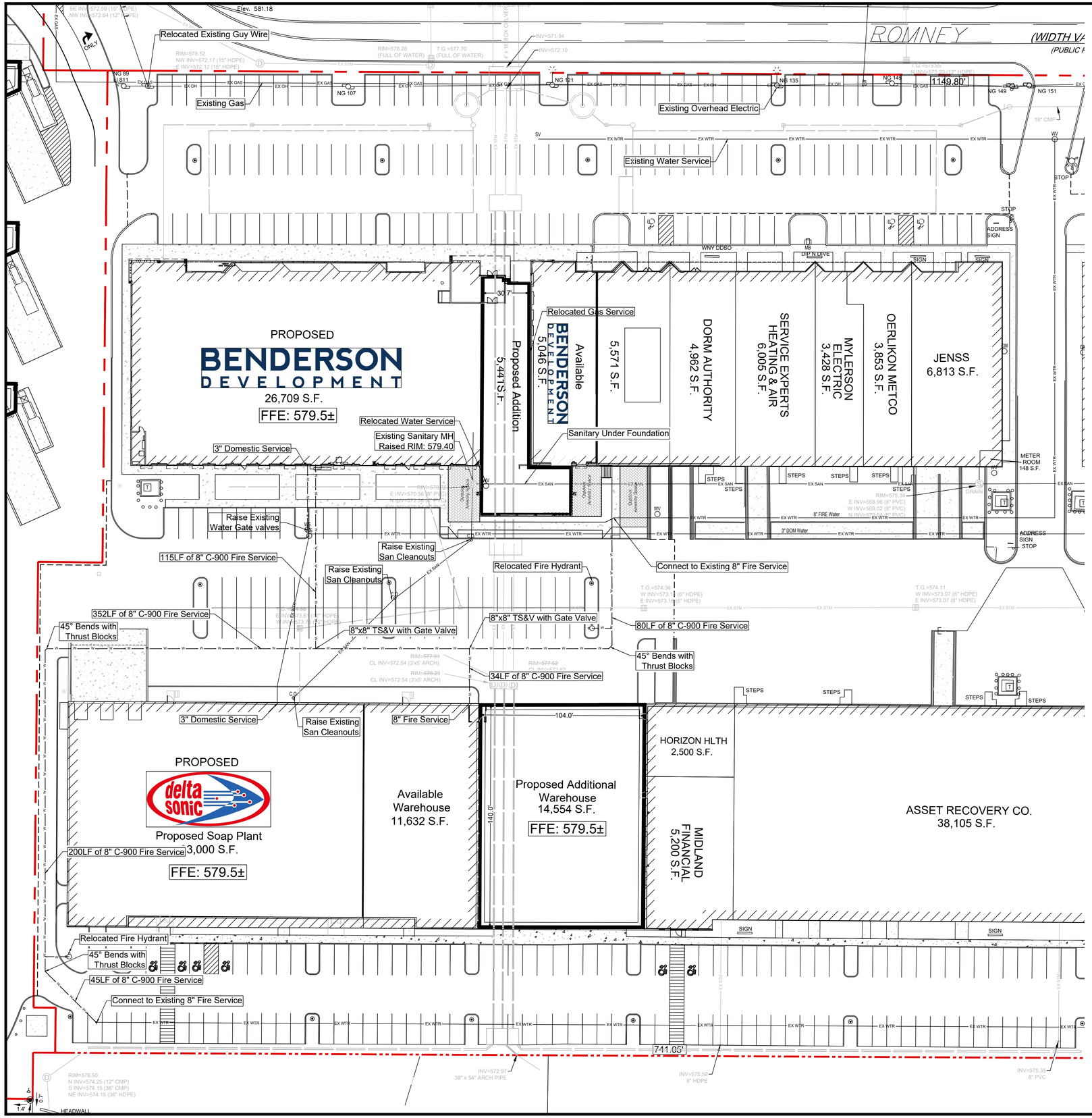
SEAL



TITLE:
Drainage Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C5.20

Attachment: SP-1988-11P drawings 091924 (25252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



GENERAL NOTES:
1. INSTALL ALL MATERIALS TO MANUFACTURERS 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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN .
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.)
11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN 2HRS AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
11.2. EXPOSED AGGREGATE/STAMPED CONCRETE SIDEWALKS SHALL HAVE ONE (x1) COAT CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED AFTER PRESSURE-WASHING THE RELEASE AGENT OFF. APRX 30 DAYS AFTER THIS (IF WEATHER PERMITS) APPLY ONE (x1) COAT OF CHEMMASTERS - POLYSEAL EZ.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SANITARY SEWER NOTES:
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2. ANY CONTRACTOR AND/OR PLUMBER PERFORMING WORKING IN A CONFINED SPACE (ie MANHOLES, WETWELLS, CHAMBERS) OWNED BY THE TOWN MUST CERTIFY TO THE TOWN THAT THEY HAVE THEIR OWN CONFINED SPACE ENTRY PROGRAM THAT MEETS OR EXCEEDS OSHA'S REGULATIONS. CERTIFICATION MUST BE NOTARIZED BY A NOTARY PUBLIC.
3. CONSTRUCTION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE TOWN AND NEW YORK STATE CODES.
4. IF ANY PROPOSED SEWER LATERAL RUNS UNDER PAVED AREA AND HAS LESS THAN 4' COVER, CONCRETE ENCASEMENT IS REQUIRED. IF MORE THAN 4' COVER IS PROVIDED IN PAVED AREAS SELECT FILL IS REQUIRED.
5. THE CONTRACTOR MUST NOTIFY THE TOWN ENGINEER OFFICE AND THE PLUMBING INSPECTOR 24 HOURS IN ADVANCE OF CONSTRUCTION.
6. CLEANOUTS ARE REQUIRED EVERY 100' AND AT CHANGE IN DIRECTION.
7. ABANDONED SANITARY SEWER CONNECTIONS FROM THE SITE, IF ANY, REQUIRE PROOF OF A DISTRICT PERMIT FOR DISCONNECTION PRIOR TO THE NEW CONNECTION BEING MADE.

UTILITY NOTES:
1. PROVIDE FITTINGS AND BLOCKING AS NECESSARY AT ALL BENDS IN WATER LINES.
2. WHERE UTILITIES ARE INSTALLED IN EXISTING PAVEMENT, LANDSCAPED AREA ETC. ANY ITEMS REMOVED/DAMAGED SHALL BE REPLACED IN KIND.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS NECESSARY: STATE, COUNTY, AND TOWN.
4. WATER MAINS TO HAVE MINIMUM 5FT COVER.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	11.16.2023	DZ	SWPPP Update

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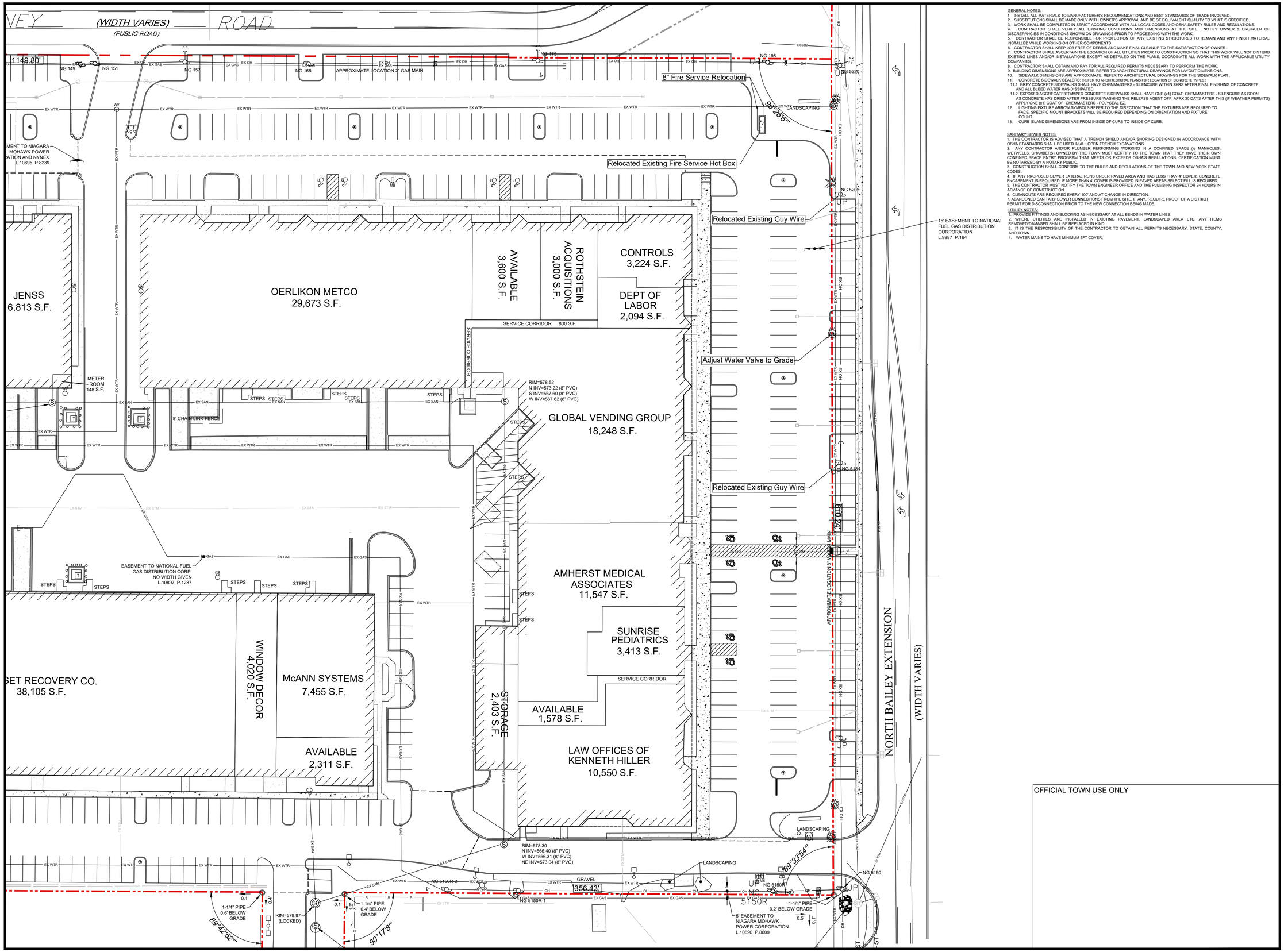
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 036103 STATE OF NEW YORK

TITLE:
Utility Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C6.00

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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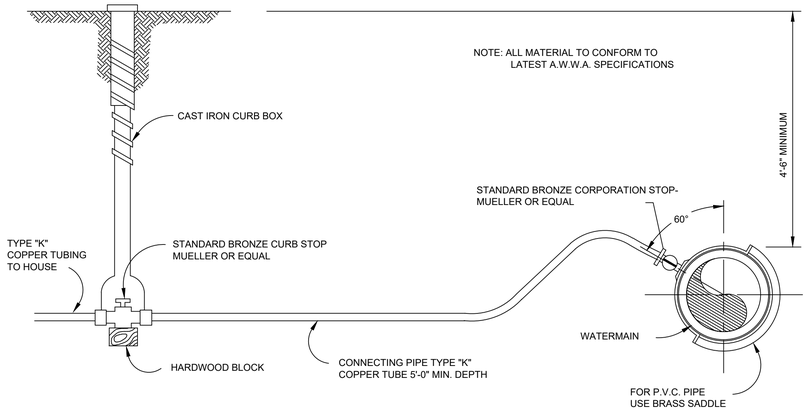
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 031708 STATE OF NEW YORK

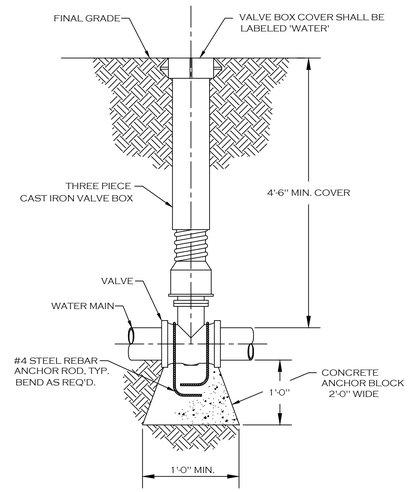
TITLE:
Utility Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.: C6.01

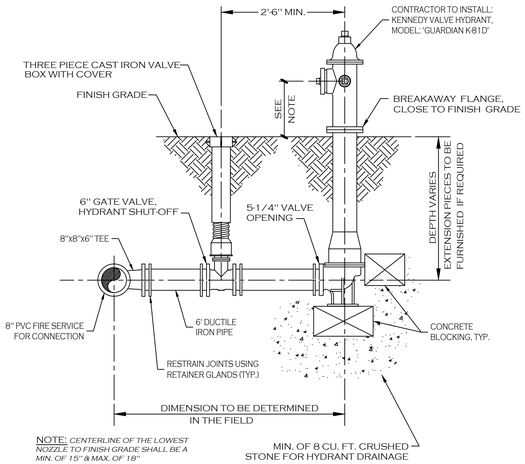
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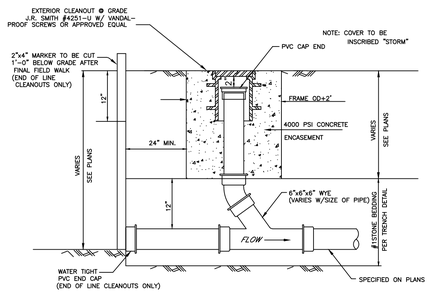
TYPICAL WATER SERVICE LINE INSTALLATION



TYPICAL GATE VALVE DETAIL

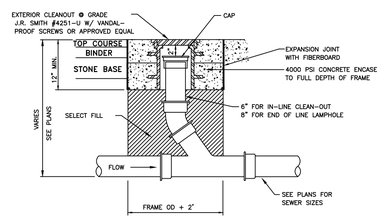


TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



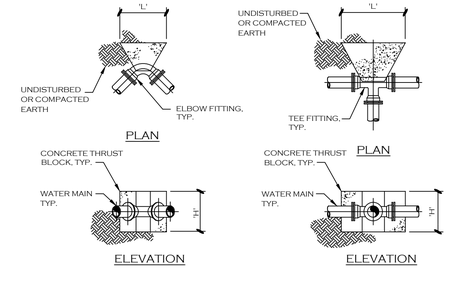
CLEANOUT IN LANDSCAPED AREAS

NOT TO SCALE



CLEANOUT IN PAVED AREAS

NOT TO SCALE



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

WATER MAIN

OFFICIAL TOWN USE ONLY

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No.	DATE	BY	REMARKS

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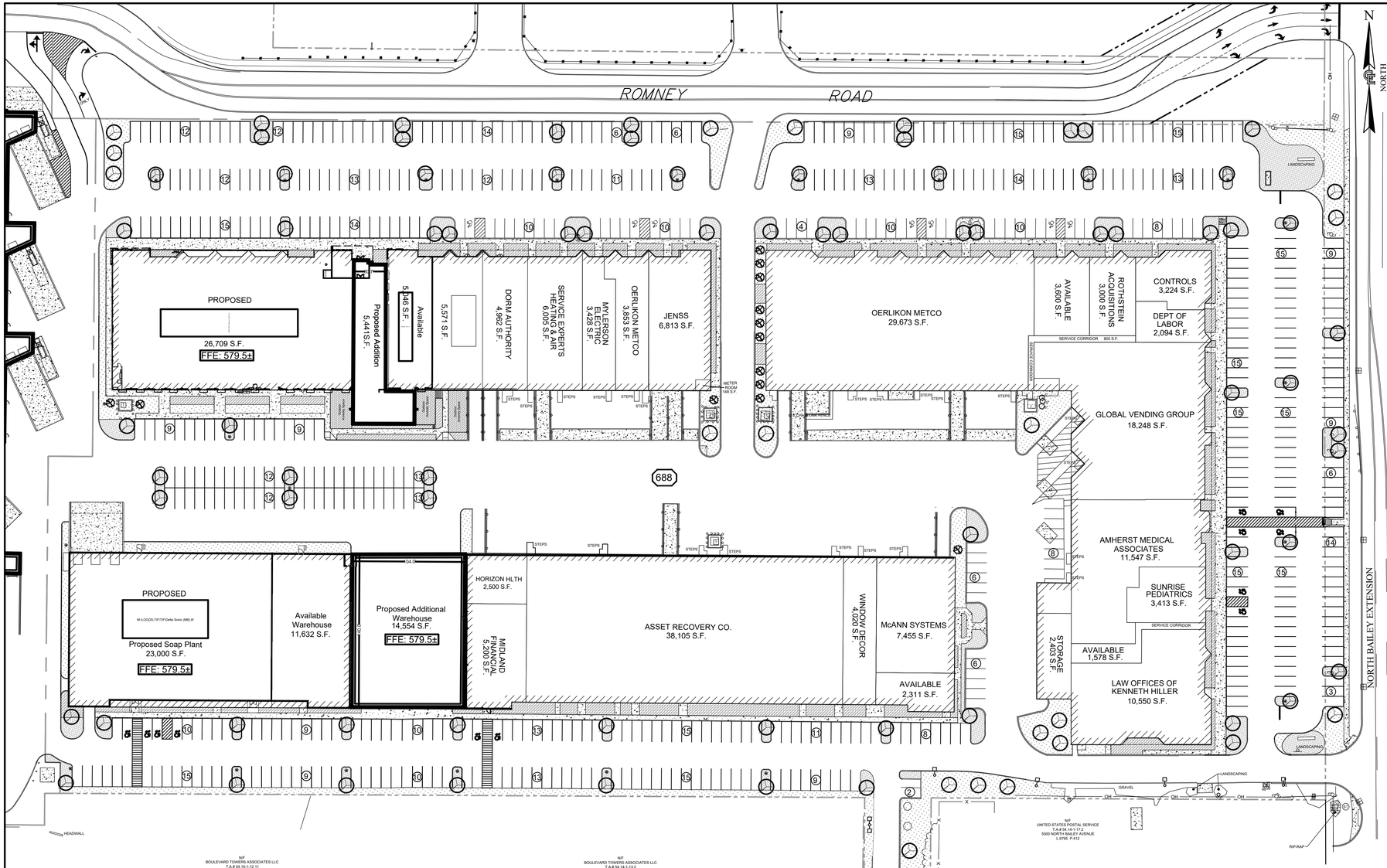
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 031709 STATE OF NEW YORK

TITLE: Utility Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C6.10

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



FOUNDATION PLANT PALETTE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE SIZE
EVERGREEN TREES						
	To	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	6-8' HT.	BB	HT. 15', SP. 3-4'
ORNAMENTAL TREES						
	Ag	AMELANCHIER GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6-8' HT.	BB	HT. 15-25', SP. 15-25'
	Cf	CORNUS FLORIDA	FLOWERING DOGWOOD	6-8' HT.	BB	HT. 15-30', SP. 15-30'
SHRUBS						
	Ig	ILEX GLABRA 'STRONG BOX'	STRONGBOX INKBERRY HOLLY	HT. 24" MIN	BB	HT. 2-3', SP. 2-3'
	Iv	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	HT. 24" MIN	CONT.	HT. 3-5', SP. 4-6'
	Ra	ROSA 'RADTKO'	DOUBLE KNOCKOUT ROSE	NO. 3 (24" MIN)	CONT.	HT. 2-5', SP. 6-8'
	Tx	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	HT. 24" MIN	CONT.	HT. 3-4', SP. 4-6'
	Vi	VIBURNUM CARLESII 'KOREAN SPICE'	KOREAN SPICE VIBURNUM	HT. 24" MIN	CONT.	HT. 3.5', SP. 4-5'
PERENNIALS & GRASSES						
	Ca	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	NO. 2	CONT.	HT. 4-6', SP. 2'-3'
	Ha	HAKONECHLOA MACRA 'ALL GOLD'	ALL GOLD JAPANESE FOREST GRASS	NO. 3	CONT.	HT. 1.5', SP. 1.5'
	Hm	HEUCHERA MICRANTHA 'PALACE PURPLE'	CORAL BELLS PALACE PURPLE	NO. 2	CONT.	HT. 2, SP. 1.5'
	Nf	NEPETA HYBRID 'CAT'S PAJAMAS'	CAT'S PAJAMA'S CATMINT	NO. 3	CONT.	HT. 18-20" SP. 18-20"
	Pv	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	NO. 2	CONT.	HT. 3-4', SP. 3-4'
	Ss	SEDUM 'AUTUMN JOY'	AUTUMN JOY STONE CROP SEDUM	NO. 2	CONT.	HT. 18-24", SP. 18-24"

ABBREVIATIONS:
BB=BALLED & BURLAPPED BR=BARE ROOT
CAL.=CALIPER IN INCHES CONT.=CONTAINER
HT.=HEIGHT NO.#=GALLON SIZE
SP.=SPREAD

NOTES:
- CALIPER TO BE MEASURED 6" ABOVE GRADE
- PLANT SYMBOLS REPRESENT 2/3 MATURE SIZE

PARKING LOT PLANT PALETTE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE SIZE
EVERGREEN TREES						
	Pm	PSUEDOTSUGA MENZIESII	DOUGLAS FIR	6-7' HT.	BB	HT. 40-80', SP. 12-20'
	To	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	6-8' HT.	BB	HT. 15', SP. 3-4'
DECIDUOUS TREES						
	Gt	GLEDITSIA TRIACANTHOS INERM.	THORNLESS HONEY LOCUST	2.5-3" CAL.	BB	HT. 60-80', SP. 60-80'
	Zs	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2.5-3" CAL.	BB	HT. 45', SP. 15'
SHRUBS						
	Am	ARONIA MELANOCARPA	LOWSCAPE MOUND CHOKEBERRY	NO. 3 (24" MIN)	CONT.	HT. 1-2', SP. 1.5-2'
	Iv	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	HT. 24" MIN	CONT.	HT. 3-5', SP. 4-6'
	Rm	ROSA MEIGALPIO	RED DRIFT GROUNDCOVER ROSE	NO. 3 (24" MIN)	CONT.	HT. 1-1.5', SP. 2-2.5'
	Ra	ROSA 'RADTKO'	DOUBLE KNOCKOUT ROSE	NO. 3 (24" MIN)	CONT.	HT. 2-5', SP. 6-8'
	Sj	SPIRAEA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	HT. 24" MIN	CONT.	HT. 2-3', SP. 4'
	Tx	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	HT. 24" MIN	CONT.	HT. 3-4', SP. 4-6'
PERENNIALS & GRASSES						
	He	HEMEROCALLIS X 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	NO. 1	CONT.	HT. 1-1.5', SP. 1-1.5'
	Ir	IRIS PALLIDA 'VARIEGATA'	VARIEGATED SWEET IRIS	BULB	CONT.	HT. 2', SP. 1'
	Nf	NEPETA HYBRID 'CAT'S PAJAMAS'	CAT'S PAJAMA'S CATMINT	NO. 3	CONT.	HT. 18-20" SP. 18-20"
	Pc	PANICUM VIRGATUM 'CHEYENNE SKY'	CHEYENNE SKY SWITCHGRASS	NO. 3	CONT.	HT. 2-3', SP. 1.5-2'
	Pe	PENNISETUM ALOPECUROIDES 'LEMON SQUEEZE'	LEMON SQUEEZE FLOWERING FOUNTAIN GRASS	NO. 3	CONT.	HT. 2.5-3', SP. 2-2.5'

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NOTES:
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- PLANT SYMBOLS REPRESENT 2/3 MATURE SIZE

PROPOSED LAWN

AREAS TO RECEIVE 4-6" TOPSOIL AND PERMANENT LAWN HYDRO SEED MIX

NOTE:
ALL DISTURBED LAWN AREAS SHALL RECEIVE 4-6" TOPSOIL AND PERMANENT LAWN HYDROSEED MIX.

SEED MIX:

	LBS/ACRE	%BY PURITY	%GERM
'Pennfine' Perennial Rye Grass	35	85	85
'Pennlawn' Red Fescue	35	97	80
'Baron' and 'Midnight' Kentucky Bluegrass	30	85	80

SEEDING RATE: 6.0 POUNDS PER 1,000 SQUARE FEET

MULCH: STRAW OR WOOD FIBER MULCH APPLIED AT THE RATE OF TWO TONS PER ACRE

STARTING FERTILIZER: 5:10:10 AT 20 POUNDS PER 1,000 SQUARE FEET

FOR FALL OR EARLY WINTER, SEED WITH CERTIFIED "AROOSTOCK" WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE.

TREE LEGEND

PROPOSED DECIDUOUS AND EVERGREEN TREES

LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR SHALL SECURE CURRENT PLANS AND SPECIFICATIONS FOR PROPER CONSTRUCTION METHODS AND MATERIAL OF ALL LANDSCAPING PRIOR TO COMMENCING WORK.
2. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, ANSI Z60.1 (LATEST EDITION).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF.
4. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKEOUT OF ALL PLANT MATERIAL AND SHRUB-BEDS. CONTACT OWNER'S REPRESENTATIVE FOR INSPECTION AND APPROVAL. LOCATIONS SHOWN ON THE PLANS CONVEY DESIGN INTENT ONLY. ACTUAL LOCATIONS WILL BE AS DIRECTED BY THE LANDSCAPE ARCHITECT AT THE TIME OF INSTALLATION.
5. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDERGROUND UTILITIES EXIST. SHOULD LOCATION OF TREES BE WITHIN 5' OF UNDERGROUND UTILITIES, RELOCATE SAID TREES TO A MINIMUM OF 5' FROM BALL TO UTILITIES.
6. SHOULD LOCATION OF TREES BE WITHIN 20' OF OVERHEAD WIRES, RELOCATE SAID TREES TO A MINIMUM OF 20' FROM WIRES.
7. ALL TREES AND SHRUBS SHALL RECEIVE A 3" LAYER OF BLACK SHREDDED HARDWOOD BARK MULCH.
8. ALL PLANTS MUST BE HARDY UNDER CLIMATE CONDITIONS THAT EXIST AT THE PROJECT SITE AND GROWN AT A NURSERY AT THE SAME HARDINESS ZONE AS THE PROJECT LOCATION.
9. NO SUBSTITUTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER OR OWNER'S PROJECT LANDSCAPE ARCHITECT.
10. ANY PLANT WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY , AND SIZE MEETING ALL PLANT LIST SPECIFICATIONS.
11. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANT MATERIALS (INCLUDING, BUT NOT LIMITED TO WATERING, SPRAYING, MULCHING, FERTILIZING, AND REMOVAL OF STAKES AND GUYS) AND NEWLY ESTABLISHED LAWN AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.
12. ALL AREAS DISTURBED BY UTILITY INSTALLATION AND SITE GRADING ACTIVITY SHALL RECEIVE 6" APPROVED TOPSOIL (TO A COMPACTED DEPTH OF 6", UNLESS OTHERWISE SPECIFIED BY THE GOVERNING MUNICIPALITY) BE FINE GRADES, SEEDED, MULCHED, AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
13. ANY IRRIGATION COMPONENT DAMAGED DURING SITE OR LANDSCAPE RENOVATIONS MUST BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.
14. A ONE YEAR GUARANTEE SHALL BE PROVIDED ON ALL PLANT MATERIALS FROM THE DATE OF PROVISIONAL ACCEPTANCE.
15. PLANTING BACKFILL MIXTURE SHALL CONSIST OF 3 PARTS TOPSOIL AND 1 PART COMPOST THOROUGHLY MIXED.
16. STAKE TREES IMMEDIATELY AFTER PLANTING.
17. LOCATIONS OF EXISTING BURIED UTILITIES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE WORK AREA. IF ANY TREE IS LOCATED CLOSER THAN 5' TO AN UNDERGROUND UTILITY, IT SHALL BE RELOCATED TO A LOCATION THAT IS A MINIMUM OF 5' AWAY AS MEASURED FROM THE ROOTBALL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, AND SITE APPURTENANCES, ETC., WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.

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 ANY ITEM ON THIS DOCUMENT IN ANY WAY. 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.

REGISTERED LANDSCAPE ARCHITECT — SARAH COSTICH LEWING — 002574 — STATE OF NEW YORK

PROJECT MANAGER	E.R.G.
DRAWN BY	E.L.O.
BOUNDARY	---
TOPO/BASE	---
DATE	11/15/2023
SCALE	1"=50'

COSTICH ENGINEERING
- Civil Engineering
- Land Surveying
- Landscape Architecture

217 Lake Avenue
Rochester, NY 14608
(585) 458-3020

TITLE OF PROJECT
PROJECT TITLE
PRJ. DESCRIPTION OR ST. ADDRESS

TITLE OF DRAWING
LANDSCAPE PLAN EXHIBIT

LOCATION OF PROJECT
TAX PARCEL NO.'S
TOWN LOT , TOWNSHIP , RANGE , SECTION, TRACT, PURCHASE, COUNTY OF MONROE, STATE OF NEW YORK

CLIENT
CLIENT NAME
CLIENT ADDRESS
ROCHESTER, NEW YORK XXXXX

DWG. # 8084.01
LE100
SHEET 1 OF 2

Attachment: SP-1988-11P drawings 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ROMNEY ROAD

PROPOSED
BENDERSON DEVELOPMENT
26,709 S.F.
FFE: 579.5±

Proposed Addition
5,441S.F.

Available
BENDERSON DEVELOPMENT
5,046 S.F.

5,571 S.F.

DORM AUTHORITY
4,962 S.F.

SERVICE EXPERTS HEATING & AIR
6,005 S.F.

MYLERSON ELECTRIC
3,428 S.F.

OERLIKON METCO
3,853 S.F.

JENSS
6,813 S.F.

METER ROOM
148 S.F.

OERLIKON METCO
29,673 S.F.

AVAILABLE
3,600 S.F.

ROTHSTEIN ACQUISITIONS
3,000 S.F.

CONTROLS
3,224 S.F.

DEPT OF LABOR
2,094 S.F.

SERVICE CORRIDOR 800 S.F.

GLOBAL VENDING GROUP
18,248 S.F.

AMHERST MEDICAL ASSOCIATES
11,547 S.F.

SUNRISE PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

AVAILABLE
1,578 S.F.

LAW OFFICES OF KENNETH HILLER
10,550 S.F.

STORAGE
2,403 S.F.

Existing Lighting

PROPOSED
delta sonic
Proposed Soap Plant
23,000 S.F.
FFE: 579.5±

Available
Warehouse
11,632 S.F.

Proposed Additional
Warehouse
14,554 S.F.
FFE: 579.5±

HORIZON HLTH
2,500 S.F.

MIDLAND FINANCIAL
5,200 S.F.

ASSET RECOVERY CO.
38,105 S.F.

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

104.0'

140.0'

6' CHAIN LINK FENCE

LANDSCAPING

GRAVEL

UP

LP
NG
5150R

RIP-RAP

HEADWALL

N/F
BOULEVARD TOWERS ASSOCIATES LLC
T.A.# 54.14-1-12.11
100 MEYER ROAD
L. 11345 P. 3418

N/F
BOULEVARD TOWERS ASSOCIATES LLC
T.A.# 54.14-1-13.2
120 MEYER ROAD

N/F
UNITED STATES POSTAL SERVICE
T.A.# 54.14-1-17.2
5500 NORTH BAILEY AVENUE
L.3795 P.412

OFFICIAL TOWN USE ONLY

Luminaire Schedule

Index	Manufacturer	Luminaire type	Item number	Lumens per Fixture	Mounting Height **	Fixture Watts	Quantity
	Cree	Cree Lighting OSQ Series Area Luminaire, Type 5M, 180W Input Power Designator, 4000K Double Head Fixtures	OSQL-C-30L-40K7-5M-UL-NM-BK	30,000 lm	25 Ft	180 W	16
	Cree	Cree Lighting OSQ Series Area Luminaire, Type 3M, 180W Input Power Designator, 4000K Double Head Fixtures with backlight shield	OSQL-C-30L-40K7-3M-UL-NM-BK w/ OSQ-L-C-BLSF	19,600 lm	25 Ft	180 W	6

*Relocated Poles shall reuse existing LED Fixtures
**Mounting Heights are measured from Finished Grade

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 026109 STATE OF NEW YORK

TITLE:

Site Lighting Plan

SCALE: 1:70

DRAWN BY: DMZ

CHECKED BY: MAO

DATE: 11.08.2023

DRAWING NO. C8.00

Attachment: SP-1988-11P_drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)


delta sonic

ROMNEY ENTRANCE

BENDERSON / DELTA SONIC OFFICE



Attachment: SP-1988-11P_drawings_091024 (2252 : SP-1988-11P, 6009-6029 N. Bailey Ave)



Attachment: SP-1988-11P drawings_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAIN ENTRY - NE CORNER

BENDERSON / DELTA SONIC OFFICE



Attachment: SP-1988-11P: Attempts (R9104 : 25252) - SO-1988-11P: 6000-6020 N. Bailey Ave)

MAIN ENTRY - NE CORNER

BENDERSON / DELTA SONIC OFFICE



Attachment: SP-1988-11P_drawings_091014_(2825) : SP-1988-11P_6000-6020 N. Bailey Ave)



Attachment: SP-1988-11P_drawings_091924_(2824) : SP-1988-11P_6000-6020 N. Bailey Ave)

TOWN OF AMHERST

APPLICATION & REVIEW PROCEDURE

MAJOR SITE PLAN

MATERIALS MUST BE PROVIDED IN AN ELECTRONIC FORMAT THAT CONTAINS PDF FILES OF THE APPLICATION, EAF, SITE PLAN DRAWING SET SURVEY, LANDSCAPE PLAN, PRELIMINARY BUILDING FLOO PLANS / ELEVATIONS & ANY OTHER SUPPORTING INFORMATION. THIS MUST BE SUBMITTED WITH YOUR APPLICATION. APPLICATIONS WILL NOT BE TRANSMITTED WITHOUT THIS ELECTRONIC INFORMATION.

THIS ALSO APPLIES TO REVISED MATERIALS THAT AR SUBMITTED.

This application package includes the following:

- Application Procedures
- Application Form & Checklist
- Stormwater Pollution Prevention Plan Checklist
- Appendix A Town of Amherst EAF Addendum
- Appendix B Criteria for Required 8½" x 11" Sketches
- Appendix C Erie Sewer District No. 5 – Commercial / Industrial New & Existing Buildings Requirements

- IMPORTANT-

1. A pre-submittal consultation with Planning Department staff is *strongly recommended* prior to submitting an application. The pre-submittal meeting gives the applicant an opportunity to discuss with staff such items as:
   - classifying the action as a major site plan, minor site plan, or minor site plan adjustment;
   - determining what specific information will be required to be submitted with the application;
   - identifying and discussing issues that must be addressed as part of the SEQR review;
   - identifying any potential variances required to implement the project as proposed.

   An appointment is required for all meetings with Planning Department staff.

2. This site plan petition is subject to the requirements of 6 NYCRR Part 617, State Environmental Quality Review Act (SEQR), and Chapter 104 of the Town of Amherst Code, as amended. The Planning Board cannot make a SEQR determination unless a complete Environmental Assessment Form (EAF), including Town of Amherst EAF Addendum, and any required supplementary information such as traffic impact studies, archaeological reports, wetland delineations or geotechnical reports, are submitted. SEQR issues may be discussed with Planning Department staff at a recommended pre-submittal meeting. Unlisted Actions require a Short EAF; Type I Actions require a Full EAF. The following is a link to the NYSDEC website and fillable forms with instructions*:*
   http://www.dec.ny.gov/permits/6191.html.

3. **Review by the Town Design Advisory Board (DAB) is required for Major Site Plans located in the following Mixed-Use zoning districts:**

   Traditional Infill 2.5 (TI-2.5)
   Traditional Infill 4 (TI-4)
   Shallow Corridor 3 (SC-3)
   Deep Corridor 3 (DC-3)
   Deep Corridor 5 (DC-5)
   Center 2.5 (CTR-2.5)
   Center 5 (CTR-5)
   Center 8 (CTR-8)

   The application for DAB review is required to be filed in conjunction with the major site plan application.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

4. The application shall be executed or consented to in writing by the owner of the property.

5. **Any variances from the Zoning Board of Appeals, or any decision from the Town Board (e.g. removal of deed restrictions) must be obtained prior to action by the Planning Board on a Site Plan application.**

6. Submittal of an application grants permission to Town staff and Planning Board members to access the parcel(s) under consideration.

7. All site plan drawings must be prepared by a Registered Architect, Professional Engineer, Landscape Architect, or Land Surveyor (as applicable) licensed to practice in New York State.

8. If you wish to include a Coordinated Sign Plan application with the site plan petition, a separate application must be completed. Contact the Planning Department for a copy of a Coordinated Sign Plan application package.

9. All drawings should be no larger than 24 in. x 36 in. If site characteristics warrant larger plan sheets, they may be accepted subject to Planning Department concurrence. All drawings must also reserve a 4 in. x 6 in. area in the lower right hand corner for official Town use.

APPLICATION PROCEDURES

1. Applicant secures application package from the Planning Department, 5583 Main Street, Williamsville, NY 14221. (716) 631-7051. Forms are also available online at: www.amherst.ny.us, (keyword: Planning).

2. Applicant prepares information as required on the Site Plan Submittal Checklist, attached. NOTE: Some proposals may not require all items on the checklist; please verify with the Planning Department.

3. Applicant schedules an appointment with the Planning Department to review the following:
   - a complete set of site plan drawings, preliminary building elevations and floor plans (no larger than 24" x 36" in size)
   - Environmental Assessment Form (EAF) & Town EAF Addendum
   - any supporting reports and materials
   - verification from the Town Assessor that the address in the application is correct

4. Applicant schedules an application submittal appointment with the Planning Department. NO SITE PLAN WILL BE ACCEPTED FOR REVIEW WITHOUT A PRE-SET SUBMITTAL APPOINTMENT.

5. At the submittal appointment, applicant provides fourteen (14) complete and collated sets of drawings and application information to the Planning Department **(materials will not be accepted unless folded into 9" x 12" in size),** including**:**
   - application form
   - Environmental Assessment Form (EAF)
   - supporting reports / materials
   - complete set of site plan drawings, preliminary building elevations and floor plans (**at least one (1) set of drawings must bear a raised or wet seal and signature of the design professional** who prepared the plans; the remaining copies may be submitted with a facsimile of the seal and signature)
   - digital files of all materials in pdf format
   - an 8½" x 11" reduction of the sketch plan or plat drawing (see Appendix B)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

6. After approval for filing by the Planning Department, applicant submits all necessary fees to the Town Clerk. **(See Schedule of Fees on first page of application and make checks payable to: Town of Amherst.)**

7. The applicant returns a copy of the filing receipt to the Planning Department.

8. The Planning Department transmits remaining thirteen (13) copies of the application and supporting materials to:
   - Assessor
   - Commissioner of Building
   - Town Engineer
   - Superintendent of Highways
   - Traffic/Safety Board
   - Fire Chiefs' Association
   - Plumbing Division
   - Right-of-Way Agent
   - Police Department (if applicable)
   - Zoning Enforcement Officer
   - Other Town and outside agencies, as applicable

9. Within 30 days of its receipt of the complete application for Site Plan approval, each agency completes its review and notifies the Planning Department in writing of its comments or recommendations as required by Ordinance.

10. The applicant may be required to submit revised plans, reports, or materials to address review agency comments. The procedures for submittal of revised plans are as follows:

    - A cover letter addressing all comments received to date is required.
    - "Highlight" the area of change on the drawings and provide a notation describing the change.
    - Revised plans/materials are required. Planning staff should be contacted to determine the number of sets needed.
    - All revised plans and materials must also be provided in an electronic format that contains pdf files of the revised information.

11. The Planning Board reviews the EAF to determine whether a Draft Environmental Impact Statement (DEIS) is required. The petitioner will be advised in the event that a DEIS is required and afforded the opportunity to prepare it. If the petitioner declines, the Planning Board will prepare the DEIS at the petitioner's expense. The public hearing will be held on the DEIS concurrently with the Planning Board hearing on the application.

12. Planning Board Meeting Procedures:

    The applicant or representative presents the project at the public hearing before the Planning Board and is available to answer any questions. The Planning Board may take any of the following actions:

    - Adjourn the hearing to a future Planning Board meeting (hearing remains open).
    - Close the hearing and table action on the site plan to a future Planning Board meeting. (The Planning Board may remove the item from the agenda until such time as all required information is provided.)
    - Close the hearing and make a decision on the site plan.

    All determinations on matters before the Planning Board are made after all public hearings on that meeting's agenda are completed.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

13. A copy of the Planning Board's determination will be provided to the applicant, his / her representative, the Building Commissioner and the Town Clerk approximately 1 week following the Planning Board meeting at which it was heard.

14. If the Planning Board approves a Site Plan with conditions, the Planning Department will work with the applicant to ensure that all conditions of the approval are satisfactorily addressed. When all conditions are satisfied, the applicant submits **seven (7) final copies** of the complete set of all site plan drawings, folded into 9" x 12". For site plans in the Mixed-Use zoning districts, building elevations will also be required.

    All 7 sets must have original wet seals and include the required 4 in. x 6 in area in the lower right hand corner for official Town use. These drawings will be stamped and signed "Approved" by the Planning Director and transmitted to Town Departments for their files and use.

15. A building permit will not be issued by the Building Department until the stamped and signed Site Plan is issued by the Planning Director.

NOTE: Please check with the Planning Department to determine the deadline date for filing applications. Due to the public hearing notice requirements and department reviews, no site plan application will be placed on the Planning Board agenda after the deadline for filing has closed. Scheduling may be delayed if an application is incomplete.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Major Site Plan Review

For Official Use

File #: _____ **Acreage** _____ **Fee $** _____

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Received by Planning Department _____ RECEIVED BY DATE

Fee Paid to Town Clerk _____ RECEIVED BY DATE

Site Plan Review		**Fill In Applicable Fees**
1 acre or less	$1,250.00	_____
Each additional acre or fraction thereof	$ 650.00/acre	_____
Amendments to Site Plans	$1,200.00	_____
Request for Relief of / Change to Conditions of Site Plan Approval	$1,200.00	_____
Request for Extension of Site Plan Approval	$ 450.00	_____
Stormwater Pollution Prevention Plan		
1 - 4.99 Acres	$ 500.00	_____
5 - 10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	$ 15.00	_____
	TOTAL FEE:	**$**_____

To Be Completed By Applicant

Petitioner:

Name: Benderson Development Company, LLC

Address: 570 Delaware Avenue

Buffalo , New York 14202

city state zip code

Phone: 716-878-9626 Fax: _____

E Mail: _____

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAJOR SITE PLAN APPLICATION (con't) ***Page 2***

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney)**:**

Name: James A. Boglioli

Address: 570 Delaware Avenue

Buffalo , New York 14202
city state zip code

Phone: 716-878-9626 Fax:

E Mail: jmb@benderson.com

Project Location (must be verified by Town Assessor's Office)**:**

Address: 6000 - 6040 North Bailey Avenue

SBL No(s): 54.14-1-12.211, 54.14-1-12.211/A, 54.14-1-12.211/B

Project Name: Two Building additions 5,441sf & 14,554sf

Project Description: Please see the attached letter of intent

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

MAJOR SITE PLAN APPLICATION (con't) ***Page 3***

If this petition is an amendment to a previously approved site plan, please describe the proposed changes (include type and size of existing structures and number of existing parking spaces):

Please see the attached letter of intent

	existing	proposed	total
Gross Floor Area (non-residential):	246,740	266,735	+19,995
Gross Floor Area Residential:	N/A	N/A	N/A
Number of Residential Units:	N/A	N/A	N/A
Number of Parking Spaces:	452	688	+236

Acreage of Parcel: 17.43

(list each parcel separately)

Frontage on Public Roads: Romney: 945'

(list each road separately) N. Bailey: 445.6'

Existing Zoning District(s) R-D

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Site Plan Submittal Requirements and Checklist

The following checklist outlines the information required by the Planning Department to accept a Site Plan application for review. ***It is strongly recommended that you make an appointment with Planning Staff to determine which items apply to your application***.

Item No.	Item	Submitted	Official use
I Basic Drawing Information			
1.0	**Drawing size not to exceed 24" x 36"**		
2.0	**Title of Drawing**		
3.0	**Name and address of Applicant**		
4.0	**Name of person preparing drawing**		
5.0	**Wet seal/raised seal and signature of NYS licensed architect, engineer, landscape architect, or surveyor (as applicable)**		
6.0	**Project address**		
7.0	**Zoning of subject property and adjacent parcels**		
8.0	**North point, scale, date, and revision date(s)**		
9.0	**4" x 6" reserved area in lower right hand corner for official Town use**		
II Structures, Paved Areas, & Open Space			
1.0	**Existing and Proposed Streets**		
1.1	Names of all existing and proposed streets		
1.2	Width and radii of proposed curb-cuts		
1.3	Existing curb-cuts on adjacent and opposite properties		
1.4	Show ROW width, pavement dimensions, lane widths, pavement markings, and proposed signage on proposed streets		
1.5	Show proposed ROW consistent with planned NYSDOT, Erie County, or Town road projects (if applicable)		
1.6	Show location of proposed cross access to adjacent parcels along with a draft easement		
1.7	Designation of Fire Lanes (if applicable)		
1.8	Fire apparatus access roads		
1.9	Label any proposed roads as public or private		
1.10	Location and dimensions of sidewalks		
1.11	Typical cross sections and profiles of proposed streets, pedestrian walkways, and bikeways		
2.0	**Proposed Structures**		
2.1	Location and complete dimensions of proposed structures		
2.2	Setback dimensions of structure(s) to all property lines		
2.3	Proposed use of structures		
2.4	Gross square feet area of each structure		
2.5	Location of all building entrances		
2.6	Indicate type of roof construction/materials		
2.7	Location, height, and design detail of existing and proposed fences and walls		
2.8	Location of light standards and building mounted lights		
2.9	Location of dumpster and detail of dumpster enclosure with gate		
2.10	Layout and dimensions of the lot(s) proposed for development		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.	Item	Submitted	Official use
II Structures, Paved Areas, & Open Space (cont'd)			
3.0	**Floor Plans with individual rooms and spaces labeled** (fully dimensioned)		
4.0	**Building elevations with height dimensions from finished grade to the highest point of the roof and to midpoint of gable or hip of a pitched roof.** (fully dimensioned)		
4.1	Show screening of mechanical equipment		
5.0	**Parking/Loading/Stacking Areas**		
5.1	Location and complete dimensions of all paved areas		
5.2	Setback dimensions of all paved areas to property lines		
5.3	Dimension of typical parking space and drive aisles		
5.4	Location and layout of handicapped parking spaces & access aisles		
5.5	Detail of vertical signage for handicapped parking and access aisles		
5.6	Indicate minimum parking requirement & number of spaces provided		
5.7	Proposed signage for directing and guiding traffic		
5.8	Curb cut permits from NYS, Erie County, or Town (if applicable)		
5.9	Pedestrian connections (from proposed structures to public sidewalk network)		
6.0	**Location and proposed development of all open spaces, including parks, playgrounds, and open reservations**		
III Utilities and Drainage			
1.0	**Engineers Report** (bound separately from the Stormwater Pollution Prevention Plan [SWPPP])		
1.1	Stamped/sealed and signed by NYS licensed architect or professional engineer		
1.2	Proposed water service sizing, RPZ pressure and fire safety flow and pressure calculations		
1.3	Proposed sanitary sewer facility load calculations (avg. & peak flows) including calculation of the peaking factor		
1.4	Proposed storm drainage facility calculations (see information included with this application)		
2.0	**Grading Plan**		
2.1	Existing and proposed grades indicated (proposed grades may not exceed 1 on 3)		
3.0	**Water Service**		
3.1	Location, size and material of existing and proposed facilities		
3.2	Location of existing and proposed fire hydrant location(s)		
3.3	Indicate use of sprinklers, location of Fire Department connection, and proposed fire protection systems		
3.4	Existing and proposed meter/RPZ size and location		
3.5	Applicable construction details		
4.0	**Sanitary Sewers**		
4.1	Locations, sizes, slopes, inverts, and materials of all existing and proposed facilities		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.		Submitted	Official use
III Utilities and Drainage (cont'd)			
4.2	Applicable construction details		
4.3	Proposed water/oil/grease interceptor sizing calculations by a professional engineer (if applicable)		
5.0	**Storm Drainage**		
5.1	Locations, sizes, slopes, inverts, and materials of existing and proposed storm drainage facilities		
5.2	Connection of roof drains to proposed drainage system		
5.3	Applicable Town Standard construction details		
5.4	Existing and proposed swales and ditches		
5.5	Detention area cross-section and high-level elevations		
5.6	County and State approval for tie-in to existing sewers		
6.0	**Stormwater Pollution Prevention Plan (SWPPP) as applicable** (bound separately from the Engineer's Report) **See attached checklist.**		
7.0	**Natural Gas Service**		
8.0	**Location of transformers, generators and other mechanical equipment; include detail drawings (if applicable)**		
9.0	**Downstream Sanitary Capacity Analysis (DSCA) Report** (must be submitted if proposed average flows are greater than 2,500 gallons per day)		
9.1	The DSCA Report must include a detailed downstream sewer capacity analysis and the calculations of and commitment to (via Developer commitment letter) the required financial contribution to the Town's I/I mitigation fund based on peak flow conditions. The contribution must be based on $250 per gallon per minute of mitigated flow		
IV Lighting Plan			
1.0	**Photometric plan showing light spread in foot candles at property lines**		
1.1	Detail of all light standards, including dimension of height from finished grade		
1.2	Detail of all exterior lighting fixtures		
V Landscape Plan			
1.0	**Wet/raised seal and signature of a licensed Landscape Architect**		
2.0	**Provide a calculation of the total Parking area and a calculation of interior parking area in square feet and as a percentage**		
3.0	**Indicate location, size, number and type of proposed landscape materials**		
4.0	**Indicate location, type and size of <u>all</u> existing trees 4" caliper or larger and indicate which will be removed or retained**		
VI Other Required Information/General Requirements			
1.0	**Complete boundary survey that includes all existing structures, acreage, legal description with reference to a property line, street, or other known feature, and easements plotted to scale by a NYS licensed land surveyor**		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.		Submitted	Official Use
VI Other Required Information/General Requirements (cont'd)			
1.1	Copies of all easements, reciprocal access agreement or similar leag documents		
2.0	**Topographic Survey with a 30 ft. buffer outside all property lines by a NYS licensed land surveyor**		
3.0	**Draft of any deed restrictions, covenants, provisions for home associations and common ownership, and reciprocal easement agreements (as applicable).**		
4.0	**For assessment purposes, state intent to apply for condominium status (if applicable).**		
5.0	**Completed and signed Environmental Assessment Form**		
5.1	Soil boring report and geotechnical report prepared by a qualified Professional Engineer (if applicable)		
5.2	Traffic Impact Study (if applicable)		
5.3	Archaeological survey (if applicable		
5.4	Wetland Delineation report (if applicable)		
6.0	**Show existing zoning(s) of both the subject property and adjacent parcels on the Site Plan and the Landscape Plan**		
7.0	**Location of NYSDEC wetlands (including buffer area) and/or federal wetlands; indicate jurisdictional status**		
8.0	**Location of Floodway and floodplain** (if applicable)		
9.0	**Documentation pertaining to any conditions of zonings, including copies of required deed restrictions; indicate date of rezoning and the parcel address under which it was rezoned (if applicable)**		
10.0	**Documentation related to any required variances granted by the ZBA**		
11.0	**For residential site plans, provide a statement from the appropriate school district that adequate school sites and facilities are available.**		
12.0	**8 1/2" X 11" reduction of primary site plan drawing (see appendix "B" of application package for specifications)**		
13.0	**A CD containing a PDF of all site plan drawings (Must also be provided with revised drawings)**		
VII Additional Required Information for Projects in the Mixed Use Districts			
1.0	**Design Advisory Board Application**		
1.1	Required for Major Site Plan		
1.2	Required at the Planning Directors Discretion for Minor Site Plans		
2.0	**Block & Street Network Plan**		
2.1	Designation of Core, Local & Alley streets		
2.2	Dimensions of Blocks		
3.0	**Block Usage Plan (as applicable)**		
3.1	Designation of site usage for each block including open space areas		
4.0	**Phasing Plan**		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
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For official use only:

_____
Approved/Date

X:\Current_Planning\Application Forms 2013 Working Doc\Major Site Plan\Site Plan Submittal Requirements and Checklist (3).doc

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
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TOWN OF AMHERST
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
-- ADDENDUM --

1. For each applicable category of proposed <u>new</u> structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

   _____ Geotechnical report attached _____ Not applicable

3. Is your property located: On Youngs Road between Dodge and Klein Roads? □ Yes □ No
   On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? □ Yes □ No

   If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? □ Yes □ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
   _____
   _____

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: □ Yes □ No

   Describe_____
   _____

   (Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per peak hour upon completion of project_____
   Source: _____

8. Will blasting occur during construction? □ Yes □ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? □ Yes □ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:
    _____ average flow _____ peak flow.

    (Average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

11. Based on the Town's *2011 Reconnaissance Level Survey of Historic Resources,* is your property 'blue-rated' for historic significance? □ Yes □ No

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NY 14202
716.886.0211.P 716.886.2269.F

November 15, 2023

VIA HAND DELIVERY
Robert J. Gilmour., Chair
Members of the Planning Board
Town of Amherst
5583 Main Street
Williamsville, NY 14221

Re: Application for Site Plan Approval
6000 – 6040 North Bailey Ave, Amherst, New York (BDC: 1723)

Dear Chair Gilmour and Members of the Planning Board:

In connection with the above-referenced property, Benderson Development Company, LLC and Delta Sonic Carwash Systems, Inc. is seeking to relocate its office from downtown Buffalo to Amherst. As part of this relocation, both companies are seeking to relocate approximately 250 employes to Amherst. In addition, Delta Sonic is proposing to locate its various warehouse locations in Western New York to the property which includes, research and development, warehousing, fabrication, and soap blending uses.

The Subject Property

As the Planning Board is aware, Amherst Development Park is a business park located in the Research and Development (RD) zoning district. It maintains frontage on North Bailey Ave. and Romney Road and is improved with five buildings. An aerial photograph of the property is attached as **Exhibit A**. To the north, across Romney Road, is the Boulevard, a large shopping center in the SC zoning district. To the west, abutting the Subject Property, is the Boulevard South, another shopping center in the SC zoning district. To the east, across N. Bailey Road will be another large development anchored by Costco and Dick's and located in the SC zoning district. To the south is an office building and the Boulevard towers, located within the CTR-5 and MFR-5 zoning districts, respectively. The properties located to the north, east and west of the Subject Property are all owned by Benderson Development.

The Proposed Project

In order to accommodate the new offices and the Delta Sonic warehouse, Benderson is proposing the following changes:

- A 5,441 s.f. building expansion to connect the existing 26,709 s.f. and 35,826 s.f. buildings located along Romney Road in the northwest corner of the Subject Property to accommodate the new offices.
- A 14,554 s.f. building expansion to connect the existing 34,632 s.f. and 59,591 s.f. buildings located along rear of the property in the southwest corner of the Subject Property to accommodate Delta Sonic's warehouse uses.
- The reconfiguration of the parking field along Romney Road to add an additional row of parking against Romney Road and the reconfiguration of the parking to the south to add an extra row of parking along the southern property line.

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BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NY 14202
716.886.0211.P 716.886.2269.F

- The reconfiguration of the area between the two buildings (office and warehouse) to add outdoor greenspace, patio area and parking, as well as to re-work the loading docks to the southerly building.

- Additional site, utility, landscaping, sidewalk and other enhancements in connection with the above - referenced changes.

- Upgrading of the building façade to accommodate the new development.

Conclusion

We look forward to working with the Town on this project. We believe this project represents a great development opportunity for this area that is consistent with the previous development of the property. If there are any questions regarding this letter or the enclosed documentation, please feel free to contact me at (716) 878-9626 or jamesboglioli@benderson.com.

Thank you,
BENDERSON DEVELOPMENT COMPANY, LLC
James A. Boglioli
James A. Boglioli, Esq.
Director, Right to Build – Northeast US

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Exhibit A

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
-- ADDENDUM --

1. For each applicable category of proposed new structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
Odessa silt loam	Severe	Severe	Severe	Severe	Severe

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

   X Geotechnical report attached _____ Not applicable
   Report will be submitted as soon as it is completed

3. Is your property located: On Youngs Road between Dodge and Klein Roads? ☐ Yes ☑ No
   On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? ☐ Yes ☑ No

   If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? ☐ Yes ☑ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
   Blvd Consumer Square; Amherst Commerce park; Maple Crossing; Blvd South (TJ Maxx Plaza);
   1401 - 1405 Niagara Falls Blvd; 3980 Maple Road; 50 Keph Drive; 1715 & 1721 Niagara Falls Blvd

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: ☐ Yes ☑ No

   Describe_____
   _____

   (Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per peak hour upon completion of project 77 TOTAL TRIPS
   Source: ITE - Trip Generation Manual

8. Will blasting occur during construction? ☐ Yes ☑ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? ☐ Yes ☑ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:
    2,000 GPD average flow 12.7 GPM peak flow.

    (Average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

11. Based on the Town's *2011 Reconnaissance Level Survey of Historic Resources,* is your property 'blue-rated' for historic significance? ☐ Yes ☑ No

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Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:
Proposed Chipotle

Project Location (describe, and attach a location map):
160-190 Main Street, East Aurora, NY

Brief Description of Proposed Action:
The proposed project is to infill an existing 3,196 S.F. vacant space within an existing 15,775 S.F. building with associated utility infrastructure.

Name of Applicant or Sponsor:	Telephone: 716-878-9683
Benderson Development Company, LLC	E-Mail: davidzuppelli@benderson.com

Address:
570 Delaware Ave

City/PO:	State:	Zip Code:
Buffalo	New York	14202

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:	☐	☑

3. a. Total acreage of the site of the proposed action? 3.3 acres
   b. Total acreage to be physically disturbed? 0.03 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 3.34 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:
   ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

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	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES
If Yes, identify:	☑	☐
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES
	☐	☑
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES
If the proposed action will exceed requirements, describe design features and technologies: Existing	☐	☑
10. Will the proposed action connect to an existing public/private water supply?	NO	YES
If No, describe method for providing potable water: Existing	☐	☑
11. Will the proposed action connect to existing wastewater utilities?	NO	YES
If No, describe method for providing wastewater treatment: Existing	☐	☑
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES
	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑	☐
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES
	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:		

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14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☑ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe: Sheet drain to existing site storm infrastructure		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: David Zuppelli Date: 9.6.24

Signature:  Title: Civil Engineer

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PRINT FORM

CARMINAWOOD
DESIGN

STORMWATER POLLUTION PREVENTION PLAN
for
CONSTRUCTION ACTIVITIES

At

Amherst Development Park
6000-6040 North Bailey Ave
Town of Amherst, Erie County, New York

Prepared for

Benderson Development Company, LLC

570 Delaware Avenue
Buffalo, NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

November 2023



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Section 102 - Project Name and Location

Section 103 - Operator's Name and Address

Section 104 - Project Description

Section 105 - Runoff Coefficient, Soils and Rainfall Information

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Section 112 - Erosion and Sediment Controls

- **Section 112.1** - Stabilization Practices
- **Section 112.2** - Structural Practices
- **Section 112.3** - Sequence of Major Activities
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Section 113 - Other Controls

Section 114 - Compliance with Federal, State and Local Regulations

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Section 118 - Spill Prevention Control and Countermeasures (SPCC) Plan

- **Section 118.1** - Materials Covered
- **Section 118.2** - Material Management Practices
- **Section 118.3** - Spill Prevention and Response Procedures

Section 119 - Control of Non-Storm Water Discharges

Section 120 – Storm Water Control Facility Maintenance

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Appendix A Site Location Maps

Appendix B NYSDEC Notice of Intent (NOI)

Appendix C MS4 SWPPP Acceptance Form

Appendix D Engineer's Report

Appendix E NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001

Appendix F Forms

- Contractor's Certification
- Owner/Operator Certification
- SWPPP Preparer Certification
- NYSDEC Letter of Acknowledgment

Appendix G NYSDEC Notice of Termination (NOT)

Town of Amherst Level 1 Inspection – Post Construction Stormwater Management

Appendix H Construction Documents

Appendix I Standard Erosion Control Details

Appendix J NYSDEC Stormwater Management Inspection Lists

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101 SCOPE

A. **PURPOSE:** Benderson Development Company, LLC 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 Benderson Development Company, LLC; and/or liquidated damages. This section provides a descriptive explanation of Benderson Development Company, LLC 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 F of this report.

Approval from a regulated, traditional land use control MS4:

1. An **owner or operator** of a construction activity that is not 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

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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.

H. **INSPECTIONS AND RECORD-KEEPING:**

A. **<u>General Construction Site Inspection and Maintenance Requirements</u>**

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.

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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;

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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.

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.

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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

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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.

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 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.

The Town of Amherst - Notice of Termination Requirement: Prior to submitting the NOT, the Town of Amherst requires a Level 1 inspection of all stormwater management practices. See Appendix G: Town of Amherst Level 1 Inspection – Post Construction Stormwater Management.

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102 PROJECT NAME AND LOCATION

Amherst Development Park

6000-6040 North Bailey Ave

Town of Amherst, County of Erie, New York

42.996°N, 78.817°W

Estimated Area of Site ≈ 17.14 acres

Estimated Area to be Disturbed by Construction Activities ≈ 6.95+/- acres

A general location map is included as Appendix A.

103 OPERATOR'S NAME AND ADDRESS

Benderson Development Company, LLC

570 Delaware Ave.

Buffalo, NY 14202

Contact Person: Matt Oates

Telephone: 716-878-9397

104 PROJECT DESCRIPTION

This project is a site redevelopment of the existing Amherst Development Park located on the south side of Ridge Lea Road and on the west side of North Bailey Ave in the Town of Amherst. The site is located north of Meyer Road and east of Niagara Falls Boulevard. The Boulevard Consumer Square is located north and west of the project site, Amherst Commerce Park is located east of the project site and Boulevard Towers Apartments are located south of the project site. The site is currently fully developed and occupied by existing commercial buildings that will remain. Proposed construction will include two building additions and parking lot/driveway expansions. Site construction will also include utility improvements and new stormwater management areas. The overall site is 17.14 of which 6.95 acres will be disturbed by construction activities. The project site is currently zoned R-D.

Soil disturbing activities will include:

A. Construction of temporary construction exit points

B. Clearing & grubbing of the site within disturbance limits

C. Installation of stormwater management 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

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H. Construction of buildings

This project is owned by Benderson Development Company, LLC and will be developed by Benderson Development Company, LLC The work area consists of approximately 6.95+/- 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" = 85. The post-construction runoff curve number for the site will be "CN" = 95. Approximately 6.95+/- acres total will be disturbed by construction activities.

See soils information located in Appendix I.

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

The runoff generated from this site will discharge to an unnamed open/closed drainage system north of the site that discharges to Ellicott Creek and ultimately the Niagara River.

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

No critical habitats have been determined to be on the site.

111 WETLANDS AND/OR OTHER SURFACE WATERS

No wetlands or other surface waters are located on the site

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.

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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.

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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 STORM WATER MANAGEMENT

Refer to Appendix D, Engineer's Report

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

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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

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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.

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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 Amherst. All changes to the SWPPP must be approved by the Town of Amherst prior to applying changes to the SWPPP in the field.

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

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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

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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

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- 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.

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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

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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 Amherst. 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.

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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

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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 bioretention areas shall match the frequencies listed on the “Bioretention Operation, Maintenance and Management 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.

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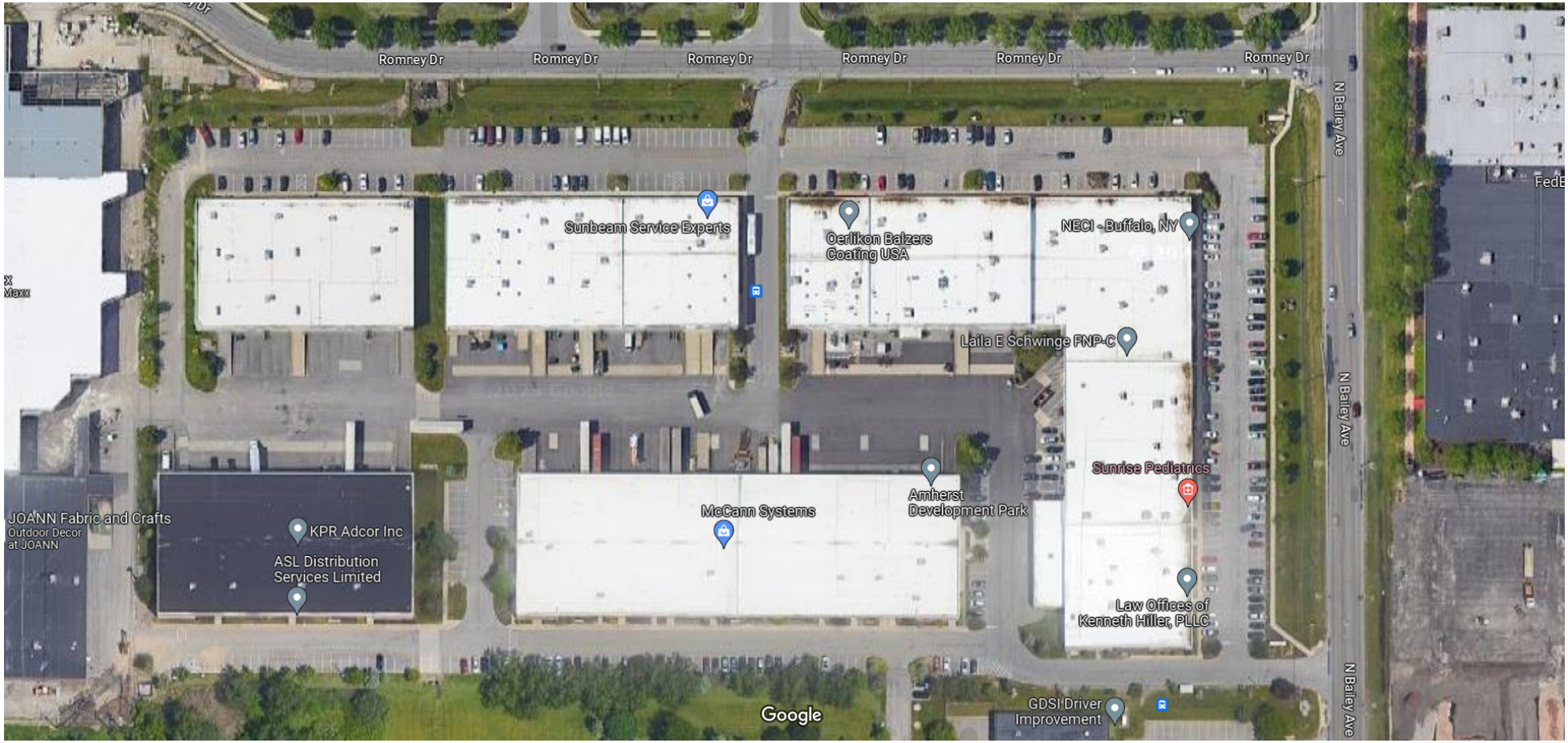
Appendix A

Site Location Maps

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1.c

Google Maps romney road

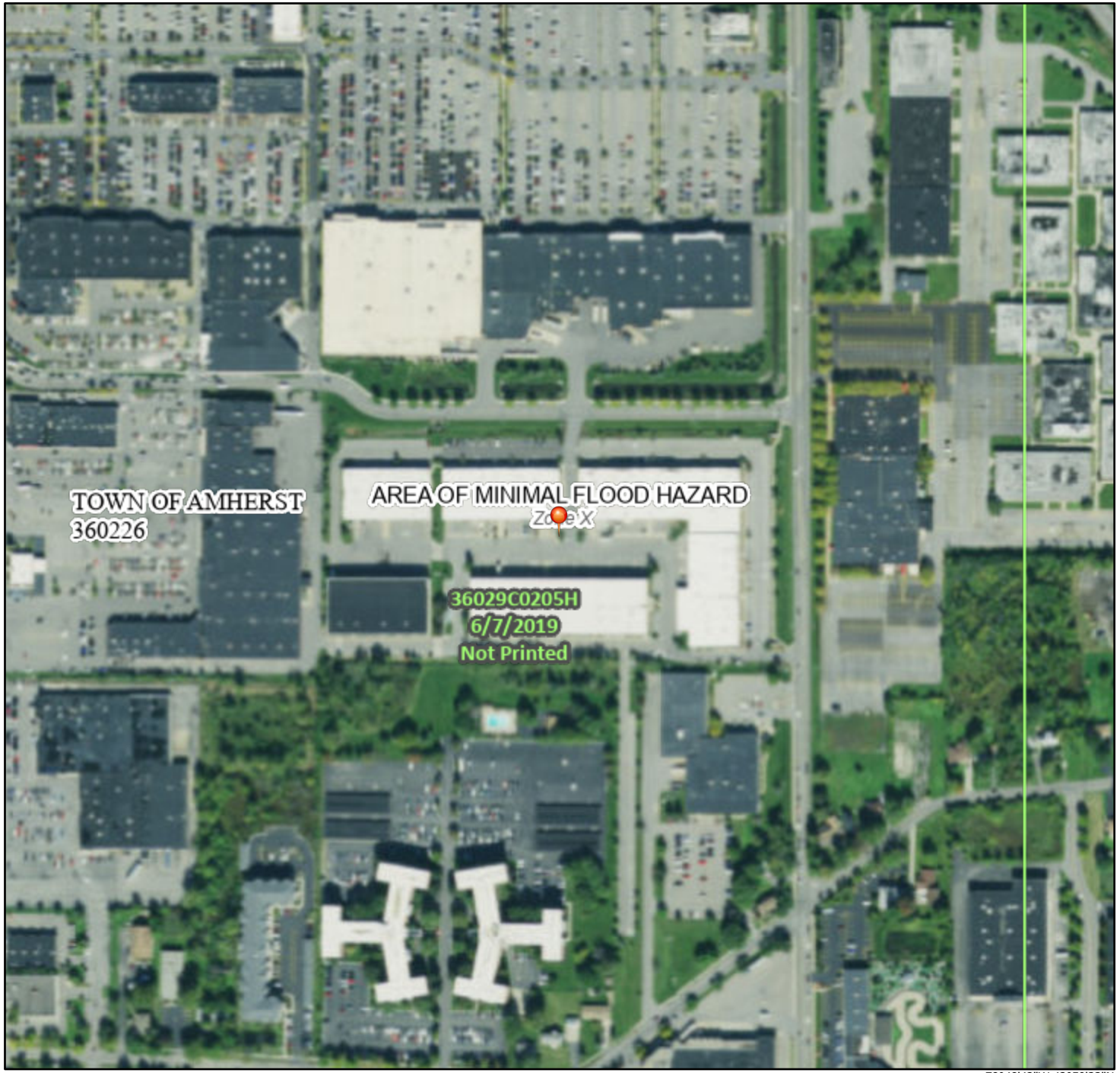


Imagery ©2023 Airbus, CNES / Airbus, Maxar Technologies, New York GIS, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2023 100 ft

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National Flood Hazard Layer FIRMette

78°49'19"W 43°N



78°48'42"W 42°59'33"N

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

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 (BF *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH,*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazar as of 1% annual chance flood with a depth less than one foot or with d areas of less than one square mil
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk du Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zo*
- Effective LOMRs
- Area of Undetermined Flood Haza

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Ch
- 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 appro point selected by the user and does not r 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 ma was exported on 11/13/2023 at 9:45 AM and does not reflect changes or amendments subsequent to this date an time. The NFHL and effective information may change or become superseded by new data over time.

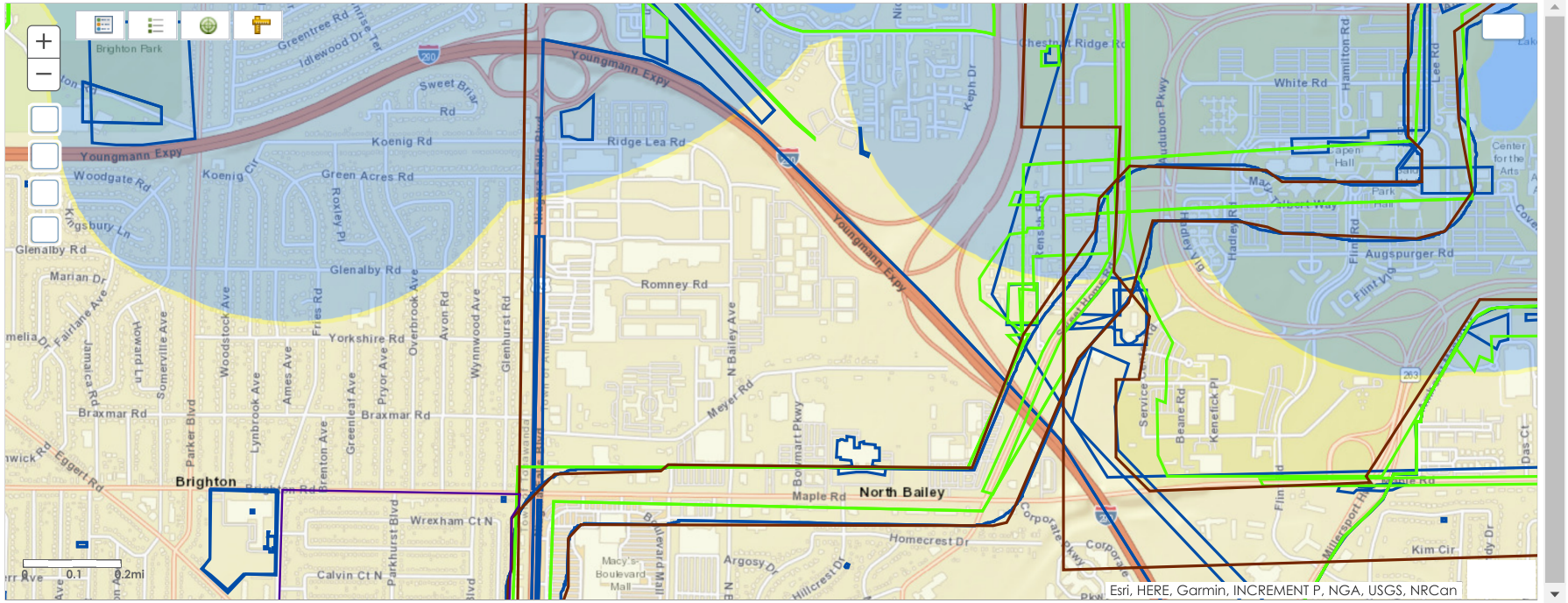
This map image is void if the one or more of the following n elements do not appear: basemap imagery, flood zone labe legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized area regulatory purposes.

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Appendix B

NYSDEC Notice of Intent (NOI)

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NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
Benderson Development Company

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Oates

Owner/Operator Contact Person First Name
Matt

Owner/Operator Mailing Address
570 Delaware Ave

City
Buffalo

State
NY

Zip
14202 -

Phone (Owner/Operator)
7168780397

Fax (Owner/Operator)
- -

Email (Owner/Operator)
MattOates@benderson.com

FED TAX ID
16-1549911 (not required for individuals)

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Project Site Information

Project/Site Name
Amherst Development Park

Street Address (NOT P.O. BOX)
6000-6040 North Bailey Ave

Side of Street
○ **North** ○ **South** ○ **East** ● **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Town of Amherst

State: NY
Zip: 14226-
County: Erie
DEC Region: 9

Name of Nearest Cross Street
Romney Road

Distance to Nearest Cross Street (Feet)
0

Project In Relation to Cross Street
○ **North** ● **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel
54.14-1-19.1

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
-7 8817
Ex. -73.749

Y Coordinates (Northing)
42996
Ex. 42.652

2. What is the nature of this construction project?

○ **New Construction**

● **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

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3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use	Post-Development Future Land Use
○ FOREST	○ SINGLE FAMILY HOME
○ PASTURE/OPEN LAND	○ SINGLE FAMILY SUBDIVISION
○ CULTIVATED LAND	○ TOWN HOME RESIDENTIAL
○ SINGLE FAMILY HOME	○ MULTIFAMILY RESIDENTIAL
○ SINGLE FAMILY SUBDIVISION	○ INSTITUTIONAL/SCHOOL
○ TOWN HOME RESIDENTIAL	○ INDUSTRIAL
○ MULTIFAMILY RESIDENTIAL	● COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
○ INDUSTRIAL	○ ROAD/HIGHWAY
● COMMERCIAL	○ RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	○ BIKE PATH/TRAIL
○ RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
○ BIKE PATH/TRAIL	○ PARKING LOT
○ LINEAR UTILITY	○ CLEARING/GRADING ONLY
○ PARKING LOT	○ DEMOLITION, NO REDEVELOPMENT
○ OTHER	○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
	○ OTHER

Number of Lots

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
17.1	7.0	3.9	5.9

5. Do you plan to disturb more than 5 acres of soil at any one time? ● **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

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

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date	End Date
03/01/2024	01/01/2025

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9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name: Ellicott Creek

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ● Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ● Yes ○ No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ Yes ● No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ Yes ● No
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ Yes ● No
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ Yes ● No

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15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ● Yes ○ No ○ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

Town of Amherst & NYSDOT

open/closed stormwater drainage system

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ● No ○ Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ Yes ● No

19. Is this property owned by a state authority, state agency, federal government or local government? ○ Yes ● No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ Yes ● No

21. 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 ○ No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ● Yes ○ No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ● Yes ○ No

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24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer: Carmina Wood Design

Contact Name (Last, Space, First): Wood, Christopher

Mailing Address: 487 Main Street Suite 600

City: Buffalo

State: NY Zip: 14203-

Phone: 7168422165 Fax: - -

Email: cwood@carminawooddesign.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name: Christopher **MI**:

Last Name: Wood

Signature:

Date: 11/16/2023

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25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ● Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ● Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ● Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ● Rock Outlet Protection
- ○ Streambank Protection

Other

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ● **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. 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 (2010 version).

- ● 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).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

0.749 **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

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7738089822

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)	
RR Techniques (Area Reduction)				
○ Conservation of Natural Areas (RR-1)		and/or		
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or		
○ Tree Planting/Tree Pit (RR-3)		and/or		
○ Disconnection of Rooftop Runoff (RR-4)		and/or		
RR Techniques (Volume Reduction)				
○ Vegetated Swale (RR-5)				
○ Rain Garden (RR-6)				
○ Stormwater Planter (RR-7)				
○ Rain Barrel/Cistern (RR-8)				
○ Porous Pavement (RR-9)				
○ Green Roof (RR-10)				
Standard SMPs with RRv Capacity				
○ Infiltration Trench (I-1)				
○ Infiltration Basin (I-2)				
○ Dry Well (I-3)				
○ Underground Infiltration System (I-4)				
○ Bioretention (F-5)			1.97	
○ Dry Swale (O-1)				
Standard SMPs				
○ Micropool Extended Detention (P-1)				
○ Wet Pond (P-2)				
○ Wet Extended Detention (P-3)				
○ Multiple Pond System (P-4)				
○ Pocket Pond (P-5)				
○ Surface Sand Filter (F-1)				
○ Underground Sand Filter (F-2)				
○ Perimeter Sand Filter (F-3)				
○ Organic Filter (F-4)				
○ Shallow Wetland (W-1)				
○ Extended Detention Wetland (W-2)				
○ Pond/Wetland System (W-3)				
○ Pocket Wetland (W-4)				
○ Wet Swale (O-2)				

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Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ Hydrodynamic	
○ Wet Vault	
○ Media Filter	
● Other WQ Structure	3.92

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name: TBD

Manufacturer: TBD

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0.094 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ● **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

0.056 **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

0.655 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

0.749

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ● **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

0.230 **acre-feet**

CPv Provided

0.230 **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

20.51 **CFS**

Post-development

13.54 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

41.10 **CFS**

Post-development

25.60 **CFS**

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37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● Yes ○ No

If Yes, Identify the entity responsible for the long term Operation and Maintenance

Benderson Development Company

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

-RRv is required for any new impervious within a redevelopment project
-Onsite soils with slow infiltration rates (Hydrologic soil group "D")

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40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][ ][ ].[ ]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ● **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [N][Y][R][ ][ ][ ][ ][ ][ ]

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: Matt

MI:

Print Last Name: Oates

Owner/Operator Signature:

Date: / /

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix C

MS4 SWPPP Acceptance Form

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Benderson Development, LLC
2. Contact Person:	Matt Oates
3. Street Address:	570 Delaware Ave
4. City/State/Zip:	Buffalo, NY 14202
II. Project Site Information	
5. Project/Site Name:	Amherst Development Park
6. Street Address:	6000-6040 North Bailey Ave
7. City/State/Zip:	Amherst, NY 14226
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:	Town of Amherst
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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 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. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix D

Engineer's Report

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

ENGINEER'S REPORT

for

Amherst Development Park

6000-6040 North Bailey Ave
Town of Amherst, Erie County, New York

Prepared for

Benderson Development Company, LLC

570 Delaware Avenue
Buffalo, NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

November 2023



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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- HydroCAD Analysis

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Section 1 – Location & Description

This project is a site redevelopment of the existing Amherst Development Park located on the south side of Ridge Lea Road and on the west side of North Bailey Ave in the Town of Amherst. The site is located north of Meyer Road and east of Niagara Falls Boulevard. The Boulevard Consumer Square is located north and west of the project site, Amherst Commerce Park is located east of the project site and Boulevard Towers Apartments are located south of the project site. The site is currently fully developed and occupied by existing commercial buildings that will remain. Proposed construction will include two building additions and parking lot/driveway expansions. Site construction will also include utility improvements and new stormwater management areas. The overall site is 17.14 of which 6.95 acres will be disturbed by construction activities. The project site is currently zoned R-D.

Section 2 – Stormwater Drainage System

The existing site is generally flat. An existing open/closed drainage system onsite drains north to an open swale along the north side of Romney Rd. Three existing 3'x5' arch stormwater conveyance pipes are also located onsite within a 30' wide Town of Amherst Drainage easement. These conveyance pipes flow from the south property line to north and discharge into the open swale along Romney Rd. The existing swale flows east along Romney Rd and north along North Bailey Ave and outlets to an existing stormwater management pond located adjacent to Interstate 290. Runoff from the pond is then conveyed north via open and closed drainage systems and discharges to Ellicott Creek and ultimately the Niagara River. All proposed stormwater runoff from the project site will continue to discharge to the existing stormwater system along Romney Road.

This project is subject to the Boulevard Central Special Stormwater Design Conditions adopted by the Town of Amherst. In addition to the requirements of the NYSDEC SPDES General Permit, the project must also provide the following criteria for Projected Growth Redevelopment Scenarios and Enhanced Phosphorus Removal:

- Provide 10% escalation of proposed peak flow when compared to existing conditions peak flows.
- Median curve number (CN) to compute existing conditions.
- Water Quality volume based on the 1-year, 24-hour storm according to Chapter 10 of the NYSDEC Stormwater Management Design Manual.

For purposes of the runoff analysis and the stormwater drainage system design, portions of the project site were classified as "Redevelopment" per NYSDEC Stormwater Management Design Manual Chapter 9 requirements. The nature of this construction project will be a "Redevelopment" with an increase in impervious area. The proposed stormwater management system was designed to attenuate proposed runoff to existing conditions prior to discharge.

The proposed stormwater drainage system will consist of a combination of overland sheet flow and HDPE pipe channel flow connected by a series of drainage inlets located throughout the project site. Proposed stormwater runoff will be collected and conveyed to an underground stormwater chamber detention area onsite and discharged via outlet control pipes to the existing stormwater system along Romney Road.

The bioretention areas will provide Runoff Reduction and Water Quality volume requirements for "New Development" areas. The filter area planting soil depth varies throughout the bioretention areas but maintains a minimum of at least 18 inches of soil. The 18 inches of soil is an acceptable deviation per the NYSDEC where existing grades prevent the full 2.5'-4' foot soil depth. A series of 6" underdrains below the planting soil will be located throughout the bioretention areas connected by overflow drainage inlets to convey runoff directly to the closed stormwater management system. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas.

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: No existing natural features exist onsite.
2. Calculation of Water Quality Volume (WQv) for site. See "Storm Sewer Drainage Calculations".

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3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity. Bioretention areas were incorporated into the site design to provide required RRv and WQv for "New Development" areas. See "Storm Sewer Drainage Calculations".
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. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas. See "Storm Sewer Drainage Calculations".
5. Design of volume and peak rate control practices where required. See "Storm Sewer 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.

Water Quality:
The NYSDEC requires water quality treatment prior to discharge. This will be achieved by the application of bioretention areas and water quality treatment structures. The total WQv provided was 0.749 ac-ft and equal to the required WQv of 0.749 ac-ft. The required water quality volume was calculated based on the proposed 6.95 acres of proposed development area.

Runoff Reduction Volume:
The NYSDEC requires reduction of the total water quality volume by green infrastructure techniques and SMPs to replicate pre-development hydrology. Bioretention areas were incorporated into the site layout to provide the required RRv for contributing runoff areas in the WQv. The RRv provided was 0.094 ac-ft and greater than the required RRv min. of 0.056 ac-ft. The required runoff reduction volume was calculated based on 3.03 acres of proposed "new development" area that includes 1.97 acres of "new impervious" area.

100% of the required WQv was not reduced due to the followings site specific limitations: Drainage areas with impermeable soils, Type D. In addition, below is a summary of how each green infrastructure technique was evaluated and determined to be feasible or infeasible:

1. Conservation of natural areas: no natural existing features present onsite.
2. Sheetflow to riparian buffers or filter strips: no riparian buffers possible on the site; filter strips not feasible given the limited area for development.
3. Vegetated Open Swales: swales were not feasible given the limited area for development.
4. Tree Plantings: new trees were planted throughout the site.
5. Disconnection of Roof Top Runoff: disconnection not feasible for these types of projects.
6. Stream Daylighting: is not feasible given the limited area for development.
7. Rain Garden: bioretention areas installed throughout site.
8. Green Roof: the proposed use of the building makes this an unfeasible practice.
9. Stormwater Planter: this method is not recommended for these types of projects.
10. Rain Barrels & Cisterns: collected water would not be used for irrigation.
11. Porous Pavement: porous pavement is not recommended for areas with impermeable soils (Type D) and areas with sediment laden runoff (salting in winter months).

Channel Protection:
The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 10,004 cf will be accommodated in the stormwater detention areas onsite.

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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 13.54 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

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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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 25.60 cfs, which is below the existing peak 100-year runoff of 41.10 cfs.

Town of Amherst:
The Town requires that the 25-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event *under the 10% escalation scenario*. Storage of this storm will be provided within the onsite stormwater detention areas. At the 25-year storm event the stormwater drainage system will allow discharge of 19.34 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

Design Criteria:
Storm pipes: 10-year storm
RUNOFF ANALYSIS OF PROPOSED DEVELOPMENT AREA:

STORM EVENT	EXISTING RUNOFF (cfs)	PROPOSED RUNOFF (cfs)	10% ESCALATION (cfs)
1 YEAR	8.12	7.30	8.03
2 YEAR	11.64	9.40	10.34
5 YEAR	16.25	11.90	13.09
10 YEAR	20.51	13.54	14.89
25 YEAR	27.36	18.03	19.83
50 YEAR	33.68	21.83	24.01
100 YEAR	41.10	25.60	28.16

WATER QUALITY SUMMARY:
WQv REQUIRED = 0.749 AC-FT
RRv MIN. REQUIRED = 0.056 AC-FT
RRv PROVIDED WITHIN BIORETENTION AREAS = 0.094 AC-FT
WQv PROVIDED WITHIN BIORETENTION AREAS = 0.234 AC-FT
WQv PROVIDED BY TREATMENT STRUCTURES = 0.515 AC-FT
TOTAL WQv PROVIDED = 0.749 AC-FT

BIORETENTION FILTER AREA SUMMARY:
FILTER AREA = 9,266 SF

See attached “Storm Sewer Drainage Calculations” for additional information.

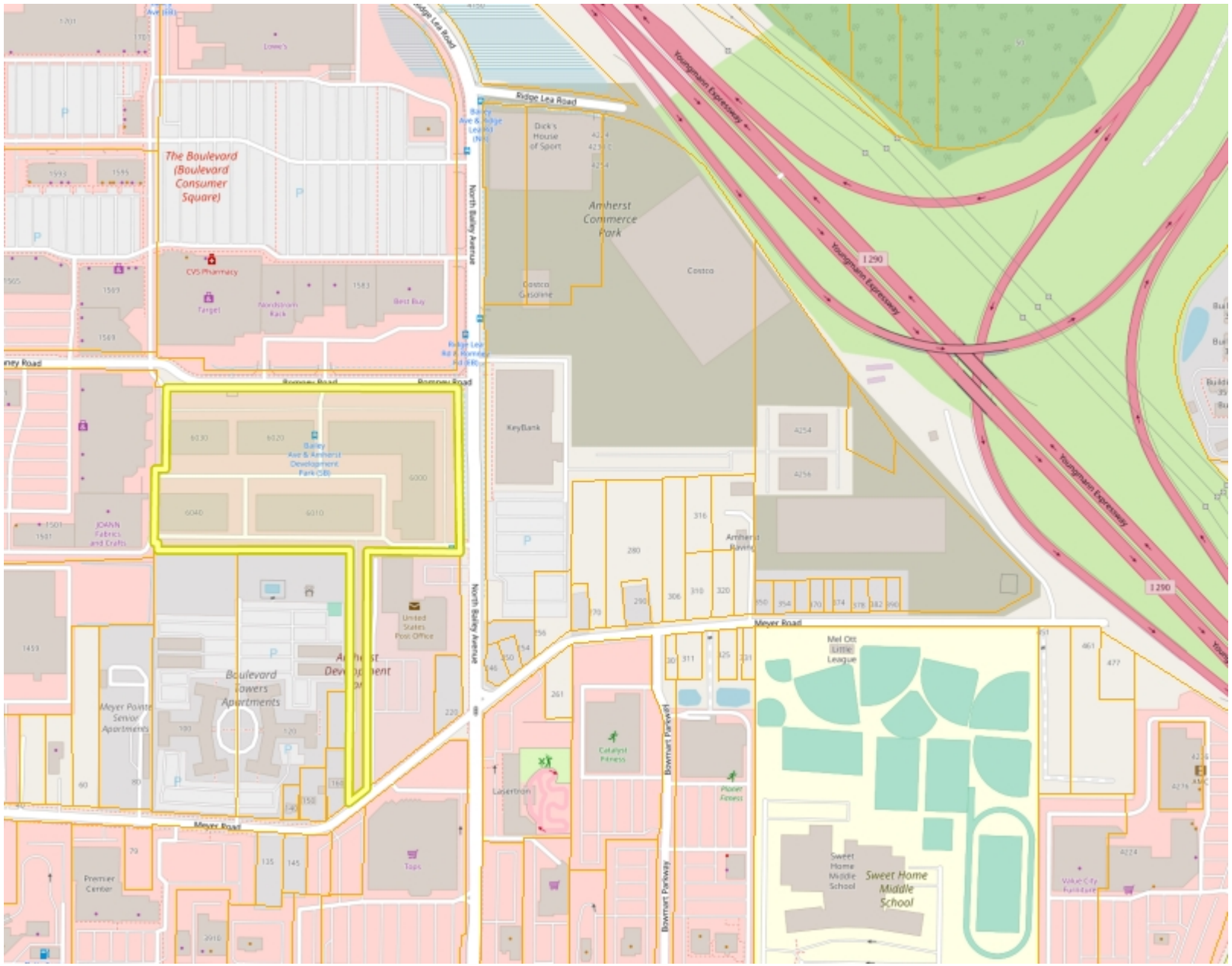
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Appendix A

Location Maps

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.14 0.3 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
THIS MAP IS NOT TO BE USED FOR NAVIGATION

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

1: 9,028

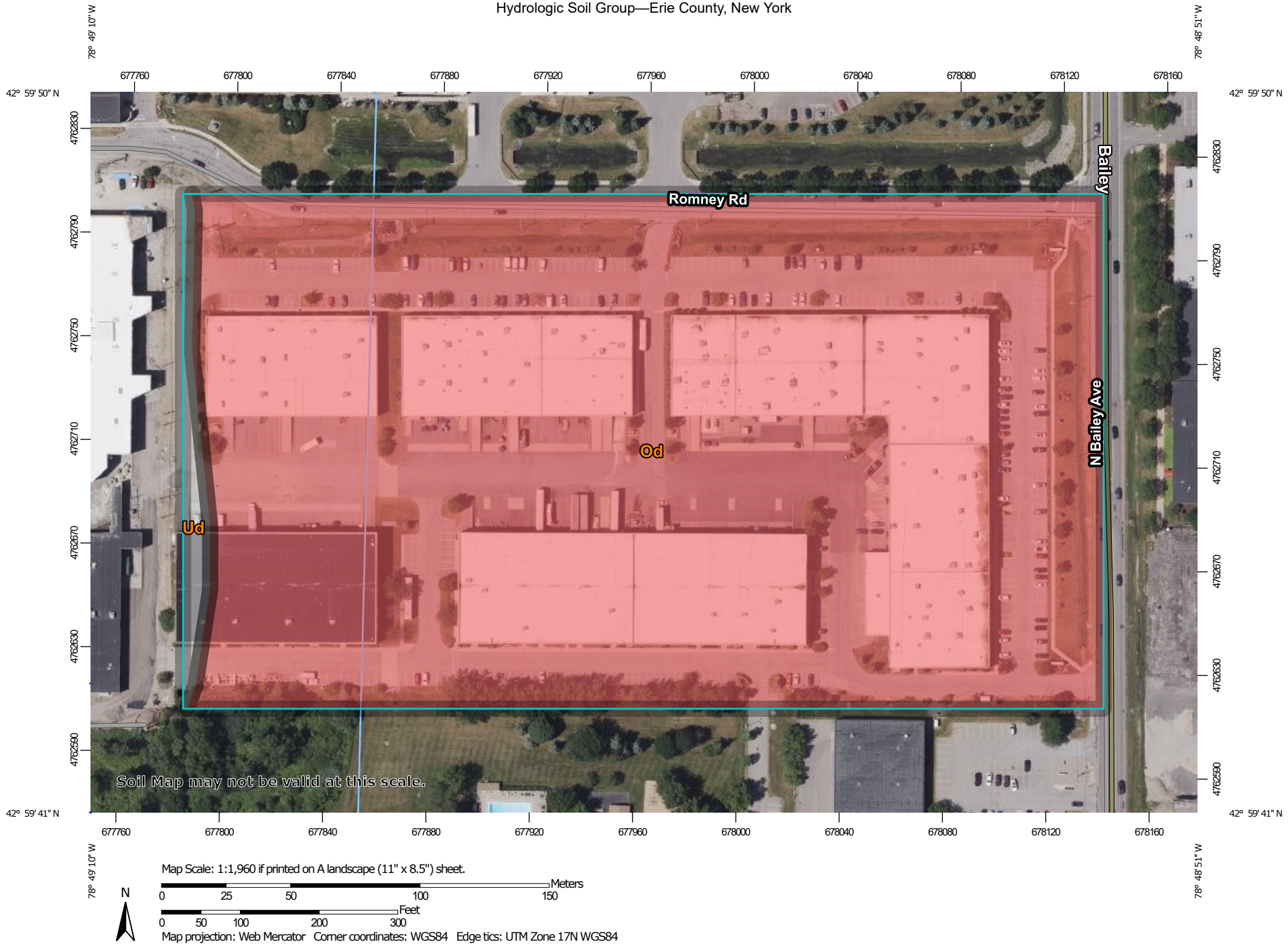
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

Appendix B

Web Soil Survey – Hydrologic Soils Group

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Hydrologic Soil Group—Erie County, New York



Map Scale: 1:1,960 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

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 23, Sep 5, 2023

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

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

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.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Od	Odessa silt loam, 0 to 3 percent slopes	D	17.2	98.2%
Ud	Urban land		0.3	1.8%
Totals for Area of Interest			**17.6**	**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

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix C

Storm Sewer Drainage Calculations

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Water Quality and Runoff Reduction Calculations

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

WATER QUALITY REQUIRED FOR PROPOSED DEVELOPMENT AREA Area, Acres = 6.95

(Note: Reference Chap. 9 NYSDEC Stormwater Design Manual)

"Redevelopment Activity", Acres = 3.92 "New development", Acres = 3.03

(existing, disturbed impervious area)

Total proposed impervious, Acres = 5.89

"New" impervious, Acres = 1.97

Water Quality Volume (WQv) WQv Required = 1-Year, 24-Hour Design Storm

See Attached Worksheet & HydroCAD "WQ1" & "WQ2":

WQ1, Proposed Overall Development Area, ac-ft = 0.749

WQ2, Redevelopment Area, ac-ft = 0.515

Flow Through Alt. Practice = 100% WQv for Redevelopment, ac-ft = 0.515

WQ3, New Development Area, ac-ft = 0.234

Total WQv Required, ac-ft = 0.749

Note: Runoff Reduction Volume (RRv) sizing criteria not required for "Redevelopment Activity" portion of project.

See attached Bioretention Worksheet for RRv sizing for "New Development" portion of project.

RRv PROVIDED FOR PROPOSED DEVELOPMENT AREA (See NYSDEC worksheets)

		WQv, cf	RRv, cf
Min. RRv Req'd, cf = 2,446	Bioretention Area	10,193	4,077
Min. RRv Req'd, ac-ft = 0.056	WQ Treatment Structure(s)	22,433	0
(P=1 yr storm event =1.80 in)	TOTAL, cf	32626.45	4077
	TOTAL, ac-ft	0.749	0.094

WQ & RR SUMMARY (ac-ft):

TOTAL WATER QUALITY PROVIDED FOR PROPOSED DEVELOPMENT AREA 0.749

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)

Revised_/_/_

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

24-4099 AMHERST DEVELOPMENT PARK 11/14/23

WATER QUALITY VOLUME FOR ENHANCED PHOSPHORUS REMOVAL

* WQ_v = 1-YR, 24-HR DESIGN STORM (HYDROCAD)

① PROPOSED OVERALL DEVELOPMENT AREA = 6.95 AC

GREENSPACE =
IMPERVIOUS =
$T_c \leq 5.0$ MIN

→ 1-YR, 24-HR HYDROCAD RUNOFF VOLUME

WQ_1 = 0.749 AC-FT
(SEE ATTACHED "WQ1" HYDROCAD)

② REDEVELOPMENT AREA = 3.92 AC (EXISTING IMPERVIOUS)

1-YR, 24-HR HYDROCAD RUNOFF VOLUME = 0.515 AC-FT
(SEE ATTACHED "WQ2" HYDROCAD)

PER NYSDEC STORMWATER DESIGN MANUAL 10.3.6
* PERFORMANCE CRITERIA: OPTIONS
1. USE 25% WQ_v OF REDEVELOPMENT AREA FOR SMP'S
2. USE 75% WQ_v OF REDEVELOPMENT AREA FOR VOLUME BASED ALTERNATIVE PRACTICE
3. USE 100% WQ_v OF REDEVELOPMENT AREA FOR FLOW THROUGH ALT. PRACTICE

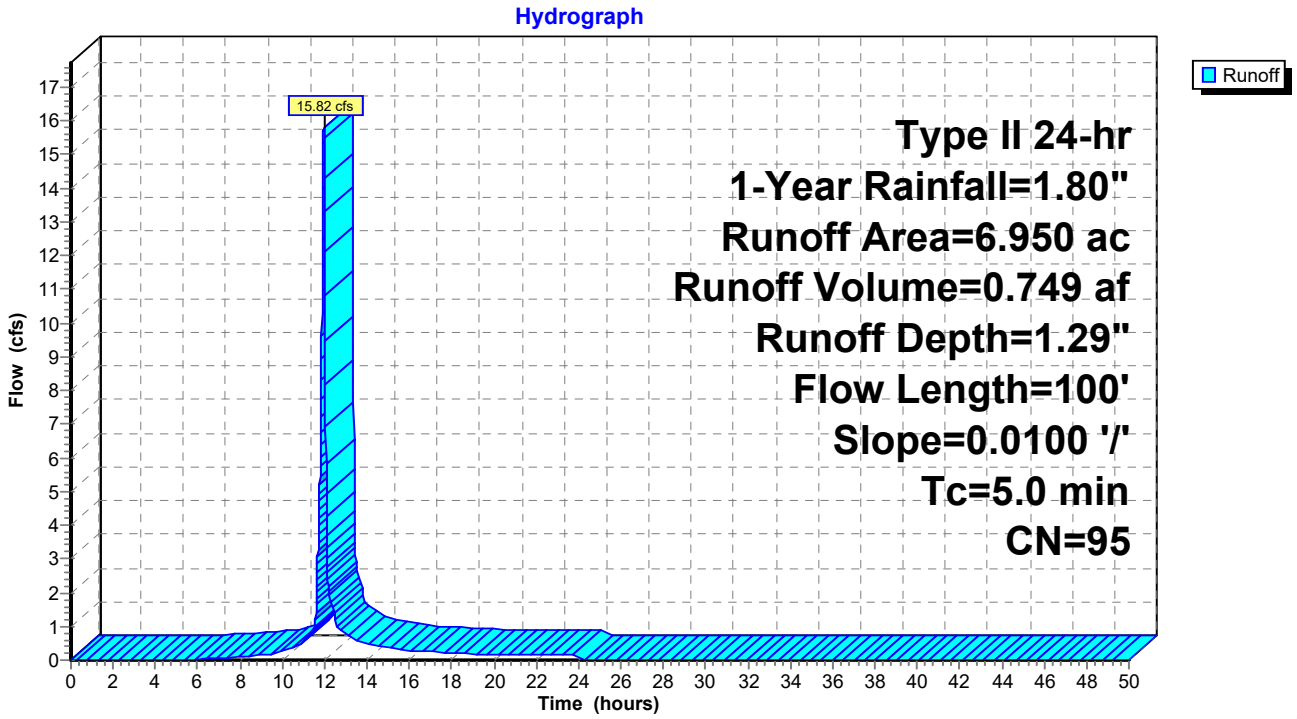
USE OPTION ③
WQ_2 = 0.515 AC-FT

③ NEW DEVELOPMENT AREA =

WQ_3 = 0.749 AC-FT − 0.515 AC-FT = 0.234 AC-FT

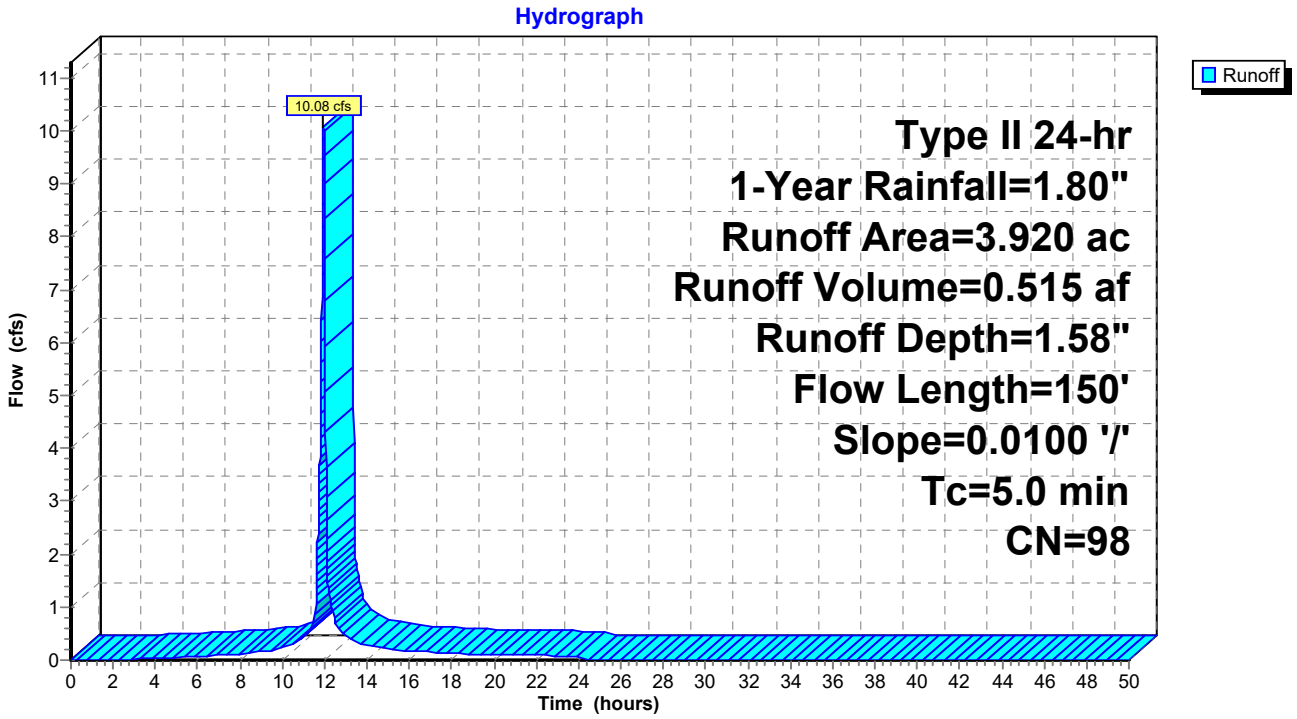
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Subcatchment WQ1: Proposed Site - Overall Area



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Subcatchment 2S: Proposed Site - Redevelopment Area



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

WATER QUALITY TREATMENT STRUCTURE SIZING CALCULATIONS

Area, Acres = 3.92

Water Quality Volume (WQv)

WQv (ac-ft)= 0.515

WQv (cf)= 22,433

Water Quality Peak Flow Calculation for Flow Through Practices

Q, WQv in Watershed Inches = (WQv/A)x12 = 1.577

P = 1.8

"Rational Method" CN Value = $1000/[10 + 5P + 10Q - 10(Q^2 + 1.25\,QP)^{1/2}]$

CN= 98

Initial Abstration: Table 4-I, Ia = 0.041

Ia/P Ratio = 0.023

Tc (HydroCAD), min.= 5

Tc (HydroCAD), hr.= 0.1

Unit Peak Discharge, qu (csm/in) 1000

Peak Discharge (Qp) = qu * A * WQv

Where: A = drainage area, in square miles

WQv = Water Quality Volume, in watershed inches

qu = the unit peak discharge, in cfs/mi²/inch

Qp, (cfs) = 9.656

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Chapter 4 Graphical Peak Discharge Method

This chapter presents the Graphical Peak Discharge method for computing peak discharge from rural and urban areas. The Graphical method was developed from hydrograph analyses using TR-20, "Computer Program for Project Formulation—Hydrology" (SCS 1983). The peak discharge equation used is:

$$q_p = q_u A_m Q F_p \qquad \text{[eq. 4-1]}$$

where:

q_p = peak discharge (cfs)
q_u = unit peak discharge (csm/in)
A_m = drainage area (mi^2)
Q = runoff (in)
F_p = pond and swamp adjustment factor

The input requirements for the Graphical method are as follows: (1) T_c (hr), (2) drainage area (mi^2), (3) appropriate rainfall distribution (I, IA, II, or III), (4) 24-hour rainfall (in), and (5) CN. If pond and swamp areas are spread throughout the watershed and are not considered in the T_c computation, an adjustment for pond and swamp areas is also needed.

Peak discharge computation

For a selected rainfall frequency, the 24-hour rainfall (P) is obtained from appendix B or more detailed local precipitation maps. CN and total runoff (Q) for the watershed are computed according to the methods outlined in chapter 2. The CN is used to determine the initial abstraction (I_a) from table 4-1. I_a / P is then computed.

If the computed I_a / P ratio is outside the range in exhibit 4 (4-I, 4-IA, 4-II, and 4-III) for the rainfall distribution of interest, then the limiting value should be used. If the ratio falls between the limiting values, use linear interpolation. Figure 4-1 illustrates the sensitivity of I_a / P to CN and P.

Peak discharge per square mile per inch of runoff (q_u) is obtained from exhibit 4-I, 4-IA, 4-II, or 4-III by using T_c (chapter 3), rainfall distribution type, and I_a / P ratio. The pond and swamp adjustment factor is obtained from table 4-2 (rounded to the nearest table value). Use worksheet 4 in appendix D to aid in computing the peak discharge using the Graphical method.

Figure 4-1 Variation of I_a / P for P and CN

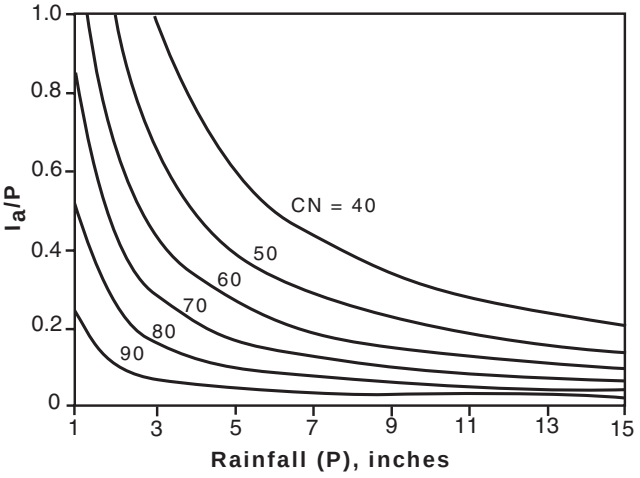
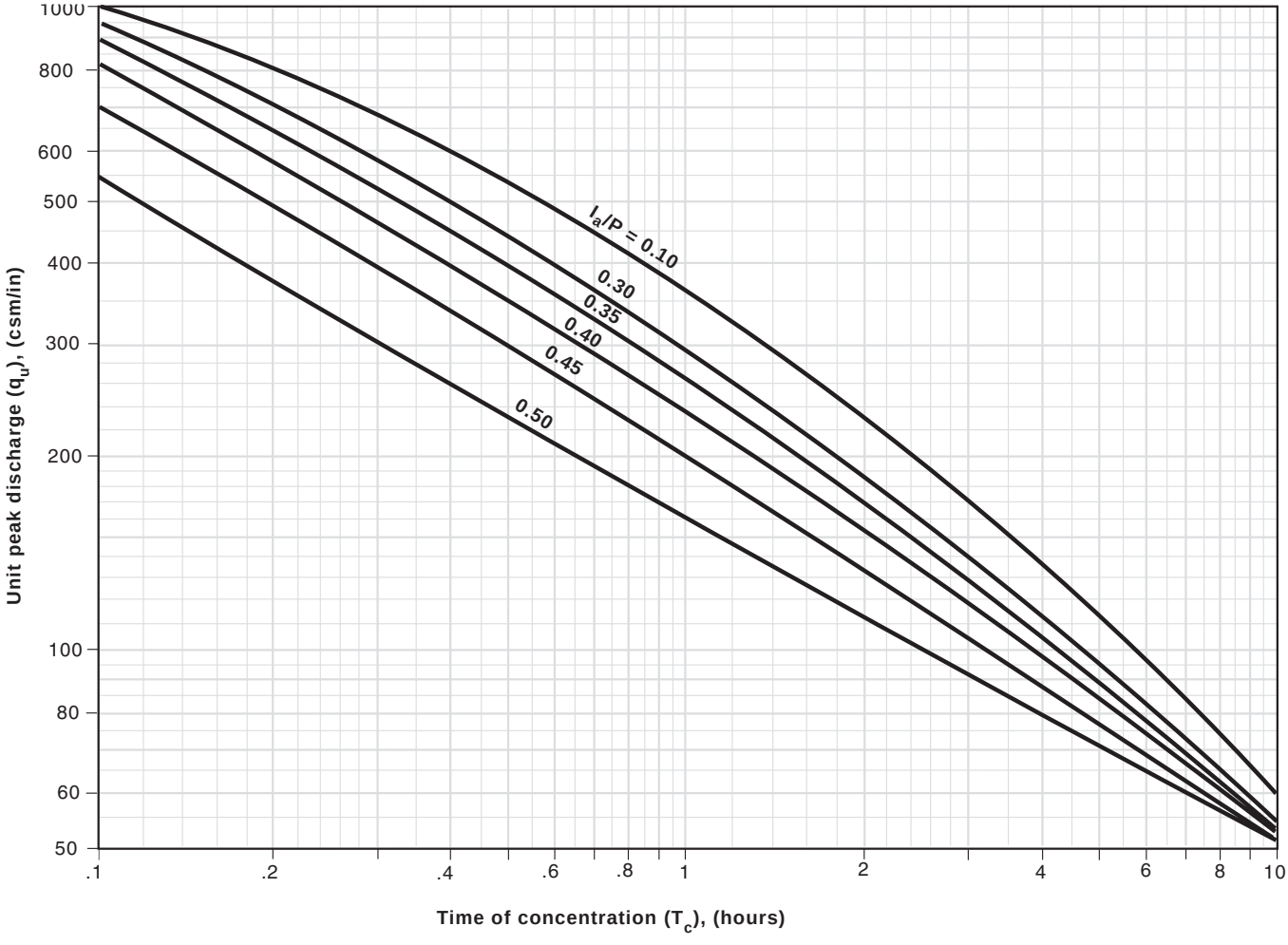


Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	70	0.857
41	2.878	71	0.817
42	2.762	72	0.778
43	2.651	73	0.740
44	2.545	74	0.703
45	2.444	75	0.667
46	2.348	76	0.632
47	2.255	77	0.597
48	2.167	78	0.564
49	2.082	79	0.532
50	2.000	80	0.500
51	1.922	81	0.469
52	1.846	82	0.439
53	1.774	83	0.410
54	1.704	84	0.381
55	1.636	85	0.353
56	1.571	86	0.326
57	1.509	87	0.299
58	1.448	88	0.273
59	1.390	89	0.247
60	1.333	90	0.222
61	1.279	91	0.198
62	1.226	92	0.174
63	1.175	93	0.151
64	1.125	94	0.128
65	1.077	95	0.105
66	1.030	96	0.083
67	0.985	97	0.062
68	0.941	98	0.041
69	0.899		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Exhibit 4-II Unit peal discharge (q_u) for NRCS (SCS) type II rainfall distribution



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:		
P=	1.80	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	3.03	1.97	65%	0.64	12,575	
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	3.03	1.97	65%	0.64	**12,575**	**Subtotal 1**
Total	3.03	1.97	65%	0.64	**12,575**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	3.03	1.97	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**3.03**	**1.97**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	3.03	1.97	65%	0.64	12,575
Subtract Area	-3.03	-1.97			
WQv adjusted after Area Reductions	**0.00**	**0.00**	0%	0.05	0
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.00	0.00	0%	0.05	**0**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**3.03**	20%
Total Area	3.03	
Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	1.97	*acre*
Precipitation	1.8	*in*
Rv	0.95	
Minimum RRv	**2,446**	***ft3***
	0.06	af

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	3.03	1.97	0.65	0.64	12574.68	1.80	
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	65%	0.64	12,575	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate		*in/hour*	
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		12,575	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.25	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**11432**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	96.25	*ft*	
Filter Length	96.27	*ft*	
Filter Area	9265.9875	*ft^2*	
Actual Volume Provided	10193	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	N/A
RRv	4,077			
RRv applied	**4,077**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	8,498	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	*ft^3*	This volume is directed another practice	
Sizing √	Error		*Check to be sure Area provided ≥ Af*	

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Stormwater Runoff Summaries and Runoff Delineation Maps

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New York
Location	New York, United States
Latitude	42.996 degrees North
Longitude	78.817 degrees West
Elevation	170 feet
Date/Time	Mon Nov 13 2023 09:29:03 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.41	0.50	0.66	0.82	1.00	**1yr**	0.71	0.93	1.13	1.34	1.56	1.80	2.09	**1yr**	1.60	2.01	2.42	2.91	3.39	**1yr**
2yr	0.30	0.47	0.58	0.77	0.96	1.18	**2yr**	0.83	1.08	1.34	1.59	1.87	2.18	2.46	**2yr**	1.93	2.36	2.78	3.31	3.80	**2yr**
5yr	0.36	0.56	0.70	0.94	1.20	1.48	**5yr**	1.03	1.35	1.67	1.98	2.30	2.65	3.00	**5yr**	2.34	2.89	3.37	3.97	4.54	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.76	**10yr**	1.22	1.61	1.98	2.34	2.70	3.07	3.49	**10yr**	2.72	3.36	3.90	4.56	5.19	**10yr**
25yr	0.48	0.76	0.96	1.33	1.77	2.20	**25yr**	1.53	2.01	2.48	2.90	3.32	3.73	4.27	**25yr**	3.30	4.10	4.74	5.48	6.20	**25yr**
50yr	0.54	0.87	1.11	1.55	2.09	2.60	**50yr**	1.81	2.39	2.94	3.42	3.88	4.33	4.97	**50yr**	3.83	4.78	5.49	6.30	7.10	**50yr**
100yr	0.61	0.99	1.28	1.82	2.48	3.10	**100yr**	2.14	2.84	3.49	4.04	4.55	5.03	5.79	**100yr**	4.45	5.57	6.36	7.24	8.13	**100yr**
200yr	0.71	1.15	1.49	2.14	2.95	3.68	**200yr**	2.54	3.39	4.14	4.77	5.33	5.84	6.75	**200yr**	5.17	6.49	7.37	8.32	9.31	**200yr**
500yr	0.85	1.39	1.82	2.64	3.70	4.62	**500yr**	3.19	4.27	5.19	5.93	6.57	7.13	8.26	**500yr**	6.31	7.95	8.96	10.01	11.14	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.42	0.57	0.70	0.87	**1yr**	0.61	0.85	0.86	1.15	1.44	1.62	1.90	**1yr**	1.44	1.83	2.08	2.63	3.10	**1yr**
2yr	0.29	0.45	0.55	0.75	0.92	1.06	**2yr**	0.80	1.04	1.16	1.42	1.71	2.10	2.35	**2yr**	1.86	2.26	2.67	3.19	3.66	**2yr**
5yr	0.33	0.51	0.63	0.86	1.10	1.26	**5yr**	0.95	1.23	1.38	1.67	2.01	2.43	2.71	**5yr**	2.15	2.60	3.03	3.61	4.08	**5yr**
10yr	0.36	0.55	0.68	0.95	1.23	1.42	**10yr**	1.06	1.39	1.56	1.87	2.26	2.71	3.01	**10yr**	2.40	2.89	3.32	3.95	4.41	**10yr**
25yr	0.41	0.62	0.77	1.10	1.45	1.67	**25yr**	1.25	1.64	1.81	2.18	2.64	3.12	3.44	**25yr**	2.76	3.31	3.73	4.42	4.84	**25yr**
50yr	0.45	0.68	0.84	1.21	1.63	1.88	**50yr**	1.41	1.84	2.02	2.43	2.95	3.47	3.82	**50yr**	3.07	3.67	4.05	4.82	5.18	**50yr**
100yr	0.49	0.74	0.92	1.33	1.83	2.12	**100yr**	1.58	2.07	2.25	2.70	3.31	3.88	4.21	**100yr**	3.43	4.05	4.39	5.25	5.53	**100yr**
200yr	0.53	0.80	1.02	1.47	2.06	2.40	**200yr**	1.77	2.34	2.49	2.99	3.69	4.34	4.65	**200yr**	3.84	4.47	4.74	5.69	5.88	**200yr**
500yr	0.60	0.90	1.16	1.68	2.39	2.81	**500yr**	2.06	2.74	2.83	3.40	4.23	5.08	5.31	**500yr**	4.50	5.11	5.18	6.32	6.32	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.46	0.56	0.75	0.93	1.07	**1yr**	0.80	1.05	1.20	1.41	1.70	1.93	2.33	**1yr**	1.71	2.24	2.61	3.09	3.63	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.16	**2yr**	0.86	1.13	1.28	1.56	1.86	2.28	2.58	**2yr**	2.02	2.48	2.95	3.48	4.03	**2yr**
5yr	0.39	0.60	0.74	1.02	1.30	1.53	**5yr**	1.12	1.50	1.68	2.06	2.44	2.88	3.31	**5yr**	2.55	3.18	3.75	4.36	5.04	**5yr**
10yr	0.46	0.71	0.88	1.22	1.58	1.89	**10yr**	1.37	1.84	2.09	2.55	3.01	3.45	4.01	**10yr**	3.05	3.86	4.52	5.17	6.02	**10yr**
25yr	0.58	0.89	1.10	1.58	2.07	2.51	**25yr**	1.79	2.45	2.79	3.39	3.98	4.40	5.18	**25yr**	3.89	4.98	5.84	6.52	7.63	**25yr**
50yr	0.69	1.05	1.31	1.88	2.53	3.11	**50yr**	2.18	3.04	3.47	4.22	4.91	5.28	6.28	**50yr**	4.68	6.04	7.10	7.79	9.17	**50yr**
100yr	0.83	1.25	1.56	2.26	3.10	3.85	**100yr**	2.68	3.77	4.33	5.24	6.07	6.33	7.62	**100yr**	5.60	7.33	8.59	9.30	10.98	**100yr**
200yr	0.99	1.48	1.88	2.72	3.80	4.78	**200yr**	3.28	4.67	5.42	6.54	7.50	7.57	9.24	**200yr**	6.70	8.88	10.46	11.13	13.20	**200yr**
500yr	1.25	1.87	2.40	3.49	4.96	6.37	**500yr**	4.28	6.22	7.30	8.75	9.94	9.62	11.94	**500yr**	8.52	11.48	13.59	14.13	16.77	**500yr**

Powered by ACIS Northeast Regional Climate Center

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

24-4099 AMHERST DEVELOPMENT PARK 11/15/23

STORMWATER DRAINAGE ANALYSIS

-PROJECTED GROWTH REDEVELOPMENT SCENARIO-

- USE MEDIAN CURVE NUMBER (CN) FOR EXISTING RUNOFF AREAS

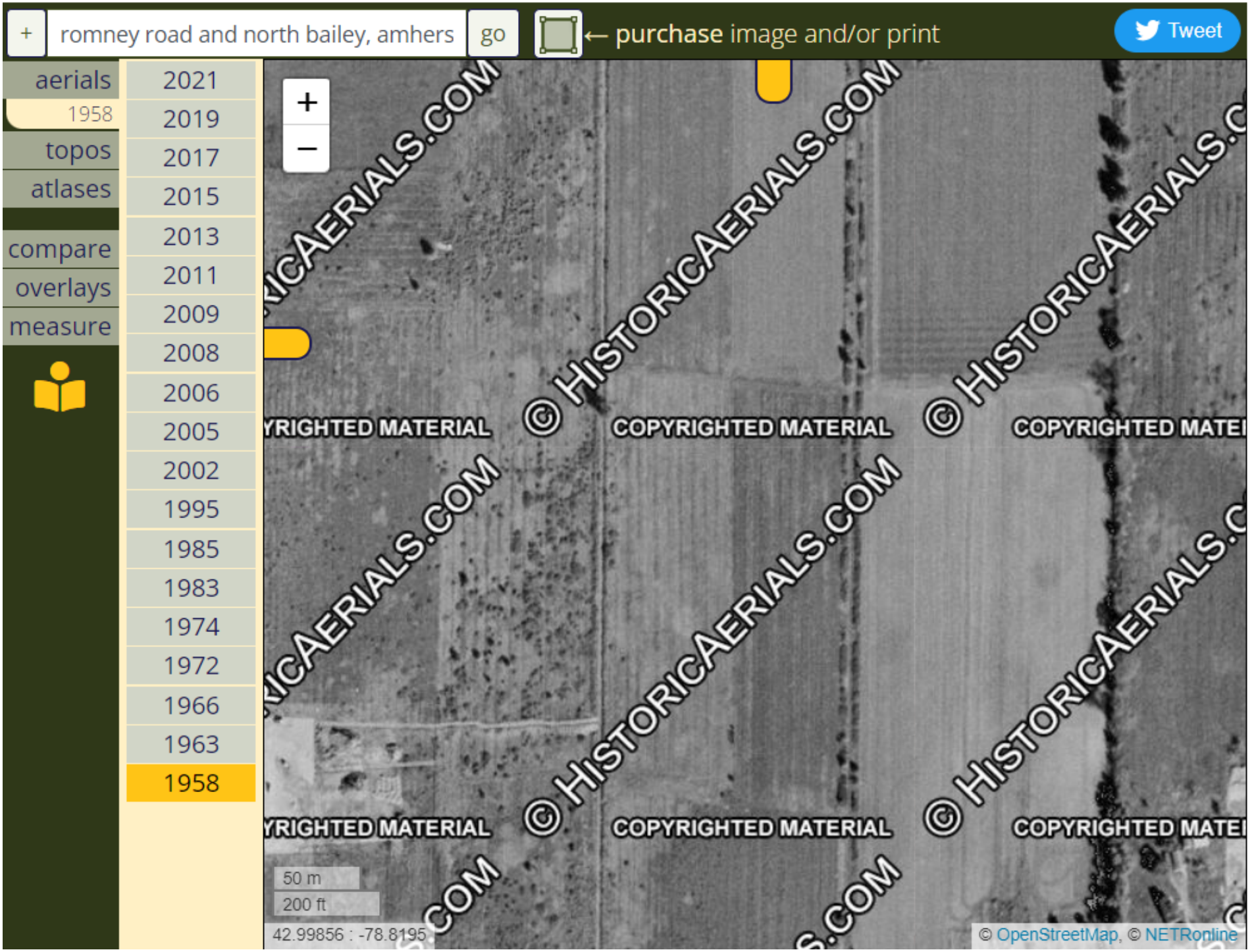
  50% RUNOFF RATE EXISTING LAND COVER
  50% PRIOR TO DEVELOPMENT (1958 HISTORIC AERIAL)
  MEADOW / FARM FIELD

- TOTAL EXISTING AREA = 6.95 AC.

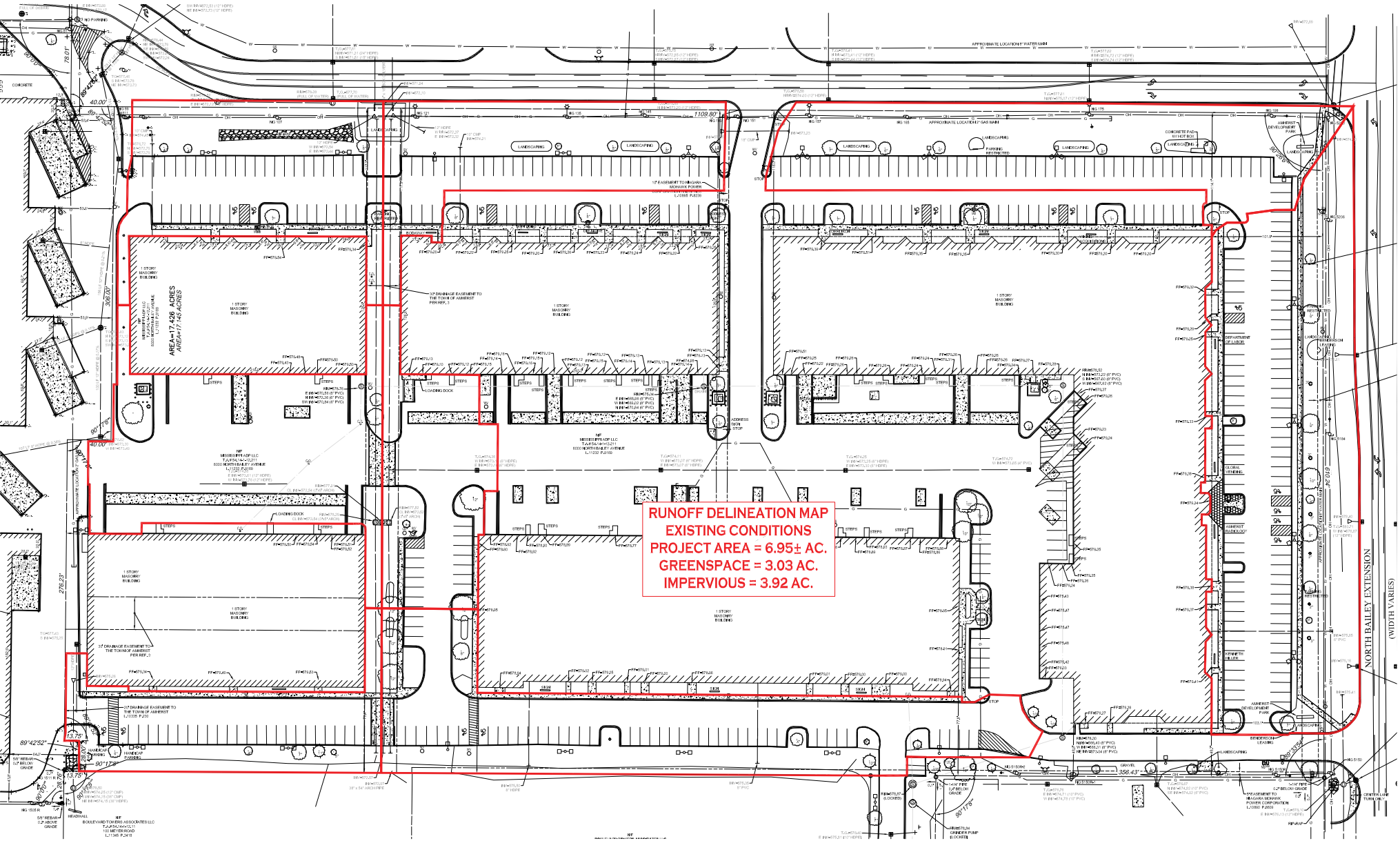
  GRASS/LANDSCAPED = 3.03 AC.
  IMPERVIOUS = 3.92 AC.

(15) APPLY MEDIAN CN: MEADOW/FARM FIELD = 3.48 AC.
GRASS/LANDSCAPED = 1.52 AC.
IMPERVIOUS = 1.95 AC.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

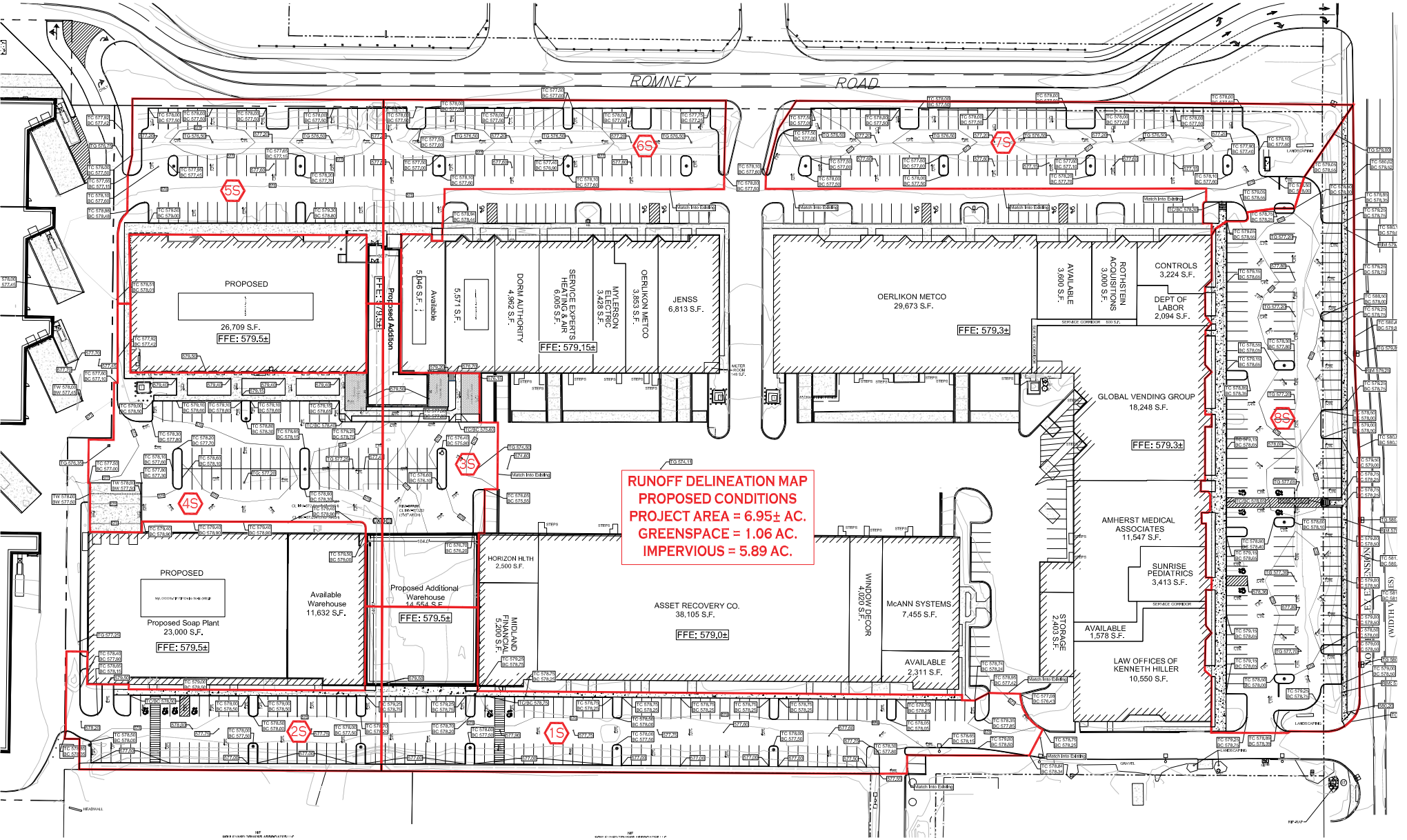


Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

Events for Subcatchment 1S: Existing Site

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	1.80	8.12	0.378	0.65
2-Year	2.18	11.64	0.538	0.93
5-Year	2.65	16.25	0.752	1.30
10-Year	3.07	20.51	0.954	1.65
25-Year	3.73	27.36	1.285	2.22
50-Year	4.33	33.68	1.595	2.75
100-Year	**5.03**	**41.10**	**1.967**	**3.40**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey

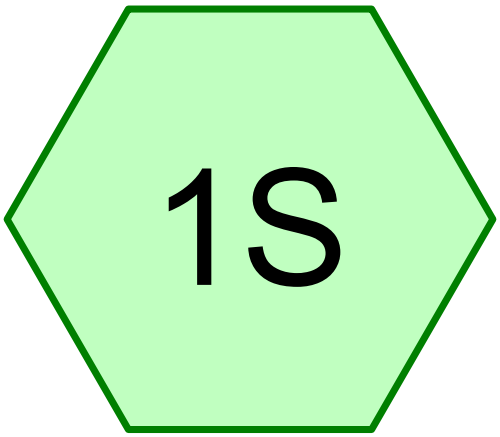
Events for Pond 1P: Detention Storage & Outlet

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)	10% Escalation (cfs)
1-Year	15.93	7.30	572.35	10,004	8.03
2-Year	20.03	9.40	572.49	12,348	10.34
5-Year	25.06	11.90	572.66	15,215	13.09
10-Year	29.54	13.54	572.83	17,843	14.89
25-Year	36.53	18.03	573.09	21,706	19.83
50-Year	42.86	21.83	573.37	25,076	24.01
100-Year	**50.20**	**25.60**	**573.83**	**29,010**	28.16

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

HydroCAD Analysis

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Existing Site

Subcat Reach Pond Link

Routing Diagram for 23-4099 Existing
Prepared by Carmina Wood Morris, PC, Printed 11/15/2023
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Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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	1.80	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.07	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.73	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.03	2

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.520	84	50-75% Grass cover, Fair, HSG D (1S)
1.950	98	Impervious (1S)
3.480	78	Meadow, non-grazed, HSG D (1S)
6.950	**85**	**TOTAL AREA**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.000	HSG D	1S
1.950	Other	1S
6.950		**TOTAL AREA**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchmen Numbers
0.000	0.000	0.000	1.520	0.000	1.520	50-75% Grass cover, Fair	1S
0.000	0.000	0.000	0.000	1.950	1.950	Impervious	1S
0.000	0.000	0.000	3.480	0.000	3.480	Meadow, non-grazed	1S
0.000	**0.000**	**0.000**	**5.000**	**1.950**	**6.950**	**TOTAL AREA**	

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=0.65"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=8.12 cfs 0.378 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.378 af Average Runoff Depth = 0.65"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

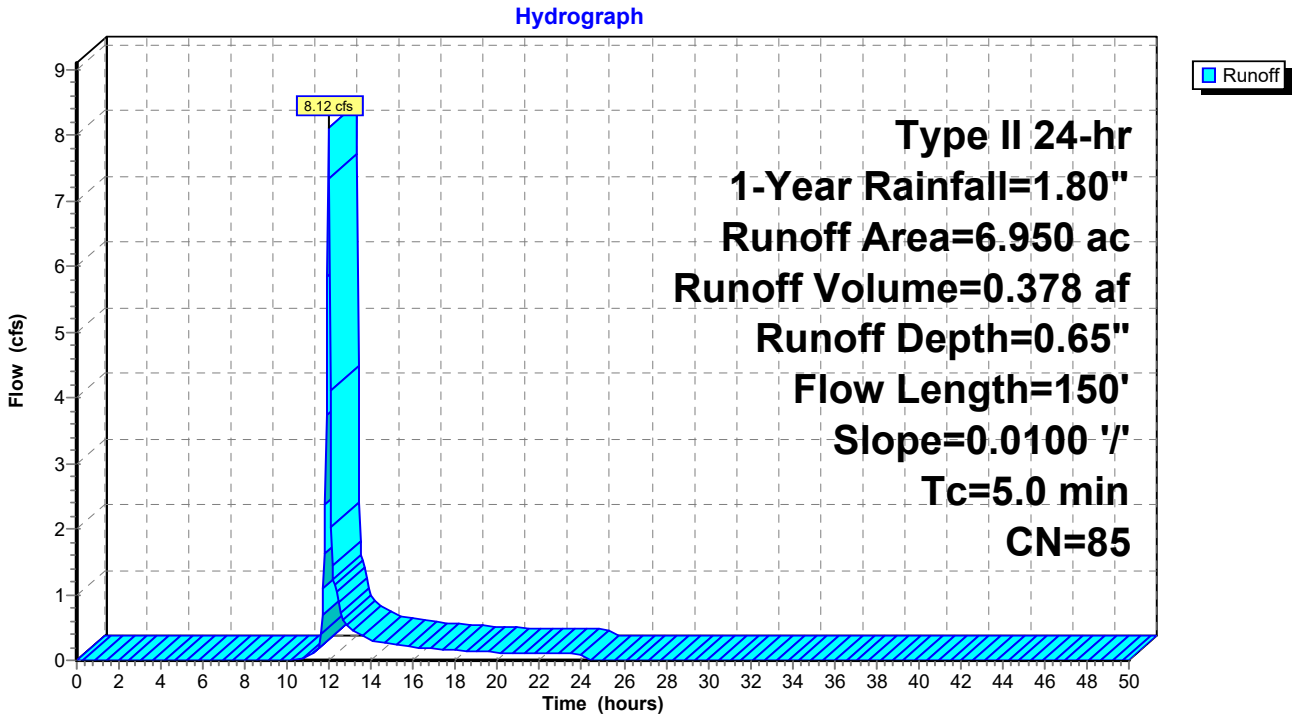
Runoff = 8.12 cfs @ 11.96 hrs, Volume= 0.378 af, Depth= 0.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=1.65"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=20.51 cfs 0.954 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.954 af Average Runoff Depth = 1.65"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

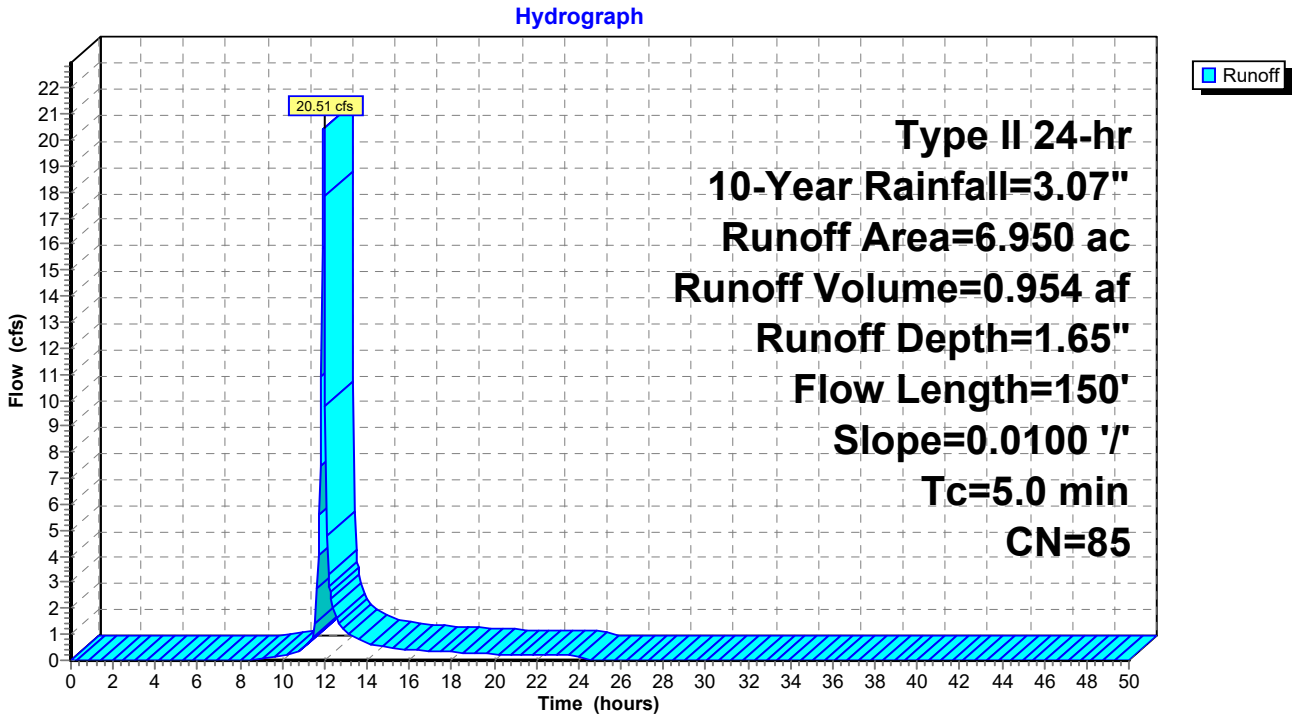
Runoff = 20.51 cfs @ 11.96 hrs, Volume= 0.954 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=2.22"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=27.36 cfs 1.285 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.285 af Average Runoff Depth = 2.22"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

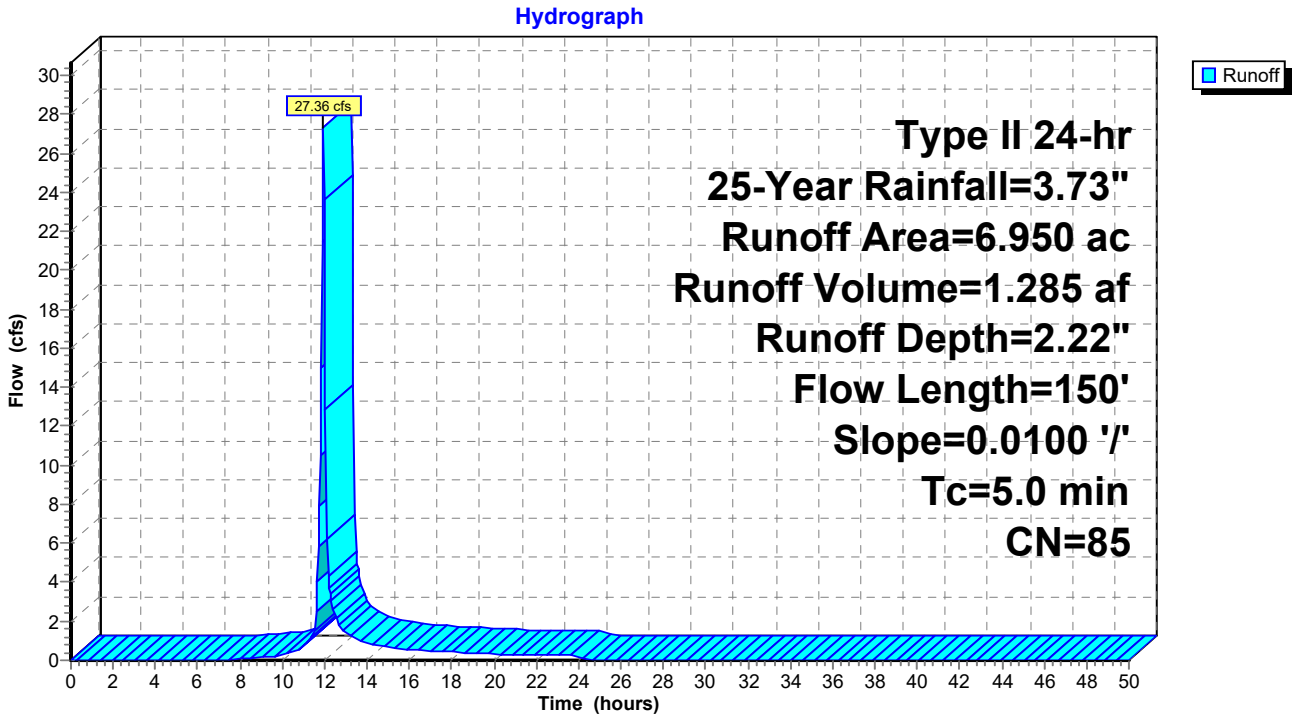
Runoff = 27.36 cfs @ 11.96 hrs, Volume= 1.285 af, Depth= 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 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 Site Runoff Area=6.950 ac 28.06% Impervious Runoff Depth=3.40"
Flow Length=150' Slope=0.0100 '/' Tc=5.0 min CN=85 Runoff=41.10 cfs 1.967 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.967 af Average Runoff Depth = 3.40"
71.94% Pervious = 5.000 ac 28.06% Impervious = 1.950 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Existing Site

[49] Hint: Tc<2dt may require smaller dt

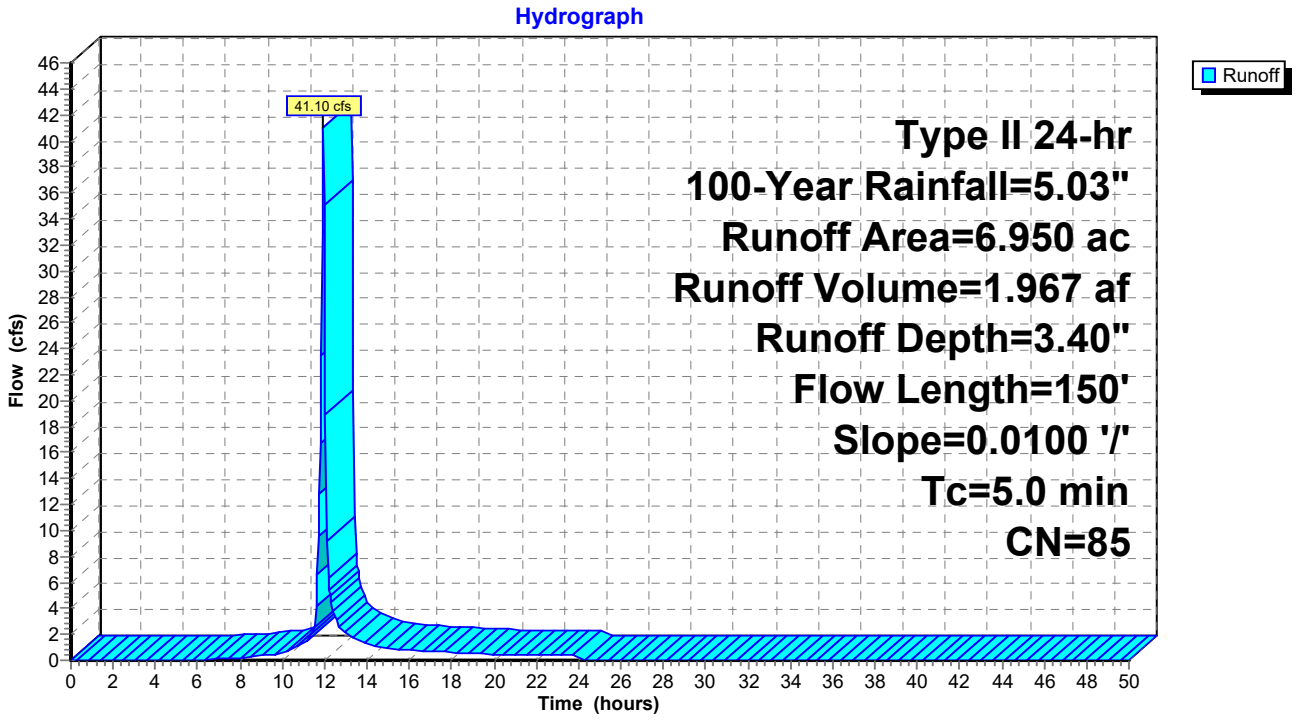
Runoff = 41.10 cfs @ 11.95 hrs, Volume= 1.967 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.03"

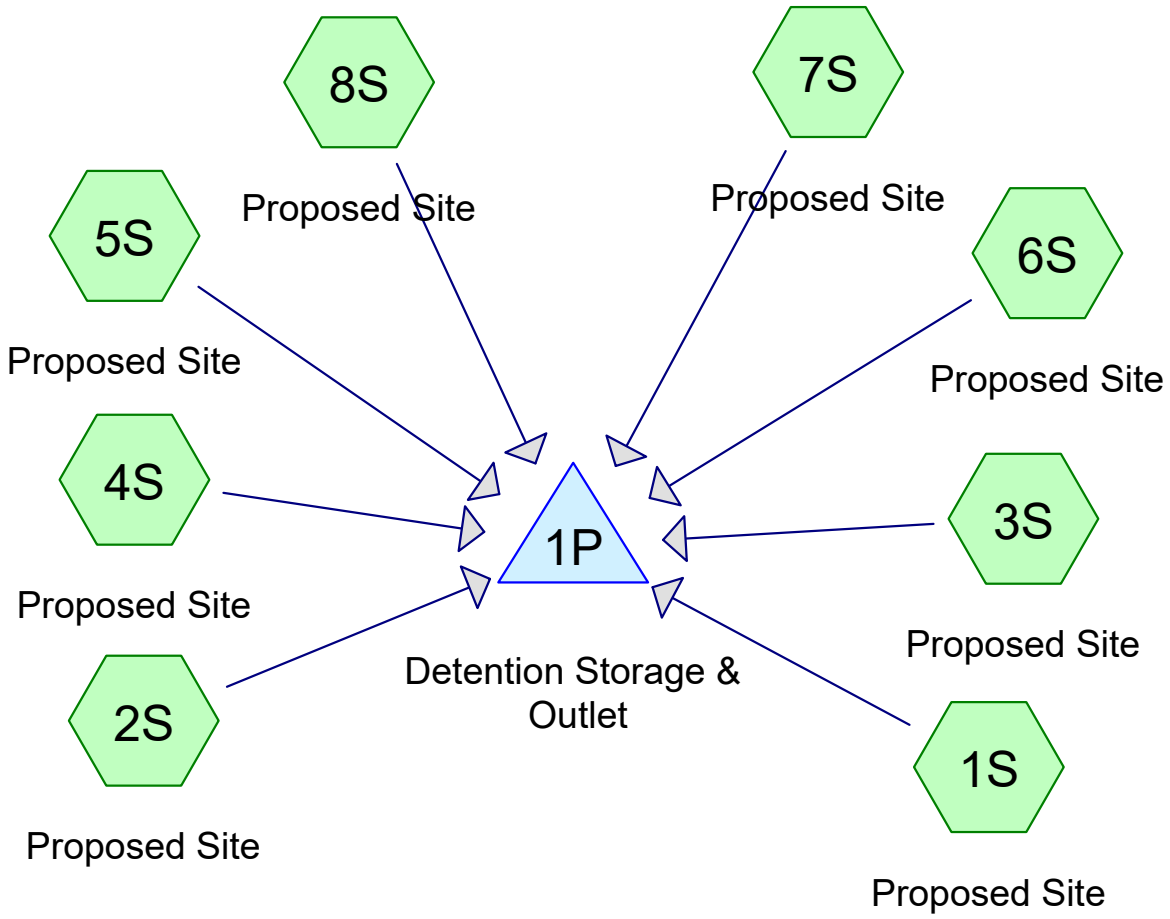
	Area (ac)	CN	Description
	3.480	78	Meadow, non-grazed, HSG D
	1.520	84	50-75% Grass cover, Fair, HSG D
*	1.950	98	Impervious
	6.950	85	Weighted Average
	5.000		71.94% Pervious Area
	1.950		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	150	0.0100	1.00		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
2.5	150	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



Subcat Reach Pond Link

Routing Diagram for 23-4099 Proposed
Prepared by Carmina Wood Morris, PC, Printed 11/15/2023
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Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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	1.80	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.07	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.73	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.03	2

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.060	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
5.890	98	Impervious, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
6.950	**95**	**TOTAL AREA**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
6.950	HSG D	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	Other	
6.950		**TOTAL AREA**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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	1.060	0.000	1.060	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	0.000	0.000	5.890	0.000	5.890	Impervious	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	**0.000**	**0.000**	**6.950**	**0.000**	**6.950**	**TOTAL AREA**	

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	1P	571.50	571.50	10.0	0.0000	0.013	0.0	12.0	0.0

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=2.67 cfs 0.129 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=1.29"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=1.21 cfs 0.057 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=1.48"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=1.22 cfs 0.060 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=2.12 cfs 0.102 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=1.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=1.69 cfs 0.082 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=1.29"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=1.53 cfs 0.072 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=1.21"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=2.10 cfs 0.098 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=1.21"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=3.40 cfs 0.158 af

Pond 1P: Detention Storage & Outlet Peak Elev=572.35' Storage=10,004 cf Inflow=15.93 cfs 0.759 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=7.30 cfs 0.756 af

Total Runoff Area = 6.950 ac Runoff Volume = 0.759 af Average Runoff Depth = 1.31"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

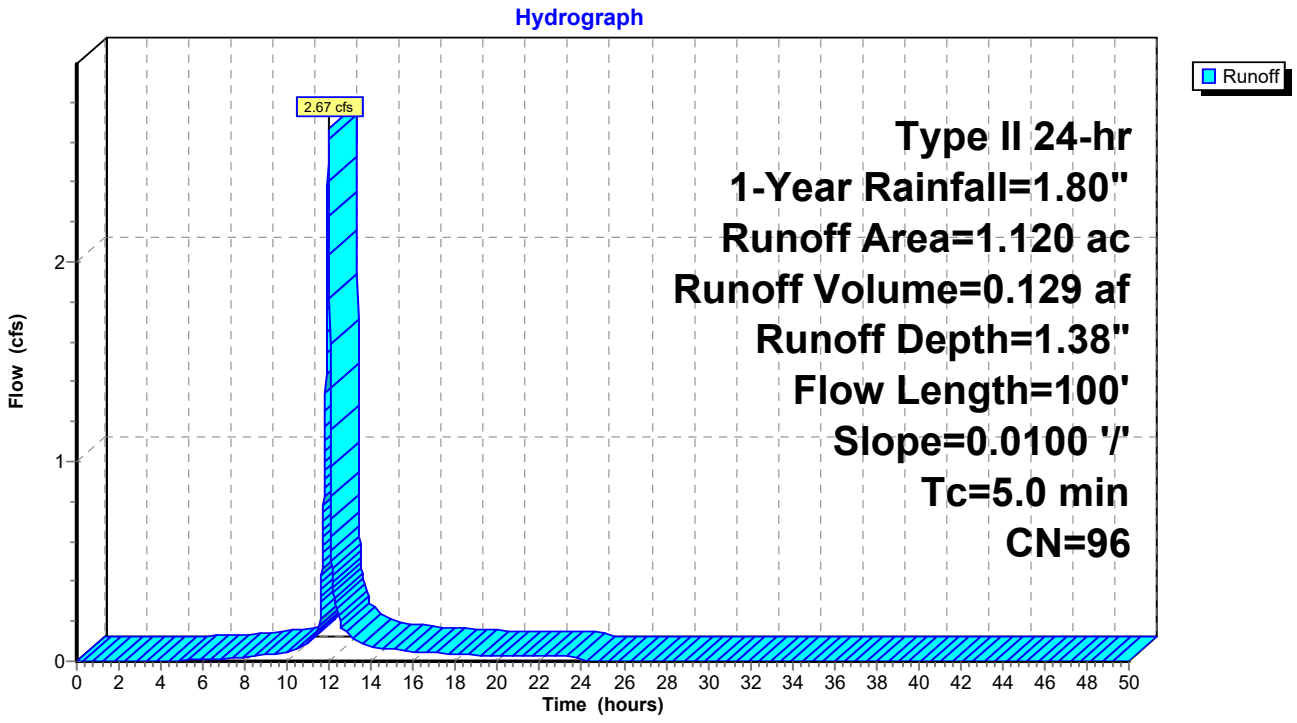
Runoff = 2.67 cfs @ 11.96 hrs, Volume= 0.129 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

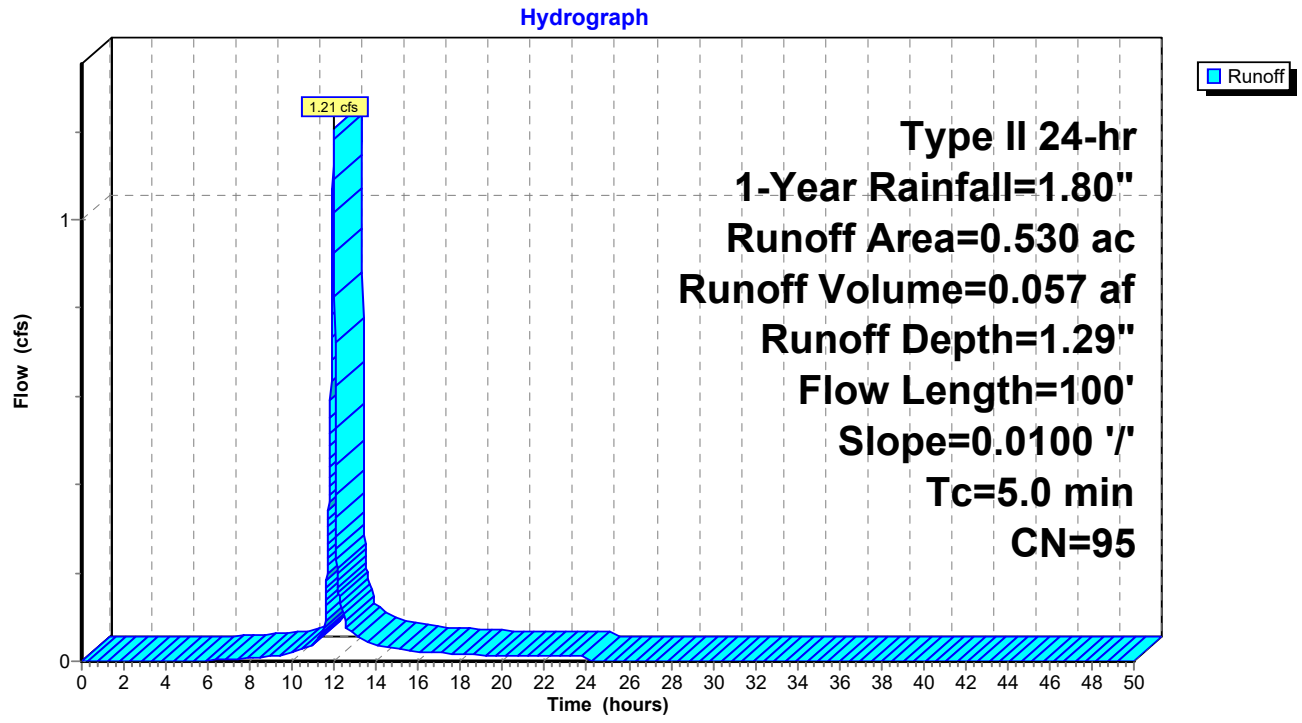
Runoff = 1.21 cfs @ 11.96 hrs, Volume= 0.057 af, Depth= 1.29"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

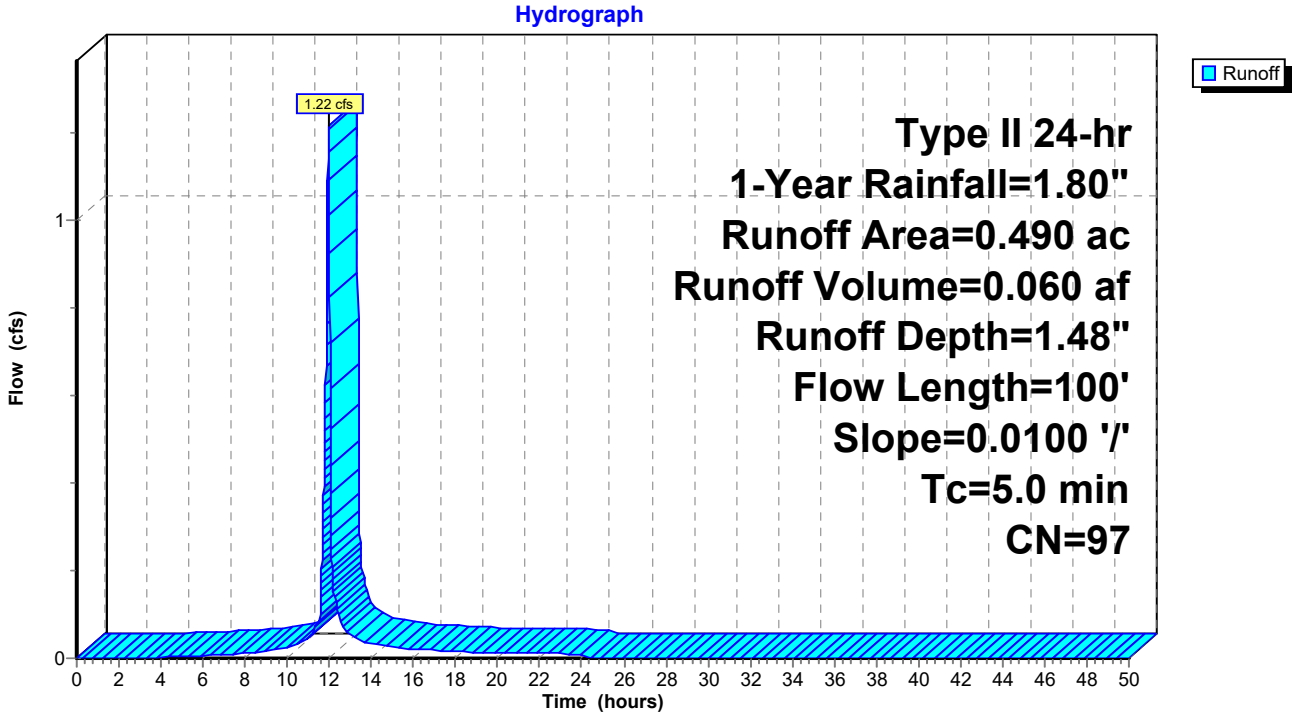
Runoff = 1.22 cfs @ 11.96 hrs, Volume= 0.060 af, Depth= 1.48"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

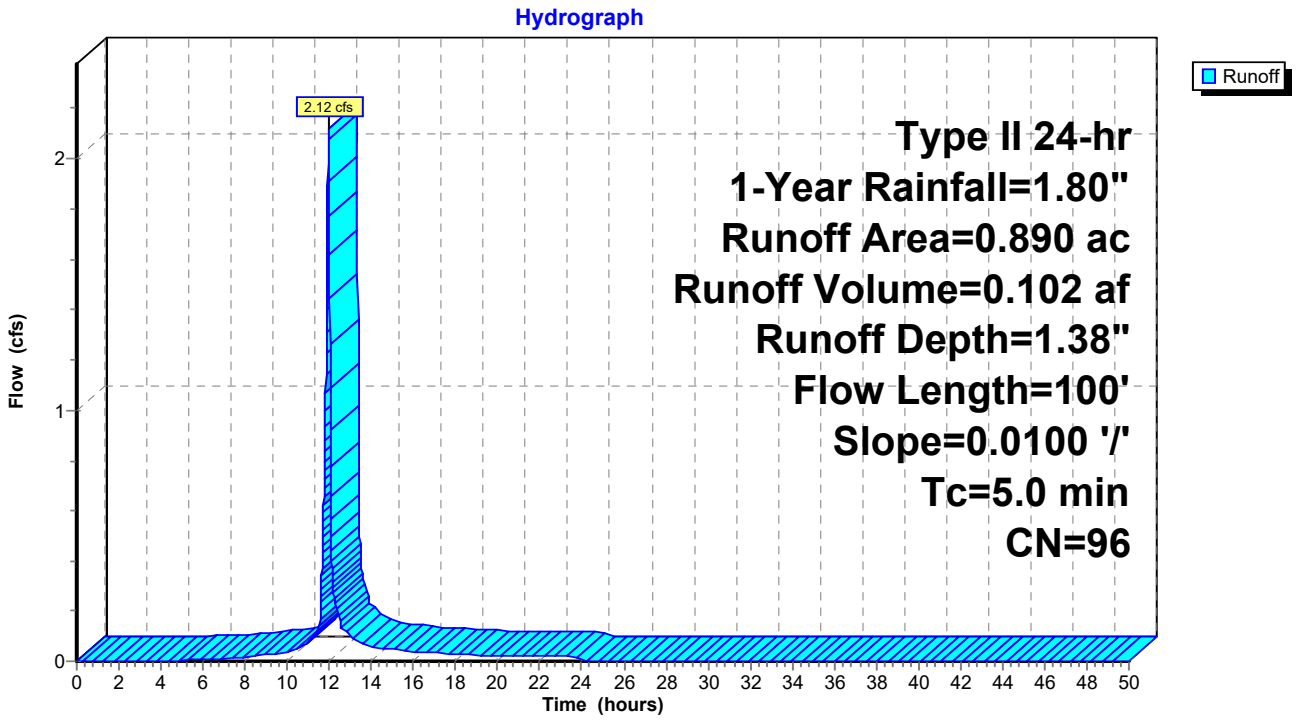
Runoff = 2.12 cfs @ 11.96 hrs, Volume= 0.102 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

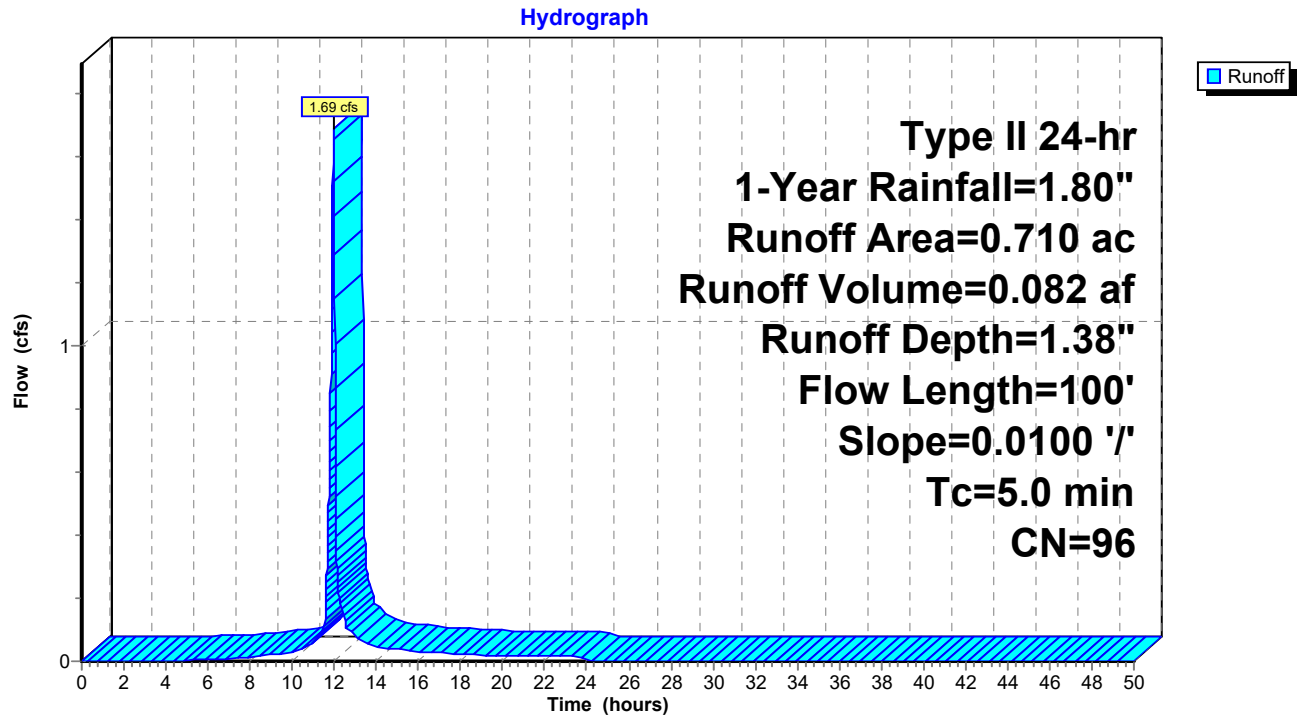
Runoff = 1.69 cfs @ 11.96 hrs, Volume= 0.082 af, Depth= 1.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

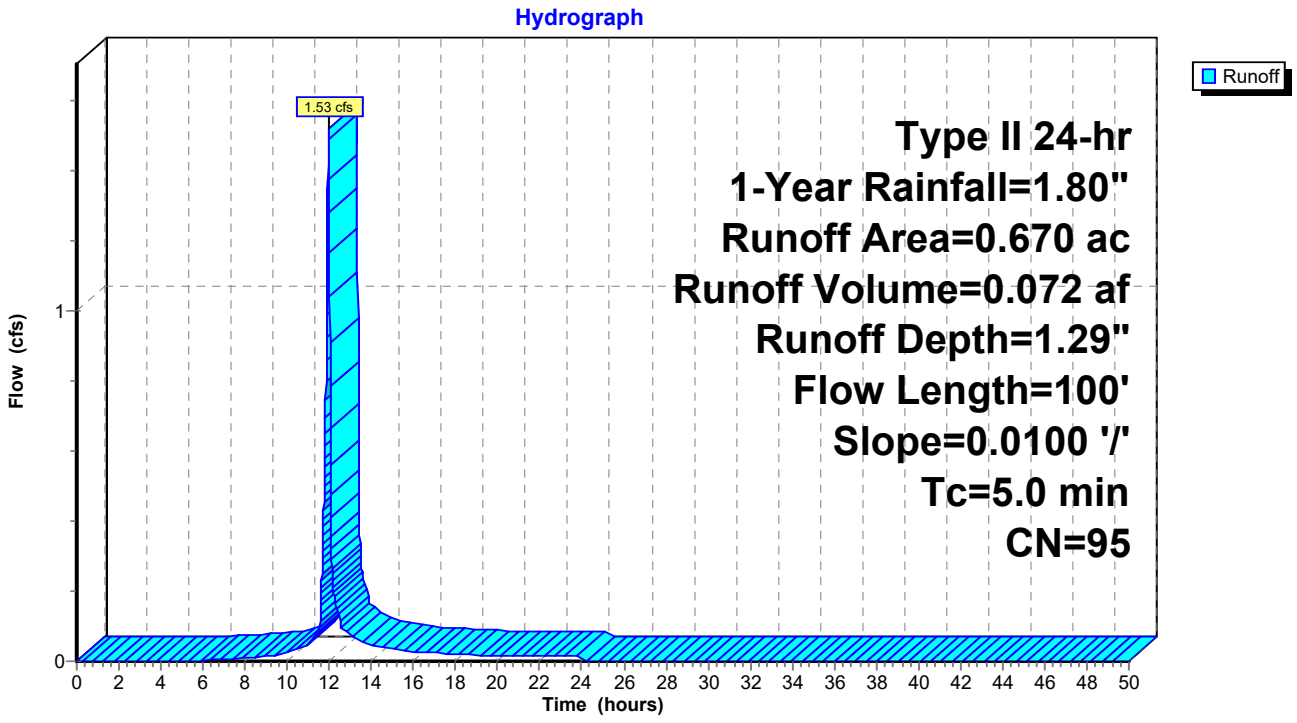
Runoff = 1.53 cfs @ 11.96 hrs, Volume= 0.072 af, Depth= 1.29"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

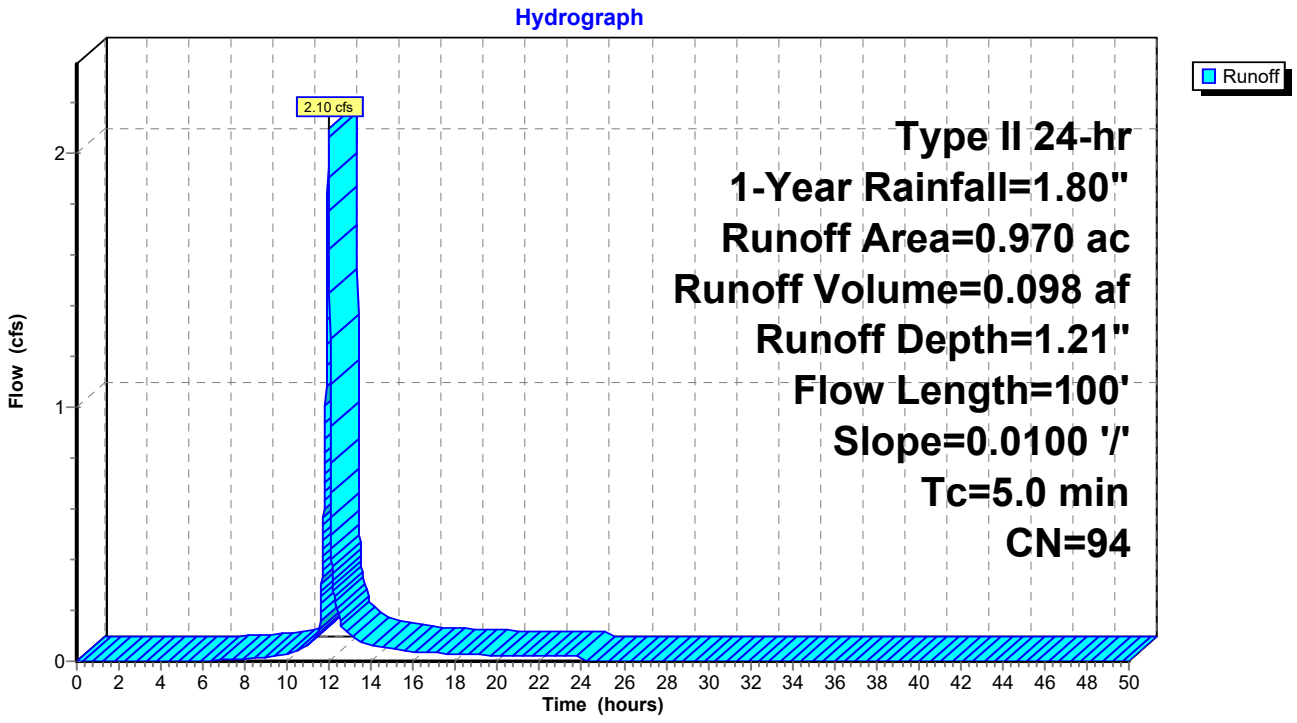
Runoff = 2.10 cfs @ 11.96 hrs, Volume= 0.098 af, Depth= 1.21"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

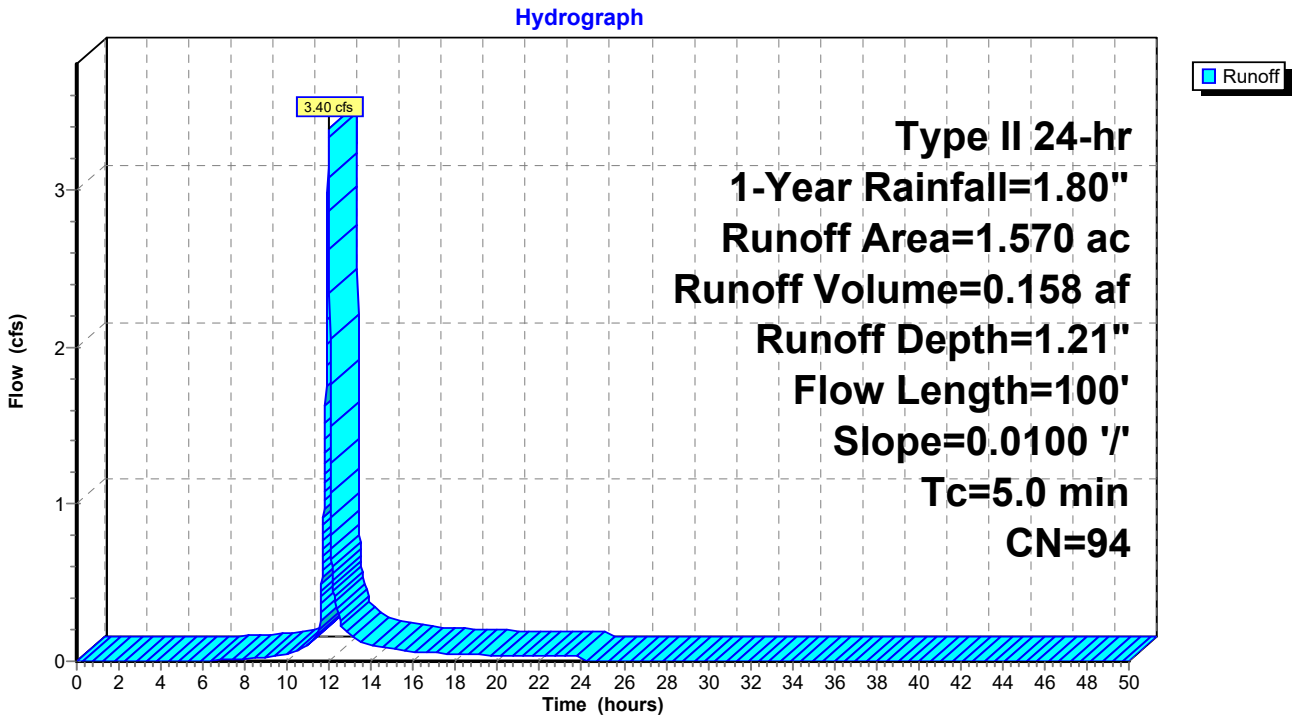
Runoff = 3.40 cfs @ 11.96 hrs, Volume= 0.158 af, Depth= 1.21"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.80"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 1.31" for 1-Year event
Inflow = 15.93 cfs @ 11.96 hrs, Volume= 0.759 af
Outflow = 7.30 cfs @ 12.05 hrs, Volume= 0.756 af, Atten= 54%, Lag= 5.3 min
Primary = 7.30 cfs @ 12.05 hrs, Volume= 0.756 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 572.35' @ 12.05 hrs Surf.Area= 20,584 sf Storage= 10,004 cf

Plug-Flow detention time= 55.9 min calculated for 0.756 af (100% of inflow)
Center-of-Mass det. time= 53.4 min (847.4 - 793.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=7.30 cfs @ 12.05 hrs HW=572.35' (Free Discharge)
↑—**1=Outlet Pipe** (Barrel Controls 7.30 cfs @ 2.78 fps)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

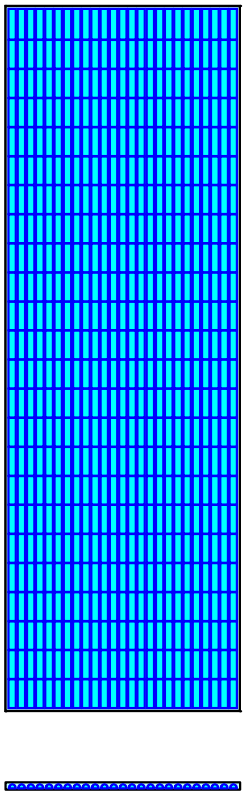
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

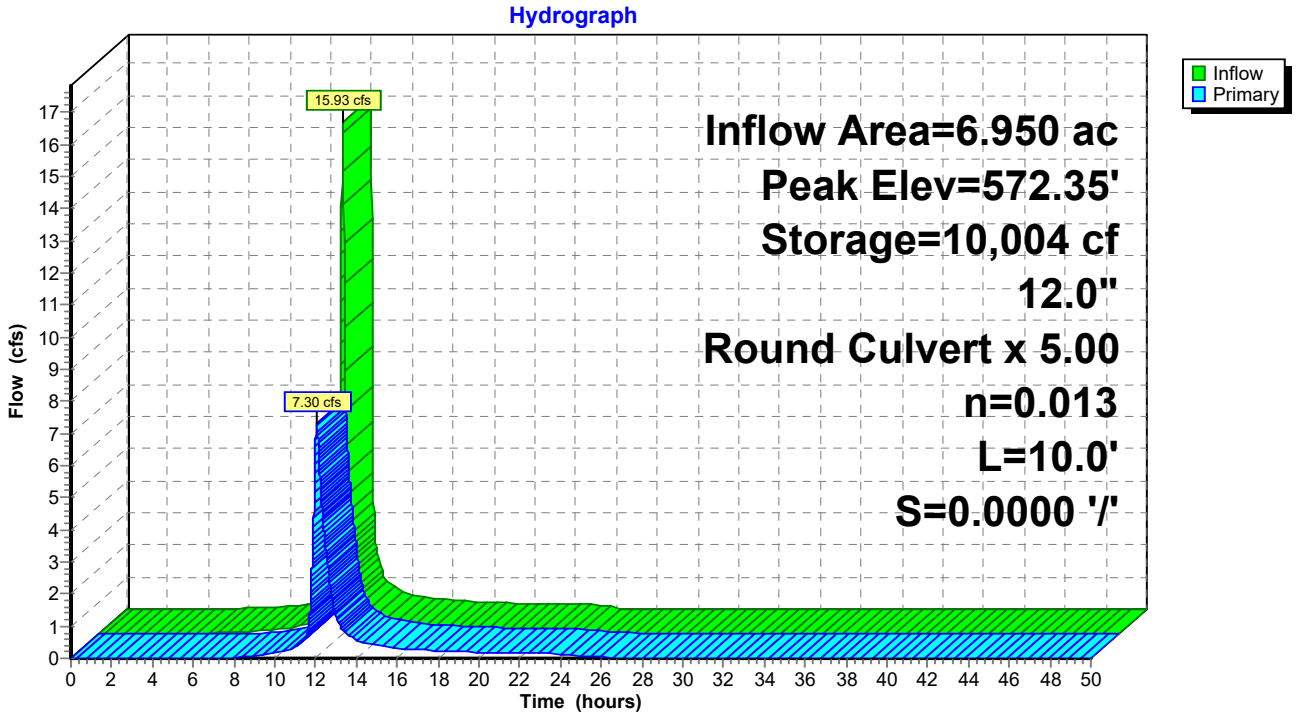
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=4.85 cfs 0.245 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=2.52"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.25 cfs 0.111 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=2.73"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=2.16 cfs 0.111 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.86 cfs 0.194 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=2.62"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.08 cfs 0.155 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=2.52"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.84 cfs 0.141 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=2.42"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=4.01 cfs 0.195 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=2.42"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=6.50 cfs 0.316 af

Pond 1P: Detention Storage & Outlet Peak Elev=572.83' Storage=17,843 cf Inflow=29.54 cfs 1.469 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=13.54 cfs 1.466 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.469 af Average Runoff Depth = 2.54"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

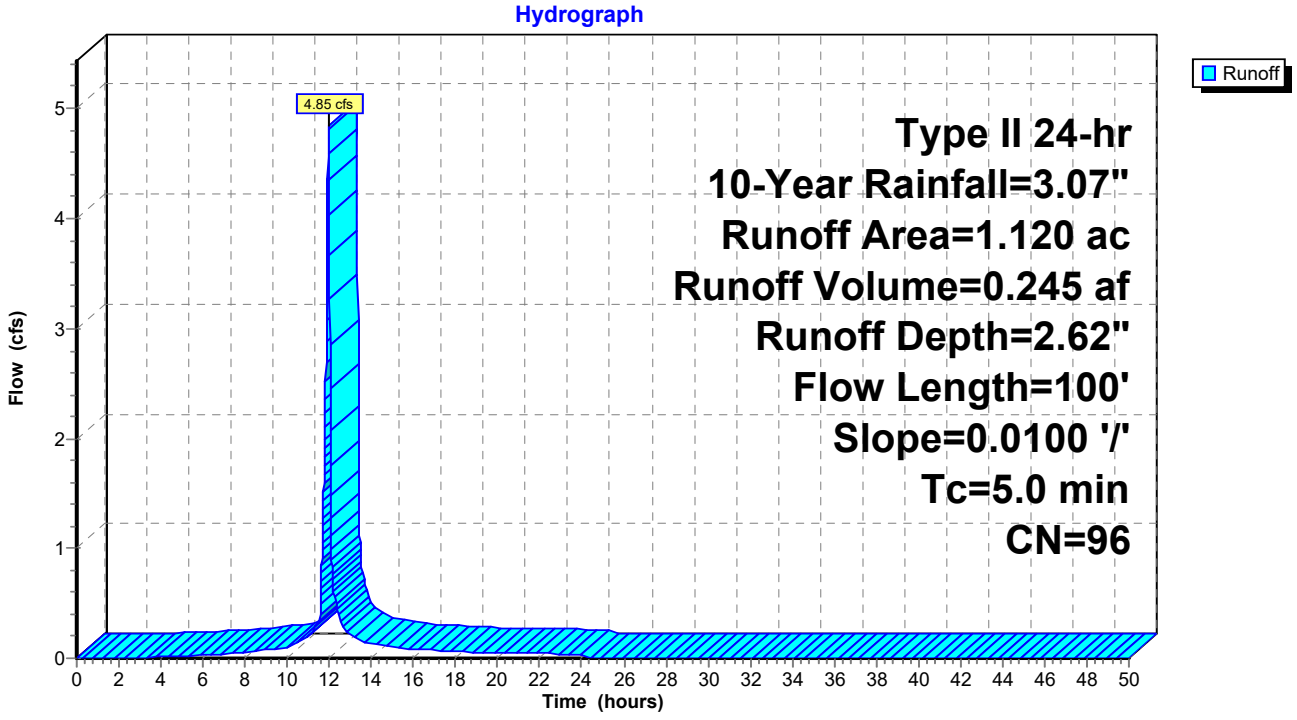
Runoff = 4.85 cfs @ 11.96 hrs, Volume= 0.245 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

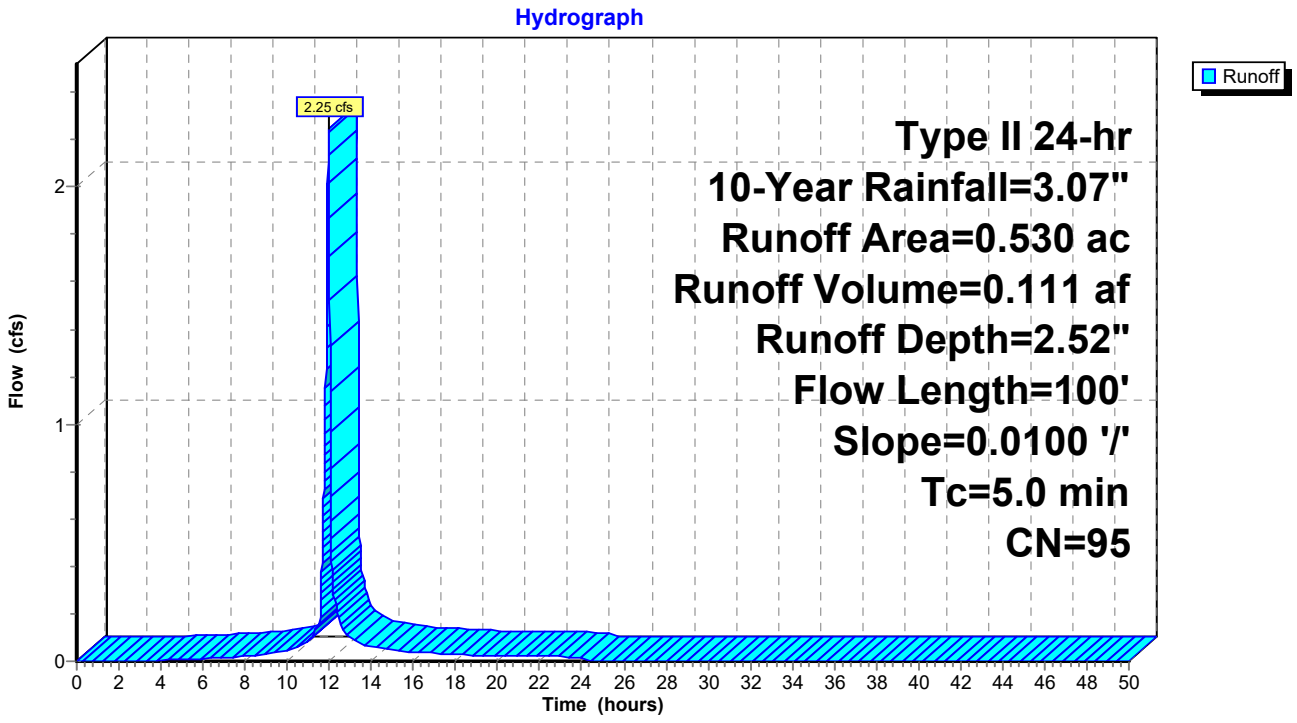
Runoff = 2.25 cfs @ 11.96 hrs, Volume= 0.111 af, Depth= 2.52"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

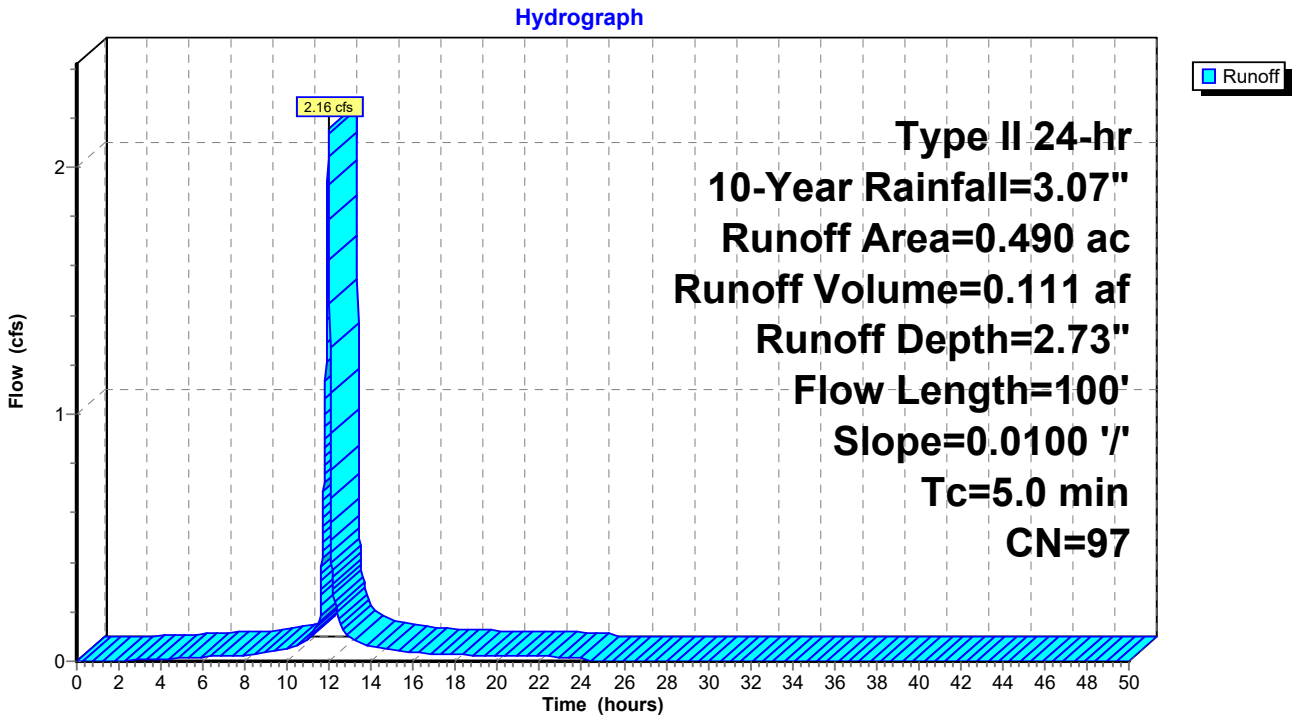
Runoff = 2.16 cfs @ 11.96 hrs, Volume= 0.111 af, Depth= 2.73"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

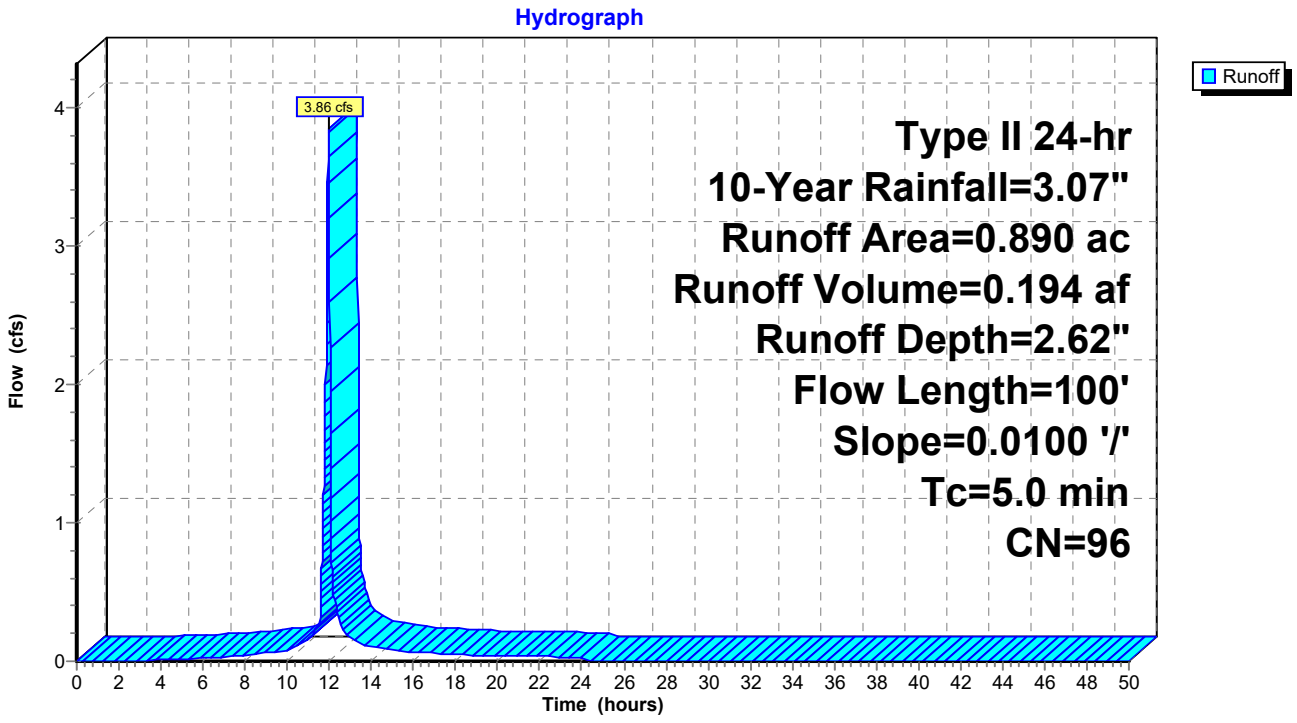
Runoff = 3.86 cfs @ 11.96 hrs, Volume= 0.194 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

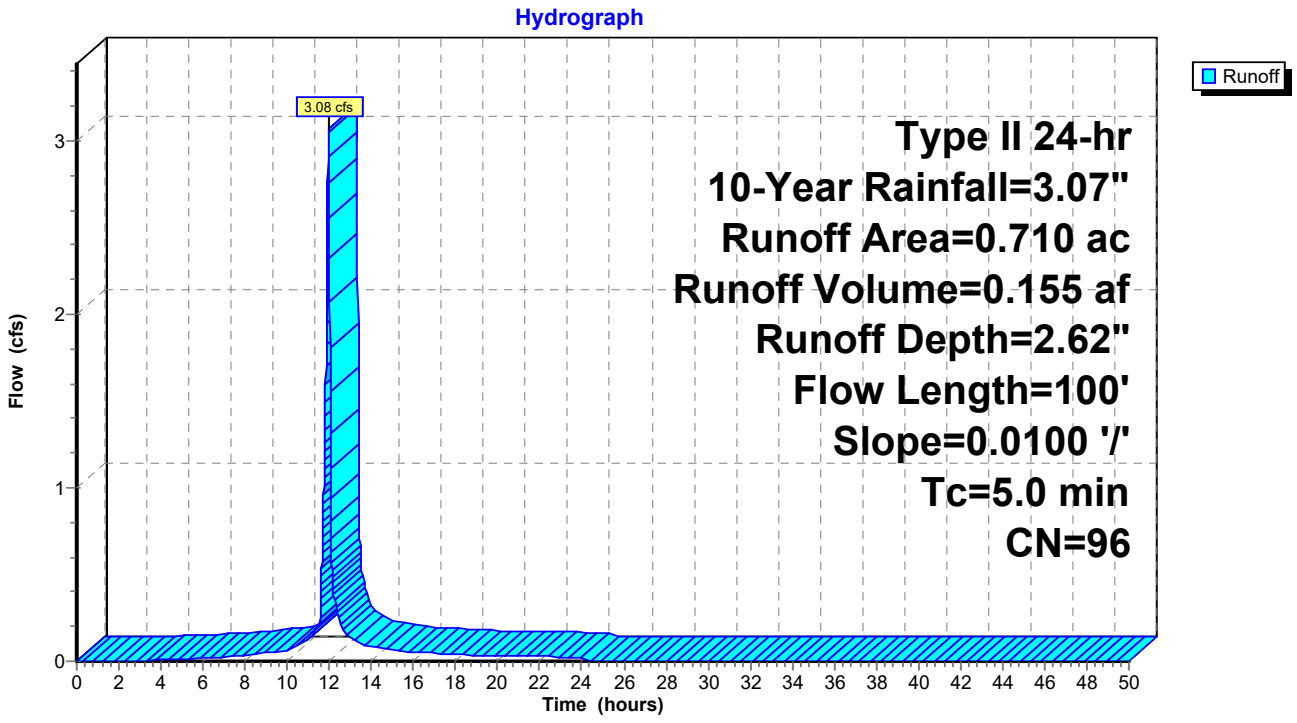
Runoff = 3.08 cfs @ 11.96 hrs, Volume= 0.155 af, Depth= 2.62"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

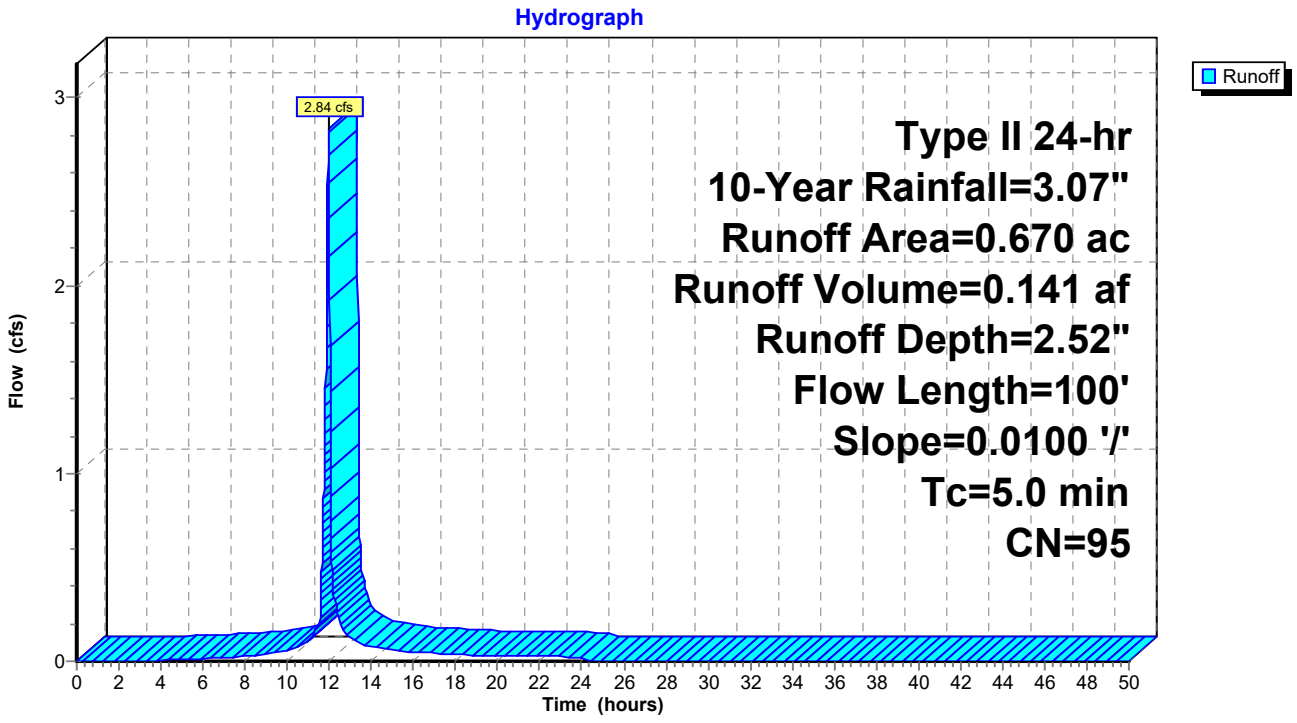
Runoff = 2.84 cfs @ 11.96 hrs, Volume= 0.141 af, Depth= 2.52"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

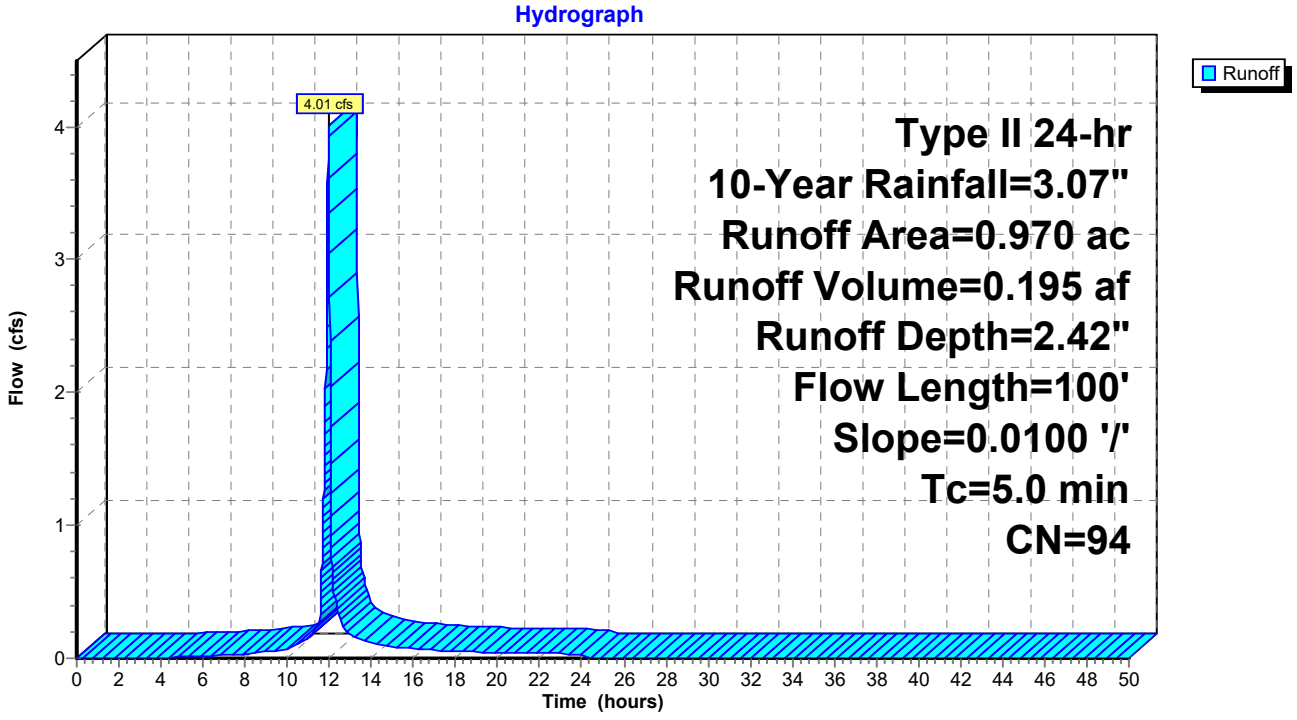
Runoff = 4.01 cfs @ 11.96 hrs, Volume= 0.195 af, Depth= 2.42"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

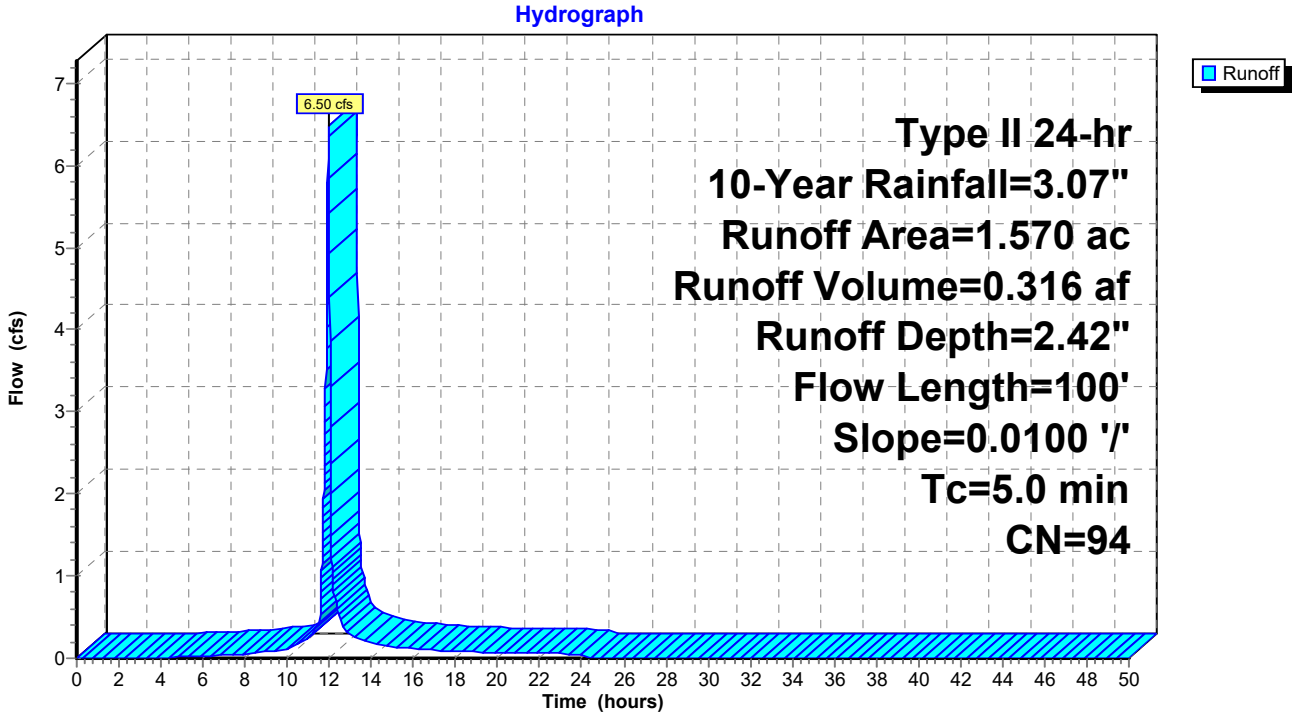
Runoff = 6.50 cfs @ 11.96 hrs, Volume= 0.316 af, Depth= 2.42"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.07"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 2.54" for 10-Year event
Inflow = 29.54 cfs @ 11.96 hrs, Volume= 1.469 af
Outflow = 13.54 cfs @ 12.04 hrs, Volume= 1.466 af, Atten= 54%, Lag= 5.3 min
Primary = 13.54 cfs @ 12.04 hrs, Volume= 1.466 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 572.83' @ 12.05 hrs Surf.Area= 20,584 sf Storage= 17,843 cf

Plug-Flow detention time= 42.6 min calculated for 1.466 af (100% of inflow)
Center-of-Mass det. time= 41.5 min (817.6 - 776.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=13.54 cfs @ 12.04 hrs HW=572.83' (Free Discharge)
↑—**1=Outlet Pipe** (Barrel Controls 13.54 cfs @ 3.45 fps)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

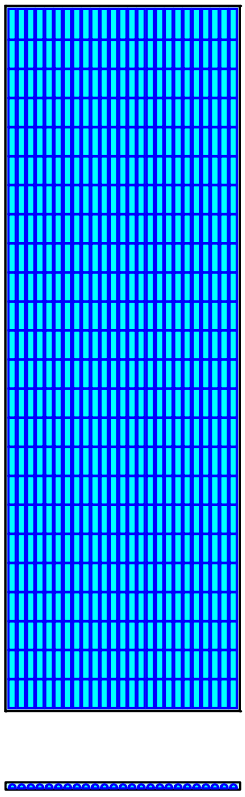
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

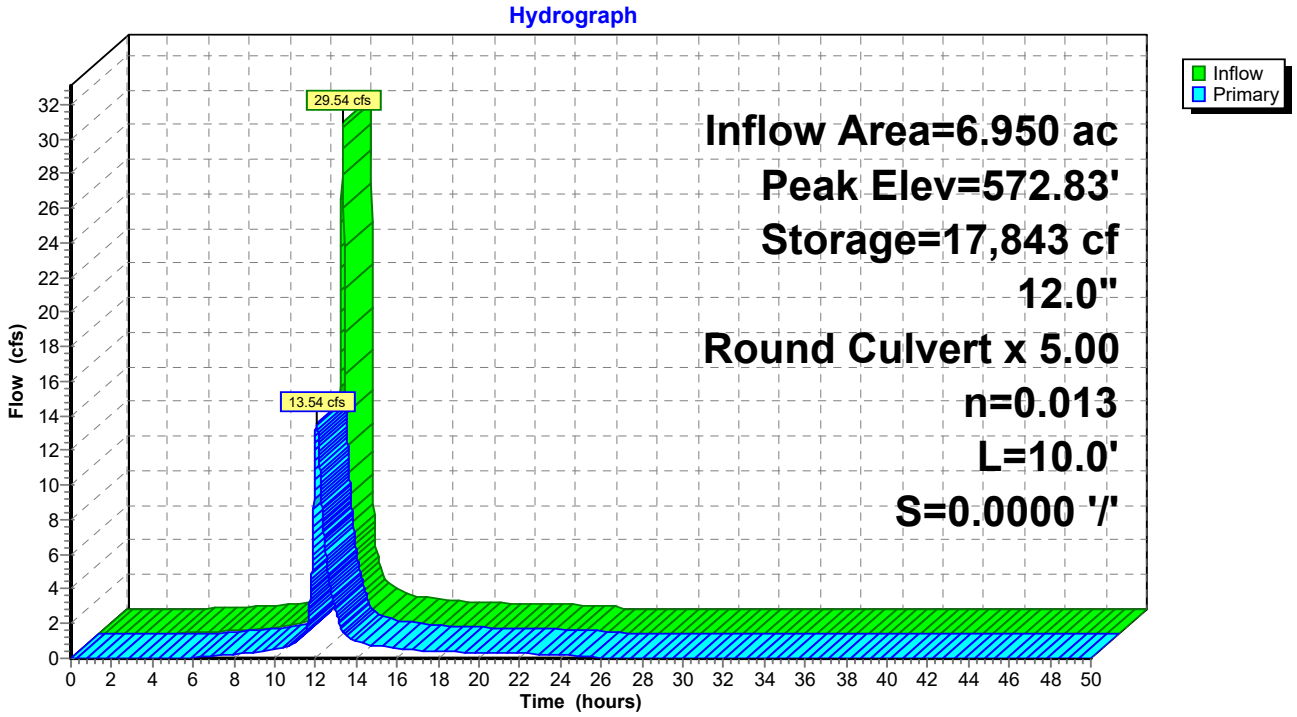
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=5.97 cfs 0.305 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=3.17"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=2.78 cfs 0.140 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=3.38"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=2.65 cfs 0.138 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=4.75 cfs 0.243 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=3.27"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=3.79 cfs 0.194 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=3.17"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=3.52 cfs 0.177 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=3.06"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=5.00 cfs 0.247 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=3.06"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=8.09 cfs 0.400 af

Pond 1P: Detention Storage & Outlet Peak Elev=573.09' Storage=21,706 cf Inflow=36.53 cfs 1.844 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=18.03 cfs 1.841 af

Total Runoff Area = 6.950 ac Runoff Volume = 1.844 af Average Runoff Depth = 3.18"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

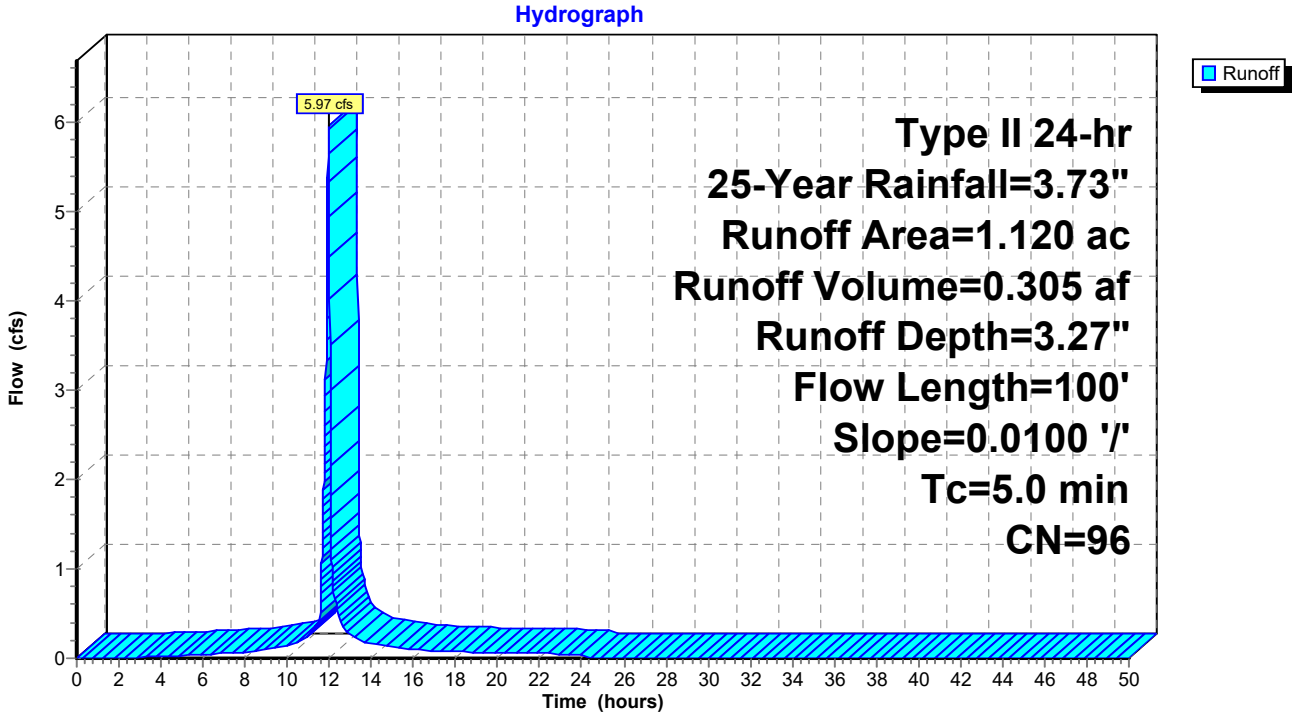
Runoff = 5.97 cfs @ 11.96 hrs, Volume= 0.305 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

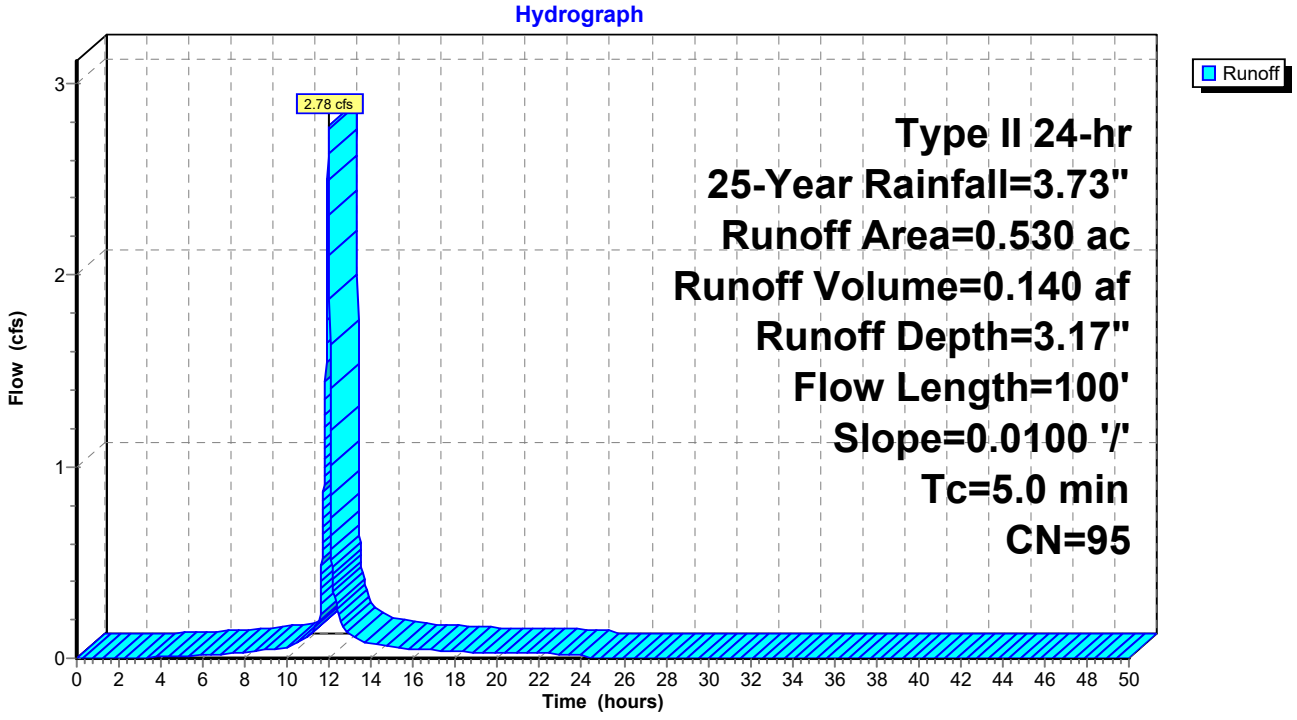
Runoff = 2.78 cfs @ 11.96 hrs, Volume= 0.140 af, Depth= 3.17"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

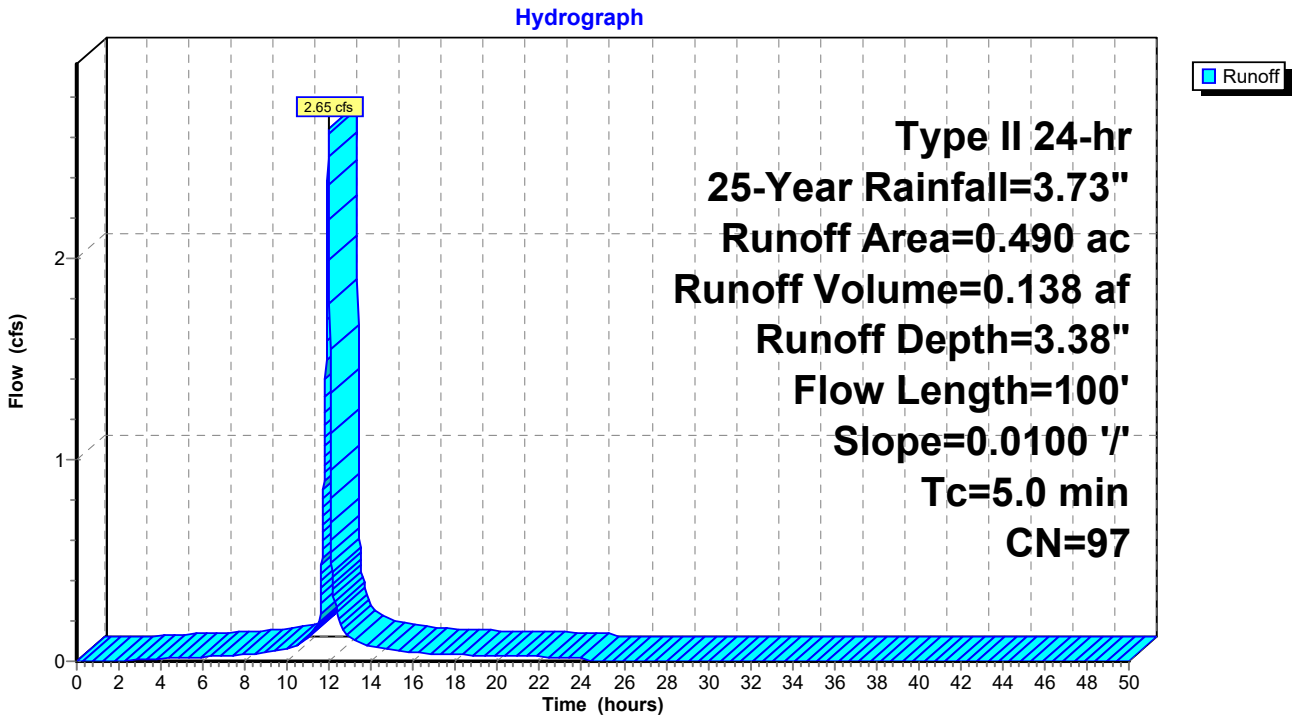
Runoff = 2.65 cfs @ 11.96 hrs, Volume= 0.138 af, Depth= 3.38"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

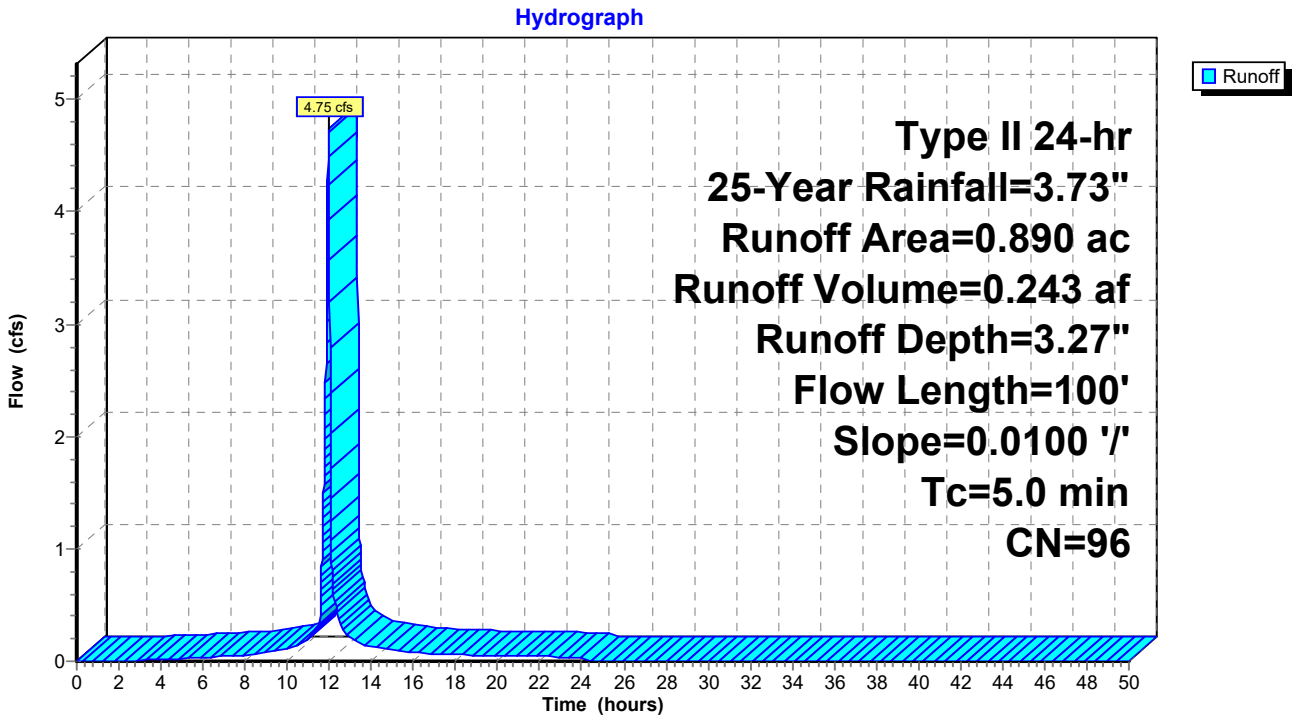
Runoff = 4.75 cfs @ 11.96 hrs, Volume= 0.243 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

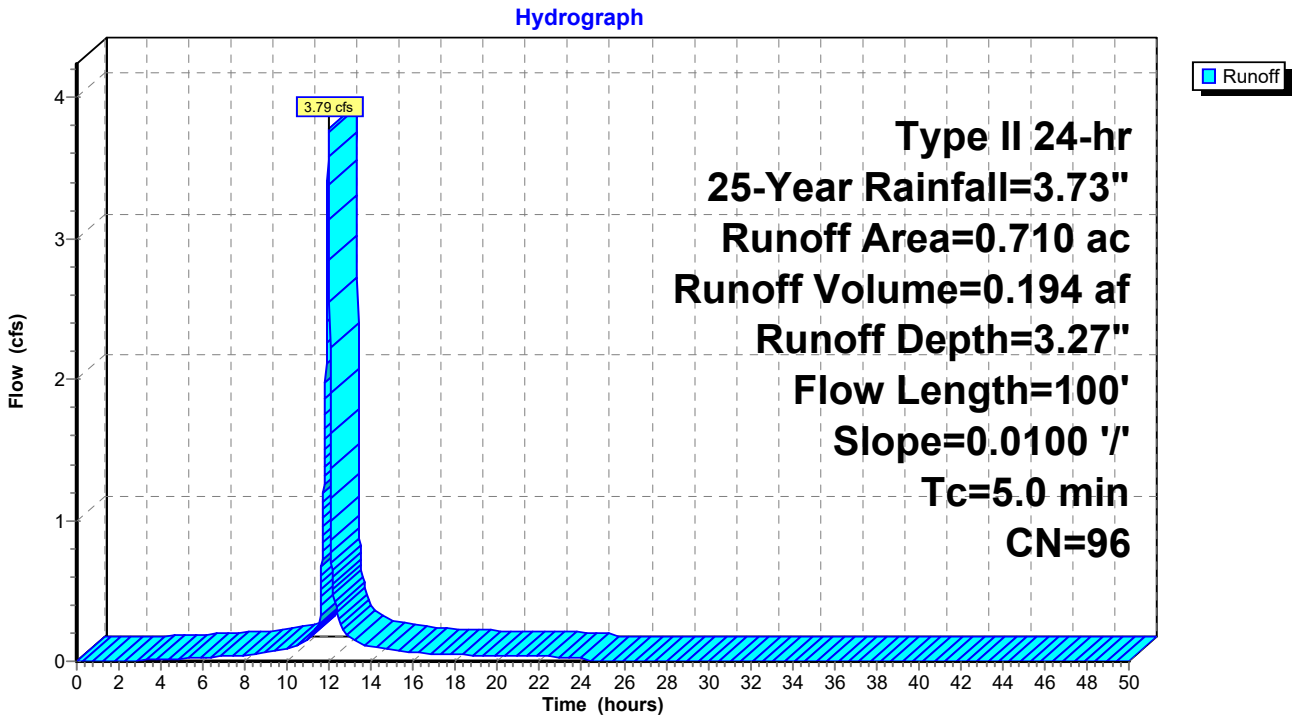
Runoff = 3.79 cfs @ 11.96 hrs, Volume= 0.194 af, Depth= 3.27"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

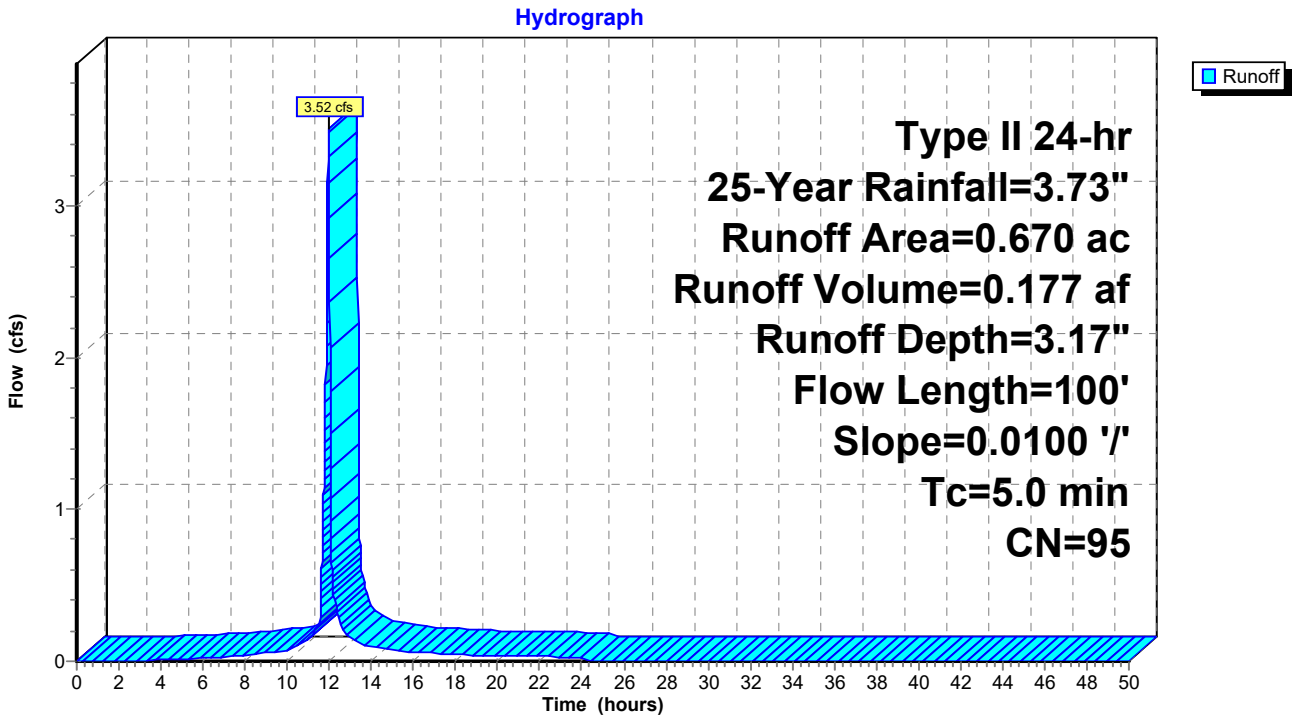
Runoff = 3.52 cfs @ 11.96 hrs, Volume= 0.177 af, Depth= 3.17"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

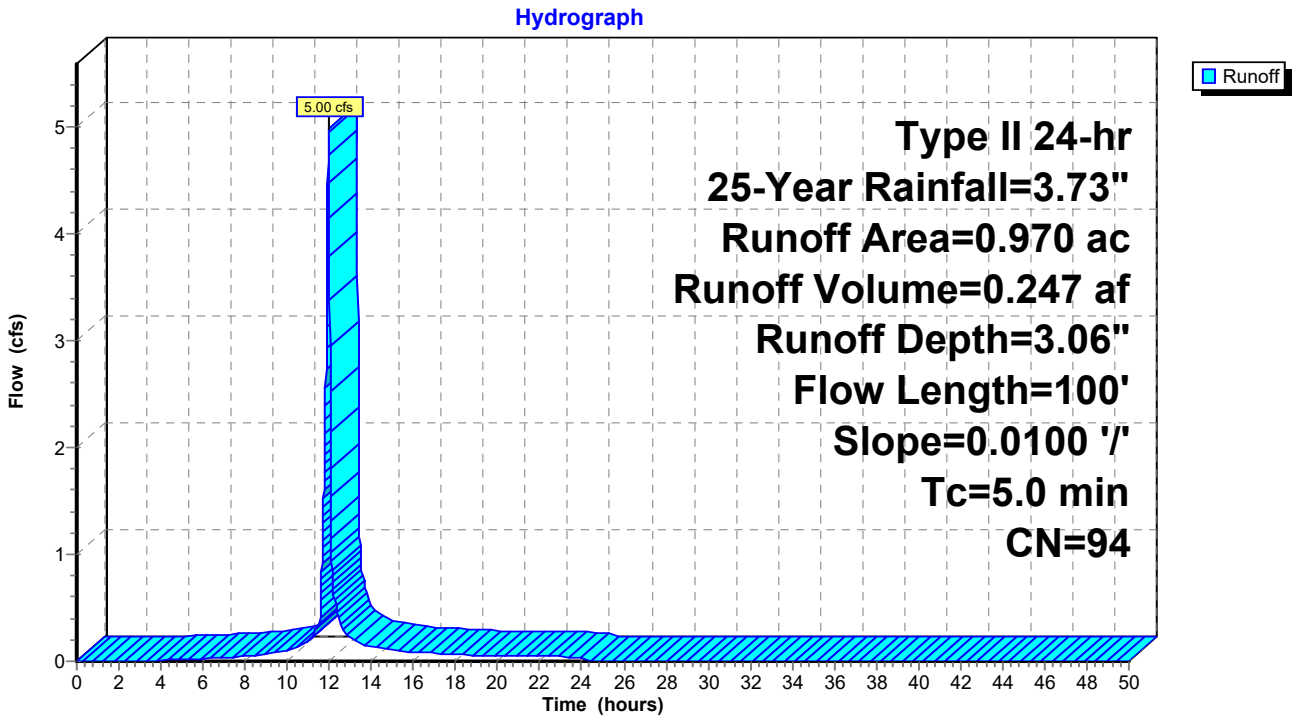
Runoff = 5.00 cfs @ 11.96 hrs, Volume= 0.247 af, Depth= 3.06"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

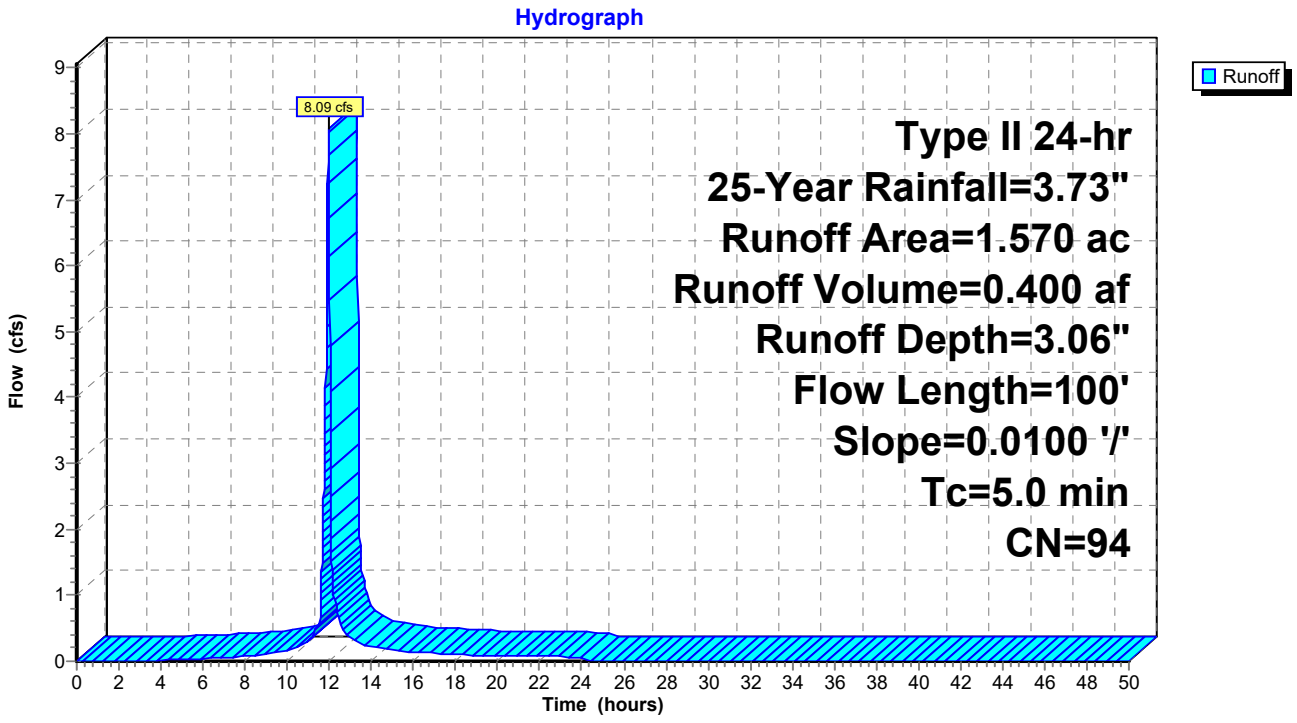
Runoff = 8.09 cfs @ 11.96 hrs, Volume= 0.400 af, Depth= 3.06"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.73"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 3.18" for 25-Year event
Inflow = 36.53 cfs @ 11.96 hrs, Volume= 1.844 af
Outflow = 18.03 cfs @ 12.04 hrs, Volume= 1.841 af, Atten= 51%, Lag= 5.1 min
Primary = 18.03 cfs @ 12.04 hrs, Volume= 1.841 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 573.09' @ 12.04 hrs Surf.Area= 20,584 sf Storage= 21,706 cf

Plug-Flow detention time= 39.0 min calculated for 1.841 af (100% of inflow)
Center-of-Mass det. time= 38.1 min (808.4 - 770.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=18.02 cfs @ 12.04 hrs HW=573.09' (Free Discharge)
↑—**1=Outlet Pipe** (Barrel Controls 18.02 cfs @ 4.59 fps)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

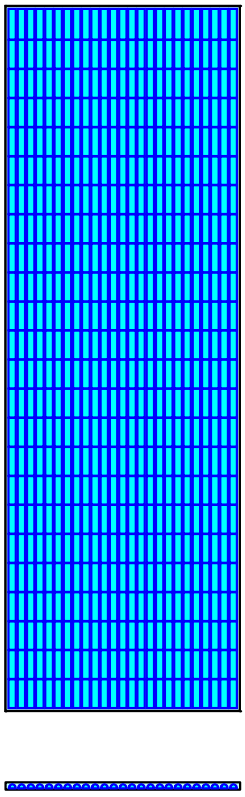
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

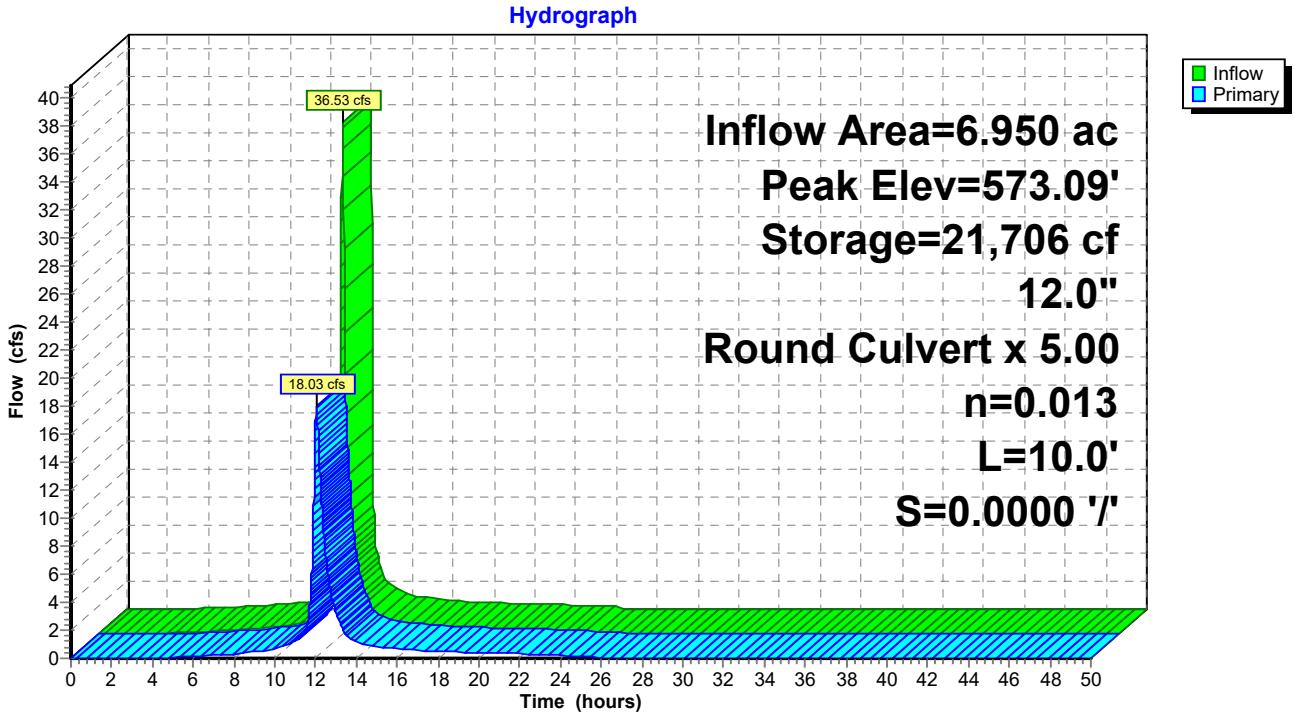
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 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 Site Runoff Area=1.120 ac 89.29% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=8.16 cfs 0.426 af

Subcatchment2S: Proposed Site Runoff Area=0.530 ac 84.91% Impervious Runoff Depth=4.45"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=3.82 cfs 0.197 af

Subcatchment3S: Proposed Site Runoff Area=0.490 ac 93.88% Impervious Runoff Depth=4.68"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=97 Runoff=3.60 cfs 0.191 af

Subcatchment4S: Proposed Site Runoff Area=0.890 ac 87.64% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=6.49 cfs 0.338 af

Subcatchment5S: Proposed Site Runoff Area=0.710 ac 87.32% Impervious Runoff Depth=4.56"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=96 Runoff=5.17 cfs 0.270 af

Subcatchment6S: Proposed Site Runoff Area=0.670 ac 85.07% Impervious Runoff Depth=4.45"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=95 Runoff=4.83 cfs 0.248 af

Subcatchment7S: Proposed Site Runoff Area=0.970 ac 77.32% Impervious Runoff Depth=4.34"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=6.92 cfs 0.351 af

Subcatchment8S: Proposed Site Runoff Area=1.570 ac 80.25% Impervious Runoff Depth=4.34"
Flow Length=100' Slope=0.0100 '/' Tc=5.0 min CN=94 Runoff=11.20 cfs 0.567 af

Pond 1P: Detention Storage & Outlet Peak Elev=573.83' Storage=29,010 cf Inflow=50.20 cfs 2.588 af
12.0" Round Culvert x 5.00 n=0.013 L=10.0' S=0.0000 '/' Outflow=25.60 cfs 2.585 af

Total Runoff Area = 6.950 ac Runoff Volume = 2.588 af Average Runoff Depth = 4.47"
15.25% Pervious = 1.060 ac 84.75% Impervious = 5.890 ac

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 1S: Proposed Site

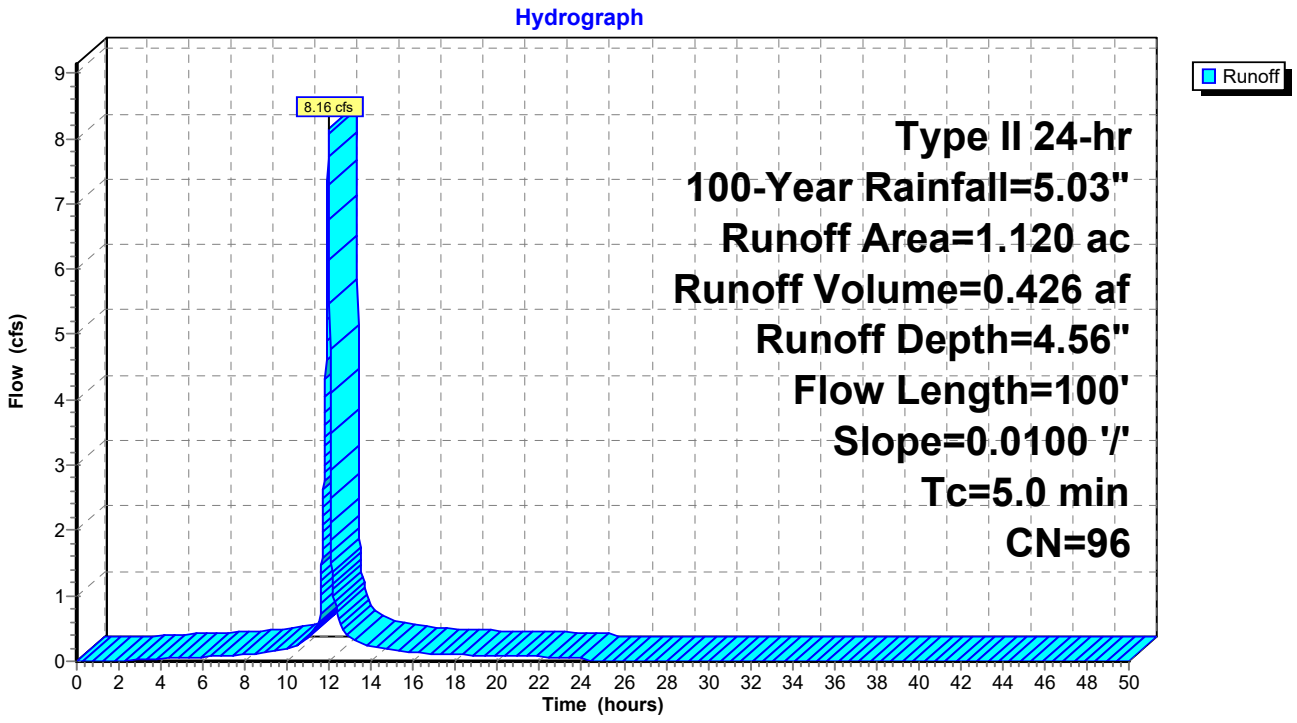
Runoff = 8.16 cfs @ 11.96 hrs, Volume= 0.426 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.120	80	>75% Grass cover, Good, HSG D
*	1.000	98	Impervious, HSG D
	1.120	96	Weighted Average
	0.120		10.71% Pervious Area
	1.000		89.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 2S: Proposed Site

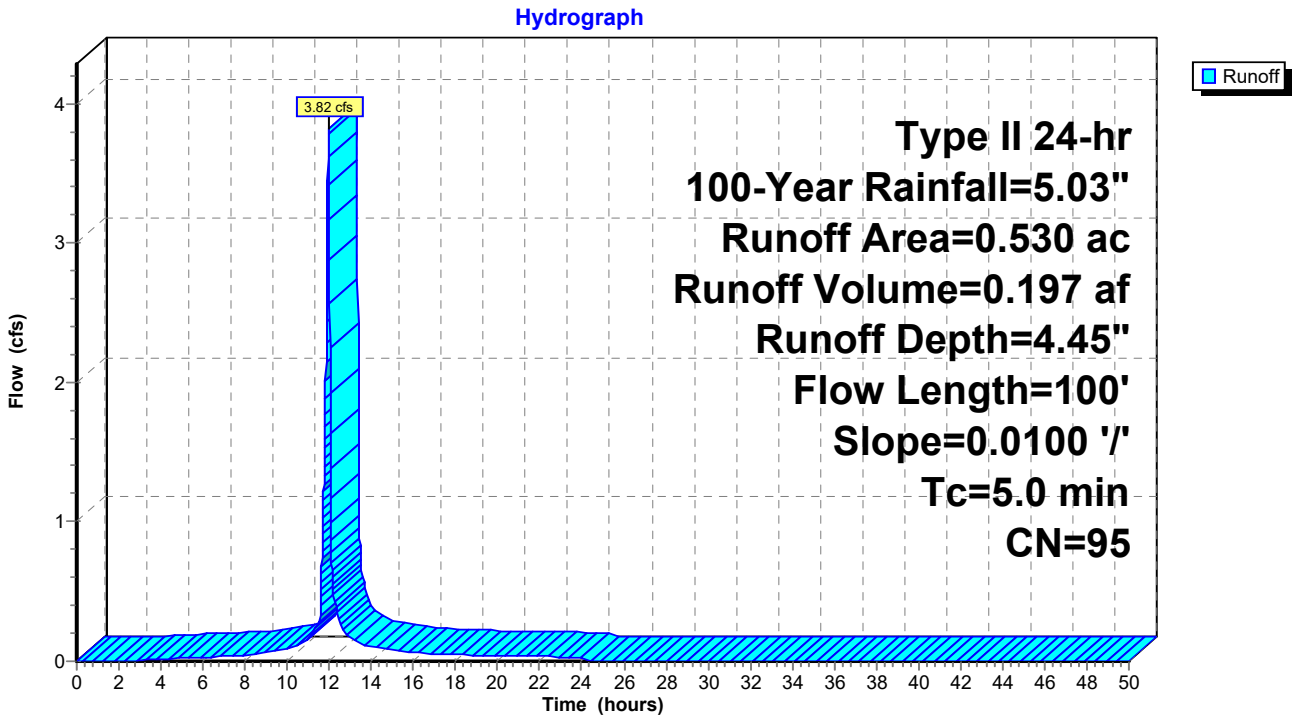
Runoff = 3.82 cfs @ 11.96 hrs, Volume= 0.197 af, Depth= 4.45"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.080	80	>75% Grass cover, Good, HSG D
*	0.450	98	Impervious, HSG D
	0.530	95	Weighted Average
	0.080		15.09% Pervious Area
	0.450		84.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 3S: Proposed Site

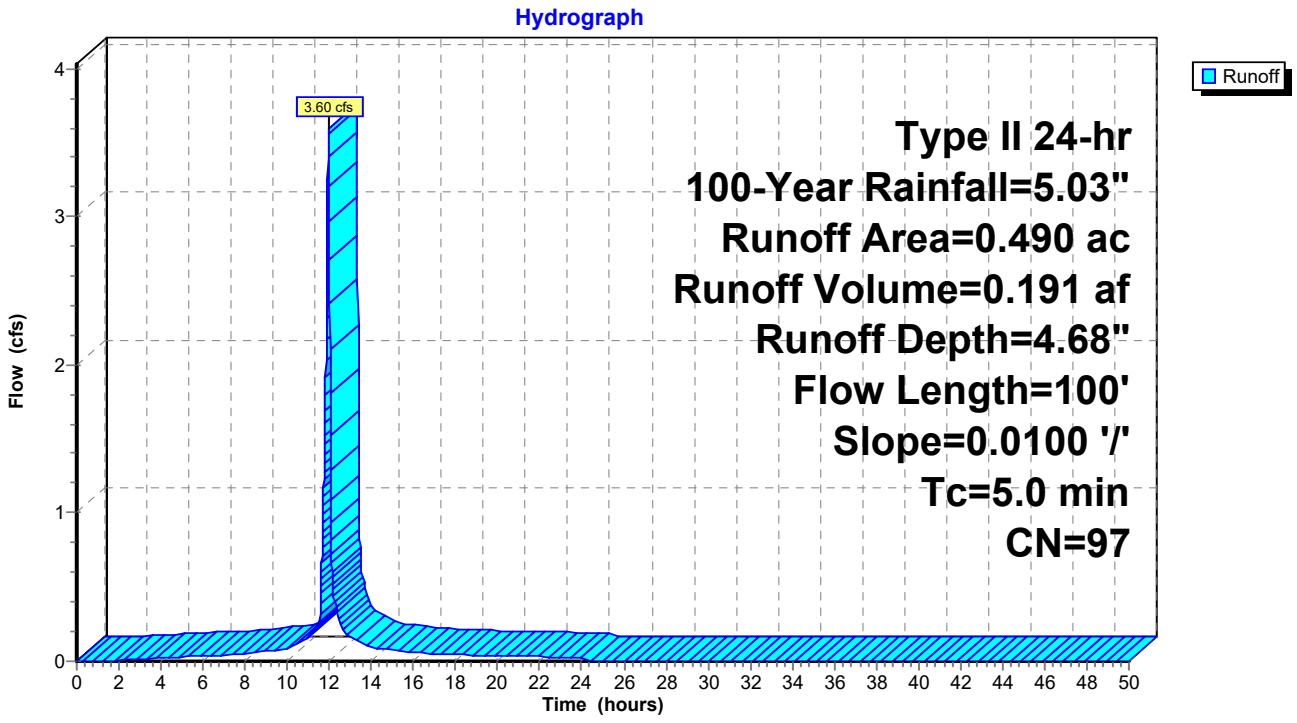
Runoff = 3.60 cfs @ 11.96 hrs, Volume= 0.191 af, Depth= 4.68"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.030	80	>75% Grass cover, Good, HSG D
*	0.460	98	Impervious, HSG D
	0.490	97	Weighted Average
	0.030		6.12% Pervious Area
	0.460		93.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 4S: Proposed Site

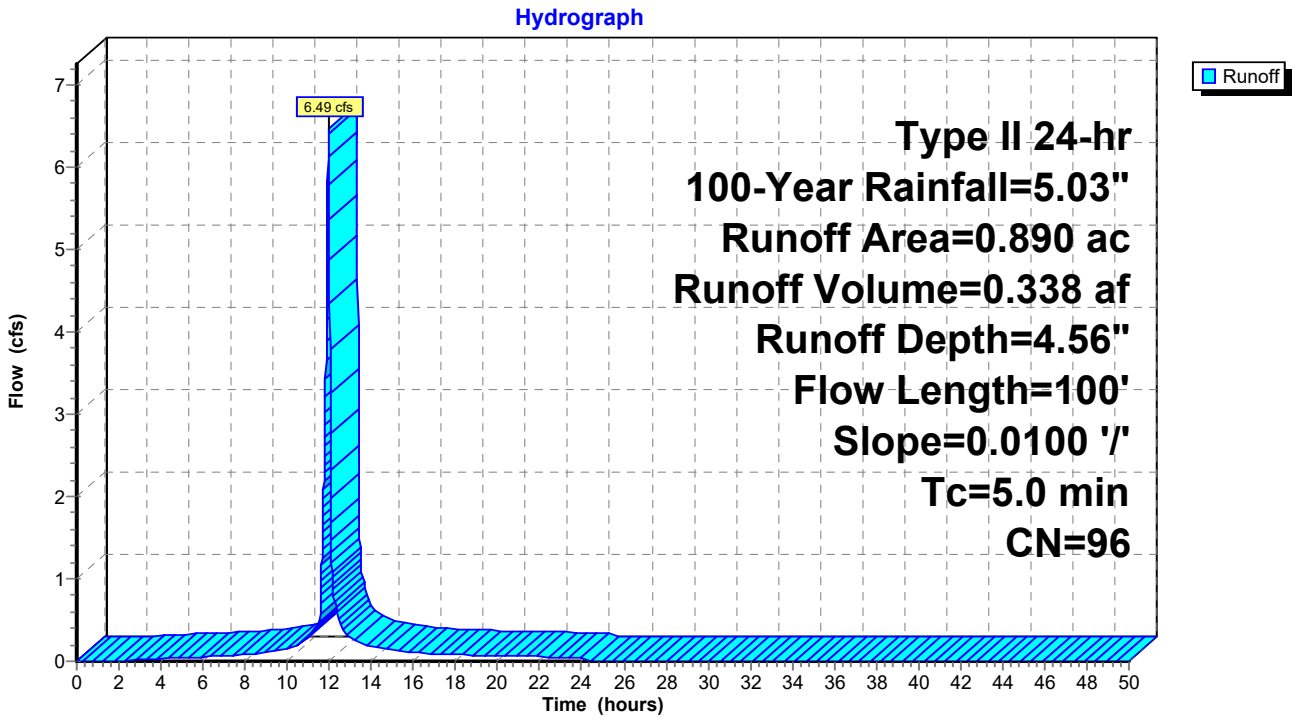
Runoff = 6.49 cfs @ 11.96 hrs, Volume= 0.338 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.110	80	>75% Grass cover, Good, HSG D
*	0.780	98	Impervious, HSG D
	0.890	96	Weighted Average
	0.110		12.36% Pervious Area
	0.780		87.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 4S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 5S: Proposed Site

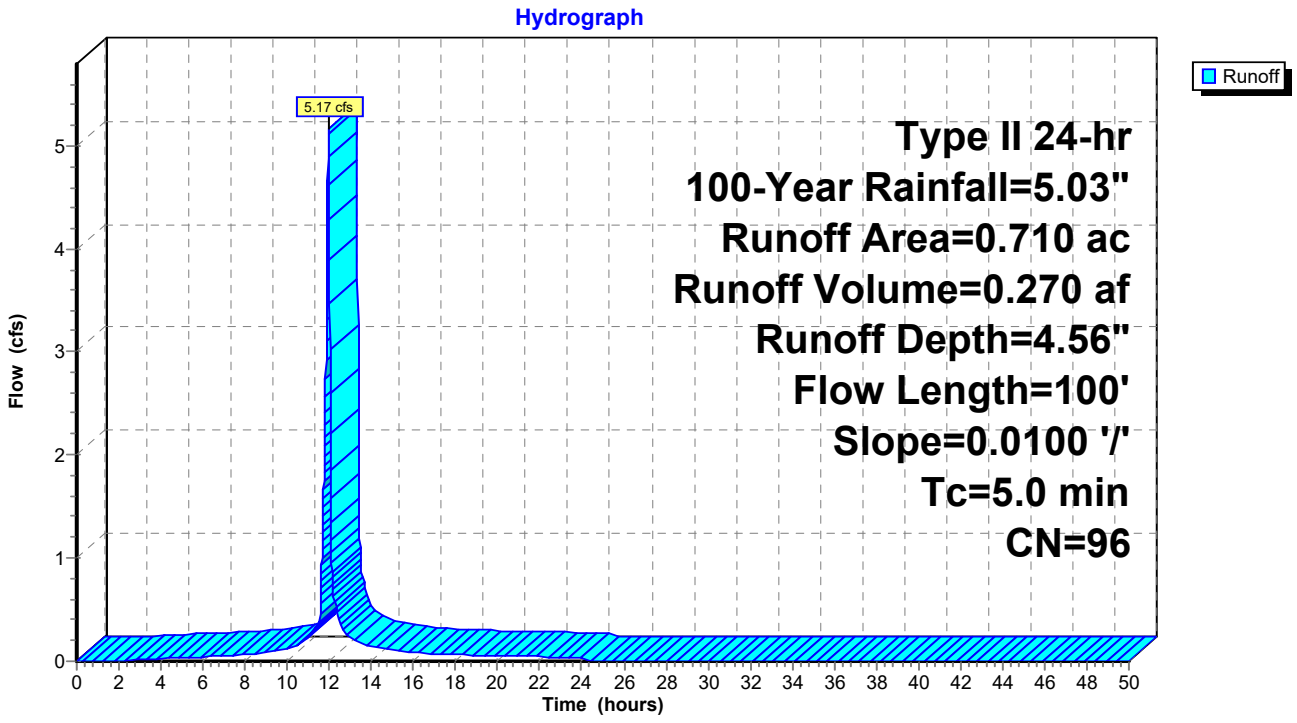
Runoff = 5.17 cfs @ 11.96 hrs, Volume= 0.270 af, Depth= 4.56"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.090	80	>75% Grass cover, Good, HSG D
*	0.620	98	Impervious, HSG D
	0.710	96	Weighted Average
	0.090		12.68% Pervious Area
	0.620		87.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 5S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 6S: Proposed Site

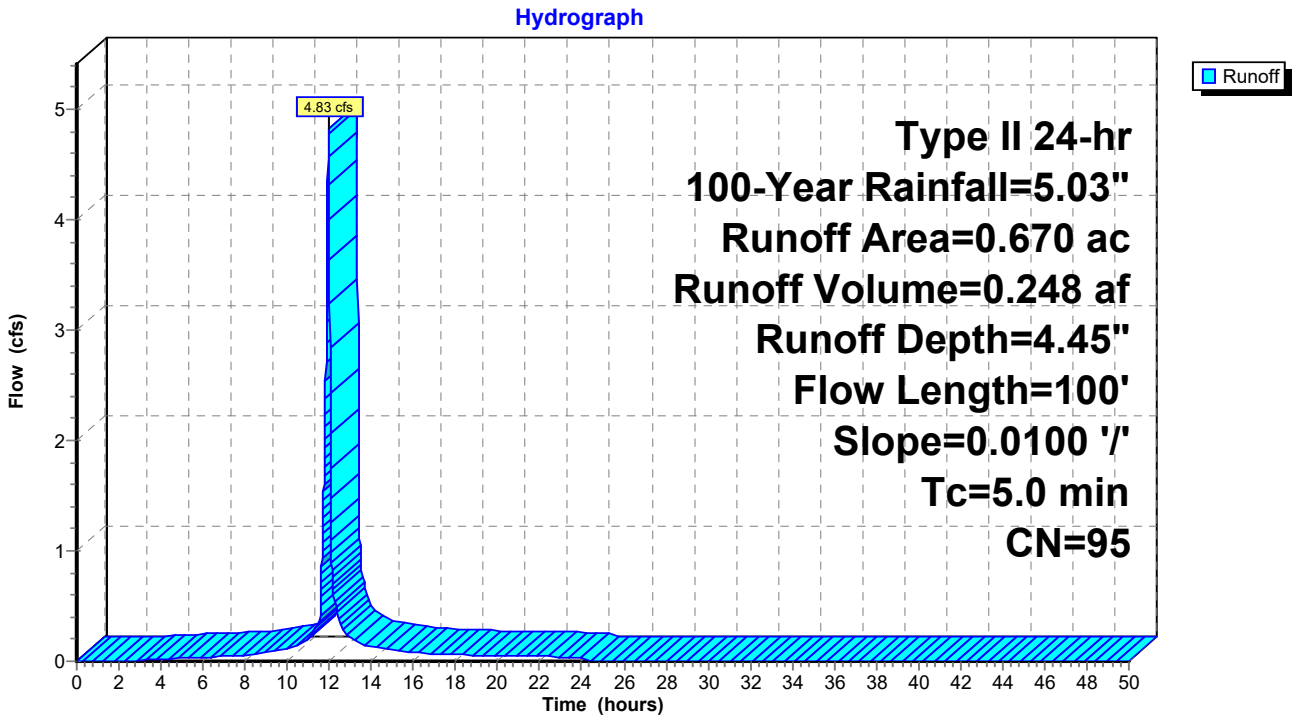
Runoff = 4.83 cfs @ 11.96 hrs, Volume= 0.248 af, Depth= 4.45"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.100	80	>75% Grass cover, Good, HSG D
*	0.570	98	Impervious, HSG D
	0.670	95	Weighted Average
	0.100		14.93% Pervious Area
	0.570		85.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 6S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 7S: Proposed Site

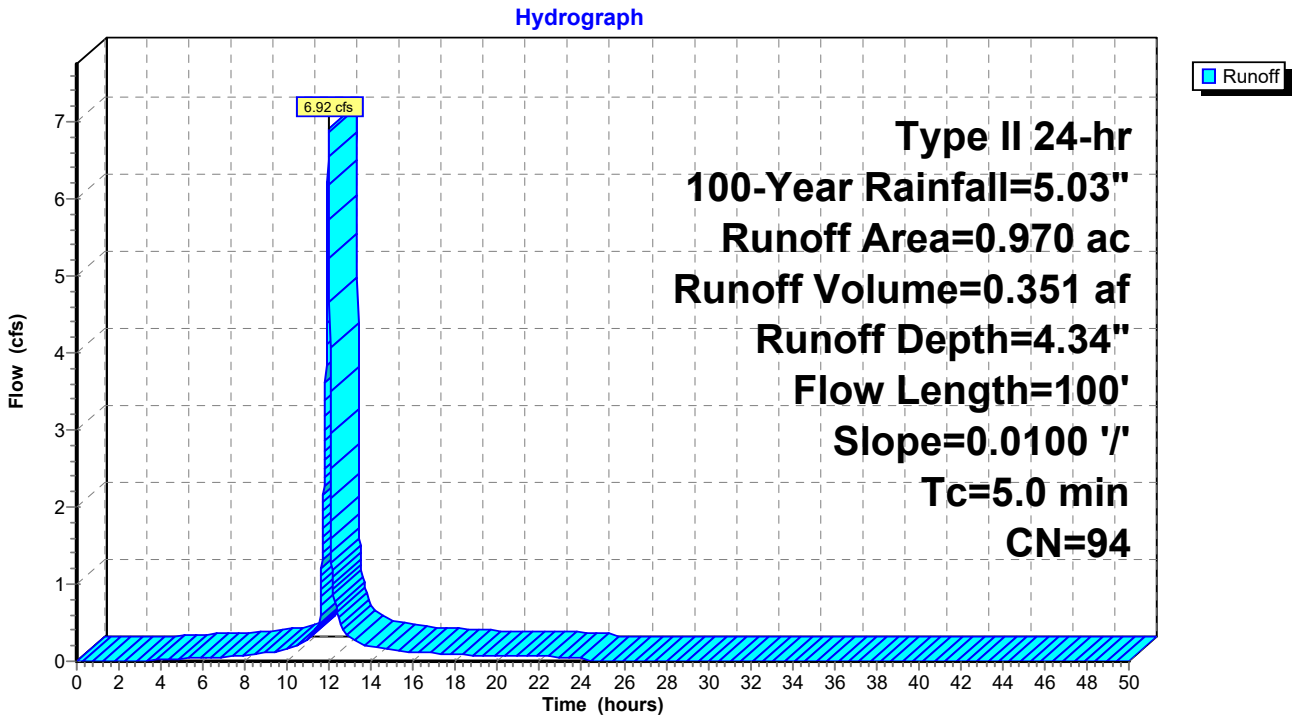
Runoff = 6.92 cfs @ 11.96 hrs, Volume= 0.351 af, Depth= 4.34"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.220	80	>75% Grass cover, Good, HSG D
*	0.750	98	Impervious, HSG D
	0.970	94	Weighted Average
	0.220		22.68% Pervious Area
	0.750		77.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 7S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Subcatchment 8S: Proposed Site

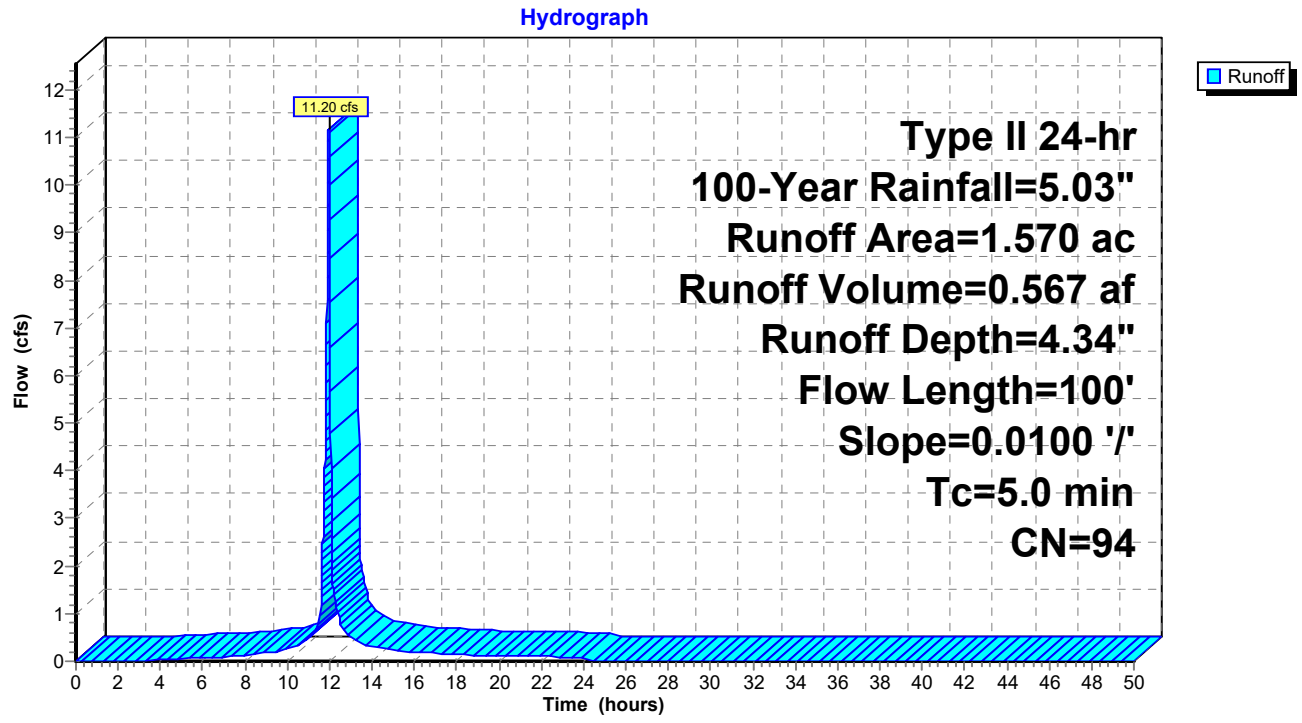
Runoff = 11.20 cfs @ 11.96 hrs, Volume= 0.567 af, Depth= 4.34"
Routed to Pond 1P : Detention Storage & Outlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.03"

	Area (ac)	CN	Description
	0.310	80	>75% Grass cover, Good, HSG D
*	1.260	98	Impervious, HSG D
	1.570	94	Weighted Average
	0.310		19.75% Pervious Area
	1.260		80.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.92		**Sheet Flow, Overland - Pvmt.** Smooth surfaces n= 0.011 P2= 2.50"
1.8	100	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 8S: Proposed Site



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Summary for Pond 1P: Detention Storage & Outlet

Inflow Area = 6.950 ac, 84.75% Impervious, Inflow Depth = 4.47" for 100-Year event
Inflow = 50.20 cfs @ 11.96 hrs, Volume= 2.588 af
Outflow = 25.60 cfs @ 12.04 hrs, Volume= 2.585 af, Atten= 49%, Lag= 5.0 min
Primary = 25.60 cfs @ 12.04 hrs, Volume= 2.585 af
Routed to nonexistent node 1L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 573.83' @ 12.04 hrs Surf.Area= 20,584 sf Storage= 29,010 cf

Plug-Flow detention time= 34.5 min calculated for 2.585 af (100% of inflow)
Center-of-Mass det. time= 33.7 min (795.7 - 762.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	571.50'	14,391 cf	**82.75'W x 248.75'L x 2.54'H Field A** 52,318 cf Overall - 16,341 cf Embedded = 35,977 cf x 40.0% Voids
#2A	572.00'	16,341 cf	**Cultec R-150XLHD** x 600 Inside #1 Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap Row Length Adjustment= +0.75' x 2.65 sf x 25 rows
		30,732 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	571.50'	**12.0" Round Outlet Pipe X 5.00** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 571.50' / 571.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=25.59 cfs @ 12.04 hrs HW=573.83' (Free Discharge)
↑—**1=Outlet Pipe** (Inlet Controls 25.59 cfs @ 6.52 fps)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Pond 1P: Detention Storage & Outlet - Chamber Wizard Field A

Chamber Model = Cultec R-150XLHD (Cultec Recharger®150XLHD)
Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
Row Length Adjustment= +0.75' x 2.65 sf x 25 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

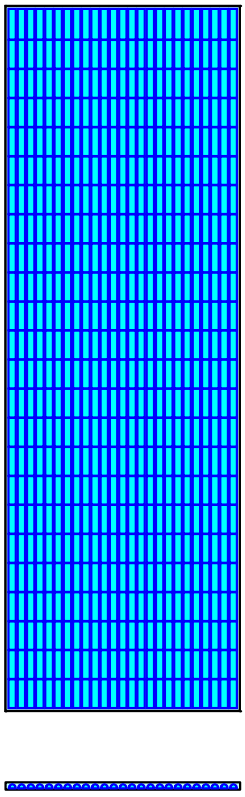
24 Chambers/Row x 10.25' Long +0.75' Row Adjustment = 246.75' Row Length +12.0" End Stone x 2 = 248.75' Base Length
25 Rows x 33.0" Wide + 6.0" Spacing x 24 + 12.0" Side Stone x 2 = 82.75' Base Width
6.0" Stone Base + 18.5" Chamber Height + 6.0" Stone Cover = 2.54' Field Height

600 Chambers x 27.2 cf +0.75' Row Adjustment x 2.65 sf x 25 Rows = 16,341.0 cf Chamber Storage

52,317.8 cf Field - 16,341.0 cf Chambers = 35,976.8 cf Stone x 40.0% Voids = 14,390.7 cf Stone Storage

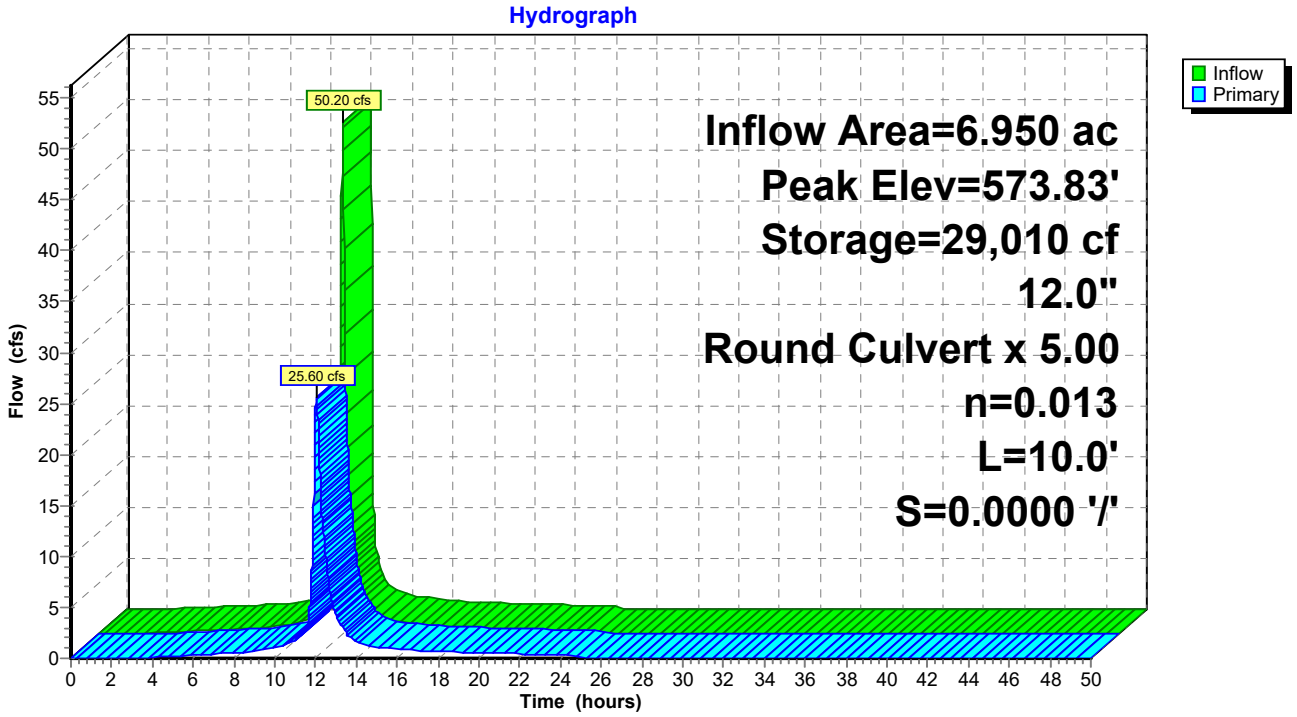
Chamber Storage + Stone Storage = 30,731.7 cf = 0.706 af
Overall Storage Efficiency = 58.7%
Overall System Size = 248.75' x 82.75' x 2.54'

600 Chambers
1,937.7 cy Field
1,332.5 cy Stone



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Pond 1P: Detention Storage & Outlet



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Appendix E

NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

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PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), 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 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, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. 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.**

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department 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.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. 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 I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, 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 the *Stormwater Pollution Prevention Plan* ("SWPPP") the reason(s) for the

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deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain *natural buffer*s around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (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;

   (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 temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

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listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily 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**. 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 designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(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. **Prohibited *Discharges*.** The following *discharges* are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

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(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall 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 Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, 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 post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall 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 shall be documented in the SWPPP.

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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 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *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 discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 discharges directly 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 Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (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 shall be

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calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall 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 shall 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 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *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 *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

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c. Sizing Criteria for Redevelopment Activity

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(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 Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice 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 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

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d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions 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 *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, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall 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 standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general 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 the Department determines that a modification of the 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. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

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E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those 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”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

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operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name 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.

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8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive 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.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (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/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); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

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(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

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 prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

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B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

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must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

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b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall 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 Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained 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.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

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use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

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regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. 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. 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.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

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operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. 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 I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or 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 or 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 site;

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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*;

c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and

d. to document the final construction conditions.

5. The Department 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 shall 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 the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department 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. of this permit.

6. 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 post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions 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

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the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s 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* shall 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 construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

    a. Background information about the scope of the project, including the location, type and size of project

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b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall 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);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. 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;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. 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;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

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schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. 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*;

k. 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

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. 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. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, 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.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

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b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. 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;

   (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

   (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;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

   (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. 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 Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

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3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *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 conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

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 post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

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. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall 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 shall

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begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

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. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this 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 *trained contractor* 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. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. 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),
- New York State Erosion and Sediment Control Certificate Program holder
- 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, 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

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in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

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;

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 that involve soil disturbances between five thousand (5,000) 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.D.3 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.

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 DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

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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 DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control 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.B.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, 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.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures 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:

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(Part IV.C.4.a)

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 and pollution prevention measures that need repair or maintenance;

g. 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;

h. Description and sketch 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;

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 pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

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l. 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 this permit 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.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

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b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; 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. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

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b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices 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,

d. for post-construction stormwater management practices 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 policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. 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 Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

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Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

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). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

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E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall 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.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP 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 (5) 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.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

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(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 permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) 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. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit 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.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

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superintendent, 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 shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be 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.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. 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 shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

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include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, 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 conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

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3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, 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 reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

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(Part VII.R)

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

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APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
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)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - 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
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
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

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Definitions

All definitions in this section are solely for the purposes of this permit.

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 –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means 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 - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means 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.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, 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.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that 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

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and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that 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 - means that 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.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means 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) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

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Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term "plan" in "larger 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 (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Minimize – means 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 (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):

(i) Owned or operated by a State, city, town, 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*;*
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

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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.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means 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 –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means 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 conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means 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 - means 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 .

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Qualified Inspector - means 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 Department 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 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 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 post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means 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 Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice 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) – means 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.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

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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).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- 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),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- 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,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- 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*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means 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 – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

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Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

Streambank – as used in this permit, means 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) – means 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 post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions 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 – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that 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 Loads (TMDLs) - A TMDL is 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 on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

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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, identified in Part III.A.6., 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* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means 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.

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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 or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- 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 E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

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 watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, 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.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

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Table 1 (Continued) 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:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *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 project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- 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

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Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 E
- 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 E
- 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 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 larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- 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) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

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Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- 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 over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- 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

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APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

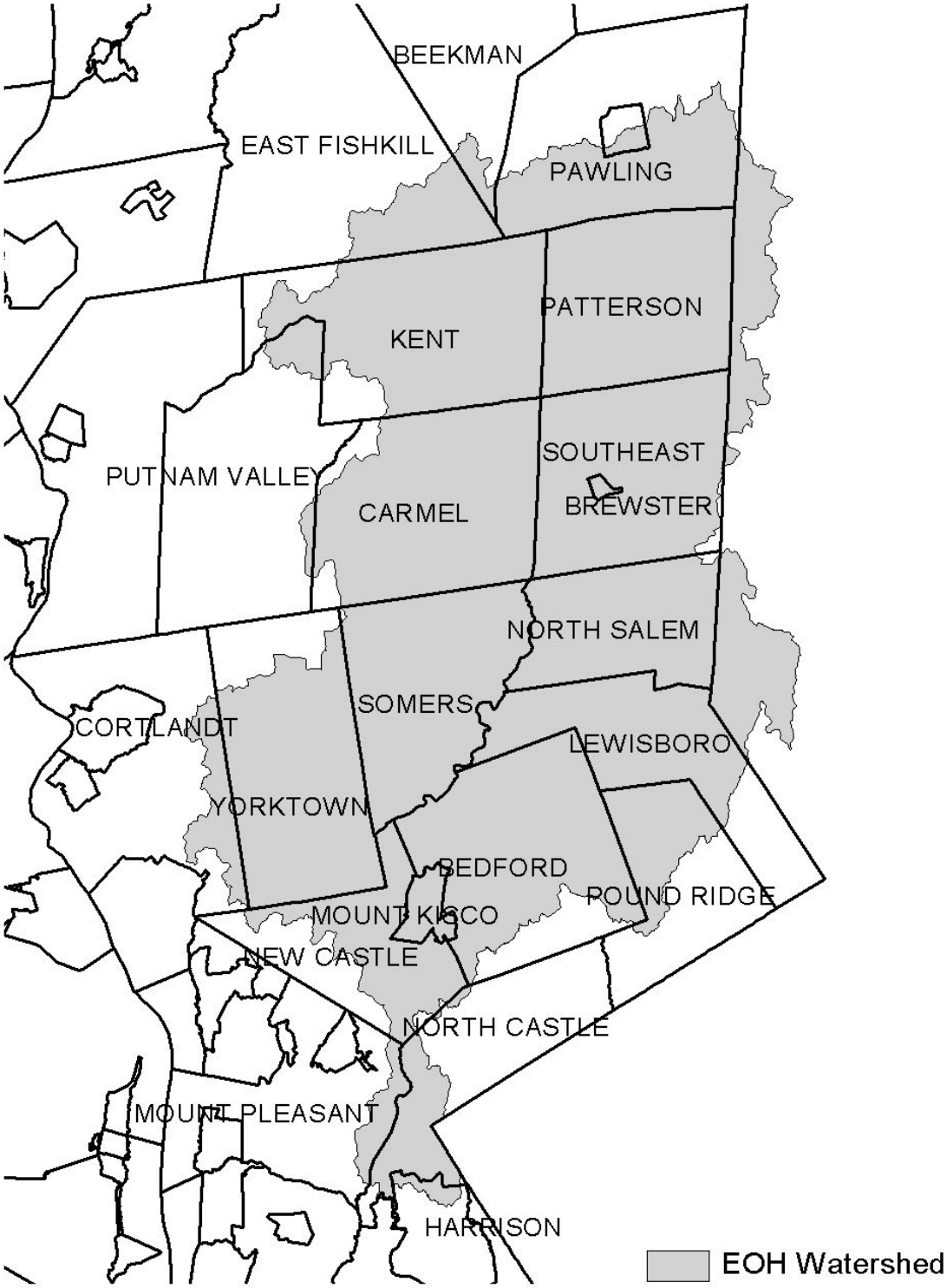
Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- 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

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Appendix C

Figure 1 - New York City Watershed East of the Hudson



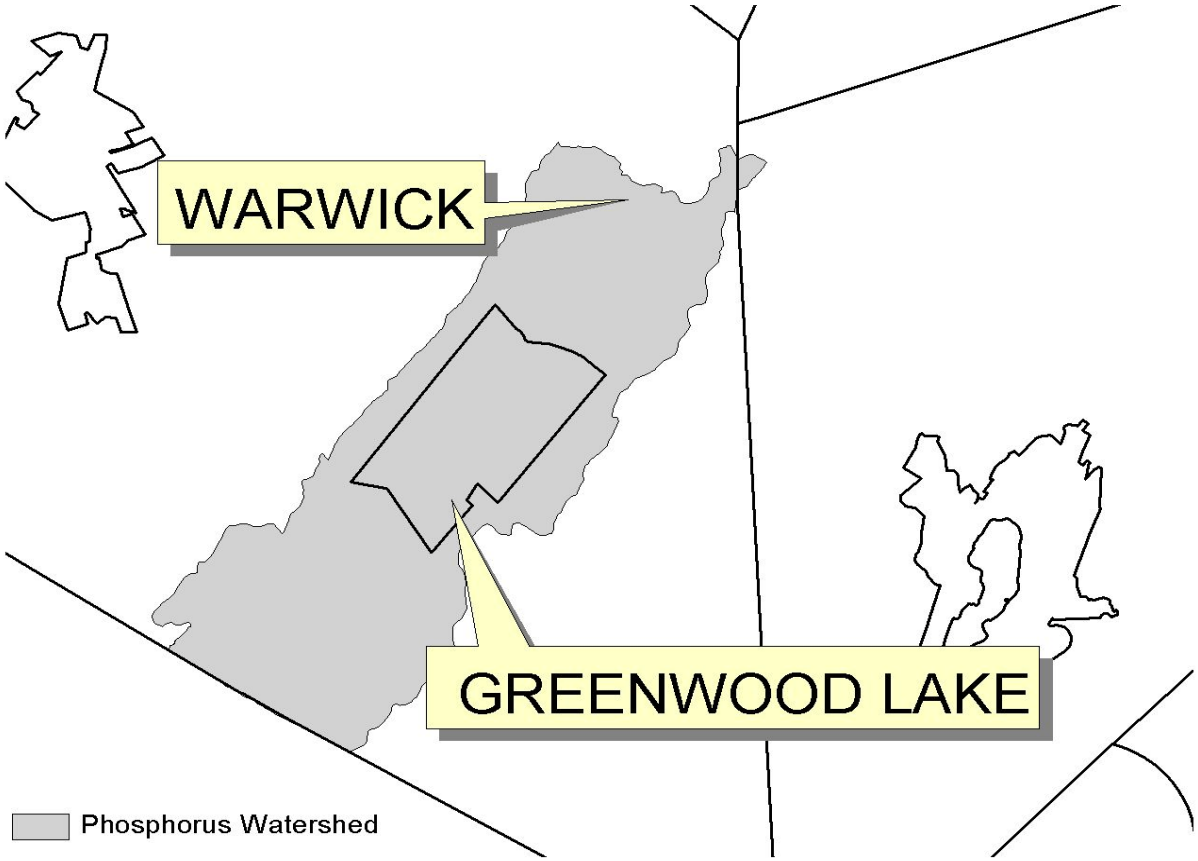
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Figure 2 - Onondaga Lake Watershed



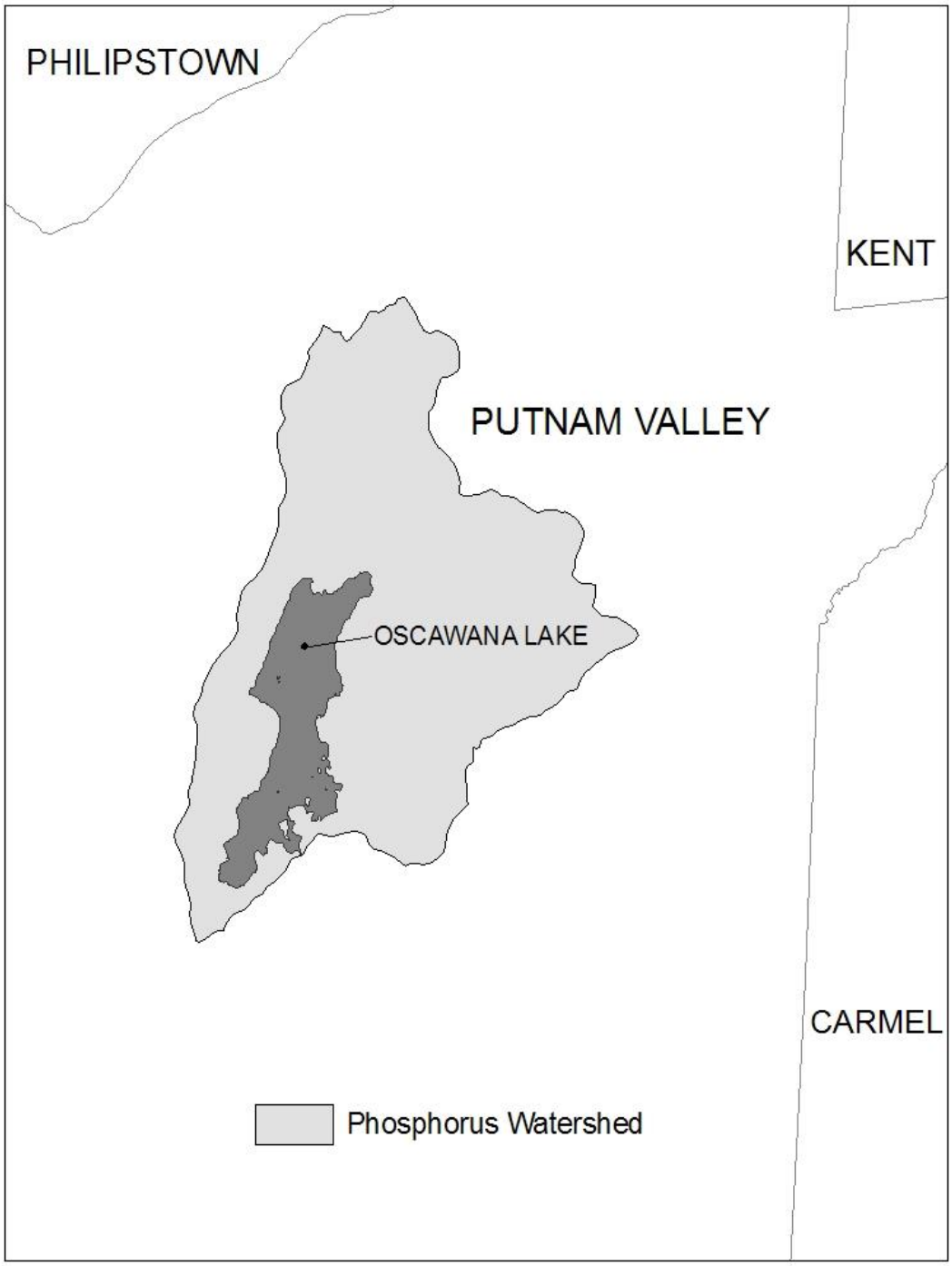
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Figure 3 - Greenwood Lake Watershed



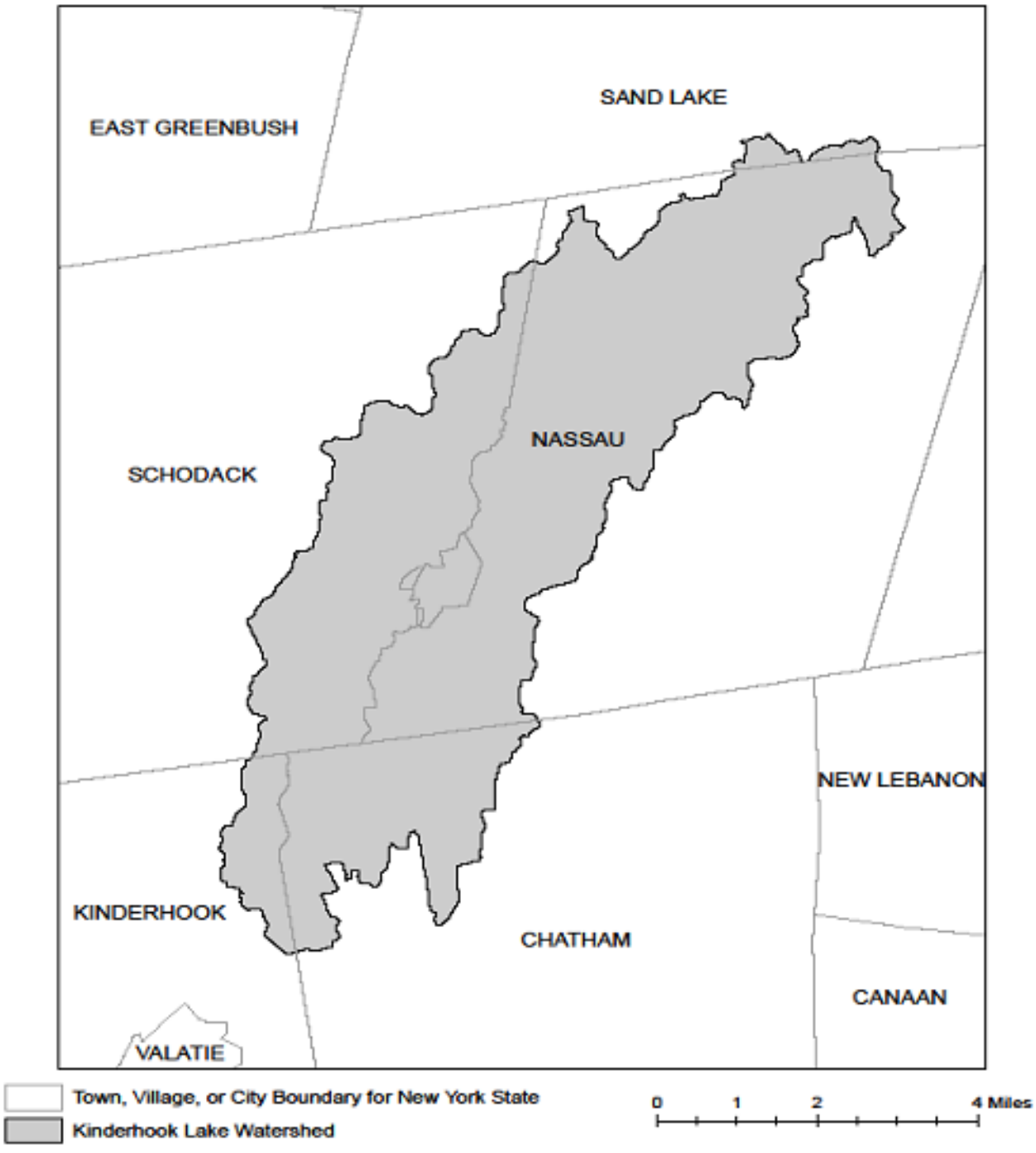
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Figure 4 - Oscawana Lake Watershed



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Figure 5 - Kinderhook Lake Watershed



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APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

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APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

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303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

APPENDIX F – List of NYS DEC 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	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 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	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 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	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix F

Forms

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

Amherst Development Park
6000-6040 North Bailey Ave
Amherst, NY 14226

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 Amherst.

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

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Amherst Development Park - 6000-6040 North Bailey Ave, Amherst, NY 14226

eNOI Submission Number: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Amherst Development Park - 6000-6040 North Bailey Ave, Amherst, NY 14226

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Benderson Development Company, LLC - 570 Delaware Ave - Buffalo, NY 14202

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Christopher		Wood
First name	MI	Last Name

11-26-23

Signature Date

Revised: January 2020

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix G

NYSDEC Notice of Termination (NOT)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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)?

_____

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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:

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Post Construction Stormwater Management

Facility Certification Form Cover Sheet

A. General Information

Use only one Cover Sheet per site with as many specific structural BMP Inspection Report attachments as needed. Please attach digital photographs of the site and structural BMPs as applicable.

Development Name:_____ Inspection Date:_____

BMP Owner:_____ Inspection Company:_____

Owner Address:_____ Company Address:_____

Owner Phone #:_____ Inspector Name:_____

Owner Email:_____ Inspector Phone #:_____

Inspector Email:_____

B. Inspection Report Attachments

The listed stormwater controls are the Structural BMPs who's Inspection Reports are to be completed per the NYS Stormwater Design Manual for this site. Please use one inspection report per BMP inspected and submit all forms together with this Cover Sheet as one single report. Also, please document the number of each structural BMP found at this site in the space below.

BMP	# of BMP	BMP	# of BMP
Micropool Extended Detention Pond (P-1)		Infiltration Basin (I-2)	
Wet Pond (P-2)		Dry Well (I-3)	
Wet Extended Detention Pond (P-3)		Surface Sand Filter (F-1)	
Multiple Pond System (P-4)		Underground Sand Filter (F-2)	
Shallow Wetland (W-1)		Perimeter Sand Filter (F-3)	
Extended Detention Wetland (W-2)		Organic Filter (F-4)	
Pond/ Wetland System (W-3)		Bioretention (F-5)	
Pocket Wetland (W-4)		Dry Swale (O-1)	
Infiltration Trench (I-1)		Wet Swale (O-2)	
Alternate Stormwater Management Practices			

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Post Construction Stormwater Management

C. Inspection Results

FAIL*

*** If any one item on the inspection form is coded as "Work needed", then the entire BMP fails inspection.**

***If a site has multiple BMPs and on fails inspection, this cover sheet is marked as fail until all items on all BMPs pass inspection.**

NOTE: Applicable BMP Inspection Reports and confirmatory digital photographs summarizing required repairs must be submitted to the Town following completion of the preliminary inspection. A re-inspection and certification must be completed within 30 days of the failed preliminary report.

PASS

NOTE: A passing inspection form should be signed below by the appropriate professional and submitted to the Town on or before the established inspection due date. Attach all applicable BMP Inspection Reports and confirmatory digital photographs accordingly.

D. Professional Certification

To be completed only when all structural BMPs at this site are functional with no outstanding maintenance issues.

I,_____, as a duly registered _____ attest that a thorough inspection has been completed for all structural BMPsthat are associated with this particular site. All inspected structural BMPs are performing properly and are in compliance with the terms and conditions of the recorded maintenance agreement for the site.

Signature:_____

Date:_____

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix H

Construction Documents

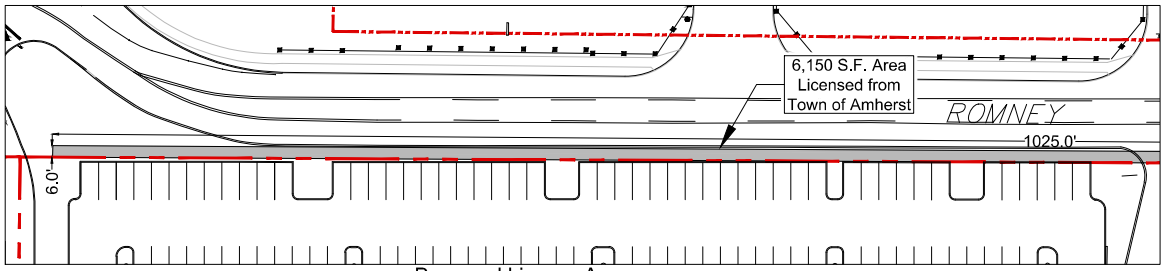
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST, NY ZONING ANALYSIS		
	REQUIRED	PROVIDED
ZONED (RD)	R-D	R-D
MIN LOT AREA	1 AC	17.14 AC
MAX. BUILDING HEIGHT	65'	<30'
BUILDING SETBACKS:		
FRONT YARD	40'	102.3'
SIDE YARD	15'	16.7'
REAR YARD	15'	48.4'
PARKING / ROAD/AUX SETBACKS:		
FRONT - PROPERTY LINE	*25'	**0'
SIDE YARD	*10'	0'
REAR YARD	10'	**6.0'

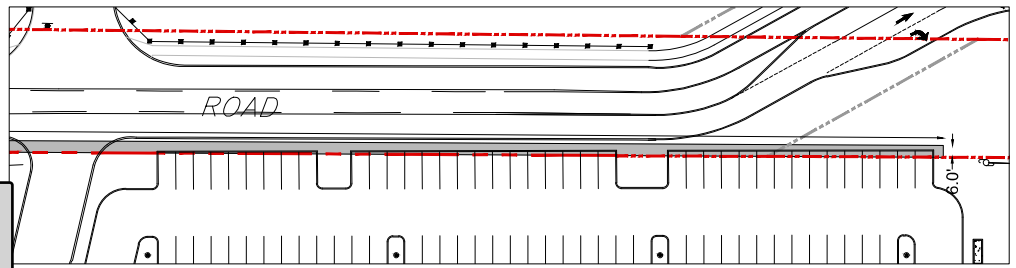
* Area to be determined to be licensed from Town of Amherst
** - Variance Required
- Curb Island Dimensions are measured from the inside of curb.

PROPOSED PARKING ANAYLSIS				
USE	CODE	S.F. USAGE	REQUIRED	PROVIDED
WAREHOUSE	1 / 1000 S.F.	181,343 SF	182 Spaces	
MEDICAL	1 / 150 S.F.	14,960 SF	100 Spaces	
RETAIL/OFFICE	1 / 200 S.F.	66,106 SF	331 Spaces	
TOTAL		262,409 SF	613 Spaces	688 Spaces
STALL SIZE			9' X 19'	9' X 19'

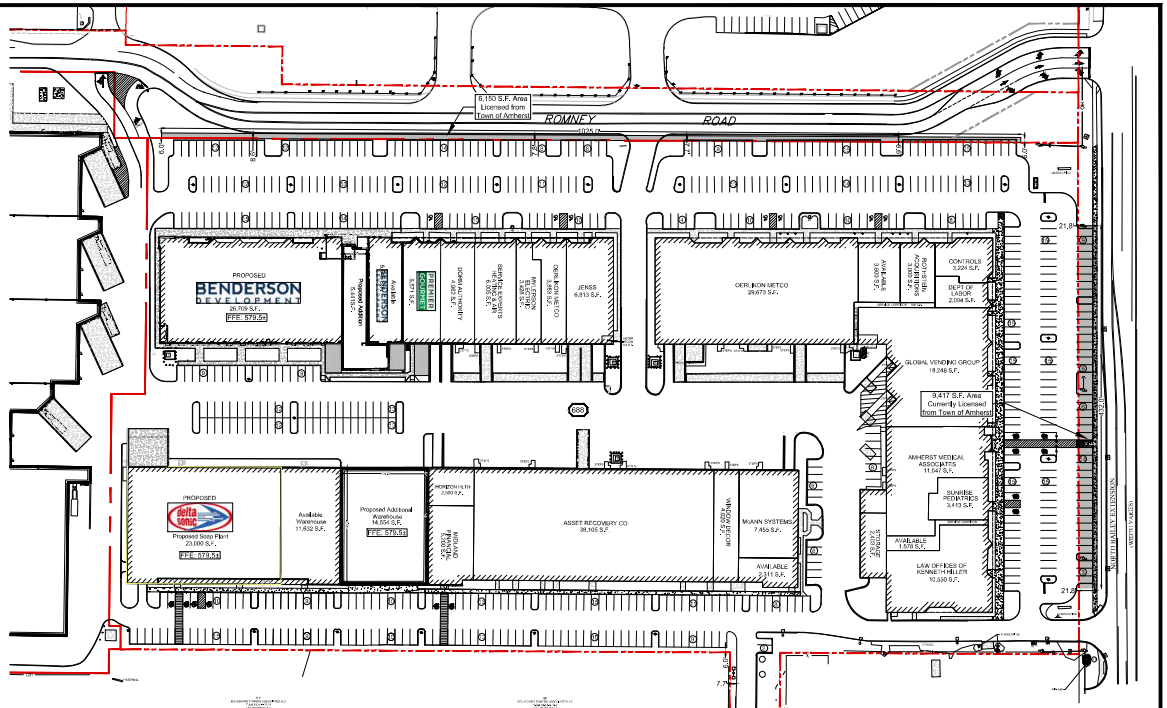
*Refer alternative parking study for site required parking



Proposed Licence Area
(1" = 30')



Proposed Licence Area
(1" = 30')



OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:
ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE
UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION 7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig

PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

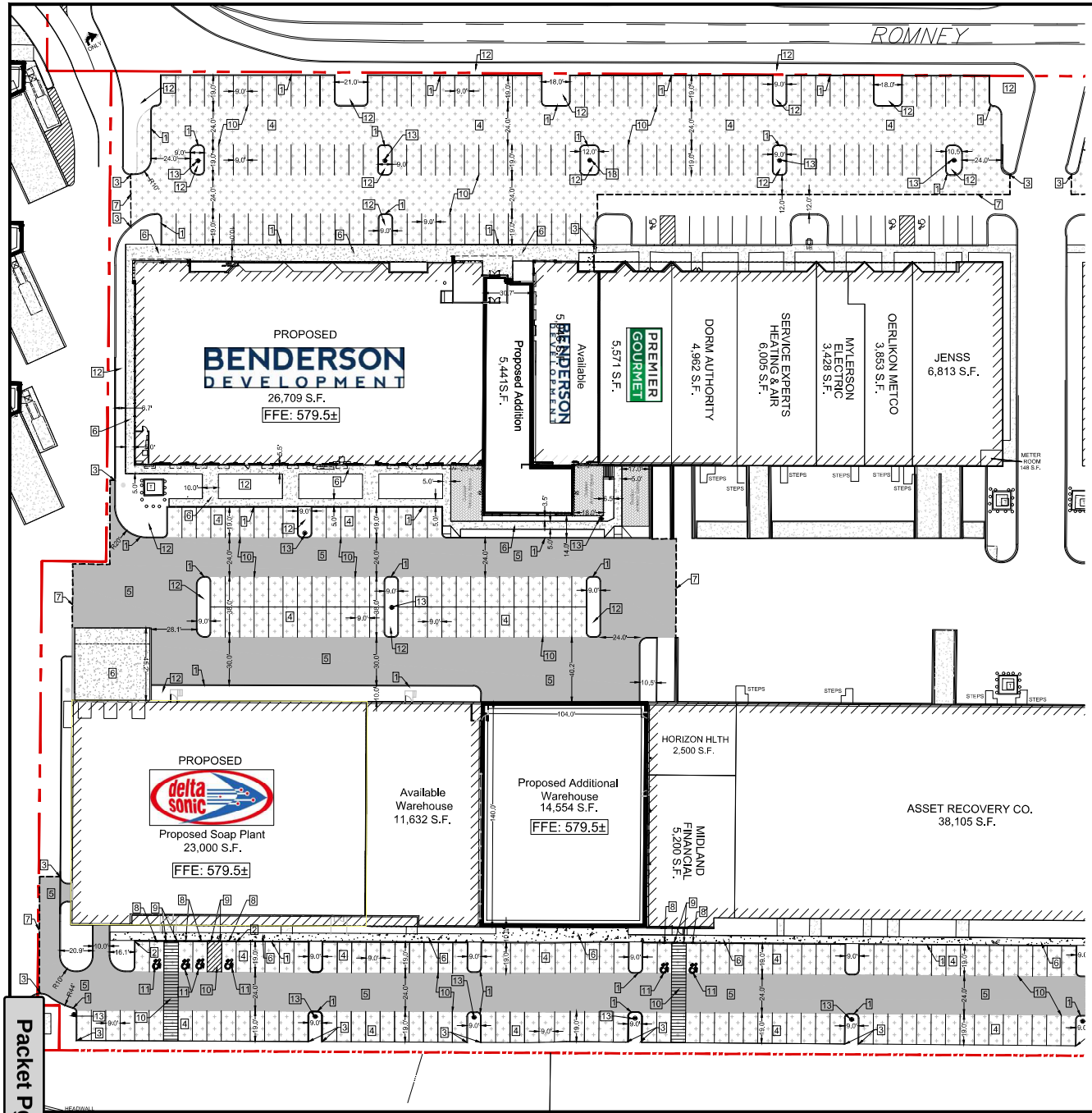
TITLE:
Overall Site Plan

SCALE: 1:70
DRAWN BY: DMZ
DRAWING NO.: C4.0
CHECKED BY: MAO
DATE: 11.06.2023

Packet Pg. 561

1.c

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
10. SIDEWALK DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN.
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES).
    1) L GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN (HRS) AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
    2) ALL COLORED CONCRETE SIDEWALKS SHALL HAVE ONE (#1) COAT: CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED AFTER PROCURE/ANSWING THE RELEASE AGENT OFF, APPLY 10 DAYS AFTER THIS (IF WEATHER PERMITS) APPLY ONE (1) COAT OF: CHEMMASTERS - POLYSEAL EC.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE, SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES:

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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Know what's below. Call before you dig

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AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

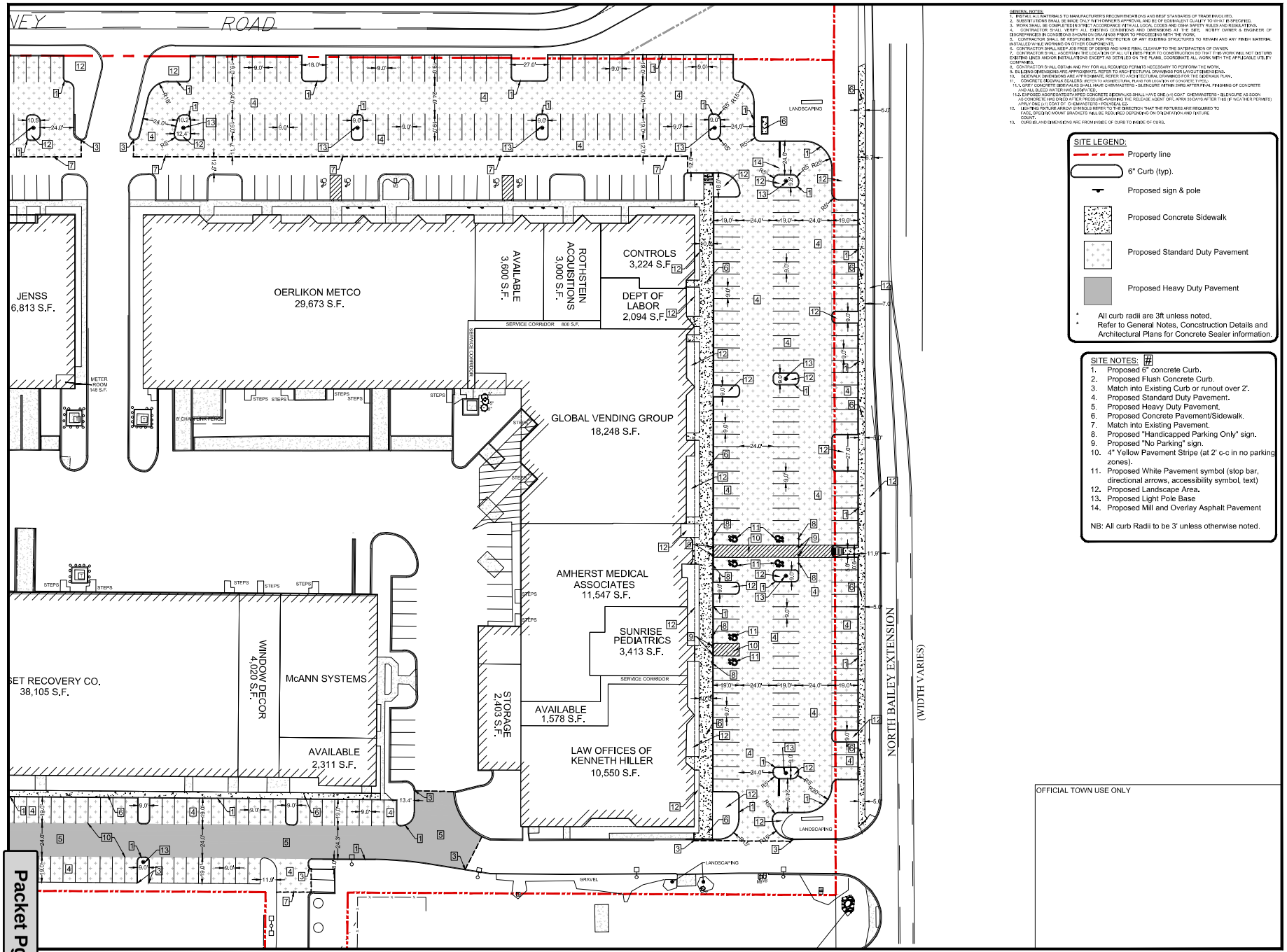
CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Detailed Site Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.: C4.
CHECKED BY: MAO
DATE: 08.16.2023



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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
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11. CONCRETE SIDEWALK SEALERS: REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.
    11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN (HRS) AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISPARTED.
    11.2. COLORED CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE AS SOON AS CONCRETE HAS DRIED BY PER PROCEDURE ABOVE USING THE RELEASE AGENT OPT, APPLY 30 DAYS AFTER THIS (IF WEATHER PERMITS) APPLY ONE (1) COAT OF: CHEMMASTERS - POLYSEAL EC.
12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES:

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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NORTH

811 Know what's below. Call before you dig

PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

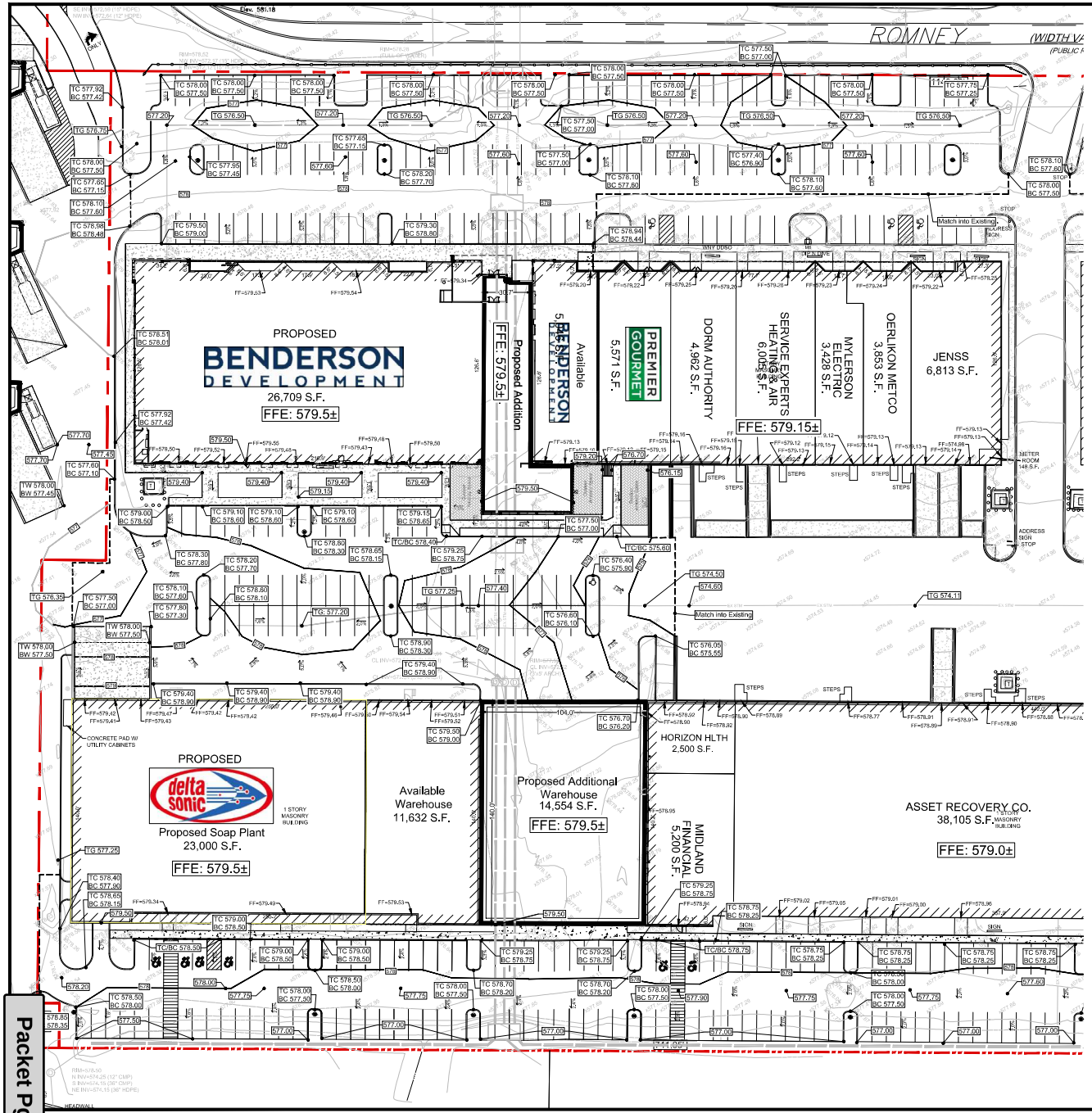
SEAL

TITLE:
Detailed Site Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.
CHECKED BY: MAO
DATE: 08.16.2023
C4.

Packet Pg. 563

1.c



GENERAL NOTES:

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GRADING LEGEND:

- Property Line
- 6" Curb (typ).
- TG ## — Catch Basin - Top of Grade
- ### — Proposed Contour Line
- ##% — Slope Direction

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Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

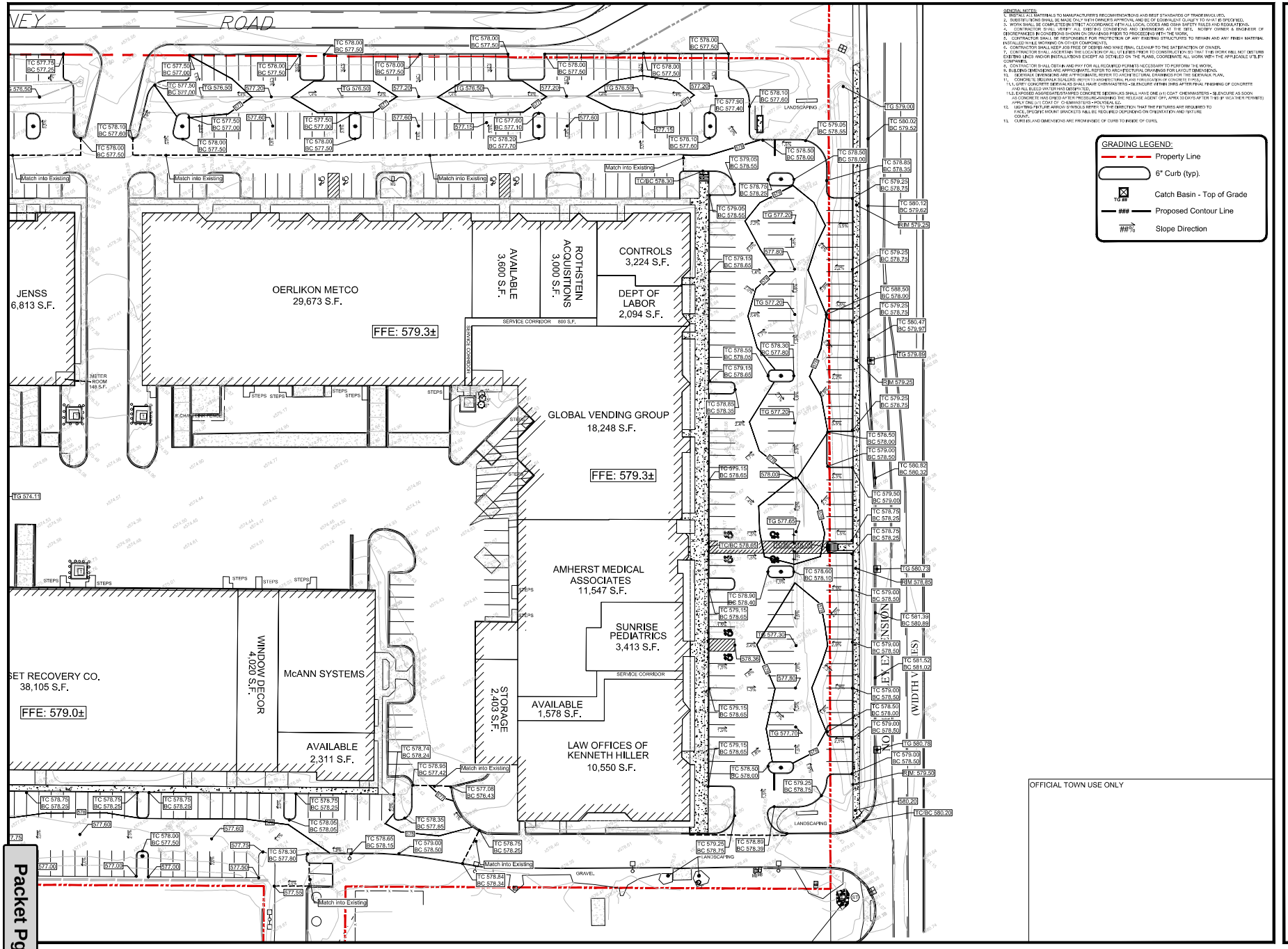
TITLE: Grading Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
DRAWING NO.: C5.0
CHECKED BY: MAO
DATE: 11.08.2023

Packet Pg. 564

1.c

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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AREA: -

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6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

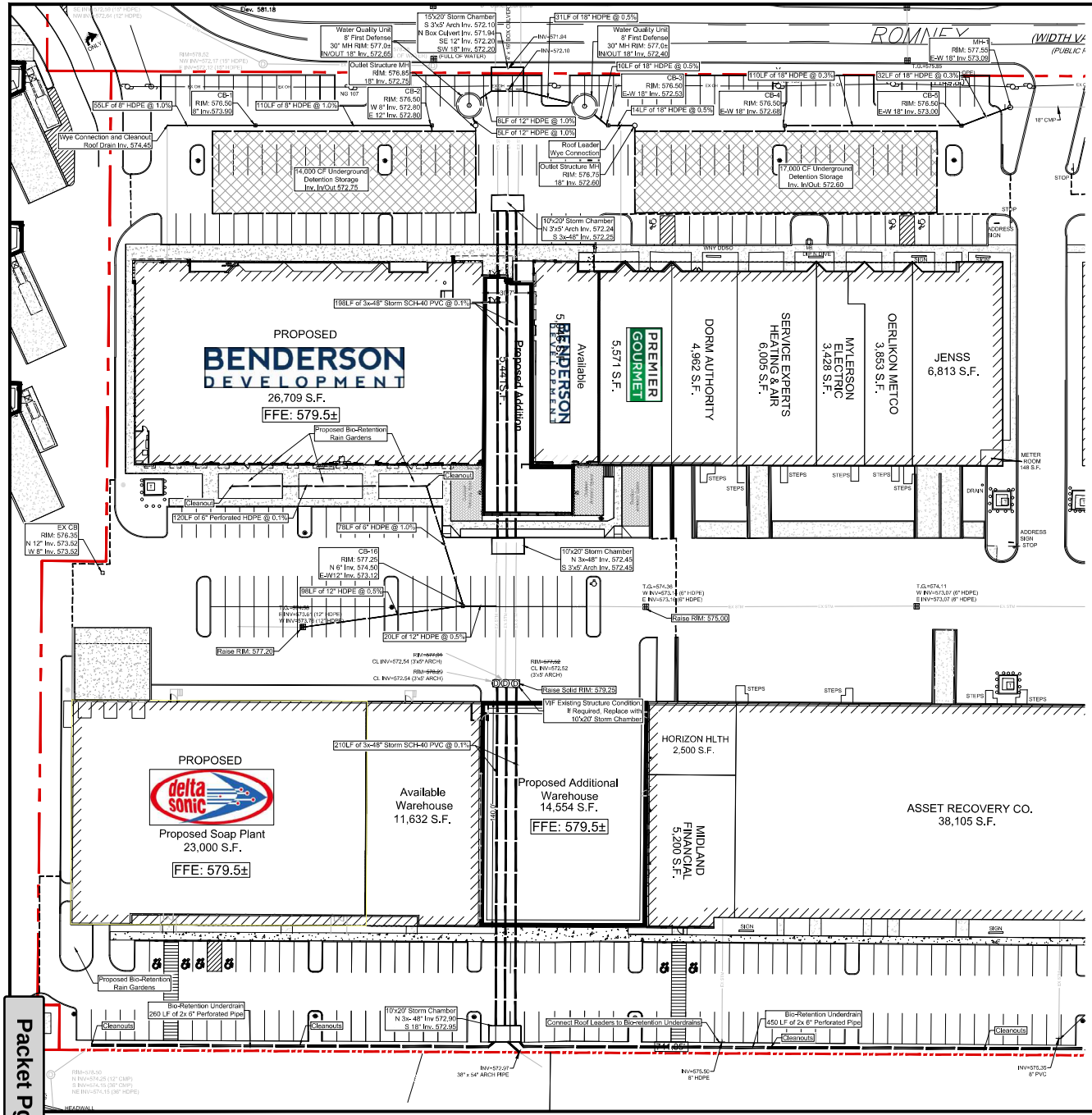
CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Grading Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C5.0



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6000 - 6040 North Bailey Ave
Amherst, NY 14226

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CONSULTANT

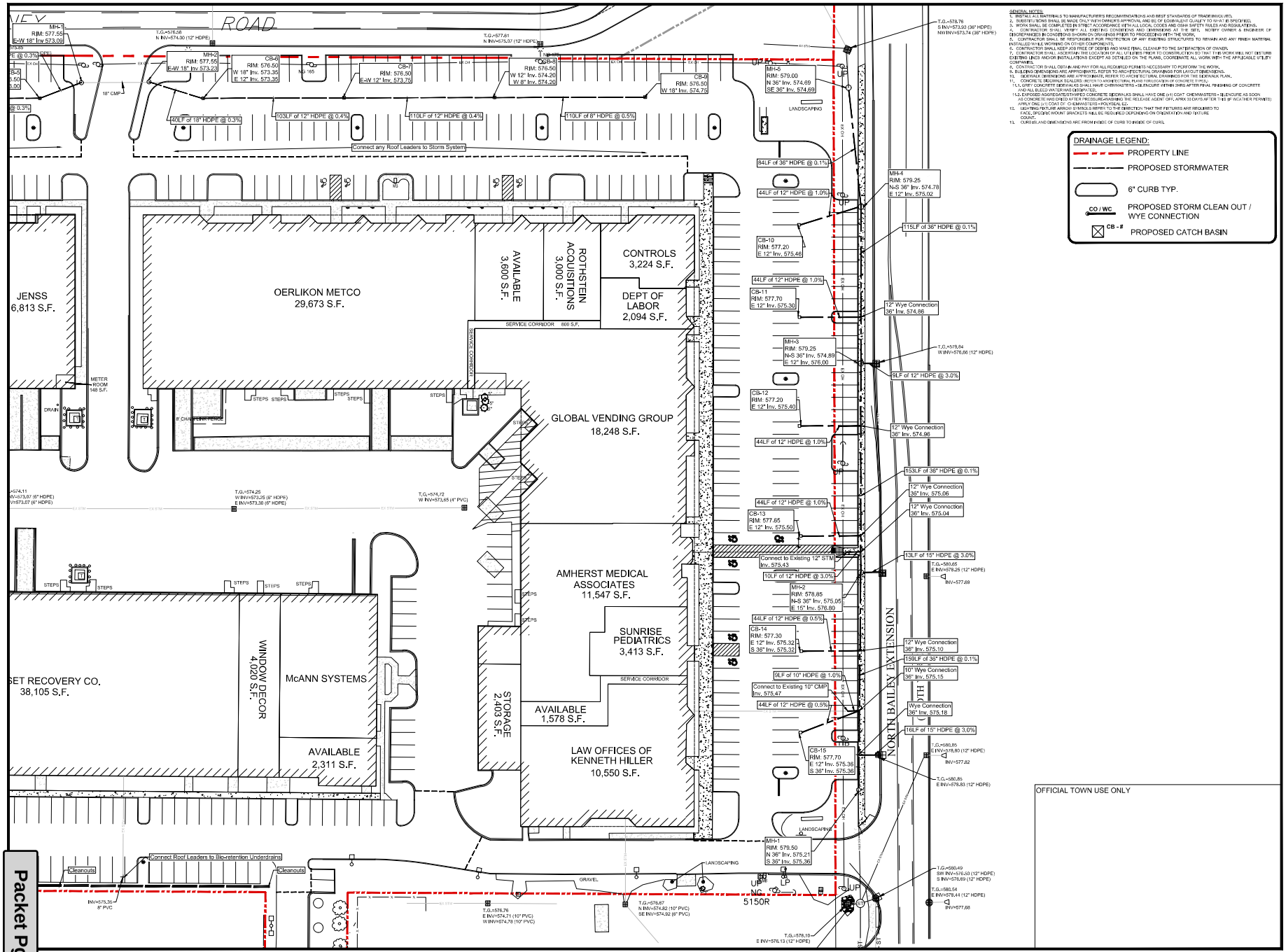
JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE: Drainage Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C5.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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CONSULTANT

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ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:
Drainage Plan (East)

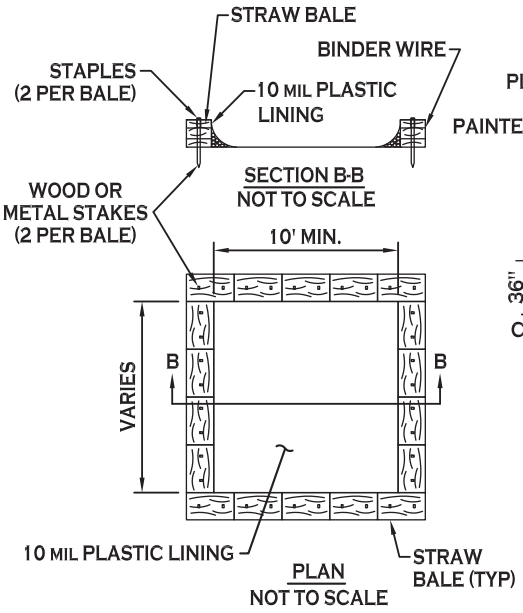
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Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

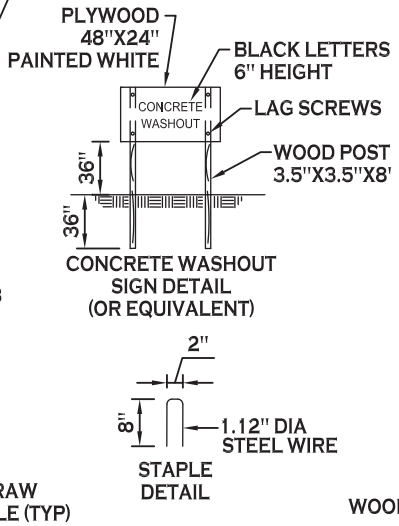
Appendix I

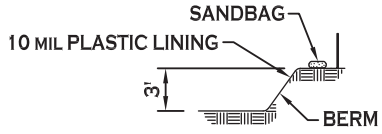
Standard Erosion Control Details

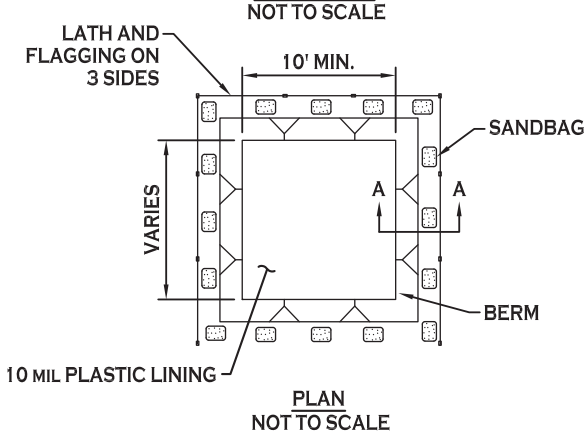
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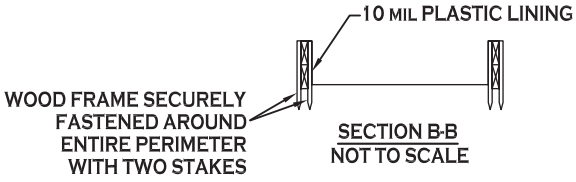
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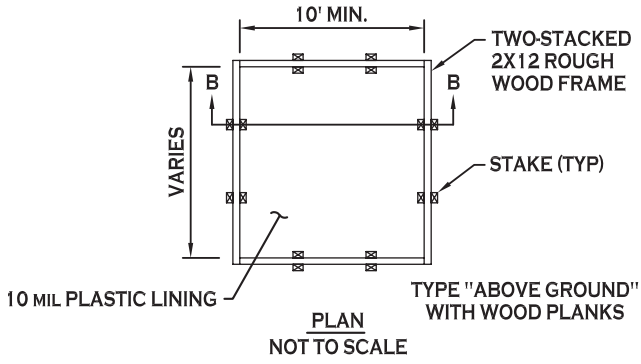






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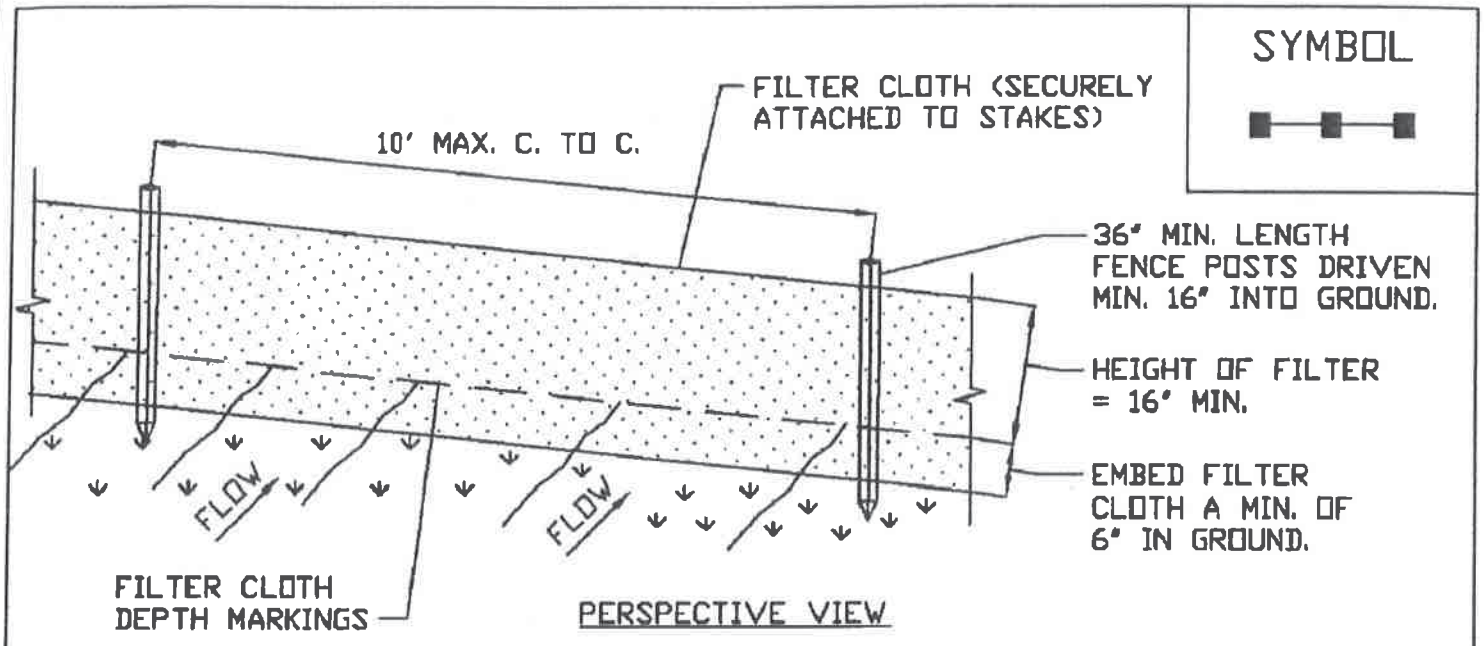


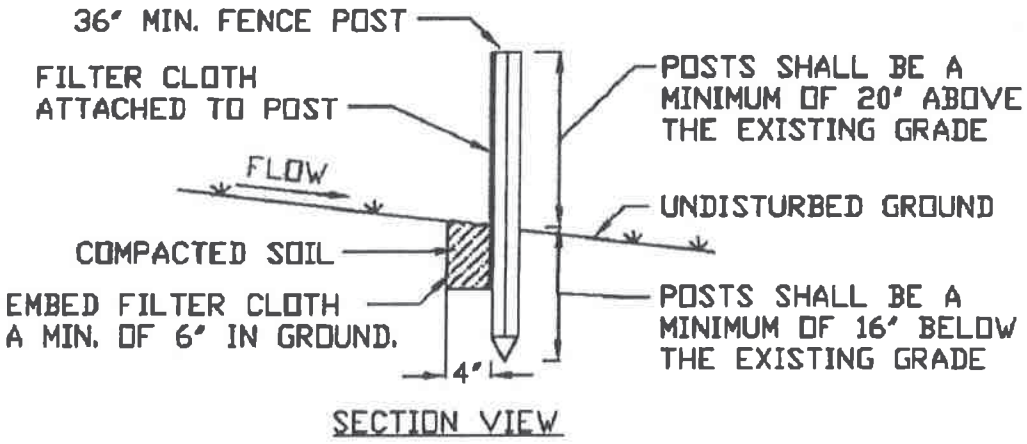
NOTES

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



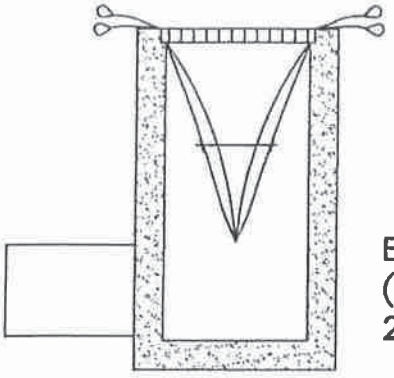


CONSTRUCTION SPECIFICATIONS

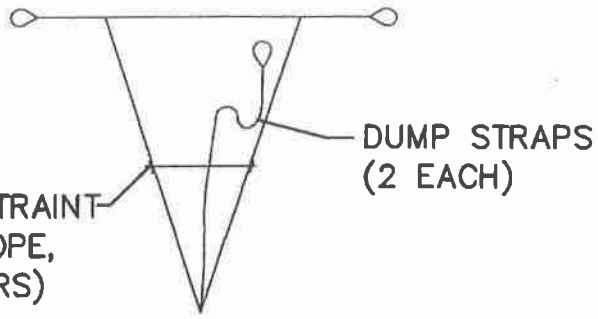
1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE (WITHOUT WIRE MESH BACKING)

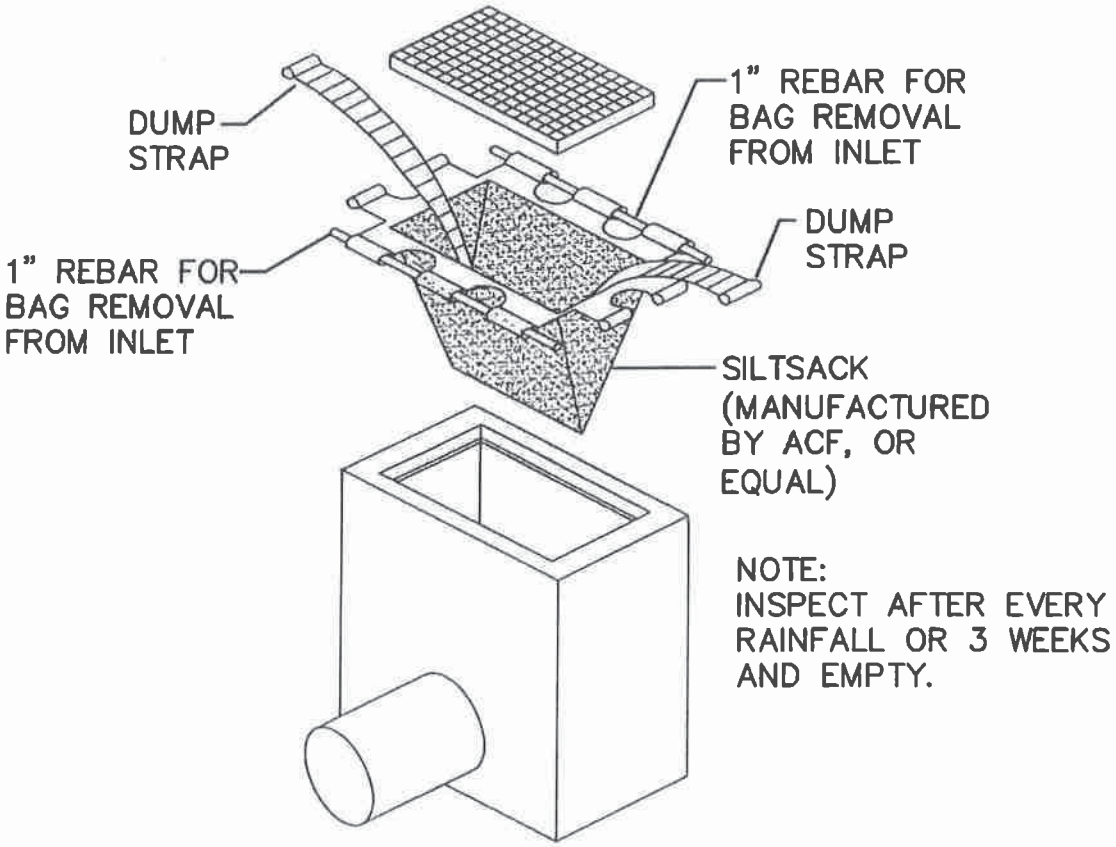
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



INSTALLATION DETAIL



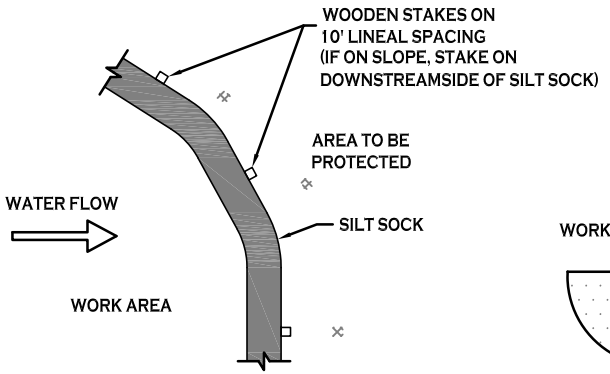
BAG DETAIL



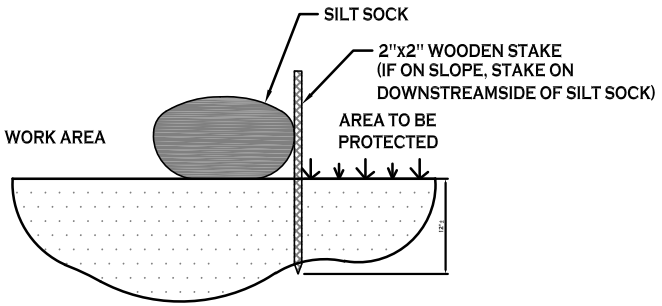
SILT SACK DETAIL

NOT TO SCALE

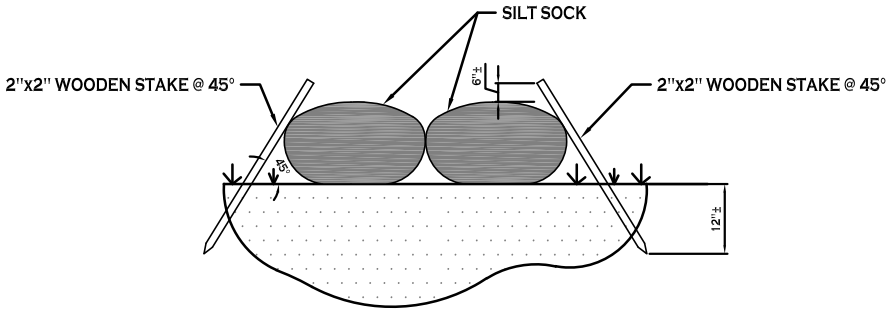
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



PLAN VIEW



SECTION VIEW



SECTION VIEW @ JOINT OVERLAP

NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

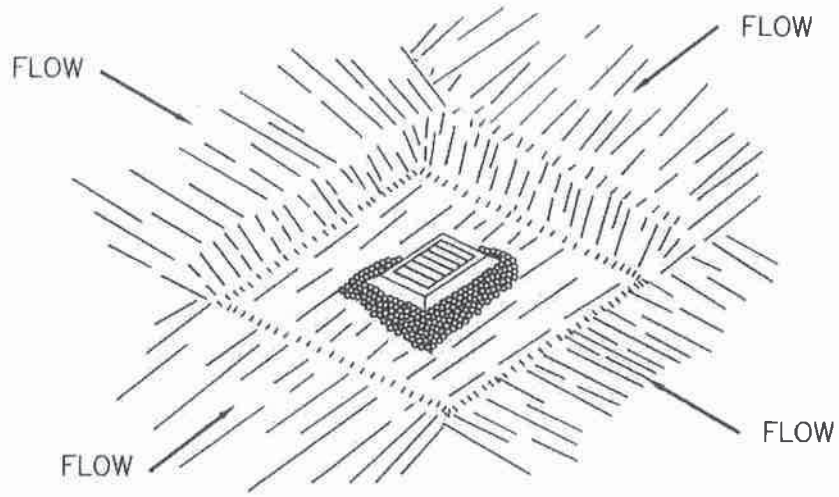
CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED $\frac{1}{2}$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

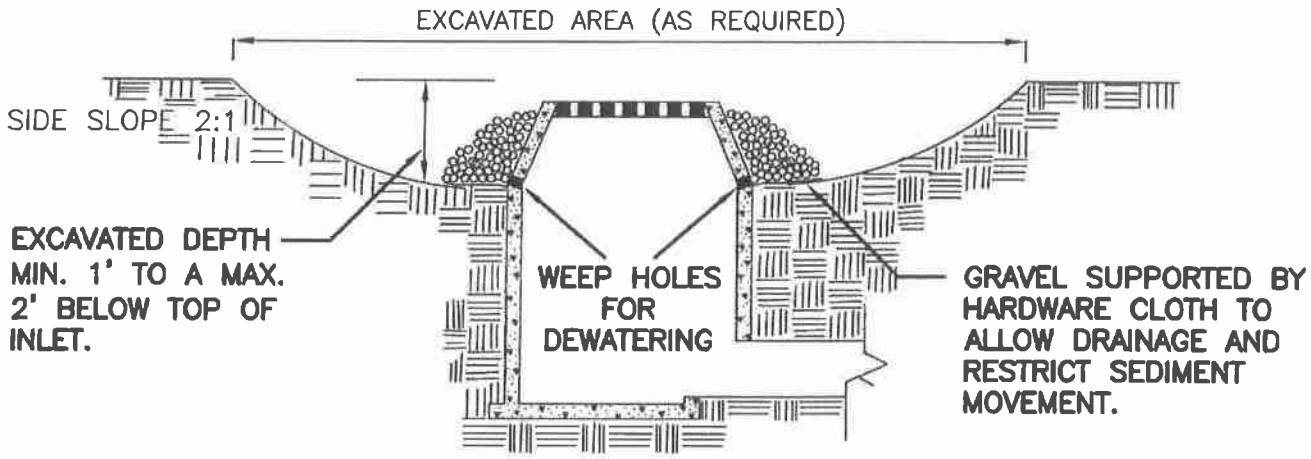
SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

N.T.S.

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CONSTRUCTION SPECIFICATIONS

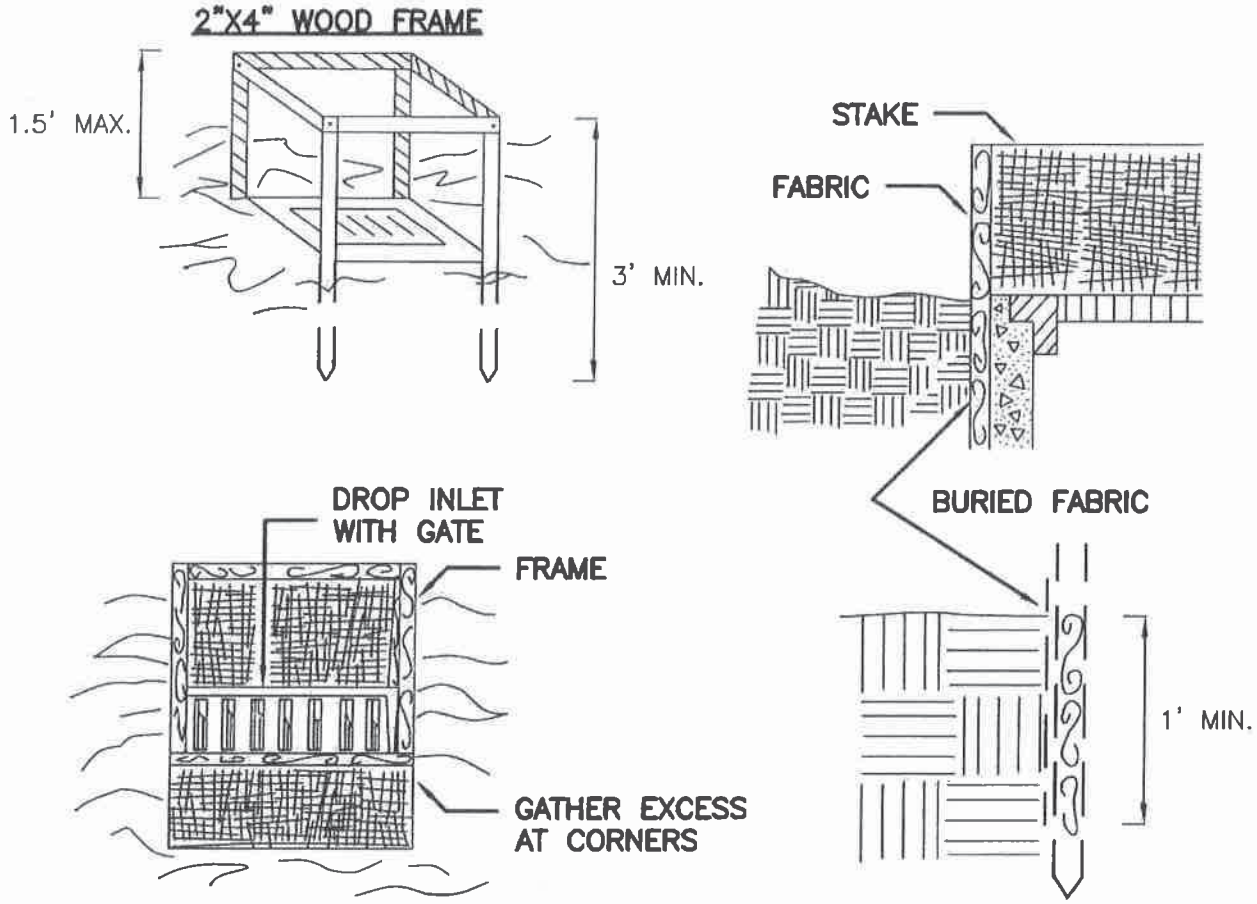
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE

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CONSTRUCTION SPECIFICATIONS

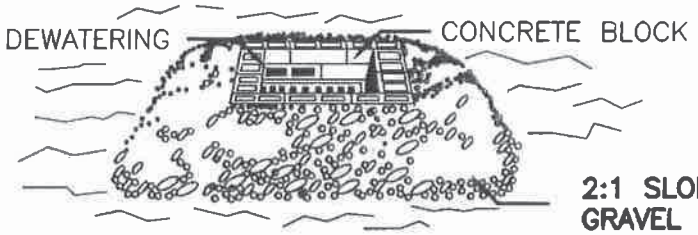
1. FILTER FABRIC SHALL HAVE AN EOS OF 40–85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH 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

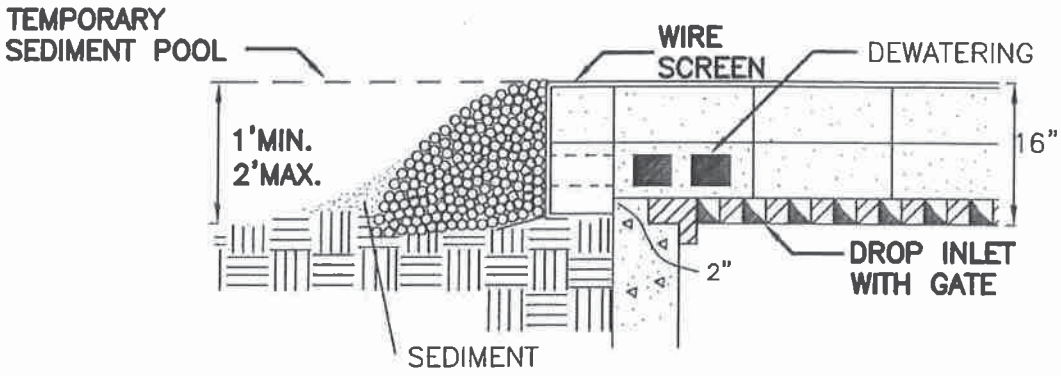
INLET PROTECTION DETAIL 2

NOT TO SCALE

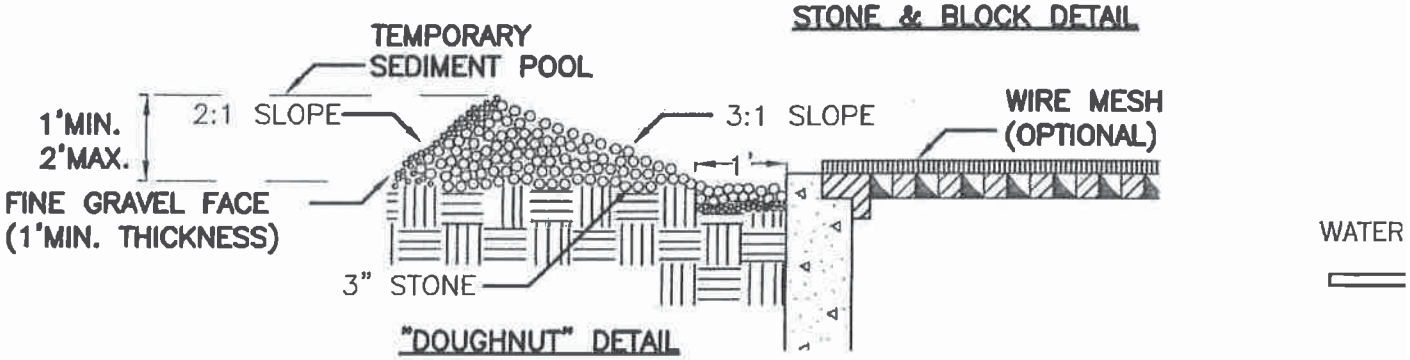
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



STONE & BLOCK PLAN VIEW



STONE & BLOCK DETAIL



"DOUGHNUT" DETAIL

CONSTRUCTION SPECIFICATIONS

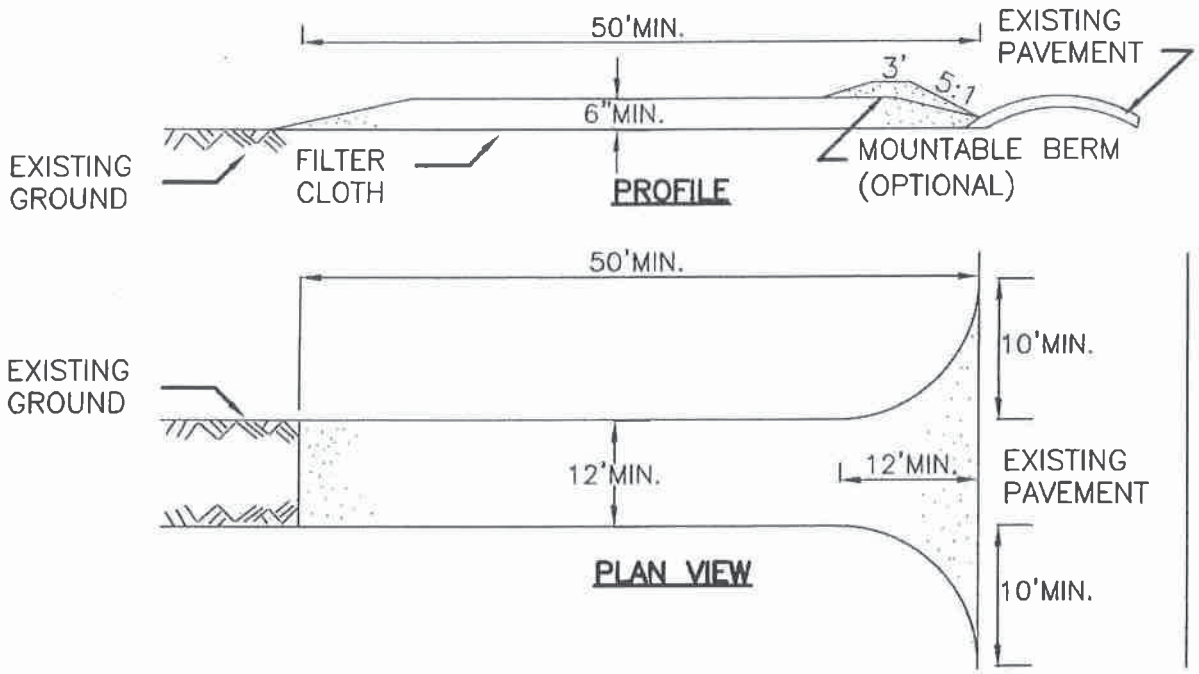
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 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

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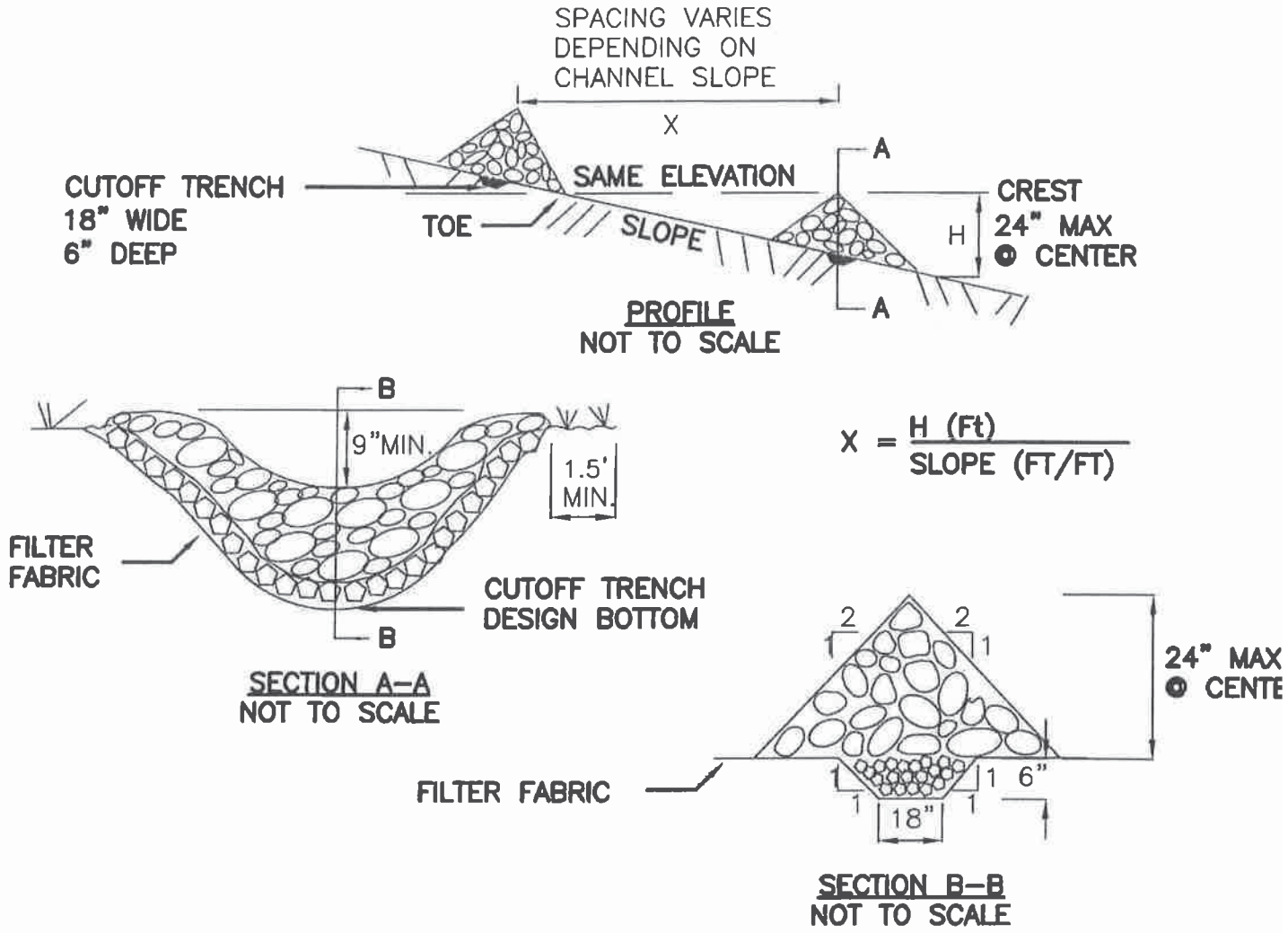
CONSTRUCTION SPECIFICATIONS

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

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CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

STONE CHECK DAM DETAIL

NOT TO SCALE

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Appendix J

NYSDEC Stormwater Management Inspection Lists

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

STORMWATER CONTROL FACILITY
MAINTENANCE AGREEMENT

Stormwater Management Facility Inspection Procedures

Post Construction Operation & Maintenance:

1. On a quarterly basis, perform the following:
   a. Inspect catch basins, manholes and storm piping for debris and accumulation of sediment.
   b. Remove and properly dispose of any collected debris from structures.
   c. Flush storm sewers with water, if necessary, to remove accumulated sediment.
   d. Check all rip rap stone for erosion and re-stone, if necessary, to prevent further erosion.
   e. Inspect grass and landscaped areas for un-vegetated areas or areas with less than 80% healthy stand of grass and reseed and mulch as necessary. Water areas daily if reseeded between July and August.

2. Maintain all lawn areas by regular mowing, including the grass slopes of the detention basins. Any eroded areas shall be re-graded, seeded and mulched immediately.

3. Inspect detention basins for debris and sediment accumulation two times per year (spring and fall). Debris and sediment accumulation should be removed from the basin every five to six years or with sediment buildup over 6" in depth. Remove and properly dispose of any collected debris and sediment.

4. The bioretention area shall be maintained as required in the NYSDEC Stormwater Management Design Manual and as a component of the property landscaping and shall be maintained on a regular basis. Sediment must be removed when accumulation depth exceeds on inch. Any erosion of the bioretention berm must be repaired as soon as possible to prevent diversion around the bioretention area.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Comments:

Actions to be Taken:

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

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MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Comments:

Actions to be Taken:

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



ENGINEER'S REPORT
FOR
PROPOSED SITE REDEVELOPMENT
6000-6040 NORTH BAILEY AVE
TOWN OF AMHERST, NEW YORK
PROP # 1723

November 17, 2023
(Updated August 23, 2024)

GENERAL

This project is a redevelopment of a 17.426-acre parcel of land currently occupied with five (5) multitenant buildings (26,709 S.F., 35,678 S.F., 90,130 S.F., 59,591 S.F., and 34,632 S.F.) with associated loading docks, parking, utility, and drainage infrastructure. It is located at the Southwest corner of North Bailey Ave and Romney Road in the Town of Amherst. The property abuts general commercial properties along all property boundaries.

Existing Conditions:

The site is currently occupied by five (5) buildings and associated parking lot and loading docks. The site currently is sheet draining any runoff from pavement surface existing on-site drainage structures.

The site contains existing domestic and fire water services. The existing Domestic water service is tapped off the 8" Masin along North Bailey Ave and enters the site at the Southeast corner of property. The existing Fire water service is tapped of the 8" Main along North Bailey Road and enters the site near the Northeast corner of property.

Existing Sanitary Sewers connection for the property is located South of property that discharges into the existing Town of Amherst sewer district.

PROJECT OVERVIEW

The proposed project *(Figure 1)* consists of; clearing of land and relocation of existing utilities; Construct building addition of 10,069 S.F. between the Two Southern Buildings. Site improvements including improvements to the associated parking lot, drainage infrastructure and sites grading and utilities.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

PROPOSED FACILITIES

Storm Water

SWPPP Engineer's Report prepared by Carmina, Wood, Morris DPC dated November 2023

Water System

The existing water service to the site is to reuse for this proposed project. The existing service is tapped off the existing 8" water main along North Bailey Ave R.O.W. The proposed development will reuse the existing domestic and fire water services, which each have their own dedicated hot box enclosure with meter and backflow devices. The existing 8" Fire service enters the site near the NE corner of property and the existing 3" domestic service enters the site near the SE corner of property.

Disinfection of the water services following installation will be continuous feed, according to AWWA C-651, latest revision.

Summary: *(Refer to Figure 2)*

Proposed Building Increased:	10,069 S.F.
Operating Demand Increase:	1.86 gpm
Peak Demand Increase:	3.36 gpm
Water Main:	8" main along North Bailey Ave
Static Pressure:	96
Head Loss Friction:	0 psi
Loss through meter/RPZ:	13.0 psi per service
Elevation Loss:	0.9 psi
Bends Loss:	0 psi
Required Pressure after RPZ:	20 psi
Proposed Pressure after RPZ:	**82.1 psi**

Sanitary Sewer:

Sanitary services will reuse building connection which will discharge into the existing sanitary sewer lateral that discharges along sanitary main along Meyer Road. The proposed building additions will reuse the existing lateral sanitary connections.

Summary:

Proposed New Building S.F.:	10,069 S.F.
Existing Buildings S.F.:	246,740 S.F.
Proposed Flow:	0.1 * 10,069 = 1,007 GPD
Additional GPD =	1,007 GPD
Total Increased Sanitary Flow:	**1,007 GPD**

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

FIGURES:

1 *Site Location Plan & Engineering Plan*

2 *Sanitary & Water Calculations*

3 *SWPPP Stormwater Report*

4 *Water Quality Unit Detail*

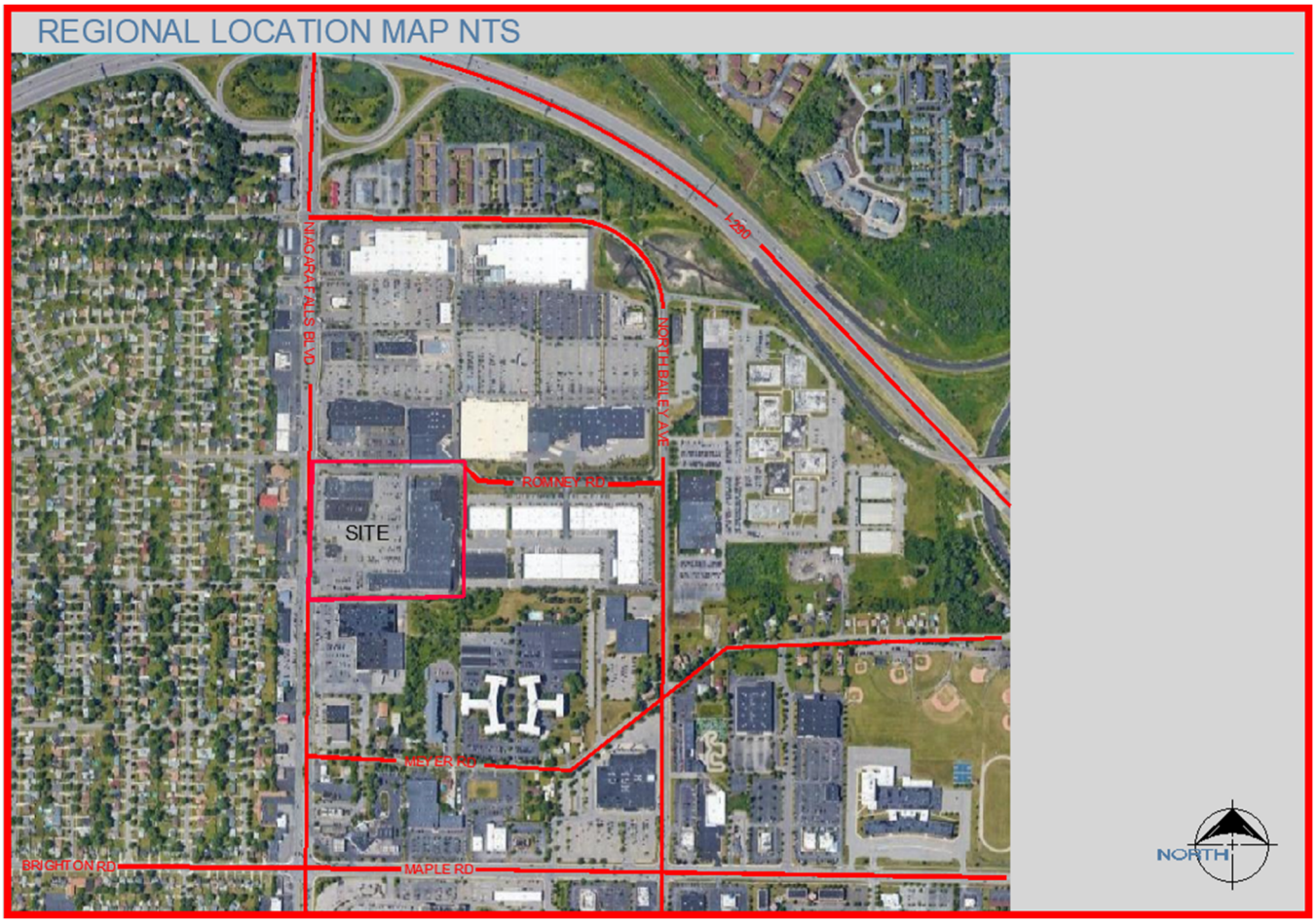
APPENDICES:

A *FEMA Flood Areas*

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

FIGURE 1

SITE LOCATION PLAN
ENGINEERING PLANS



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

FIGURE 2

SANITARY & WATER CALCULATIONS

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202
716.886.0211.P : : 716.886.1026.F

JOB NAME: Amherst Development
DESCRIPTION: SANITARY & WATER CALCULATIONS
PROPERTY # 1723 DATE: 8.23.24
CALCULATED BY: DMZ SHEET: 1 OF 2

SANITARY SEWER CALCULATIONS:

PROPOSED NEW BUILDING: **10,069 S.F.**

Required GPD = 0.1 GPD / S.F. *NYSDEC Design standard for WWTS

Proposed = 10,069 * 0.1 GOPD = 1,007 GPD

INCREASED SANITARY FLOW = **1,007 GPD**

PEAK SANITARY DEMAND

Total Demand = 1007 GPD x 1.1 = 1,108 GPD
Per Population = 30 Per Capita

Peak Factor: $(18+\sqrt{P}) / (4+\sqrt{P})$ P in Thousands

Peak Factor = 4

Peak Sanitary Demand = 1108 x 4.38 = 4,853 gpd
0.005 MGD

WATER CALCULATIONS:

Demand: = 1,007 GPD
GPM: = GPD / 9hr / 60min
ASSUMED 9HR SHIFT = 1,007 / 9 / 60
= **1.86 GPM**

PEAK FACTOR: = GPM X 1.8
= 1.86 X 1.8
Q = **3.36 GPM PEAK**

HEADLOSS FRICTION: = $\frac{(10.44) X (L) X (Q)^{1.85}}{(C)^{1.85} X (D)^{4.866}}$

Q = GPMin
L = LENGTH OF PIPE = $\frac{(10.44) X (50) X (3.36)^{1.85}}{(140)^{1.85} X (2)^{4.866}}$
C = DESIGN COEF OF PIPE
D = PIPE DIAMETER

= **0 PSI**

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BENDERSON DEVELOPMENT
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202
716.886.0211.P : : 716.886.1026.F

JOB NAME: Amherst Development
DESCRIPTION: SANITARY & WATER CALCULATIONS
PROPERTY # 1723 DATE: 8.23.24
CALCULATED BY: DMZ SHEET: 2 OF 2

ELEVATION LOSS: = (BUILDING INTAKE - HYDRANT HEIGHT) X 0.433
= (579.5 - 577.5) X 0.433
= **0.9 PSI**

LOSS THROUGH RPZ & METER:

RPZ = 12 PSI (STANDARD)
METER = 1 PSI (STANDARD)
= **13 PSI After Hotbox**

LOSS DUE TO BENDS:
RESISTANCE EQUIVALENT LENGTH METHOD)

TOTAL = **0 FT ADDITIONAL PIPE**

STATIC PRESSURE @ HYDRANT:
= **96 psi**

PRESSURE AFTER RPZ / METER / BENDS / ELEVATION / HEADLOSS:

= 96 - 13 PSI - 0.9 PSI
(HYD) (RPZ) (FRICTION)
= **82.1 psi**

REQUIRED RESIDUAL PRESSURE = 20 PSI

PROPOSED RESIDUAL PRESSURE = 82.1 PSI

THEREFORE PROPOSED > REQUIRED
82 PSI (GREATER) 20 PSI

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

FIGURE 3

SWPPP Report

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

CARMINAWOOD
DESIGN

ENGINEER'S REPORT

for

Amherst Development Park

6000-6040 North Bailey Ave
Town of Amherst, Erie County, New York

Prepared for

Benderson Development Company, LLC

570 Delaware Avenue
Buffalo, NY 14202

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

November 2023



Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Table of Contents

Written Engineer's Report

Section 1 - Location & Description

Section 2 - Stormwater Drainage System

Appendices

Appendix A - Location Maps – Erie County GIS

Appendix B - Web Soil Survey – Hydrologic Soils Groups

Appendix C - Storm Sewer Drainage Calculations

- Water Quality and Runoff Reduction Calculations
- Stormwater Runoff Summaries and Runoff Delineation Maps
- HydroCAD Analysis

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Section 1 – Location & Description

This project is a site redevelopment of the existing Amherst Development Park located on the south side of Ridge Lea Road and on the west side of North Bailey Ave in the Town of Amherst. The site is located north of Meyer Road and east of Niagara Falls Boulevard. The Boulevard Consumer Square is located north and west of the project site, Amherst Commerce Park is located east of the project site and Boulevard Towers Apartments are located south of the project site. The site is currently fully developed and occupied by existing commercial buildings that will remain. Proposed construction will include two building additions and parking lot/driveway expansions. Site construction will also include utility improvements and new stormwater management areas. The overall site is 17.14 of which 6.95 acres will be disturbed by construction activities. The project site is currently zoned R-D.

Section 2 – Stormwater Drainage System

The existing site is generally flat. An existing open/closed drainage system onsite drains north to an open swale along the north side of Romney Rd. Three existing 3'x5' arch stormwater conveyance pipes are also located onsite within a 30' wide Town of Amherst Drainage easement. These conveyance pipes flow from the south property line to north and discharge into the open swale along Romney Rd. The existing swale flows east along Romney Rd and north along North Bailey Ave and outlets to an existing stormwater management pond located adjacent to Interstate 290. Runoff from the pond is then conveyed north via open and closed drainage systems and discharges to Ellicott Creek and ultimately the Niagara River. All proposed stormwater runoff from the project site will continue to discharge to the existing stormwater system along Romney Road.

This project is subject to the Boulevard Central Special Stormwater Design Conditions adopted by the Town of Amherst. In addition to the requirements of the NYSDEC SPDES General Permit, the project must also provide the following criteria for Projected Growth Redevelopment Scenarios and Enhanced Phosphorus Removal:

- Provide 10% escalation of proposed peak flow when compared to existing conditions peak flows.
- Median curve number (CN) to compute existing conditions.
- Water Quality volume based on the 1-year, 24-hour storm according to Chapter 10 of the NYSDEC Stormwater Management Design Manual.

For purposes of the runoff analysis and the stormwater drainage system design, portions of the project site were classified as "Redevelopment" per NYSDEC Stormwater Management Design Manual Chapter 9 requirements. The nature of this construction project will be a "Redevelopment" with an increase in impervious area. The proposed stormwater management system was designed to attenuate proposed runoff to existing conditions prior to discharge.

The proposed stormwater drainage system will consist of a combination of overland sheet flow and HDPE pipe channel flow connected by a series of drainage inlets located throughout the project site. Proposed stormwater runoff will be collected and conveyed to an underground stormwater chamber detention area onsite and discharged via outlet control pipes to the existing stormwater system along Romney Road.

The bioretention areas will provide Runoff Reduction and Water Quality volume requirements for "New Development" areas. The filter area planting soil depth varies throughout the bioretention areas but maintains a minimum of at least 18 inches of soil. The 18 inches of soil is an acceptable deviation per the NYSDEC where existing grades prevent the full 2.5'-4' foot soil depth. A series of 6" underdrains below the planting soil will be located throughout the bioretention areas connected by overflow drainage inlets to convey runoff directly to the closed stormwater management system. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas.

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: No existing natural features exist onsite.
2. Calculation of Water Quality Volume (WQv) for site. See "Storm Sewer Drainage Calculations".

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity. Bioretention areas were incorporated into the site design to provide required RRv and WQv for "New Development" areas. See "Storm Sewer Drainage Calculations".
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. Water quality treatment structures will be installed onsite to address water quality requirements for "Redevelopment" areas. See "Storm Sewer Drainage Calculations".
5. Design of volume and peak rate control practices where required. See "Storm Sewer 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.

Water Quality:
The NYSDEC requires water quality treatment prior to discharge. This will be achieved by the application of bioretention areas and water quality treatment structures. The total WQv provided was 0.749 ac-ft and equal to the required WQv of 0.749 ac-ft. The required water quality volume was calculated based on the proposed 6.95 acres of proposed development area.

Runoff Reduction Volume:
The NYSDEC requires reduction of the total water quality volume by green infrastructure techniques and SMPs to replicate pre-development hydrology. Bioretention areas were incorporated into the site layout to provide the required RRv for contributing runoff areas in the WQv. The RRv provided was 0.094 ac-ft and greater than the required RRv min. of 0.056 ac-ft. The required runoff reduction volume was calculated based on 3.03 acres of proposed "new development" area that includes 1.97 acres of "new impervious" area.

100% of the required WQv was not reduced due to the followings site specific limitations: Drainage areas with impermeable soils, Type D. In addition, below is a summary of how each green infrastructure technique was evaluated and determined to be feasible or infeasible:

1. Conservation of natural areas: no natural existing features present onsite.
2. Sheetflow to riparian buffers or filter strips: no riparian buffers possible on the site; filter strips not feasible given the limited area for development.
3. Vegetated Open Swales: swales were not feasible given the limited area for development.
4. Tree Plantings: new trees were planted throughout the site.
5. Disconnection of Roof Top Runoff: disconnection not feasible for these types of projects.
6. Stream Daylighting: is not feasible given the limited area for development.
7. Rain Garden: bioretention areas installed throughout site.
8. Green Roof: the proposed use of the building makes this an unfeasible practice.
9. Stormwater Planter: this method is not recommended for these types of projects.
10. Rain Barrels & Cisterns: collected water would not be used for irrigation.
11. Porous Pavement: porous pavement is not recommended for areas with impermeable soils (Type D) and areas with sediment laden runoff (salting in winter months).

Channel Protection:
The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 10,004 cf will be accommodated in the stormwater detention areas onsite.

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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 13.54 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

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. Storage of this storm will be provided within the onsite stormwater detention areas. At this storm event the stormwater drainage system will allow discharge of 25.60 cfs, which is below the existing peak 100-year runoff of 41.10 cfs.

Town of Amherst:
The Town requires that the 25-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event *under the 10% escalation scenario*. Storage of this storm will be provided within the onsite stormwater detention areas. At the 25-year storm event the stormwater drainage system will allow discharge of 19.34 cfs, which is below the existing peak 10-year runoff of 20.51 cfs.

Design Criteria:
Storm pipes: 10-year storm
RUNOFF ANALYSIS OF PROPOSED DEVELOPMENT AREA:

STORM EVENT	EXISTING RUNOFF (cfs)	PROPOSED RUNOFF (cfs)	10% ESCALATION (cfs)
1 YEAR	8.12	7.30	8.03
2 YEAR	11.64	9.40	10.34
5 YEAR	16.25	11.90	13.09
10 YEAR	20.51	13.54	14.89
25 YEAR	27.36	18.03	19.83
50 YEAR	33.68	21.83	24.01
100 YEAR	41.10	25.60	28.16

WATER QUALITY SUMMARY:
WQv REQUIRED = 0.749 AC-FT
RRv MIN. REQUIRED = 0.056 AC-FT
RRv PROVIDED WITHIN BIORETENTION AREAS = 0.094 AC-FT
WQv PROVIDED WITHIN BIORETENTION AREAS = 0.234 AC-FT
WQv PROVIDED BY TREATMENT STRUCTURES = 0.515 AC-FT
TOTAL WQv PROVIDED = 0.749 AC-FT

BIORETENTION FILTER AREA SUMMARY:
FILTER AREA = 9,266 SF

See attached “Storm Sewer Drainage Calculations” for additional information.

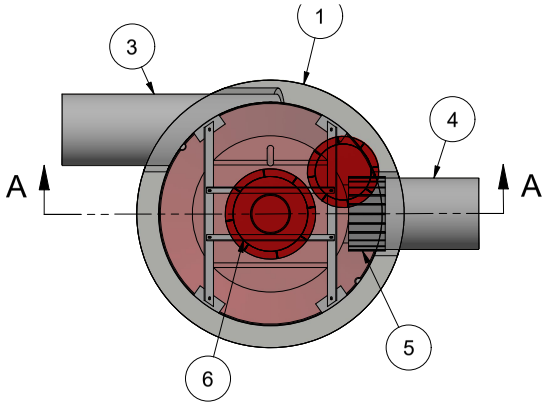
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

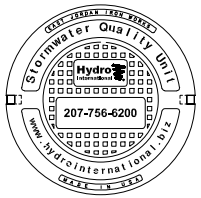
FIGURE 4

Water Quality Unit Detail

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

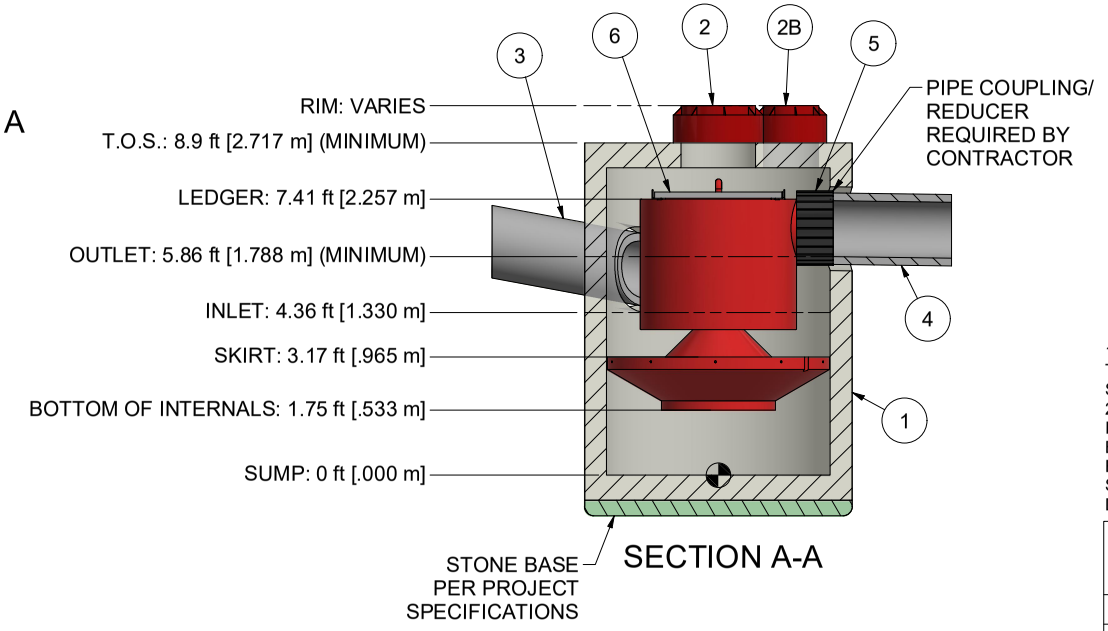
Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)





HYDRO FRAME AND COVER (INLCUDED)

GRADE RINGS BY OTHERS AS REQUIRED



SECTION A-A

NOTE: NOT FOR CONSTRUCTION. CONTACT HYDRO FOR SITE SPECIFIC DETAIL

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

1. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
2. Peak Hydraulic Capacity: 8.0 cfs (227 l/s)
3. Sediment Storage Capacity: 2.10 cu. yd. (1.59 cu. m)
4. Continuous Oil Storage Capacity: 216 gal. (818 liters)
5. Sediment shall be stored in a zone that is isolated from the main flow path and protected from reintrainment by a benching skirt.
6. For more product information including regulatory acceptances, please visit https://hydro-int.com/en/products/downstream-defender

PARTS LIST

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	72	1800	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)
2	3	24	600	FRAME AND COVER
2B	1	18	450	FRAME AND COVER
3	1	18 (MAX)	450 (MAX)	MAX INLET PIPE (BY OTHERS)
4	1	18 (MAX)	450 (MAX)	MAX OUTLET PIPE (BY OTHERS)
5	1			PIPE COUPLING (BY OTHERS)
6	1			INTERNAL COMPONENTS (PRE-INTALLED)

PROJECTION

IF IN DOUBT ASK

DATE: 10/8/2019	SCALE: 1 / 50	
DRAWN BY: ER	CHECKED BY: MRJ	APPROVED BY

Title: 6ft-DIAMETER

GENERAL ARRANGEMENT

Hydro International
A CRH COMPANY
hydro-int.com
HYDRO INTERNATIONAL

WEIGHT: N/A	MATERIAL:
STOCK NUMBER: NEXT ASSY	
DRAWING NO.: DD GA-10	
SHEET SIZE: B	SHEET: 1 OF 1
Rev: A	

APPENDIX A

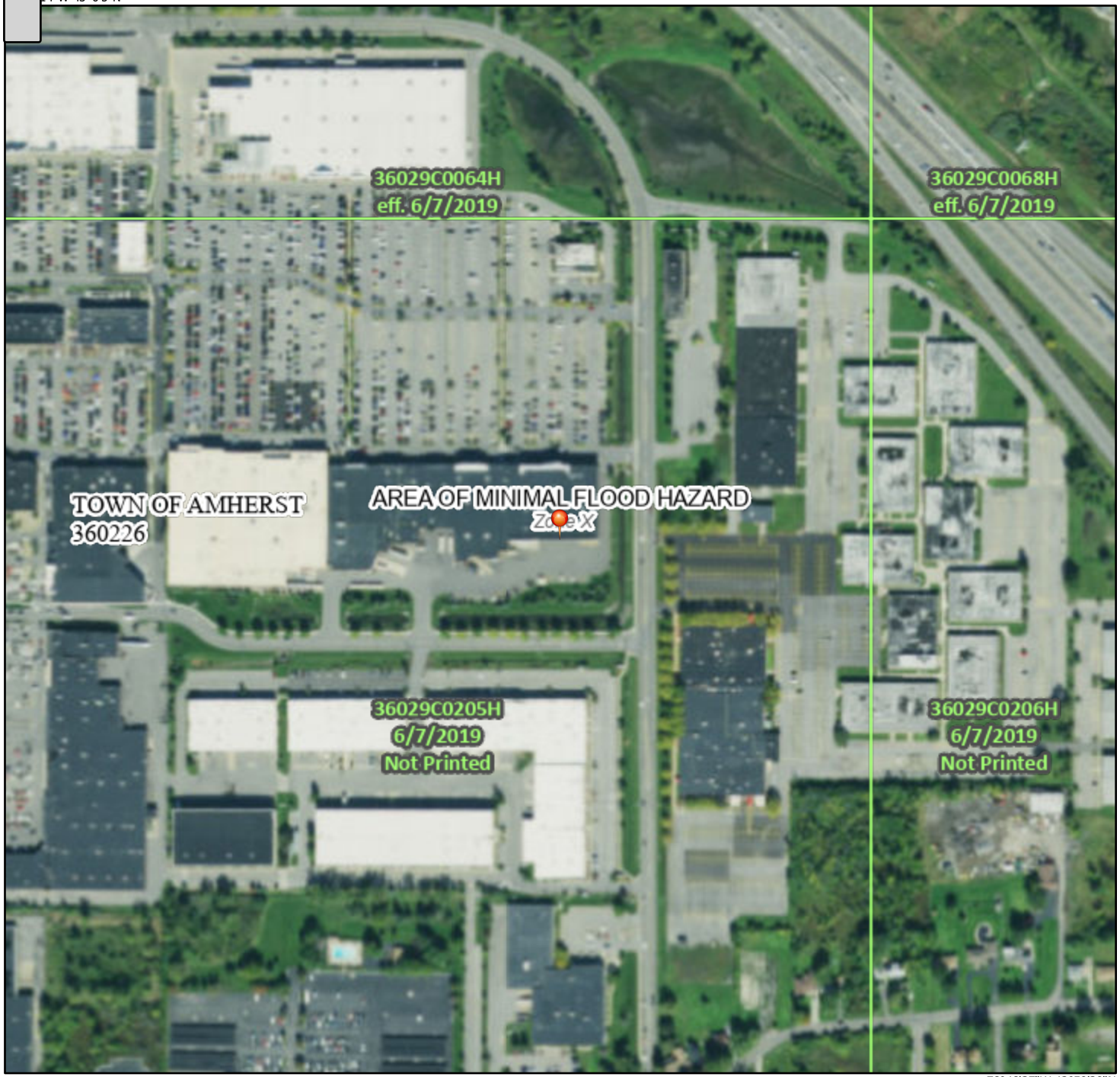
FEMA Flood Areas

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Attachment: SP-1988-11P_application updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ati... Flood Hazard Layer FIRMette

14"W 43°0'5"N



78°48'37"W 42°59'39"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 L

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BF... *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, V*
- 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 11/17/2023 at 9:20 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.

PROPOSED SITE MODIFICATIONS

Amherst Development Park
6000 - 6040 N.Bailey Ave, Amherst, NY
BDC Property # 1723
SITE DEVELOPMENT DRAWINGS

INDEX OF DRAWINGS

DWG. #	DRAWING NAME	REVISION	DATE
C1.0	COVER SHEET	6	08.30.2024
C2.0	EXISTING SURVEY		
C3.00	DEMOLITION & EROSION CONTROL PLAN WEST	6	08.30.2024
C3.01	DEMOLITION & EROSION CONTROL PLAN EAST	6	08.30.2024
C3.10	DEMOLITION & EROSION CONTROL PLAN DETAILS	6	08.30.2024
C4.0	OVERALL SITE PLAN	5	08.12.2024
C4.01	FIRE TRUCK TURNING PLAN		
C4.10	DETAILED SITE PLAN WEST	5	08.12.2024
C4.11	DETAILED SITE PLAN EAST	4	07.31.2024
C4.20	CONSTRUCTION DETAILS	1	12.13.2023
C5.00	GRADING PLAN WEST	5	08.12.2024
C5.01	GRADING PLAN EAST	4	07.31.2024
C5.10	DRAINAGE PLAN WEST	6	08.30.2024
C5.11	DRAINAGE PLAN EAST	6	08.30.2024
C5.20	DRAINAGE DETAILS	1	12.13.2023
C5.21	DRAINAGE DETAILS		
C6.00	UTILITY PLAN WEST	5	08.12.2024
C6.01	UTILITY PLAN EAST	4	07.31.2024
C6.10	UTILITY DETAILS	1	12.13.2023
C7.0 - C7.4	LANDSCAPING PLANS	1	08.21.2024
C8.0	SITE LIGHTING PLAN	5	08.12.2024
C8.10	LIGHTING DETAILS		

OWNER/DEVELOPER:

NAME: BENDERSON DEVELOPMENT COMPANY, LLC
ADDRESS: 570 DELAWARE AVENUE, BUFFALO, NY 14202
CONTACT: DAVID ZUPPELLI
PHONE: 716 - 878 - 9683

BENDERSON DEVELOPMENT COMPANY, LLC
570 Delaware Ave.
Buffalo, New York 14202

SURVEYOR

NAME: KHEOPS ARCHITECTURE, ENGINEERING & SURVEY, DCP
ADDRESS: 300 PEARL STREET, BUFFALO, NY 14202
CONTACT: -
PHONE: 716-849-8739

UTILITIES:

NATURAL GAS
NAME/TITLE: WILLIAM SCHNEIDER
COMPANY/DEPT: NATURAL FUEL GAS
ADDRESS: -
PHONE: 716 - 696 - 6460

TELEPHONE COMPANY
NAME/TITLE: JOHN HECKMAN
COMPANY/DEPT: VERIZON
ADDRESS: -
PHONE: 716 - 840 - 8603

ELECTRIC
NAME/TITLE: -
COMPANY/DEPT: NATIONAL GRID
ADDRESS: -
PHONE: -

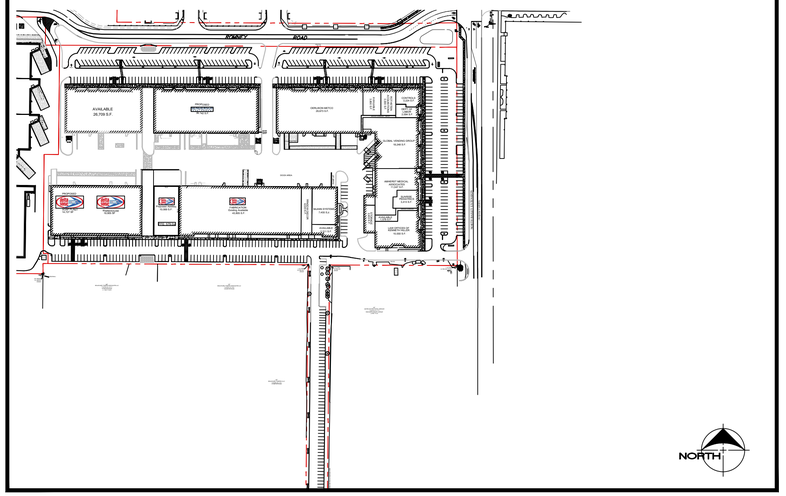
DIG SAFELY NEW YORK
PHONE: 1 - 800 - 962 - 7962 OR (811)

AGENCIES:

ENGINEERING DEPARTMENT
NAME/TITLE: JEFF BURROUGHS
COMPANY/DEPT: TOWN OF AMHERST, NY - ENGINEERING DPT
ADDRESS: 1100 NORTH FOREST RD, WILLIAMSVILLE, NY
PHONE: 716 - 631 - 7154 EX 7418

BUILDING & PLUMBING DEPARTMENT
NAME/TITLE: -
COMPANY/DEPT: TOWN OF AMHERST, NY - BUILDING DPT
ADDRESS: 5583 MAIN STREET, WILLIAMSVILLE, NY 14221
PHONE: 716 - 631 - 7080

SITE LOCATION MAP 1:200



REGIONAL LOCATION MAP NTS



OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
2	05.08.2024	DZ	Site Plan Update
3	06.12.2024	DZ	Site Updates
4	07.31.2024	DZ	Site Updates
5	08.12.2024	DZ	Site Updates
6	08.30.2024	DZ	Town Comments

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723
AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

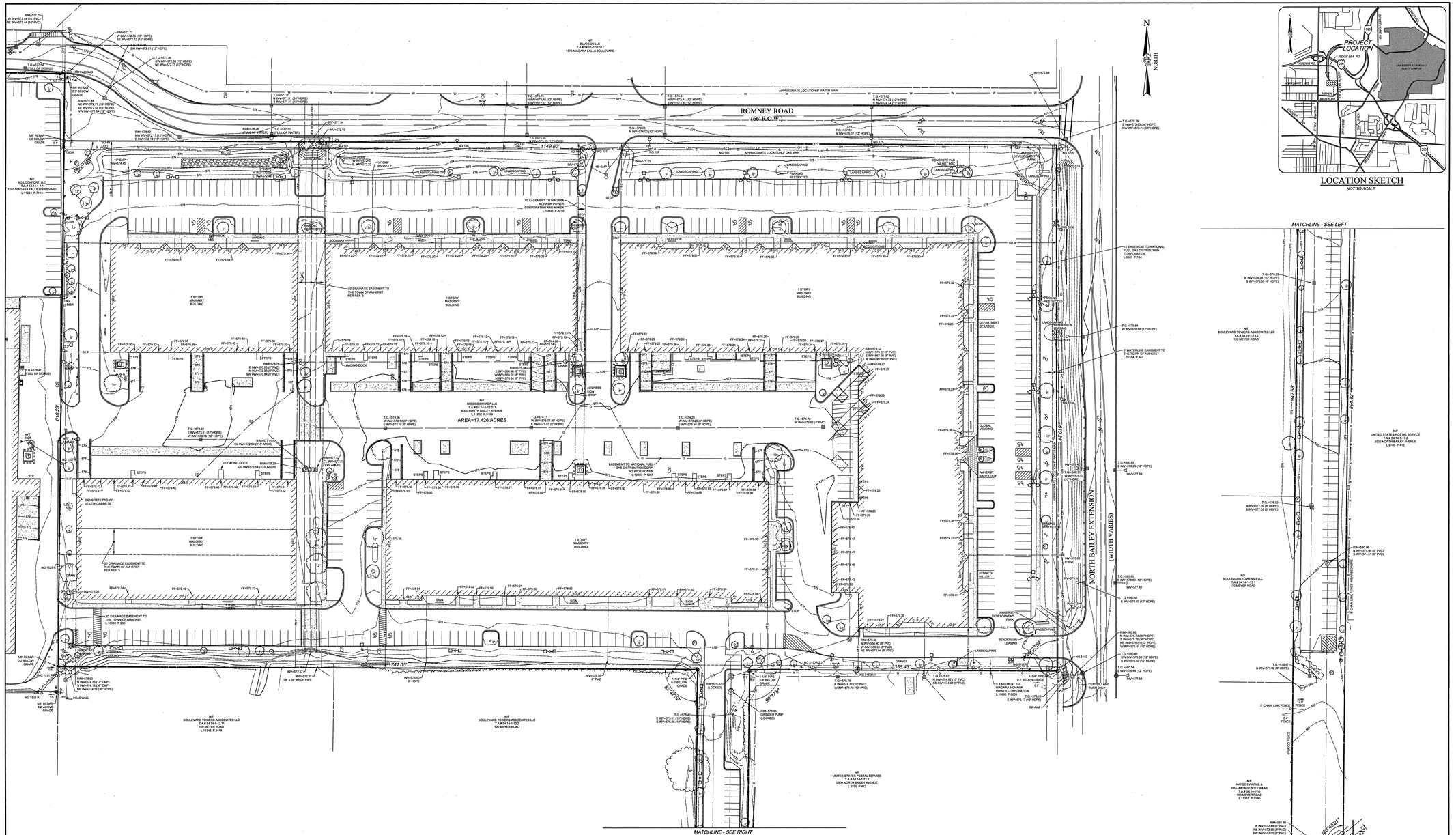
SEAL



TITLE: COVER SHEET

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.16.2023
DRAWING NO. C1.0

Attachment: SP-1988-11P drawings updated 090924 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



LOCATION SKETCH

NOT TO SCALE

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
- x 420.4 — EXISTING SPOT ELEVATION @ X
- CONCRETE PAD/ CONCRETE SIDEWALK

SYMBOL LEGEND

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

EASEMENT NOTES
T.A.# 54.14-1-12.211

1. EASEMENT MADE BY BOULEVARD POWER CO. TO NEW YORK TELEPHONE COMPANY RECORDED OCTOBER 30, 1968 IN LIBER 7527 OF DEEDS, PAGE 543. (NOT PLOTTABLE)
2. EASEMENT MADE BY MARIET DEVELOPMENT CORPORATION OF NEW YORK TO NIAGARA MOHAWK POWER CORPORATION RECORDED SEPTEMBER 11, 1967 IN LIBER 7302 OF DEEDS, PAGE 474. (DOES NOT AFFECT PREMISES)
3. RIGHT OF WAY MADE BY MARIET DEVELOPMENT CORPORATION OF NEW YORK TO IROQUOIS GAS CORPORATION RECORDED SEPTEMBER 29, 1967 IN LIBER 7309 OF DEEDS, PAGE 98. (NOT PLOTTABLE)
4. EASEMENT FROM NIAGARA BOULEVARD TOWERS, INC TO NIAGARA MOHAWK POWER CORPORATION AND NEW YORK TELEPHONE CO. RECORDED ON AUGUST 29, 1969 IN LIBER 7506 OF DEEDS, PAGE 503. (NOT PLOTTABLE)
5. EASEMENT RESERVED BY BOULEVARD TOWERS CO. CONTAINED IN DEED RECORDED ON JULY 29, 1969 AT LIBER 9695 OF DEEDS, PAGE 528.

SURVEY NOTES

1. TOPOGRAPHY SHOWN FROM A FIELD SURVEY BY COSTICH ENGINEERING ON 5/4/2021 HORIZONTAL AND VERTICAL DATA OBTAINED THROUGH NYSDOT CORS NETWORK REFERENCED TO THE FOLLOWING MONUMENT

HAMBURG CORS STATION
-LATITUDE: 42-43-37.92029 (N) } NAD 83 (CORS)
-LONGITUDE: 078-54-54.28856 (W)
-ELLIP HEIGHT: 212.508 METERS } NAVD 88 (CORS)

REFERENCES

1. THE DEEDS AS SHOWN ON FILE AT THE ERIE COUNTY CLERKS OFFICE.
2. ALTA/NSPS LAND TITLE SURVEY PREPARED FOR DDR - PROJECT SABRE PROJECT, PREPARED BY BOCK & CLARK, HAVING PROJECT NO. 20150423S-003, DATED 1/26/2015.
3. ALTA/NSPS LAND TITLE SURVEY 6000-6040 NORTH BAILEY AVENUE, PREPARED BY TVGA CONSULTANTS, HAVING JOB NO. 2006.0095.00, DATED 6/12/2006.

UTILITY INFORMATION

UTILITY INFORMATION PER UFPO DESIGN TICKET # 04261-000-825-00 DATED APRIL 29, 2021

1. CHARTER COMMUNICATIONS BUFFALO	317-575-7800 X2	NO CONFLICT
2. ERIE COUNTY WATER AUTHORITY	716-665-8207	UTILITIES PLOTTED
3. LIGHTOWER FIBER TECHNOLOGIES	888-632-0931 X2	NO RESPONSE
4. NATIONAL FUEL GAS - TONAWANDA	716-857-7431	UTILITIES PLOTTED
5. NATIONAL GRID - WEST - ELECTRIC	315-428-6319	NO CONFLICT
6. SUNOCO PIPELINE LP	713-989-7079	NO RESPONSE
7. TOWN OF AMHERST	716-631-7413	UTILITIES PLOTTED
8. VERIZON / BUFFALO	315-937-2515	UTILITIES PLOTTED

SITE DATA

T.A.# 54.14-1-12.211

1. EXISTING ZONING: RD - RESEARCH AND DEVELOPMENT DISTRICT
2. BULK REQUIREMENTS:

	REQUIRED
MIN. LOT AREA (SF)	1 ACRE
MAX LOT COVERAGE	NONE REQUIRED
MIN. LOT WIDTH (FT)	35
MAX. BUILDING HEIGHT (FT)	65 FEET
MIN. FRONT YARD SETBACK (FT)	20 FEET FOR BUILDINGS UP TO 35 FEET IN HEIGHT; 30 FEET FOR BUILDINGS GREATER THAN 35 FEET IN HEIGHT
MIN. SIDE YARD SETBACK (FT)	0 TO 15 FEET FOR BUILDINGS UP TO 30 FEET IN HEIGHT; 25 FEET FOR BUILDINGS GREATER THAN 30 FEET IN HEIGHT; PLUS 3 FEET FOR EACH 1 FOOT OF HEIGHT OVER 35 FEET
MIN. REAR YARD SETBACK (FT)	15 FEET FOR BUILDINGS UP TO 30 FEET IN HEIGHT; 25 FEET FOR BUILDINGS GREATER THAN 30 FEET IN HEIGHT; PLUS 3 FEET FOR EACH 1 FOOT OF HEIGHT OVER 35 FEET

CERTIFICATION

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

THIS MAP WAS PREPARED FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED ON MAY 12, 2021 AND FROM THE REFERENCE(S) LISTED HEREON. NO SEARCH OF RECORDS, OTHER THAN THOSE REFERENCED, WAS MADE FOR EASEMENTS OR ENCUMBRANCES AFFECTING THIS PARCEL.

By: Daniel T. Hicks, N.Y.S. L.S., No. 050449 Date: 6-7-2021

Dig Safely. New York Call811 before you dig

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
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY	CHKD.	APVLS.

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COSTICH ENGINEERING, D.P.C.

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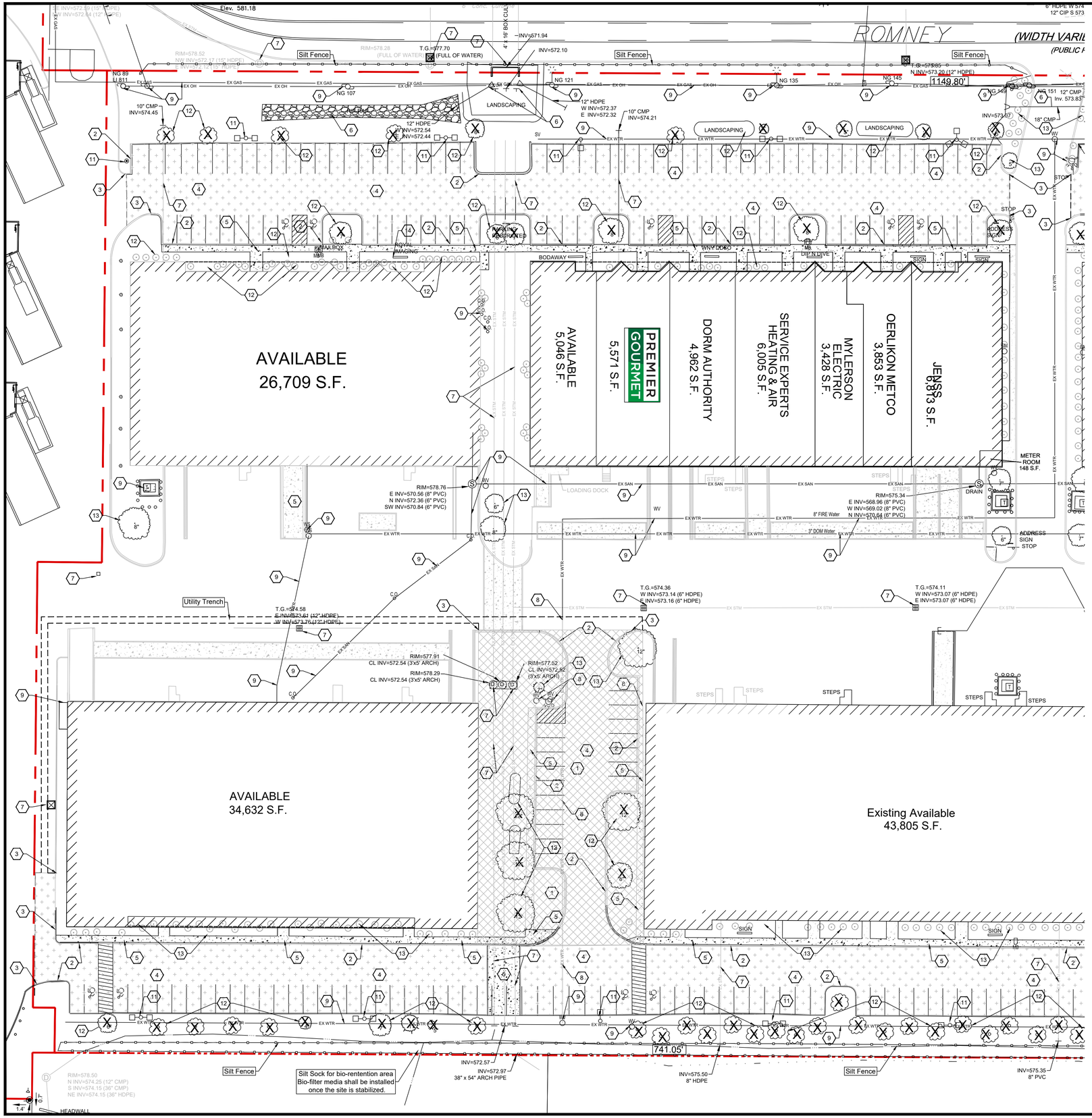
STATE OF NEW YORK — DANIEL T. HICKS — No. 050449 — LICENSED LAND SURVEYOR

PROJECT ENGINEER	M.O.R.
DRAWN BY	G.M.S.
BOUNDARY	G.M.S.
TOPOGRAPHY	G.L.K.
DATE	6/1/2021
SCALE	1"=40'

COSTICH ENGINEERING
• CIVIL ENGINEERING
• LAND SURVEYING
• LANDSCAPE ARCHITECTURE
217 LAKE AVENUE ROCHESTER, NY 14608 (585) 4583020

TITLE OF PROJECT: 1723/5256 AMHERST DEVELOPMENT
TITLE OF DRAWING: EXISTING FEATURES
LOCATION OF PROJECT: TAX PARCEL NO. 54.14-1-12.211 TOWN LOT 81, TOWNSHIP 13, RANGE 7, HOLLAND LAND COMPANY'S SURVEY, TOWN OF AMHERST, COUNTY OF ERIE, STATE OF NEW YORK
CLIENT: BENDERSON DEVELOPMENT CO., INC. 570 DELAWARE AVENUE BUFFALO, NEW YORK 14202
DWG # 5084 VA110 SHEET 1 OF 1

Attachment: SP-1988-11P drawings updated 090924, 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



GENERAL NOTES:
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10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN .
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12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

DEMOLITION LEGEND:

- Property Line
- EX ELEC — Existing Electric
- EX GAS — Existing Gas
- EX WTR — Existing Water
- EX OH — Existing Overhead Utility
- EX SAN — Existing Sanitary
- EX STM — Existing Storm
- EX TC — Existing Telecoms
- Saw Cut Line
- Silt Fence/Sock
- Inlet Protection
- X — Tree Removal
- Existing area to be removed.
- Existing Asphalt Pavement to be Removed. Sub-base to Remain.

DEMOLITION NOTES: (#)

1. Existing Area to be Cleared.
2. Existing Curb to be removed.
3. Limits of Curb Removal.
4. Existing Asphalt Pavement to be removed.
5. Existing Concrete Sidewalk/ Pavement/ Ramps to be removed.
6. Existing Storm Drainage/CB to be removed.
7. Existing Storm Drainage/CB to remain and be protected during Construction.
8. Existing Utility Structure to be removed.
9. Existing Utility Structure to remain and be protected during Construction.
10. Existing Pylon Sign to remain and be protected during Construction.
11. Existing Light Pole Base to be Relocated
12. Existing Landscaping to be Removed
13. Existing Landscaping to remain and be protected during construction.
14. Existing Bollard/Signage to be removed.

Project Disturbance
Sub-Surface Disturbance: 3.92 Acres
Surface Disturbance: 3.03 Acres
Total Disturbance: 6.95 Acres.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
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PROPERTY NUMBER: #1723

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Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

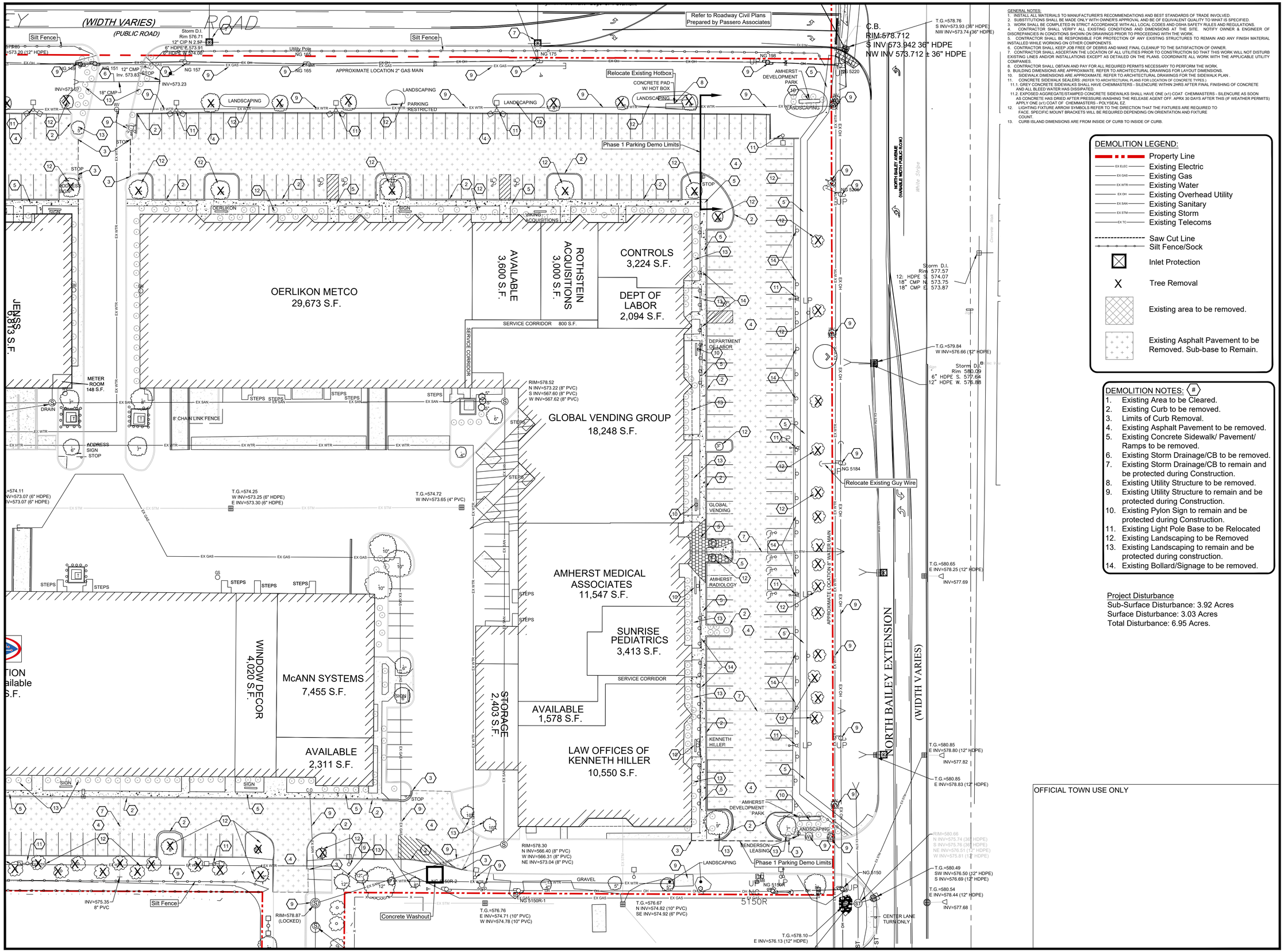
SEAL

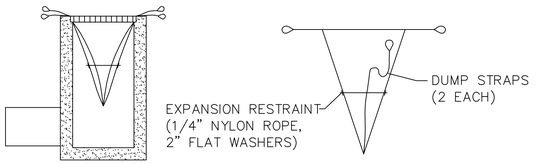
REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:
Demolition and Erosion Control Plan (West)

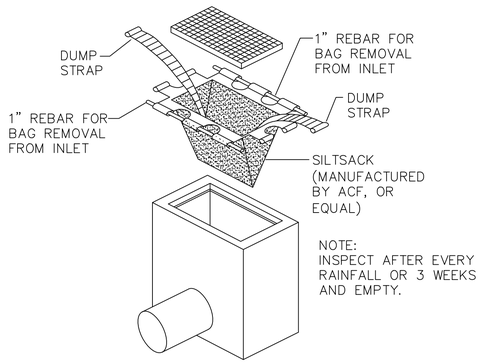
SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO. C3.00

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)


(WIDTH VARIES)
(PUBLIC ROAD)
Refer to Roadway Civil Plans Prepared by Passero Associates
Silt Fence
Storm D.I. Rim 576.71 12" CIP N 2.57 6" HDPE E 573.91 6" HDPE W 574.06
Utility Pole NG 165
APPROXIMATE LOCATION 2" GAS MAIN
Relocate Existing Hotbox
CONCRETE PAD W/ HOT BOX
AMHERST DEVELOPMENT PARK
LANDSCAPING
PARKING RESTRICTED
Phase 1 Parking Demo Limits
NG 5220
NG 5184
Relocate Existing Guy Wire
NG 5150R
NG 5150R-1
NG 5150R-2
NG 5150
NG 5180
NG 5179
NG 5178
NG 5177
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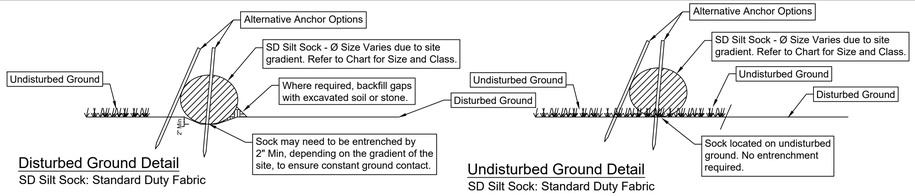


INSTALLATION DETAIL BAG DETAIL



SILT SACK DETAIL

N.T.S.

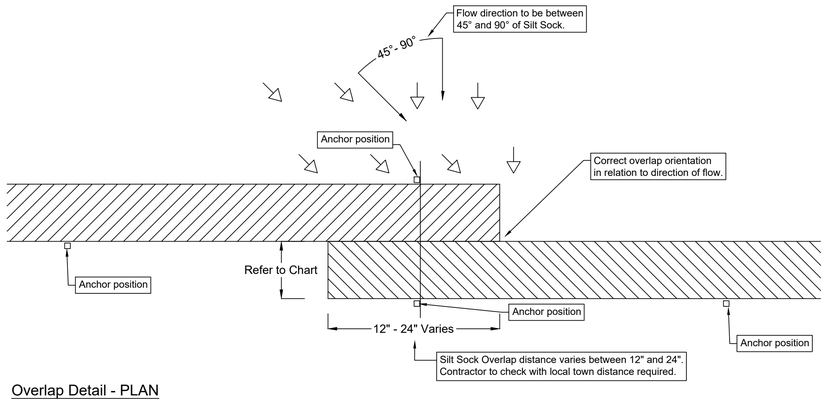


Disturbed Ground Detail

SD Silt Sock: Standard Duty Fabric

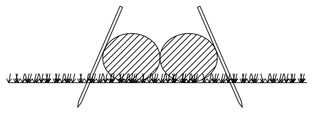
Undisturbed Ground Detail

SD Silt Sock: Standard Duty Fabric



Overlap Detail - PLAN

1) Anchors required at the overlap section are to stay outside the Silt Sock and not pierce through the material. See alternative anchor positons in details above.

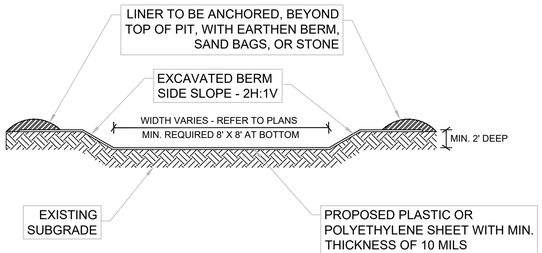


Anchor at Overlaped Ends - SECTION

Size & Class Chart			
	Diameter		
Gradient	8"	12"	18"
0 - 2%	30	55	75
2.1 - 5%	25	40	55
5.1 - 10%	15	30	40
10.1 - 33%	10	15	20
> 33%	5	10	15

SD SILT SOCK DETAIL

SD Silt Sock: Standard Duty Fabric



TYPICAL CONCRETE WASH OUT DETAIL

NOTES:
1. CONSTRUCT TO 2016 NYSDEC BLUE BOOK DESIGN CRITERIA

Notes:

1 - Do not use sock below the normal watermark or perpendicular to flow in river and where the maximum incline is greater than 50%.
2 - Contractors should be aware of federal, state and local laws, rules regulations or permit requirements for the use of Silt Socks on site.
3 - Sock should be positioned on the outline of the area to be protected, but must be installed between 45° to 90° from directions of flow.
4 - Sock may be required to be entrenched a minimum of 2" on disturbed ground to ensure constant ground contact.
5 - All gaps and ruts must be backfilled with soil or sock material.
6 - Sock overlap should be in the direction of the flow. Overlap amount will be between 12" and 24". Contractor to check with local town for requirements.
7 - If sediment collects to 1/2 the height of the sock, then a second sock may be stacked immediately up slope of the original instead of removing the sediment.
8 - Sock joint is where two sock sections meet on a level grade, overlap and adjoining ends, tightening the ends together, and anchoring through each end. Where two sections meet on un-level ground, j-hook higher elevated end, anchor, and begin new section just below. Back fill any gaps.
9 - Sock should be inspected and repaired as needed.
10 - If ruts begin under the sock they should be backfilled with soil and compacted so that the ground and sock have continuous contact.
11 - If sock rolls out of place, the sock should be repositioned and secured with additional anchors.
12 - Tears in the Sock fabric may be repaired by wrapping a new piece of fabric over the sock and securing, or by place a second sock immediately up slope with the required overlap beyond deformation.
13 - A section of sock should be replaced whenever it has weakened to such an extent that the efficiency is reduced or diminished. Weakening can occur because the natural mesh fabric breaks down over time of from being moved/dragged on site.
14 - Sock should be replaced when sediment has built up and has been removed three times.
15 - All sediment in disturbed area next to sock must be removed and correctly disposed of before the sock can be removed.
16 - When removing, cut sock open and spread the filler material around. The netting should be removed from site.
17 - Sock should be installed before works commence on site.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
6	08.30.2024	DZ	Town Comments

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CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL



TITLE: Demolition and Erosion Control Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023

DRAWING NO. C3.10

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

TOWN OF AMHERST, NY ZONING ANALYSIS

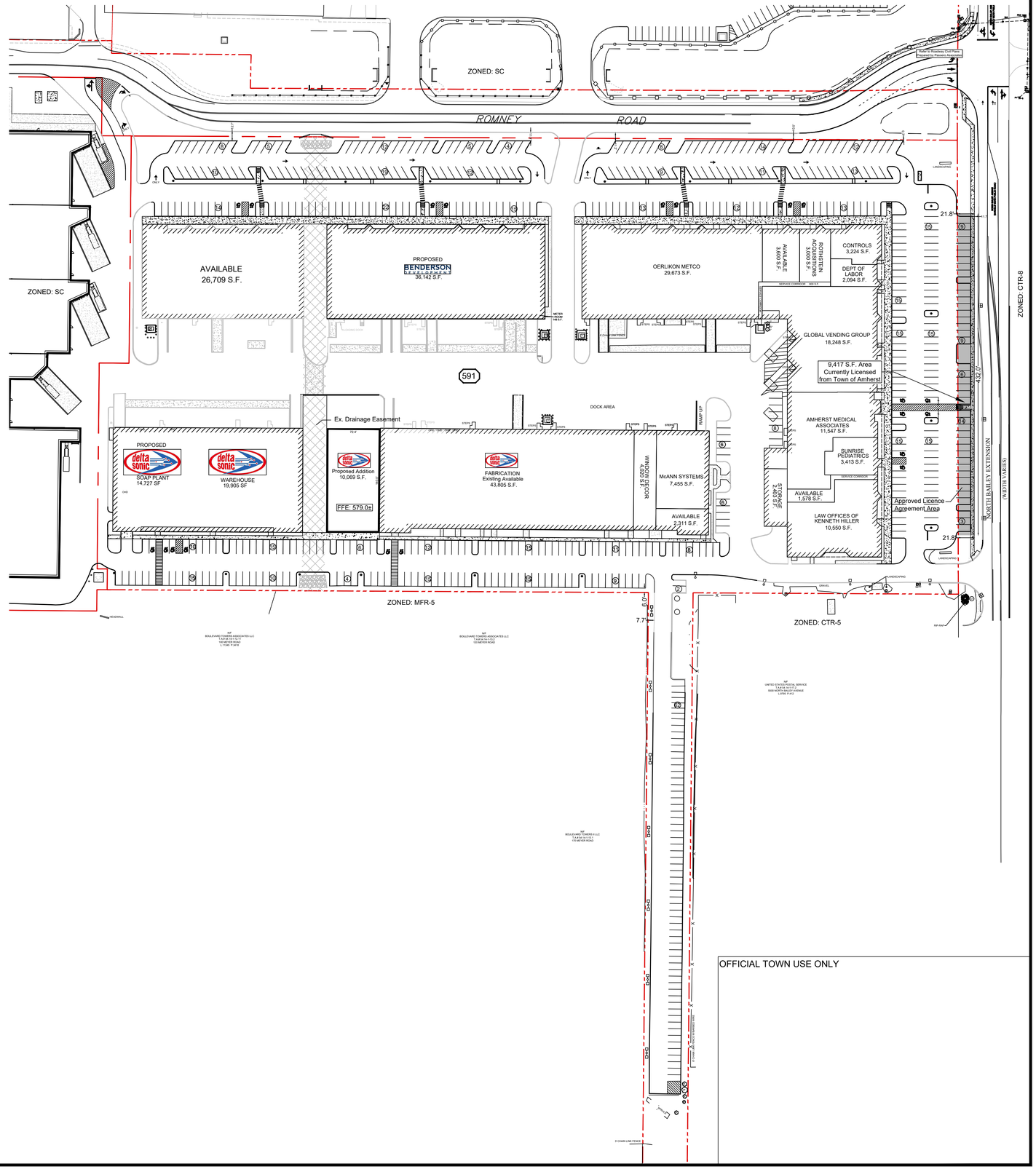
	REQUIRED	PROVIDED
ZONED (RD)	R-D	R-D
MIN LOT AREA	1 AC	17.14 AC
MAX. BUILDING HEIGHT	65'	<30'
BUILDING SETBACKS:		
FRONT YARD	40'	102.3'
SIDE YARD	15'	16.7'
REAR YARD	15'	48.4'
PARKING / ROAD/AUX SETBACKS:		
FRONT - ROMNEY ROAD	25'	0.3'
FRONT - N BAILEY	25'	*0'
REAR YARD	10'	6.0'

* Setback variance previously granted along North Bailey Road
- License Agreement along North Bailey has been previously granted
- Romney Road Pavement/Parking Setback - 14.5'
- N. Bailey Pavement/Parking Setback - 11.7'

PROPOSED PARKING ANAYLSIS

USE	CODE	S.F. USAGE	REQUIRED	PROVIDED
WAREHOUSE	1 / 1000 S.F.	177,407 SF	178 Spaces	
MEDICAL	1 / 150 S.F.	14,960 SF	100 Spaces	
RETAIL/OFFICE	1 / 200 S.F.	62,106 SF	311 Spaces	
TOTAL		254,252 SF	589 Spaces	591 Spaces
STALL SIZE			9' X 19'	9' X 19'

*Refer alternative parking study for site required parking



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(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 13703 STATE OF NEW YORK

TITLE:

Overall Site Plan

SCALE: 1:70

DRAWN BY: DMZ

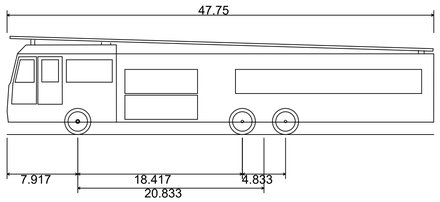
CHECKED BY: MAO

DATE: 11.06.2023

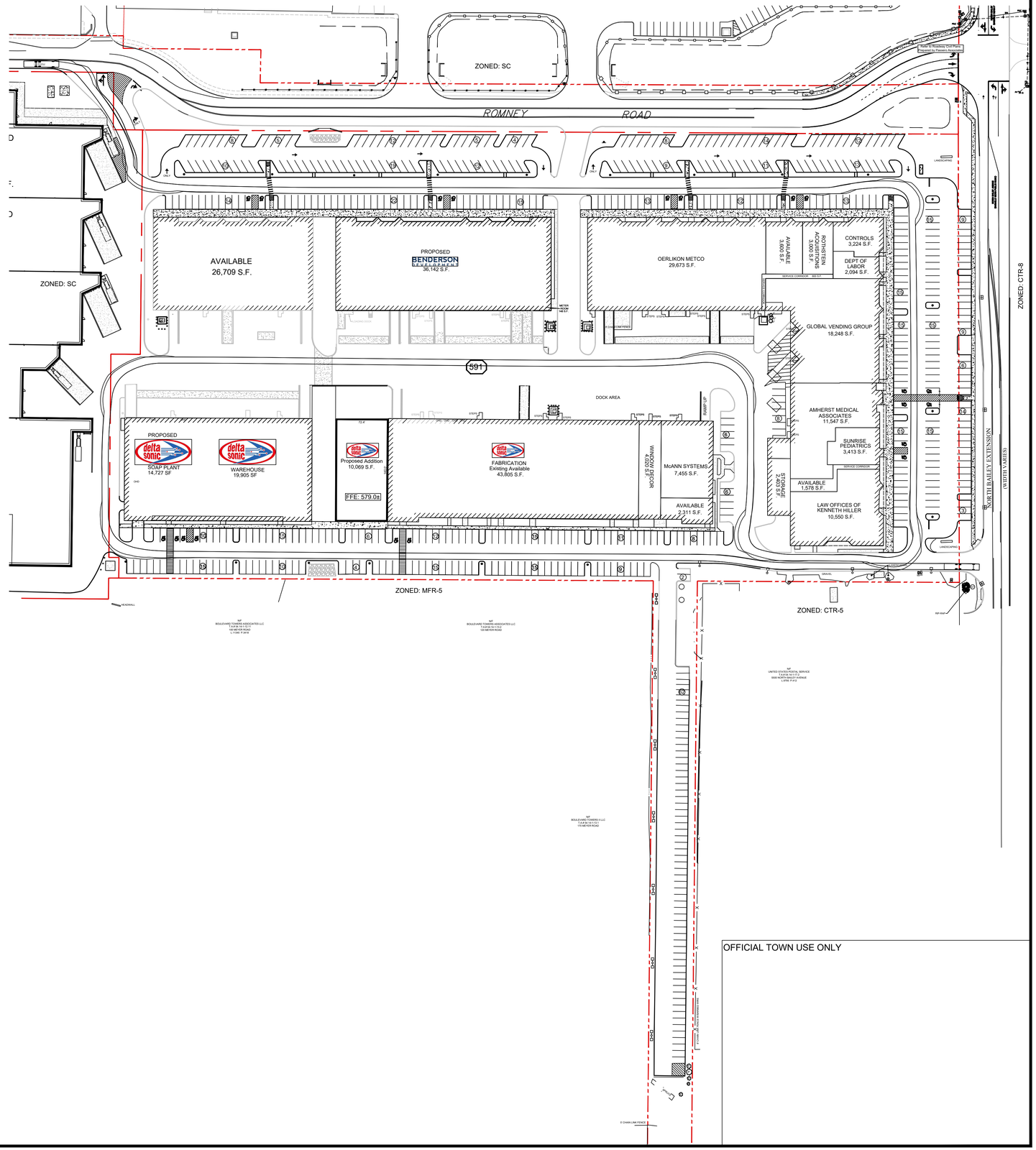
DRAWING NO.

C4.0

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



E-ONE HP95 Mid Mount	
Overall Length	47.750ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°



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SEAL



TITLE:

Fire Truck Turning Plan

SCALE: 1:70

DRAWN BY: DMZ

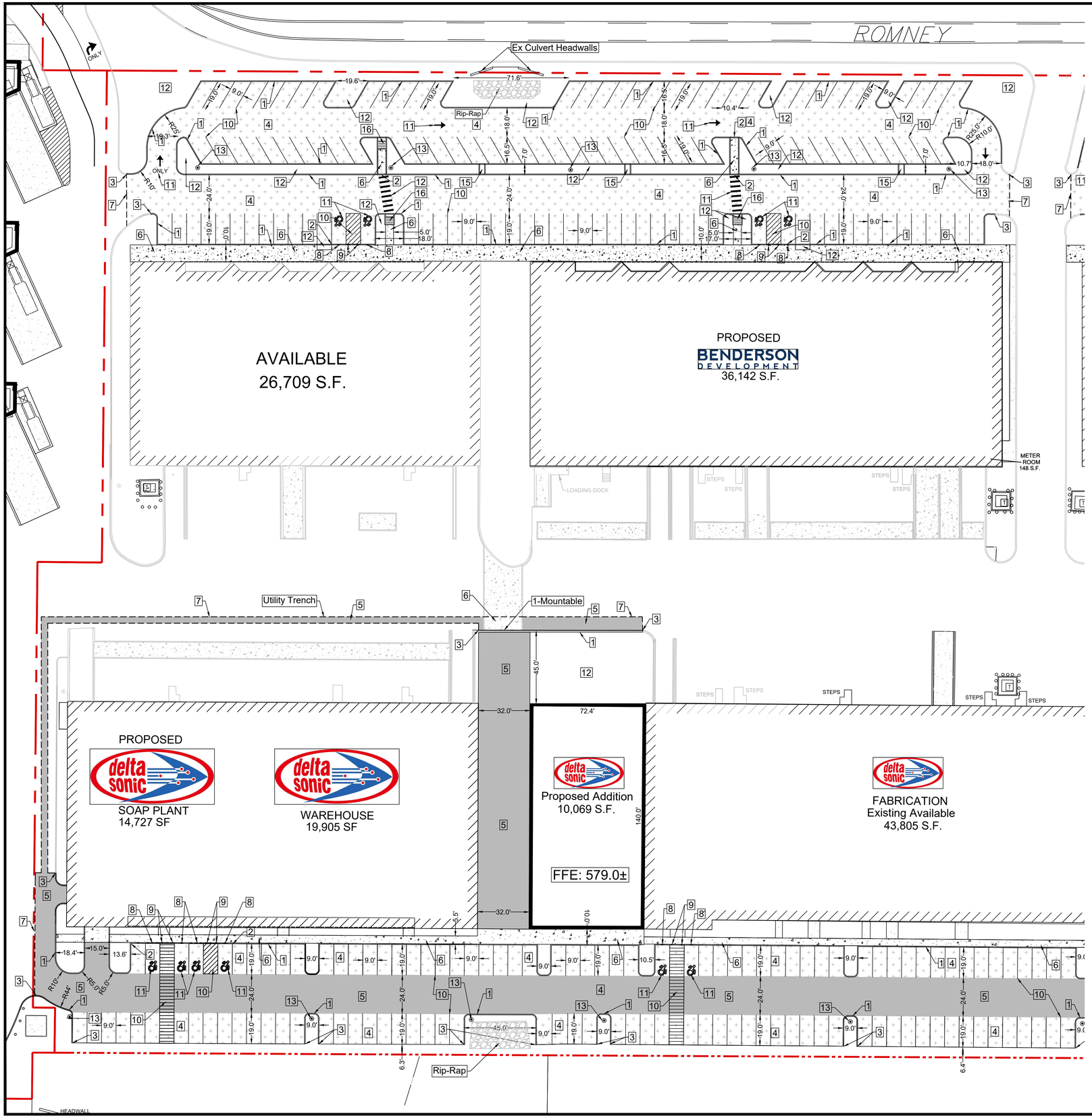
CHECKED BY: MAO

DATE: 08.30.2024

DRAWING NO.

C4.01

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SITE LEGEND:
- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES: #
1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement
15. Proposed 3' Wide Curb Opening
16. Proposed Curb Return Ramp

NB: All curb Radii to be 3' unless otherwise noted.

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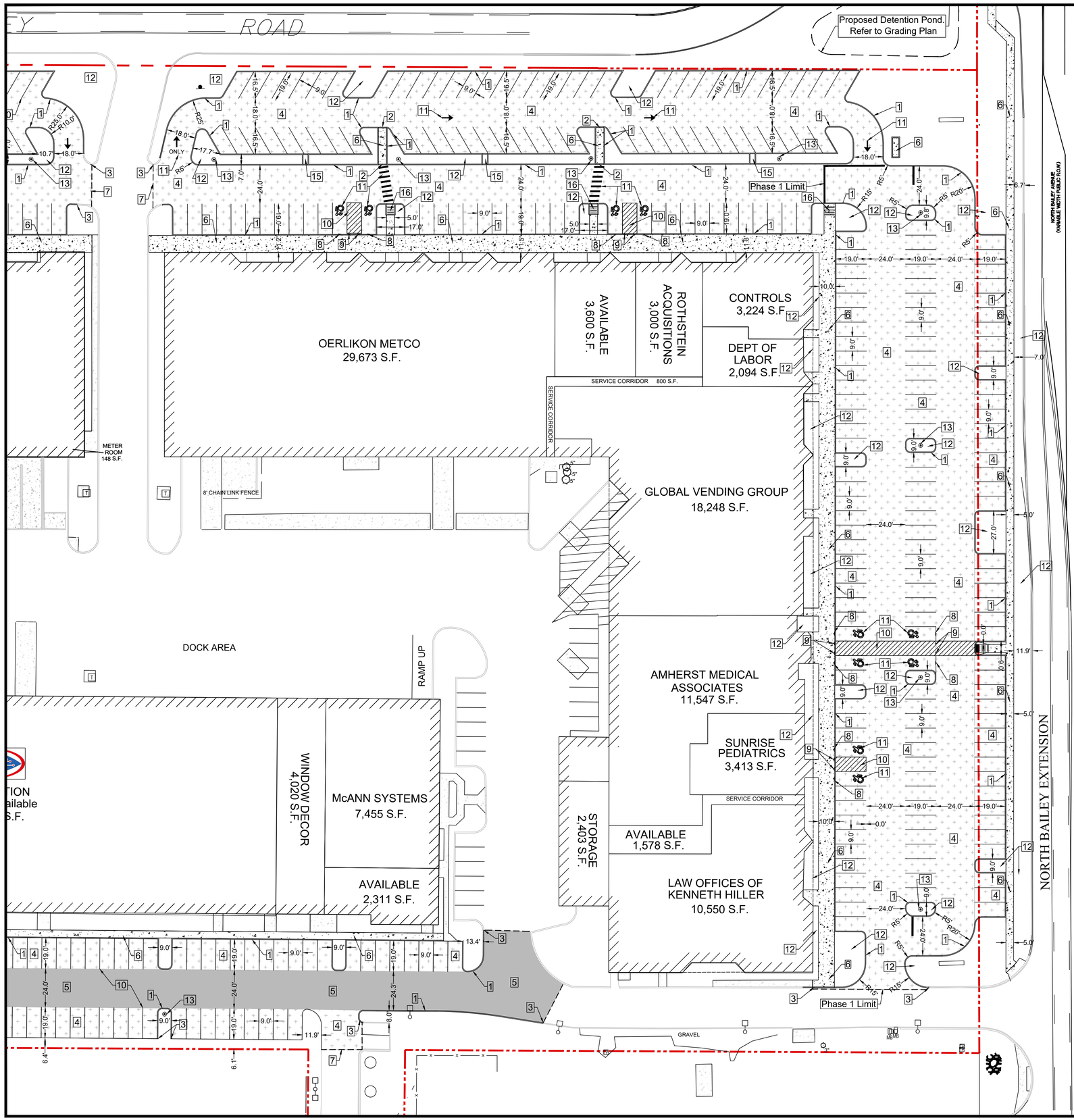
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 037703 STATE OF NEW YORK

TITLE:
Detailed Site Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.: C4.10

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURERS 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. CONTRACTOR SHALL 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.
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6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO THE SATISFACTION OF OWNER.
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10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN .
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.)
    11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN 2HRS AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
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12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

SITE LEGEND:

- Property line
- 6" Curb (typ).
- Proposed sign & pole
- Proposed Concrete Sidewalk
- Proposed Standard Duty Pavement
- Proposed Heavy Duty Pavement

* All curb radii are 3ft unless noted.
* Refer to General Notes, Concstruction Details and Architectural Plans for Concrete Sealer information.

SITE NOTES: #

1. Proposed 6" concrete Curb.
2. Proposed Flush Concrete Curb.
3. Match into Existing Curb or runout over 2'.
4. Proposed Standard Duty Pavement.
5. Proposed Heavy Duty Pavement.
6. Proposed Concrete Pavement/Sidewalk.
7. Match into Existing Pavement.
8. Proposed "Handicapped Parking Only" sign.
9. Proposed "No Parking" sign.
10. 4" Yellow Pavement Stripe (at 2' c-c in no parking zones).
11. Proposed White Pavement symbol (stop bar, directional arrows, accessibility symbol, text)
12. Proposed Landscape Area.
13. Proposed Light Pole Base
14. Proposed Mill and Overlay Asphalt Pavement
15. Proposed 3' Wide Curb Opening
16. Proposed Curb Return Ramp

NB: All curb Radii to be 3' unless otherwise noted.

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
4	07.31.2024	DZ	Site Updates

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Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

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JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

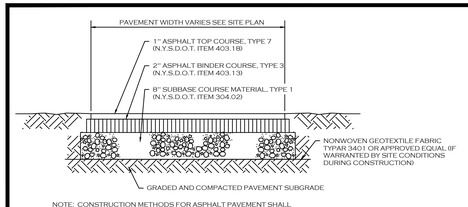
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 037103 STATE OF NEW YORK

TITLE: Detailed Site Plan (East)

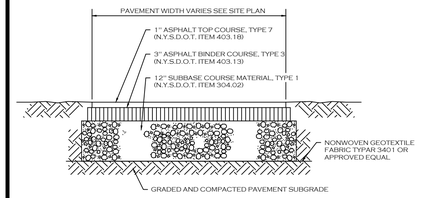
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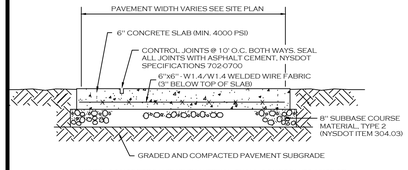
NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

STANDARD DUTY ASPHALT SECTION



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

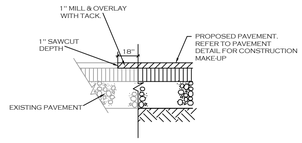


NOTE: CONCRETE PAVEMENT MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 502-3.

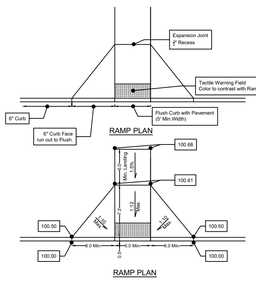
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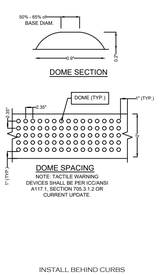
REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES FOR SIDEWALKS.

CONCRETE PAVEMENT (INC DUMPSTER)



PAVEMENT TRANSITION DETAIL
(ASPHALT PAVEMENT)







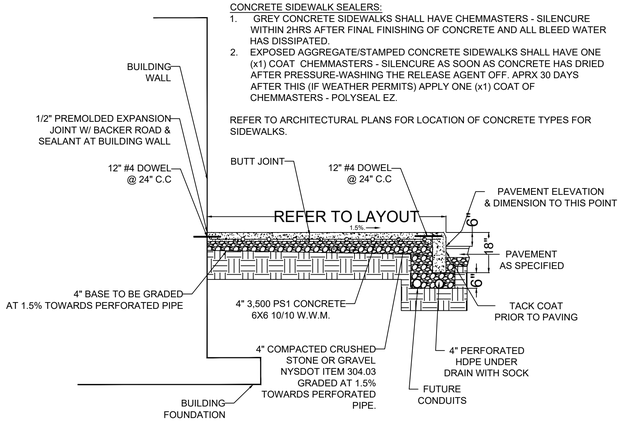
SIDEWALK CURB RAMP DETAIL

NOTES:
1. (1.5% SIDEWALK) GRADES ARE FOR REPRESENTATION ONLY. REFER TO LAYOUT FOR PROPOSED GRADES.

NOTES:
1. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3
2. BUTT JOINTS TO BE AT 5'-0" O.C. BOTH WAYS- SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.

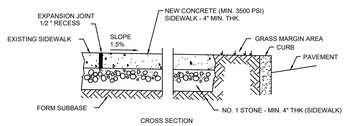
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REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES FOR SIDEWALKS.



BUILDING SIDEWALK DETAIL

CONTRACTOR TO VERIFY WITH OWNER ON CURB DETAIL

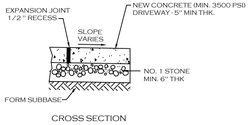


NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE SIDEWALK MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.

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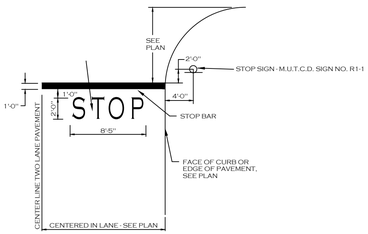
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STANDARD CONCRETE SIDEWALK

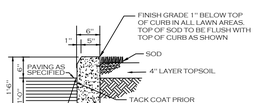


NOTES:
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RPZ ENCLOSURE PAD

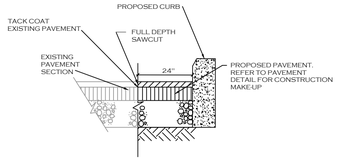


STOP BAR DETAIL

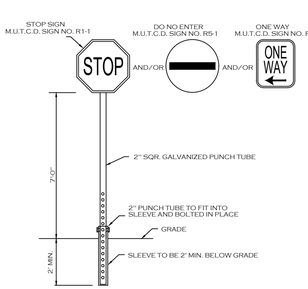


NOTE: CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700

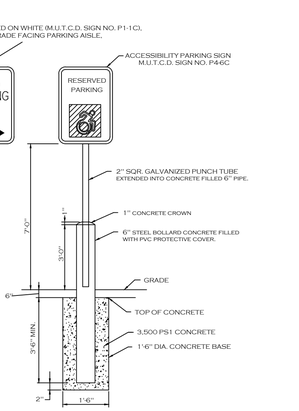
TYPE "A" CONCRETE CURB



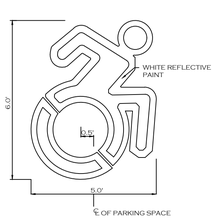
CURB AND PAVEMENT TRANISTION DETAIL



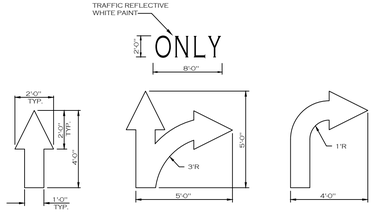
"STOP" / "NO ENTRY" / "ONE WAY" SIGNS



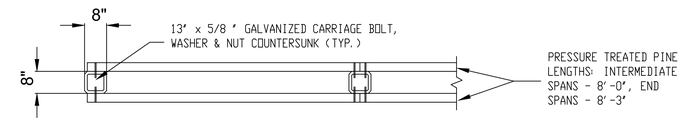
HANDICAP / NO PARKING SIGNS



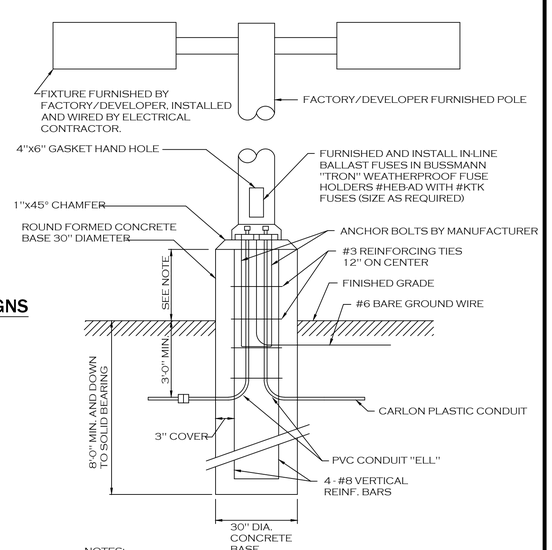
INTERNATIONAL ACCESSIBILITY SYMBOL



PAINTED TRAFFIC ARROWS



WOODEN GUIDE RAIL



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: 30" ABOVE GRADE
IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

LIGHT POLE FOUNDATION

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

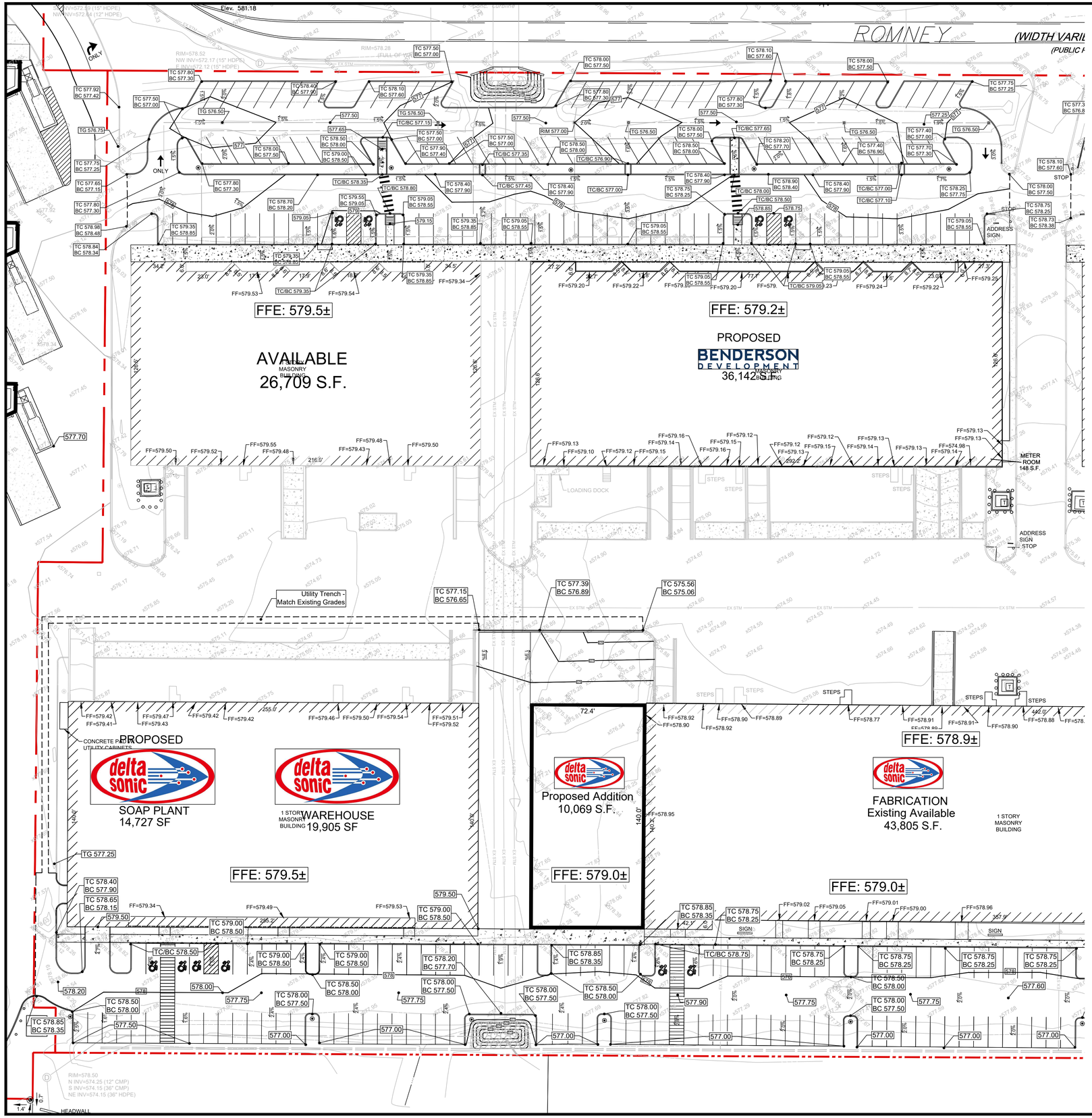
SEAL



TITLE: Construction Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.: C4.20

Attachment: SP-1988-11P_drawings updated 090924, 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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GRADING LEGEND:

- Property Line
- 6" Curb (typ).
- TG ## — Catch Basin - Top of Grade
- ### — Proposed Contour Line
- ##% — Slope Direction

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1	12.13.2023	DZ	POND UPDATES
2	05.08.2024	DZ	Site Plan Update
4	07.31.2024	DZ	Site Updates
5	08.12.2024	DZ	Site Updates

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(716) 886-0211

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REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:

Grading Plan (West)

SCALE: 1:30

DRAWN BY: DMZ

CHECKED BY: MAO

DATE: 11.08.2023

DRAWING NO. C5.00

Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ROAD

Detention Pond
~6,000 CF Storage

LANDSCAPING

ONLY

OERLIKON METCO
29,673 S.F.

1 STORY
MASONRY
BUILDING

FFE: 579.4±

AVAILABLE
3,600 S.F.

FFE: 579.3±

CONTROLS
3,224 S.F.

DEPT OF
LABOR
2,094 S.F.

SERVICE CORRIDOR 800 S.F.

SERVICE CORRIDOR

METER
ROOM
148 S.F.

8' CHAIN LINK FENCE

GLOBAL VENDING GROUP
18,248 S.F.

FFE: 579.3±

AMHERST MEDICAL
ASSOCIATES
11,547 S.F.

SUNRISE
PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

AVAILABLE
1,578 S.F.

LAW OFFICES OF
KENNETH HILLER
10,550 S.F.

DOCK AREA

RAMP UP

1 STORY
MASONRY
BUILDING

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

STORAGE
2,403 S.F.

Match into Existing

GRAVEL

LANDSCAPING

LANDSCAPING

NO. EXTENSION (WIDTH VARIES)

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13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

GRADING LEGEND:
- Property Line
- 6" Curb (typ.)
- TG ## — Catch Basin - Top of Grade
- ### — Proposed Contour Line
- ##% — Slope Direction

Refer to Roadway Civil Plans
Prepared by Passero Associates

Detention Pond
~6,000 CF Storage

POI 2

Detention Pond 1" = 20'

OFFICIAL TOWN USE ONLY

NORTH

Know what's below. Call before you dig. 811

PROPERTY NUMBER: #1723
AREA: -

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
2	05.08.2024	DZ	Site Plan Update
4	07.31.2024	DZ	Site Updates

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Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

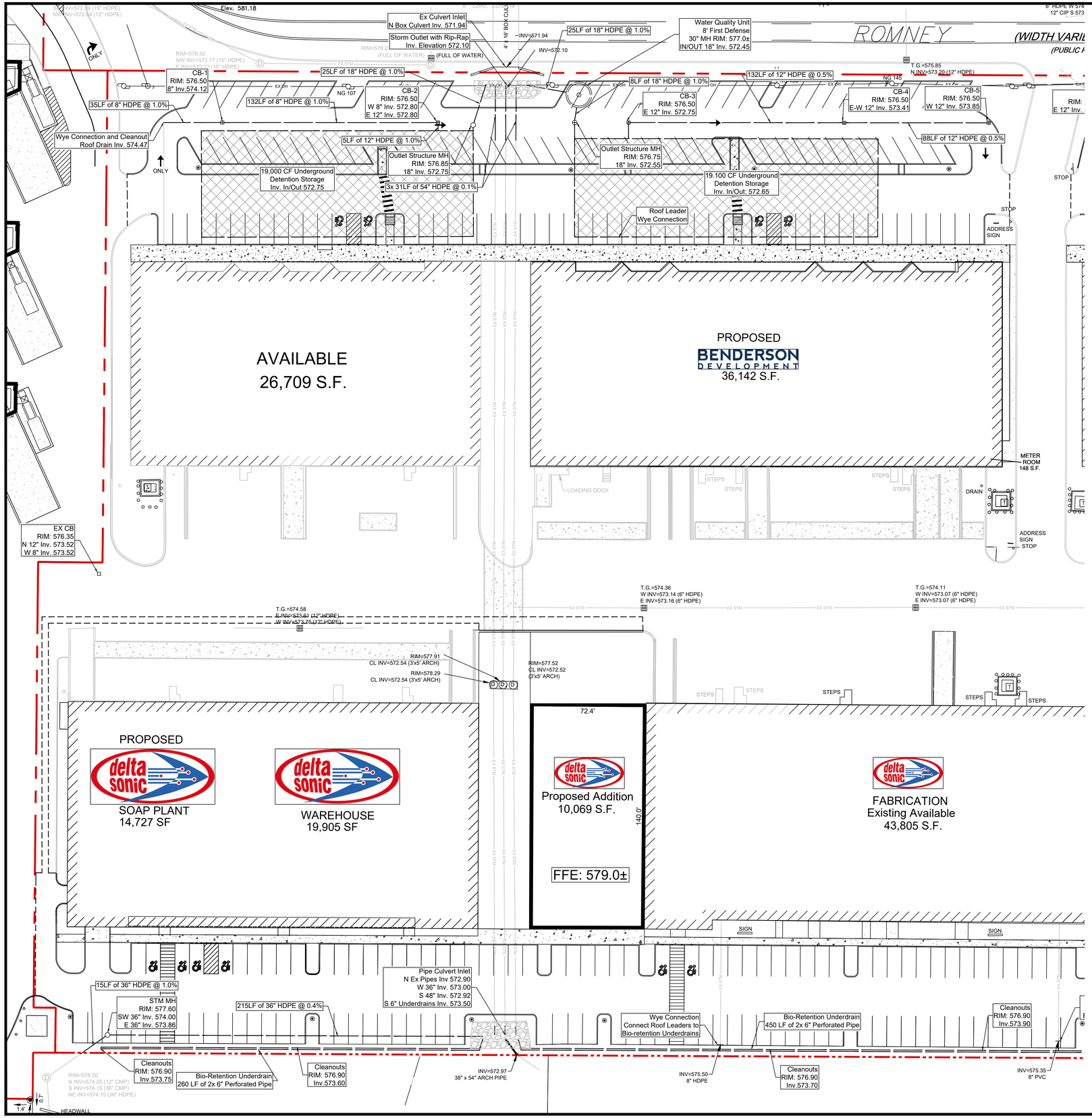
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 039709 STATE OF NEW YORK

TITLE:
Grading Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C5.01

Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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DRAINAGE LEGEND:

- PROPERTY LINE
- PROPOSED STORMWATER
- 6" CURB TYP.
- CO / WC — PROPOSED STORM CLEAN OUT / WYE CONNECTION
- CB - # — PROPOSED CATCH BASIN

OFFICIAL TOWN USE ONLY

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No.	DATE	BY	REMARKS
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2	05.08.2024	DZ	Site Plan Update
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5	08.12.2024	DZ	Site Updates
6	08.30.2024	DZ	Town Comments

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Amherst, NY 14226

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PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:

Drainage Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO.: C5.10

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

(WIDTH VARIES) ROAD
(PUBLIC ROAD)

Storm D.I.
Rim 576.71
12" CIP N 2.57
6" HDPE E 573.91
6" HDPE W 574.06

Utility Pole
NG 165

CB-6
RIM: 576.50
E 12" Inv. 574.85

CB-7
RIM: 576.50
E-W 12" Inv. 574.45

CB-8
RIM: 576.50
N 15" Inv. 574.18
W 12" Inv. 574.18

Water Quality Unit
8' First Defense
30" MH RIM: 577.5±
IN/OUT 15" Inv. 574.10

18 LF of 12" HDPE @ 0.5%
12" Inlet Inv. 574.00
41LF of 36" HDPE @ 0.5%
35 LF of 15" HDPE @ 0.2%
197LF of 12" HDPE @ 0.2%
133LF of 12" HDPE @ 0.2%
@ 0.5%
ONLY

OERLIKON METCO
29,673 S.F.

AVAILABLE
3,600 S.F.

ROTHSTEIN ACQUISITIONS
3,000 S.F.

CONTROLS
3,224 S.F.

DEPT OF LABOR
2,094 S.F.

SERVICE CORRIDOR 800 S.F.

SERVICE CORRIDOR

METER ROOM
148 S.F.

8' CHAIN LINK FENCE

RIM=578.52
N INV=573.22 (8" PVC)
S INV=567.60 (8" PVC)
W INV=567.62 (8" PVC)

GLOBAL VENDING GROUP
18,248 S.F.

T.G.=574.25
W INV=573.25 (6" HDPE)
E INV=573.30 (6" HDPE)

T.G.=574.72
W INV=573.65 (4" PVC)

DOCK AREA

RAMP UP

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

AMHERST MEDICAL ASSOCIATES
11,547 S.F.

SUNRISE PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

STORAGE
2,403 S.F.

AVAILABLE
1,578 S.F.

LAW OFFICES OF KENNETH HILLER
10,550 S.F.

Cleanouts
RIM: 576.90
Inv.573.90

Wye Connection
Connect Roof Leaders to
Bio-retention Underdrains

Cleanouts
RIM: 576.90
Inv.574.00

INV=575.35
8" PVC

0.1"

1-1/4" PIPE
0.6' BELOW GRADE

RIM=578.87
(LOCKED)

1-1/4" PIPE
0.4' BELOW GRADE

T.G.=576.76
E INV=574.71 (10" PVC)
W INV=574.78 (10" PVC)

RIM=578.30
N INV=566.40 (8" PVC)
W INV=566.31 (8" PVC)
NE INV=573.04 (8" PVC)

T.G.=576.67
N INV=574.82 (10" PVC)
SE INV=574.92 (6" PVC)

MH-1
RIM: 579.50
N 36" Inv. 575.21
S 36" Inv. 575.36

1-1/4" PIPE
0.2' BELOW GRADE

T.G.=578.10
E INV=576.13 (12" HDPE)

6' MH-6 (D-14)
RIM: 578.79
NW 36" Inv. 573.98
S 36" Inv. 573.98
NE 15" 574.57

34LF of 36" HDPE @ 0.5%
B4LF of 36" HDPE @ 0.5%
44LF of 12" HDPE @ 1.0%

CB-10
RIM: 577.20
E 12" Inv. 575.46

44LF of 12" HDPE @ 1.0%

CB-11
RIM: 577.70
E 12" Inv. 575.30

MH-3
RIM: 579.25
N-S 36" Inv. 574.80
E 12" Inv. 576.00

CB-12
RIM: 577.20
E 12" Inv. 575.40

44LF of 12" HDPE @ 1.0%

CB-13
RIM: 577.65
E 12" Inv. 575.50

44LF of 12" HDPE @ 1.0%

Connect to Existing 12" STM
Inv. 575.43

10LF of 12" HDPE @ 3.0%

MH-2
RIM: 578.85
N-S 36" Inv. 575.10
E 15" Inv. 576.80

44LF of 12" HDPE @ 0.5%

CB-14
RIM: 577.30
E 12" Inv. 575.32

9LF of 10" HDPE @ 1.0%

Connect to Existing 10" CMP
Inv. 575.47

44LF of 12" HDPE @ 0.5%

CB-15
RIM: 577.70
E 12" Inv. 575.36

T.G.=578.76
S INV=573.99 (36" HDPE)
NW INV=573.74 (36" HDPE)

MH-5
RIM: 579.00
N 36" Inv. 574.15
S 36" Inv. 574.15

NORTH BAILEY AVENUE
(PUBLIC ROW)

MH-4
RIM: 579.25
N-S 36" Inv. 574.57
E 12" Inv. 575.02

115LF of 36" HDPE @ 0.2%

Storm D.I.
Rim 577.57
12" HDPE S. 574.07
18" CMP N. 573.75
18" CMP E. 573.87

12" Wye Connection
36" Inv. 574.73

T.G.=579.84
W INV=576.66 (12" HDPE)

Storm D.I.
Rim 580.09
6" HDPE S. 577.64
12" HDPE W. 576.88

9LF of 12" HDPE @ 3.0%

12" Wye Connection
36" Inv. 574.89

153LF of 36" HDPE @ 0.2%

12" Wye Connection
36" Inv. 575.06

12" Wye Connection
36" Inv. 575.07

13LF of 15" HDPE @ 3.0%

T.G.=580.65
E INV=578.25 (12" HDPE)
INV=577.69

159LF of 36" HDPE @ 0.2%

12" Wye Connection
36" Inv. 575.21

10" Wye Connection
36" Inv. 575.29

Wye Connection
36" Inv. 575.36

16LF of 15" HDPE @ 3.0%

T.G.=580.85
E INV=578.80 (12" HDPE)
INV=577.82

T.G.=580.85
E INV=578.83 (12" HDPE)

RIM=580.66
N INV=575.74 (36" HDPE)
S INV=575.76 (36" HDPE)
NE INV=576.51 (12" HDPE)
W INV=575.81 (12" HDPE)

T.G.=580.49
SW INV=576.50 (12" HDPE)
S INV=576.69 (12" HDPE)

T.G.=580.54
E INV=578.44 (12" HDPE)
INV=577.68

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- 6" CURB TYP.
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- CB - # — PROPOSED CATCH BASIN

36" Outlet Inv. 572.25

RELOCATED 30 MPH SPEED LIMIT SIGN

6" SPRUCE

Refer to Roadway Civil Plans Prepared by Passero Associates

100LF of 36" HDPE @ 1.5%

MH-7
RIM: 578.5±
N 36" Inv. 573.75
SE 36" Inv. 573.77
SW 12" Inv. 573.80

10 LF of 12" HDPE @ 1.0%

12" Outlet Inv. 573.90

POLE 2

18 LF of 12" HDPE @ 0.5%

12" Inlet Inv. 574.00

41LF of 36" HDPE @ 0.5%

6' MH-6 (D-14)
RIM: 578.79
NW 36" Inv. 573.98
S 36" Inv. 573.98
NE 15" 574.57

CB-8
RIM: 576.50
N 15" Inv. 574.18
W 12" Inv. 574.18

34LF of 36" HDPE @ 0.5%

Detention Pond 1" = 20'

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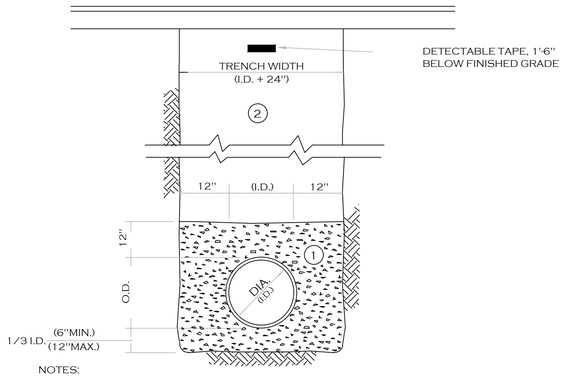
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY STATE OF NEW YORK

TITLE:
Drainage Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 11.08.2023
DRAWING NO. C5.11

Attachment: SP-1988-11P drawings updated 090924, 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



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)

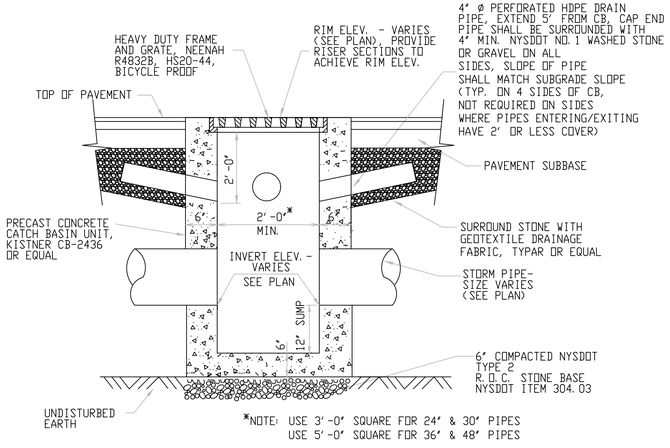
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

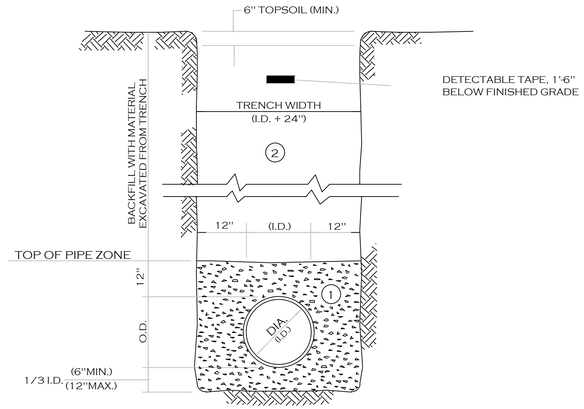
(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERAIL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

TRENCH SECTION IN PAVED AREAS



TYPICAL PRECAST CATCH BASIN



NOTES:

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MATERIALS

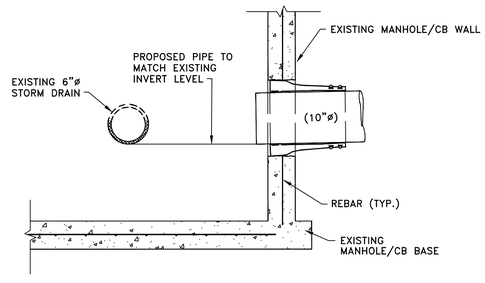
PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

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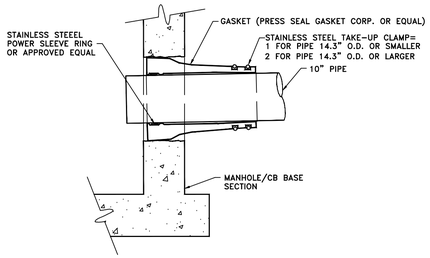
(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

TRENCH SECTION IN UNPAVED AREAS

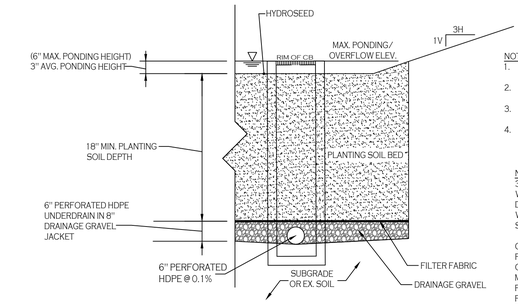


NOTES:

1. CORE DRILL ENTRANCE HOLE IN PRECAST MANHOLE BARREL, BASE AND/OR BENCH FOR REQUIRED PIPE CLEARANCE. PER MANUFACTURERS RECOMMENDATIONS.
2. DOES NOT APPLY TO HOUSE LATERALS.
3. WATERTIGHT PIPE TO MANHOLE BOOT SEAL REQUIRED FOR ALL CORE DRILLED ENTRANCE HOLES IN MANHOLE BARREL AS SHOWN BELOW.



CONNECTION TO EXISTING MANHOLE/CB



BIORETENTION AREA - TYPICAL SECTION

NOTES:

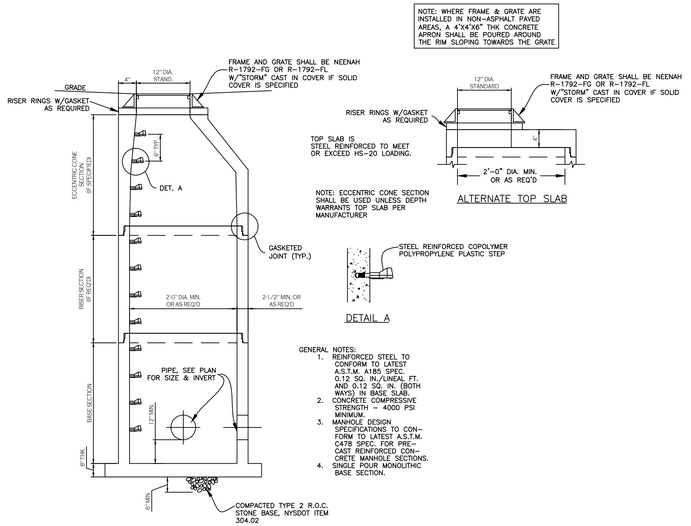
1. FILTER FABRIC TO BE NON-WOVEN CLASS 'C', MIRAFI 180N OR APPROVED EQUIVALENT
2. MULCH TO BE SHREDDED HARDWOOD, AGED 12 MONTHS MIN.
3. DRAINAGE GRAVEL TO MEET AASHTO M-43, NO.67, SIZE 0.25" TO 0.75"
4. CONTRACTOR TO PROVIDE PLANTING SOIL SUBMITTAL SPECIFICATION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

NOTE: PLANTING SOIL SHALL BE LOAM/SAND MIX CONTAINING A MINIMUM OF 35 TO 60% SAND BY VOLUME AND LESS THAN 25% CLAY. 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. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED.

CHARACTERISTICS SHALL BE:
PH RANGE: 5.2 - 7.00
ORGANIC MATTER: 1.5 - 4.0%
MAGNESIUM: 35 LBS PER ACRE MIN.
PHOSPHORUS: 75 LBS PER ACRE MIN.
POTASSIUM: 85 LBS PER ACRE MIN.
SOLUBLE SALTS: 500 PPM
CLAY: 10 TO 25%
SILT: 30 TO 55%
SAND: 35 TO 60%

BIO-RETENTION AREA SEEDING SPEC (NORTHEAST WETLAND GRASS SEED MIX):

SEED MIXTURE	VARIETY	PERCENT BY NO. OF SEEDS
CREEPING BENTGRASS	AGROSTIS STOLONIFERA	63.0
ROUGH BLUEGRASS	POA TRIVIALIS	17.0
MEADOW FOXTAIL	ALOPECURUS ARUNDINACEUS	11.0
ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	4.5
DEERTONGUE	PANICUM CLANDESTINUM	4.5



TYPICAL STORM MANHOLE DETAIL

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 029109 STATE OF NEW YORK

TITLE: Drainage Details

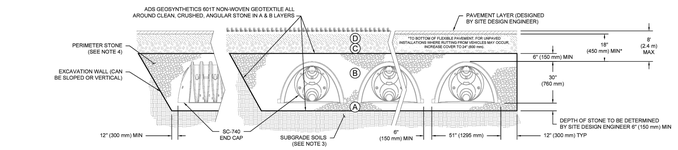
SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO. C5.20

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 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* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 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	AASHTO M43* 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 6" (150 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.

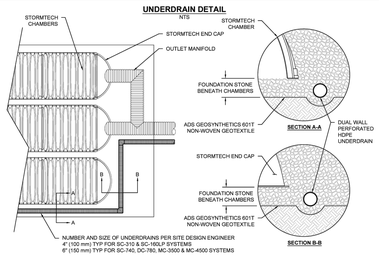


NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a. "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 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.
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 2".
   - 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 550 LBS/IN/IN. 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.

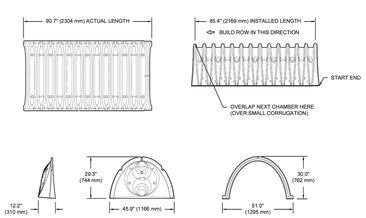
UNDERDRAIN DETAIL

NTS



SC-740 TECHNICAL SPECIFICATION

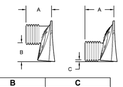
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NOMINAL CHAMBER SPECIFICATIONS

SIZE (W x H x INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1296 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



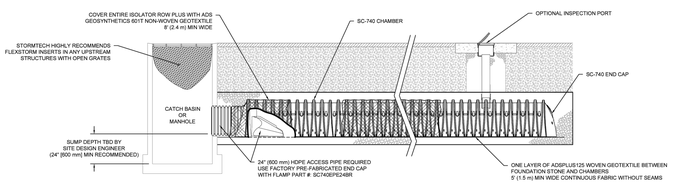
PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	—
SC740EPE06B / SC740EPE06BPC				0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (418 mm)	—
SC740EPE08B / SC740EPE08BPC			—	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EPE10B / SC740EPE10BPC			—	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EPE12B / SC740EPE12BPC			—	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EPE15B / SC740EPE15BPC			—	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EPE18B / SC740EPE18BPC			—	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)
SC740EPE24BR*	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B/SC740EPE24BR ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B/SC740EPE24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL



SC-740 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. OPEN DOWNSTREAM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

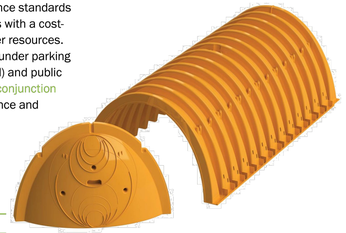
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

StormTech SC-740 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.



StormTech SC-740 Chamber (not to scale)

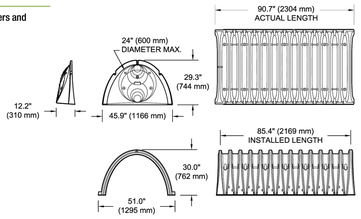
Nominal Chamber Specifications

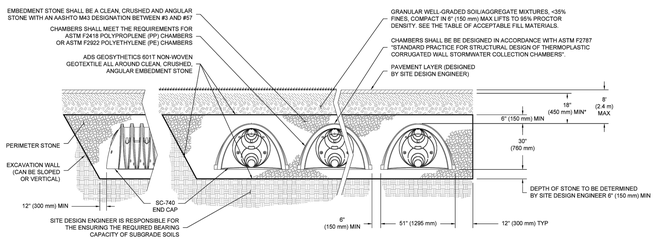
Size (L x W x H)	85.4" x 51.0" x 30.0" (2,170 x 1,295 x 762 mm)
Chamber Storage	45.9 ft³ (1.30 m³)
Min. Installed Storage*	74.9 ft³ (2.12 m³)
Weight	74.0 lbs (33.6 kg)

*Assumes 6" (150 mm) stone above, below and between chambers and 40% stone porosity.

Shipping

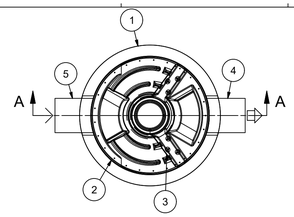
30 chambers/pallet
60 end caps/pallet
12 pallets/truck





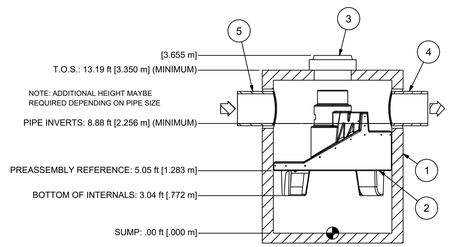
*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm).

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.



PLAN VIEW

HYDRO FRAME AND COVER (INCLUDED)
GRADE RINGS BY OTHERS AS REQUIRED



SECTION A-A

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 50.0 cfs (1415 l/s)
2. Min Sediment Storage Capacity: 2.8 cu. yd. (2.1 cu. m.)
3. Oil Storage Capacity: 1002 gal. (3793 liters)
4. Maximum Inlet/Outlet Pipe Diameters: 48 in. (1200 mm)
5. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
6. For more product information including regulatory acceptances, please visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:

1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 48".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	96	2400	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	48 (MAX)	1200 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	48 (MAX)	1200 (MAX)	INLET PIPE (BY OTHERS)

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT. ACCORDINGLY HYDRO INTERNATIONAL CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT, (OR THE PERFORMANCE THEREOF) DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY. HYDRO INTERNATIONAL HAVE A POLICY OF CONTINUOUS DEVELOPMENT AND RESERVE THE RIGHT TO AMEND THE SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE OF ITS EQUIPMENT, (OR ANY PART THEREOF), IF THE EQUIPMENT IS SUBJECT TO CONDITIONS OUTSIDE ANY DESIGN SPECIFICATION. HYDRO INTERNATIONAL OWNS THE COPYRIGHT OF THIS DRAWING, WHICH IS SUPPLIED IN CONFIDENCE. IT MUST NOT BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.

PROJECTION

IF IN DOUBT ASK

COMMENTS:

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.

2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.

3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

DATE: 10/7/2019 | SCALE: 1:50
DRAWN BY: ER | CHECKED BY: MRJ | APPROVED BY:
Title: 8-ft DIAMETER FIRST DEFENSE HIGH CAPACITY GENERAL ARRANGEMENT

Hydro International
hydro-int.com
HYDRO INTERNATIONAL

DO NOT SCALE DRAWING
STEEL FABRICATION TOLERANCES
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

LINEAR	ANGULAR
000 - 012in = ±0.04in	000 - 120in = ±1°
012 - 024in = ±0.06in	120 - 240in = ±0.5°
024 - 048in = ±0.09in	240in >>>> = ±0.25°
048 - 120in = ±0.12in	
120in >>>> = ±0.20in	

WEIGHT: N/A | MATERIAL:
STOCK NUMBER:
DRAWING NO.: FDHC GA-8
SHEET SIZE: B | SHEET: 1 OF 1 | Rev: -

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

SPECIAL INFORMATION:

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SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723 | AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

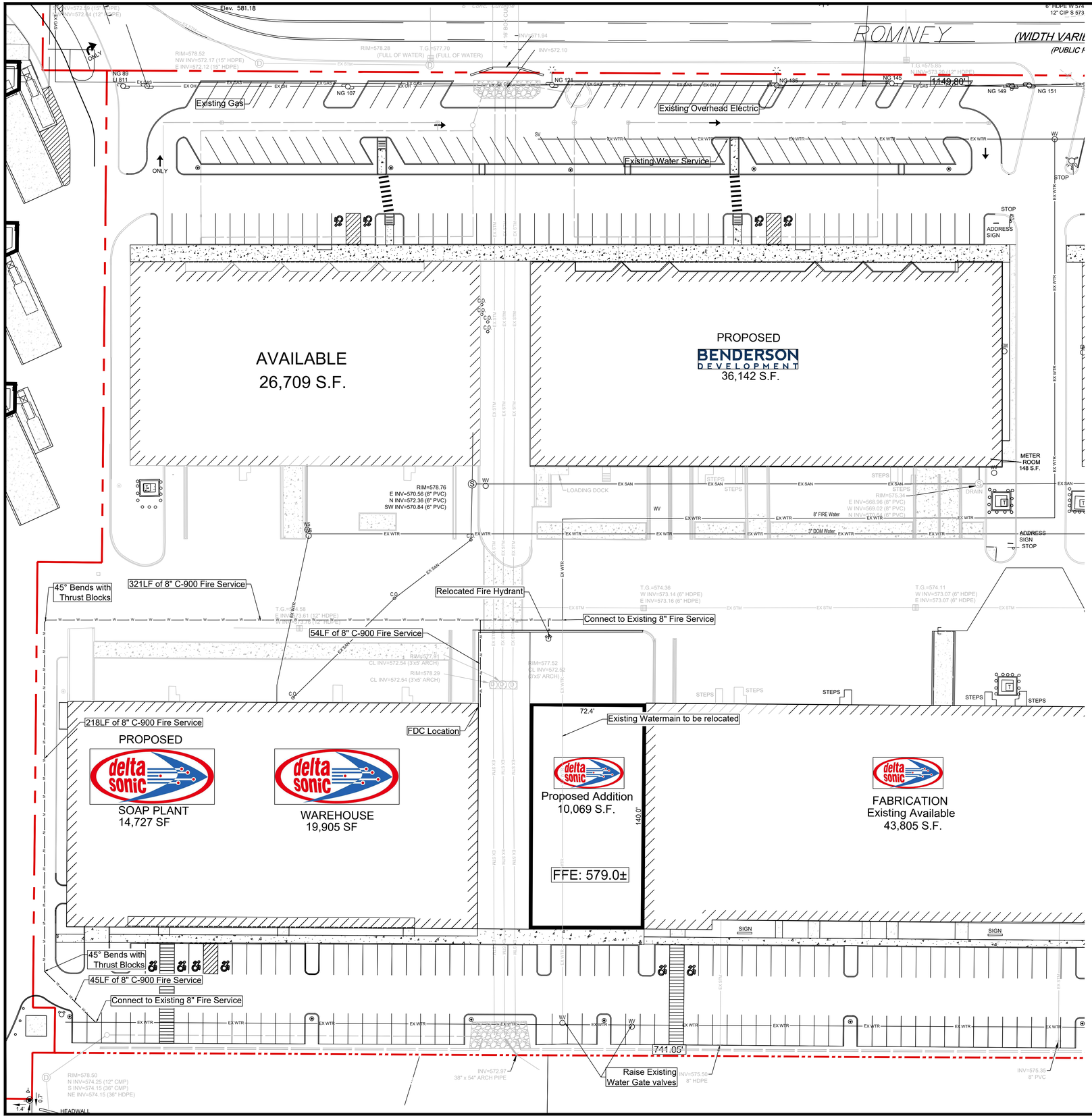
SEAL



TITLE: Drainage Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.30.2023
DRAWING NO.: C5.21

Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



GENERAL NOTES:
1. INSTALL ALL MATERIALS TO MANUFACTURERS 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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
10. SIDEWALK DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR THE SIDEWALK PLAN .
11. CONCRETE SIDEWALK SEALERS: (REFER TO ARCHITECTURAL PLANS FOR LOCATION OF CONCRETE TYPES.)
 11.1. GREY CONCRETE SIDEWALKS SHALL HAVE CHEMMASTERS - SILENCURE WITHIN 2HRS AFTER FINAL FINISHING OF CONCRETE AND ALL BLEED WATER HAS DISSIPATED.
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12. LIGHTING FIXTURE ARROW SYMBOLS REFER TO THE DIRECTION THAT THE FIXTURES ARE REQUIRED TO FACE. SPECIFIC MOUNT BRACKETS WILL BE REQUIRED DEPENDING ON ORIENTATION AND FIXTURE COUNT.
13. CURB ISLAND DIMENSIONS ARE FROM INSIDE OF CURB TO INSIDE OF CURB.

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3. CONSTRUCTION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE TOWN AND NEW YORK STATE CODES.
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5. THE CONTRACTOR MUST NOTIFY THE TOWN ENGINEER OFFICE AND THE PLUMBING INSPECTOR 24 HOURS IN ADVANCE OF CONSTRUCTION.
6. CLEANOUTS ARE REQUIRED EVERY 100' AND AT CHANGE IN DIRECTION.
7. ABANDONED SANITARY SEWER CONNECTIONS FROM THE SITE, IF ANY, REQUIRE PROOF OF A DISTRICT PERMIT FOR DISCONNECTION PRIOR TO THE NEW CONNECTION BEING MADE.

UTILITY NOTES:
1. PROVIDE FITTINGS AND BLOCKING AS NECESSARY AT ALL BENDS IN WATER LINES.
2. WHERE UTILITIES ARE INSTALLED IN EXISTING PAVEMENT, LANDSCAPED AREA ETC. ANY ITEMS REMOVED/DAMAGED SHALL BE REPLACED IN KIND.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS NECESSARY: STATE, COUNTY, AND TOWN.
4. WATER MAINS TO HAVE MINIMUM 5FT COVER,

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
2	05.08.2024	DZ	Site Plan Update
4	07.31.2024	DZ	Site Updates
5	08.12.2024	DZ	Site Updates
6	08.30.2024	DZ	Town Comments

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NOTICE

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Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 013703 STATE OF NEW YORK

TITLE:
Utility Plan (West)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.
C6.00

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

(WIDTH VARIES) ROAD
(PUBLIC ROAD)

Utility Pole NG 165
NG 149 NG 151 NG 167 NG 165 NG 175 NG 198 NG 5220
APPROXIMATE LOCATION 2" GAS MAIN
8" Fire Service Relocation
LANDSCAPING
Relocated Existing Fire Service Hot Box
NG 5205
Relocated Existing Guy Wire
Adjust Water Valve to Grade
Relocated Existing Guy Wire
NG 5184
NG 5150
NG 5150R-2
NG 5150R-1
5150R
Existing Hot Box Enclosure
ONLY
NORTH BAILEY AVENUE (VARIABLE WIDTH PUBLIC ROW)
White Stripe
Concrete Walk
Asphalt
NORTH BAILEY EXTENSION (WIDTH VARIES)

OERLIKON METCO
29,673 S.F.

AVAILABLE
3,600 S.F.

ROTHSTEIN ACQUISITIONS
3,000 S.F.

CONTROLS
3,224 S.F.

DEPT OF LABOR
2,094 S.F.

SERVICE CORRIDOR 800 S.F.

SERVICE CORRIDOR

METER ROOM
148 S.F.

8' CHAIN LINK FENCE

RIM=578.52
N INV=573.22 (8" PVC)
S INV=567.60 (8" PVC)
W INV=567.62 (8" PVC)

GLOBAL VENDING GROUP
18,248 S.F.

STEPS

DOCK AREA

RAMP UP

AMHERST MEDICAL ASSOCIATES
11,547 S.F.

SUNRISE PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

AVAILABLE
1,578 S.F.

LAW OFFICES OF KENNETH HILLER
10,550 S.F.

STORAGE
2,403 S.F.

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

FDC Location

RIM=578.30
N INV=566.40 (8" PVC)
W INV=566.31 (8" PVC)
NE INV=573.04 (8" PVC)

GRAVEL

1-1/4" PIPE
0.6' BELOW GRADE

RIM=578.87
(LOCKED)

1-1/4" PIPE
0.4' BELOW GRADE

1-1/4" PIPE
0.2' BELOW GRADE

GENERAL NOTES:
1. INSTALL ALL MATERIALS TO MANUFACTURERS 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. CONTRACTOR SHALL 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 THE 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 EXCEPT AS DETAILED ON THE PLANS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
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6	08.30.2024	DZ	Town Comments

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6000 - 6040 North Bailey Ave
Amherst, NY 14226

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ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

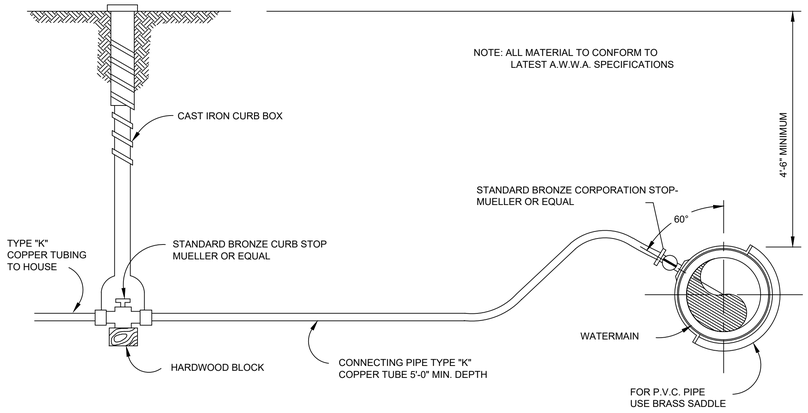
SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 027109 STATE OF NEW YORK

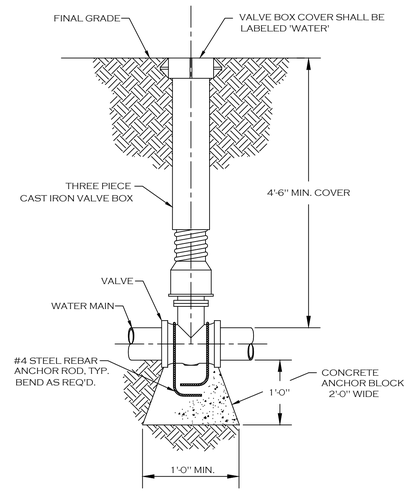
TITLE:
Utility Plan (East)

SCALE: 1:30
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO. C6.01

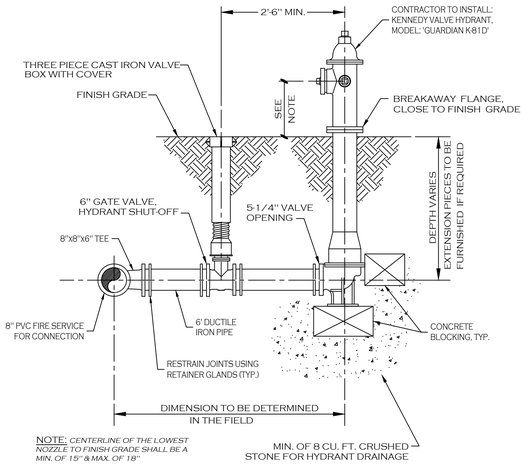
Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



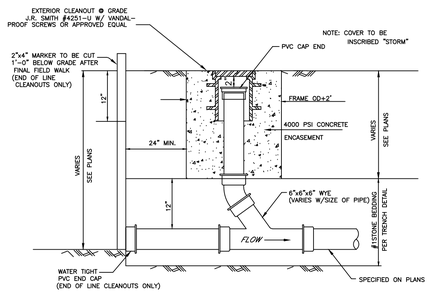
TYPICAL WATER SERVICE LINE INSTALLATION



TYPICAL GATE VALVE DETAIL

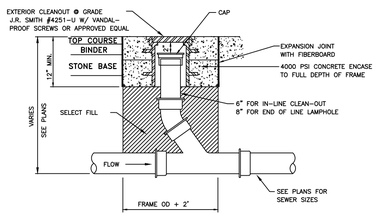


TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



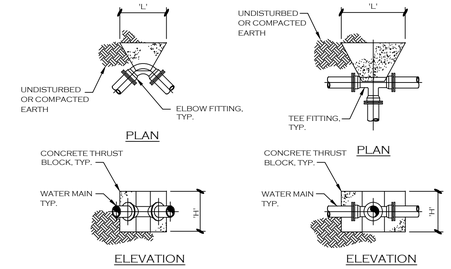
CLEANOUT IN LANDSCAPED AREAS

NOT TO SCALE



CLEANOUT IN PAVED AREAS

NOT TO SCALE



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

WATER MAIN

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS

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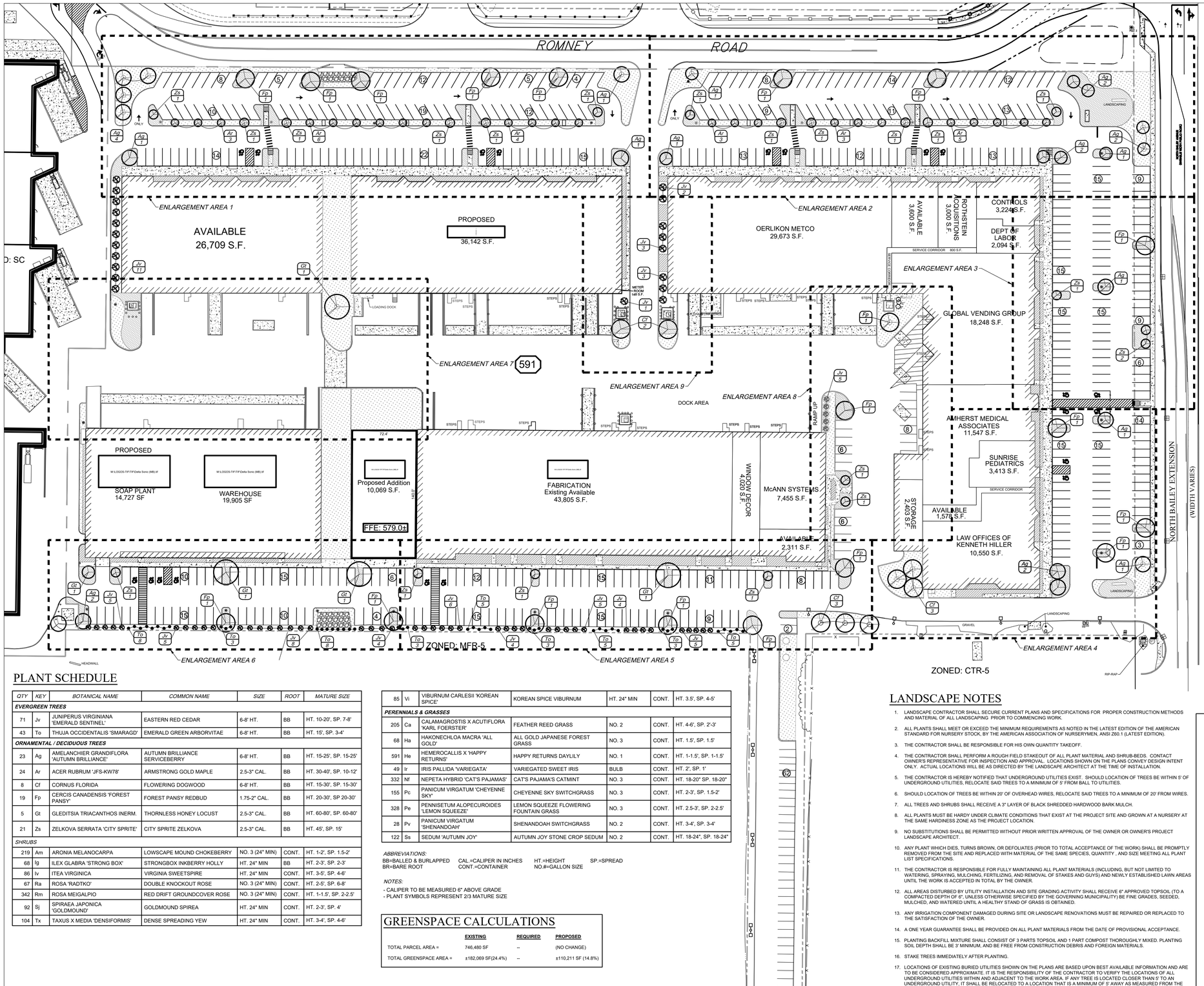
SEAL

REGISTERED ARCHITECT
JAMES ALLEN RUMSEY
109
STATE OF NEW YORK

TITLE:
Utility Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.
C6.10

Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



PLANT SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE SIZE
EVERGREEN TREES						
71	Jv	JUNIPERUS VIRGINIANA 'EMERALD SENTINEL'	EASTERN RED CEDAR	6-8' HT.	BB	HT. 10-20', SP. 7-8'
43	To	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	6-8' HT.	BB	HT. 15', SP. 3-4'
ORNAMENTAL / DECIDUOUS TREES						
23	Ag	AMELANCHIER GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6-8' HT.	BB	HT. 15-25', SP. 15-25'
24	Ar	ACER RUBRUM 'JFS-KW78'	ARMSTRONG GOLD MAPLE	2.5-3" CAL.	BB	HT. 30-40', SP. 10-12'
8	Cf	CORNUS FLORIDA	FLOWERING DOGWOOD	6-8' HT.	BB	HT. 15-30', SP. 15-30'
19	Fp	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY REDBUD	1.75-2" CAL.	BB	HT. 20-30', SP 20-30'
5	Gt	GLEDITSIA TRIACANTHOS INERM.	THORNLESS HONEY LOCUST	2.5-3" CAL.	BB	HT. 60-80', SP. 60-80'
21	Zs	ZELKOVA SERRATA 'CITY SPRITE'	CITY SPRITE ZELKOVA	2.5-3" CAL.	BB	HT. 45', SP. 15'
SHRUBS						
219	Am	ARONIA MELANOCARPA	LOWSCAPE MOUND CHOKEBERRY	NO. 3 (24" MIN)	CONT.	HT. 1-2', SP. 1.5-2'
68	Ig	ILEX GLABRA 'STRONG BOX'	STRONGBOX INKBERRY HOLLY	HT. 24" MIN	BB	HT. 2-3', SP. 2-3'
86	Iv	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	HT. 24" MIN	CONT.	HT. 3-5', SP. 4-6'
67	Ra	ROSA 'RADTKO'	DOUBLE KNOCKOUT ROSE	NO. 3 (24" MIN)	CONT.	HT. 2-5', SP. 6-8'
342	Rm	ROSA MEIGALPIO	RED DRIFT GROUNDCOVER ROSE	NO. 3 (24" MIN)	CONT.	HT. 1-1.5', SP. 2-2.5'
92	Sj	SPIRAEA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	HT. 24" MIN	CONT.	HT. 2-3', SP. 4'
104	Tx	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	HT. 24" MIN	CONT.	HT. 3-4', SP. 4-6'
85	Vi	VIBURNUM CARLESII 'KOREAN SPICE'	KOREAN SPICE VIBURNUM	HT. 24" MIN	CONT.	HT. 3.5', SP. 4-5'
PERENNIALS & GRASSES						
205	Ca	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	NO. 2	CONT.	HT. 4-6', SP. 2'-3'
68	Ha	HAKONECHLOA MACRA 'ALL GOLD'	ALL GOLD JAPANESE FOREST GRASS	NO. 3	CONT.	HT. 1.5', SP. 1.5'
591	He	HEMEROCALLIS X 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	NO. 1	CONT.	HT. 1-1.5', SP. 1-1.5'
49	Ir	IRIS PALLIDA 'VARIEGATA'	VARIEGATED SWEET IRIS	BULB	CONT.	HT. 2', SP. 1'
332	Nf	NEPETA HYBRID 'CAT'S PAJAMAS'	CAT'S PAJAMA'S CATMINT	NO. 3	CONT.	HT. 18-20" SP. 18-20"
155	Pc	PANICUM VIRGATUM 'CHEYENNE SKY'	CHEYENNE SKY SWITCHGRASS	NO. 3	CONT.	HT. 2-3', SP. 1.5-2'
328	Pe	PENNISETUM ALOPECUROIDES 'LEMON SQUEEZE'	LEMON SQUEEZE FLOWERING FOUNTAIN GRASS	NO. 3	CONT.	HT. 2.5-3', SP. 2-2.5'
28	Pv	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	NO. 2	CONT.	HT. 3-4', SP. 3-4'
122	Ss	SEDUM 'AUTUMN JOY'	AUTUMN JOY STONE CROP SEDUM	NO. 2	CONT.	HT. 18-24", SP. 18-24"

ABBREVIATIONS:
BB=BALLED & BURLAPPED CAL.=CALIPER IN INCHES HT.=HEIGHT SP.=SPREAD
BR=BARE ROOT CONT.=CONTAINER NO.#=GALLON SIZE

NOTES:
- CALIPER TO BE MEASURED 6" ABOVE GRADE
- PLANT SYMBOLS REPRESENT 2/3 MATURE SIZE

GREENSPACE CALCULATIONS

	EXISTING	REQUIRED	PROPOSED
TOTAL PARCEL AREA =	746,480 SF	--	(NO CHANGE)
TOTAL GREENSPACE AREA =	±182,069 SF(24.4%)	--	±110,211 SF (14.8%)

LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR SHALL SECURE CURRENT PLANS AND SPECIFICATIONS FOR PROPER CONSTRUCTION METHODS AND MATERIAL OF ALL LANDSCAPING PRIOR TO COMMENCING WORK.
2. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, ANSI Z60.1 (LATEST EDITION).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF.
4. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKEOUT OF ALL PLANT MATERIAL AND SHRUB-BEDS. CONTACT OWNER'S REPRESENTATIVE FOR INSPECTION AND APPROVAL. LOCATIONS SHOWN ON THE PLANS CONVEY DESIGN INTENT ONLY. ACTUAL LOCATIONS WILL BE AS DIRECTED BY THE LANDSCAPE ARCHITECT AT THE TIME OF INSTALLATION.
5. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDERGROUND UTILITIES EXIST. SHOULD LOCATION OF TREES BE WITHIN 5' OF UNDERGROUND UTILITIES, RELOCATE SAID TREES TO A MINIMUM OF 5' FROM BALL TO UTILITIES.
6. SHOULD LOCATION OF TREES BE WITHIN 20' OF OVERHEAD WIRES, RELOCATE SAID TREES TO A MINIMUM OF 20' FROM WIRES.
7. ALL TREES AND SHRUBS SHALL RECEIVE A 3" LAYER OF BLACK SHREDDED HARDWOOD BARK MULCH.
8. ALL PLANTS MUST BE HARDY UNDER CLIMATE CONDITIONS THAT EXIST AT THE PROJECT SITE AND GROWN AT A NURSERY AT THE SAME HARDINESS ZONE AS THE PROJECT LOCATION.
9. NO SUBSTITUTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER OR OWNER'S PROJECT LANDSCAPE ARCHITECT.
10. ANY PLANT WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY , AND SIZE MEETING ALL PLANT LIST SPECIFICATIONS.
11. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANT MATERIALS (INCLUDING, BUT NOT LIMITED TO WATERING, SPRAYING, MULCHING, FERTILIZING, AND REMOVAL OF STAKES AND GUYS) AND NEWLY ESTABLISHED LAWN AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.
12. ALL AREAS DISTURBED BY UTILITY INSTALLATION AND SITE GRADING ACTIVITY SHALL RECEIVE 6" APPROVED TOPSOIL (TO A COMPACTED DEPTH OF 6", UNLESS OTHERWISE SPECIFIED BY THE GOVERNING MUNICIPALITY) BE FINE GRADES, SEEDED, MULCHED, AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
13. ANY IRRIGATION COMPONENT DAMAGED DURING SITE OR LANDSCAPE RENOVATIONS MUST BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.
14. A ONE YEAR GUARANTEE SHALL BE PROVIDED ON ALL PLANT MATERIALS FROM THE DATE OF PROVISIONAL ACCEPTANCE.
15. PLANTING BACKFILL MIXTURE SHALL CONSIST OF 3 PARTS TOPSOIL AND 1 PART COMPOST THOROUGHLY MIXED. PLANTING SOIL DEPTH SHALL BE 3' MINIMUM, AND BE FREE FROM CONSTRUCTION DEBRIS AND FOREIGN MATERIALS.
16. STAKE TREES IMMEDIATELY AFTER PLANTING.
17. LOCATIONS OF EXISTING BURIED UTILITIES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE WORK AREA. IF ANY TREE IS LOCATED CLOSER THAN 5' TO AN UNDERGROUND UTILITY, IT SHALL BE RELOCATED TO A LOCATION THAT IS A MINIMUM OF 5' AWAY AS MEASURED FROM THE ROOTBALL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, AND SITE APPURTENANCES, ETC., WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.

LEGEND

- AREAS TO RECEIVE 4-6" TOPSOIL AND PERMANENT LAWN HYDRO SEED MIX
- PARKING LOT LANDSCAPE AREAS
- FOUNDATION LANDSCAPE AREAS

NOTE:
ALL DISTURBED LAWN AREAS SHALL RECEIVE 4-6" TOPSOIL AND PERMANENT LAWN HYDROSEED MIX.

SEED MIX:

PURITY %GERM	LBS/ACRE	%BY
'Pennfine' Perennial Rye Grass 85	35	85
'Pennlawn' Red Fescue 80	35	97
'Baron' and 'Midnight' Kentucky Bluegrass 80	30	85

SEEDING RATE: 6.0 POUNDS PER 1,000 SQUARE FEET

MULCH: STRAW OR WOOD FIBER MULCH APPLIED AT THE RATE OF TWO TONS PER ACRE

STARTING FERTILIZER: 5:10:10 AT 20 POUNDS PER 1,000 SQUARE FEET

FOR FALL OR EARLY WINTER, SEED WITH CERTIFIED "AROOSTOCK" WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE.

No.	Revision/Issue	Date
01	Revised based on site plan changes	2024-08-21

Notes & References

CONTRACTOR SHALL CONTACT "DIG SAFELY" NEW YORK @ 1-800-962-7962 FOR LOCATION OF ALL UTILITIES, AT LEAST 7 DAYS PRIOR TO BEGINNING CONSTRUCTION

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Applicant
BENDERSON DEVELOPMENT
570 DELAWARE AVE, BUFFALO, NY 14202
PHONE (716) 886-0211 FAX (716)-856-7791
WWW.BENDERSON.COM

PROJECT NO.:1810

Landscape Architect's Seal

REGISTERED LANDSCAPE ARCHITECT SARAH COSTICH 002574 STATE OF NEW YORK

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

Project Name and Address

AMHERST DEVELOPMENT PARK - BUILDING ADDITIONS

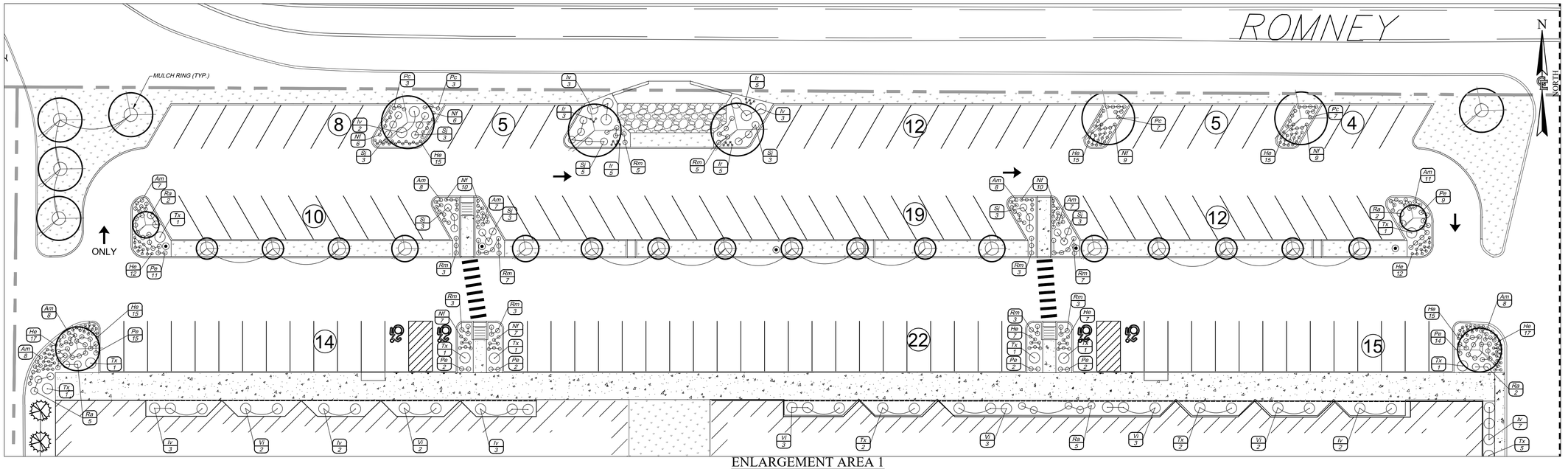
6000-6040 N. Bailey Avenue
Amherst, New York 14226

Drawing Name

OVERALL LANDSCAPE PLAN

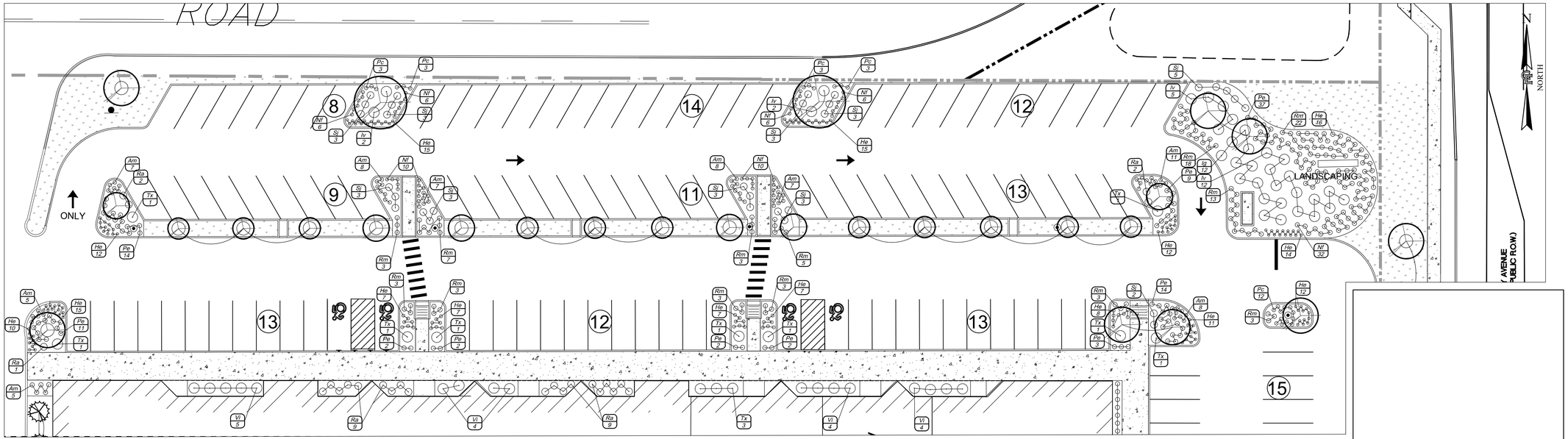
Sheet	Drawing Number
1 OF 5	C-7.0
Date: 06/12/2024	
Scale: 1"=50'	

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



ENLARGEMENT AREA 1

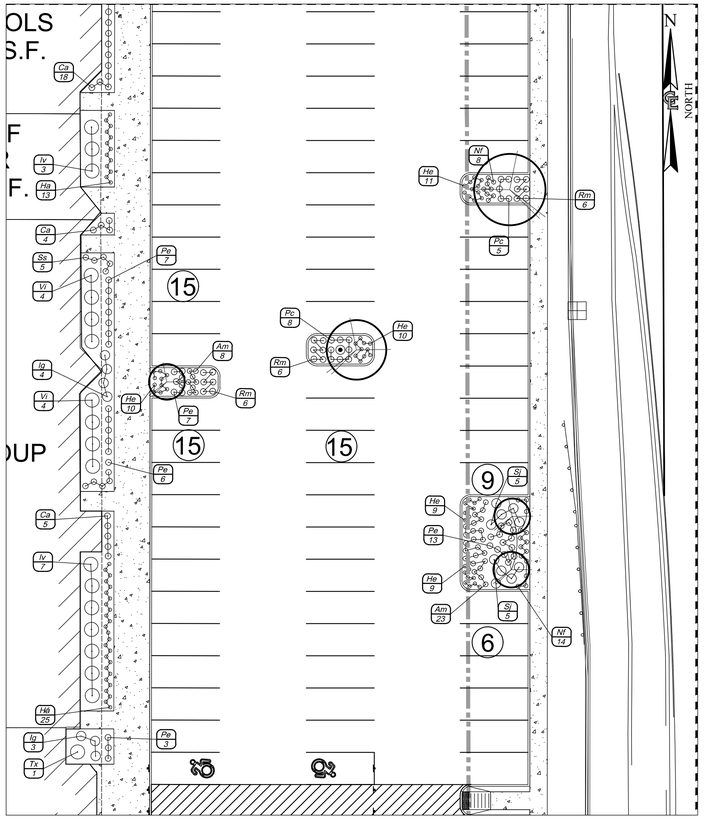
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ENLARGEMENT AREA 2

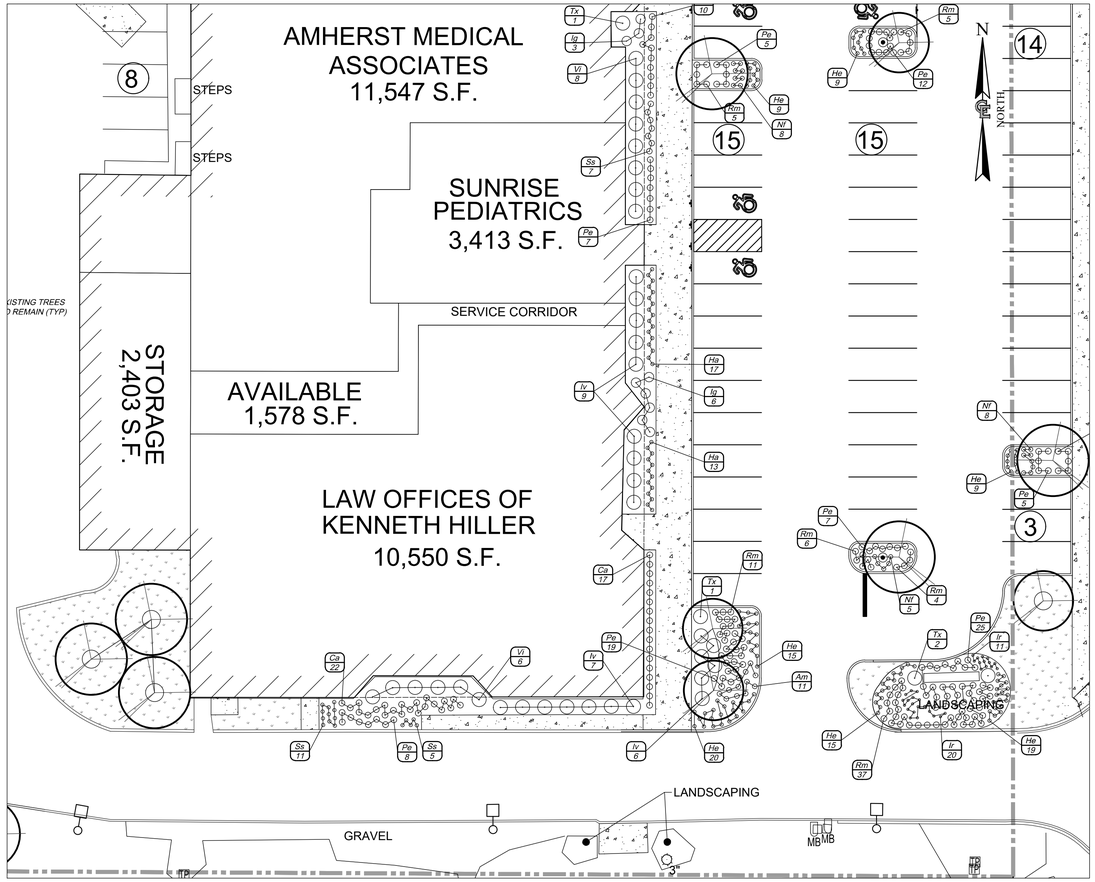
SCALE: 1" = 20'

| Revisions | | |



ENLARGEMENT AREA 3

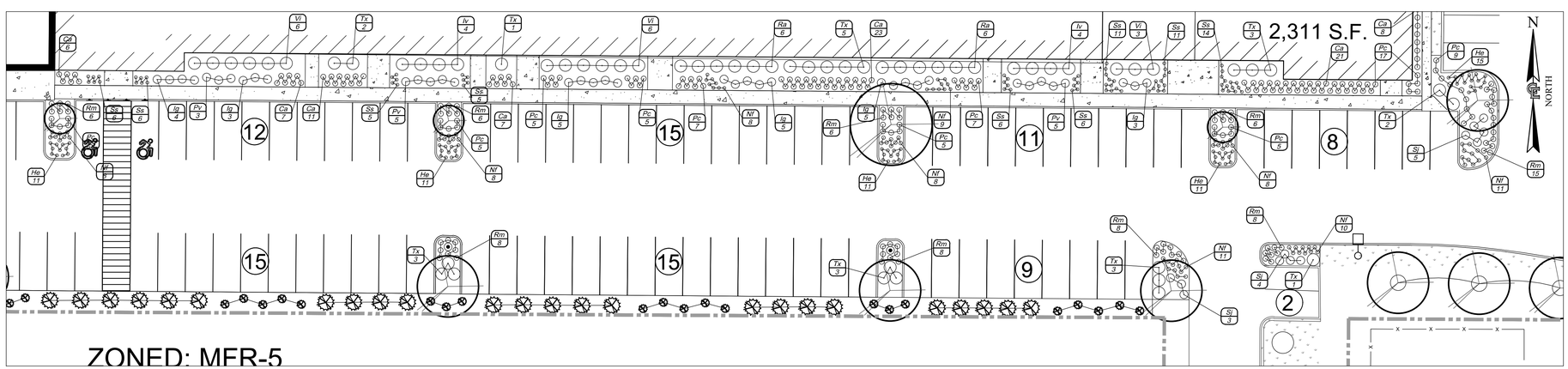
SCALE: 1" = 20'



ENLARGEMENT AREA 4

SCALE: 1" = 20'

MATCHLINE (SEE SHEET C-7.0)



ENLARGEMENT AREA 5

SCALE: 1" = 20'

No.	Revision/Issue	Date
01	Revised based on site plan changes	2024-08-21

Notes & References

CONTRACTOR SHALL CONTACT "DIG SAFELY" NEW YORK @ 1-800-962-7962 FOR LOCATION OF ALL UTILITIES, AT LEAST 7 DAYS PRIOR TO BEGINNING CONSTRUCTION

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Applicant

BENDERSON DEVELOPMENT

570 DELAWARE AVE, BUFFALO, NY 14202
PHONE (716) 886-0211 FAX (716)-856-7791
WWW.BENDERSON.COM

PROJECT NO.: 1810

Landscape Architect's Seal

REGISTERED LANDSCAPE ARCHITECT
SARAH COSTICH-HAG
002574
STATE OF NEW YORK

Landscape Architect

COSTICH ENGINEERING

- CIVIL ENGINEERING
- LAND SURVEYING
- LANDSCAPE ARCHITECTURE

217 LAKE AVENUE
ROCHESTER, NY 14608
(585) 458-3020

Project Name and Address

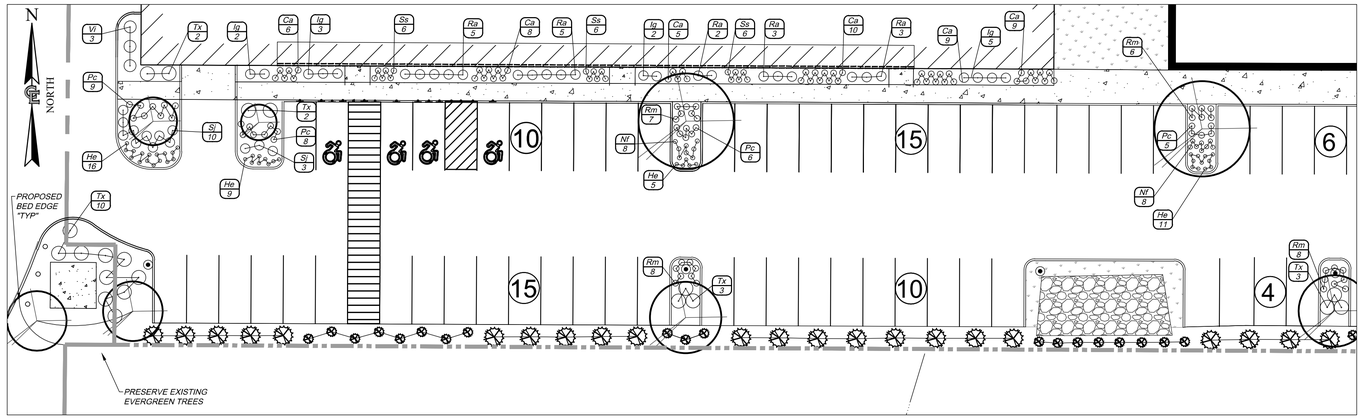
AMHERST DEVELOPMENT PARK - BUILDING ADDITIONS
6000-6040 N. Bailey Avenue
Amherst, New York 14226

Drawing Name

LANDSCAPE PLAN ENLARGEMENT AREAS

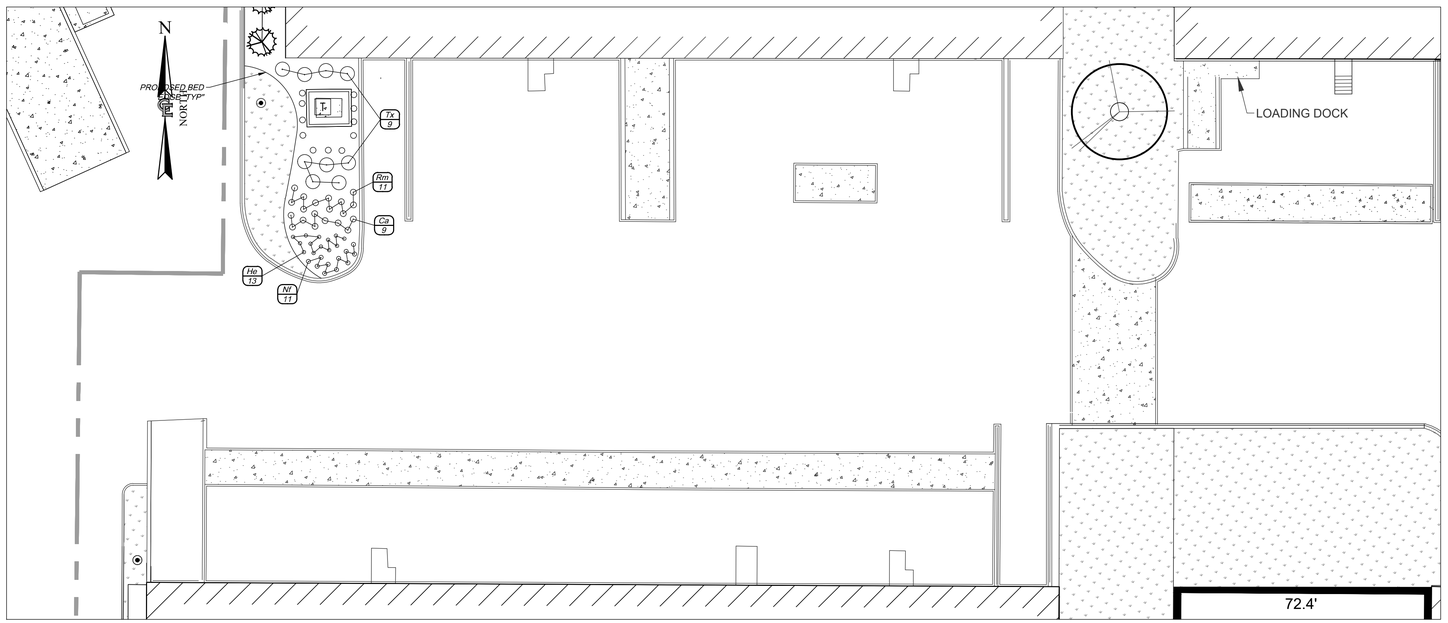
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3 OF 5	C-7.2
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Attachment: SP-1988-11P drawings updated 090924 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



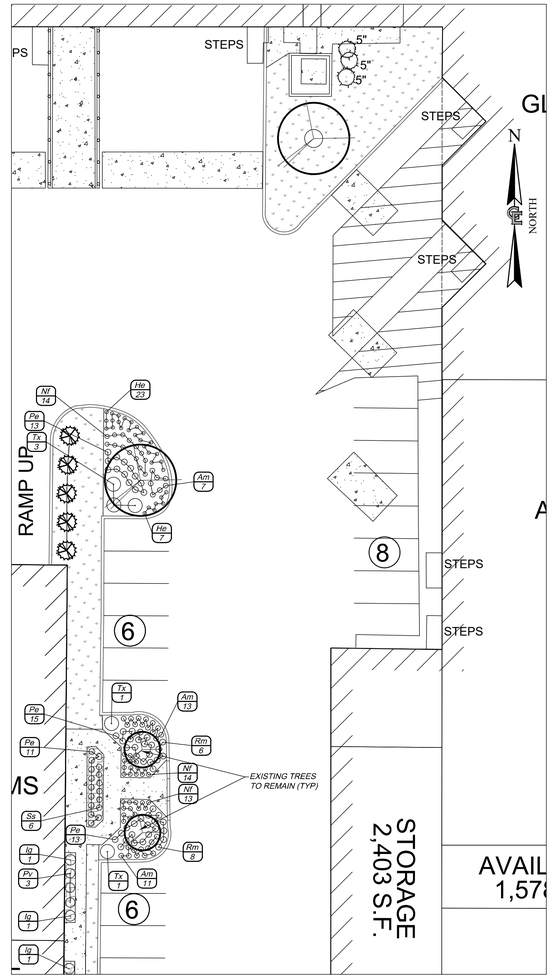
ENLARGEMENT AREA 6

SCALE: 1" = 20'



ENLARGEMENT AREA 7

SCALE: 1" = 20'



ENLARGEMENT AREA 8

SCALE: 1" = 20'

Revisions									
No.	Revision/Issue	Date
01	Revised based on site plan changes	2024-08-21

Notes & References

CONTRACTOR SHALL CONTACT "DIG SAFELY" NEW YORK @ 1-800-962-7962 FOR LOCATION OF ALL UTILITIES, AT LEAST 7 DAYS PRIOR TO BEGINNING CONSTRUCTION

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Applicant

BENDERSON DEVELOPMENT
570 DELAWARE AVE, BUFFALO, NY 14202
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WWW.BENDERSON.COM

PROJECT NO. 1810

Landscape Architect's Seal

REGISTERED LANDSCAPE ARCHITECT SARAH COSTICH 002574 STATE OF NEW YORK

Landscape Architect

COSTICH ENGINEERING
• Civil Engineering
• Land Surveying
• Landscape Architecture
217 Lake Avenue Rochester, NY 14608
(585) 458-3020

Project Name and Address

AMHERST DEVELOPMENT PARK - BUILDING ADDITIONS
6000-6040 N. Bailey Avenue
Amherst, New York 14226

Drawing Name

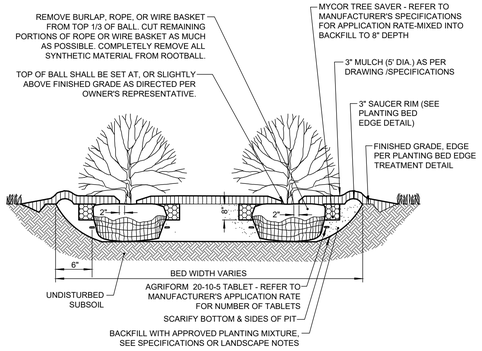
LANDSCAPE PLAN ENLARGEMENT AREAS

Sheet	Drawing Number
4 OF 5	C-7.3
Date: 6/12/2024	
Scale: 1"=20'	

Attachment: SP-1988-11P drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

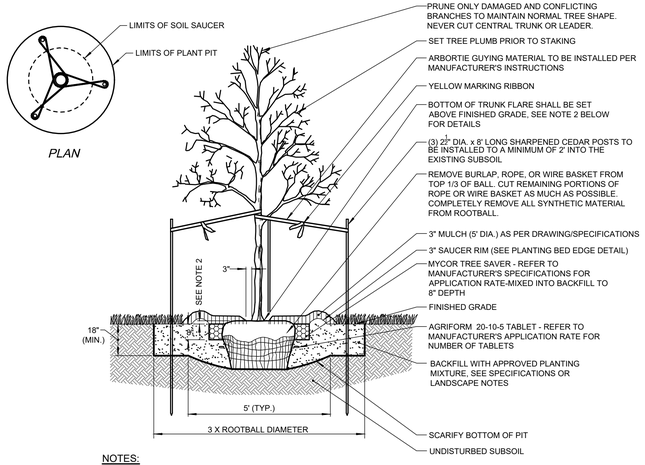
NOTES:

1. MAINTAIN A 2" MINIMUM RADIUS CLEAR OF MULCH AROUND THE TRUNK.
2. PLANTING BED DEPTH IN LAWN AREAS SHALL BE A MINIMUM OF 18" DEEP AND/OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
3. ALL PLANTING BEDS SHALL BE FREE OF CONSTRUCTION DEBRIS.
4. IF BARE ROOT PLANT MATERIAL IS SPECIFIED IN THE PLANT SCHEDULE, SEE LANDSCAPE NOTES ON SHEET LA100 FOR ADDITIONAL INFORMATION.



SHRUB PLANTING DETAIL

NOT TO SCALE

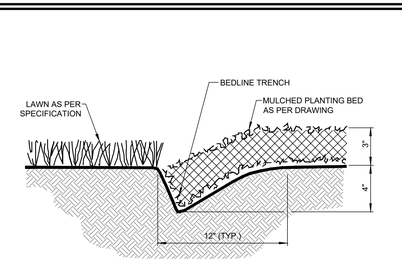


NOTES:

1. MAINTAIN A 3" MINIMUM RADIUS CLEAR OF MULCH AROUND THE TRUNK.
2. THE DISTANCE BETWEEN THE BOTTOM OF THE TRUNK FLARE AND THE FINISHED GRADE SHALL BE AS FOLLOWS:
   FOR SANDY OR LOAMY SOILS: 1"
   FOR CLAY OR POORLY DRAINED SOILS: 3"
   THE CONTRACTOR SHALL REVIEW THE APPROPRIATE PLANTING DEPTH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. WHEN TAGGING TREES AT THE NURSERY, MARK THE NORTH SIDE OF THE TREE IN THE FIELD AND WHEN INSTALLING, ROTATE TREE TO FACE NORTH WHENEVER POSSIBLE
4. IF BARE ROOT PLANT MATERIAL IS SPECIFIED IN THE PLANT SCHEDULE, SEE LANDSCAPE NOTES ON SHEET LA100 FOR ADDITIONAL INFORMATION.

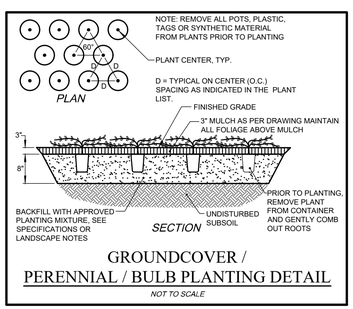
DECIDUOUS TREE PLANTING LESS THAN 4" CAL. DETAIL

NOT TO SCALE



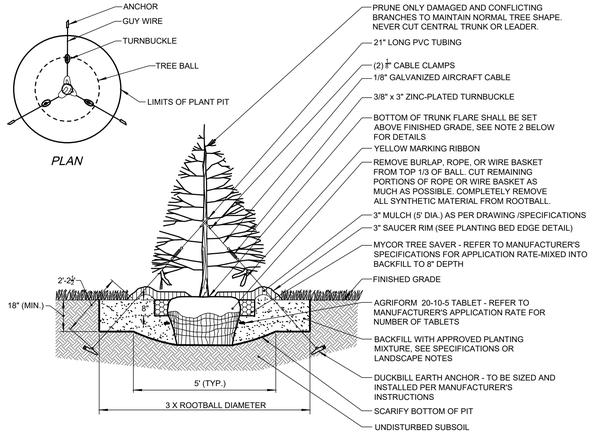
PLANTING BED EDGE TREATMENT DETAIL

NOT TO SCALE



GROUNDCOVER / PERENNIAL / BULB PLANTING DETAIL

NOT TO SCALE

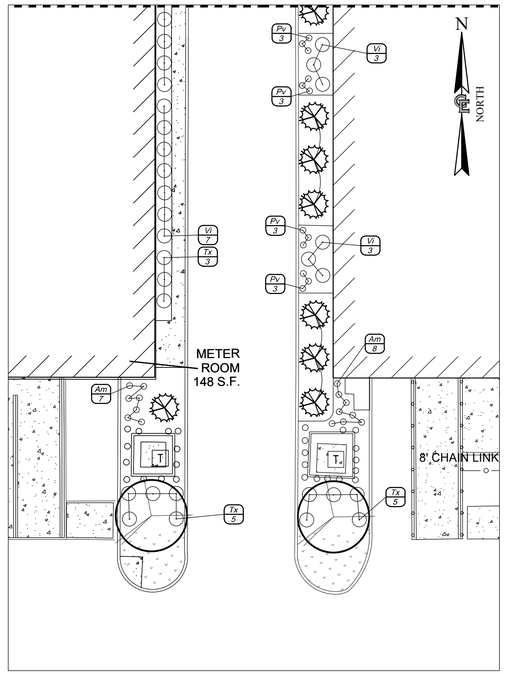


NOTES:

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2. THE DISTANCE BETWEEN THE BOTTOM OF THE TRUNK FLARE AND THE FINISHED GRADE SHALL BE AS FOLLOWS:
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   FOR CLAY OR POORLY DRAINED SOILS: 3"
   THE CONTRACTOR SHALL REVIEW THE APPROPRIATE PLANTING DEPTH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. WHEN TAGGING TREES AT THE NURSERY, MARK THE NORTH SIDE OF THE TREE IN THE FIELD AND WHEN INSTALLING, ROTATE TREE TO FACE NORTH WHENEVER POSSIBLE
4. IF BARE ROOT PLANT MATERIAL IS SPECIFIED IN THE PLANT SCHEDULE, SEE LANDSCAPE NOTES ON SHEET LA100 FOR ADDITIONAL INFORMATION.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE



ENLARGEMENT AREA 9

SCALE: 1" = 20'

No.	Revision/Issue	Date
01	Revised based on site plan changes	2024-08-21

Notes & References

CONTRACTOR SHALL CONTACT "DIG SAFELY" NEW YORK @ 1-800-962-7962 FOR LOCATION OF ALL UTILITIES, AT LEAST 7 DAYS PRIOR TO BEGINNING CONSTRUCTION

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Applicant
BENDERSON DEVELOPMENT
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PHONE (716) 886-0211 FAX (716)-856-7791
WWW.BENDERSON.COM

PROJECT NO. 1810

Landscape Architect's Seal

REGISTERED LANDSCAPE ARCHITECT SARAH COSTICH ON 00257A STATE OF NEW YORK

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

Project Name and Address

AMHERST DEVELOPMENT PARK - BUILDING ADDITIONS
6000-6040 N. Bailey Avenue
Amherst, New York 14226

Drawing Name
LANDSCAPE PLAN ENLARGEMENT AREAS & DETAILS

Sheet	Drawing Number
5 OF 5	C-7.4
Date: 6/12/2024	
Scale: 1"=20'	

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

ROMNEY ROAD

AVAILABLE
26,709 S.F.

PROPOSED
BENDERSON DEVELOPMENT
36,142 S.F.

METER ROOM 148 S.F.

LOADING DOCK

OERLIKON METCO
29,673 S.F.

AVAILABLE 3,600 S.F.

ROTHSTEIN ACQUISITIONS 3,000 S.F.

CONTROLS 3,224 S.F.

DEPT OF LABOR 2,094 S.F.

SERVICE CORRIDOR 800 S.F.

6' CHAIN LINK FENCE

GLOBAL VENDING GROUP
18,248 S.F.

AMHERST MEDICAL ASSOCIATES
11,547 S.F.

SUNRISE PEDIATRICS
3,413 S.F.

SERVICE CORRIDOR

AVAILABLE
1,578 S.F.

LAW OFFICES OF KENNETH HILLER
10,550 S.F.

STORAGE
2,403 S.F.

Existing Lighting

DOCK AREA

RAMP UP

PROPOSED

SOAP PLANT
14,727 SF

WAREHOUSE
19,905 SF

72.4'

Proposed Addition
10,069 S.F.

FFE: 579.0±

FABRICATION
Existing Available
43,805 S.F.

WINDOW DECOR
4,020 S.F.

McANN SYSTEMS
7,455 S.F.

AVAILABLE
2,311 S.F.

LANDSCAPING

GRAVEL

RIP-RAP

HEADWALL

N/F
BOULEVARD TOWERS ASSOCIATES LLC
T.A.# 54.14-1-12.11
100 MEYER ROAD
L:11345 P:3418

N/F
BOULEVARD TOWERS ASSOCIATES LLC
T.A.# 54.14-1-13.2
120 MEYER ROAD

N/F
UNITED STATES POSTAL SERVICE
T.A.# 54.14-1-17.2
5500 NORTH BAILEY AVENUE
L:9795 P:412

OFFICIAL TOWN USE ONLY

Luminaire Schedule

Index	Manufacturer	Luminaire type	Item number	Lumens per Fixture	Mounting Height **	Fixture Watts	Quantity
	Cree	Cree Lighting OSQ Series Area Luminaire, Type 5M, 180W Input Power Designator, 4000K Double Head Fixtures	OSQL-C-30L-40K7-5M-UL-NM-BK	30,000 lm	25 Ft	180 W	13
	Cree	Cree Lighting OSQ Series Area Luminaire, Type 3M, 180W Input Power Designator, 4000K Double Head Fixtures with backlight shield	OSQL-C-30L-40K7-3M-UL-NM-BK w/ OSQ-L-C-BLSF	19,600 lm	25 Ft	180 W	6

*Relocated Poles shall reuse existing LED Fixtures
**Mounting Heights are measured from Finished Grade

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
2	05.08.2024	DZ	Site Plan Update
4	07.31.2024	DZ	Site Updates
5	08.12.2024	DZ	Site Updates

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

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NORTH

811 Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

REGISTERED ARCHITECT JAMES ALLEN RUMSEY 029109 STATE OF NEW YORK

TITLE:

Site Lighting Plan

SCALE: 1:70

DRAWN BY: DMZ

CHECKED BY: MAO

DATE: 08.16.2023

DRAWING NO. C8.00

Attachment: SP-1988-11P_drawings updated 090924_091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

OSQ Series

OSQ™ LED Area/Flood Luminaire featuring Patented NanoComfort™ Technology – Version C

Rev. Date: V3 04/17/2023

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. Medium is suitable upgrade for HID applications up to 400 Watts. Large is suitable upgrade for HID applications up to 1000 Watts. Extra Large is suitable upgrade for HID applications up to multiple 1000 Watts.

Applications: Parking lots, walkways, campuses, car dealerships, office complexes, high-mast and internal roadways

Performance Summary

Utilizes Patented NanoComfort™ Technology

Utilizes Cree TrueWhite® Technology on 5000K Luminaires

Assembled in the USA by Cree Lighting from US and imported parts

Initial Delivered Lumens: 4,000 - 75,000

Efficacy: Up to 171 LPW

CRI: Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K)

CCT: 3000K, 4000K, 5000K, 5700K

Limited Warranty*: 10 years for luminaire; 10 years for Colorfast DeltaGuard® finish; 5 years for BML sensor; up to 5 years for Synapse® accessories; 1 year for luminaire accessories

*See http://creelighting.com/warranty for warranty terms. For Synapse accessories, consult Synapse spec sheets for details on warranty terms.

Ordering Information

Fully assembled Luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-ML-C-AA-BK + **Luminaire:** OSQM-C-4L-30K7-2M-UL-NM-BK

Mount (Luminaire must be ordered separately)*

OSQ-

Medium/Large Mounts
OSQ-ML-C-AA Adjustable Arm
OSQ-ML-C-DA Direct Arm
OSQ-ML-C-TM Trunnion Mount

Extra Large Mounts
OSQ-X-C-AA Adjustable Arm
OSQ-X-C-DA Direct Arm

Color Options: **SV** Silver, **BK** Black, **BZ** Bronze, **WH** White

* Reference fixture mounting drill pattern, EPA, and pole configuration suitability data beginning on page 14.

Luminaire (Must must be ordered separately)

OSQ | **C**

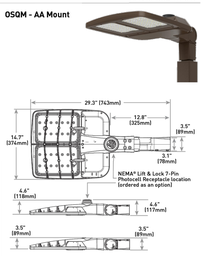
Family	Size	Series	Lumen Package*	CCT/ CRI	Optic	Voltage	Mount	Color Options	Controls*	Options
OSQ	**M** Medium **L** Large **X** Extra Large	**C**	**Medium** **4L** 4,000 Lumens **6L** 6,000 Lumens **9L** 9,200 Lumens **11L** 11,000 Lumens **16L** 16,000 Lumens **Large** **22L** 22,000 Lumens **30L** 30,000 Lumens **40L** 40,000 Lumens **Extra Large** **50L** 50,000 Lumens **65L** 65,000 Lumens **75L** 75,000 Lumens	**30K7** 3000K, 70 CRI **40K7** 4000K, 70 CRI **50K7** 5000K, 70 CRI **57K7** 5700K, 70 CRI	**Asymmetric** **2M** Type II Mid Type II Mid w/ Factory-Installed Backlight Shield **3M** Type III Mid **4M** Type III Mid w/ Factory-Installed Backlight Shield **5M** Type V Mid **5N** Type V Narrow **4B** Type IV Mid w/ Factory-Installed Backlight Shield **AF** Automotive FrontlineOptic™ **AB** Automotive FrontlineOptic™ w/Factory-Installed Backlight Shield **Symmetric** **33** NEMA® 3x3 **44** NEMA® 4x4 **55** NEMA® 5x5 **66** NEMA® 6x6 **7X** NEMA® 7x5	**UL** Universal: 120-277V **UH** Universal: 347-480V - Not available with 4L, 40L or 75L lumen packages **UE** Universal: 277-480V - Available with 40L and 75L lumen packages	**NM** No Mount - Must specify mount from table above - Mount ordered separately	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**BML** **Bluetooth® Technology Enabled Multi-Level Sensor** - Utilizes a multifunction sensor - Refer to BML spec sheet for details - 20-40' sensor lens installed on luminaire; 8-20' sensor lens and aisle shroud included - Intended for downlight applications - Not UL - Not available with Q or X options or Synapse TLT-B2 or TLT-HVO accessories **0V/0R/1T/1N/0D/0A/0J/02/01 Field Adjustable Output** - Must select 0V, 0R, 0T, 0N, 0L, Q3, Q2, or Q1 - Offers full range adjustability - Refer to pages 15-25 for power and lumen values - Not available with BML or X options or Synapse TLT-B2 or TLT-HVO accessories **XB/X7/XA/X5/X4/X3/X2/X1 Locked Lumen Output** - Must select XB, X7, X6, X5, X4, X3, X2, or X1 - Not available with BML or Q options - X7 option not available with the following lumen package/voltage offerings: 9L/UL, 16L/UL, 16L/UH, 30L/UL, 30L/UH, 40L/UL, 65L/UH - X2 option not available 9L/UL lumen package/voltage - Lumen output is permanently locked to the setting selected - Refer to pages 15-25 for power and lumen values	**20KV** **20kV/10kA Surge Suppression** - Replaces standard 10kV/5kA surge protection **F** **Fuse** - Compatible with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - When code dictates fusing, use time delay fuse **N** **Photocell and NEMA® Lift & Lock 7-Pin Photocell Receptacle** - External utility label per ANSI C136.15-2020 - 7-pin receptacle per ANSI C136.41 - Available only with OSQM & OSQL luminaires - Intended for downlight applications with maximum 45° tilt - Factory connected 0-10V dim leads - Requires photocell or shorting cap by others **R** **NEMA® Lift & Lock 7-Pin Photocell Receptacle** - Available only with OSQM & OSQL luminaires - Intended for downlight applications with maximum 45° tilt - Factory connected 0-10V dim leads - Requires photocell or shorting cap by others - Refer to page 2 for compatible Synapse control offerings **RL** **Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 26 for optic directionality - Not for use with symmetric optics **RR** **Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 26 for optic directionality - Not for use with symmetric optics

* Lumen Package codes identify approximate light output only. Actual lumen output levels vary by CCT and optic selection. Refer to Initial Delivered Lumen tables for specific lumen values
* Luminaire comes standard with 0-10V dimming

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

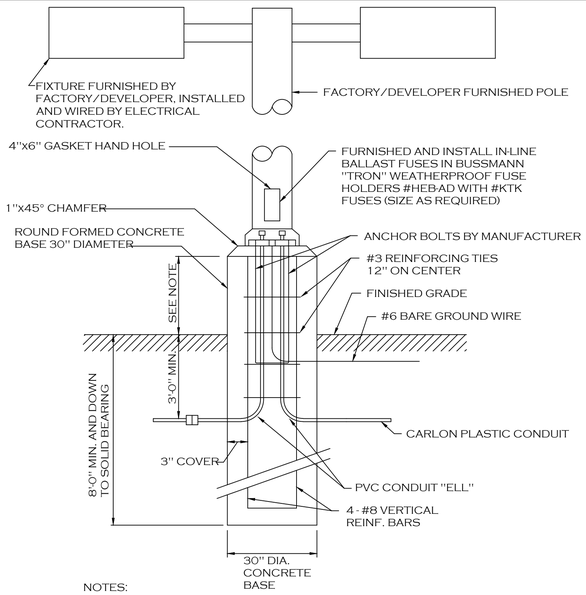
CREE ⇕ LIGHTING®

OSQM - AA Mount



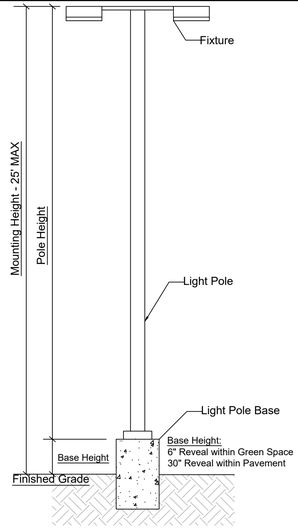
Luminaire	Weight
OSQM	19.3 lbs. (8.8kg)

Note: For OSQL, OSQX and additional mounts, refer to drawings beginning on page 26.



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: 30" ABOVE GRADE
   IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

LIGHT POLE FOUNDATION



Light Pole Mounting

OFFICIAL TOWN USE ONLY

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
1	12.13.2023	DZ	POND UPDATES
4	07.31.2024	DZ	Site Updates

SPECIAL INFORMATION:

ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ANY AND ALL STRUCTURES.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

Know what's below. Call before you dig.

PROPERTY NUMBER: #1723

AREA: -

Amherst Development Park
6000 - 6040 North Bailey Ave
Amherst, NY 14226

PROPOSED SITE MODIFICATIONS

CONSULTANT

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

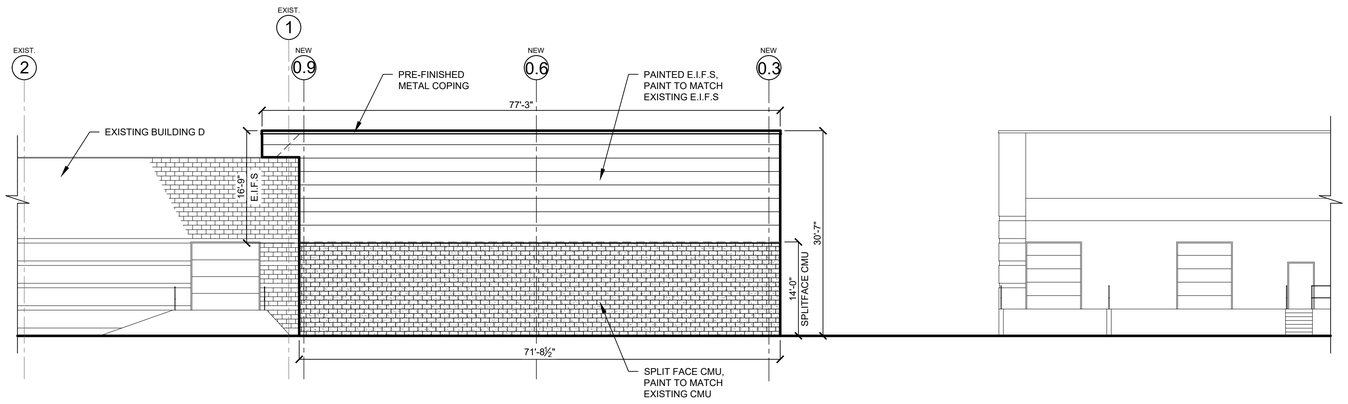
SEAL



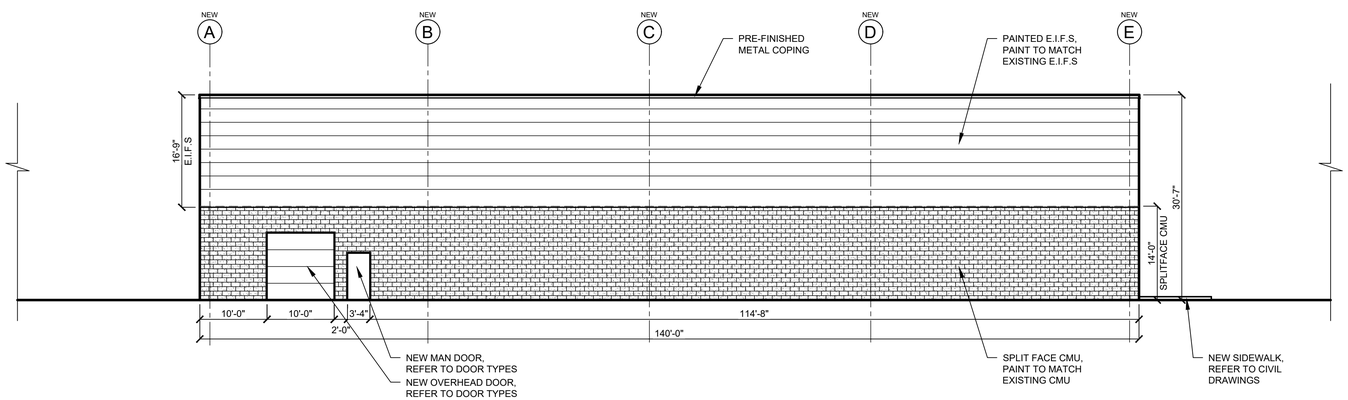
TITLE:
Lighting Details

SCALE: NTS
DRAWN BY: DMZ
CHECKED BY: MAO
DATE: 08.16.2023
DRAWING NO.: C8.10

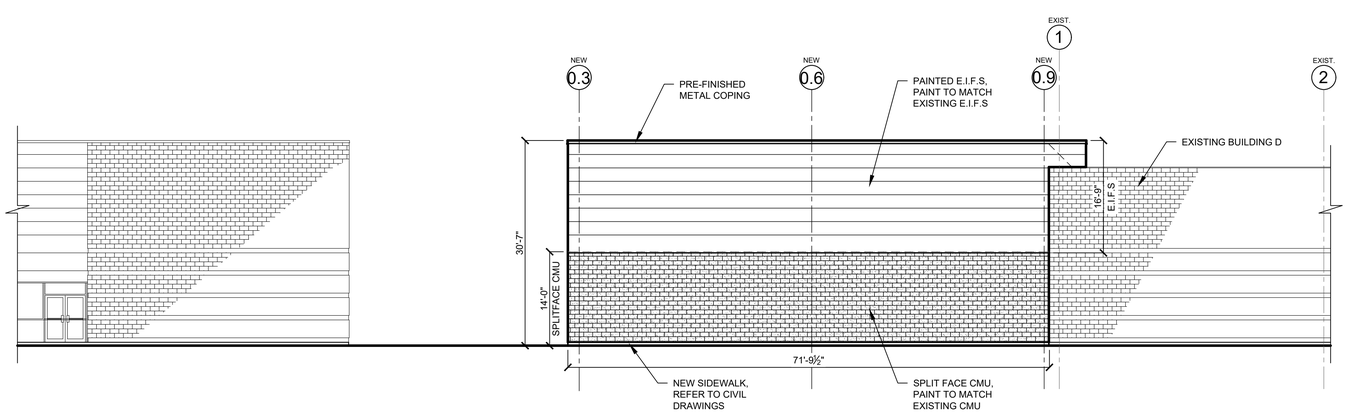
Attachment: SP-1988-11P_drawings updated 090924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)



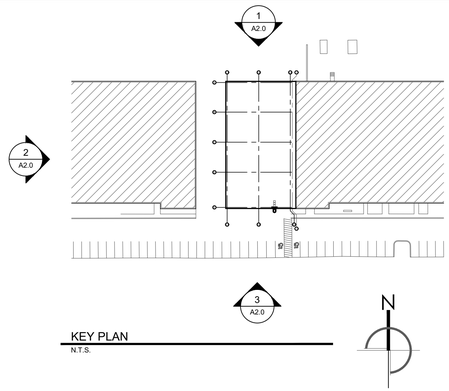
1 SOUTH ELEVATION
SCALE: 3/32"=1'-0"



2 WEST ELEVATION
SCALE: 3/32"=1'-0"



3 NORTH ELEVATION
SCALE: 3/32"=1'-0"



KEY PLAN
N.T.S.

DRAWING REVISIONS:

No.	DATE	BY	REMARKS
-	-	-	-

SPECIAL INFORMATION:

THIS DRAWING PREPARED FOR TENANT IMPROVEMENTS TO AN EXISTING BUILDING OR BUILDING CONSTRUCTED BY OTHERS IT IS UNDERSTOOD THAT ANY WARRANTY INFORMATION CONCERNING EQUIPMENT INSTALLED MUST BE FORWARDED TO THE OWNER AND THAT ANY AND ALL CONTRACTORS SHALL GUARANTEE THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE.

NOTICE

UNAUTHORIZED ALTERATIONS OF THIS DOCUMENT ARE IN VIOLATION OF SECTION #7209 OF THE STATE EDUCATION LAW.

PROPERTY NUMBER: -

AREA: - SF

AMHERST DEVELOPMENT PARK
6000 - 6040 NORTH BAILEY AVE
AMHERST, NY 14226

BUILDING D EXPANSION

CONSULTANT:

JAMES ALLEN RUMSEY
ARCHITECT
PREPARED FOR
BENDERSON DEVELOPMENT
570 DELAWARE AVE., BUFFALO, NY 14202
(716) 886-0211

SEAL

TITLE:

EXTERIOR ELEVATIONS

DRAWN BY: RKT
CHECKED BY: JAR
DATE: 00.00.00

DRAWING NO.
A2.0

Attachment: SP-1988-11P drawings updated 090924 091924 (28252 : SP-1988-11P, 6000-6020 N. Bailey Ave)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 09/19/24 06:30 PM
Department: Planning
Category: Site Plan and Relief from Conditions of Site Plan
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 29174

ADOPTED

PLANNING BOARD ITEM (ID # 29174)

Proposed Lou Gehrig Amherst Park - Parking Lot Expansion, SP-1990-08J

Property located at 50 Dann Road & 550 Smith Road
Town of Amherst, Petitioner

Proposal to Expand and reconstruction, paving, and re-striping of two (2) existing parking lots at Lou Gehrig Amherst Park to provide for 354 vehicle parking spaces. One parking lot is accessed from Dann Road and the other from Smith Road. Additional work includes installation of storm drainage (catch basins and pipes), installation of paved parking, curbing and pathway lights, and landscaping throughout. The petitioner is also requesting a waiver of required sidewalks along Smith and Dann Roads.

Jesse Wendel, Wendel Companies, represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Wendel showed the flow of the one-way entrance and exit in the parking lot and stated stripping could be added for pedestrian walkways.

No further comments were heard on this proposal. The hearing was closed.

Following discussion, Mr. Giuliani moved to approve the Negative Declaration. The motion was seconded by Ms. Penberthy and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

Following the approval of the Negative Declaration, Ms. Penberthy moved to approve the Smith and Dan Road sidewalk waiver request. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

Following the approval of the sidewalk waiver request, Ms. Penberthy moved to approve the request based on the resolution. The motion was seconded by Mr. Giuliani and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

ATTACHMENTS:

- SP-1990-08J_application_091924 (PDF)
- SP-1990-08J_drawings_091924 (PDF)
- SP-1990-08J signed neg dec 091924 (PDF)
- SP-1990-08J signed resolution 091924 (PDF)

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Brittany Lee Penberthy, Board Member
SECONDER:	Dal Giuliani, Board Member
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy
ABSENT:	John B. Davis, Joseph P. Raffaele Jr.

TOWN OF AMHERST

APPLICATION & REVIEW PROCEDURE

MAJOR SITE PLAN

MATERIALS MUST BE PROVIDED IN AN ELECTRONIC FORMAT THAT CONTAINS PDF FILES OF THE APPLICATION, EAF, SITE PLAN DRAWING SET SURVEY, LANDSCAPE PLAN, PRELIMINARY BUILDING FLOO PLANS / ELEVATIONS & ANY OTHER SUPPORTING INFORMATION. THIS MUST BE SUBMITTED WITH YOUR APPLICATION. APPLICATIONS WILL NOT BE TRANSMITTED WITHOUT THIS ELECTRONIC INFORMATION.

THIS ALSO APPLIES TO REVISED MATERIALS THAT AR SUBMITTED.

This application package includes the following:

- Application Procedures
- Application Form & Checklist
- Stormwater Pollution Prevention Plan Checklist
- Appendix A Town of Amherst EAF Addendum
- Appendix B Criteria for Required 8½" x 11" Sketches
- Appendix C Erie Sewer District No. 5 – Commercial / Industrial New & Existing Buildings Requirements

- IMPORTANT-

1. A pre-submittal consultation with Planning Department staff is *strongly recommended* prior to submitting an application. The pre-submittal meeting gives the applicant an opportunity to discuss with staff such items as:
   - classifying the action as a major site plan, minor site plan, or minor site plan adjustment;
   - determining what specific information will be required to be submitted with the application;
   - identifying and discussing issues that must be addressed as part of the SEQR review;
   - identifying any potential variances required to implement the project as proposed.

   An appointment is required for all meetings with Planning Department staff.

2. This site plan petition is subject to the requirements of 6 NYCRR Part 617, State Environmental Quality Review Act (SEQR), and Chapter 104 of the Town of Amherst Code, as amended. The Planning Board cannot make a SEQR determination unless a complete Environmental Assessment Form (EAF), including Town of Amherst EAF Addendum, and any required supplementary information such as traffic impact studies, archaeological reports, wetland delineations or geotechnical reports, are submitted. SEQR issues may be discussed with Planning Department staff at a recommended pre-submittal meeting. Unlisted Actions require a Short EAF; Type I Actions require a Full EAF. The following is a link to the NYSDEC website and fillable forms with instructions*:*
   https://gisservices.dec.ny.gov/eafmapper/.

3. **Review by the Town Design Advisory Board (DAB) is required for Major Site Plans located in the following Mixed-Use zoning districts:**

   Traditional Infill 2.5 (TI-2.5)
   Traditional Infill 4 (TI-4)
   Shallow Corridor 3 (SC-3)
   Deep Corridor 3 (DC-3)
   Deep Corridor 5 (DC-5)
   Center 2.5 (CTR-2.5)
   Center 5 (CTR-5)
   Center 8 (CTR-8)

   The application for DAB review is required to be filed in conjunction with the major site plan application.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

4. The application shall be executed or consented to in writing by the owner of the property.

5. **Any variances from the Zoning Board of Appeals, or any decision from the Town Board (e.g. removal of deed restrictions) must be obtained prior to action by the Planning Board on a Site Plan application.**

6. Submittal of an application grants permission to Town staff and Planning Board members to access the parcel(s) under consideration.

7. All site plan drawings must be prepared by a Registered Architect, Professional Engineer, Landscape Architect, or Land Surveyor (as applicable) licensed to practice in New York State.

8. If you wish to include a Coordinated Sign Plan application with the site plan petition, a separate application must be completed. Contact the Planning Department for a copy of a Coordinated Sign Plan application package.

9. All drawings should be no larger than 24 in. x 36 in. If site characteristics warrant larger plan sheets, they may be accepted subject to Planning Department concurrence. All drawings must also reserve a 4 in. x 6 in. area in the lower right hand corner for official Town use.

APPLICATION PROCEDURES

1. Applicant secures application package from the Planning Department, 5583 Main Street, Williamsville, NY 14221. (716) 631-7051. Forms are also available online at: www.amherst.ny.us, (keyword: Planning).

2. Applicant prepares information as required on the Site Plan Submittal Checklist, attached. NOTE: Some proposals may not require all items on the checklist; please verify with the Planning Department.

3. Applicant schedules an appointment with the Planning Department to review the following:
   - a complete set of site plan drawings, preliminary building elevations and floor plans (no larger than 24" x 36" in size)
   - Environmental Assessment Form (EAF) & Town EAF Addendum
   - any supporting reports and materials
   - verification from the Town Assessor that the address in the application is correct

4. Applicant schedules an application submittal appointment with the Planning Department. NO SITE PLAN WILL BE ACCEPTED FOR REVIEW WITHOUT A PRE-SET SUBMITTAL APPOINTMENT.

5. At the submittal appointment, applicant provides fourteen (14) complete and collated sets of drawings and application information to the Planning Department **(materials will not be accepted unless folded into 9" x 12" in size),** including**:**
   - application form
   - Environmental Assessment Form (EAF)
   - supporting reports / materials
   - complete set of site plan drawings, preliminary building elevations and floor plans (**at least one (1) set of drawings must bear a raised or wet seal and signature of the design professional** who prepared the plans; the remaining copies may be submitted with a facsimile of the seal and signature)
   - digital files of all materials in pdf format
   - an 8½" x 11" reduction of the sketch plan or plat drawing (see Appendix B)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

6. After approval for filing by the Planning Department, applicant submits all necessary fees to the Town Clerk. **(See Schedule of Fees on first page of application and make checks payable to: Town of Amherst.)**

7. The applicant returns a copy of the filing receipt to the Planning Department.

8. The Planning Department transmits remaining thirteen (13) copies of the application and supporting materials to:
   - Assessor
   - Commissioner of Building
   - Town Engineer
   - Superintendent of Highways
   - Traffic/Safety Board
   - Fire Chiefs' Association
   - Plumbing Division
   - Right-of-Way Agent
   - Police Department (if applicable)
   - Zoning Enforcement Officer
   - Other Town and outside agencies, as applicable

9. Within 30 days of its receipt of the complete application for Site Plan approval, each agency completes its review and notifies the Planning Department in writing of its comments or recommendations as required by Ordinance.

10. The applicant may be required to submit revised plans, reports, or materials to address review agency comments. The procedures for submittal of revised plans are as follows:

    - A cover letter addressing all comments received to date is required.
    - "Highlight" the area of change on the drawings and provide a notation describing the change.
    - Revised plans/materials are required. Planning staff should be contacted to determine the number of sets needed.
    - All revised plans and materials must also be provided in an electronic format that contains pdf files of the revised information.

11. The Planning Board reviews the EAF to determine whether a Draft Environmental Impact Statement (DEIS) is required. The petitioner will be advised in the event that a DEIS is required and afforded the opportunity to prepare it. If the petitioner declines, the Planning Board will prepare the DEIS at the petitioner's expense. The public hearing will be held on the DEIS concurrently with the Planning Board hearing on the application.

12. Planning Board Meeting Procedures:

    The applicant or representative presents the project at the public hearing before the Planning Board and is available to answer any questions. The Planning Board may take any of the following actions:

    - Adjourn the hearing to a future Planning Board meeting (hearing remains open).
    - Close the hearing and adjourn action on the site plan to a future Planning Board meeting. (The Planning Board may remove the item from the agenda until such time as all required information is provided.)
    - Close the hearing and make a decision on the site plan.

    All determinations on matters before the Planning Board are made after all public hearings on that meeting's agenda are completed.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

13. A copy of the Planning Board's determination will be provided to the applicant, his / her representative, the Building Commissioner and the Town Clerk approximately 1 week following the Planning Board meeting at which it was heard.

14. If the Planning Board approves a Site Plan with conditions, the Planning Department will work with the applicant to ensure that all conditions of the approval are satisfactorily addressed. When all conditions are satisfied, the applicant submits **seven (7) final copies** of the complete set of all site plan drawings, folded into 9" x 12". For site plans in the Mixed-Use zoning districts, building elevations will also be required.

    All 7 sets must have original wet seals and include the required 4 in. x 6 in area in the lower right hand corner for official Town use. These drawings will be stamped and signed "Approved" by the Planning Director and transmitted to Town Departments for their files and use.

15. A building permit will not be issued by the Building Department until the stamped and signed Site Plan is issued by the Planning Director.

NOTE: Please check with the Planning Department to determine the deadline date for filing applications. Due to the public hearing notice requirements and department reviews, no site plan application will be placed on the Planning Board agenda after the deadline for filing has closed. Scheduling may be delayed if an application is incomplete.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Major Site Plan Review

For Official Use

File #: _____ **Acreage** _____ **Fee $** _____

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Received by Planning Department _____ RECEIVED BY DATE

Fee Paid to Town Clerk _____ RECEIVED BY DATE

Site Plan Review		**Fill In Applicable Fees**
1 acre or less	$1,250.00	_____
Each additional acre or fraction thereof	$ 650.00/acre	_____
Amendments to Site Plans	$1,200.00	_____
Request for Relief of / Change to Conditions of Site Plan Approval	$1,200.00	_____
Request for Extension of Site Plan Approval	$ 450.00	_____
Stormwater Pollution Prevention Plan		
1 - 4.99 Acres	$ 500.00	_____
5 - 10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	$ 15.00	_____
	TOTAL FEE:	**$**_____

To Be Completed By Applicant

Petitioner:

Name: Town of Amherst Engineering Department

Address: 1100 North Forest Road

Williamsville (city) NY (state) 14221 (zip code)

Phone: 716.631.7154 Fax: _____

E Mail: jboudreau@amherst.ny.us

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MAJOR SITE PLAN APPLICATION (con't) ***Page 2***

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney)**:**

Name: Leanne Voit, Project Manger, Wendel Companies

Address: 375 Essjay Road, Suite 200

Williamsville (city) NY (state) 14221 (zip code)

Phone: 716.688.0766 Fax:

E Mail: lvoit@wendelcompanies.com

Project Location (must be verified by Town Assessor's Office)**:**

Address: 550 Smith Road

SBL No(s): 16.00-4-20.1 & 16.00-4-16.1

Project Name: Lou Gehrig Amherst Park Parking Lot Expansion

Project Description:

Reconstruction, paving, and re-striping of two (2) existing parking lots at Lou Gehrig Amherst Park. One parking lot is accessed from Dann Road, and the other from Smith Road. Additional work includes installation of storm drainage (catch basins and pipes), installation of parking and pathway lights, and landscaping throughout.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

If this petition is an amendment to a previously approved site plan, please describe the proposed changes (include type and size of existing structures and number of existing parking spaces):

Existing parking lots will be repaved, but not expanded. With the re-striping and reconfiguration of the spaces, the number of parking spaces will increase from approximately 258 un-striped spaces to 354 striped spaces

	existing	proposed	total
Gross Floor Area (non-residential):	NA		
Gross Floor Area Residential:	NA		
Number of Residential Units:	NA		
Number of Parking Spaces:	258+/-		354

Acreage of Parcel:
(list each parcel separately)
Smith Road, 16.00-4-20.1: 62.95+/- acres
Dann Road, 16.00-4-16.1: 17.89+/- acres

Frontage on Public Roads:
(list each road separately)
Smith Road: 1,703+/- linear feet
Dann Road: 990+/- feet

Existing Zoning District(s)
RC: Recreation Conservation

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Site Plan Submittal Requirements and Checklist

The following checklist outlines the information required by the Planning Department to accept a Site Plan application for review. ***It is strongly recommended that you make an appointment with Planning Staff to determine which items apply to your application***.

Item No.	Item	Submitted	Official use
I Basic Drawing Information			
1.0	**Drawing size not to exceed 24" x 36"**		
2.0	**Title of Drawing**		
3.0	**Name and address of Applicant**		
4.0	**Name of person preparing drawing**		
5.0	**Wet seal/raised seal and signature of NYS licensed architect, engineer, landscape architect, or surveyor (as applicable)**		
6.0	**Project address**		
7.0	**Zoning of subject property and adjacent parcels**		
8.0	**North point, scale, date, and revision date(s)**		
9.0	**4" x 6" reserved area in lower right hand corner for official Town use**		
II Structures, Paved Areas, & Open Space			
1.0	**Existing and Proposed Streets**		
1.1	Names of all existing and proposed streets		
1.2	Width and radii of proposed curb-cuts		
1.3	Existing curb-cuts on adjacent and opposite properties		
1.4	Show ROW width, pavement dimensions, lane widths, pavement markings, and proposed signage on proposed streets		
1.5	Show proposed ROW consistent with planned NYSDOT, Erie County, or Town road projects (if applicable)		
1.6	Show location of proposed cross access to adjacent parcels along with a draft easement		
1.7	Designation of Fire Lanes (if applicable)		
1.8	Fire apparatus access roads		
1.9	Label any proposed roads as public or private		
1.10	Location and dimensions of sidewalks		
1.11	Typical cross sections and profiles of proposed streets, pedestrian walkways, and bikeways		
2.0	**Proposed Structures**		
2.1	Location and complete dimensions of proposed structures		
2.2	Setback dimensions of structure(s) to all property lines		
2.3	Proposed use of structures		
2.4	Gross square feet area of each structure		
2.5	Location of all building entrances		
2.6	Indicate type of roof construction/materials		
2.7	Location, height, and design detail of existing and proposed fences and walls		
2.8	Location of light standards and building mounted lights		
2.9	Location of dumpster and detail of dumpster enclosure with gate		
2.10	Layout and dimensions of the lot(s) proposed for development		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.	Item	Submitted	Official use
II Structures, Paved Areas, & Open Space (cont'd)			
3.0	**Floor Plans with individual rooms and spaces labeled** (fully dimensioned)		
4.0	**Building elevations with height dimensions from finished grade to the highest point of the roof and to midpoint of gable or hip of a pitched roof.** (fully dimensioned)		
4.1	Show screening of mechanical equipment		
5.0	**Parking/Loading/Stacking Areas**		
5.1	Location and complete dimensions of all paved areas		
5.2	Setback dimensions of all paved areas to property lines		
5.3	Dimension of typical parking space and drive aisles		
5.4	Location and layout of handicapped parking spaces & access aisles		
5.5	Detail of vertical signage for handicapped parking and access aisles		
5.6	Indicate minimum parking requirement & number of spaces provided		
5.7	Proposed signage for directing and guiding traffic		
5.8	Curb cut permits from NYS, Erie County, or Town (if applicable)		
5.9	Pedestrian connections (from proposed structures to public sidewalk network)		
6.0	**Location and proposed development of all open spaces, including parks, playgrounds, and open reservations**		
III Utilities and Drainage			
1.0	**Engineers Report** (bound separately from the Stormwater Pollution Prevention Plan [SWPPP])		
1.1	Stamped/sealed and signed by NYS licensed architect or professional engineer		
1.2	Proposed water service sizing, RPZ pressure and fire safety flow and pressure calculations		
1.3	Proposed sanitary sewer facility load calculations (avg. & peak flows) including calculation of the peaking factor		
1.4	Proposed storm drainage facility calculations (see information included with this application)		
2.0	**Grading Plan**		
2.1	Existing and proposed grades indicated (proposed grades may not exceed 1 on 3)		
3.0	**Water Service**		
3.1	Location, size and material of existing and proposed facilities		
3.2	Location of existing and proposed fire hydrant location(s)		
3.3	Indicate use of sprinklers, location of Fire Department connection, and proposed fire protection systems		
3.4	Existing and proposed meter/RPZ size and location		
3.5	Applicable construction details		
4.0	**Sanitary Sewers**		
4.1	Locations, sizes, slopes, inverts, and materials of all existing and proposed facilities		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.		Submitted	Official use
III Utilities and Drainage (cont'd)			
4.2	Applicable construction details		
4.3	Proposed water/oil/grease interceptor sizing calculations by a professional engineer (if applicable)		
5.0	**Storm Drainage**		
5.1	Locations, sizes, slopes, inverts, and materials of existing and proposed storm drainage facilities		
5.2	Connection of roof drains to proposed drainage system		
5.3	Applicable Town Standard construction details		
5.4	Existing and proposed swales and ditches		
5.5	Detention area cross-section and high-level elevations		
5.6	County and State approval for tie-in to existing sewers		
6.0	**Stormwater Pollution Prevention Plan (SWPPP) as applicable** (bound separately from the Engineer's Report) **See attached checklist.**		
7.0	**Natural Gas Service**		
8.0	**Location of transformers, generators and other mechanical equipment; include detail drawings (if applicable)**		
9.0	**Downstream Sanitary Capacity Analysis (DSCA) Report** (must be submitted if proposed average flows are greater than 2,500 gallons per day)		
9.1	The DSCA Report must include a detailed downstream sewer capacity analysis and the calculations of and commitment to (via Developer commitment letter) the required financial contribution to the Town's I/I mitigation fund based on peak flow conditions. The contribution must be based on $250 per gallon per minute of mitigated flow		
IV Lighting Plan			
1.0	**Photometric plan showing light spread in foot candles at property lines**		
1.1	Detail of all light standards, including dimension of height from finished grade		
1.2	Detail of all exterior lighting fixtures		
V Landscape Plan			
1.0	**Wet/raised seal and signature of a licensed Landscape Architect**		
2.0	**Provide a calculation of the total Parking area and a calculation of interior parking area in square feet and as a percentage**		
3.0	**Indicate location, size, number and type of proposed landscape materials**		
4.0	**Indicate location, type and size of <u>all</u> existing trees 4" caliper or larger and indicate which will be removed or retained**		
VI Other Required Information/General Requirements			
1.0	**Complete boundary survey that includes all existing structures, acreage, legal description with reference to a property line, street, or other known feature, and easements plotted to scale by a NYS licensed land surveyor**		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
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Item No.		Submitted	Official Use
VI Other Required Information/General Requirements (cont'd)			
1.1	Copies of all easements, reciprocal access agreement or similar leag documents		
2.0	**Topographic Survey with a 30 ft. buffer outside all property lines by a NYS licensed land surveyor**		
3.0	**Draft of any deed restrictions, covenants, provisions for home associations and common ownership, and reciprocal easement agreements (as applicable).**		
4.0	**For assessment purposes, state intent to apply for condominium status (if applicable).**		
5.0	**Completed and signed Environmental Assessment Form**		
5.1	Soil boring report and geotechnical report prepared by a qualified Professional Engineer (if applicable)		
5.2	Traffic Impact Study (if applicable)		
5.3	Archaeological survey (if applicable		
5.4	Wetland Delineation report (if applicable)		
6.0	**Show existing zoning(s) of both the subject property and adjacent parcels on the Site Plan and the Landscape Plan**		
7.0	**Location of NYSDEC wetlands (including buffer area) and/or federal wetlands; indicate jurisdictional status**		
8.0	**Location of Floodway and floodplain** (if applicable)		
9.0	**Documentation pertaining to any conditions of zonings, including copies of required deed restrictions; indicate date of rezoning and the parcel address under which it was rezoned (if applicable)**		
10.0	**Documentation related to any required variances granted by the ZBA**		
11.0	**For residential site plans, provide a statement from the appropriate school district that adequate school sites and facilities are available.**		
12.0	**8 1/2" X 11" reduction of primary site plan drawing (see appendix "B" of application package for specifications)**		
13.0	**A CD containing a PDF of all site plan drawings (Must also be provided with revised drawings)**		
VII Additional Required Information for Projects in the Mixed Use Districts			
1.0	**Design Advisory Board Application**		
1.1	Required for Major Site Plan		
1.2	Required at the Planning Directors Discretion for Minor Site Plans		
2.0	**Block & Street Network Plan**		
2.1	Designation of Core, Local & Alley streets		
2.2	Dimensions of Blocks		
3.0	**Block Usage Plan (as applicable)**		
3.1	Designation of site usage for each block including open space areas		
4.0	**Phasing Plan**		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

For official use only:

_____
Approved/Date

X:\Current_Planning\Application Forms 2013 Working Doc\Major Site Plan\Site Plan Submittal Requirements and Checklist (3).doc

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

TOWN OF AMHERST
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
-- ADDENDUM --

1. For each applicable category of proposed new structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
La: Lakemont silt loam					
Od: Odessa silt loam		NO NEW STRUCTURES PROPOSED			

2. Is your property located: On Youngs Road between Dodge and Klein Roads? □ Yes ☒ No
   On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? □ Yes ☒ No

   If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

3. Are there alternative locations on the site for this project? □ Yes ☒ No

4. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
   125.66+/- acres surrounding the project area

5. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: □ Yes ☒ No

   Describe_____

   (Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

6. Maximum number of vehicular trips to be generated per peak hour upon completion of project_____
   Source: No increase as no new structures or facilities that will increase usage are being constructed

7. Will blasting occur during construction? □ Yes ☒ No

8. Does the project propose to connect and be tributary to the public sanitary sewer system? □ Yes ☒ No

9. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:
   NA average flow NA peak flow.

   (Average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

10. Based on the Town's *2011 Reconnaissance Level Survey of Historic Resources,* is your property 'blue-rated' for historic significance? □ Yes ☒ No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Full Environmental Assessment Form
Part 1 - Project and Setting

RECEIVED
AUG 20 2024
TOWN OF AMHERST
PLANNING DEPT.

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Lou Gehrig Amherst Park Parking Lot Expansion		
Project Location (describe, and attach a general location map): 50 Dann Road, Amherst, NY		
Brief Description of Proposed Action (include purpose or need): Reconstruction, paving, and re-striping of two (2) existing parking lots at Lou Gehrig Amherst Park. One parking lot is accessed from Dann Road, and the other from Smith Road. Additional work includes installation of storm drainage (catch basins and pipes), installation of parking and pathway lights, and landscaping throughout.		
Name of Applicant/Sponsor: Town of Amherst Engineering Department	Telephone: 716.631.7154 E-Mail:	
Address: 1100 N.Forest Road		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role): Jessica Boudreau	Telephone: 716.631.7154 E-Mail: jboudreau@amherst.ny.us	
Address:		
City/PO:	State: NY	Zip Code:
Property Owner (if not same as sponsor): Town of Amherst	Telephone: E-Mail:	
Address: 5583 Main St		
City/PO: Williamsville	State: NY	Zip Code: 14221

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	**If Yes: Identify Agency and Approval(s) Required**	**Application Date (Actual or projected)**
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes☑No		
b. City, Town or Village Planning Board or Commission ☑Yes☐No	Planning Board Site Plan Approval	6/28
c. City, Town or Village Zoning Board of Appeals ☑Yes☐No	ZBA	
d. Other local agencies ☐Yes☑No		
e. County agencies ☐Yes☑No		
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC: wetland permit, SPDES	
h. Federal agencies ☐Yes☑No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):
NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
RC - Recreation Conservation

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Williamsville Central School District

b. What police or other public protection forces serve the project site?
Town of Amherst

c. Which fire protection and emergency medical services serve the project site?
Town of Amherst

d. What parks serve the project site?
Lou Gehrig Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Parking for recreational purposes

b. a. Total acreage of the site of the proposed action? **(portion of)** 80.79+/- acres
b. Total acreage to be physically disturbed? 4.3+/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 125.66+/- acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

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f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i. What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑Yes ☐No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Refer to attached Wetlands Report and Permit Application

_____

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
The proposed action will impact a small portion of a NYSDEC wetland, however the area will be mitigated during the restoration of the same wetland. Refer to attached Wetlands Report and Permit Application

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No
If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No
If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or ___+ acres (impervious surface)

_____ Square feet or 80.+ acres (parcel size) **(two parcels)**

ii. Describe types of new point sources. None

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Smith Rd parking lot drainage will be directed to two dry ponds through new catch basins and new storm pipes, ultimately out-falling in the existing grass ditch. The Dann Rd parking lot drainage will be directed into the existing system (with some minor improvements), ultimately out-falling into the existing grass ditch.

- If to surface waters, identify receiving water bodies or wetlands: Existing Town ditch system to Black Creek (Ransom Creek Watershed 0102-0004)
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☑No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 258+/- Proposed 354 Net increase/decrease +96

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:
The entrance/exit drives for both parking lots have been reconfigured to allow for safer access and improved traffic flow

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☑No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00am-9:00pm
- Saturday: 8:00am-5:00pm
- Sunday: 9:00am-5:00pm
- Holidays: _____

ii. During Operations: **(in-season only)**

- Monday - Friday: 5:00am-11:00am
- Saturday: 7:00am-9:00pm
- Sunday: 7:00am-9:00pm
- Holidays: _____

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m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Construction equipment during construction only, and only during Town-approved hours

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Parking lot and path lighting placed strategically and at heights ranging from 12'-25'

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

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s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: _____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Recreation

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	9.23+/-	9.23+/-	0
• Forested			
• ~~Meadows~~, grasslands or ~~brushlands~~ (non-agricultural, including abandoned agricultural)	7.2+/-	7.2+/-	0
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: NYSDEC wetland (largely vegetated)	34.5 +/-	34.5 +/-	0
Athletic Fields, lawns, landscaping	29.86 +/-	29.86 +/-	0

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c. Is the project site presently used by members of the community for public recreation? ☑ Yes ☐ No

i. If Yes: explain: Existing softball fields and support buildings

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

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v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☐No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6 feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☑No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

La: Lakemont silt loam	19 %
Od: Odessa silt loam	81 %
	%

d. What is the average depth to the water table on the project site? Average: 0-1.5 feet

e. Drainage status of project site soils:

☐ Well Drained:	% of site
☐ Moderately Well Drained:	% of site
☑ Poorly Drained	100 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	100 % of site
☐ 10-15%:	% of site
☐ 15% or greater:	% of site

g. Are there any unique geologic features on the project site? ☐Yes ☑No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐Yes ☑No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information: **(see attached report)**

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☑No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☑Yes ☐No

j. Is the project site in the 100-year Floodplain? ☑Yes ☐No

k. Is the project site in the 500-year Floodplain? ☐Yes ☑No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☑No
If Yes:

i. Name of aquifer: _____

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m. Identify the predominant wildlife species that occupy or use the project site:
possible deer, squirrels, rodents

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No
If Yes:
i. Species and listing (endangered or threatened):

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

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e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Leanne Volt (as agent for owner) Date 6/28/2024

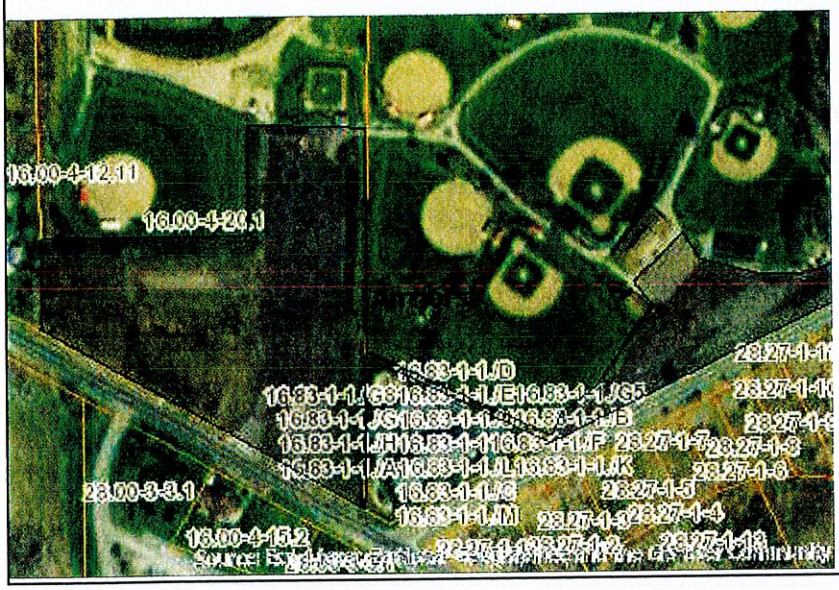
Signature _____ Title Project Manager, Wendel

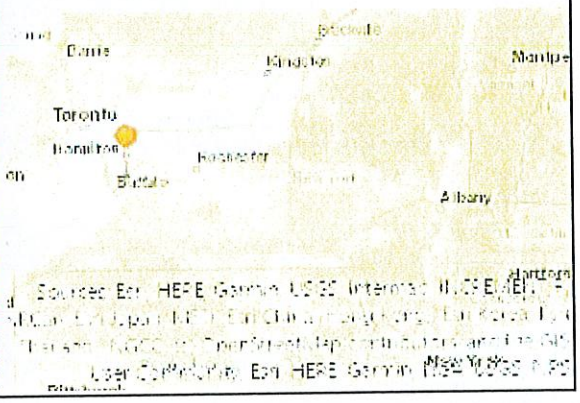
PRINT FORM

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EAF Mapper Summary Report

Friday, June 21, 2024 1:31 PM





Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

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E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, Region 9
700 Delaware Avenue, Buffalo, NY 14209
P: (716) 851-7010 | F: (716) 851-7005
www.dec.ny.gov

May 29, 2024

Jessica Boudreau
Town of Amherst
1100 North Forest Road
Williamsville, New York 14221

Dear Jessica Boudreau:

Wetland CC-45
Boundary Delineation
Lou Gehrig Field
550 Smith Road & 0 Dann Road
Town of Amherst, Erie County

This letter serves as notification that I conducted a field visit of the property at 550 Smith Road & 0 Dann Road property, parcel #16.00-4-20.1 & 16.00-4-16.1, on September 14, 2022, to determine whether wetlands present within and adjacent to the parcel meet New York State Department of Environmental Conservation (NYSDEC) criteria for state wetlands jurisdiction.

Based on our review, we verified the boundary, delineated by Earth Dimensions Inc. (EDI), of Wetland CC-45, denoted as “Wetland W1” and “Wetland W2” by EDI. The wetland boundary flagged by Earth Dimensions, Inc. is identified with pink plastic flagging, and is depicted in Figure 6 in their April 2022 Wetland and Waterbodies Delineation Report (enclosed). Please note that the NYSDEC boundary verification deviated from this mapped boundary for “Wetland W1”, due to the presence of fill in the wetland. A map depicting the NYSDEC’s final jurisdictional wetland boundary is attached, and the changes are explained below.

For “Wetland W1”, which extends generally east to north to west on the west side of the 550 Smith Road parcel, EDI flags W1-1 through W1-4 and W1-6 through W1-11 were eliminated by the NYSDEC. The NYSDEC 2010 delineated boundary was inserted, beginning with consecutively numbered flags A14 through A28, which connects to EDI Flag W1-5, which connects to DEC flag A29, which connects to EDI flags W1-12 through W1-14, which connects to DEC flags A32 to A41, as is shown in the attached map.

“Wetland W2” is consecutively numbered from W2-1 through W2-4, and extends generally south to north along the east side of the 0 Dann Road parcel.

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Based on our review, we determined that there is no state-regulated freshwater wetlands jurisdiction of EDI's "Wetland W3." Specifically, the DEC determined that "Wetland W3" is not part of Wetland CC-45 as it does not substantively function as a unit with the extensive area of Wetland CC-45 to the northeast in providing wetland benefits. Wetland 3 is small in size (<0.1 acre), it exhibits a seasonally saturated hydrologic regime, it lacks DEC Class 1 wetland characteristics, and is separated from the main body of Wetland CC-45 by a ditch. Similarly, "Wetland W3" is not dependent on the main body of Wetland CC-45 in providing wetland benefits.

In 1975, the New York State Legislature passed the Freshwater Wetlands Act to preserve and protect wetlands and their functions, such as flood protection and fish and wildlife habitat. Activities that may have a negative impact on the wetlands and their functions, such as construction, filling, draining, clearing vegetation, or polluting, are regulated. Landowners must first obtain permits in order to ensure that no problems result from their proposed activities in the wetland or the regulated 100-foot adjacent area. Contact our Division of Environmental Permits Office for information regarding permit requirements at:

New York State Department of Environmental Conservation
Division of Environmental Permits
270 Michigan Avenue
Buffalo, New York 14203-2915
Telephone: (716) 851-7165

Locations of wetland flags were recorded with a hand-held Global Positioning System and, therefore, may not be survey-accurate. In addition, DEC flags from 2010 are no longer present.

Please note that, for the purpose of your Article 24 application, this Department will not require a surveyed wetland boundary map. Instead, the plans included in the Joint Permit Application dated April 1, 2020 are acceptable. Instead, you may submit a sketch of the planned work areas in your anticipated Joint Application.

Be advised that the U.S. Army Corps of Engineers may also have wetland jurisdiction irrespective of the Department of Environmental Conservation. For more information, you may contact the Corps at:

United States Army Corps of Engineers Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207
Telephone: (716) 879-4330

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If you have any questions about this wetland delineation, please feel free to call me in the Buffalo office at (716) 851-7010.

Sincerely,

Angela G. Driscoll
Wetlands & Waters Ecologist
Region 9 - Buffalo

AGD:ef

Attach: Consultant Wetland Location Map
Delineation Map
Wetland Information Handout

cc: Maureen Brady, NYSDEC Office of General Counsel
Chuck Rosenburg, NYSDEC Division of Fish and Wildlife
Lisa Czechowicz, NYSDEC Division of Environmental Permits
Jody Celeste, Earth Dimensions, Inc.
Leanne Voit, Wendel Companies
William Anterline, Wendel Companies
Jeffrey Burroughs, Town of Amherst
Eric Guzdek, Town of Amherst
Wetland CC-45 file

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Wetland and Waterbodies Delineation Report

for

LOU GEHRIG FIELD PARKING

Town of Amherst

Erie County, New York

for

Wendel

EARTH DIMENSIONS, INC.

Soils Investigations • Wetland Delineations

April 21, 2022
EDI Project Code: **W6D93d**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

REPORT SUMMARIZING
THE RESULTS OF
A WETLAND DELINEATION SURVEY OF

LOU GEHRIG FIELD PARKING

Prepared for Submission to:

U.S. ARMY CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207

AND

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
270 MICHIGAN AVENUE
BUFFALO, NEW YORK 14203

Prepared By:

EARTH DIMENSIONS, INC.
1091 JAMISON ROAD
ELMA, NEW YORK 14059

Prepared For:

LEANNE VOIT
WENDEL
CENTERPOINTE CORPORATE PARKWAY
350 ESSJAY ROAD, SUITE 200
WILLIAMSVILLE, NEW YORK 14221

REPORT DATE: April 21, 2022

EDI PROJECT CODE: W6D93d

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PROJECT INFORMATION

Project Name	Lou Gehrig Field Parking
Street Address	550 Smith Road & 0 Dann Road
SBL Numbers	16.00-4-20.1 & 16.00-4-16.1
Town	Amherst
County	Erie
State	New York
Latitude/Longitude (NAD83)	43.05207°N, 78.71373°W
Investigation Area	6.02± Acres
USGS 7.5 Minute Topographical Map	Clarence Center Quadrangle
Waterway	Ransom Creek
Hydrologic Unit Code	04120104
Date of Delineation	April 19, 2022
Consultant	Earth Dimensions, Inc. 1091 Jamison Road Elma, New York 14059
Point of Contact	Scott Livingstone (716)655-1717 slivingstone@earthdimensions.com
Engineer	Wendel
Property Owner	Town of Amherst
Authority	Section 404, Article 24
Permit/Letter Being Requested	Jurisdictional Determination

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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EXECUTIVE SUMMARY

The Town of Amherst has proposed improvements to existing parking lots within the Lou Gehrig Baseball Field complex located along the north side of Smith Road and Dann Road in the Town of Amherst, County of Erie, and State of New York. Wendel has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation report that would allow the U.S. Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) to determine their jurisdictional authority over the investigation area, pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

A preliminary review of available information pertaining to vegetation, soils, and hydrology in the project area was implemented prior to conducting a field investigation at the site. Sources of information included the United States Geological Survey (USGS), Natural Resources Conservation Service (NRCS), National Wetland Inventory (NWI), and NYSDEC Freshwater Wetland maps. The NRCS and NWI maps indicate the potential for wetlands under federal jurisdiction. The NYSDEC map indicates the potential for wetland under state jurisdiction.

EDI applied methodology specified by the Corps of Engineers Wetlands Delineation Manual (January 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012) to perform a delineation of Federal jurisdictional wetlands within the site. EDI identified three (3) wetland areas totaling 0.39± acre within the investigation area. A man-made ditch is present tin the eastern portion of the site. The identification number of the wetlands, their acreage and boundary flags are as follows:

TABLE 1: WETLAND SUMMARY

Wetland Identification #	Geographic Center (NAD83)		Boundary Flag #	Total Acreage On-site	Wetland Type (Cowardin)	Wetland Type (Reschke)	Jurisdictional Determination
	Latitude	Longitude					
Wetland 1	43.05246	78.71555	W1-1 through W1-14	0.23±	PEM/SS1B	Emergent Marsh/Scrub-shrub	Jurisdictional
Wetland 2	43.05312	78.71093	W2-1 through W2-4	0.07±	PFO1B	Hardwood Swamp	Jurisdictional
Wetland 3	43.05293	78.71133	W3-1 through W3-6	0.09±	PFO1B	Hardwood Swamp	Jurisdictional
Total Wetland Acreage:				0.39±			

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

TABLE 2: STREAM & DRAINAGE SUMMARY

Stream Identification #	Waterway	DEC Class	Linear Feet On-site	Highwater Width (Ft)	Flow Regime	Substrate	Classification (Cowardin)	Jurisdictiona Determinatic
Ditch 1	N/A	N/A	175 feet	1 to 2 feet	Ephemeral	Organic, silt	R4SB6	Non-Jurisdictiona

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION I: INTRODUCTION

The Town of Amherst has proposed improvements to existing parking lots within the Lou Gehrig Baseball Field complex located along the north side of Smith Road and Dann Road in the Town of Amherst, County of Erie, and State of New York. The project has been given the name Lou Gehrig Field Parking and is located on USGS 7.5 minute quadrangle map indexed as Clarence Center (Figure 1). The field work was completed on April 19, 2022 using a Trimble Geo 7X GPS to locate wetland and drainage boundaries.

Wendel has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation study at this site. The investigation was designed to facilitate a determination of the extent of USACE and NYSDEC jurisdiction over the project area pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

EDI has performed a wetland delineation study at the site under guidelines specified by the *Corps of Engineers Wetlands Delineation Manual*, dated January 1987 (referred to hereafter as the Corps Manual) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region version 2.0* (January 2012) (referred to hereafter as the Northcentral and Northeast Regional Supplement). The purpose of this report is to present EDI's methods, results, conclusions, and recommendations with respect to the Lou Gehrig Field Parking project site.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION II: SITE DESCRIPTION

The Lou Gehrig Field Parking project area is comprised of two separate investigation areas totaling 6.02± acres on the north side of Smith Road and Dann Road. The western investigation area, 3.41± acres, is on the north side of Smith Road, west of the Dann Road intersection. The eastern investigation area, 2.61± acres, is on the north side of Dann Road, east of the intersection with Smith Road. The investigation area is outlined on Figure 1 and depicted on the Wetland Delineation Map included in Appendix A (Figure 6).

The natural topography of the Lou Gehrig Field Parking site is flat. The property is currently used as a baseball field complex and recreational area. Numerous baseball fields, parking areas and paved trails are present. The uplands within the investigation area consisted of existing gravel parking lot, successional old field, and mowed lawn communities. The wetland areas were found to consist of shallow emergent marsh, scrub-shrub swamp, and hardwood swamp communities. The vegetative communities of the investigation area are described according to *Ecological Communities of New York State* (Edinger et al. 2014).

The proposed project entails improving the gravel parking lots within the footprint of the existing parking areas. The parking areas are partially within the 100-foot Upland Adjacent Area to NYSDEC Freshwater Wetland CC-45.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION III: PRELIMINARY DATA REVIEW

A. SUMMARY OF FINDINGS

Several sources of information may be reviewed to facilitate the completion of a wetland delineation study. In some cases, it is even possible to make a preliminary office wetland determination based upon available vegetation, soils, and hydrologic information for a project area. EDI completed a preliminary review of several data sources at the onset of this study. The results of the review are summarized as follows:

1. USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Figure 1 depicts the Lou Gehrig Field Parking project site on the Clarence Center quadrangle map. The figure depicts the flat topography of the site. No drainage features are depicted within the investigation area.

2. USFWS NATIONAL WETLANDS INVENTORY MAP

The National Wetlands Inventory (NWI) map obtained from the USFWS Wetland Mapper http://www.fws.gov/wetlands/Data/Mapper.html displays one (1) wetland type, PFO1B, near the eastern edge of the investigation area. The wetland can be decoded as:
[P] Palustrine, [FO] Forested, [1] Broad leaved-deciduous, [B] Saturated

3. NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP

Figure 3 presents the project area outlined on a copy of the Erie County Soil Survey map from the National Cooperative Soil Survey. As shown on that figure, the site has the following soil types:

Soil Conservation Service Legend

Map Unit Symbol	Map Unit Name	Hydric Rating
La	Lakemont silt loam, 0 to 3% slopes	95
Od	Odessa silt loam, 0 to 3% slopes	5

Lakemont Series: The Lakemont series consists of deep, poorly drained and very poorly drained soils of lake plains. They are nearly level soils formed in very slowly permeable reddish colored clayey lacustrine sediments. Slope ranges from 0 to 3 percent. Permeability is moderately slow in the surface

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and very slow in the subsoil sand substratum. Mean annual temperature is about 48°F and mean annual precipitation is about 34 inches.

Odessa Series: The Odessa series consists of very deep, somewhat poorly drained soils formed in red, clayey lacustrine deposits. These soils are in moderately low areas on lake plains and valley terraces. Slope ranges from 0 to 20 percent. Mean annual temperature is 46°F and mean annual precipitation is 39 inches.

The U.S. Department of Agriculture's National Technical Committee for Hydric Soils Criteria has developed a list of soils that often display hydric soil characteristics. Hydric soil typically forms in places of the landscape where surface water periodically collects for some time and/or where groundwater discharges sufficient to create waterlogged or anaerobic soils. Such anaerobic soils can support the growth and survival of hydrophytic vegetation that is tolerant of such conditions. The Hydric Rating indicates the proportion of map units that meets the criteria for hydric soils. Soil units are designated as "hydric," "predominantly hydric," "partially hydric," "predominantly nonhydric," or "nonhydric" depending on the hydric rating of its respective components. "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly nonhydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Nonhydric" means that none of the components are rated as hydric. Wetland hydrologic conditions, hydric soils, and hydrophytic vegetation are the three criteria of a wetland.

4. NYSDEC Freshwater Wetlands Map

The NYSDEC Freshwater Wetlands map obtained from the online NYSDEC Environmental Resource Mapper displays state jurisdictional Freshwater Wetland CC-45 within and adjacent to the investigation area.

B. RESULTS OF AGENCY INFORMATION REVIEW

The preliminary data review revealed that the Corps may have jurisdiction over wetlands at the project location. The evidence consisted of potential federally regulated wetlands on the NWI map (Figure 2) and hydric soils and soils with possible inclusions depicted within the project area as shown on the

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NRCS map (Figure 3). The preliminary data review indicated that NYSDEC may have jurisdiction over wetlands on site as depicted on the NYSDEC Resource Mapper (Figure 4). Therefore, it was considered necessary to perform a field investigation at the site in order to determine the presence of federal and state protected wetlands. The methods specified in the Corps of Engineers Wetlands Delineation Manual (January 1987) and Northcentral and Northeast Regional Supplement Version 2.0 (January 2012) were employed during the field investigation. Procedures, results, and conclusions of the wetland delineation study are presented in the remainder of this report.

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SECTION IV: FIELD INVESTIGATION PROCEDURES

WETLANDS:

Step 1

EDI applied methodology specified by the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region to perform a delineation of Federal jurisdictional wetlands within the site. EDI used the Level 2 Routine Determination method (on-site inspection necessary) since insufficient information was available for making a determination for the entire project area. This methodology is consistent with Part IV, Section D of the Corps Manual.

Step 2

EDI's initial evaluation of the project area revealed that no atypical situations existed. If an atypical situation had existed, EDI would have used methodology outlined in Part IV, Section F of the Corps manual and/or Section 5 of the Northcentral and Northeast Supplement.

Step 3

EDI made the determination that normal environmental conditions were present, as the area was not lacking hydrophytic vegetation or hydrologic indicators due to annual, seasonal or long-term fluctuations in precipitation, surface water, or groundwater levels. The Northcentral and Northeast Supplement defines the growing season as beginning when one of the following indicators of biological activity are evident in a given year: (1) above-ground growth and development of vascular plants and/or (2) soil temperature measured at 12" below ground surface reaches 41ºF. The end of the growing season is defined as the point at which deciduous species lose their leaves or the last herbaceous plants cease flowering and their leaves become dry or brown, whichever comes latest.

Step 4

In order to accurately identify the limits of various vegetative communities and extent of wetlands on-site, a routine determination method was used. As depicted in Appendix A and included in Appendix B, three (3) data points were used to characterize the site.

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Step 5

The plant community inhabiting each observation point was characterized in accordance with methods specified in the Northcentral and Northeast Regional Supplement. Dominant plant species were identified within four vegetative strata (i.e. herb, sapling/shrub, tree and liana (woody vines) at each sampling point. The Northcentral and Northeast Regional Supplement defines the vegetative strata in the following manner:

Herb – A non-woody individual of a macrophytic species. Seedlings of woody plants (including vines) that are less than 3.28 feet in height are considered to be herbs.

Sapling/Shrub – A layer of vegetation composed of woody plants < 3.0 inches in diameter at breast height but greater than 3.28 feet in height, exclusive of woody vines.

Tree – A woody plant > 3.0 inches in diameter at breast height, regardless of height (exclusive of woody vines)

Liana – A layer of vegetation in forested plant communities that consist of woody vines greater than 3.28 feet in height.

As outlined in the manual, the quadrant sizes used for the vegetative strata were (i) a 3.28-foot radius for herbs; (ii) a ten-foot radius for saplings/shrubs and woody vines; and (iii) a 30-foot radius for trees. Dominant plant species were estimated using aerial coverage methods. Dominant species are defined in the Corps Manual as the most abundant plant species that when ranked in descending order of abundance and cumulatively totaled immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure.

The wetland indicator status (OBL, FACW, FAC, FACU, or UPL) listed for each identified species by the U.S. Fish and Wildlife Service in the National List of Plant Species that Occur in Wetlands: Northeast (Region 1) was recorded. The U.S. Fish and Wildlife wetland indicator status listings are defined as follows:

OBL – Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability < 1 percent) in nonwetlands.

FACW – Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in nonwetlands.

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FAC – Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring in both wetlands and nonwetlands.

FACU – Plants that occur sometimes (estimated probability 1 percent to <33 percent) in wetlands but occur more often (estimated probability >67 percent to 99 percent) in nonwetlands.

UPL – Plants that occur rarely (estimated probability < 1 percent) in wetlands but occur almost always (estimated probability >99 percent) in nonwetlands under natural conditions.

The plant community data was summarized on the data forms provided in the Northcentral and Northeast Regional Supplement included in this report as Appendix B.

Step 6

Plant data from each observation point were tested against the hydrophytic vegetation criterion specified in the Corps Manual and Northcentral and Northeast Regional Supplement. The Northcentral and Northeast Regional Supplement identifies a four-tiered approach for making a determination of whether or not the hydrophytic vegetation criteria is met for a sample plot. Indicator 1 (Rapid Test for Hydrophytic Vegetation) was first applied to determine if all dominant species across all strata are rated OBL and/or FACW. If Indicator 1 did not meet the hydrophytic vegetation criteria, Indicator 2 was then applied (dominance test); if greater than 50% of all plant species across all strata were rated OBL, FACW, or FAC, the hydrophytic vegetation criteria was considered met. In rare cases, when Indicators 1 and 2 did not meet the hydrophytic vegetation criteria but soils and hydrology criteria were met, Indicators 3 (Prevalence Index) and 4 (Morphological Adaptations) were used to make a final determination. All observation points that met the hydrophytic vegetation criterion were considered potential wetlands. Soils were then characterized.

Step 7

The Corps Manual specifies that soils need not be characterized (and are assumed hydric soils) at sampling points meeting the hydrophytic vegetation criterion if: (i) all dominant plant species have an indicator status of OBL, or (ii) all dominant species have an indicator status of OBL and/or FACW, and the wetland boundary is abrupt (at least one dominant OBL species must be present). All observation points sampled during this field investigation were examined directly for soil and hydrologic characteristics.

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Step 8

At observation points requiring a soil evaluation, soil borings were performed by an EDI Soil Scientist using methods specified in the Northcentral and Northeast Regional Supplement. Soil pits were dug using a tile spade. Testpits were generally dug to a depth of 20 inches below ground surface. Soils were examined for any of the hydric soil indicators, as outlined in the Field Indicators of Hydric Soils in the United States. A determination was made as to whether or not the hydric soil criterion was met. Soils data was recorded on the data forms included in Appendix B of this report.

Step 9

EDI's Soil Scientist examined hydrologic indicators using methods specified by the Northcentral and Northeast Regional Supplement at each observation point. The wetland hydrology criterion was met if: (i) one or more primary field indicators was materially present, (ii) available hydrologic records provided necessary evidence, or (iii) two or more secondary indicators were present. Results were recorded on data forms taken from the Corps Manual and are included in this report as Appendix B.

Step 10

A wetland determination was made for every observation point. If a sample plot met the hydrophytic vegetation, hydric soil, and wetland hydrology criteria, the area was considered to be wetland.

Step 11

Based on the results of the transected data, wetland boundaries were established for each identified wetland using survey ribbon labeled “wetland delineation” and numbered consecutively along each wetland boundary. As outlined in the Corps Manual, the placement of flags was based on the limits of areas where all three parameters were met. Wetland flags were labeled W1-1 through W1-14, W2-1 through W2-4 and W3-1 through W3-6.

STREAMS & DRAINAGES:

The federally regulated Ordinary High Water (OHW) mark of streams within the Project area were delineated utilizing the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary

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High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial, intermittent, or ephemeral, as defined by the USACE. The Ordinary High Water (OHW) mark for each stream is surveyed using the Trimble Geo 7X GPS. Each stream is assigned a letter designation, and survey points are numbered consecutively. Substrate characteristics and water depth are noted. Streams classified as AA, A, B, C, C(t), C(ts) and D in the State of New York are regulated by NYSDEC under Article 15 Use and Protection of Waters. Streams are given classifications which designate the level of protection afforded to each waterbody. Class AA and A are assigned to sources of drinking water. Class B streams are best suited for swimming and other contact recreation, but not drinking water. Class C streams identify waters that support fishing and non-contact activities. A classification with (t) designated a stream with the potential to support trout populations. A classification of (ts) identifies waters that may support trout spawning. Class D waters are the lowest classification and are often highly imperiled.

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SECTION V: RESULTS AND CONCLUSIONS

Earth Dimensions, Inc. (EDI) has completed a wetland delineation study at the Lou Gehrig Field Parking site located in the Town of Amherst, County of Erie, and State of New York. A field investigation was conducted by a Soil Scientist and a Wetland Ecologist from EDI. The wetland delineation study identified three (3) wetlands totaling 0.39± acre present within the Lou Gehrig Field Parking site. In addition, a 175-foot portion of a man-made ditch was identified. No waterbodies were identified within the investigation area.

Figure 5 depicts the vegetative communities as they existed at the time of the investigation. The uplands within the investigation area were comprised of gravel parking areas, successional old field, and mowed lawn communities. The wetland areas were found to consist of shallow emergent marsh, scrub-shrub swamp, and hardwood swamp communities. The vegetative communities of the investigation area are described according to Ecological Communities of New York State (Edinger et al. 2014).

The successional old field community was dominated by the following species: Canada goldenrod (*Solidago canadensis*) and Fuller's teasel (*Dipsacus fullonum*). This community is adjacent to Wetland W1 and has not been mowed for a few seasons.

No data was taken in the mowed lawn community; however, species present are consistent with descriptions provided by Reschke. This community also includes portions of the existing baseball fields.

Wetland W1 is a 0.23± acre emergent marsh/scrub-shrub swamp dominated by pussy willow (*Salix discolor*), narrowleaf cattail (*Typha angustifolia*) and common rush (*Juncus effusus*). The community is predominantly emergent with scattered shrubs and saplings beginning to dominate. Soils within wetland W1 are mapped as Odessa silt loam and had a topsoil color of 7.5YR3/1 and a subsoil color of 7.5YR5/1 with 5% 7.5YR5/8 mottles. The texture is silty clay loam and silty clay. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W1 included surface water (A1), saturation (A3) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W1 is Federally jurisdictional under the currently applicable post-Rapanos Rule due to a

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significant nexus to a traditionally navigable water. It is also EDI's professional opinion that wetland W1 is connected to NYSDEC Freshwater Wetland CC-45 and is jurisdictional under Article 24.

Wetland W2 is a 0.07± acre hardwood swamp dominated by pin oak (*Quercus palustris*), American elm (*Ulmus americana*), creeping Jenny (*Lysimachia nummularia*), reed canarygrass (*Phalaris arundinacea*) and upright sedge (*Carex stricta*). Soils within wetland W2 are mapped as Lakemont silt loam and had a topsoil color of 7.5YR3/1 and a subsoil color of 7.5YR5/1 with 15% 7.5YR5/8 mottles. The texture is silt loam and silty clay loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W1 included surface water (A1), high water table (A2), saturation (A3) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W2 is Federally jurisdictional under the currently applicable post-Rapanos Rule due to a significant nexus to a traditionally navigable water. It is also EDI's professional opinion that wetland W2 is connected to NYSDEC Freshwater Wetland CC-45 and is jurisdictional under Article 24.

Wetland W3 is a 0.09± acre hardwood swamp dominated by pin oak (*Quercus palustris*). It is EDI's professional opinion that Wetland W3 is Federally jurisdictional under the currently applicable post-Rapanos Rule due to a significant nexus to a traditionally navigable water. It is also EDI's professional opinion that wetland W3 is connected to NYSDEC Freshwater Wetland CC-45 and is jurisdictional under Article 24.

Ditch 1 is a man-made ditch approximately 2 feet deep with 1 to 2 inches of standing water. There was no directional flow during the field visit. The ditch was nearly fully vegetated with grasses and had a dense layer of detritus (leaves). Ditch 1 is assumed to be non-jurisdictional under Section 404 and Article 24.

A map which depicts the site boundaries and the location of all observation points established during the field survey is included as Figure 6 in Appendix A of this report. Data forms are included as Appendix B. Appendix C includes representative photographs of the project area. Appendix D notes the references used during the preparation of this report and during the field investigation. Appendix E provides the names, addresses and phone numbers of the survey personnel involved in the wetland delineation study.

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SECTION VI: RECOMMENDATIONS

Three (3) wetland areas and one (1) ditch were identified during the course of a field investigation based upon the three parameter technique (vegetation, soils, and hydrology) outlined in the Corps Manual and Northcentral and Northeast Regional Supplement. It is EDI's professional opinion that all three wetland areas are regulated by the USACE under Section 404 of the Clean Water Act. It is also EDI's opinion that all three wetlands are part of Freshwater Wetland CC-45 and would be regulated by NYSDEC under Article 24 of the New York Conservation Law. USACE and NYSDEC approach their regulatory analyses by first considering avoidance of wetlands and minimization of wetland losses. EDI recommends the following:

(1) Submit this report to USACE and NYSDEC with a request for a wetland boundary confirmation and jurisdictional determination.

(2) If no impacts are proposed to federal or state regulated wetlands or state regulated 100-foot adjacent area based on the outcome of the jurisdictional determination, it is the professional opinion of EDI that the project may proceed without the need for Section 404 or Article 24 Permits.

(3) If any NYSDEC regulated upland adjacent area or federal or state jurisdictional wetland impacts are proposed, it is EDI's recommendation that a Joint Application for Permit and supporting documentation be submitted to the USACE and NYSDEC with a request for a Section 404 Permit, Section 401 Water Quality Certification, and/or an Article 24 Permit.

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LOU GEHRIG FIELD PARKING

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APPENDIX A - FIGURES

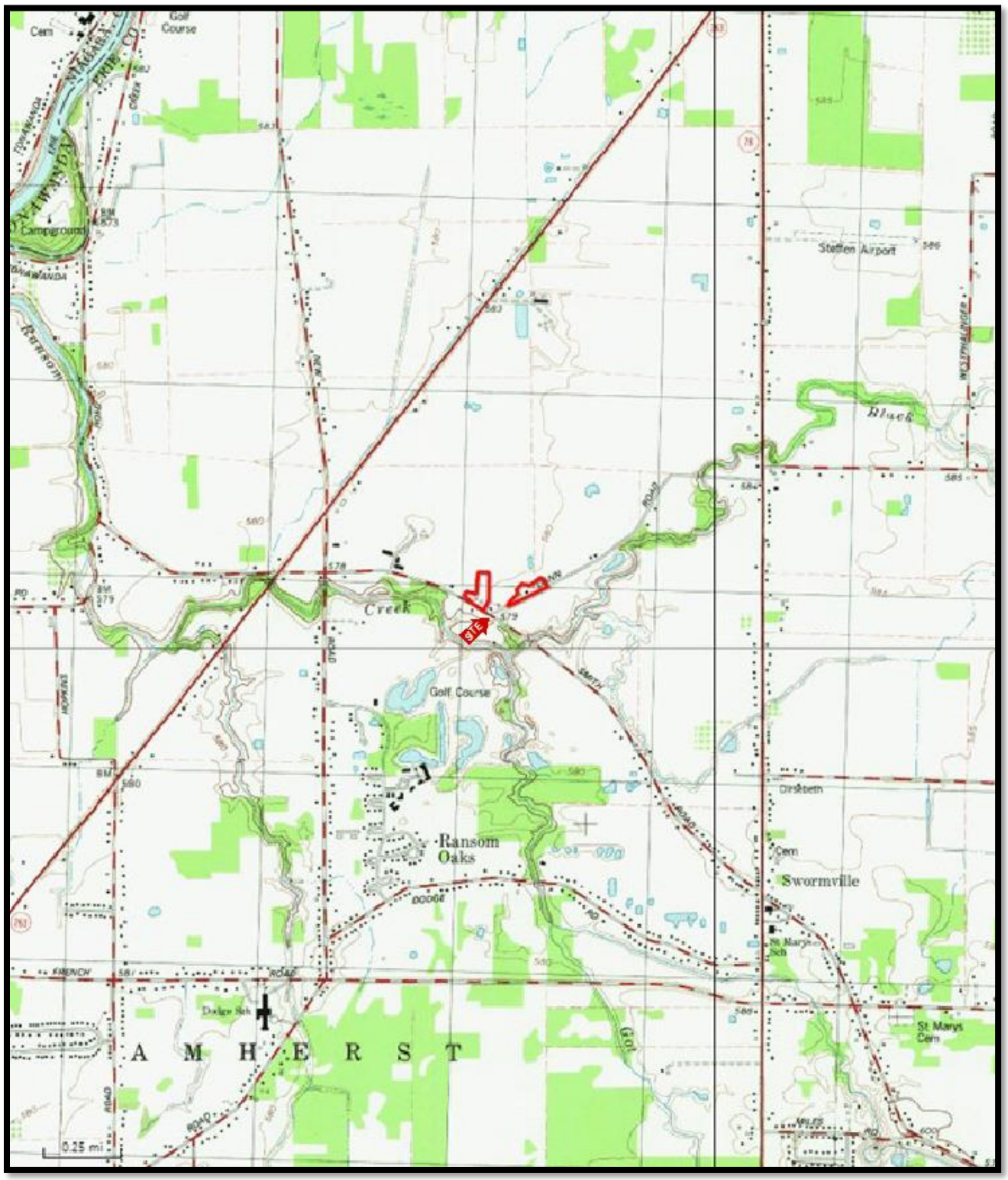


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / U.S. Geological Survey

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

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FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 4/21/22)

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

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FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 4/21/22)

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

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FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 4/21/22)

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

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Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, IN
1091 Jamison Road | Elma, NY
(716) 655-1717 | www.earthdimensions.com



Lou Gehrig Field Parking

LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- ML Mowed Lawn
- EM Emergent/Scrub-shrub
- HS Hardwood Swamp

Scale: 0 100′ 200′
Map Date: April 21, 2022/ TJS for EDI Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation map.dwg
EDI Project Code: W6D93d

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, IN
1091 Jamison Road | Elma, NY
(716) 655-1717 | www.earthdimensions.com



Lou Gehrig Field Parking

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- NYSDEC 100-foot Buffer
- P1 Photo Location
- D1 Data Point Location

Scale: 0 100′ 200′
Map Date: April 21, 2022/ TJS for EDI Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation map.dwg
EDI Project Code: W6D93d

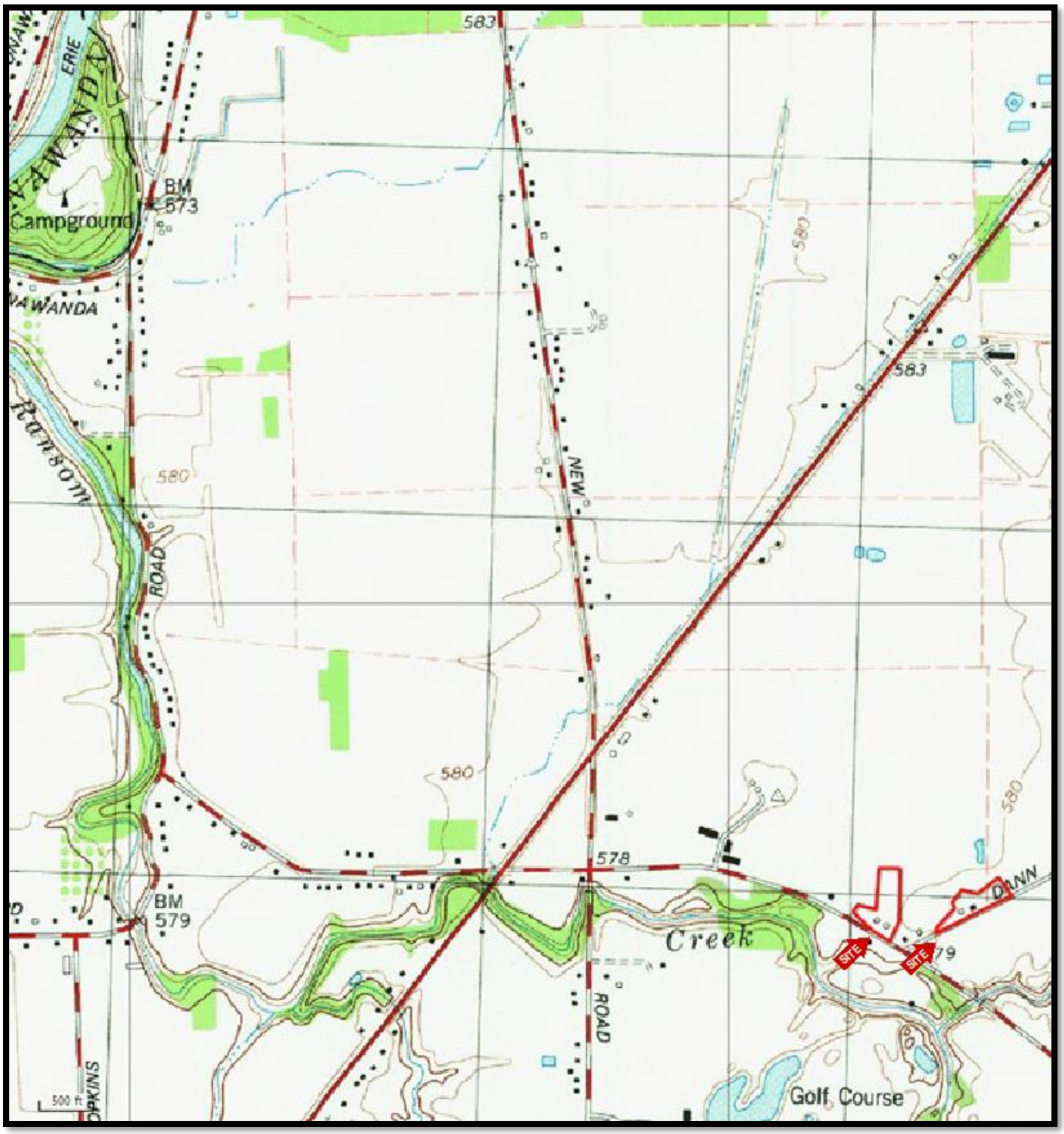


FIGURE 7: DRAINAGE MAP

Clarence Center Quadrangle / U.S. Geological Survey

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



FIGURE 8: SITE AERIAL PHOTOGRAPH

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx (Visited 4/21/22)

Lou Gehrig Field Parking

Town of Amherst, Erie County, New York

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LOU GEHRIG FIELD PARKING

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX B – DATA SHEETS

Project Code: W6D93d

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site Lou Gehrig Field Parking Expansion Town/County: Amherst/Erie County Sampling Date: April 19, 2022

Applicant/Owner: Town of Amherst State: New York Sampling Point: D1

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 16.00-4-20.1

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONCAVE Slope (%): 2-1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: ODESSA SILT LOAM, 0-3% SLOPES NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)

* W1-1 → W1-14 (OPEN)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No X	Depth (inches): 0-2" (SOIL)
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): Surface

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

VEGETATION : Use scientific names of plants. Sampling Point: D1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix discolor	35	Y	FACW
2. Quercus palustris	7	N	FACW
3. Cornus amomum	5	N	FACW
4. Lonicera tatarica	2	N	FACU
5.			
6.			
7.			
	49 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Typha angustifolia	30	Y	OBL
2. Juncus effusus	18	Y	OBL
3. Agrostis stolonifera	10	N	FACW
4. Lythrum Salicaria	9	N	FACW
5. Phalaris arundinacea	5	N	FACW
6. Poa palustris	5	N	FACW
7. Dipsacus fullonum	2	N	FACU
8.			
9.			
10.			
11.			
12.			
	79 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh / Scrub-Shrub PEM/SS2B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P1 **Direction of Photo** East

- mixed shrubs & herbaceous layer
- numerous dead ash trees & saplings

Wetland W1

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5YR 3/1	100					Si CL	
7-16	7.5YR 5/1	95	7.5YR 5/8	5	C	M	Si C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site Lou Gehrig Field Parking Expansion Town/County: Amherst/Erie County Sampling Date: April 19, 2022

Applicant/Owner: Town of Amherst State: New York Sampling Point: DP2

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 16.00-4-20.1

Landform (hillslope, terrace, etc.): Fill PAD Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: OdB 91A Silt Loam, 0-3% Slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

UPLAND SUCCESSIONAL FIELD/FILL PAD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

VEGETATION : Use scientific names of plants. Sampling Point: D2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5')			
1. Solidago canadensis	35	Y	FACU
2. Dipsacus fullonum	15	Y	FACU
3. Phalaris arundinacea	10	N	FACW
4. Poa pratensis	10	N	FACU
5. Poa compressa	10	N	FACU
6. Alliaria petiolata	8	N	FACU
7. Daucus carota	2	N	FACU
8.			
9.			
10.			
11.			
12.			
	90 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	–	x 1 =	–
FACW species	10	x 2 =	20
FAC species	–	x 3 =	–
FACU species	80	x 4 =	320
UPL species	–	x 5 =	–
Column Totals:	90 (A)		340 (B)

Prevalence Index = B/A = 3.77

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: S. Old field / mowed

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P2 **Direction of Photo** East

- Partially mowed upland field
- numerous dead ash saplings

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

SOIL

Sampling Point: A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 4/2	100					S-L	Fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site Lou Gehrig Field Parking Expansion Town/County: Amherst/Erie County Sampling Date: April 19, 2022

Applicant/Owner: Town of Amherst State: New York Sampling Point: DS

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 16.00-4-20.1

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): NONE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAKEMONT SILT LOAM, 0-3% NW I classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W2

Remarks: (Explain alternative procedures here or in a separate report.)

• W2-1 -> W2-4 (OPEN)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No X Depth (inches): 0-2" (75%)

Water Table Present? Yes X No ____ Depth (inches): Surface

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): Surface

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Code: W6D93d

VEGETATION : Use scientific names of plants. Sampling Point: D3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	75	Y	FACW
2. Ulmus americana	8	N	FACW
3.			
4.			
5.			
6.			
7.			
	83	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Quercus palustris	15	Y	FACW
2. Ulmus americana	8	Y	FACW
3. Cornus amomum	6	N	FACW
4. Fraxinus pennsylvanica	5	N	FACW
5.			
6.			
7.			
	34	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Lysimachia nummularia	12	Y	FACW
2. Phalaris arundinacea	10	Y	FACW
3. Carex stricta	9	Y	OBL
4. Symphyotrichum sp.	3	N	NI
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	34	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [X] 1 - Rapid Test for Hydrophytic Vegetation
- [ ] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is < 3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Hardwood Swamp PFO7B

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P4 **Direction of Photo** Northeast

Wetland W2

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SOIL

Sampling Point: D3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/1	100					SiL	
6-16	7.5YR 5/1	85	7.5YR 5/8	15	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX C - SITE PHOTOGRAPHS



Photo 1: Facing east. Depicts the emergent marsh/scrub-shrub swamp community of wetland W1 at data point D1.



Photo 2: Facing east. Depicts the successional old field and mowed lawn communities at data point D2.



Photo 3: Facing north. Depicts the existing parking area in the western investigation area.



Photo 4: Facing northeast. Depicts the hardwood swamp community of wetland W2 at data point D3.



Photo 5: Facing east. Depicts the hardwood swamp community of wetland W3.



Photo 6: Facing west. Depicts the existing parking area in the eastern investigation area.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX D - REFERENCES

INFORMATIONAL REFERENCES
USED BY EARTH DIMENSIONS INC.

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LOU GEHRIG FIELD PARKING

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APPENDIX E - WETLAND INVESTIGATION PERSONNEL

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Proposed Article 24 Wetland Mitigation Plan

for

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Town of Amherst

Erie County, New York

for

Wendel

EARTH DIMENSIONS, INC.

Wetland Delineations • Wetland Mitigation

June 13, 2024

EDI Project Code: **W6D93e**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PROPOSED ARTICLE 24 WETLAND MITIGATION AND RESTORATION PLAN

FOR

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Prepared for Submission to:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
700 DELAWARE AVENUE
BUFFALO, NEW YORK 14209

Prepared By:

EARTH DIMENSIONS, INC.
1091 JAMISON ROAD
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Prepared For:

LEANNE VOIT
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CENTERPOINTE CORPORATE PARKWAY
350 ESSJAY ROAD, SUITE 200
WILLIAMSVILLE, NEW YORK 14221

REPORT DATE: June 13, 2024

EDI PROJECT CODE: W6D93e

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PROJECT INFORMATION

Project and Mitigation Site Information

Project Name ..... Lou Gehrig Field Parking Lots

Street Address ..... 550 Smith Road

SBL Number ..... 16.00-4-20.1 & 16.00-4-16.1

Town ..... Amherst

County ..... Erie

State ..... New York

Latitude/Longitude (NAD83) ..... 43.05207°N, -78.71373°W

Hydrologic Unit Code 04120104

General Information

Property Owner (Project and Mitigation Site) ..... Town of Amherst
c/o Jessica Boudreau
1100 North Forest Road
Williamsville, New York 14221

Responsible Parties

Consultant ..... Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14095

Point of Contact ..... Jody M. Celeste
(716) 655-1717
jceleste@earthdimensions.com

Engineer ..... Wendel

Construction Company ..... NA

Mitigation Site Protection & Maintenance ..... Town of Amherst

Mitigation Monitoring ..... NA

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Figure 3: National Wetlands Inventory Map

Figure 4: NRCS Soil Survey Map

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Appendix B: Overall Site Plan & Wetland Impact Map

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D1: Topography Map

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D3: Cross-sections

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Appendix F: Joint Application for Permit

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EXECUTIVE SUMMARY

Wendel, on behalf of the Town of Amherst, has proposed the construction of additional parking at the existing Lou Gehrig Fields at 550 Smith Road project located on the north side of Smith Road in the Town of Amherst, County of Erie, and State of New York. In addition, the applicant is proposing restoration on a 0.815± acre area of state regulated wetland and the creation of a 0.101± acre area of wetland as mitigation. The mitigation is for the unauthorized fill of 0.815± acre of state regulated wetland and proposed impact of 0.067± acre of state regulated wetland and 1.008± acre of regulated adjacent area for additional parking spaces. The project will not impact any federal wetlands. Please see Appendix B: Overall Site Plan and Wetland Impact Map. The restoration area was previously used as overflow parking for ballpark users, was cleared, filled and graded. The proposed parking area impact area is located to the northeast of the restoration area. To compensate for the above wetland losses, Wendel on behalf of the Town of Amherst, is proposing the restoration of 0.815± acres of NYSDEC wetland area and the creation of 0.101± acre of scrub/shrub swamp. The creation and restoration areas will be seeded and planted with a variety of native species.

To compensate for Upland Adjacent Area impacts, the applicant is proposing the enhancement of the adjacent uplands by planting a row of trees along the edges of development. A total of 54 tree plantings will be planted to protect the state regulated arears. In addition, permanent monuments will be placed along the limits of disturbance and deed restrictions will be placed on the remaining wetland and buffer. Please refer to Appendix D-2 for the Project Details.

The proposed state wetland impact area at the Lou Gehrig Field Parking Lots- 550 Smith Road site consisted of a former scrub/shrub swamp. The state wetland restoration area currently consists of mown lawn, gravel areas and successional shrubland. The principal functions of the wetlands include floodflow alteration, wildlife habitat and nutrient removal. The proposed wetland mitigation is intended to compensate for these impacts through the restoration of 0.815± acre of scrub/shrub wetland and the creation of 0.101± acre of scrub/shrub swamp, creating a mitigation basin that will be seeded with an approved wetland seed mix and planted with wetland

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shrubs. The created wetland is intended to compensate for and enhance the functions lost from the impact areas.

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SECTION I: OVERALL MITIGATION GOALS & OBJECTIVES

The goal of this mitigation project is to create and restore a sustainable scrub/shrub swamp that will replace the wetlands impacted at the proposed Lou Gehrig Field Parking Lots-550 Smith Road project site. Replacing the functions lost by the impact to the existing wetland are critical to the success of the wetland creation area. In addition, this plan is intended to compensate for the impact to NYSDEC Upland Adjacent Area (AA).

The objective of the wetland creation and restoration plan is to replace the wetland impact areas, with a ratio of 1.5:1, creating a minimum of 0.101± acre of scrub/shrub swamp and restoring a minimum of 0.815± acre of scrub/shrub swamp. The creation to impact ratio of 1.5:1 was determined to be appropriate given the quality of the wetland impact area. In addition to the wetland creation, NYSDEC upland adjacent area impacts will be mitigated for through the planting of fifty-four (54) native conifer plantings as well as permanent monuments delineating the limits of protected area and development.

The project design will rely on using the appropriate seed mix and supplemental plantings. Please refer to Section IV for specific seeding and planting details. The Mitigation Plan (Appendix D) includes: a map showing the existing topography within the mitigation area, details of the proposed wetland creation area, cross-section drawings and the proposed monitoring locations.

It is anticipated that the creation area will attract a wide variety of wildlife species and increase the diversity of wildlife utilizing the area. The proposed mitigation design will allow for contrasting diversified habitats for mammals, amphibians, reptiles, and bird species. The newly created wetland will serve as refuge for many of the smaller and more ubiquitous members of the desired wetland community, namely invertebrates.

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SECTION II: BASELINE INFORMATION

Appendix A contains Figures that depict the proposed project impact and wetland mitigation plans. The proposed impact site is located on the north side of Smith Road, to the west of the existing parking lot. The proposed mitigation areas are contiguous to NYSDEC Freshwater wetland CC-45 and the impact areas in the Town of Amherst, County of Erie, and State of New York.

2.1 IMPACT SITE CONDITIONS

2.1.1 RESOURCE TO BE IMPACTED

The project consists of the restoration 0.882± acre of unauthorized impact to state jurisdictional wetland and a proposed fill area totaling 0.067± acre, that consists of scrub/shrub swamp. In addition, 1.008± acre of NYSDEC AA is proposed to be impacted by the proposed . It should be noted that there are no impacts to federal wetlands as part of the project.

2.1.2 FUNCTIONAL ASSESSMENT

Appendix C includes the Functions and Values Assessment form prepared by EDI. The primary function and values provided by the wetland area proposed for impact include floodflow alteration, wildlife habitat and sediment/toxicant retention.

2.1.3 UPLAND BUFFERS AND ADJACENT LAND USES

The upland buffer areas adjacent to the current and proposed impact sites consist of mown lawn, gravel parking, ball fields and successional shrubland communities.

2.2 MITIGATION SITE CONDITIONS

2.2.1 EXISTING RESOURCES

The location of the mitigation consists of an area that was previously used as overflow parking for ballpark users, was cleared, filled and graded. The published Soil Survey of Erie County identifies soils within the proposed wetland creation area as Odessa silt

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loam. This soil has the potential to contain hydric inclusions and suitable for wetland creation and restoration.

2.2.2 ADJACENT LAND USES

The mitigation site lies within an area adjacent to the ball park and surrounded on other sides by state and federally regulated wetland and regulated upland adjacent area.

2.2.3 PRESENCE OF INVASIVE PLANT SPECIES

The existing wetland on-site contains scattered occurrences of purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*) and cattail (*Typha* spp.). Please refer to Section 4.2.2 for specific recommendations regarding invasive species.

2.2.4 CONTRIBUTIONS OF MITIGATION TO WATERSHED AND/OR REGIONAL FUNCTION

Functions and values to be gained by the watershed include sediment /toxicant retention, floodflow alteration and wildlife habitat. The wetland creation area will provide additional area for retention of toxicants, sediment and nutrients from adjacent development. These functions will be performed by the ability of the mitigation area and adjacent preserved wetland to hold excess storm water, and in turn, remove nutrients and sediment by settling as well as provide quality wildlife habitat.

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SECTION III: MITIGATION SITE SELECTION & JUSTIFICATION

3.1 SITE SELECTION

The mitigation site was chosen based on the proximity to the NYSDEC impact areas. Per NYSDEC mitigation requirements, the mitigation location is adjacent to (connected to) the existing NYSDEC Freshwater Wetland (CC-45) that is proposed for impact. The mitigation site has suitable soil characteristics for successful hydrology and there are minimal invasive plant species adjacent to the mitigation site. The mitigation site is currently owned by the Town of Amherst and is therefore available for carrying out the proposed mitigation.

3.2 SITE RESTRICTIONS

Restrictions to the development of the site and the creation of the wetland mitigation include federal and state regulated wetlands and state regulated upland Adjacent Area. There are no listed threatened or endangered species within the site.

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SECTION IV: MITIGATION CONSTRUCTION PLAN

EDI recommends that a Pre-Construction meeting take place between the project design team, the earthwork contractor(s) and the project sponsor in order to ensure design specifications are understood.

4.1 TIMING OF WORK AUTHORIZED BY THE PERMIT(S)

4.1.1 REQUIRED DOCUMENTATION

Prior to conducting any work authorized in the NYSDEC Permit, the permittee must comply with any pre-construction Permit requirements including but not limited to any required financial assurances, deed restrictions and pre-notification requirements. In addition, the wetland mitigation must be constructed prior to or concurrently with the construction of the proposed project, unless otherwise specified in the permits.

4.1.2 SWPPP

A Stormwater Pollution Prevention Control Plan will be prepared in accordance with NYS blue book standards by the project engineer.

Silt fencing or other approved siltation control measures should be installed where necessary per NYS bluebook standards to prevent siltation. Silt fence should be installed to prevent inadvertent disturbance to adjacent wetlands. When required, any Permits and/or SWPPP approvals must be posted on-site.

4.2. SITE PREPARATION

4.2.1 SURVEY CONTROL

A licensed land surveyor should locate the footprint of the proposed creation area based on the Mitigation Plans (Appendix D). The perimeter of the work area is to be outlined, using wooden stakes marked with cut and fill information. All contractors should be fully aware of work limits, as well as adjacent wetlands and buffer areas to be avoided. This also includes areas off limits for storage of equipment. Survey control measures must be

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implemented during construction of the mitigation area to ensure the wetland is built according to the proposed specifications.

4.2.2 INVASIVE PLANT SPECIES CONTROL PLAN

A wetland delineation was conducted within the project site and invasive plant species were identified at that time. There are known scattered populations of invasive plant species within the adjacent wetland and upland communities. To reduce the potential for introduction of invasive plant species to the mitigation area, it is critical that soils encumbered with invasive species propagules not be re-applied to the mitigation area.

To prevent the unintentional introduction or spread of invasive species, the applicant must ensure that all construction equipment be cleaned of mud, seeds, vegetation and other debris before entering either the project or mitigation site. The construction contractor should guarantee that all equipment and vehicles will be cleaned prior to entering the mitigation area. Loose plant and soil material shall be removed from clothing and boots of any persons entering the mitigation area.

The mitigation area was designed to limit the spread of invasive species. The monitoring protocol calls for close monitoring of invasive species. If invasive species are found, at any time, removal methods will include, but are not limited to manual removal. Contingent on the extent of potential invasions, other methods may be employed.

4.2.3 SOILS

It is recommended that the wetland be constructed during a drier time of the year in order to aid in the ease of construction and to minimize the disturbance of the surrounding areas and the destruction of the granular soil structure of the topsoil. Soil compaction and destruction of the subsoil /substratum soil structure will inhibit proper drainage and desired plant growth as well as encourage invasive plant establishment. The project will be constructed using on-site soils. The excavated subsoil from the construction of the wetland mitigation area will be utilized within the development footprint. Excess soils will not be placed in any regulated wetlands or buffers.

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The following Earthwork protocols are being recommended:

(1) Strip the gravel off of the former parking areas. Strip the topsoil (if present) from the restoration and creation areas and stockpile in a separate staging area for re-use as a seed bed in the appropriate zone and as fill for future construction. (No stockpiling of topsoil or subsoil will occur within any regulated wetlands or buffers).

(2) Excavate as per specifications shown on the Mitigation Plans included in Appendix D. It is recommended that low impact and or tracked equipment is utilized in the construction of the mitigation area. Rough finish grading should create rough surfaces on all side slopes and a ragged shoreline. It is important that survey control be established in order to assure that the final planned elevations are obtained. The wetland mitigation area should be over-excavated by six (6) inches to allow for the reapplication of topsoil.

(3) Place a minimum of six inches of topsoil within the wetland creation area and to bring the restoration and creation areas to the proposed elevations shown on the Mitigation Plans in Appendix D. This soil should come from the topsoil excavated from this area (if present) but must be free of rocks, debris, gravel or invasive species propagules, in which case the topsoil should be sourced from an area that does not contain gravel or invasive plant parts or seeds. If no topsoil is present within the restoration or creation areas, clean topsoil may be imported.

(4) It is critical if heavy equipment and or untracked equipment is utilized within the mitigation areas that the soils are decompacted prior to planting. The soils should be fluffed-ripped using a disc, chisel plow or other means prior to planting. Disc the surface to an approximate depth of six (6) inches after topsoil has been replaced within ALL creation and restoration areas. While performing decompacting efforts, avoid mixing subsoil and topsoil to the maximum extent possible. After disking, a hand operated cone penetrometer or other method should be used to confirm acceptable compaction levels and planting can commence.

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4.2.4 HYDROLOGY

The success of mitigation relies primarily on attaining wetland hydrology. The creation areas are underlain by Odessa and Lakemont silt loam soils. The parent material of Odessa soils consists of very deep, somewhat poorly drained soils formed in red, clayey lacustrine deposits. These soils are in moderately low areas on lake plains and valley terraces. Slope ranges from 0 to 20 percent. Mean annual temperature is 8 degrees C (46 degrees F), and mean annual precipitation is 995 mm (39 in). The parent material of Lakemont soils consists of deep, poorly drained and very poorly drained soils of lake plains. They are nearly level soils formed in very slowly permeable reddish colored clayey lacustrine sediments. Slope ranges from 0 to 3 percent. Permeability is moderately slow in the surface and very slow in the subsoil sand substratum. Mean annual temperature is about 48 degrees F. and mean annual precipitation is about 34 inches.

Hydrology is expected to imitate the adjacent wetland areas. The wetland creation will be connected to the existing wetland to the east and the proposed elevations will mimic those elevations. The design will rely heavily on seasonal saturation and inundation from the adjacent wetland community.

As shown on the wetland cross-sectional drawings included as Appendix D-3, EDI is proposing one (1) hydrologic zone to correspond with the proposed vegetative community, scrub/shrub swamp. The creation and restoration areas are proposed to have 2-8 inches of seasonal inundation. The side slopes to the mitigation basin are proposed at a minimum 4:1 slope. It is anticipated that the creation and restoration areas will have periods of fluctuation and will likely have decreased water levels and/or draw down during dry summer months or increased amounts in certain cases of high precipitation or runoff.

4.2.5 PLANTING/SEEDING

Immediately following mitigation construction, all areas including wetland restoration and creation areas and disturbed upland areas should be seeded with the respective seed mixtures and rates specified in Section 5. The upland areas and side slopes to the

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creation and restoration areas should be seeded and mulched with clean straw to reduce soil erosion and to keep the soil moist for germination. Planting of the proposed wetland shrubs should take place concurrent with seeding or during the fall after seeding.

The following Seeding/Planting protocols are being recommended:
(1) It is recommended that an appropriate cover crop be added to seeded areas to promote the proper moisture and shade levels for optimal plant growth. Annual rye germinates rather quickly and provides nursery crop for wetland seed as well as adding to the organic layer when it dies back. In addition, straw mulch is recommended to further optimize germination and growth. Hay is not to be used as mulch, as it may contain many seeds of undesirable invasive species that may spread throughout the mitigation areas.

(2) It is recommended that seeding be completed prior to June 15th or after September 15th. Seeding during drier times may require some type of irrigation to promote germination. It is also recommended that hydro-seeding techniques be avoided due to the light requirements required for the germination of many wetland species. Hydro-seeding fibers can block the solar rays and deter the wetland seed mixture from proper germination and ultimately affect the success of the mitigation.

(3) Upon completion of seeding the mitigation area, the upland buffer tree planting and the wetland restoration and creation area shrub plantings are to be installed as per specifications outlined in Section 5.2.1.

(4) Branches and logs will be placed opportunistically throughout the wetland restoration and creation areas. The additional woody material will not only increase the habitat diversity within the area, but also deter potential anthropogenic impacts (e.g., all-terrain vehicle damage).

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION V: PLANTING AND ENHANCEMENT PLAN

5.1 SPECIFICATIONS AND CHARACTERISTICS

The wetland restoration and creation areas are proposed as scrub/swamp communities. Shrub plantings will be throughout the wetland creation and restoration areas, a total of 183 shrubs will be planted. Tree plantings will be placed along the limits of disturbance, a total of 54 trees will be planted as part of the mitigation plans. A Northeast Wetland Forest Herb Mix will be used for the scrub/shrub swamp restoration areas and a Native Wetland Hummock Mix will be used in the wetland creation areas. Any upland areas disturbed by the wetland creation or restoration work will be seeded with a Northeast Upland Native/Naturalized Wildflower mix. The purpose is to create a diverse habitat, maximizing the variety of species to inhabit this area. The project design relies on natural colonization and growth of existing propagules as well as the appropriate seed mix.

It is anticipated that the water levels in the scrub/shrub swamp will fluctuate between 0 and 8 inches during portions of the wetter portions of the growing season. The proposed bottom elevation of the restoration and creation areas is set between elevations of 577.5 & 578 feet. The scrub/shrub swamp is anticipated to draw down in the summer months similar to the hydrology of the wetlands adjacent to the creation and restoration areas.

5.2 PLANTING PLAN

As outlined below, the wetland creation and restoration areas are proposed to include shrub plantings, a forested wetland and hummock wetland mix. The on-site regulated adjacent area mitigation consists of a row of native conifer plantings as well as permanent monuments proposed between the development footprint and the jurisdictional area boundary.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

5.2.1 WETLAND CREATION AND RESTORATION AREAS

WETLAND SHRUB PLANTING

One hundred and eighty-three (183) shrub plantings are proposed for the wetland creation and restoration areas. The shrubs proposed for planting within the mitigation area were selected by considering soil conditions, climate, hydrology, inundation tolerance, shade tolerance, wildlife benefit and other factors in determining suitable species for planting. The following species and amounts were selected:

Common Name	Latin Name	Indicator Status	Number of Plantings	Type
Silky Willow	*Salix sericea*	FACW	61	Live Stake
Silky Dogwood	*Cornus amomum*	FACW	60	Live Stake
Pussy Willow	*Salix discolor*	FACW	62	Live Stake

The wetland creation and restoration areas are designed to be a scrub/shrub swamp community. The plan utilizes the expectation that volunteer shrub species will establish in addition to the planted shrubs. The planting scheme is random to mimic what occurs naturally.

WETLAND SEEDING

Wetland seeding with a cover crop is scheduled for this area followed immediately by straw mulch to retain moisture. It is expected that ground water and precipitation will allow for proper hydrology within the basin. Vegetation is expected to come from previously existing native species as well as the seed mixes. The seed mix can take up to a year to germinate as some wetland species seeds need to cold stratify before emerging. The applicant is proposing the following seed mix for the wetland creation and restoration areas:

Cover Crop

Recommended at ten pounds per acre

Common Name	Latin Name	Indicator Status	Percent by Number of seeds (not weight)
Annual Rye Grass	*Lolium multiflorum*	NI	100%

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Northeast Wetland Hummock Mix Scrub/Shrub Swamp Wetland Creation and Restoration Areas Recommended at 3.5 pounds per acre		
Percent by No. of seeds (not weight)	**Scientific Name**	**Common Name**
43.6%	*Scirpus atrovirens*	Green Bulrush
19.0%	*Juncus effusus*	Soft Rush
33.5%	*Carex vulpinoidea*	Fox Sedge
1.3%	*Leersia oryzoides*	Rice Cut Grass
1.3%	*Carex comosa*	Bearded Sedge
0.9%	*Carex crinita*	Fringed Sedge
0.2%	*Carex lurida*	Shallow Sedge
0.2%	*Carex lupulina*	Hop Sedge

Northeast Wetland Forest Herb Mix Hardwood Swamp Recommended at four pounds per acre		
Percent by No. of seeds (not weight)	**Scientific Name**	**Common Name**
25.96%	*Scirpus atrovirens*	Green Bulrush
25.41%	*Scirpus cyperinus*	Wool Grass
8.33%	*Carex vulpinoidea*	Fox Sedge
7.68%	*Glyceria canadensis*	Canada Mannagrass
7.63%	*Verbena hastata*	Blue Vervain
6.02%	*Glyceria grandis*	Reed Meadowgrass
5.70%	*Glyceria striata*	Fowl Mannagrass
2.12%	*Panicum clandestinum*	Deertongue
1.53%	*Verbena urticifolia*	White Vervain
1.51%	*Glyceria melicaria*	Melic Mannagrass
0.94%	*Boehmeria cylindrica*	False Nettle
0.94%	*Urtica dioica*	Stinging Nettle
0.85%	*Solidago gigantea*	Giant Goldenrod
0.85%	*Solidago rugosa*	Wrinkled Goldenrod
0.75%	*Cinna arundinacea*	Wood Reed
0.62%	*Leersia virginica*	Whitegrass
0.57%	*Cephalanthus occidentalis*	Buttonbush
0.45%	*Elymus canadensis*	Wild Rye
0.38%	*Sium suave*	Water Parsnip
0.32%	*Elymus virginicus*	Virginia Wild Rye
0.29%	*Polygonum pensylvanicum*	Pennsylvania Smartweed
0.24%	*Geum macrophyllum*	Large-Leaf Avens
0.22%	*Elymus riparius*	Riverbank Wild Rye
0.19%	*Rumex verticillatus*	Water Dock
0.16%	*Asclepias incarnata*	Swamp Milkweed
0.09%	*Carex lurida*	Shallow Sedge
0.09%	*Lilium superbum*	Turk's Cap Lily
0.09%	*Rubus allegheniensis*	Blackberry
0.07%	*Carex lupulina*	Hop Sedge

5.2.2 UPLAND ENHANCEMENT AREAS, AREAS DISTURBED BY CONSTRUCTION, UPLAND BUFFERS

UPLAND TREE PLANTING

Fifty-four (54) tree plantings are proposed for the upland buffer area. The tree plantings will be placed along the limits of the impact areas, within the 100-foot upland adjacent area to Freshwater Wetland CC-45. The trees proposed for planting

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

within the enhancement areas were selected by considering soil conditions, climate, hydrology, wildlife benefit and other factors in determining suitable species for planting. The planting scheme is random to mimic what occurs naturally.

The following species and amounts were selected:

Common Name	Latin Name	Number of Plantings	Type
White Spruce	*Picea glauca*	13	#3 Container
White Pine	*Pinus strobus*	14	#3 Container
Eastern Red Cedar	*Juniperus virginiana*	14	#3 Container
Arborvitae	*Quercus palustris*	13	#3 Container

UPLAND SEEDING

Upland areas disturbed by the construction of the wetland creation area will need to be seeded and mulched immediately after the earthwork has been completed in order to stabilize these areas and minimize the risk of soil erosion. The Applicant is proposing the following seed mixes for all disturbed upland areas:

Northeast Upland Native/ Naturalized wildflower Mix
Hardwood Swamp
Recommended at twenty-three pounds per acre

Common Name	Latin Name	Percent by Number of seeds (not weight)
Sheep Fescue	*Festuca ovina*	28.1%
Switchgrass	*Panicum virgatum*	26.0%
Foxtail Millet	*Setaria italica*	15.3%
Sweet Vernal Grass	*Anthoxanthum odoratum*	12.8%
Annual Ryegrass	*Lolium multiflorum*	11.1%
Wild Rye	*Elymus canadensis*	6.7%
Common Yarrow	*Achillea millefolium*	47.5%
Black Eyed Susan	*Rudbeckia hirta*	9.1%
Ox-Eye Daisy	*Chrysanthemum leucanthemum*	7.5%
Blue Vervain	*Verbena hastata*	7.4%
Cichory	*Cichorium intybus*	7.3%
Birdsfoot Trefoil	*Lotus corniculatus*	6.8%
Dame's Rocket	*Hesperis matronalis*	5.0%
Queen Anne's Lace	*Daucus carota*	2.2%
Canada Goldenrod	*Solidago canadensis*	2.0%
Grass Leaf Goldenrod	*Euthamia graminifolia*	2.0%
Wild Bergamot	*Monarda fistulosa*	1.5%
New England Aster	*Aster novae-angliae*	1.3%
Common Milkweed	*Asclepias syriaca*	0.4%

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5.3 HABITAT ENHANCEMENT EFFORTS

5.3.1 NATURAL HABITAT ENHANCEMENTS

The existing regulated adjacent area will be enhanced by tree plantings to promote increased habitat and diversity. In addition to the proposed tree plantings, the Adjacent Area where the trees will be planted will not be mowed as it was in the past. When mowing is stopped, the natural vegetation will diversify, and shrubs and saplings will begin growing.

5.3.2 BUFFERS

The mitigation area will be buffered from the adjacent development by existing wetland to the north and west of the proposed impact areas. These buffers are sufficient to protect the natural resources of the existing wetlands and the proposed wetland restoration and creation areas.

5.3.3 EXPECTED VOLUNTEER SPECIES

It is expected that existing native volunteer species will also establish in the proposed mitigation area. Most of these will come from adjacent seed sources. The species in the vicinity of the mitigation area which are anticipated to establish include: pin oak (*Quercus palustris*), American elm (*Ulmus americana*), upright sedge (*Carex stricta*), pussy willow (*Salix discolor*) and common rush (*Juncus effusus*).

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION VI: PERFORMANCE STANDARDS

Performance goals for shallow emergent marsh:

6.1 CREATION ACREAGE

The project will include at a minimum, the restoration of two areas previously impacted which total 0.815± acre of scrub/shrub swamp and mitigation for the proposed wetland impact area of 0.067 acre with a minimum ratio of 1.5:1, creating approximately 0.101± acre of scrub/shrub swamp. In addition, 1.008± acres of regulated upland adjacent area is proposed to be impacted by this project. For this upland impact, enhancement is proposed which includes the planting of native conifer trees, ceasing of mowing activities and adding permanent monuments delineating the limits of protected area and proposed development.

6.2 VEGETATION STRUCTURE

Establish and maintain 85% coverage of beneficial FAC, FACW, and OBL species; total coverage shall meet or exceed 80%, with no more than 50% coverage of one species. Less than 5% of the wetland vegetative composition will include invasive species (i.e., Lythrum salicaria and Phragmites australis).

6.3 HYDROLOGY/ WATER LEVELS

Establish and maintain seasonal inundation/saturation of between 0 and 8 inches of water, for at least 12.5% of the growing season for 80% of the monitoring years.

6.4 HABITAT ATTRIBUTES

The wetland creation area will provide adequate protection and habitat for an array of nesting birds, amphibians and reptiles.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION VII: CONSTRUCTION MONITORING & POST CONSTRUCTION MONITORING REQUIREMENTS

7.1 BASELINE POST CONSTRUCTION REPORT

A Baseline Post-Construction report must be submitted to the New York State Department of Environmental Conservation by December 31 of the year of construction completion (including all site grading, seeding and/or planting activities).

This baseline report must include the following:

1. An as-built topographic survey of the mitigation area including all as-built elevations completed by a licensed land surveyor at 0.5' (1/2') contour intervals.
2. Photographs from fixed locations including a photo-location map.
3. A list of plants introduced through seeding and/or planting including approximate planting and/ or seeding dates.
4. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.
5. A detailed description of all time-of-construction field design modifications to the original design plans.

7.2 ANNUAL MONITORING REQUIREMENTS

The permittee is required to submit annual monitoring reports to the NYSDEC for the five (5) years following completion of construction and initial planting efforts. Please see Appendix E for the proposed Maintenance and Inspection Schedule. The report must include a summary of the data collected between May and October for that monitoring year.

These reports must include the following:

1. Comparison of site conditions to an as-built survey.
2. Wetland Delineation including a map of the wetland boundary.
3. Photographs (minimum of 5) from fixed locations including a photo-location map.
4. A plants species list including wetland indicator status, strata, dominant plants and aerial coverage.
5. A list of plants introduced through seeding and/or planting.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

6. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
7. Fish and wildlife observations at the mitigation site.
8. A summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation plan as well as current wetland functions. These reports must also address any potential problem areas and include suggestions and a timetable for correction if it is anticipated that projected goals may not be met.
9. Date(s) of field inspection(s).

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION VIII: LONG-TERM SITE MANAGEMENT

8.1 FUTURE LAND USE PLANS

There are no future planned uses for the mitigation site. Areas to the east are being utilized for existing ball fields and parking. It is anticipated that the mitigation site will be utilized for recreation and educational purposes by nearby residents. It is EDI's opinion that these future land use plans are compatible with the mitigation project.

8.2 REAL ESTATE RESTRICTIONS

There are no existing deed restrictions or right-of-way agreements which would prevent or restrict the development of the mitigation area. There are no current restrictions on the mitigation area.

8.3 MITIGATION SUSTAINABILITY

The project has been designed to be sustainable and self-maintaining. Once the wetland hydrology and hydrophytic vegetation has been established, it is anticipated that the wetland will continue to function without human intervention.

8.4 ADAPTIVE MANAGEMENT PLAN

The Applicant will be responsible for first successfully meeting the short-term requirements of the permit, including any necessary adaptive management measures. If invasive species control measures are required, the Applicant will develop a plan to control the species that establish and present a plan to NYSDEC for approval. Minor occurrences of invasive species will be manually removed during scheduled monitoring visits. Should hydrology not properly establish, the Applicant will develop a plan to attain planned hydrology.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix A - Figures

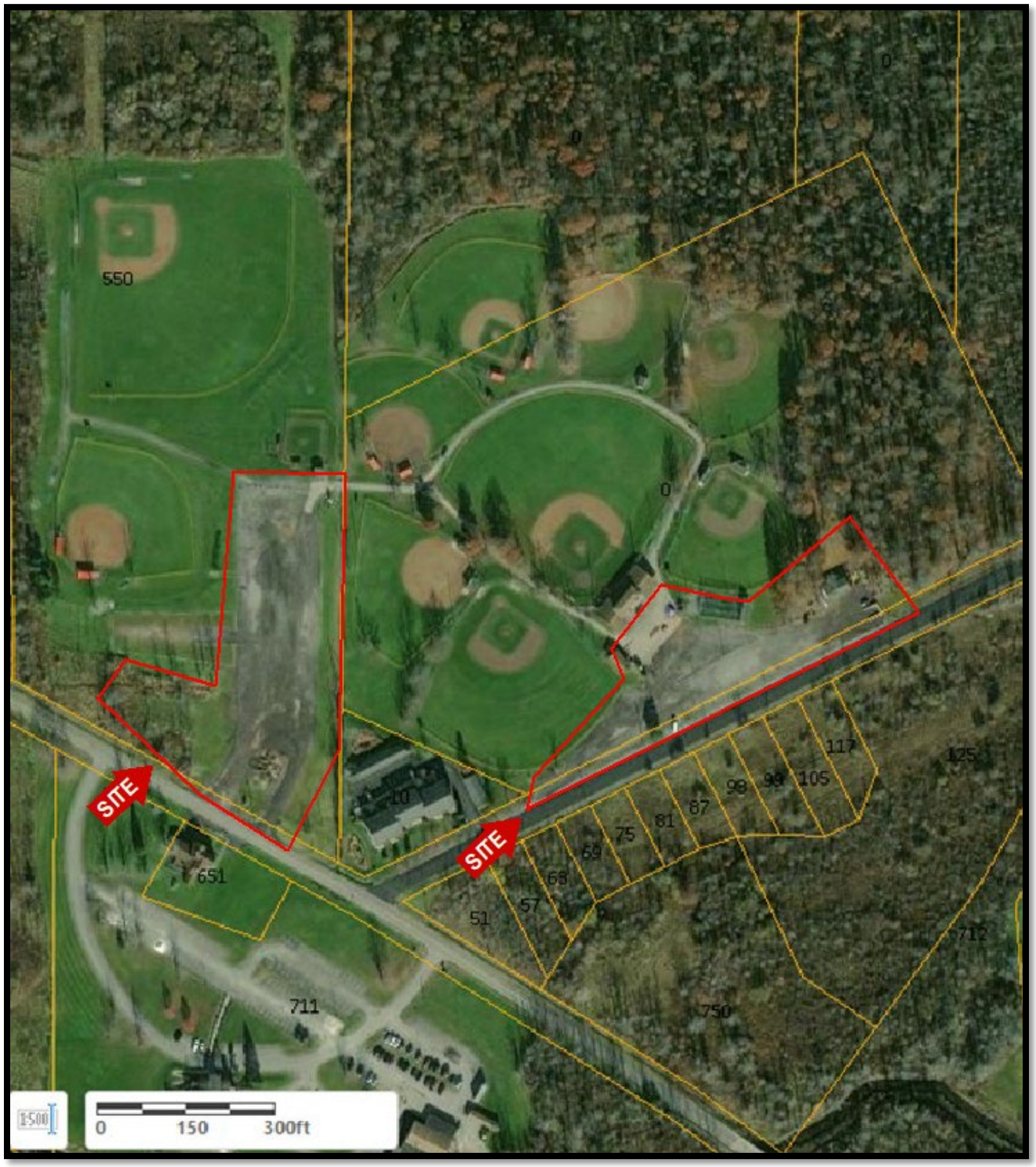


Figure 1: Aerial Photograph

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

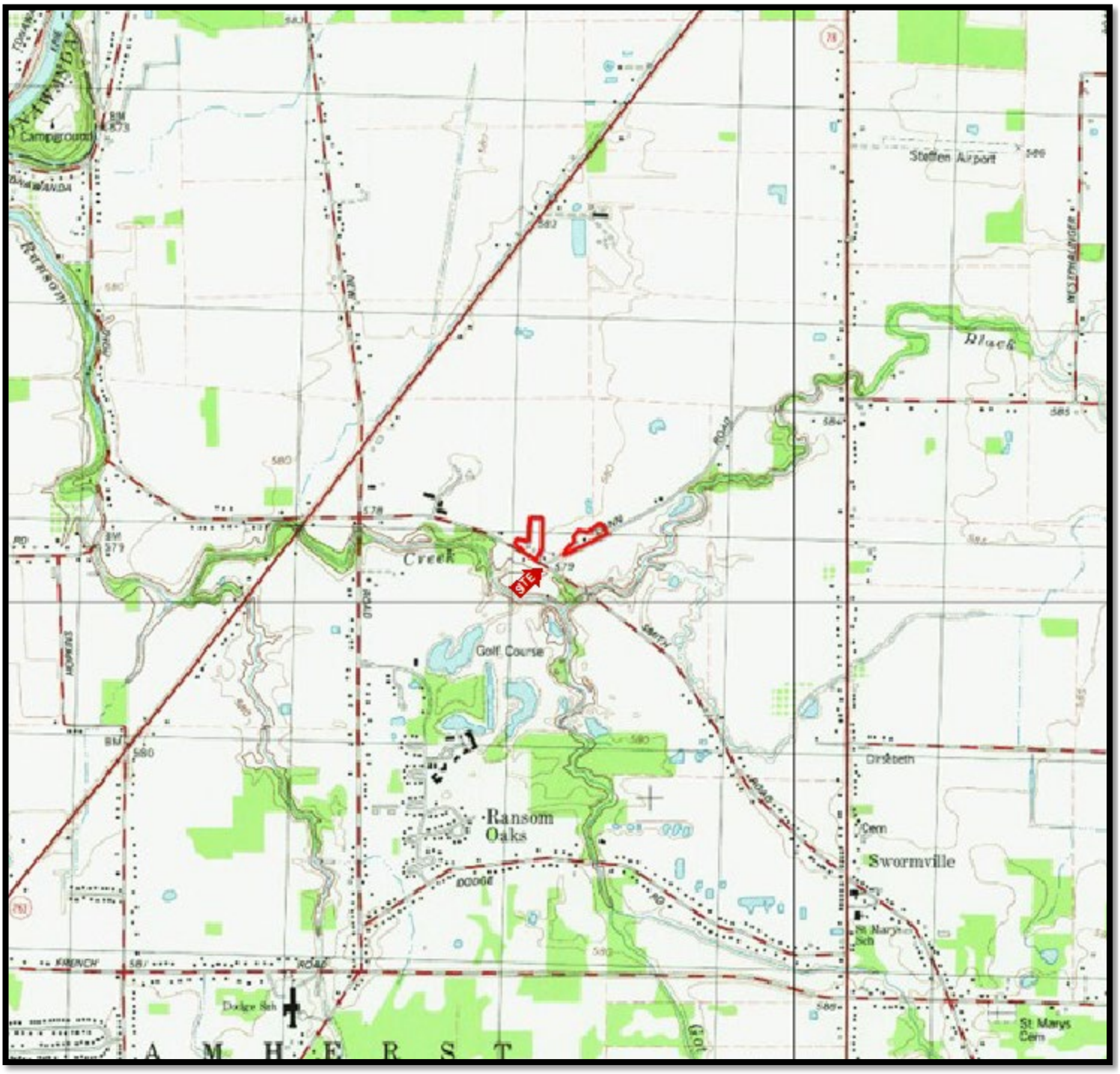


Figure 2: USGS 7.5 Minute Topographical Map

Clarence Center Quadrangle / 2002 DeLorme

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



Figure 3: National Wetlands Inventory Map

http://www.fws.gov/wetlands/data/mapper.HTML

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



Figure 4: NRCS Erie County Soil Survey Map

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



Figure 5: NYSDEC Environmental Resource Mapper

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix B - Overall Site Plan & Wetland Impact Map

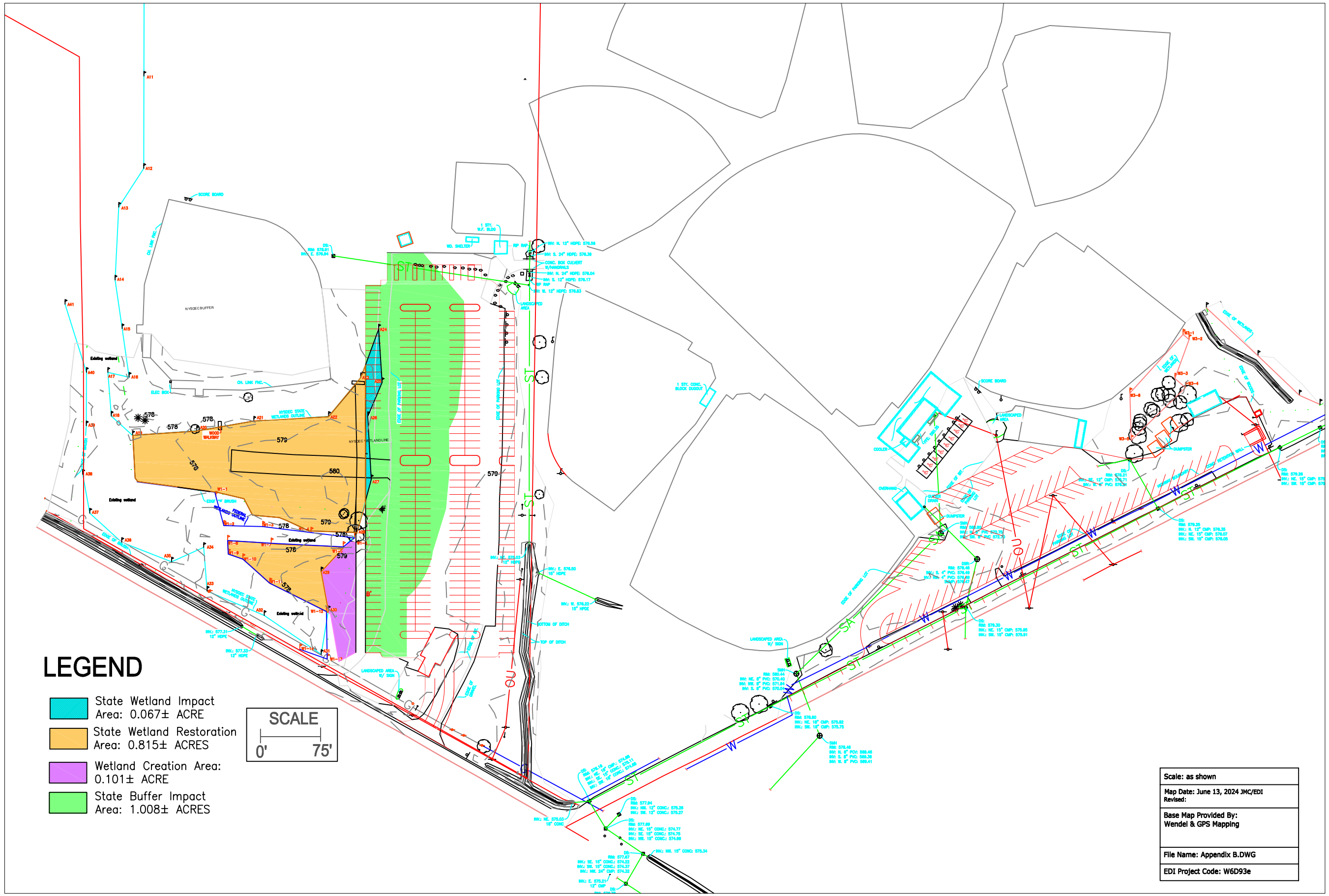
2.a

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

NORTH

Appendix B: Overall Site Plan and
Wetland Impact Map
Lou Gehrig Field Parking Lots
Town of Amherst Erie County, New York

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LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix C - Functional Assessment Data Form

Wetland Function-Value Evaluation Form

Total area of wetland 0.067± acres Human made? No s wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use undeveloped, recreational facilities Distance to nearest roadway or other development <20 feet

Dominant wetland systems present PSS/EM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Contiguous to Black Creek corridor across road.

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Please refer to the Wetland Delineation Report. dated 04-21-2022

Wetland I.D. Wetland 1

Latitude 43.05274ºN Longitude -78.71543ºW

Prepared by: JMC/EDI Date 05-14-2024

Wetland Impact: Type Fill Area 0.0.067± acre

Evaluation based on: Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y	Suitability N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge		N	7,15	N	Topographic gradient is minimal, overland flow present, retention low
Floodflow Alteration	X		1,5,6,7,9	Y	Flood storage potential in wetland, adjacent to impervious surfaces
Fish and Shellfish Habitat		X	NA	N	NA
Sediment/Toxicant Retention	X		1,2,3,5,7,8	Y	Sediments held temporarily during low flow events
Nutrient Removal		X	3,9	N	Potential for nutrient and sediment removal exists.
Production Export		X	1,4,12	N	Overland flow constricted by topographic gradient
Sediment/Shoreline Stabilization		X	3	N	Low flow volumes
Wildlife Habitat	X		5,6,7,8,17,19,20,21	Y	Wildlife habitat exists, mediocre quality due to invasive species and minor distrubances
Recreation	X		1,4,5,10	Y	Has potential for recreational opportunities since located on town owned lands
Educational/Scientific Value		X	5	N	No known education uses currently
Uniqueness/Heritage		X		N	NA
Visual Quality/Aesthetics		X	8	N	NA
ES Endangered Species Habitat		X		N	None found or known to occur on-site.
Other					

Notes:

* Refer to backup list of numbered considerations.

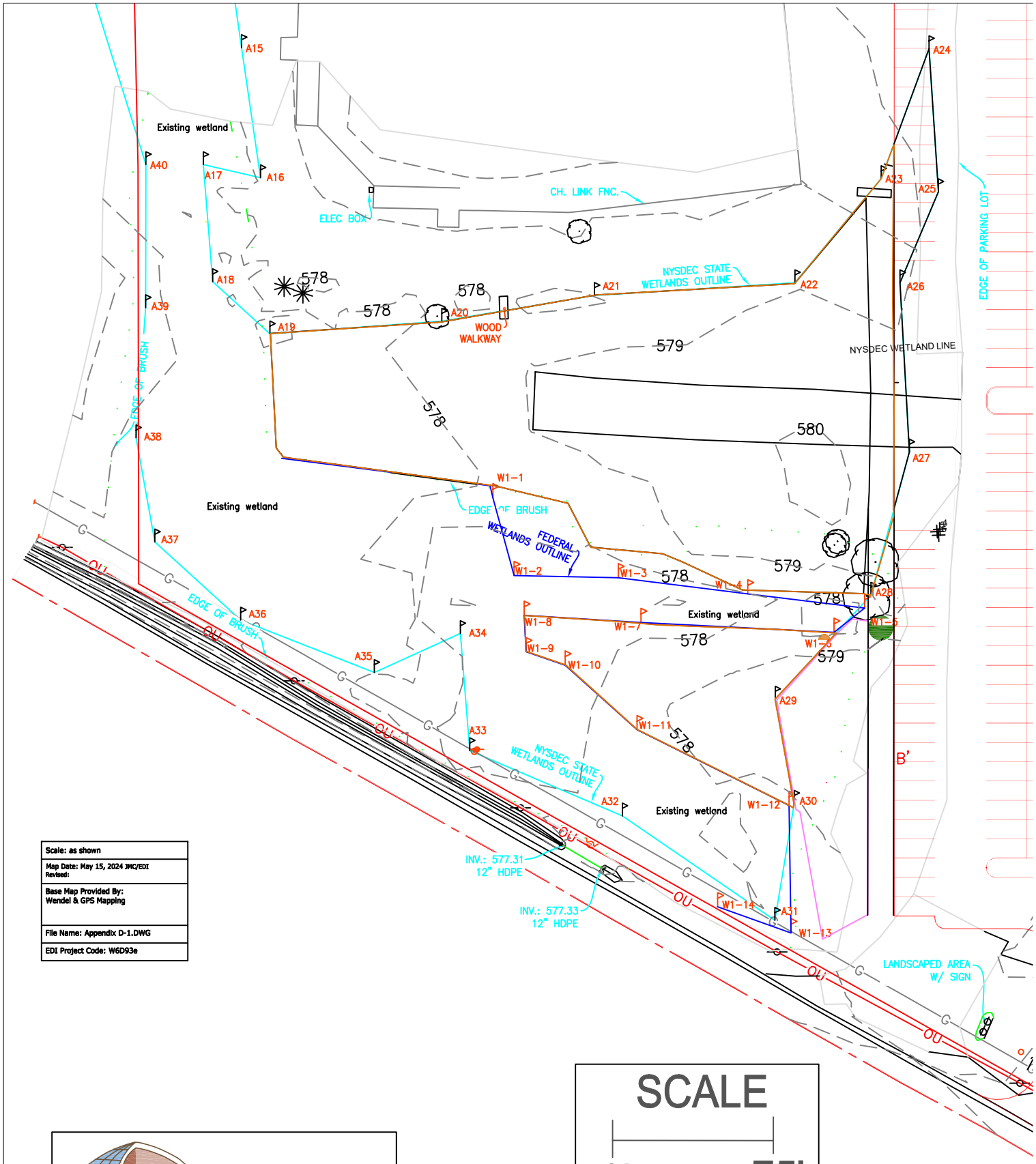
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix D - Mitigation Plans

Appendix D-1: Topography Map
Lou Gehrig Field Parking Lots
Town of Amherst Erie County, New York



Scale: as shown
Map Date: May 15, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Appendix D-1.DWG
EDI Project Code: W6D93e

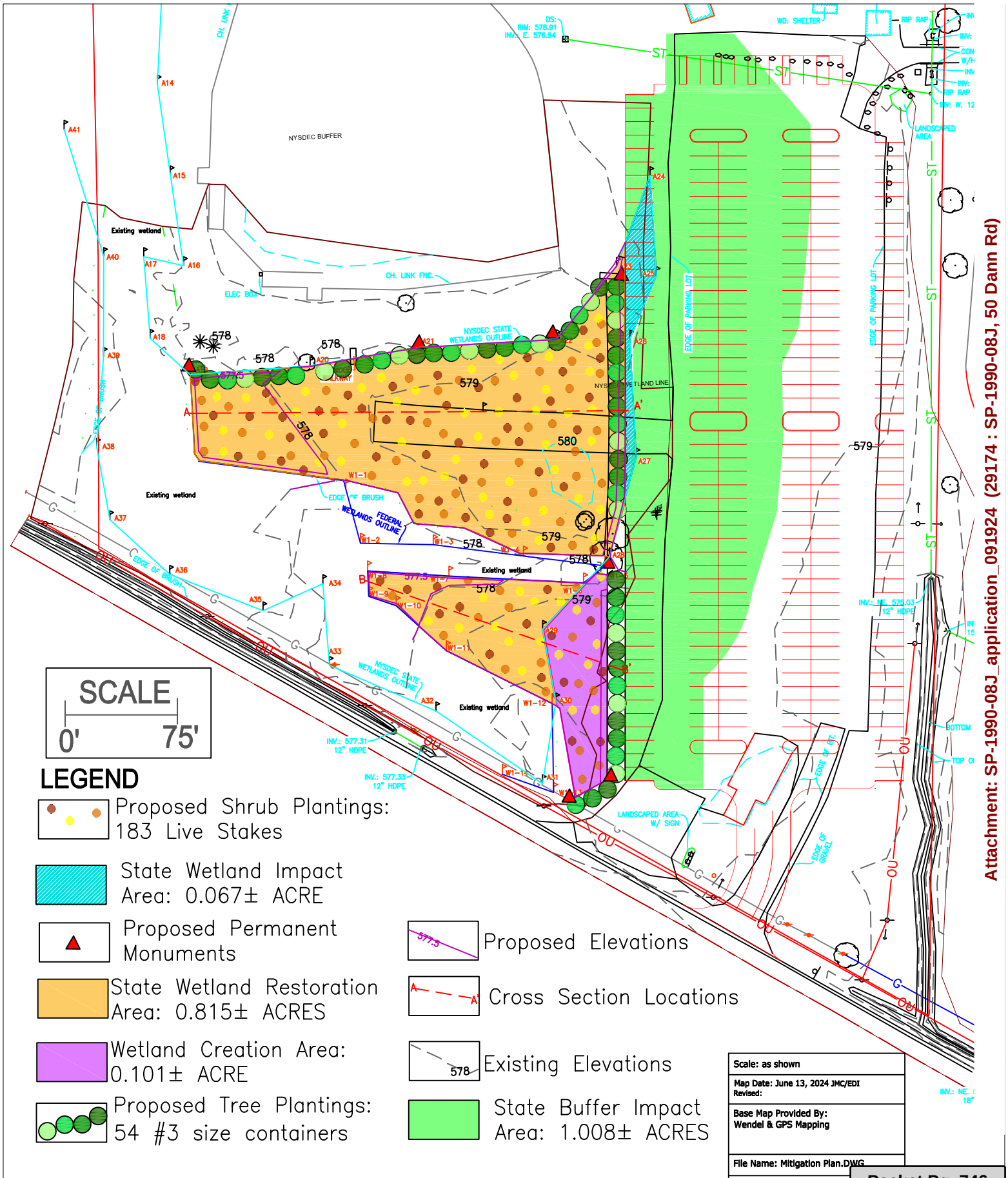
SCALE
0' 75'

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Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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Appendix D-2: Project Details
Lou Gehrig Field Parking Lots
Mitigation Plan
Town of Amherst Erie County, New York



LEGEND

- Proposed Shrub Plantings: 183 Live Stakes
- State Wetland Impact Area: 0.067± ACRE
- Proposed Permanent Monuments
- State Wetland Restoration Area: 0.815± ACRES
- Wetland Creation Area: 0.101± ACRE
- Proposed Tree Plantings: 54 #3 size containers
- 577.5 Proposed Elevations
- A – A' Cross Section Locations
- 578 Existing Elevations
- State Buffer Impact Area: 1.008± ACRES

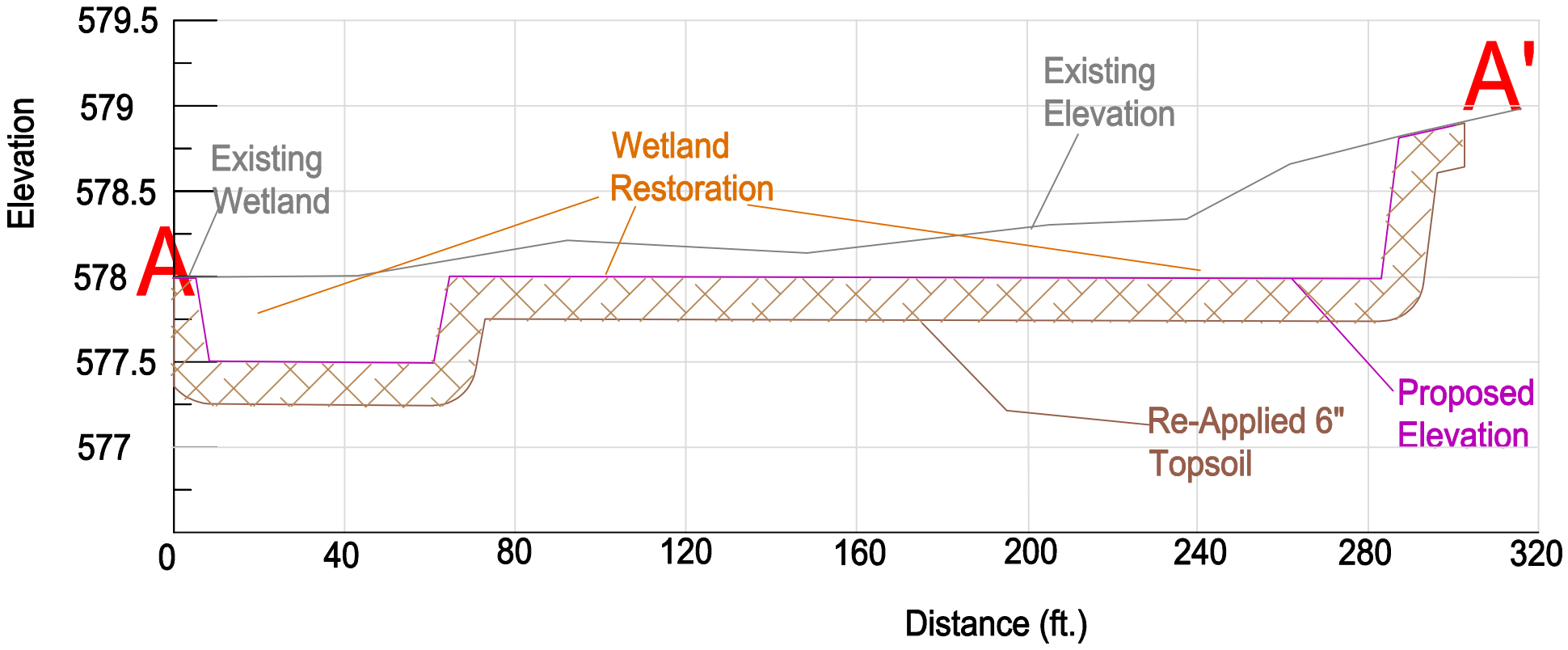
Scale: as shown
Map Date: June 13, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Mitigation Plan.DWG
EDI Project Code: W6D93e

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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Appendix D-3 - Cross Section A-A'
Lou Gehrig Field Parking Lots- 550 Smith Road
Town of Amherst Erie County, New York



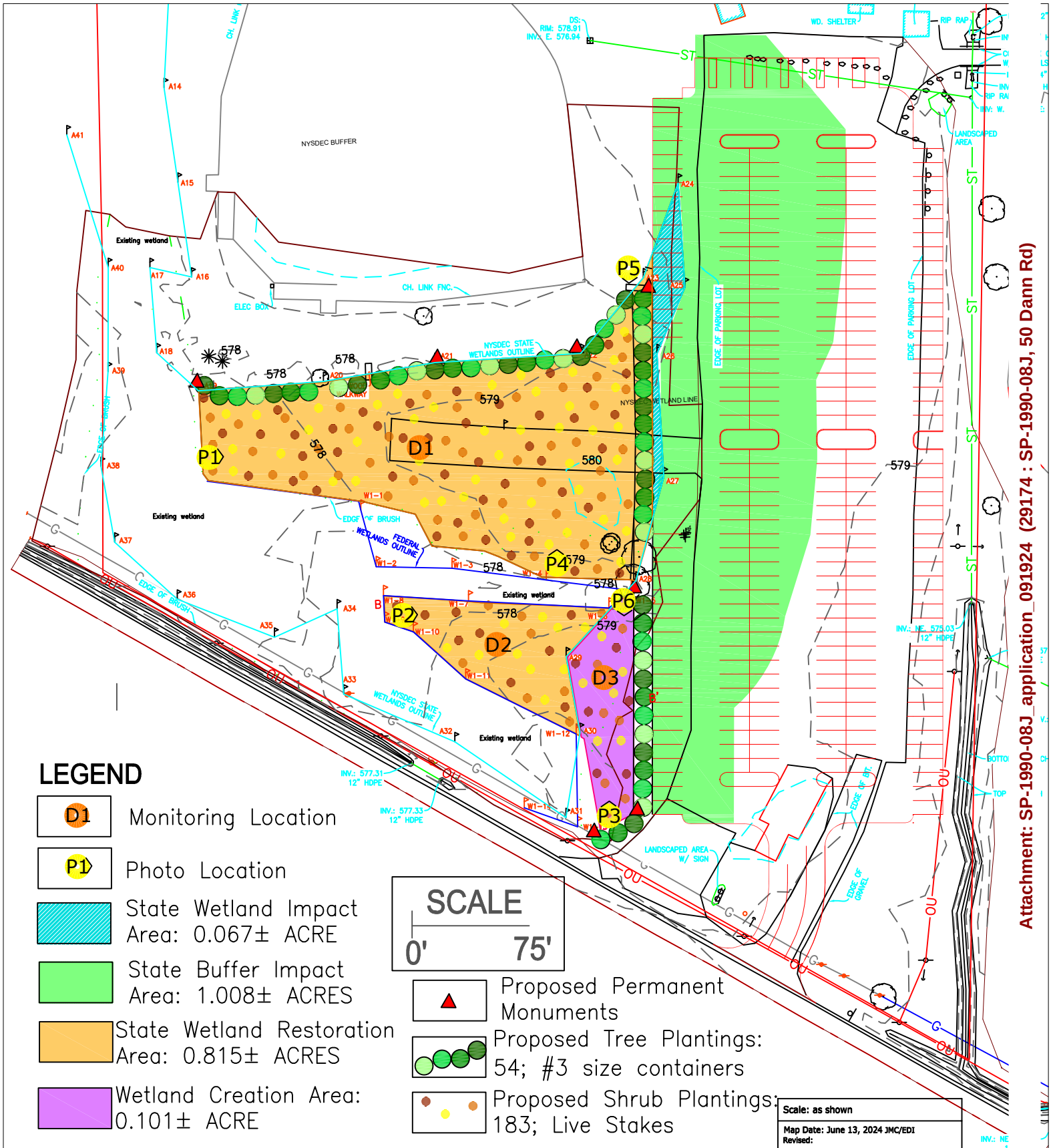
Appendix D-3 - Cross Section B-B'
Lou Gehrig Field Parking Lots- 550 Smith Road
Town of Amherst Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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Wetland Delineations • Wetland Mitigation

Appendix D-4: Annual Monitoring
Benchmark Map
Lou Gehrig Field Parking Lots Mitigation Plan
Town of Amherst Erie County, New York

NORT



LEGEND

- D1 — Monitoring Location
- P1 — Photo Location
- State Wetland Impact Area: 0.067± ACRE
- State Buffer Impact Area: 1.008± ACRES
- State Wetland Restoration Area: 0.815± ACRES
- Wetland Creation Area: 0.101± ACRE

SCALE
0' 75'

- Proposed Permanent Monuments
- Proposed Tree Plantings: 54; #3 size containers
- Proposed Shrub Plantings: 183; Live Stakes

Scale: as shown
Map Date: June 13, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Mitigation Plan.DWG
EDI Project Code: W6D

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix E - Maintenance & Inspection Schedule

Appendix E: Maintenance & Inspection Schedule

Activity	Timeframe
CONSTRUCTION	
Receive Authorization from NYSDEC & USACE	Fall 2024
Mitigation Site Construction	Fall and Winter 2024
Mitigation site planting & seeding	Spring 2025
Post Construction Report	December 31, 2025
MONITORING	
Year of Construction (For Remaining Months During the Growing Season)	Monthly Visits (July to October) 2026
1st Year Monitoring Field Visits	Monthly Visits (April to October) 2026
1st Year Monitoring Report	December 31, 2026
2nd Year Monitoring Field Visits	Two Site Visits During Growing Season 2027
2nd Year Monitoring Report	December 31, 2027
3rd Year Monitoring Field Visits	Two Site Visits During Growing Season 2028
3rd Year Monitoring Report	December 31, 2028
4th Year Monitoring Field Visits	Two Site Visits During Growing Season 2029
4th Year Monitoring Report	December 31, 2029
5th Year Monitoring Field Visits	Two Site Visits During Growing Season 2030
5th Year Monitoring Report	December 31, 2030
USACE & NYSDEC Sign-off	Winter 2030/Spring 2031

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LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix F – Joint Application for Permit

NEW YORK STATE | Department of Environmental Conservation | Office of General Services | Department of State

US Army Corps of Engineers

JOINT APPLICATION FORM

For Permits for activities activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. **Applications To:**

>NYS Department of Environmental Conservation ☑ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

- ☐ Stream Disturbance
- ☐ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☐ 401 Water Quality Certification
- ☑ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Coastal Erosion Management
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ Incidental Take of Endangered / Threatened Species

>US Army Corps of Engineers ☐ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☐ Section 404 Clean Water Act ☐ Section 10 Rivers and Harbors Act

Is the project Federally funded? ☐ Yes ☑ No

If yes, name of Federal Agency:

General Permit Type(s), if known:

Preconstruction Notification: ☐ Yes ☑ No

>NYS Office of General Services ☐ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

- ☐ State Owned Lands Under Water
- ☐ Utility Easement (pipelines, conduits, cables, etc.)
- ☐ Docks, Moorings or Platforms

>NYS Department of State ☐ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. **Name of Applicant**

Town of Amherst Engineering Department

Taxpayer ID (if applicant is NOT an individual)

Mailing Address	Post Office / City	State	Zip
1100 North Forest Road	Williamsville	NY	14221

Telephone 716-631-7222 Email jboudreau@amherst.ny.us

Applicant Must be (check all that apply): ☑ Owner ☐ Operator ☐ Lessee

3. **Name of Property Owner (if different than Applicant)**

Town of Amherst

Mailing Address	Post Office / City	State	Zip
5583 Main Street	Williamsville	NY	14221

Telephone 716-631-7000 Email jboudreau@amherst.ny.us

For Agency Use Only	Agency Application Number:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

4. **Name of Contact / Agent**

Jody M. Celeste

Mailing Address: Earth Dimensions, Inc.
1091 Jamison Road

Post Office / City: Elma

State: NY

Zip: 14059

Telephone: 716-655-1717

Email: jceleste@earthdimensions.com

5. **Project / Facility Name**

Lou Gehrig Field Parking Lots

Property Tax Map Section / Block / Lot Number: 16.00-4-20.1, 16.00-4-16.1

Project Street Address, if applicable: 550 Smith Road

Post Office / City: Amherst

State: NY

Zip: 14051

Provide directions and distances to roads, intersections, bridges and bodies of water

The site is located on the north side of Smith Road, east of Millersport Highway and west of Dann Road.

☑ Town ☐ Village ☐ City

Amherst

County: Erie

Stream/Waterbody Name: FWW CC-45

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 43 ° 3 ' 16.2N " Longitude: 78 ° 42 ' 56.5W "

6. **Project Description:** Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

The proposed project involves improvements to an existing gravel parking lot within the NYSDEC 100-foot buffer to Freshwater Wetland CC-45. The project includes re-shaping the parking lots.

b. Description of current site conditions:

The site of the proposed action is currently a baseball field within a large sports complex.

c. Proposed site changes:

The project will involve the expansion and re-grading of the existing parking lots involving the disturbance of approximately 0.067 acre NYSDEC Freshwater Wetland CC-45 and 1.008± acre of NYSDEC Adjacent Area to CC-45. All disturbance will be within an existing parking lot and maintained lawn area.

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

The project includes the filling of 0.067 acre NYSDEC Freshwater Wetland CC-45 and 1.008± acre of NYSDEC Adjacent Area to CC-45.

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

The project does not involve dredging.

f. Is tree cutting or clearing proposed? ☐ Yes If Yes, explain below. ☑ No

Timing of the proposed cutting or clearing (month/year):

Number of trees to be cut:

Acreage of trees to be cleared:

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JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

g. Work methods and type of equipment to be used:

Standard construction practices and equipment, including excavators and bull dozers will be utilized during the construction of the project.

h. Describe the planned sequence of activities:

Site work will take place in the fall of 2024. Permanent monument and tree/shrub planting will take place immediately after final site grading.

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

Standard Blue Book SWPPP measures will be used to prevent sediment from entering waterways or wetlands during construction.

j. Erosion and silt control methods that will be used to prevent water quality impacts:

Silt fence or silt sock will be placed along the approved limits of disturbance. Immediately after final grading, seeding and mulching will take place.

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

The project has been designed to minimize impacts. No wetlands will be impacted by the proposed project nor will the project require any clearing as it is entirely within an existing maintained lawn area.

l. Proposed use: ☐ Private ☑ Public ☐ Commercial

m. Proposed Start Date: Fall 2024 Estimated Completion Date: Summer 2025

n. Has work begun on project? ☐ Yes If Yes, explain below. ☑ No

o. Will project occupy Federal, State, or Municipal Land? ☑ Yes If Yes, explain below. ☐ No

Yes, the project is within the Town-owned Lou Gehrig baseball complex.

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

DA# 2012-00704

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☑ Yes If Yes, list below. ☐ No

SEQR
Town Approval

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

7. **Signatures.**

Applicant and Owner (If different) must sign the application.
Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant | Date

Applicant Must be (check all that apply): ☐ Owner ☑ Operator ☐ Lessee

Printed Name: Town of Amherst (c/o Jessica Boudreau, PE) | Title: Operator

Signature of Owner (if different than Applicant) | Date

Printed Name | Title

Signature of Contact / Agent | Date

Printed Name: Jody M. Celeste | Title: Ecologist

For Agency Use Only **DETERMINATION OF NO PERMIT REQUIRED**

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name | Title

Signature | Date

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

June 2024
Wendel Project No. 261353

TOWN OF AMHERST, NY

REVISED 8-15-24

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Town of Amherst
New York



wendel

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

TITLE	SECTION
Introduction	I
Project Maps and Plans	II
Project Soils	III
General Requirements of the Owner/Operator	IV
Inspection and Maintenance Requirements	V
Construction Phasing	VI
Erosion and Sediment Control Measures	VII
Existing Watershed Information	VIII
Post Construction Storm Water Control Practices	IX

Appendices:

A. Supporting Maps
B. Geotechnical Reports
C. Standards and Specifications for Erosion and Sediment Control
D. Notice of Intent & Notice of Termination Correspondence
E. SPDES General Permit – GP-0-20-001
F. Calculations
G. Operation and Maintenance Plan
H. Wetland Mitigation Plan

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

I. Introduction

The Town of Amherst (ToA) is proposing to make improvements to the Lou Gehrig Sports Complex parking lots. The improvements include the reconfiguration and expansion of surface parking, drainage system augmentation, and lighting enhancement. These improvements are proposed for both Lou Gehrig Sports Complex parking lots located along Smith Road and Dann Road, henceforth referred to as the Smith Road Site and Dann Road Site.

A stormwater management assessment has been conducted for the proposed project in order to protect the waters of the State of New York from the adverse impacts of storm water runoff. This report presents an analysis of the project in accordance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from Construction Activity (Permit No. GP-0-20-001) and the New York State Storm Water Management Design Manual (SMDM). As required, standard sediment and erosion control practices are implemented where appropriate to provide pollutant removal and to prevent sediment from the project from reaching waters of the State. Stormwater management practices provide reduction in stream channel erosion, control of the overbank and extreme flood events, and provide water quality treatment and runoff reduction.

The total project disturbance area is approximately 4.31 acres, 2.85 acres of disturbance at the Smith Road site and 1.45 acres of disturbance at the Dann Road Site. Based on total project disturbance area the SPDES General Permit is required, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared to document the means and methods by which the project will comply with the requirements of the General Permit. The SWPPP is intended to be a work in progress document and should be revised and updated by a Qualified Professional whenever the site conditions dictate. Any proposed modifications shall be in accordance with the New York State Department of Environmental Conservation's (NYSDEC) technical standards.

(1) Scope of the Project: Wendel WD Architecture, Engineering, Surveying & Landscape Architecture, P.C. (Wendel) was retained by the Town of Amherst to provide planning services, surveying, architectural/engineering design services, and construction administration support for the design and implementation of the Lou Gehrig Sports Complex improvements.

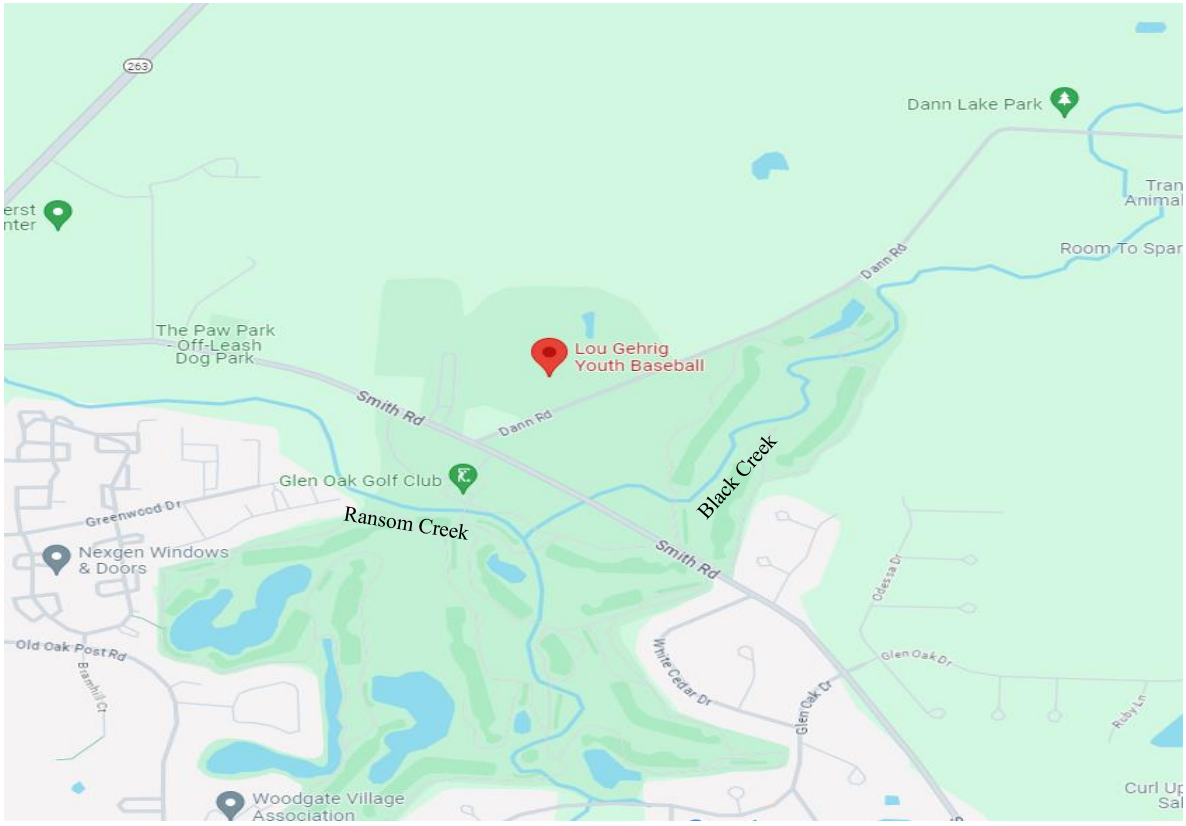
(2) Location of Project: The project is located at Lou Gehrig Amherst Park, 50 Dann Rd, East Amherst, NY 14051.

Table 1- Location Table

(Coordinate Map can be found in Appendix A)

Approximate Coordinate Position at Center of Project				
Long./Lat.	Longitude	-78.1250	Latitude	43.0529

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Location Map
N.T.S.

(3) Routing of Runoff: The existing parking lot drainage for the Smith Road site is divided in to three drainage areas (DA): 1S, 2S, and 3S. DA's 2S and 3S drain to wetlands, west of the site, and DA 1S flows to a grass drainage ditch southeast of the Smith Road Site. For the Dann Road site, the existing parking lot drainage is also divided into three drainage areas (DA): 1D, 2D, and 3D. DA 1D currently flows in a northeast direction as overland flow before entering an existing drainage inlet and flowing offsite to the southwest. DA 2D flows in the southwest direction to an existing parking lot drainage inlet and flows generally in a southern eastern direction. DA 3D flows in northwest direction as overland flow. Reference Appendix F for Drainage area exhibits.

DA's 1S, 1D, 2D, and 3D all ultimately drain to a town storm sewer system before draining to a grass ditch ~80ft southeast of the of Smith Road and Dann Road intersection. Flows continue ~700 LF and outlet to Black Creek before ultimately flowing to Ransom Creek via confluence. DA's 2S and 3S drain to wetlands west of the site where flows ultimately outlet to Ransom Creek. The Project area is not a tributary to any streams or bodies of water with AA or AA-s State classification and it is not located in a watershed where enhanced phosphorous removal standards (TMDL) are required. The project site does discharge to Black creek flowing ultimately to Ransom Creek (0102-0004), which is not classified as a 303 (d) segment impaired by pollutants related to Water Treatment.

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(4) Project Type and Size: It is anticipated that overall project construction will result in approximately 4.31 acres of disturbance. Within the limits of disturbance, the existing site has 3.57-acres of impervious cover while the proposed site will have 3.53-acres of impervious cover.

(5) Guidance and Applicability: The New York State Stormwater Management Design Manual (SMDM) and the NYSDEC SPDES General Permit for Stormwater Discharges (GP-0-20-001) were used to determine the requirements for permit coverage. The nature of the project was determined to be "Redevelopment with no increase in impervious area". A full SWPPP (including post-construction stormwater management practices) is required for the project. The Town of Amherst is a regulated Municipal Separate Storm Sewer System (MS4). As such, the Town must review the project SWPPP and provide a signed MS4 Acceptance Form prior to filing for permit coverage. An electronic Notice of Intent (eNOI) has been completed and will be submitted to the NYSDEC Division of Water to initiate the permit process once the signed MS4 Acceptance Form is received.

(6) However, it is our understanding that for Town projects within their own MS4, permit jurisdiction everts back to the NYSDEC. As such, a completed MS4 SWPPP Acceptance Form is not required and the Notice of Intent (NOI) is submitted directly to the NYSDEC Albany office. This project has been designed in conformance with the technical standards and the NOI will be filed electronically (eNOI).

(7) State / National Register of Historic Places: The project site is not located within the limits of an archaeologically sensitive area. OPRHP determined that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State National Registers of Historic Places will be impacted by the project. A print from the Cultural Resource Information System (CRIS) website and a copy of the OPRHP "no impact" letters are included in Appendix D for reference.

II. Project Maps and Plans

(1) Supporting Maps: A USGS Project Location Map showing planimetric features and existing water bodies is presented in Appendix A. Also included in Appendix A is a print from the Stormwater Interactive Map to verify project coordinates, several prints from the NYSDEC's Environmental Resource Mapper showing stream classification and other environmental features, a print from the National Wetland Inventory Mapper, a print from the NYS Cultural Resource Information System website, and multiple FIRMettes (floodplain maps) made from the FEMA Map Service Center website.

(2) Contract Plans: Copies of reduced size (11"x17") Contract Plans will be included in Appendix I in the next design phase.

III. Project Soils

(1) NRCS Soils Map at Project Location: Soil maps showing the Map Unit Symbols and Hydrologic Soil Groups of the local soils has been included in Appendix B. This information was acquired through the Web Soil Survey website as hosted by

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the USDA National Resources Conservation Service (NRCS). The applicable project site was defined on the website and the above-mentioned maps were generated. It should be noted that the project delineation shown on the maps is an approximate representation of the site. The following information is provided to give a general overview of the types of soils present at the site and to present various associated soil properties. The actual area of disturbance for this project is approximately 4.31 acres.

(2) Soil Types: The following soil type currently exists across the project area:

Table 2 – Soil Types at the Project Site

Map Unit Symbol	*Map Unit Name, Texture, % Slope Range*	*Hydrologic Soil Group (HSG)*	*Drainage Class Rating*
La	Lakemont Silt Loam, 0 to 3% Slopes	D	Poorly drained
Od	Odessa Silt Loam, 0 to 3% Slopes	D	Poorly drained

(3) Soil Disturbance Distribution: Soil maps included in Appendix B support the following soil disturbance distributions:

Table 3 – Soil HSG Distribution for Project Site

	Hydrologic Soil Group (HSG)			
	A	*B*	*C*	*D*
% Distribution	0	0	0	100

(4) Discussion of Soil Characteristics and Erosion Hazard Potential: As may be seen on the Soil Map, the project area is comprised entirely of HSG Group D soil (HSG Group D was used when modeling hydrologically to be conservative). Group D soils have a very slow infiltration rate (medium/high runoff potential) when thoroughly wet. They 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.

IV. General Requirements of Owner / Operator

(1) The Owner or Operator must satisfy the following criteria prior to being authorized to discharge under GP-0-20-001:

i. A project review pursuant to the State Environmental Quality Review Act (SEQRA), when SEQR is applicable
ii. Where required, all necessary Department permits subject to the *Uniform Procedures Act (UPA)* (see NYCRR part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4).

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Owners / operators of construction activities that are required to obtain *Uniform Procedures Act (UPA)* permits must submit a preliminary SWPPP to the appropriate DEC regional office at the time all other necessary UPA permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the construction activity qualifies for authorization under this general permit.

iii. The final SWPPP has been prepared and,

iv. A Notice of Intent (NOI) has been submitted to the Department in accordance with the requirements of this permit.

(2) Prior to the start of construction activities, the Owner or Operator must identify the contractor(s) that will be responsible for installing, constructing, repairing, inspecting, and maintaining the erosion and sediment control devices on site and included in the SWPPP; and the contractor(s) or subcontractor(s) that will be responsible for the construction of all post construction stormwater management practices included in the SWPPP. The Owner / Operator shall have each of these contractors and subcontractors identify at least one trained individual from their company that will be responsible for implementation, maintenance, inspection, etc. of the SWPPP and associated components. The Owner / Operator shall ensure at least one trained individual is on site on a daily basis when soil disturbance activities are being performed.

(3) The Owner / Operator shall have each of the contractors and subcontractors identified above sign a copy of the Contractor Certification Statement, which has been included in Appendix E.

(4) Certifications, Inspections and Reports: The Contractor shall be responsible for complying with the requirements and conditions described in the New York State Department of Environmental Conservation SPDES General Permit for Storm Water Discharge from Construction Activity, Permit No. GP-0-20-001 (See Appendix F). A Contractor Certification Statement is included in Appendix E and must be signed and certified by all contractors / subcontractors involved in earth disturbance activities. Copies of signed certifications shall be kept on site with the SWPPP.

(5) The Owner or Owner's representative will maintain a copy of the SWPPP at the construction site throughout construction, from the beginning of construction activities through final stabilization and submission of a Notice of Termination (NOT). The Notice of Intent (NOI) for the Project must be posted at the construction site for public viewing or must be immediately available to the public if requested. The SWPPP and any reports, inspections or certifications required by the permit must be kept onsite with the SWPPP and must be made available to any authorized entity requesting the documents. Authorized entities include representatives from the NYSDEC, EPA, and/or the local MS4 receiving stormwater from the project site. The aforementioned entities must be allowed entry for inspection at the site if so requested.

(6) The Owner / Operator must ensure that all necessary components of the SWPPP are implemented from the start of construction activity until all areas of disturbance have reached final stabilization, and the Notice of Termination has been submitted.

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(7) The Owner / Operator of the construction activity shall not disturb more than 5-acres at any one time without prior written authorization from the NYSDEC or the local MS4.

(8) The Owner / Operator shall install any additional site specific practices that may be necessary to protect water quality.

(9) The Owner / Operator must ensure that all erosion and sediment control devices are maintained and in effective operating condition at all times.

(10) If there is a change in the Owner / Operator, or a change in the operational control over the construction plan and specification, the original Owner / Operator must notify the new Owner / Operator in writing of the requirement to obtain permit coverage by submitting an NOI with the Department. Once the new Owner / Operator obtains coverage, the original Owner / Operator shall then submit a Notice of Termination (NOT) with the name and permit identification number of the new Owner / Operator to the Department. If the original Owner / Operator maintains ownership of a portion of the construction activity and will disturb soil, they must maintain their coverage under the General Permit.

V. Inspection and Maintenance Requirements

(1) Inspection Schedule: An Owner or Operator shall have a Qualified Inspector conduct site inspections as detailed below:

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.D.3 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.

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 DOW Water (SPDES) Program contact at the Regional Office (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 regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity) in writing prior to reducing the frequency of inspections.

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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 DOW Water (SPDES) Program contact at the Regional Office (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 regulated, traditional land use control MS4 (provided the regulated, traditional land use control 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.B.1 of this permit.

E. For construction sites that directly discharge to one of the 303(d) segments listed in Appendix E of the General Permit or is located in one of the watersheds listed in Appendix C of the General Permit, 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.

F. The Qualified Inspector shall prepare an inspection report subsequent to each and every inspection. A sample inspection report has been included in Appendix E.

G. The Qualified Inspector must notify the Owner / Operator (and appropriate contractors or sub-contractors) of any necessary corrective actions within one business day of the completion of the inspection. All reports are to be signed by the Qualified Inspector and be maintained on-site with the SWPPP.

H. The Contractor is required to begin implementation of any required corrective actions within one business day of receiving notification from the Qualified Inspector. All corrective actions must be implemented in a reasonable time frame.

I. The Owner or Owner's representative is responsible for a final site inspection when the site has achieved final stabilization. Wendel or another Qualified Professional or Qualified Inspector must perform the final inspection and file a Notice of Termination (NOT) form to terminate coverage under the SPDES General Permit GP-0-20-001.

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VI. Construction Phasing

(1) Prior to Soil Disturbance: Before any soil disturbance may occur, the Contractor is required to install several controls. These controls include (but are not limited to) a stabilized construction entrance and any required perimeter sediment controls (i.e., silt fence, compost filter sock). An initial site assessment and inspection shall be conducted by Wendel or another Qualified Professional prior to the commencement of construction activities to ensure all necessary controls are considered and to verify that the initial erosion and sediment control devices are properly installed and are operating as intended (see Appendix E for a sample inspection form). As construction progresses, additional erosion and sediment controls (such as inlet protection, check dams, etc.) shall be employed as site conditions dictate and as outlined on the erosion and sediment control plan.

The Contractor shall perform daily site maintenance and ensure the site is well maintained at the end of each day of construction. This maintenance shall include walking the site, looking for extraneous material (litter), and checking all stormwater outfall locations downstream of disturbed areas for evidence of turbidity, sedimentation, or oil and grease in the receiving waters/storm sewer system. All debris should be collected and disposed of in an appropriate manner. Construction chemicals shall be stored in areas away from any temporary or permanent stormwater drainage facility, and in areas that are above the ground surface so that surface water runoff does not deteriorate the associated container/bag. All containers shall be adequately sealed at the end of each workday or at the end of use. Construction debris shall be on site where the stockpiles will not interfere with temporary or permanent stormwater infrastructure, or negatively impact the environment (through sedimentation).

(2) Sequence of Construction Activities: The Contractor must submit to the Engineer for approval, a construction / progress schedule showing the order in which the Contractor proposes to complete the work, the date on which the work on the project will start, the major items of work (mobilization, implementation of soil erosion control measures, earthwork, excavation, construction, backfill operations, seeding and mulching operations, etc.), the critical features, and the anticipated dates for completing each task.

The Contractor's work schedule and method shall be consistent with the SWPPP or amended SWPPP. Once approved, the project schedule shall become part of the SWPPP. The focus of the method and schedule should be to prevent erosion and to prevent pollutants from the construction site from mixing with stormwater. The following is a recommended sequence of major construction activities, erosion and sediment control tasks, and inspection activities for the project:

1. Conduct a pre-construction meeting.
2. Provide a protected onsite location for the project SWPPP and associated certifications, inspections, and reports.
3. Install any required perimeter erosion and sediment control measures and construction entrance.
4. Stabilize any existing disturbed areas within the project area that are outside the limits of construction / soil disturbance.

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5. Engage a Qualified Professional to perform an Initial Site Inspection and Assessment.
6. Engage a Qualified Inspector to conduct site inspections and complete inspection reports for the duration of construction activities.
7. Clear the site and remove pavements within limits of construction.
8. Begin rough grading.
9. Install storm sewers, stormwater management practices, and other required utilities.
10. Install and maintain all practices in conformance with the plans, details, and project SWPPP.
11. Stabilize all denuded areas, stockpiles, and/or areas where construction activities have temporarily or permanently ceased as soon as practicable, but in no case more than 14 days after construction activity has ceased (7- days if over 5 acres are disturbed at one time).
12. Construct parking lot improvements and fine grade site.
13. Install bioretention media, associated underdrains, and any remaining SWM components.
14. Permanently stabilize areas as they are brought to final grade.
15. Complete final grading.
16. Restore soil in accordance with Section 5.1.6 of the Stormwater Management Design Manual. Full restoration is required in areas of cut or fill and in areas that have been compacted by construction equipment.
17. Install final stabilization and landscaping/seeding/mulching.
18. When vegetation is established and site is stable, remove silt fence and other temporary erosion control measures that remain and reseed / repair any area damaged during removal.
19. When site has reached final stabilization (80% uniform vegetative cover), engage a Qualified Professional or Qualified Inspector to conduct a final site inspection and file a Notice of Termination to terminate permit coverage.

(3) Pollution Prevention Measures: Pollution prevention measures shall be used to prevent construction materials with the potential for adversely affecting stormwater from entering the storm sewer system. Some potential construction materials with the potential for polluting stormwater include, but are not limited to: sediments, equipment fuel, solvents, lubricants, asphalt, concrete, hazardous waste, trash, and demolition debris. Also, prevention measures should address any contaminated soil that may be present on the project site.

Pollution prevention includes good housekeeping measures and proper disposal of construction materials and contaminated soil. Typical measures applicable to this project site may be summarized as follows:

Construction Waste

- Collect, remove, and dispose of waste at designated disposal area.
- Designate a contained disposal area on site.
- Use good housekeeping practices, (i.e., clean spills up immediately, provide and use container with lids, and arrange for refuse pickup before the containers reach capacity).

Hazardous Waste Disposal

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

- Determine what the requirements are for disposing waste materials by checking with authorities in waste management.
- Follow the manufacturer's recommended method for disposal.
- Communicate plan for disposal with the regulating authorities.
- Use good housekeeping practices.
- To prevent hazardous contaminants from entering waterways, all construction equipment and vehicles will be staged as far from stormwater receivers, creek beds, creek banks, etc. as practical.
- All instances of equipment refueling and staging of fuels shall take place in a manner consistent with relevant regulations and safety practices.
- In addition, all excess or staged materials will be surrounded by silt fencing, covered, stabilized, or promptly removed to prevent sediment migration.

Contaminated Soils

- Communicate plan for disposal with the regulating authority.
- Identify a licensed and insured waste transporter.
- Designate and design a staging area.
- Determine what the regulations are for disposing of contaminated soil by checking with State regulatory agency or consult with private firms specializing in disposal of contaminated soil.

Sanitary Sewer Waste

- Treat or dispose of waste according to State or local requirements.
- Do not bury or discharge untreated waste on site.
- Use good housekeeping practices to avoid illicit discharges.
- Use temporary facilities to contain waste prior to having waste haulers transport waste offsite. Communicate with the municipality if discharging waste into sanitary sewer system.

Solvents, Lubricants and Petroleum Products

- Use good housekeeping practices (i.e., contain and clean up spills immediately, construct dikes to contain spills, use preventive maintenance to fix gas or oil leaks from construction vehicles and monitor filling procedures).

Concrete Disposal

- No wet or fresh concrete shall be allowed to escape to any waterways, nor shall washings from concrete trucks, mixers, or other devices be allowed to enter any stormwater conveyance systems. Prevent concrete wash water from polluting stormwater by erecting a temporary concrete washout area per project plans and details.

A spill management plan that addresses potential spillage at the site should be generated by the contractor. The documented plan should entail stopping the initial source of the spillage, containing, and cleaning up spillage immediately, and disposing of contaminated materials through the proper channels and authorities.

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Construction and waste materials expected to be stored on-site consist of materials and equipment typically used for soil excavation, building construction, utility pipe installation, pavement construction, and landscaping/restoration. Materials generally consist of concrete, stone, pipe, concrete storm structures, asphalt paving products and building construction products. Equipment will generally consist of excavators and bulldozers to grade the site, dump trucks to move material, and paving and compaction equipment.

VII. Erosion and Sediment Control Measures

(1) Erosion and Sediment Control Plan: An Erosion and Sediment Control Plan has been developed in accordance with the NYSDEC's technical standards from the New York Standards and Specifications for Erosion and Sediment Control. The plan contains provisions for the changes in localized drainage patterns that will occur during various construction stages. The erosion control plan limits the amount of area exposed prior to stabilization, diverts drainage runoff from adjacent areas away from and around the construction site area, and employs various sediment control methods chosen for the site based on site characteristics. The plan includes items such as silt fence/silt sock, catch basin inserts, and re-vegetation and mulching requirements.

(2) Temporary Erosion and Sediment Control Measures: Temporary provisions for erosion and sediment control are shown on the contract plans and are included in Appendix C. The following temporary controls will be utilized, or employed if required, based on the conditions of the project:

Temporary Stabilized Construction Entrance/Exit – Temporary construction entrances will be placed as necessary and maintained to minimize the tracking of soils offsite. During and/or immediately following wet weather events, it may become necessary to wash the tires of construction vehicles prior to exiting the project site if material is being tracked offsite, as determined by the Qualified Inspector, Qualified Professional and/or the NYSDEC.

Temporary Soil Stockpiles – Temporary topsoil stockpile areas will be protected with perimeter silt fencing/siltsock and seeded as soon as possible to minimize the potential for sediment transport and erosion.

Equipment / Material Storage Areas – Equipment and material storage areas will be provided as required to complete the proposed construction and shall be at locations determined by the contractor (see Section VI, Construction Phasing). The storage areas will be graded to ensure that any material spillage shall be directed away from entering the storm drainage system. In addition, any identified chemical (oil, grease, etc.) spills shall be addressed immediately and appropriate local officials contacted if necessary.
Silt Fence / Compost Filter Sock – Silt fencing/filter socks shall be installed as a minimum requirement to filter potential sediment-laden runoff. If site conditions warrant, additional erosion and sediment control practices shall be installed.

Erosion Control Blankets – Erosion control blankets shall be installed on all slopes greater than 3:1, and where other conditions may warrant. Erosion control blankets will protect unstabilized earth from erosion while promoting the

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establishment of vegetation.

Inlet Protection – Inlet Protection may be provided on existing and new structures in paved areas subject to vehicular traffic with catch basin inserts. These sediment trapping devices can be installed in drainage structures to help reduce the potential of sediment laden water being transported from the site. For existing and proposed drainage structures in landscaped areas, filter fabric inlet protection as well as silt sock inlet protection may be used. In some cases, silt sock inlet protection may be used in paved areas not subject to vehicular traffic. Placing filter fabric between the frame and grate of a drainage structure is not an acceptable inlet protection configuration.

(3) Permanent Erosion and Sediment Control Measures: Permanent controls are those that will remain after construction completion. Asphalt and concrete pavements will protect the underlying soils from erosion. Catch basin sumps, the bioretention area, and dry detention system will act as permanent measures to help remove sediment that may try to leave the site after it is stabilized. Hydrodynamic separators also help to reduce sediment transport from the site. Remaining areas will be landscaped and/or seeded and a good stand of grass will be established to reduce erosion and promote infiltration.

(4) Applicable Standard Sheets and Special Details: Dimensions and installation details for erosion and sediment control practices are shown in Appendix C. Appendix C includes the applicable information from the New York State Standards and Specifications for Erosion and Sediment Control, also known as the NYSDEC's "Blue Book".

(5) Installation Sequence: The Contractor is responsible for the implementation of all erosion and sediment control features. The schedule of these installations will be as outlined by the contractor or as discussed in Section VI.

(6) Maintenance Schedule: The Contractor under contract for the installation of erosion and sediment control measures shall be responsible for their continued maintenance, operation, and ultimate removal of temporary measures. This designated party shall also be responsible to remedy any component of the SWPPP that is in need of maintenance, repair, or replacement. Inspections shall be conducted as outlined Sections IV & V of the SWPPP, and as outlined in the erosion and sediment control details included in Appendix C. The measures shall be maintained as required by the NYS Standards and Specifications for Erosion and Sediment Control, the Stormwater Management Design Manual, and/or as directed by the engineer / Qualified Professional.

(7) SWPPP Implementation Responsibilities: As applicant, the **Town of Amherst** will ultimately be responsible for ensuring the implementation of all components of the SWPPP and for meeting the conditions of the SPDES General Permit (GP-0-20-001). These responsibilities are outlined under Section V, inspection, and maintenance requirements. While the Owner/Operator is ultimately responsible for ensuring compliance with the General Permit, the Contractor is responsible to include in his bid the costs for any/all erosion and sediment control measures, their maintenance, repair, and ultimate removal, and for Qualified Professionals/Qualified Inspectors to perform the required inspections and

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prepare the reports/certifications required by the General Permit.

VIII. Existing Watershed Information

Stormwater runoff from both the Smith Road and Dann Road site drain to a series of drainage inlets, batch basins, grass swales ultimately draining in a southern direction to a closed town storm sewer system. The storm sewer continues to the southeast under Dann Road and outfalls to a grass swale heading towards Black creek. Black Creek continues southwest to a confluence with Ransom Creek.

The NYSDEC Environmental Resource Mapper was used to determine the location and classification of waterways that are in the project vicinity. Stream classification maps have been included in Appendix A.

Table 4 – Receiving Water bodies

Method of Stormwater Conveyance	*Receiving Body of Water*	*Waterway Class*
Open Channel Flow	Black Creek	C

IX. Post Construction Stormwater Control Practices

The proposed storm sewer and stormwater management facilities have been designed in accordance with the following guidelines/regulations:

a. New York State Stormwater Design Manual (SMDM), January 2015
b. State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-20-001).
c. New York State Standards and Specifications for Erosion and Sediment Control, July 2016

The SPDES General Permit requires:

- 24-hour extended detention of the post-developed, 1-yr, 24-hr storm (Cpv),
- Quantity controls to reduce post-developed peak runoff rates from the 10-year (Qp) and 100-year (Qf), 24-hour storms to equal to or less than pre-developed conditions.
- Water Quality (WQv) treatment for a volume of stormwater runoff, and
- A reduction in runoff from the site (RRv) equal to the WQv or at least equal to the calculated minimum (RRv min) with justification.

Town of Amherst requires:

- Quantity controls to reduce post-development peak runoff rates from the 25-year, 24-hour storm to equal to or less than predeveloped conditions under a 10-year storm.

(1) Water Quality and Runoff Reduction: The General Permit requires projects to utilize the design manual to provide practices to improve water quality by capturing and treating 90% of the average annual stormwater runoff volume. The design manual also requires a reduction of runoff volume to more closely replicate pre-development hydrology. This Runoff Reduction Volume (RRv) is

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achieved by application of green infrastructure practices and is naturally provided in some standard practices. The target volume for reduction is the entire WQv. However, when reduction of the target WQv cannot be achieved, a reduced RRv may be calculated and met as a minimum.

Chapter 9 of the SMDM discusses the alternative sizing criteria that may be applied to Redevelopment Activity. For Water Quality, the project proposes to use a hydrodynamic separator to meet project specific water quality objectives. A hydrodynamic separator is utilized for water quality treatment of an area that represents reconstructed impervious area (3.57 acres). Further discussion of these practices and all calculations are provided as Appendix F. The following tables is from the Engineering Report and summarizes WQv and RRv:

For this project, catch basins were needed to capture storm sewer runoff from the new parking areas (3.57 acres). This is an ideal location for placement of a hydrodynamic separator. The WQv tributary to this catchment was calculated to be 0.288 ac-ft (12540 cf) which exceeds the required WQv. This WQv was then converted to a Water Quality Volume Flowrate (WQvf) of 3.07 cfs. A First Defense Optimum (FDO-6) separator as manufactured by Hydro International was selected as it provides treatment of a WQvf up to 4.07 cfs. This unit (or an approved equal) will provide an excess of the required WQv for the subshed of 4,666 cf.

A WQv and RRv summary is provided in the table below and all calculations are provided in Appendix G.

Table 5 – Water Quality and Runoff Reduction Summary

Practice	*WQv Required (ac-ft / cf)*	*WQv Treated (cf)*
Hydro Unit	.288/ 12,540	17,206 cf
TOTALs	**.288/ 12,540**	**0.395 ac-ft**

* - Runoff Reduction (RRv) is not required for Redevelopment practices.

Table 6 – Practice Summary – Alternative Practice

Stormwater Management Practice	*Water Quality Volume Flowrate Required (cfs)*	*Water Quality Volume Flowrate capacity of Hydrodynamic Unit (cfs)*
FDO-6 by Hydro-International	3.07	4.07

(2) Water Quantity: The General Permit requires various controls to protect stream channels, prevent an increase in frequency of out-of-bank flooding, and prevent the increase of flood damage from large storm events. The stream Channel Protection Volume (Cpv) protects stream channels from erosion by providing 24-hour extended detention of the post-developed, 1-year, 24-hour storm event. Overbank Flood Control (Qp) is typically achieved by providing storage (detention) to attenuate the post development, 10-yr, 24-hour peak discharge rate to predevelopment 10-yr, 24-hour peak discharge rates. Similarly, Extreme Flood

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Control (Qf) is typically achieved by providing storage (detention) to attenuate the post development, 100-yr, 24-hour peak discharge rate to predevelopment 100-yr, 24-hour peak discharge rates.

For this project, the Town of Amherst will not enforce their requirement to reduce post-development peak runoff rates from the 25-year, 24-hour storm to equal to or less than predeveloped conditions under a 10-year storm. In proposed conditions, the Dann Site drainage area extents and outfalls for drainage 1D and 2D mimic the existing conditions. For DA 3D, the majority of the DA will be shifted to drain towards DA 2D before entering the proposed drainage inlet DS17 and flowing to an existing structure southeast of the site. No SWM quantity controls are proposed for the Dann Site.

Smith Site proposed conditions drains the parking lot with a series of drainage inlets and storm sewer piping outleting all DA's to two dry ponds south of the proposed parking lot. Flow will initially outlet to the pond east of the parking lot entrance road and flow west into the second pond before ultimately outfalling to the grass drainage ditch southeast of the project site, via orifice/riser and auxiliary riprap spillway. Though the project results in no net increase in impervious cover, the drainage area shifts at the Dann and Smith site results in a proposed hydrology that increases the discharge rate from the site, the Cpv, Qp and Qf criteria apply to the project. To meet Cpv, Qp and Qf requirements, the two dry ponds at the south end of the Smith Road Site will provide attenuation via extended detention. To verify this, hydrology for both sites and pond hydraulics were modeled using 2023 HydroCAD 10.20-5a Software. As confirmed by the calculations, there is a reduction in peak runoff rates between existing and proposed conditions.

A Quantity control summary is provided in the table below and all calculations are provided in Appendix G.

Table 6 – Project Quantity Control Summary

Quantity Controls	*Ext. 1-yr (cfs)*	*Prop. 1-yr (cfs)*	*Ext. 10-yr (cfs)*	*Prop. 10-yr (cfs)*	*Ext. 25-yr (cfs)*	*Prop. 25-yr (cfs)*	*Ext. 100-yr (cfs)*	*Prop. 100-yr (cfs)*
Storm Pipe to Black Creek	7.91	4.65	16.54	13.42	21.20	18.90	30.37	30.36
Reduction %	41%		39%		11%		<1%	

(3) Stormwater Conveyance: The proposed onsite storm sewer system is designed to convey 10-yr storm event to a series of drainage inlets throughout the proposed parking lots. For Smith Road Site, all parking lot flow will drain to a series of dry ponds towards the south end of the site which outfall to the grass ditch southeast of the Smith Road Site. For the Dann Road Site, all parking lot drainage will drain to the 18" RCP town storm sewer located southwest of the Dann Road Site. Flows from both sites ultimately outlet to the an existing concrete pipe, located north of the Smith Road and Dann Road intersection. Site specific Intensity-Duration-Frequency (IDF) information was acquired from the NRCS website (precip.net) and used with the Rational Method to size the storm pipes based on peak flows.

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Reference Appendix F for proposed storm sewer sizing calculations

(4) Maintenance of Post-Construction Stormwater Control Practices: The practices installed to meet the Water Quality and Quantity control requirements of the permit will require regular maintenance to maintain optimal performance. To facilitate this maintenance, an Operation and Maintenance Plan has been included in Appendix H. The plan discusses recommended maintenance activities for drainage inlets (catch basins), the hydrodynamic separator, and paved areas and provides operation and maintenance checklists to assist with future maintenance of the practices.

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Appendix A

Supporting Maps

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

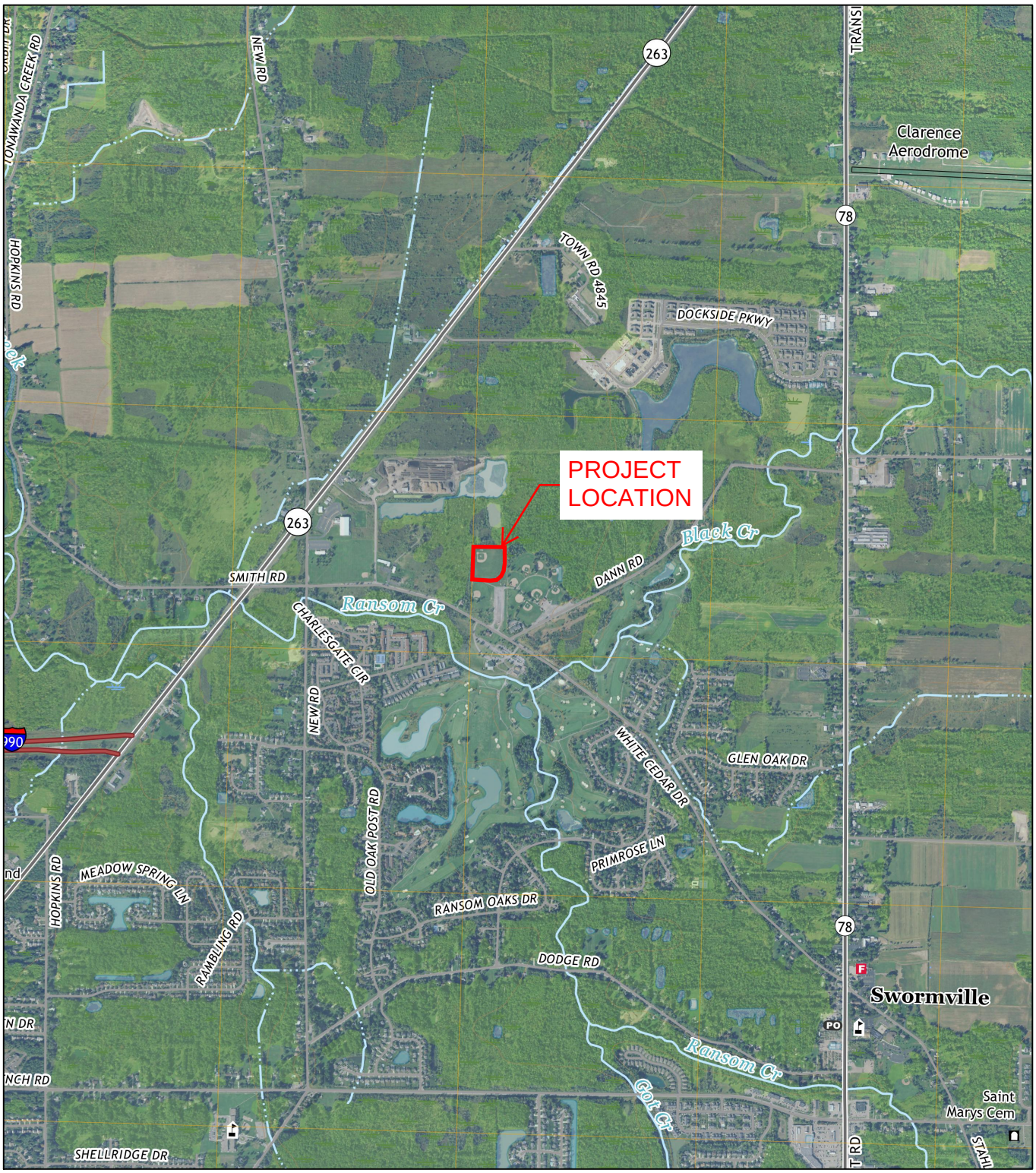


IMAGE IS FROM CLARENCE CENTER, NY QUADRANGLE, 2019.

wendel
www.wendelcompanies.com

USGS LOCATION MAP

LOU GEHRIG BASEBALL FIELD IMPROVEMENTS
TOWN OF AMHERST, NEW YORK

Proj. No.	261353
Date	AUGUST, 2021
Dwn.	AMR
No.	1

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Stormwater Interactive Map



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	197424.367	**Northing:**	4773545.980
Longitude/Latitude	**Longitude:**	-78.715	**Latitude:**	43.054

The approximate address of the point you clicked on is:
14051, East Amherst, New York

County: Erie
Town: Amherst
USGS Quad: CLARENCE CENTER

DEC Administrative Boundaries

Region 9:
(Western New York) Allegany, Chautauqua, Cattaraugus, Erie, Niagara and Wyoming counties. For more information visit http://www.dec.ny.gov/about/617.html.

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Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	197431.92594694393	**Northing:**	4773548.194967599
Longitude/Latitude	**Longitude:**	-78.71520858391703	**Latitude:**	43.05432291795601

The approximate address of the point you clicked on is:
14051, East Amherst, New York

County: Erie
Town: Amherst
USGS Quad: CLARENCE CENTER

Freshwater Wetlands Checkzone

This location is in the vicinity of one or more Regulated Freshwater Wetlands.

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.

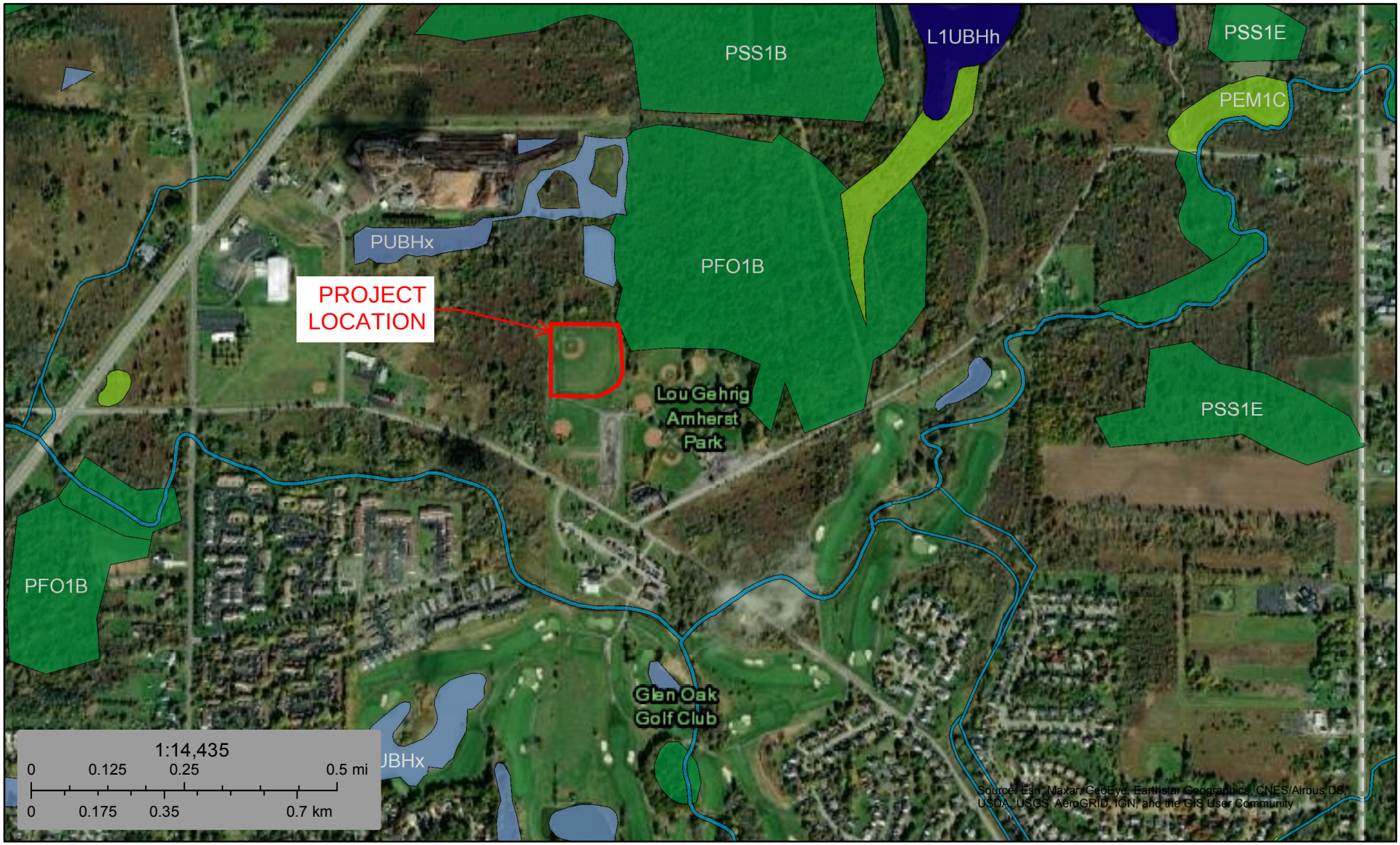
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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 permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

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U.S. Fish and Wildlife Service
National Wetlands Inventory

Federal Wetlands



July 29, 2021

Wetlands

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

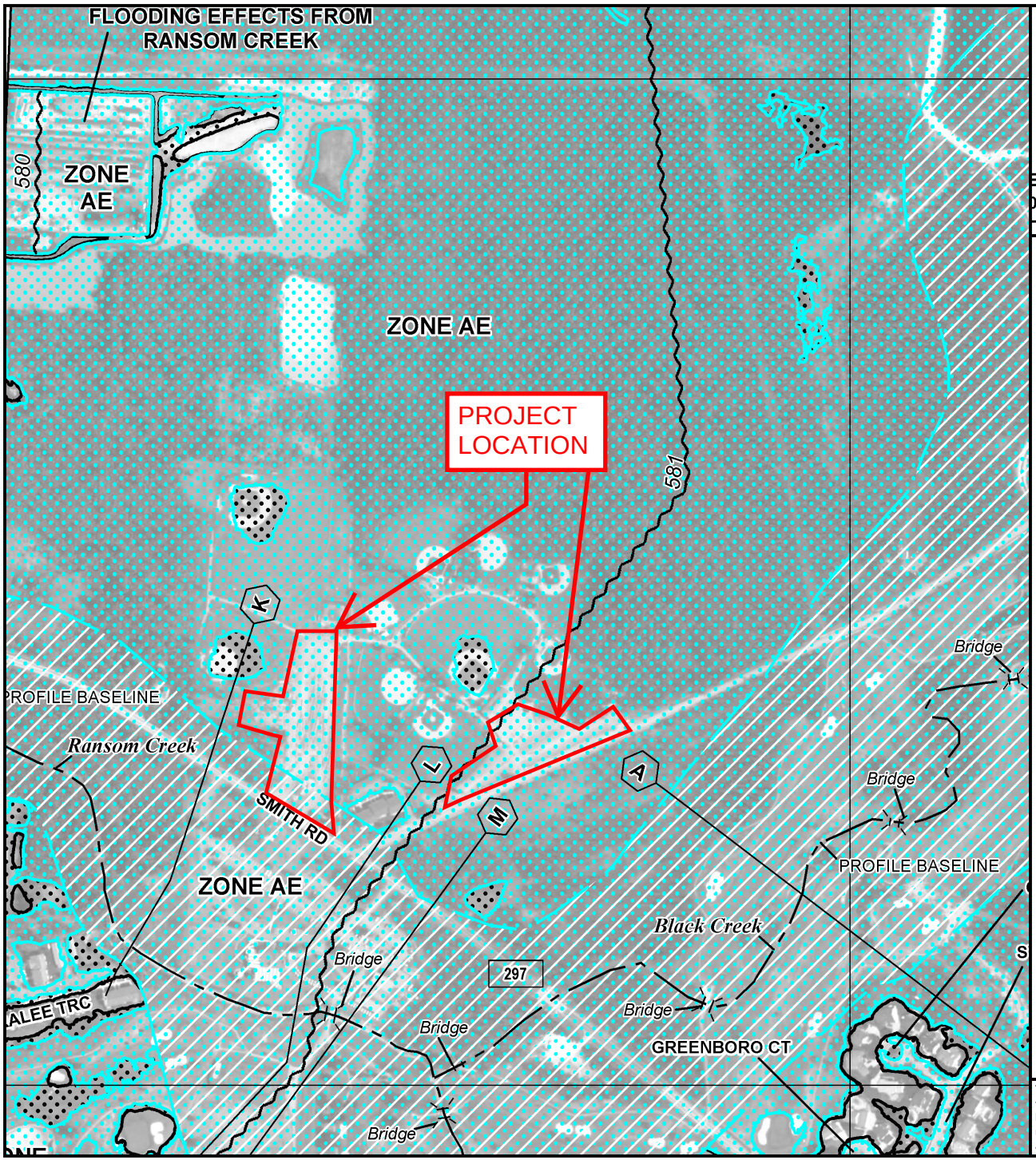
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

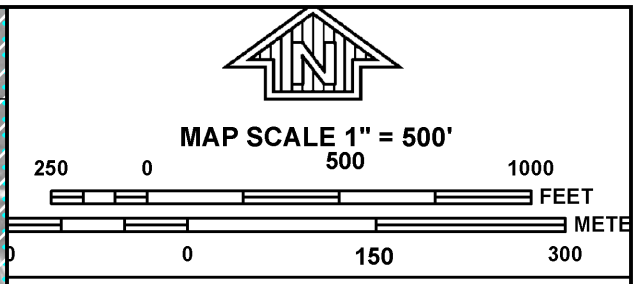
National
This page was produced by the NWI mapper

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Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)





NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0087H

FIRM

FLOOD INSURANCE RATE MAP

ERIE COUNTY, NEW YORK (ALL JURISDICTIONS)

PANEL 87 OF 807

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AMHERST, TOWN OF	360226	0087	H
CLARENCE, TOWN OF	360232	0087	H

Notice: This map was reissued on July 19, 2019 to make a correction. This version replaces any previous versions. See the Notice-to-User Letter that accompanied this correction for details.

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
36029C0087H

EFFECTIVE DATE
JUNE 7, 2019

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

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Appendix B

Geotechnical Reports

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United States Department of Agriculture

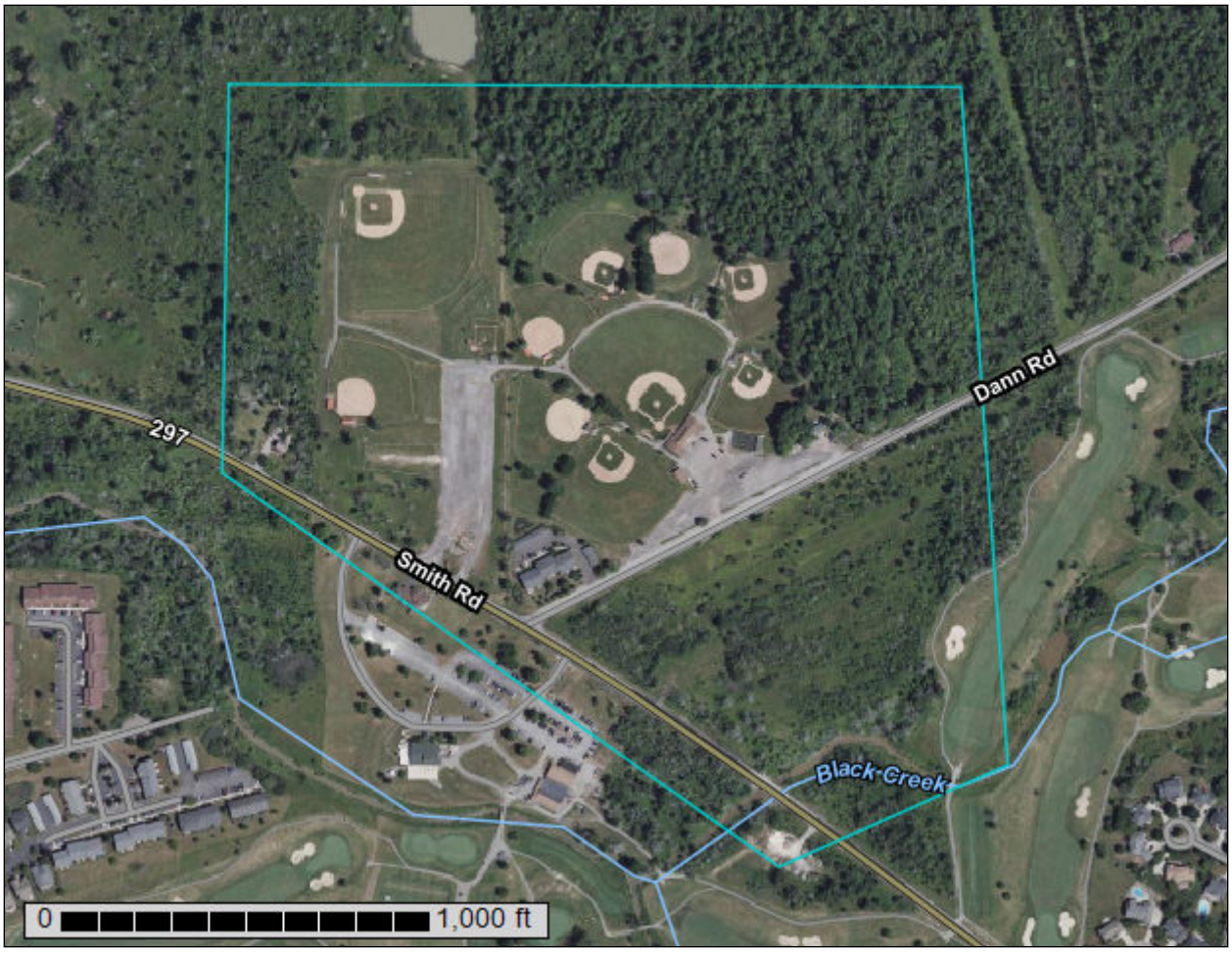
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Erie County, New York

Lou Gehrig Sports Complex



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Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

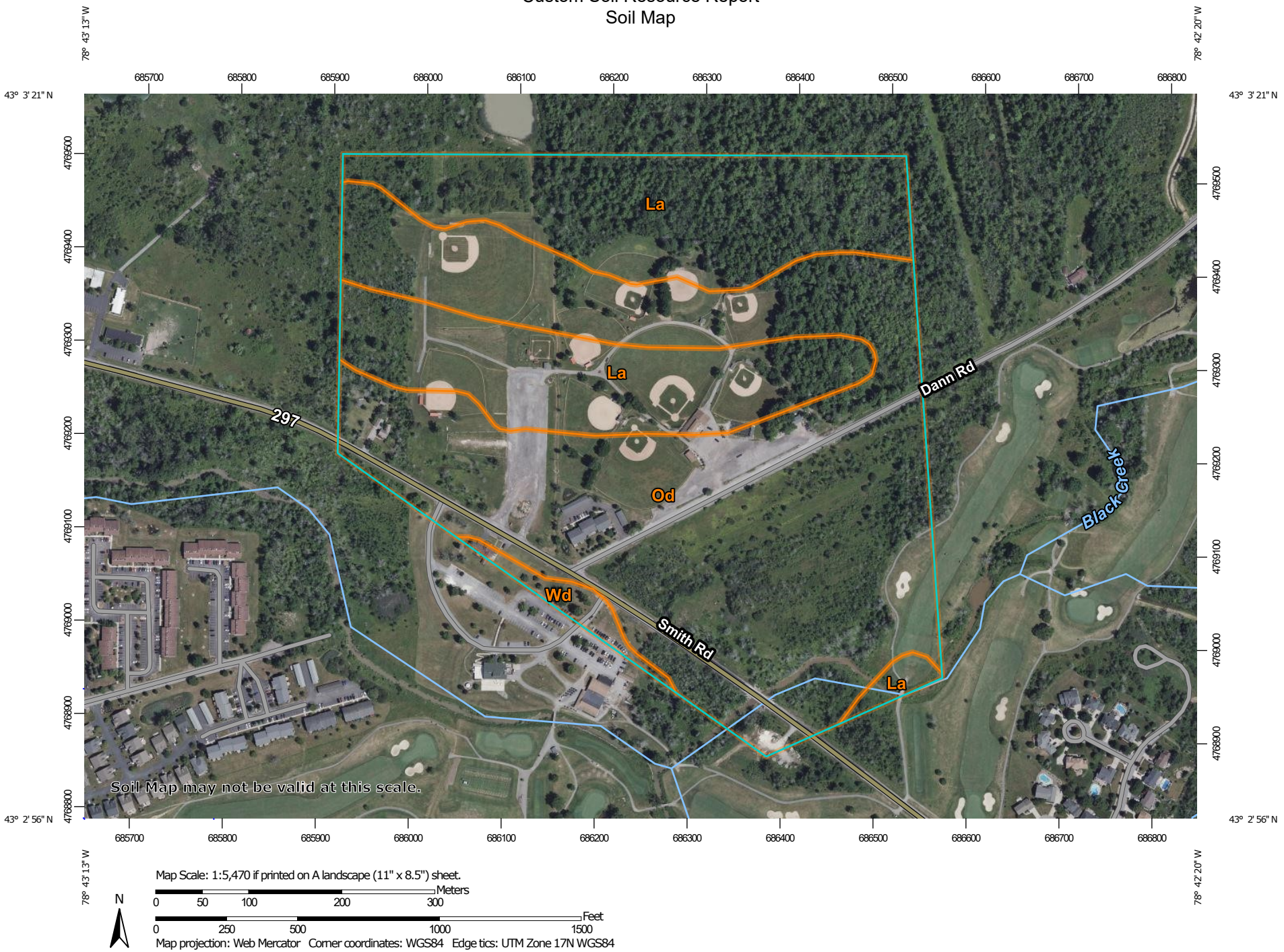
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Custom Soil Resource Report
Soil Map



Map Scale: 1:5,470 if printed on A landscape (11" x 8.5") 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

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MAP LEGEND

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

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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 23, Sep 5, 2023

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

Date(s) aerial images were photographed: Jul 4, 2020—Jul 10, 2020

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Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
La	Lakemont silt loam, 0 to 3 percent slopes	29.1	36.1%
Od	Odessa silt loam, 0 to 3 percent slopes	50.1	62.2%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	1.3	1.7%
Totals for Area of Interest		**80.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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Erie County, New York

La—Lakemont silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2spjx
Elevation: 260 to 1,210 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lakemont and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakemont

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 9 inches: silt loam
Eg - 9 to 13 inches: silty clay loam
Btg1 - 13 to 18 inches: silty clay
Btg2 - 18 to 29 inches: silty clay
C - 29 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 10.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F101XY010NY - Wet Lake Plain Depression
Hydric soil rating: Yes

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Minor Components

Odessa

Percent of map unit: 5 percent
Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Fonda

Percent of map unit: 4 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Canandaigua

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Barre

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Cheektowaga

Percent of map unit: 1 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Od—Odessa silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wrd8
Elevation: 260 to 1,540 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Odessa and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Odessa

Setting

Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt/E - 8 to 10 inches: silty clay loam
Bt1 - 10 to 15 inches: silty clay
Bt2 - 15 to 25 inches: silty clay
C - 25 to 79 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Schoharie
Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lakemont
Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Churchville
Percent of map unit: 3 percent
Landform: Drumlinoid ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Rhinebeck
Percent of map unit: 2 percent
Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Wd—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: 2srgv
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 68 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam
Bg1 - 6 to 12 inches: silt loam

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Minor Components

Wakeville

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

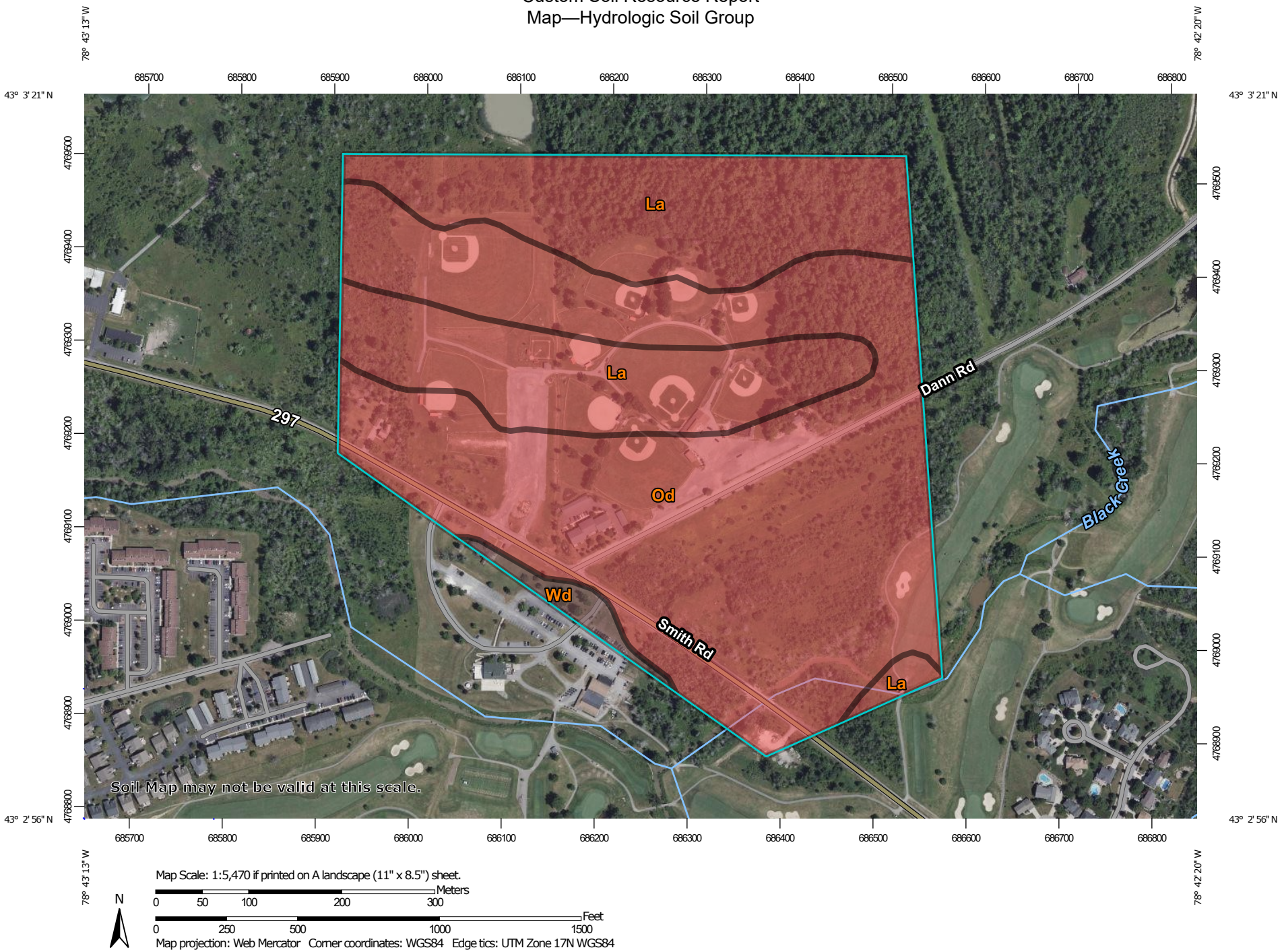
Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

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.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:5,470 if printed on A landscape (11" x 8.5") 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

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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

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Web Soil Survey URL:
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Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
La	Lakemont silt loam, 0 to 3 percent slopes	D	29.1	36.1%
Od	Odessa silt loam, 0 to 3 percent slopes	D	50.1	62.2%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	B/D	1.3	1.7%
Totals for Area of Interest			**80.5**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Features

Water Features include ponding frequency, flooding frequency, and depth to water table.

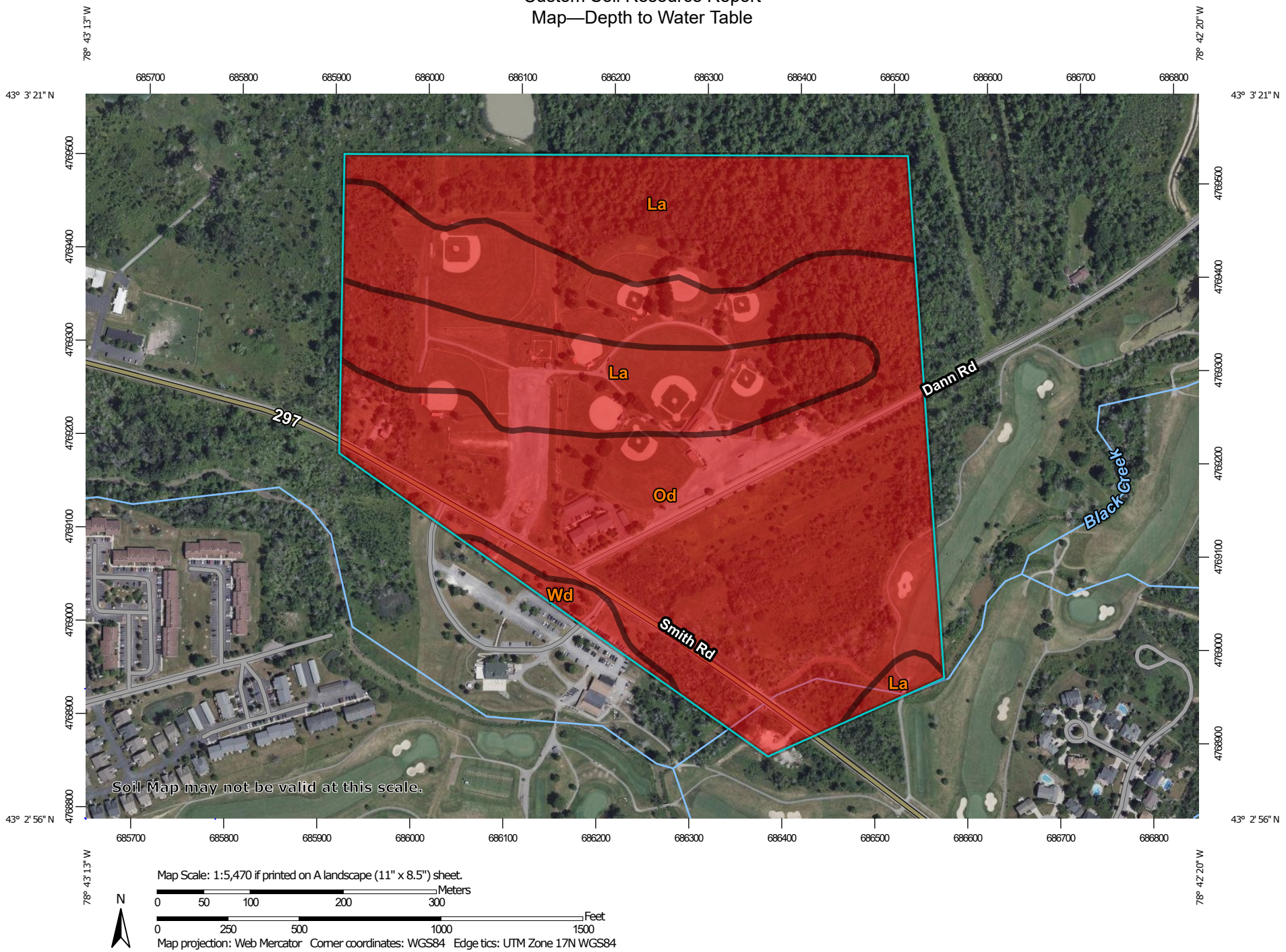
Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

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Custom Soil Resource Report
Map—Depth to Water Table



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MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- 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 23, Sep 5, 2023

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

Date(s) aerial images were photographed: Jul 4, 2020—Jul 10, 2020

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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Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
La	Lakemont silt loam, 0 to 3 percent slopes	0	29.1	36.1%
Od	Odessa silt loam, 0 to 3 percent slopes	20	50.1	62.2%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	0	1.3	1.7%
Totals for Area of Interest			**80.5**	**100.0%**

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Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

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Pavement Evaluation Report for Proposed Parking Lot Reconstruction Lou Gehrig Baseball Fields Smith Road & Dann Road Town of Amherst, New York

Prepared For:

Wendel
375 Essjay Road, Suite 200
Williamsville, New York 14221

Prepared By:

WMA Engineering, DPC dba
Empire Geotechnical Engineering Services
5167 South Park Avenue
Hamburg, New York 14075



Project No.: WB-22-057
Ref. SJB Project No.: BE-22-057
June 2022

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WMA ENGINEERING DPC|DBA
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June 2, 2022
Project No. WB-22-057
Ref. SJB Project No.: BE-22-057

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Mr. Christopher M. Chapman, P.E.
Wendel
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Williamsville, New York 14221

Re: Pavement Evaluation Report for
Proposed Parking Lot Reconstruction
Lou Gehrig Baseball Fields
Smith Road & Dann Road
Town of Amherst, New York

Dear Mr. Chapman,

This report summarizes the pavement evaluation completed by WMA Engineering, DPC dba Empire Geotechnical Engineering Services (Empire) with regard to the proposed parking lot reconstruction planned at the Lou Gehrig Baseball Fields facility located at Smith Road and Dann Road in the Town of Amherst, New York. The approximate location of the project site is shown on Figure 1. One (1) hard copy of this report is submitted to Wendel. We have also e-mailed you an electronic copy (pdf file format) of this report for your use, and for distribution, as appropriate.

The pavement evaluation was completed by Empire at the request of, and as authorized by Wendel. SJB Services, Inc. (SJB), our affiliated drilling and testing company, was retained by Empire to complete the subsurface exploration work at the site. Our evaluation and recommendations are based on five (5) pavement core / test borings completed at the site by SJB.

The purpose of this work was to investigate the existing pavement structure and subgrade conditions within the two parking lot areas proposed for reconstruction, and to develop appropriate design and construction recommendations for reconstruction of the existing pavement areas, as well as for any adjoining new pavement areas. This report summarizes the subsurface exploration program completed, along with the findings concerning the existing pavement and subgrade soil conditions as they relate to the proposed improvements.

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BACKGROUND INFORMATION AND PROPOSED PAVEMENT IMPROVEMENTS

Empire understands the parking lot areas within the Lou Gehrig facility, located at the intersection of Smith Road and Dann Road are planned for reconstruction by the Town of Amherst. The proposed pavement improvements include two general parking lot areas:

- The west parking lot area, with access drives from Smith Road; which consists generally of an asphalt milling surface; and

- The east parking lot area, with access from Dann Road; which consists mainly of an asphalt concrete pavement surface, with some areas of asphalt millings.

The locations of these areas are shown on Figure 2. Photographs of the existing pavement surface conditions at the core / test boring locations are presented in Appendix A.

It is understood the existing parking lots and access drives are planned to be reconstructed, with a full depth asphalt concrete and subbase pavement section. In addition, some areas may be expanded or reconfigured slightly, as appropriate. Use of these parking lots and access drives are predominately for automobile / SUV parking and access, along with some occasional buses, light delivery trucks and maintenance vehicles.

SUBSURFACE EXPLORATION

The subsurface exploration consisted of a total of five (5) pavement core / test borings, made by SJB within the various pavement areas, and completed on May 9th, 2022.

These explorations were completed as follows:

- West Parking Lot and Access Drive Area - 3 Locations; designated as B-1 through B-3; and

- East Parking Lot Area - 2 Locations, designated as B-4 and B-5.

The approximate exploration locations are shown on Figure 2.

Wendel provided a plan (aerial photograph) of the site, with the proposed general pavement core / test boring locations initially established on it. Using this plan,

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SJB then established the proposed pavement core / test boring locations, and their GPS coordinates, using a Google Earth™ aerial photograph of the site. The pavement core / test borings were then located and staked in the field, using a handheld GPS instrument. These coordinates were recorded and were used to prepare Figure 2.

A listing of the exploration location GPS coordinates is presented in tabular format on Figure 2, as well as preceding the test boring logs in Appendix B.

Portable coring equipment was utilized to obtain 6-inch diameter core samples of the asphaltic concrete at exploration locations B-4 and B-5 made through the asphalt concrete surface at these locations. The underlying subbase was then hand sampled and its thickness measured after the pavement cores were extracted. At pavement core / test boring locations B-1 through B-3, SJB hand sampled and measured the approximate thickness of the asphalt millings present at the surface of these locations.

The test borings (subgrade soil sampling) were advanced using a Central Mine Equipment (CME) model 550X, all-terrain vehicle mounted drill rig, using hollow stem auger and split spoon sampling techniques. The subgrade soil sampling included taking continuous split spoon samples, and corresponding Standard Penetration Test (SPT), in the subgrade beneath the subbase stone layer or asphalt milling surface. The test borings were advanced to a depth of 8.0 feet below the existing pavement surface, and then terminated as planned. The split spoon sampling and SPTs were completed in general accordance with *ASTM D1586 – "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils"*.

A geologist from SJB prepared the pavement core / test boring logs based on visual observation of the recovered pavement cores and subgrade soil samples, along with review of the driller's field notes. The subgrade soil samples were described based on a visual/manual estimation of the grain size distribution, along with characteristics such as color, relative density, consistency, moisture, etc. The pavement area core / test boring logs, along with general information and a key of terms and symbols used to prepare the logs, are included with this report as Appendix B.

LABORATORY EVALUATION

The thickness of the asphalt concrete core samples obtained at pavement core / test borings B-4 and B-5 were measured, and the cores described and photographed in SJB's soils laboratory. The pavement core photographs are presented in Appendix C. A thickness breakdown and description of the various

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components (i.e. top course and binder course layers, etc.) making up the existing asphalt concrete pavement are summarized on the core photographs.

The pavement subbase material samples collected from pavement core / test borings B-4 and B-5, as well as the millings obtained from the surface of pavement core / test borings B-1 through B-3, were also photographed in SJB's soils laboratory. These photographs are also included as part of the asphalt concrete core sample photographs in Appendix C.

The millings collected from pavement core / test boring locations B-1 through B-3 and the subbase samples collected from core / test borings B-4 and B-5 were tested in SJB's geotechnical testing laboratory to assist with evaluating their gradation characteristics. The grain size analyses (sieve analyses only) were completed in accordance with *ASTM D 6913 – "Standard Test Method for Particle-Size Distribution (Gradation) of Soils using Sieve Analysis"*.

The laboratory test data is presented in Appendix D.

SUMMARY OF ASPHALT PAVEMENT, MILLINGS, SUBBASE AND SUBGRADE CONDITIONS

General

The thickness of the asphalt concrete, millings and the subbase encountered at the pavement core / boring locations, along with a general description of the underlying subgrade soils, are summarized for the two parking lot areas on Table 1. In addition, the number and type of components (i.e. top course and binder course layers) making up the asphalt concrete are also summarized on this table, as well as in more detail, with the component thicknesses, on the pavement core photographs, in Appendix C.

Surface Millings

Asphalt millings were present at the surface of pavement core / test borings B-1 through B-3 made in the west parking lot area. The thickness of the asphalt millings ranged between about 6-inches and 10-inches.

A comparison of the gradation test results of the subbase samples tested, to NYSDOT Item 304.14 (Type 4 Subbase) gradation requirements, are presented on Table 2. One (1) of the three (3) samples tested, was found to not fully meet the gradation requirements for NYSDOT Item 304.14 (Type 4 Subbase), as noted on Table 1. In this case, the variation was not substantial, and therefore does not

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appear to detrimentally impact the structural performance of the milling material, which was tested.

Asphalt Pavement Conditions

Asphalt concrete pavement was encountered at the surface of the pavement core / test boring locations B-4 and B-5 made in the east parking lot area. The thickness of the asphalt concrete encountered at these two locations was similar ranging between about 2.7-inches and 2.8-inches, respectively

The asphalt concrete appeared to contain between 1 and 2 layers of asphalt top material (i.e. 2 layers in B-4 and 1 apparent layer in B-5). The core from B-5 may have contained a possible second top layer, however, this was difficult to confirm as the bottom of this core was deteriorated.

Subbase Conditions

A subbase course layer was encountered at pavement core locations B-4 and B-5. The subbase material consisted of an apparent crushed stone type material. The thickness of the subbase within these pavement cores ranged between 8-inches and 4-inches, respectively. A geotextile fabric layer was not apparent beneath the subbase at these core locations.

A comparison of the gradation test results of the subbase samples tested, to NYSDOT Item 304.14 (Type 4 Subbase) gradation requirements, are presented on Table 2. For both samples tested, the gradations of the existing subbase tested were found to not fully meet the gradation requirements for NYSDOT Item 304.14 (Type 4 Subbase). In the both cases, the variation was not substantial, and therefore does not appear to detrimentally impact the structural performance of the subbase material, which was tested.

Subgrade Soil Conditions

The subgrade soils encountered beneath the pavement surface materials, at the test boring locations consisted of man-placed sandy gravel, silty clay, and silty clayey gravel and sand type fill soils, which was found to extend to depths ranging between about 4 feet and 6 feet. The fill type soils were found to overlie indigenous soils which consist predominately of “stiff” to “very stiff” silty clay type soils. These indigenous soils were found to be present to the 8 feet termination depths of the test borings.

Standard Penetration Test (SPT) "N" values obtained in the subgrade soils directly beneath the millings or subbase course ranged from 7 to 26, indicating the

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upper fill soil subgrades range generally between a "loose" to "firm" relative density or a “stiff” consistency.

The subgrade soils encountered typically have “fair” to “very poor” drainage characteristics, which is dependent on the amount of silt and clay present within these soils. Freestanding water was not present in the test borings, immediately following the completion of drilling and soil sampling. It is possible, however, given the presence of the clayey type soils encountered, that groundwater where present, may not have had sufficient time to accumulate and stabilize during the period which elapsed from the completion of drilling and the time when these observations / measurements were made.

Moist to wet” and "wet" soil samples were recovered from several of the test borings generally within the upper 2 feet. These conditions suggest that perched groundwater is present within portions of the upper sandy gravel fill subgrade soils, trapped by the underlying lower permeability subgrade silty clay type soils. Perched or trapped groundwater conditions can be more prevalent following heavy or extended periods of rain and during seasonally wet periods, as well as be impacted by the subgrade soil drainage conditions.

The poor draining subgrade soil conditions, in conjunction with the apparent lack of adequate drainage relief, appear may result in poor drainage of the millings and subbase and can trap water within these courses. These conditions can result in potentially weakened subgrades at various times, as well as causing the millings and subbase to be potentially susceptible to frost action, resulting in pavement structure fatigue and shortened design life, as well as poor structural support of the vehicle loads.

PAVEMENT EVALUATION, CONSIDERATIONS AND RECOMMENDATIONS FOR RECONSTRUCTION

General Evaluation and Recommendations

Photographs of the existing pavement surface conditions at the core / test boring locations, presented in Appendix A, indicate the existing parking lots are generally deteriorated and contain various deficiencies including the following.

- Areas of standing water (west parking lot area), indicating poor site and pavement structure drainage;
- Areas of minor rutting / wheel depressions in the millings;
- Cracking and patches in the asphalt pavement surface, where present;
- Areas of both asphalt pavement and milling type surfaces (east parking lot area);

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- Soils mixed within the asphalt millings at various locations (both parking lot areas); and
- Structural support deficiencies due to the limited amount of millings, asphalt pavement and /or existing subbase.

Considering the limited amount of millings present at the surface of the west parking lot area, along with deficiencies in the asphalt pavement and limited subbase present in the east parking lot, as well as the overall lack of adequate pavement structure drainage in both parking lot areas, it is recommended the pavement reconstruction in both parking lot areas consist of a new full depth pavement structure, as currently planned and as outlined further below.

Implementation of Proper Drainage

As stated above, the drainage characteristics of the existing subgrade soils are typically “fair” to “very poor”, based on their clayey nature. In addition, portions of the upper fill subgrade soils were in a “moist to wet” and “wet” condition at the time of our study. Due to the poor subgrade drainage characteristics and the lack of adequate drainage relief (i.e. underdrains, edge drains), the existing clayey type subgrade soils are susceptible to periodic trapped or perched groundwater thus becoming soft, weakened and unstable. These conditions can result in potentially weakened subgrades at various times, as well as cause the subbase of the new pavement structure to be potentially susceptible to frost action, resulting in shortened pavement structure design life.

Accordingly, the installation of underdrains or edge drains are strongly recommended to drain the new pavement subbase course and subgrades in order to limit the potential for frost action and improve pavement structure performance and design life. Alternatively, the pavement subbase course can also be allowed to daylight/drain to an adjacent perimeter drainage swale(s) or other drainage relief points. Additional recommendations for pavement drainage are presented further in this report.

Subgrade Conditions

The subgrades for the new pavement structure are expected to be established within generally "loose" to "firm" relative density or a “stiff” consistency, fill type soils. In addition, some of these subgrade soils are expected to be to be in a “moist to wet” and “wet” condition. Thus, the subgrade soils that will be exposed are sensitive and may degrade, lose strength and become unstable when they are wet and disturbed by construction activities traffic. Therefore, it should be expected that some subgrade undercuts may be necessary to remove softer wet subgrade

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soils and stabilize these areas with additional subbase or other suitable granular materials, as discussed further below.

Accordingly, we would recommend a contingency in the Contract for some potential undercuts of the subgrade soils. If undercuts are necessary to stabilize weak, disturbed or unstable subgrades, we would anticipate such conditions can generally be stabilized with the undercuts being in the range of about 12-inches ± below the design bottom of the subbase course, depending on the severity of the unsuitable subgrades.

Subgrade Soil Support and Pavement Design Analyses

Based on the subgrade soil types encountered, along with the SPT data obtained at the pavement core / boring locations, we have estimated the effective Roadbed Soil Resilient Modulus (Mr) of the subgrade soils to range generally between about 3,000 and 4,500 psi, as presented on Table 1. On this basis for new pavement structure design, we would suggest the use of an Mr value of around 3,400 psi (23 MPa), which would be an average of the less favorable Mr values ranging between 3,000 psi and 3,500 psi. This Mr value correlates to a subgrade CBR value of approximately 3 to 4.

Our analyses and design recommendations are based on the design criteria presented in the NYSDOT Thickness Design Manual for New and Reconstructed Pavement. These analyses provide estimated structural design capacities, in terms of Equivalent 18-kip Single Axle Loads (ESAL'S), for the new pavement structure. The analyses of the structural design capacities assume the presence of adequate subgrade / subbase drainage conditions.

A structural design capacity of approximately 50,000 to 75,000 EALs, for a 20 to 25 year design life, has been used for the pavement structure design, for light duty use, consisting of predominately automobiles / SUV's, along with occasional buses, light delivery trucks, and maintenance vehicles.

Recommendations for Construction of a New Full Depth Pavement Structure

Full depth pavement reconstruction, as well as new pavement construction at any locations of proposed expanded or reconfigured parking areas, should include removal of the existing asphalt concrete, millings or topsoil in proposed new pavement areas, excavation of the existing subbase and subgrade soils, as necessary to establish the new pavement section, preparation of the exposed subgrades for the new pavement structure, and installation of a new pavement structure, which includes installation of suitable drainage and placement of a new pavement subbase course and an asphalt concrete pavement surface.

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Recommended Pavement Structure:

The following Light Duty asphalt pavement structure is recommended for reconstruction of the parking lots, which are expected to be subject to predominately automobiles / SUV's, along with some occasional buses, light delivery trucks, and maintenance vehicles. It is noted that this pavement section is not intended for heavy truck parking or use, and therefore should not be permitted without modification.

Light Duty Asphalt Concrete Pavement:

- 1.5 inches – Top Course
- 2.0 inches – Binder Course
- 12.0 to 15.0 inches – Subbase Course*
- Stabilization / Separation Geotextile
- Prepared Subgrade

** It is recommended to increase the Subbase Course thickness to 15.0 inches in the parking lot entrances which will be subject to more frequent traffic, as well as in areas subject to delivery truck access. It may also be necessary to increase the subbase thickness in some areas to improve subgrade conditions and to promote drainage to underdrains, etc, as discussed further below.*

Materials for the above asphalt pavement structure components should consist of the following:

A. Asphalt Concrete Top Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 9.5 F2 Top Course.

B. Asphalt Concrete Binder Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 19 F9 Binder Course.

C. Subbase Course – Should generally comply with NYSDOT Standard Specifications, Item No. 304.12 - Type 2 Subbase, as described further below.

D. Stabilization / Separation Geotextile - Woven polypropylene stabilization / separation geotextile (i.e. Mirafi 600X or approved suitable equivalent).

E. Prepared Subgrade – As recommended below.

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The above asphalt pavement materials should be produced in accordance with NYSDOT Standard Specifications, Section 401.

Subbase Material

We recommend that the subbase material used for the full depth reconstruction should generally be a crusher run, quarried limestone or dolostone product, complying with NYSDOT Standard Specifications, Item No. 304.12 - Type 2 Subbase.

The subbase material should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557). Placement of the subbase material should not exceed a maximum lift thickness of 12 inches. It may be necessary to reduce the lift thickness depending on the type of compaction equipment used so that the required density is attained. The subbase material should have a moisture content within two percent of the optimum moisture content at the time of its compaction.

Reuse of Existing Milling and Subbase Material

Considering the gradation test results, portions of the existing asphalt millings surface material and existing subbase appear could be re-used for the new pavement structure construction. For reuse, however, it will be necessary to carefully excavate and properly segregate the milling and stone material from the underlying subgrade soils, as well as material containing intermixed soil, and to not mix in the subgrade or other soils, which potentially could contaminate the stone and alter its structural and drainage properties.

Suitable existing milling and subbase stone material could be used in the bottom third to half portion of the design subbase course. Alternatively, this material could also be used to backfill any necessary undercuts required to stabilize the existing subgrade soils, as discussed further below.

Pavement Drainage

The installation of underdrains or edge drains (i.e. AvanEDGE® or suitable equivalent) is recommended to drain the pavement subbase course and subgrades in order to limit the potential for frost action and improve pavement structure performance and design life.

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Underdrains should include a geotextile (i.e. Mirafi 160N or suitable equivalent), selected considering drainage and filtration, installed around drainage stone surrounding a slotted or perforated drain pipe. The drainage stone should be sized in accordance with the pipe slotting or perforations. A crushed aggregate conforming to NYSDOT Standard Specifications Section 703-02, Size Designation No. 1 (½-inch washed gravel or stone) is generally acceptable for slotted underdrain pipe. The underdrain pipes should be set in the bottom of the subbase layer, or preferably below the top of the soil subgrade elevation. The drainage stone and surrounding geotextile should extend above the underdrain pipe and into the subbase layer. Underdrain pipes should be connected to the site storm water drainage system or other suitable drainage outlet.

Alternatively, the pavement subbase course can be allowed to daylight/drain to an adjacent drainage swale or other drainage relief point. Accumulation of water on pavement subgrades should be avoided by grading the subgrade to a slope of at least 2 percent to allow drainage to the underdrains, edge drains or drainage swales.

Pavement Construction Considerations

The site preparation work for the pavement reconstruction / new construction should be performed during dry periods to minimize potential degradation of the subgrade soils and undercuts which may be required to establish and maintain a stable subgrade for construction. It should be understood that the existing subgrade soils can be sensitive and be expected to degrade and lose strength when they are wet and disturbed by construction equipment traffic.

Accordingly, efforts should be made to maintain the subgrades in a dry and stable condition at all times, and to minimize construction traffic directly over these soils. These efforts should include proper grading to divert surface runoff away from the construction areas, sloping of the subgrade and "sealing" of the surface, at the end of each day or when rain is anticipated, with a smooth drum roller to promote runoff, and restricting construction equipment traffic from traveling directly over the subgrade surfaces, especially when they are wet.

During construction the Contractor should take precautions to limit construction traffic over the subgrades for the pavement structure reconstruction / new construction. Any subgrades which become damaged, rutted or unstable should be undercut and repaired as necessary prior to placement of the overlying new subbase and asphalt pavement courses. All subgrade preparation, including backfilling should be monitored, tested and documented, on a full-time basis, by qualified geotechnical personnel.

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Existing asphalt pavement, millings, and subbase as well as any surface slabs, curbs, vegetation, topsoil, soils containing organics, or otherwise wet, soft, or unsuitable material should be removed within pavement areas to be fully reconstructed, as well as in any new pavement areas, as appropriate. Following removal of the surface materials and excavation to the proposed subgrades, the exposed in-situ soil subgrades should be carefully inspected and proof-rolled.

The in-situ soil subgrade proof-rolling should be performed, prior to any required fill or new subbase placement using a smooth drum roller weighing at least 10 tons. The roller should be operated in the static mode for proof rolling and should complete at least two (2) passes for the proof rolling evaluation.

The subgrade proof-rolling should be done under the guidance of, and observed by, a representative of SJB / Empire. Any areas, which appear wet, loose, soft, unstable or otherwise contain unsuitable materials, should be undercut. Over excavation, which may be required as the result of the subgrade inspection and/or proof-rolling, should be performed based on evaluation of the conditions and guidance provided by SJB / Empire. Resulting over-excavations should be backfilled with additional Subbase material or other suitable fill material (i.e. existing millings or subbase stone) as determined appropriate by Wendel and SJB / Empire.

The pavement construction can proceed on suitable subgrades / subbase following the proof-rolling evaluation. Installation of adjacent geotextile panels should have minimum overlap of 12 to 18 inches. Construction of the Asphalt Concrete Pavement should be performed in accordance with NYSDOT Standard Specification Section 400. The Binder and Top Course compaction / evaluation should comply with NYSDOT Standard Specifications – 80 Series Compaction procedures, as a minimum. In addition, placement of new subbase and asphalt concrete courses should not be permitted on wet or snow covered surfaces or when the subgrade surface is less than 40° F.

CONCLUDING REMARKS

This report was prepared to assist in the planning, design and construction, with regard to the proposed parking lot reconstruction planned at the Lou Gehrig Baseball Fields facility in the Town of Amherst, New York. The report has been prepared for the exclusive use of Wendel; the Town of Amherst; and other members of the design team, for specific application to this site and this project only.

The pavement improvement recommendations were prepared based on Empire's understanding of the proposed project, as described herein, and through the application of generally accepted soils and foundation engineering practices.

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Empire should be consulted with any questions regarding the interpretation of the findings of our work, and/or the geotechnical considerations and recommendations presented. In addition, the recommendations presented are provided as guidance to the designer and should not be considered a project specification. No warranties, expressed or implied, are made by the conclusions, opinions, recommendations or services provided.

Empire should be informed of any changes to the planned redevelopment construction so that it may be determined if any modifications to the recommendations presented in this report are necessary. SJB / Empire should also be retained to review final plans and specifications and to monitor the pavement and site work construction to verify that the recommendations were properly interpreted and implemented.

Additional information regarding the use and interpretation of this report is presented in Appendix E.

Please contact me if you have any questions or wish to discuss this information. Thank you, and we look forward to working with Wendel through completion of this project.

Respectfully Submitted:

WMA ENGINEERING, DPC dba
EMPIRE GEOTECHNICAL ENGINEERING SERVICES

John J. Danzer, P.E.
Senior Geotechnical Engineer

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TABLES

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

June 1, 2022
Project No. WB-22-057

TABLE 1

SUMMARY OF EXISTING PAVEMENT STRUCTURE AND SUBGRADE CONDITIONS

PAVEMENT EVALUATION FOR PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
SMITH ROAD AND DANN ROAD
TOWN OF AMHERST, NEW YORK

		Existing Asphalt Concrete Pavement Conditions					Subgrade Soil Conditions				
Core Number and (Location)	Pavement Surface Material	Total Thickness (inches)	Number of Asphalt Course Layers	Remarks Regarding Asphalt Courses	Subbase Material and Thickness (inches)	Geotextile Beneath Subbase	Subgrade Material Type	Subgrade SPT "N" value	Relative Density or Consistency of Subgrade	Estimated Soil Resilience Modulus - Mr (psi)	Subgrade Drainage Characteristics
West Parking Lot Area											
B-1	Asphalt Millings	6.0	NA	---	---	Not Apparent	Sandy Gravel (GP / FILL)	26	Firm	4,500	Fair
B-2	Asphalt Millings	10.0	NA	---	---	Not Apparent	Sandy Silty Clay (CL / FILL)	11	Stiff	3,000	Very Poor
B-3	Asphalt Millings	7.0	NA	---	---	Not Apparent	Sandy Gravel (GP / FILL)	9	Loose	3,500	Fair
East Parking Lot Area											
B-4	Asphalt Concrete	2.7	2	Core Contains 2 TC Layers	Crushed Stone - 8	Not Apparent	Sandy Gravel (GP / FILL)	12	Firm	3,500	Fair
B-5	Asphalt Concrete	2.8	1	Core Contains 1 Apparent TC Layer; Bottom of Core Deteriorated (Possible 2nd TC Layer)	Crushed Stone - 4	Not Apparent	Silty Clayey Gravel with Sand (GC-GM / FILL)	7	Loose	3,500	Poor

TC - Top Course; BC - Binder Course; BA - Base Course, T&L - Truing and Leveling Course, TC -Tack Coat

WMA Engineering, DPC dba
Empire Geotechnical Engineering Services
5167 South Park Avenue
Hamburg, New York 14075

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

June 1, 2022
Project No.: WB-22-057

TABLE 2

PAVEMENT MILLINGS & SUBBASE COURSE - GRADATION COMPARISONS

PAVEMENT EVALUATION FOR PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
SMITH ROAD AND DANN ROAD
TOWN OF AMHERST, NEW YORK

Sieve Size	NYSDOT Type 4 Subbase Gradation Requirement (% Passing by Weight)	Asphalt Millings Core / Boring B-1	Asphalt Millings Core / Boring B-2	Asphalt Millings Core / Boring B-3	Crushed Stone Subbase Core / Boring B-4	Crushed Stone Subbase Core / Boring B-5
2-Inch	100	100	100	100	100	100
1/4-Inch	30 - 65	65.8	64.1	53.1	37.4	69.3
No. 40	5 - 40	12.1	11.9	17.2	3.9	5.1
No. 200	0 - 10	7.1	5.1	9.8	2.1	1.7

Does Not Meet NYSDOT Type 4 Subbase Gradation Requirement

Empire Geotechnical EngineeringServices
5167 South Park Avenue
Hamburg, New York 14075

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

FIGURES

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



APPROXIMATE LOCATION OF PROJECT SITE

N

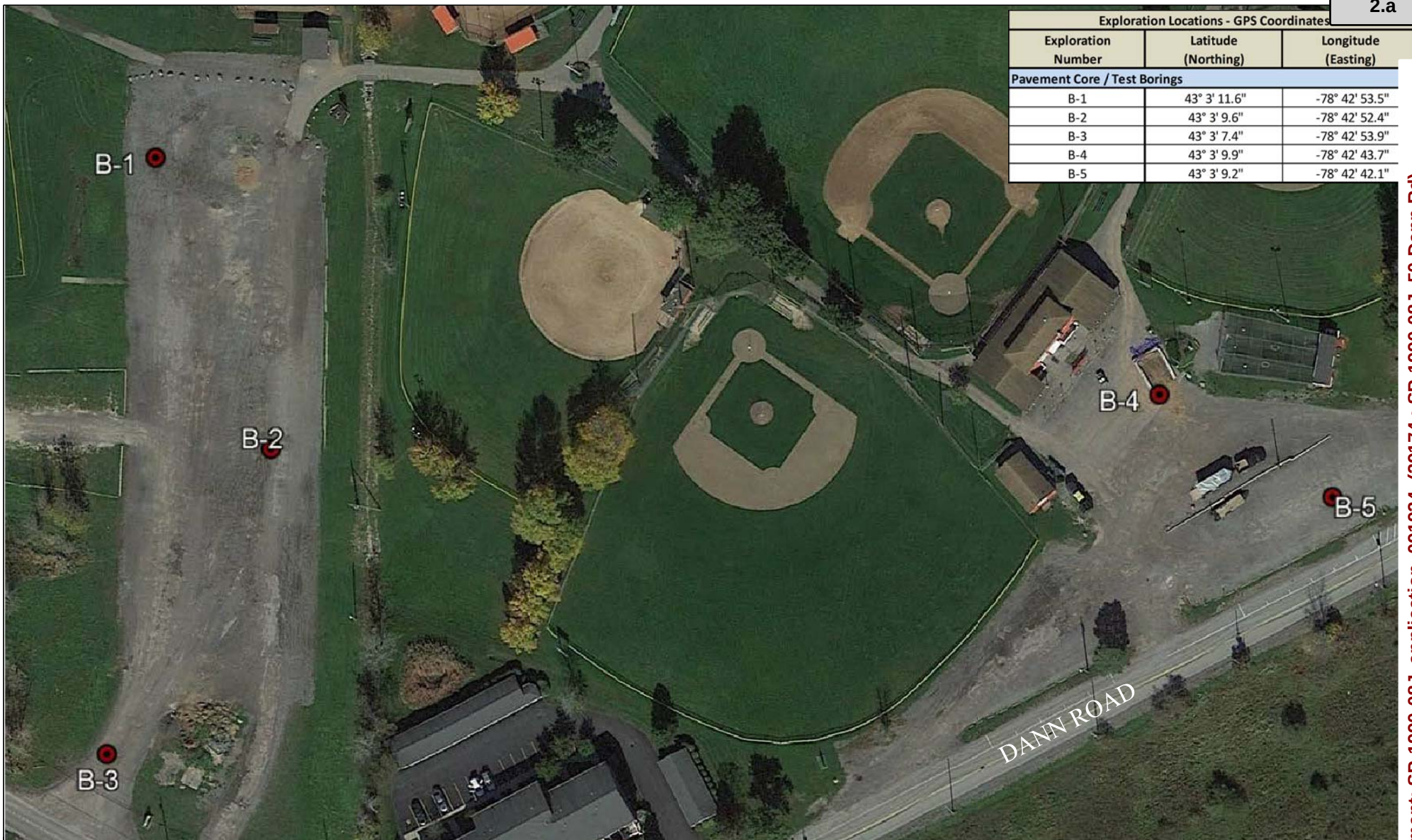
NOTE: SITE LOCATION PLAN DEVELOPED FROM BING MAPS.

WMA ENGINEERING DPC|DBA
EMPIRE GEOTECHNICAL ENGINEERING SERVICES

PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
SMITH ROAD & DANN ROAD
TOWN OF AMHERST, NEW YORK

SITE LOCATION PLAN	DR BY: BVB	SCALE: NTS	PROJECT NO.: WB-22-057
	CHKD BY: JJD	DATE: 05/24/2022	FIGURE

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



Exploration Locations - GPS Coordinates		
Exploration Number	Latitude (Northing)	Longitude (Easting)
Pavement Core / Test Borings		
B-1	43° 3' 11.6"	-78° 42' 53.5"
B-2	43° 3' 9.6"	-78° 42' 52.4"
B-3	43° 3' 7.4"	-78° 42' 53.9"
B-4	43° 3' 9.9"	-78° 42' 43.7"
B-5	43° 3' 9.2"	-78° 42' 42.1"

LEGEND:

B-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF PAVEMENT CORE/TEST BORING.

NOTE: FIGURE DEVELOPED FROM GOOGLE EARTH.

N

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PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
SMITH ROAD & DANN ROAD
TOWN OF AMHERST, NEW YORK

SUBSURFACE EXPLORATION PLAN
(EXISTING SITE CONDITIONS)

DR BY: BVB	SCALE: NTS	PROJECT NO.: WB-22-057
CHKD BY: JJD	DATE: 5/24/2022	FIGURE

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX A

PAVEMENT SURFACE PHOTOGRAPHS AT PAVEMENT CORE / TEST BORING LOCATIONS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PHOTOGRAPHS OF EXISTING PAVEMENT SURFACE CONDITIONS AT PAVEMENT CORE / TEST BORING LOCATIONS



Core / Boring B-1, Looking North / Northeast

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PHOTOGRAPHS OF EXISTING PAVEMENT SURFACE CONDITIONS AT PAVEMENT CORE / TEST BORING LOCATIONS



Core / Borings B-2, Looking North

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PHOTOGRAPHS OF EXISTING PAVEMENT SURFACE CONDITIONS AT PAVEMENT CORE / TEST BORING LOCATIONS



Core / Boring B-3, Looking North / Northeast

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PHOTOGRAPHS OF EXISTING PAVEMENT SURFACE CONDITIONS AT PAVEMENT CORE / TEST BORING LOCATIONS



Core / Boring B-4, Looking Northwest

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PHOTOGRAPHS OF EXISTING PAVEMENT SURFACE CONDITIONS AT PAVEMENT CORE / TEST BORING LOCATIONS



Core / Boring B-5, Looking Northeast

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX B

SUBSURFACE EXPLORATION GPS LOCATIONS AND PAVEMENT CORE / TEST BORING LOGS (B-1 THROUGH B-5)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Pavement Evaluation for
Proposed Parking Lot Reconstruction
Lou Gehrig Baseball Fields
Smith Road and Dann Road
Town of Amherst, New York

TABLE A - EXPLORATION LOCATIONS

Exploration Locations - GPS Coordinates		
Exploration Number	**Latitude (Northing)**	**Longitude (Easting)**
Pavement Core / Test Borings		
B-1	43° 3' 11.6"	-78° 42' 53.5"
B-2	43° 3' 9.6"	-78° 42' 52.4"
B-3	43° 3' 7.4"	-78° 42' 53.9"
B-4	43° 3' 9.9"	-78° 42' 43.7"
B-5	43° 3' 9.2"	-78° 42' 42.1"

WMA Engineering, DPC dba
Empire Geotechnical Engineering Services
5167 South Park Avenue
Hamburg, New York
WMA Project No: WB-22-057

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface condition between adjacent borings or between the sampled intervals. The data presented of the Subsurface Logs together with the recovered samples provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and recovered samples must be performed by qualified professionals. The following information defines some of the procedures and terms used of the Subsurface Logs to describe the conditions encountered, consistent with the numbered identifiers shown on the Key opposite this page.

1. **The figures in the Depth column define the scale of the Subsurface Log.**
2. **The Samples column shows, graphically, the depth range from which a sample was recovered. See Table I for descriptions of the symbols used to represent the various types of samples.**
3. **The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.**
4. **Blows on Sampler – shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches is recorded. The first 6 inches of penetration is considered a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N**
5. **Blows on Casing – Shows the number of blows required to advance the casing a distance of 12 inches. The casing size, hammer weight, and length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log. Alternatively, sample recovery may be shown in this column or other data consistent with the column heading.**
6. **All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist, or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification System group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet, and saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.**
7. **Rock description is based on review of the recovered rock core and the driller's notes. Frequently used rock classification terms are included in Table VI.**
8. **The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines convey a lesser degree of certainty with respect to either a change in soil type or where such change may occur.**
9. **Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that any drill water used to advance the boring may have influenced the observations. The ground water level will fluctuate seasonally, typically. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or groundwater observation wells.**
10. **The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total length of pieces of NX core exceeding 4 inches divided by the core run. The size core barrel used is also noted in the Method of Investigation at the bottom of the Subsurface Log.**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE

STARTED _____

FINISHED _____

SHEET _____ OF _____

SJB SERVICES, INC.
SUBSURFACE LOG

PROJ. No. _____

HOLE No. _____

SURF. ELEV. _____

G.W. DEPTH _____

PROJECT _____ LOCATION _____

DEPTH (ft)	SAMPLES	SAMPLE No.	BLOWS ON SAMPLER (0/6 | 6/12 | 12/18 | 18/24 | N)	BLOWS ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES
0		1	3 | 3 | 4 | 8 | 7	10	3" TOPSOIL	Groundwater at 10' upon completion, and 5' 24 hrs. after completion
				15	Brown SILT, some Sand, trace clay, ML (Moist-Loose)	
				50/.5		
5					Gray SHALE, medium hard, weathered, thin bedded, some fractures	Run#1, 2.5'-5.0' 95% Recovery 50% RQD

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

(7) *(numbered features explained on reverse)*

TABLE I

- Split Spoon Sample
- Shelby Tube Sample
- Geoprobe Macro-Core
- Auger or Test Pit Sample
- Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	Coarse Grained (Granular)
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	Fine Grained
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:

Granular Soils		Cohesive Soils	
Term	**Blows per Foot, N**	**Term**	**Blows per Foot, N**
Very Loose	0 - 4	Very Soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Firm	10 - 30	Medium	4 - 8
Compact	30 - 50	Stiff	8 - 15
Very Compact	>50	Very Stiff	15 - 30
		Hard	>30

(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term		Meaning
Hardness	- Soft	Scratched by fingernail
	- Medium Hard	Scratched easily by penknife
	- Hard	Scratched with difficulty by penknife
	- Very Hard	Cannot be scratched by penknife
Weathering	- Very Weathered	Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.
	- Weathered	
	- Sound	

Rock Classification Term		Meaning	
Bedding	- Laminated	(<1")	Natural breaks in Rock Layers
	- Thin Bedded	(1" - 4")	
	- Bedded	(4" - 12")	
	- Thick Bedded	(12" - 36")	
	- Massive	(>36")	

(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE
START 5/9/2022
FINISH 5/9/2022
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-1
SURF. ELEV N.D.
G.W. DEPTH See Notes

PROJECT: PROPOSED PARKING LOT RECONSTRUCTION
LOCATION: LOU GEHRIG BASEBALL FIELDS
PROJ. NO.: BE-22-057
SMITH RD AND DUNN RD; AMHERST, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1	12	12				MILLINGS Brown fine GRAVEL, some f-c Sand, tr. silty clay, tr. concrete, tr. organics (moist-wet, FILL)	Driller noted approx. 6" of Millings at the surface.
		14	16		26			
	2	12	7				Brown-Gray Silty CLAY, tr. sand, tr. gravel, tr. organics (moist, FILL)	
		7	5		14			
5	3	4	6					S-3: Contains Wood
		8	9		14			
	4	7	8				Brown Silty CLAY, tr. sand, Silt Partings (moist, v. stiff, CL)	
		9	7		17			
							Boring Complete at 8.0'	No Free Standing Water encountered at boring completion
10								
15								
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist
DRILLER: S. WOLKIEWICZ JR.
DRILL RIG TYPE : CME 550X
METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE
START 5/9/2022
FINISH 5/9/2022
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-2
SURF. ELEV N.D.
G.W. DEPTH See Notes

PROJECT: PROPOSED PARKING LOT RECONSTRUCTION
PROJ. NO.: BE-22-057
LOCATION: LOU GEHRIG BASEBALL FIELDS
SMITH RD AND DUNN RD; AMHERST, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1	12	6				MILLINGS Gray Silty CLAY, little f-c Sand, tr. gravel, tr. glass, tr. organics (moist, FILL)	Driller noted approx. 10" of Millings at the surface. S-1: Organic Odor
		5	3		11			
	2	4	4				Becomes Brown-Gray, Contains tr. sand, no glass	
		4	5		8			
5	3	6	8				Brown Silty CLAY, tr. sand, Silt Partings (moist, stiff, CL)	
		7	9		15			
	4	4	4	8			(v. stiff)	
		8	10		16			
							Boring Complete at 8.0'	No Free Standing Water encountered at boring completion.
10								
15								
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist
DRILLER: S. WOLKIEWICZ JR.
DRILL RIG TYPE : CME 550X
METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE
START 5/9/2022
FINISH 5/9/2022
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-3
SURF. ELEV N.D.
G.W. DEPTH See Notes

PROJECT: PROPOSED PARKING LOT RECONSTRUCTION
PROJ. NO.: BE-22-057
LOCATION: LOU GEHRIG BASEBALL FIELDS
SMITH RD AND DUNN RD; AMHERST, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1	8	5				MILLINGS Brown fine GRAVEL, some f-c Sand, littl Asphalt, tr. brick, tr. silty clay, tr. organics (moist, FILL)	Driller noted approx. 7" of Millings at the surface.
		4	4		9			
	2	3	4				Brown-Gray Silty CLAY, tr. sand, tr. organics (moist, FILL)	S-2: Contains Wood
		6	7		10			
5	3	5	5				Contains little f-c Sand	
		5	7		10			
	4	8	8				Brown Silty CLAY, tr. sand, Silt Partings (moist, v. stiff, CL)	
		9	11		17			
							Boring Complete at 8.0'	No Free Standing Water encountered at boring completion
10								
15								
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist
DRILLER: S. WOLKIEWICZ JR.
DRILL RIG TYPE : CME 550X
METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE
START 5/9/2022
FINISH 5/9/2022
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-4
SURF. ELEV N.D.
G.W. DEPTH See Notes

PROJECT: PROPOSED PARKING LOT RECONSTRUCTION
LOCATION: LOU GEHRIG BASEBALL FIELDS
PROJ. NO.: BE-22-057
SMITH RD AND DUNN RD; AMHERST, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1	X	13				ASPHALT / SUBBASE Brown fine GRAVEL, little f-c Sand, tr. silty clay (wet, FILL)	Driller noted approximately 3" of Asphalt and 8" of Subbase at the surface
		5	7		12			
	2	3	4				Brown-Gray Silty CLAY, tr. sand, tr. gravel, tr. organics (moist, FILL)	
		4	7		8			
5	3	7	7				Brown-Gray Silty CLAY, tr. sand, tr. gravel (moist, stiff, CL)	
		8	10		15			
	4	8	7				Contains Silt Partings (v.stiff)	
		9	11		16			
							Boring Complete at 8.0'	No Free Standing Water encountered at boring completion
10								
15								
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.
DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

DATE
START 5/9/2022
FINISH 5/9/2022
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-5
SURF. ELEV N.D.
G.W. DEPTH See Notes

PROJECT: PROPOSED PARKING LOT RECONSTRUCTION
PROJ. NO.: BE-22-057
LOCATION: LOU GEHRIG BASEBALL FIELDS
SMITH RD AND DUNN RD; AMHERST, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1	X	9				ASPHALT / SUBBASE Brown-Gray fine GRAVEL, some Silty Clay, little f-c Sand, tr. organics (moist-wet, FILL)	Driller noted approximately 3" of Asphalt and 4" of Subbase at the surface S-1: Organic Odor
		4	3		7			
	2	7	6				Brown-Gray Silty CLAY, tr. sand, tr. organics (moist, FILL)	
		4	3		10			
5	3	5	6				Brown-Gray Silty CLAY, tr. sand, tr. organics (moist, stiff, CL)	
		4	7		10			
	4	7	8				Contains no organics (v. stiff)	
		8	10		16			
							Boring Complete at 8.0'	No Free Standing Water encountered at boring completion
10								
15								
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist
DRILLER: S. WOLKIEWICZ JR.
DRILL RIG TYPE : CME 550X
METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX C

PAVEMENT CORE, MILLINGS AND SUBBASE PHOTOGRAPHS AND DESCRIPTIONS (B-1 THROUGH B-5)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SJB SERVICES, INC.
BE-22-057
PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
AMHERST, NY
CORE SUMMARY



LOCATION	DESCRIPTION
B-1	ASPHALT MILLINGS - Approximate thickness - 6”

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SJB SERVICES, INC.
BE-22-057
PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
AMHERST, NY
CORE SUMMARY



LOCATION	DESCRIPTION
B-2	ASPHALT MILLINGS - Approximate thickness - 10”

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

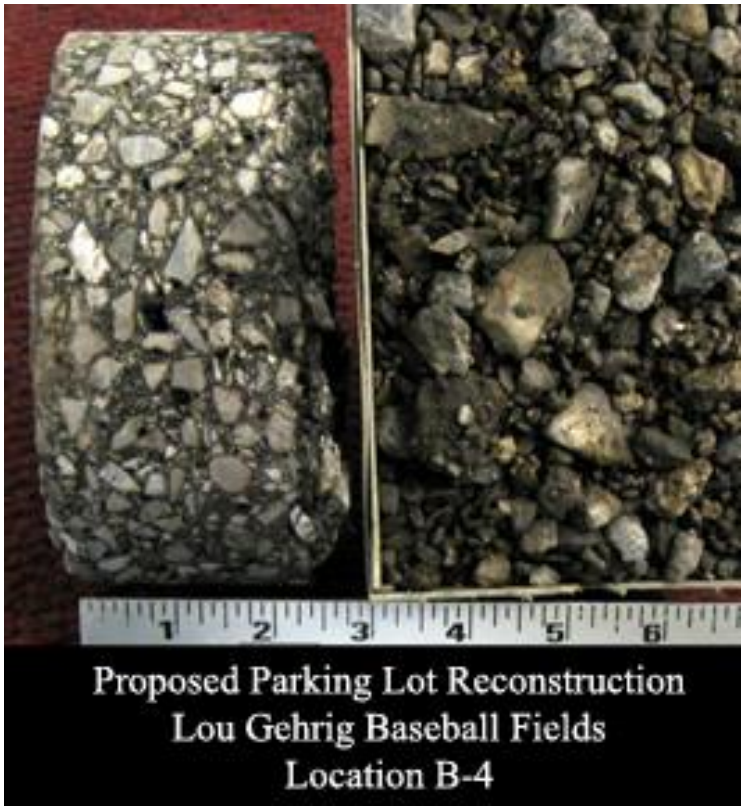
SJB SERVICES, INC.
BE-22-057
PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
AMHERST, NY
CORE SUMMARY



LOCATION	DESCRIPTION
B-3	ASPHALT MILLINGS - Approximate thickness - 7”

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SJB SERVICES, INC.
BE-22-057
PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
AMHERST, NY
CORE SUMMARY



LOCATION	DESCRIPTION

B-4	TOTAL CORE LENGTH = 2.65”
	
	TOTAL ASPHALT = 2.65”
	
	- 1st Top Layer = 1.50”
	  - Aggregate = 0.4” stone
	- 2nd Top Layer = 1.15”
	  - Aggregate = 0.4” gravel
	
	SUBBASE INVESTIGATION
	- Approximate Subbase thickness - 8”
	- Description: Crushed Stone

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SJB SERVICES, INC.
BE-22-057
PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
AMHERST, NY
CORE SUMMARY



LOCATION	DESCRIPTION

B-5	TOTAL CORE LENGTH = 2.75”
	
	TOTAL ASPHALT = 2.75”
	
	- 1st Top Layer = 2.75”
	  - Aggregate = 0.55” stone
	  - Possible multiple layers
	
	SUBBASE INVESTIGATION
	- Approximate Subbase thickness - 4”
	- Description: Crushed Stone

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX D

LABORATORY TEST DATA

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: **Proposed Parking Lot Reconstruction: Lou Gehrig Baseball Fields**

CLIENT: **Wendel**

DATE: **May 31, 2022**

PROJECT NO.: BE-22-057
REPORT NO.: LTR-1

SJB Sample Number: 22-310
Sample Location: B-1
Sample Description: Asphalt Millings

ASTM D-6913: Particle Size Distribution (Gradation) of Soils Using Sieve Analysis

Sieve Size	*Percent Passing*
2"	100.0
1 ½"	98.2
1"	92.1
¾"	89.5
½"	82.0
3/8"	75.1
¼"	65.8
#4	56.1
#10	31.7
#20	17.5
#40	12.1
#100	8.2
#200	7.1

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

The results of this report relate only to the items inspected or tested.
The report shall not be reproduced, except in full, without the written approval of SJB Services, Inc.

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: Proposed Parking Lot Reconstruction: Lou Gehrig Baseball Fields
CLIENT: Wendel
DATE: May 31, 2022

PROJECT NO.: BE-22-057
REPORT NO.: LTR-1

SJB Sample Number: 22-311
Sample Location: B-2
Sample Description: Asphalt Millings

ASTM D-6913: Particle Size Distribution (Gradation) of Soils Using Sieve Analysis

Sieve Size	*Percent Passing*
2"	100.0
1 ½"	97.5
1"	92.9
¾"	86.8
½"	77.7
⅜"	72.2
¼"	64.1
#4	55.9
#10	33.5
#20	18.1
#40	11.9
#100	6.8
#200	5.1

SJB Sample Number: 22-312
Sample Location: B-3
Sample Description: Asphalt Millings

ASTM D-6913: Particle Size Distribution (Gradation) of Soils Using Sieve Analysis

Sieve Size	*Percent Passing*
2"	100.0
1 ½"	91.6
1"	85.3
¾"	81.2
½"	73.3
⅜"	64.9
¼"	53.1
#4	44.4
#10	29.3
#20	21.1
#40	17.2
#100	12.5
#200	9.8

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

The results of this report relate only to the items inspected or tested.
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Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

Laboratory Test Report

PROJECT: **Proposed Parking Lot Reconstruction: Lou Gehrig Baseball Fields**
CLIENT: **Wendel**
DATE: **May 31, 2022**

PROJECT NO.: BE-22-057
REPORT NO.: LTR-1

SJB Sample Number: 22-313
Sample Location: B-4 : Subbase
Sample Description: Crushed Stone material

ASTM D-6913: Particle Size Distribution (Gradation) of Soils Using Sieve Analysis

Sieve Size	*Percent Passing*
1 ½"	100.0
1"	91.7
¾"	83.1
½"	65.4
3/8"	54.4
¼"	37.4
#4	27.0
#10	9.4
#20	5.0
#40	3.9
#100	2.8
#200	2.1

SJB Sample Number: 22-314
Sample Location: B-5: Subbase
Sample Description: Crushed Stone material

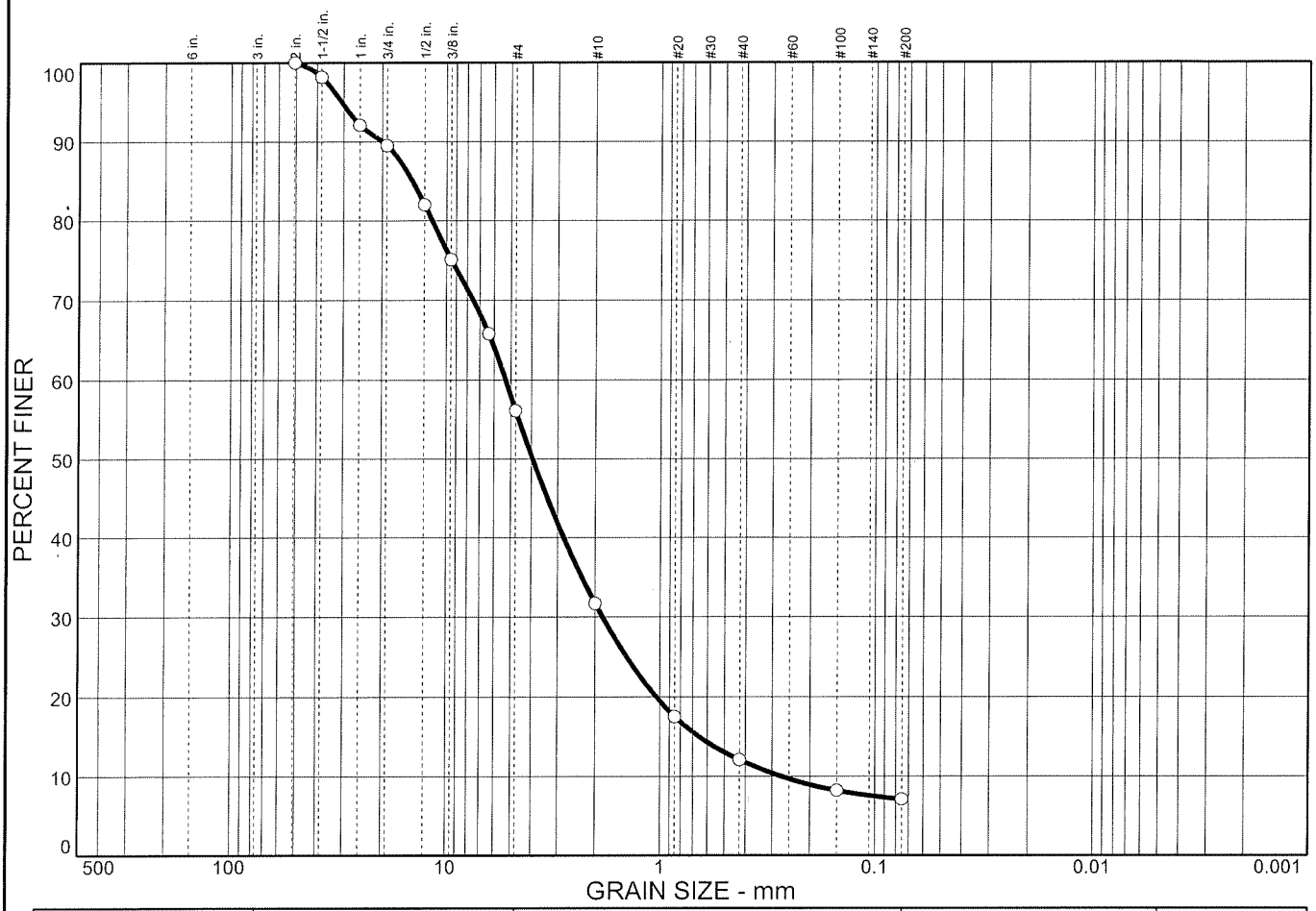
ASTM D-6913: Particle Size Distribution (Gradation) of Soils Using Sieve Analysis

Sieve Size	*Percent Passing*
1"	100.0
¾"	98.0
½"	91.5
3/8"	84.1
¼"	69.3
#4	54.0
#10	21.9
#20	8.5
#40	5.1
#100	2.5
#200	1.7

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

The results of this report relate only to the items inspected or tested.
The report shall not be reproduced, except in full, without the written approval of SJB Services, Inc.

Particle Size Distribution Report ASTM D-6913



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	43.9	49.0	7.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1.5 in.	98.2		
1 in.	92.1		
.75 in.	89.5		
.5 in.	82.0		
.375 in.	75.1		
.25 in.	65.8		
#4	56.1		
#10	31.7		
#20	17.5		
#40	12.1		
#100	8.2		
#200	7.1		

* (no specification provided)

Soil Description

B-1: ASPHALT MILLINGS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 14.5 D_{60}= 5.31 D_{50}= 3.95
D_{30}= 1.85 D_{15}= 0.656 D_{10}= 0.272
C_u= 19.55 C_c= 2.37

Classification

USCS= AASHTO=

Remarks

LTR-1
SAMPLE NUMBER: 22-310

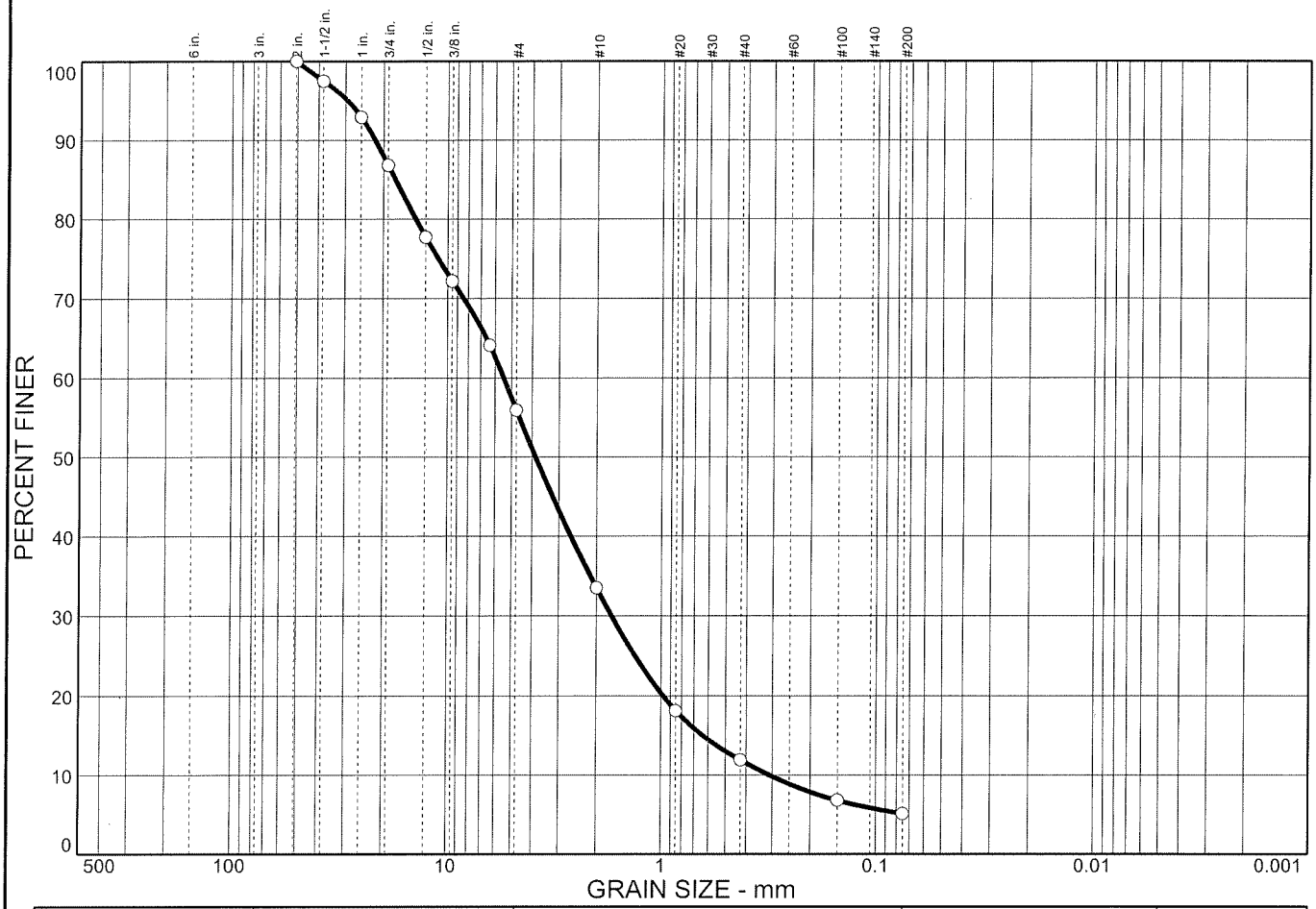
Sample No.: 22-310 **Source of Sample:** B-1 **Date:** 5-31-2022
Location: B-1 **Elev./Depth:**

SJB SERVICES, INC.

Client: WENDEL
Project: PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
Project No: BE-22-057 **Reviewed by:**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Particle Size Distribution Report ASTM D-6913



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	44.1	50.8	5.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1.5 in.	97.5		
1 in.	92.9		
.75 in.	86.8		
.5 in.	77.7		
.375 in.	72.2		
.25 in.	64.1		
#4	55.9		
#10	33.5		
#20	18.1		
#40	11.9		
#100	6.8		
#200	5.1		

* (no specification provided)

Soil Description

B-2 : ASPHALT MILLINGS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 17.6 D_{60}= 5.46 D_{50}= 3.86
D_{30}= 1.70 D_{15}= 0.638 D_{10}= 0.311
C_u= 17.59 C_c= 1.71

Classification

USCS= AASHTO=

Remarks

LTR-1
SAMPLE NUMBER: 22-311

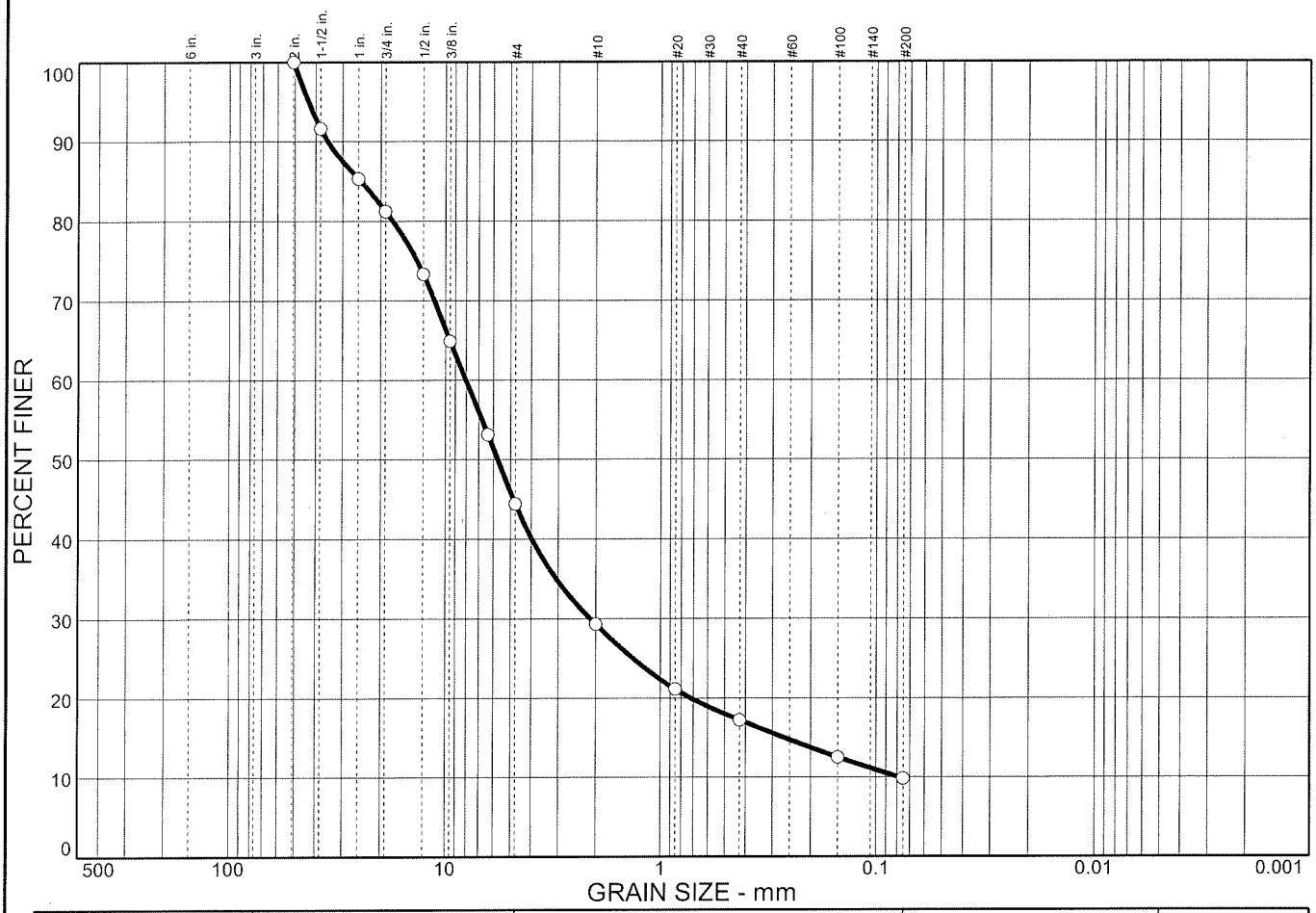
Sample No.: 22-311 **Source of Sample:** B-2 **Date:** 5-31-2022
Location: B-2 **Elev./Depth:**

SJB SERVICES, INC.

Client: WENDEL
Project: PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
Project No: BE-22-057 **Reviewed by:**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Particle Size Distribution Report ASTM D-6913



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	55.6	34.6	9.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1.5 in.	91.6		
1 in.	85.3		
.75 in.	81.2		
.5 in.	73.3		
.375 in.	64.9		
.25 in.	53.1		
#4	44.4		
#10	29.3		
#20	21.1		
#40	17.2		
#100	12.5		
#200	9.8		

* (no specification provided)

Soil Description

B-3: ASPHALT MILLINGS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 24.8 D_{60}= 8.05 D_{50}= 5.74
D_{30}= 2.12 D_{15}= 0.266 D_{10}= 0.0791
C_u= 101.81 C_c= 7.08

Classification

USCS= AASHTO=

Remarks

LTR-1
SAMPLE NUMBER: 22-312

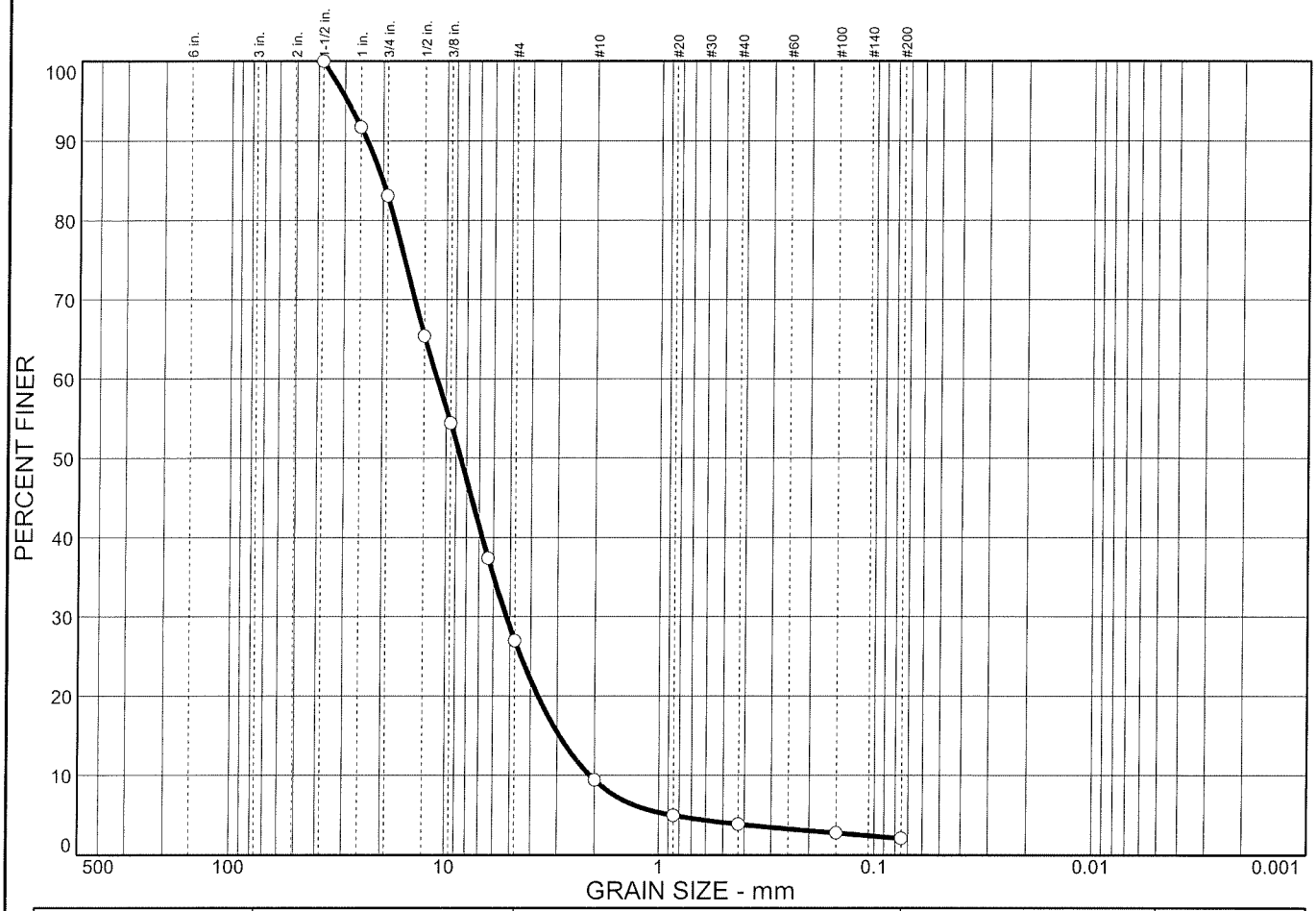
Sample No.: 22-312 **Source of Sample:** B-3 **Date:** 5-31-2022
Location: B-3 **Elev./Depth:**

SJB SERVICES, INC.

Client: WENDEL
Project: PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
Project No: BE-22-057 **Reviewed by:**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Particle Size Distribution Report ASTM D-6913



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	73.0	24.9	2.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	91.7		
.75 in.	83.1		
.5 in.	65.4		
.375 in.	54.4		
.25 in.	37.4		
#4	27.0		
#10	9.4		
#20	5.0		
#40	3.9		
#100	2.8		
#200	2.1		

* (no specification provided)

Soil Description

B-4: SUBBASE
CRUSHED STONE MATERIAL

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 20.1 D_{60}= 11.1 D_{50}= 8.55
D_{30}= 5.20 D_{15}= 2.93 D_{10}= 2.11
C_u= 5.24 C_c= 1.16

Classification

USCS= AASHTO=

Remarks

LTR-1
SAMPLE NUMBER: 22-313

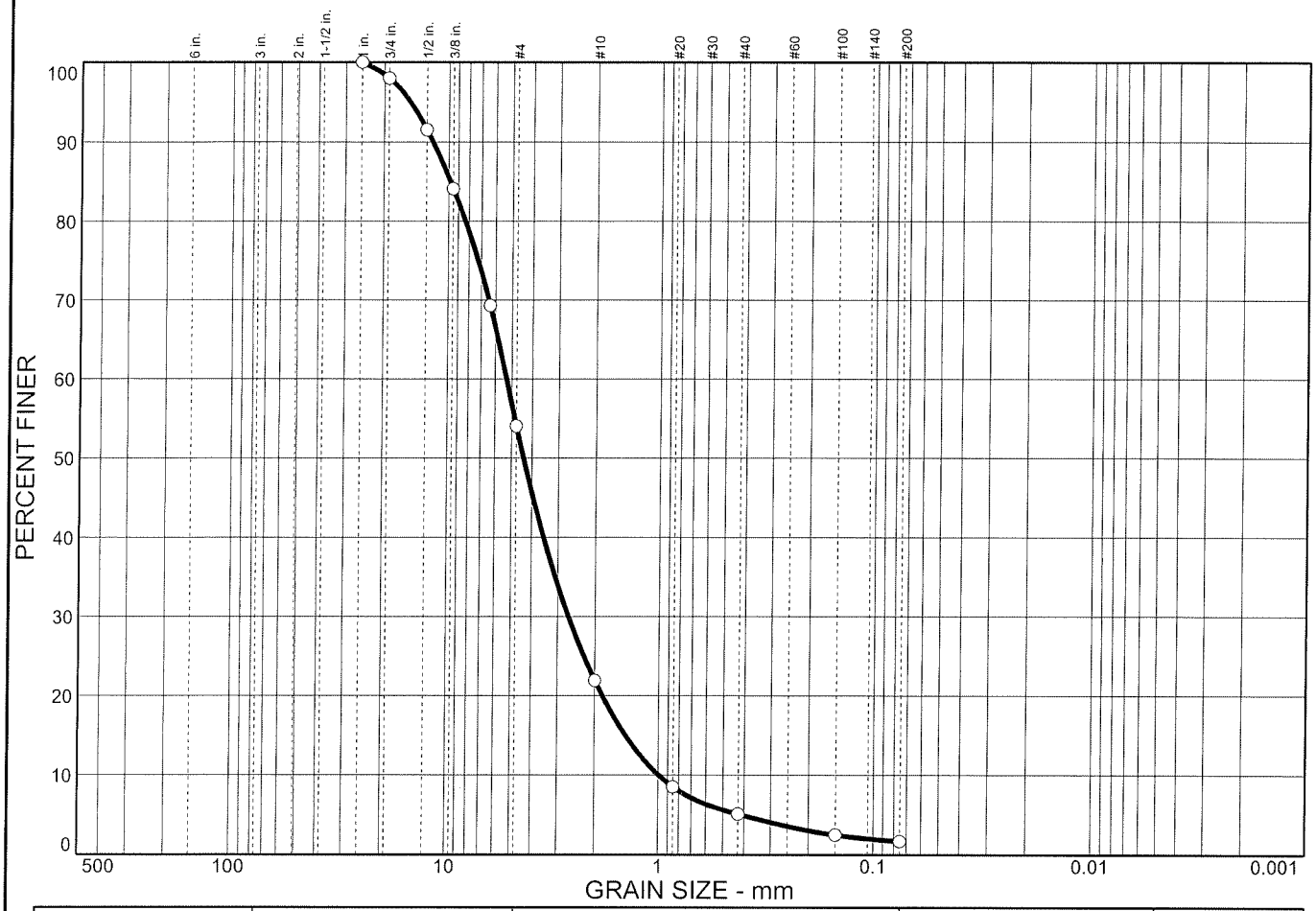
Sample No.: 22-313 **Source of Sample:** B-4 **Date:** 5-31-2022
Location: B-4: SUBBASE **Elev./Depth:** SUBBASE

SJB SERVICES, INC.

Client: WENDEL
Project: PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
Project No: BE-22-057 **Reviewed by:**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Particle Size Distribution Report ASTM D-6913



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	46.0	52.3	1.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
.75 in.	98.0		
.5 in.	91.5		
.375 in.	84.1		
.25 in.	69.3		
#4	54.0		
#10	21.9		
#20	8.5		
#40	5.1		
#100	2.5		
#200	1.7		

* (no specification provided)

Soil Description

B-5 : SUBBASE
CRUSHED STONE MATERIAL

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 9.83 D_{60}= 5.31 D_{50}= 4.39
D_{30}= 2.67 D_{15}= 1.43 D_{10}= 0.997
C_u= 5.33 C_c= 1.35

Classification

USCS= AASHTO=

Remarks

LTR-1
SAMPLE NUMBER: 22-314

Sample No.: 22-314 **Source of Sample:** B-5 **Date:** 5-31-2022
Location: B-5: SUBBASE **Elev./Depth:** SUBBASE

SJB SERVICES, INC.

Client: WENDEL
Project: PROPOSED PARKING LOT RECONSTRUCTION
LOU GEHRIG BASEBALL FIELDS
Project No: BE-22-057 **Reviewed by:**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

APPENDIX E

GEOTECHNICAL REPORT LIMITATIONS

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

GEOTECHNICAL REPORT LIMITATIONS

WMA Engineering DPC / DBA Empire Geotechnical Engineering Services (Empire) has endeavored to meet the generally accepted standard of care for the services completed, and in doing so is obliged to advise the geotechnical report user of our report limitations. Empire believes that providing information about the report preparation and limitations is essential to help the user reduce geotechnical-related delays, cost over-runs, and other problems that can develop during the design and construction process. Empire would be pleased to answer any questions regarding the following limitations and use of our report to assist the user in assessing risks and planning for site development and construction.

PROJECT SPECIFIC FACTORS: The conclusions and recommendations provided in our geotechnical report were prepared based on project specific factors described in the report, such as size, loading, and intended use of structures; general configuration of structures, roadways, and parking lots; existing and proposed site grading; and any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. *Accordingly, Empire cannot accept responsibility for problems which may develop if we are not consulted regarding any changes to the project specific factors that were assumed during the report preparation.*

SUBSURFACE CONDITIONS: The site exploration investigated subsurface conditions only at discrete test locations. Empire has used judgement to infer subsurface conditions between the discrete test locations, and on this basis the conclusions and recommendations in our geotechnical report were developed. It should be understood that the overall subsurface conditions inferred by Empire may vary from those revealed during construction, and these variations may impact on the assumptions made in developing the report conclusions and recommendations. *For this reason, Empire should be retained during construction to confirm that conditions are as expected, and to refine our conclusions and recommendations in the event that conditions are encountered that were not disclosed during the site exploration program.*

USE OF GEOTECHNICAL REPORT: Unless indicated otherwise, our geotechnical report has been prepared for the use of our client for specific application to the site and project conditions described in the report. *Without consulting with Empire, our geotechnical report should not be applied by any party to other sites or for any uses other than those originally intended.*

CHANGES IN SITE CONDITIONS: Surface and subsurface conditions are subject to change at a project site subsequent to preparation of the geotechnical report. Changes may include, but are not limited to, floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. *Empire should be informed of any such changes to determine if additional investigative and/or evaluation work is warranted.*

MISINTERPRETATION OF REPORT: The conclusions and recommendations contained in our geotechnical report are subject to misinterpretation. *To limit this possibility, Empire should review project plans and specifications relative to geotechnical issues to confirm that the recommendations contained in our report have been properly interpreted and applied.*

Subsurface exploration logs and other report data are also subject to misinterpretation by others if they are separated from the geotechnical report. This often occurs when copies of logs are given to contractors during the bid preparation process. *To minimize the potential for misinterpretation, the subsurface logs should not be separated from our geotechnical report and the use of excerpted or incomplete portions of the report should be avoided.*

OTHER LIMITATIONS: Geotechnical engineering is less exact than other design disciplines, as it is based partly on judgement and opinion. For this reason, our geotechnical report may include clauses that identify the limits of Empire's responsibility, or that may describe other limitations specific to a project. These clauses are intended to help all parties recognize their responsibilities and to assist them in assessing risks and decision making. Empire would be pleased to discuss these clauses and to answer any questions that may arise.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix C

Standards and Specifications for Erosion and Sediment Control

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR CONSTRUCTION ROAD STABILIZATION



Definition & Scope

The stabilization of temporary construction access routes, on-site vehicle transportation routes, and construction parking areas to control erosion on temporary construction routes and parking areas.

Conditions Where Practice Applies

All traffic routes and parking areas for temporary use by construction traffic.

Design Criteria

Construction roads should be located to reduce erosion potential, minimize impact on existing site resources, and maintain operations in a safe manner. Highly erosive soils, wet or rocky areas, and steep slopes should be avoided. Roads should be routed where seasonal water tables are deeper than 18 inches. Surface runoff and control should be in accordance with other standards.

Road Grade – A maximum grade of 12% is recommended, although grades up to 15% are possible for short distances.

Road Width – 12 foot minimum for one-way traffic or 24 foot minimum for two-way traffic.

Side Slope of Road Embankment – 2:1 or flatter.

Ditch Capacity – On-site roadside ditch and culvert capacities shall be the 10 yr. peak runoff.

Composition – Use a 6-inch layer of NYS DOT sub-base Types 1,2,3, 4 or equivalent as specified in NYSDOT Standard Specifications.

Construction Specifications

1. Clear and strip roadbed and parking areas of all vegetation, roots, and other objectionable material.

2. Locate parking areas on naturally flat areas as available. Keep grades sufficient for drainage, but not more than 2 to 3 percent.

3. Provide surface drainage and divert excess runoff to stabilized areas.

4. Maintain cut and fill slopes to 2:1 or flatter and stabilized with vegetation as soon as grading is accomplished.

5. Spread 6-inch layer of sub-base material evenly over the full width of the road and smooth to avoid depressions.

6. Provide appropriate sediment control measures to prevent offsite sedimentation.

Maintenance

Inspect construction roads and parking areas periodically for condition of surface. Top dress with new gravel as needed. Check ditches for erosion and sedimentation after rainfall events. Maintain vegetation in a healthy, vigorous condition. Areas producing sediment should be treated immediately.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR CONCRETE TRUCK WASHOUT



Definition & Scope

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

Conditions Where Practice Applies

Washout facilities shall be provided for every project where concrete will be poured or otherwise formed on the site. This facility will receive highly alkaline wash water from the cleaning of chutes, mixers, hoppers, vibrators, placing equipment, trowels, and screeds. Under no circumstances will wash water from these operations be allowed to infiltrate into the soil or enter surface waters.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per hopper of the concrete pump truck and/or discharging drum. The minimum size shall be 8 feet by 8 feet at the bottom and 2 feet deep. If excavated, the side slopes shall be 2 horizontal to 1 vertical.

Location: 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 structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be sized based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Dispose of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if this has been approved and accepted as part of the projects SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with each cleaning of the washout facility.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

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STANDARD AND SPECIFICATIONS FOR DUST CONTROL



Definition & Scope

The control of dust resulting from land-disturbing activities, to prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the NYSDEC.

No polymer application shall take place without written approval from the NYSDEC.

Construction Specifications

A. **Non-driving Areas** – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

B. **Driving Areas** – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access route to provide short term limited dust control.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geo-textiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

Maintenance

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.

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STANDARD AND SPECIFICATIONS FOR PROTECTING VEGETATION DURING CONSTRUCTION



Definition & Scope

The protection of trees, shrubs, ground cover and other vegetation from damage by construction equipment. In order to preserve existing vegetation determined to be important for soil erosion control, water quality protection, shade, screening, buffers, wildlife habitat, wetland protection, and other values.

Conditions Where Practices Applies

On planned construction sites where valued vegetation exists and needs to be preserved.

Design Criteria

1. Planning Considerations

   A. Inventory:

   1) Property boundaries, topography, vegetation and soils information should be gathered. Identify potentially high erosion areas, areas with tree windthrow potential, etc. A vegetative cover type map should be made on a copy of a topographic map which shows other natural and manmade features. Vegetation that is desirable to preserve because of its value for screening, shade, critical erosion control, endangered species, aesthetics, etc., should be identified and marked on the map.

   2) Based upon this data, general statements should be prepared about the present condition, potential problem areas, and unique features of the property.

   B. Planning:

   1) After engineering plans (plot maps) are prepared, another field review should take place and recommendations made for the vegetation to be saved. Minor adjustments in location of roads, dwellings, and utilities may be needed. Construction on steep slopes, erodible soils, wetlands, and streams should be avoided. Clearing limits should be delineated (See "Determine Limits of Clearing and Grading" on page 2.2).

   2) Areas to be seeded and planted should be identified. Remaining vegetation should blend with their surroundings and/or provide special function such as a filter strip, buffer zone, or screen.

   3) Trees and shrubs of special seasonal interest, such as flowering dogwood, red maple, striped maple, serviceberry, or shadbush, and valuable potential shade trees should be identified and marked for special protective treatment as appropriate.

   4) Trees to be cut should be marked on the plans. If timber can be removed for salable products, a forester should be consulted for marketing advice.

   5) Trees that may become a hazard to people, personal property, or utilities should be removed. These include trees that are weak-wooded, disease-prone, subject to windthrow, or those that have severely damaged root systems.

   6) The vigor of remaining trees may be improved by a selective thinning. A forester should be consulted for implementing this practice.

2. Measures to Protect Vegetation

   A. Limit soil placement over existing tree and shrub roots to a maximum of 3 inches. Soils with loamy texture and good structure should be used.

   B. Use retaining walls and terraces to protect roots of trees and shrubs when grades are lowered. Lowered grades should start no closer than the dripline of the tree. For narrow-canopied trees and shrubs, the stem diameter in inches is converted to feet and doubled, such that a 10 inch tree should be protected to 20 feet.

   C. Trenching across tree root systems should be the same minimum distance from the trunk, as in "B". Tunnels under root systems for underground utilities should start 18 inches or deeper below the normal ground surface. Tree roots which must be severed should be cut clean. Backfill material that will be in contact with the roots should be topsoil or a prepared planting soil mixture.

   D. Construct sturdy fences, or barriers, of wood, steel, or other protective material around valuable

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vegetation for protection from construction equipment. Place barriers far enough away from trees, but not less than the specifications in "B", so that tall equipment such as backhoes and dump trucks do not contact tree branches.

E. Construction limits should be identified and clearly marked to exclude equipment.

F. Avoid spills of oil/gas and other contaminants.

G. Obstructive and broken branches should be pruned properly. The branch collar on all branches whether living or dead should not be damaged. The 3 or 4 cut method should be used on all branches larger than two inches at the cut. First cut about one-third the way through the underside of the limb (about 6-12 inches from the tree trunk). Then (approximately an inch further out) make a second cut through the limb from the upper side. When the branch is removed, there is no splintering of the main tree trunk. Remove the stub. If the branch is larger than 5-6 inches in diameter, use the four cut system. Cuts 1 and 2 remain the same and cut 3 should be from the underside of the limb, on the outside of the branch collar. Cut 4 should be from the top and in alignment with the 3rd cut. Cut 3 should be 1/4 to 1/3 the way through the limb. This will prevent the bark from peeling down the trunk. Do not paint the cut surface.

H. Penalties for damage to valuable trees, shrubs, and herbaceous plants should be clearly spelled out in the contract.

PROTECTING TREES IN HEAVY USE AREAS

The compaction of soil over the roots of trees and shrubs by the trampling of recreationists, vehicular traffic, etc., reduces oxygen, water, and nutrient uptake by feeder roots. This weakens and may eventually kill the plants. Table 2.6 rates the “Susceptibility of Tree Species to Compaction.”

Where heavy compaction is anticipated, apply and maintain a 3 to 4 inch layer of undecayed wood chips or 2 inches of No. 2 washed, crushed gravel. In addition, use of a wooden or plastic mat may be used to lessen compaction, if applicable.

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Table 2.6
Susceptibility of Tree Species to Compaction[1]

Resistant:

Box elder……	*Acer negundo*	Willows……	*Salix spp.*
Green ash……..	*Fraxinus pennsylvanica*	Honey locust……	*Gleditsia triacanthos*
Red elm……..	*Ulmus rubra*	Eastern cottonwood…….	*Populus deltoides*
Hawthornes……	*Crataegus spp.*	Swamp white oak…….	*Quercus bicolor*
Bur oak……..	*Quercus macrocarpa*	Hophornbeam……	*Ostrya virginiana*
Northern white cedar….	*Thuja occidentalis*		

Intermediate:

Red maple…….	*Acer rubrum*	Sweetgum…….	*Liquidambar styraciflua*
Silver maple……..	*Acer saccharinum*	Norway maple…….	*Acer platanoides*
Hackberry…….	*Celtis occidentalis*	Shagbark hickory…….	*Carya ovata*
Black gum……	*Nyssa sylvatica*	London plane……..	*Platanus x hybrida*
Red oak……	*Quercus rubra*	Pin oak…….	*Quercus palustris*
Basswood…….	*Tilia americana*		

Susceptible:

Sugar maple…….	*Acer saccharum*	Austrian Pine……	*Pinus nigra*
White pine……	*Pinus strobus*	White ash…….	*Fraxinus americana*
Blue spruce……..	*Picea pungens*	Paper birch……..	*Betula papyrifera*
White oak……	*Quercus alba*	Moutain ash…….	*Sorbus aucuparia*
Red pine……..	*Pinus resinosa*	Japanese maple……	*Acer palmatum*

[1] If a tree species does not appear on the list, insufficient information is available to rate it for this purpose.

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STANDARD AND SPECIFICATIONS FOR SITE POLLUTION PREVENTION





Definition & Scope

A collection of management practices intended to control non-sediment pollutants associated with construction activities to prevent the generation of pollutants due to improper handling, storage, and spills and prevent the movement of toxic substances from the site into surface waters.

Conditions Where Practice Applies

On all construction sites where the earth disturbance exceeds 5,000 square feet, and involves the use of fertilizers, pesticides, petroleum based chemicals, fuels and lubricants, as well as sealers, paints, cleared woody vegetation, garbage, and sanitary wastes.

Design Criteria

The variety of pollutants on a particular site and the severity of their impacts depend on factors such as the nature of the construction activity, the physical characteristics of the construction site, and the proximity of water bodies and conveyances to the pollutant source.

1. All state and federal regulations shall be followed for the storage, handling, application, usage, and disposal of pesticides, fertilizers, and petroleum products.

2. Vehicle and construction equipment staging and maintenance areas will be located away from all drainage ways with their parking areas graded so the runoff from these areas is collected, contained and treated prior to discharge from the site.

3. Provide sanitary facilities for on-site personnel.

4. Store, cover, and isolate construction materials including topsoil, and chemicals, to prevent runoff of pollutants and contamination of groundwater and surface waters.

5. Develop and implement a spill prevention and control plan. The plan should include NYSDEC's spill reporting and initial notification requirements.

6. Provide adequate disposal for solid waste including woody debris, stumps, and other construction waste and include these methods and directions in the construction details on the site construction drawings. Fill, woody debris, stumps and construction waste shall not be placed in regulated wetlands, streams or other surface waters.

7. Distribute or post informational material regarding proper handling, spill response, spill kit location, and emergency actions to be taken, to all construction personnel.

8. Refueling equipment shall be located at least 100 feet from all wetlands, streams and other surface waters.



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STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 2.1 on page 2.31 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile: The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

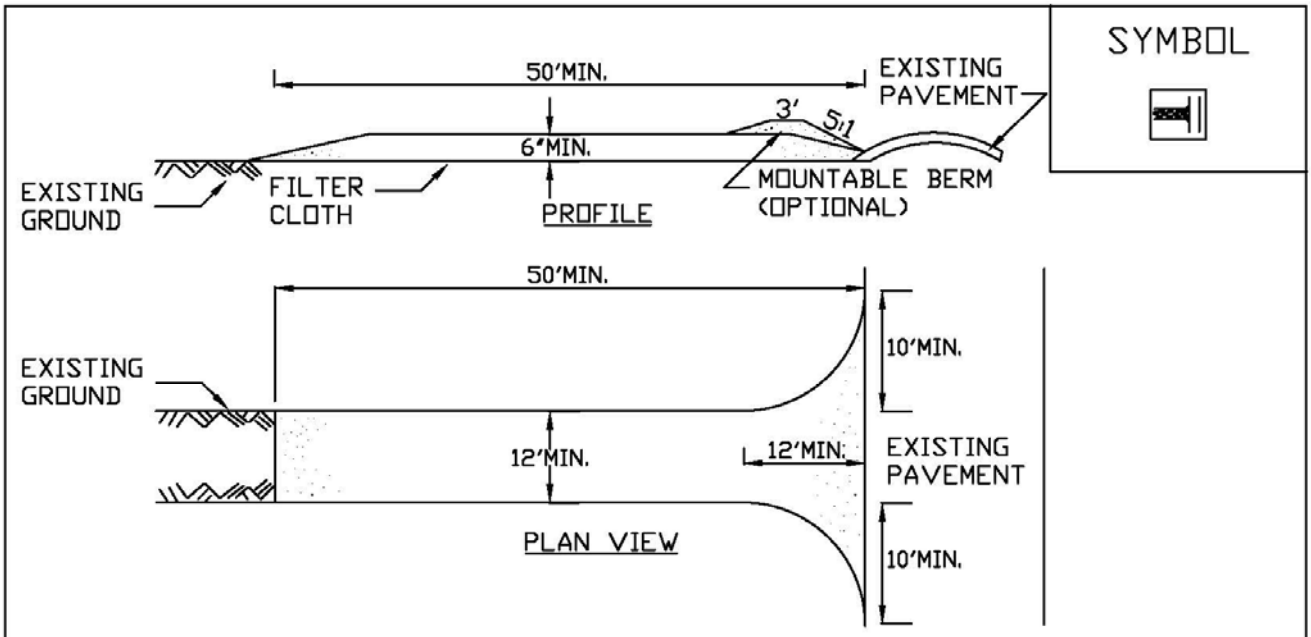
Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

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Figure 2.1
Stabilized Construction Access



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 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 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

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STANDARD AND SPECIFICATIONS FOR TEMPORARY ACCESS WATERWAY CROSSING



Definition & Scope

A temporary access waterway crossing is a structure placed across a waterway to provide access for construction purposes for a period of less than one year. Consideration should be given to stream flow capacity and velocity anticipated during the period of time that the temporary structures will be in place. Temporary access crossings shall not be utilized to maintain traffic for the general public. The purpose of the temporary access waterway crossing is to provide safe, environmentally sound access across a waterway for construction equipment by establishing minimum standards and specifications for the design, construction, maintenance, and removal of the structure. This standard and specification may represent a channel constriction, thus, the temporary nature of waterway access crossing must be stressed. They should be planned to be in service for the shortest practical period of time and removed as soon as their function is completed.

Conditions Where Practice Applies

This standard and specification for temporary access waterway crossings is applicable in non-tidal waterways. It provides designs based on waterway geometry rather than the drainage area contributing to the point of crossing.

The principal consideration for development of the standard and specifications is concern for erosion and sediment control, tracking soil into waterways, blocking fish passage and destruction of aquatic habitat. Structural utility and safety must also be considered when designing temporary access waterway crossings to withstand expected loads.

The three types of standard temporary access waterway crossings are bridges, culverts, and fords.

General Requirements

1. In-Stream Excavation: In-Stream excavation shall be limited to only that necessary to allow installation of the standard methods as presented in Subsection "Temporary Access Waterway Crossing Methods."

2. Elimination of Fish Migration Barriers: Of the two basic methods presented in Subsection "Temporary Access Waterway Crossing Methods," bridges pose the least potential for creating barriers to aquatic migration. The construction of any specific crossing method as presented in Subsection "Temporary Access Waterway Crossing Methods," shall not cause a significant water level difference between the upstream and downstream water surface elevations. Fish spawning or migration within waterways generally occurs between October 1 to May 31 for water classified for trout and from March 15 to July 15 for other streams. Fish spawning or migration dates can vary across New York and restrictions imposed by the NYS Department of Environmental Conservation may vary and must be checked.

3. Crossing Alignment: The temporary waterway crossing shall be at right angles to the stream. Where approach conditions dictate, the crossing may vary 15 degrees from a line drawn perpendicular to the centerline of the stream at the intended crossing location.

4. Road Approaches: The centerline of both roadway approaches shall coincide with the crossing alignment centerline for a minimum distance of 50 feet from each bank of the waterway being crossed. If physical or right-of-way restraints preclude the 50 feet minimum, a shorter distance may be provided. All fill materials associated with the roadway approach shall be limited to a maximum height of 2 feet above the existing flood plain elevation.

5. Surface Water Diverting Structure: A water diverting structure such as a swale shall be constructed (across the roadway on both roadway approaches) 50 feet (maximum) on either side of the waterway crossing. This will prevent roadway surface runoff from directly entering the waterway. The 50 feet is measured from the top of the waterway bank. Design criteria for this diverting structure shall be in accordance with the "Standard and Specification" for

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the individual design standard of choice. If the roadway approach is constructed with a reverse grade away from the waterway, a separate diverting structure is not required.

6. Road Width: All crossings shall have one traffic lane. The minimum width shall be 12 feet with a maximum width of 20 feet.

7. Time of Operation: All temporary crossing shall be removed within 14 calendar days after the structure is no longer needed. Unless prior written approval is obtained, all structures shall be removed within one year from the date of the installation.

8. Materials

A. Aggregate: There shall be no earth or soil materials used for construction within the waterway channel. NYS DOT specifications for coarse aggregate designation No. 4 (2" to 4"), also referenced as AASHTO designation No. 1, shall be the minimum acceptable aggregate size for temporary crossings. Larger aggregates will be allowed.

B. Filter Cloth: Filter cloth is a fabric consisting of either woven or nonwoven plastic, polypropylene, or nylon used to distribute the load, retain fines, allow increased drainage of the aggregate and reduce mixing of the aggregate with the subgrade soil. The designer shall specify the appropriate filter fabric/cloth for a specific use.

Temporary Access Waterway Crossing Methods

The following criteria for erosion and sediment control shall be considered when selecting a specific temporary access waterway crossing standard method:

1. Site aesthetics: Select a standard design method that will least disrupt the existing terrain of the stream reach. Consider the effort that will be required to restore the area after the temporary crossing is removed.

2. Site location: Locate the temporary crossing where there will be the least disturbance to the soils of the existing waterway banks. When possible, locate the crossing at a point receiving minimal surface runoff.

3. Physical site constraints: The physical constraints of a site may preclude the selection of one or more of the standard methods.

4. Time of year: The time of year may preclude the selection of one or more of the standard methods due to fish spawning or migration restrictions.

5. Vehicular loads and traffic patterns: Vehicular loads, traffic patterns, and frequency of crossing should be considered in choosing a specific method.

6. Maintenance of crossing: The standard methods will require various amounts of maintenance. The bridge method should require the least maintenance, whereas the ford method will probably require more intensive maintenance.

7. Removal of the Structure: Ease of removal and subsequent damage to the waterway should be primary factors in considering the choice of a standard method.

Temporary Access Bridge (Figure 2.2 on page 2.36)

A temporary access bridge is a structure made of wood, metal, or other materials, which provides access across a stream or waterway.

Considerations:

1. This is the preferred method for temporary access waterway crossings. Normally, bridge construction causes the least disturbance to the waterway bed and banks when compared to the other access waterway crossings.

2. Most bridges can be quickly removed and reused.

3. Temporary access bridges pose the least chance for interference with fish migration when compared to the other temporary access waterway crossings.

4. Span width will be limited by the length of the bridging material and weight of equipment that will drive over the temporary bridge. Spans of over 10 feet are difficult to construct.

5. Restrictions and Permits: A permit from the New York State Department of Environmental Conservation, Division of Environmental Permits, Regional Permit Administrator, will be needed to install and remove temporary access culverts in streams with a classification of C(T) and higher. Installation and removal may not be permitted during the period of time from the start of trout spawning until the eggs have hatched. In some instances, restrictions may also be applied to bass spawning waters.

Construction Specifications:

1. Restriction: Construction, use, or removal of a temporary access bridge will not normally have any time of year restrictions if construction, use, or

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removal does not disturb the stream or its banks.

2. Bridge Placement: A temporary bridge structure shall be constructed at or above bank elevation to prevent the entrapment of floating materials and debris.

3. Abutments: Abutments shall be placed parallel to and on stable banks.

4. Bridge Span: Bridges shall be constructed to span the entire channel. If a footing, pier, or bridge support is constructed within the waterway, a stream- disturbance permit may be required.

5. Stringers: Stringers shall either be logs, saw timber, pre-stressed concrete beams, metal beams, or other approved materials.

6. Deck Material: Decking shall be of sufficient strength to support the anticipated load. All decking members shall be placed perpendicular to the stringers, butted tightly, and securely fastened to the stringers. Decking materials must be butted tightly to prevent any soil material tracked onto the bridge from falling into the waterway below.

7. Run Planks (optional): Run planking shall be securely fastened to the length of the span. One run plank shall be provided for each track of the equipment wheels. Although run planks are optional, they may be necessary to properly distribute loads.

8. Curbs or Fenders: Curbs or fenders may be installed along the outer sides of the deck. Curbs or fenders are an option, which will provide additional safety.

9. Bridge Anchors: Bridges shall be securely anchored at only one end using steel cable or chain. Anchoring at only one end will prevent channel obstruction in the event that floodwaters float the bridge. Acceptable anchors are large trees, large boulders, or driven steel anchors. Anchoring shall be sufficient to prevent the bridge from floating downstream and possibly causing an obstruction to the flow.

10. Stabilization: All areas disturbed during installation shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specification for Temporary Construction Area Seeding on page 4.58.

Bridge Maintenance Requirements

1. Inspection: Periodic inspection shall be performed by the user to ensure that the bridge, streambed, and streambanks are maintained and not damaged.

2. Maintenance: Maintenance shall be performed, as needed to ensure that the structure complies with the standard and specifications. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of outside of the floodplain and stabilized.

Bridge Removal and Clean-Up Requirements

1. Removal: When the temporary bridge is no longer needed, all structures including abutments and other bridging materials shall be removed within 14 calendar days. In all cases, the bridge materials shall be removed within one year of installation.

2. Final Clean-Up: Final clean-up shall consist of removal of the temporary bridge from the waterway, protection of banks from erosion, and removal of all construction materials. All removed materials shall be stored outside the waterway floodplain.

3. Method: Removal of the bridge and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.

4. Final Stabilization: All areas disturbed during removal shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specifications for Permanent Construction Area Planting on page 4.42.

Temporary Access Culvert (Figure 2.3 on page 2.37)

A temporary access culvert is a structure consisting of a section(s) of circular pipe, pipe arches, or oval pipes of reinforcing concrete, corrugated metal, or structural plate, which is used to convey flowing water through the crossing.

Considerations

1. Temporary culverts are used where a) the channel is too wide for normal bridge construction, b) anticipated loading may prove unsafe for single span bridges, or c) access is not needed from bank to bank.

2. This temporary waterway crossing method is normally preferred over a ford type of crossing, since disturbance to the waterway is only during construction and removal of the culvert.

3. Temporary culverts can be salvaged and reused.

Construction Specifications

1. Restrictions and Permits: A permit from the New York State Department of Environmental

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Conservation, Division of Environmental Permits, Regional Permit Administrator, will be needed to install and remove temporary access culverts in streams with a classification of C(T) and higher. Installation and removal may not be permitted during the period of time from the start of trout spawning until the eggs have hatched. In some instances, restrictions may also be applied to bass spawning waters.

2. Culvert Strength: All culverts shall be strong enough to support their cross sectional area under maximum expected loads.

3. Culvert Size: The size of the culvert pipe shall be the largest pipe diameter that will fit into the existing channel without major excavation of the waterway channel or without major approach fills. If a channel width exceeds 3 feet, additional pipes may be used until the cross sectional area of the pipes is greater than 60 percent of the cross sectional area of the existing channel. The minimum size culvert that may be used is 12-inch diameter pipe.

4. Culvert Length: The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.

5. Filter Cloth: Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum six inches and a maximum one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.

6. Culvert Placement: The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration (free passage of fish).

7. Culvert Protection: The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used, they shall be separated by at least 12 in. of compacted aggregate fill. At the minimum, the bedding and fill material used in the construction of the temporary access culvert crossings shall conform with the aggregate requirements cited in the General Requirements subsection.

8. Stabilization: All areas disturbed during culvert installation shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for Permanent Construction Area Plantings.

Culvert Maintenance Requirements

1. Inspection: Periodic inspection shall be performed to ensure that the culverts, streambed, and streambanks are not damaged, and that sediment is not entering the stream or blocking fish passage or migration.

2. Maintenance: Maintenance shall be performed, as needed in a timely manner to ensure that structures are in compliance with this standard and specification. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of and stabilized outside the waterway flood plain.

Culvert Removal and Clean-Up Requirements

1. Removal: When the crossing has served its purpose, all structures, including culverts, bedding, and filter cloth materials shall be removed within 14 calendar days. In all cases, the culvert materials shall
be removed within one year of installation. No structure shall be removed during the spawning season (generally October 1 through May 31 for trout waters and March 15 through July 15 for other waters).

2. Final Clean-Up: Final clean-up shall consist of removal of the temporary structure from the waterway, removal of all construction materials, restoration of original stream channel cross section, and protection of the streambanks from erosion. Removed material shall be stored outside of the waterway floodplain.

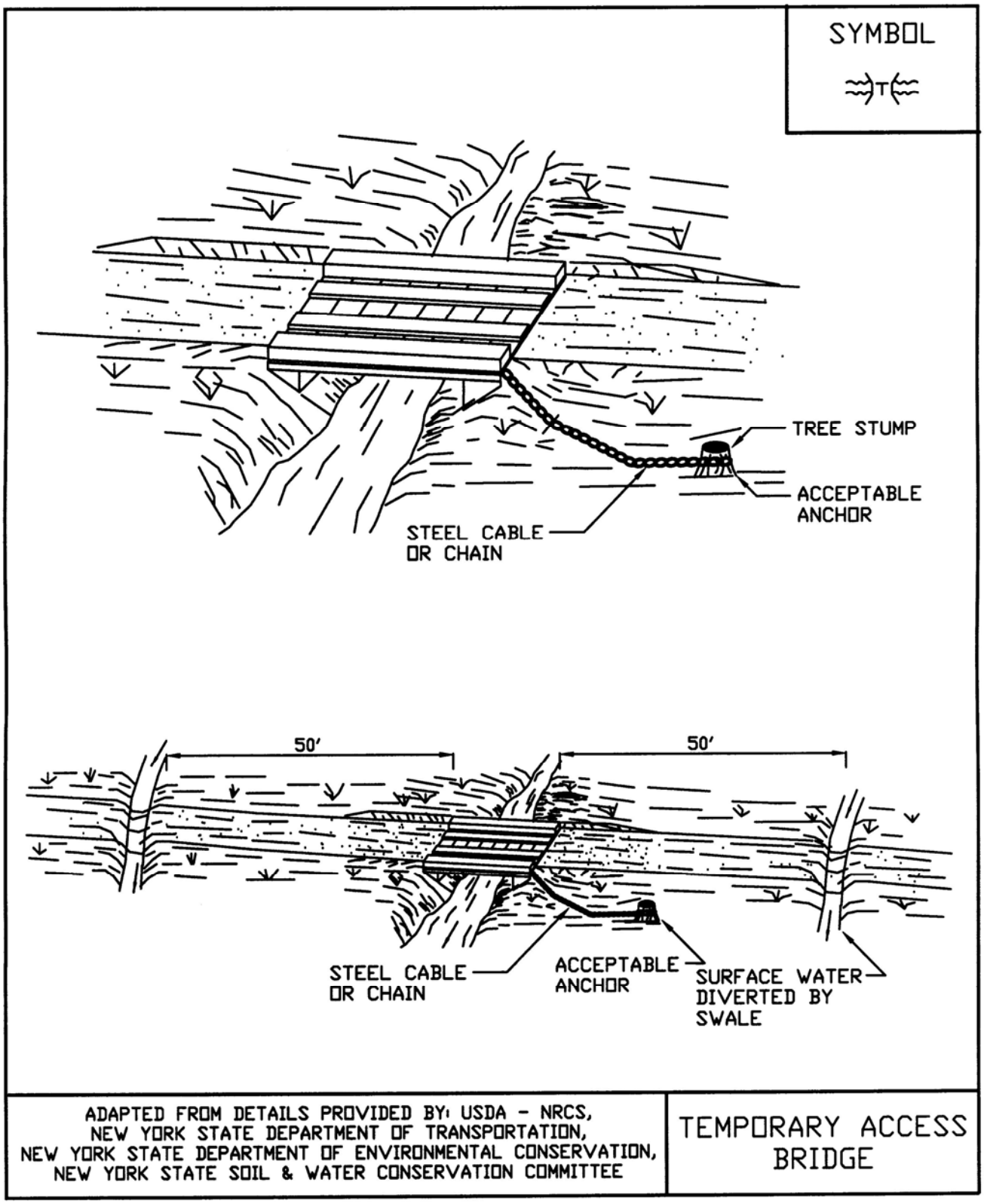
3. Method: Removal of the structure and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.

4. Final Stabilization: All areas disturbed during culvert removal shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for Permanent Construction Area Plantings.

NOTE: Any temporary access crossing shall conform to the technical requirements of this Standard and Specifications as well as any specific requirement imposed by the New York State Department of Environmental Conservation and the US Army Corps of Engineers. Permits may be required for streambank disturbance.

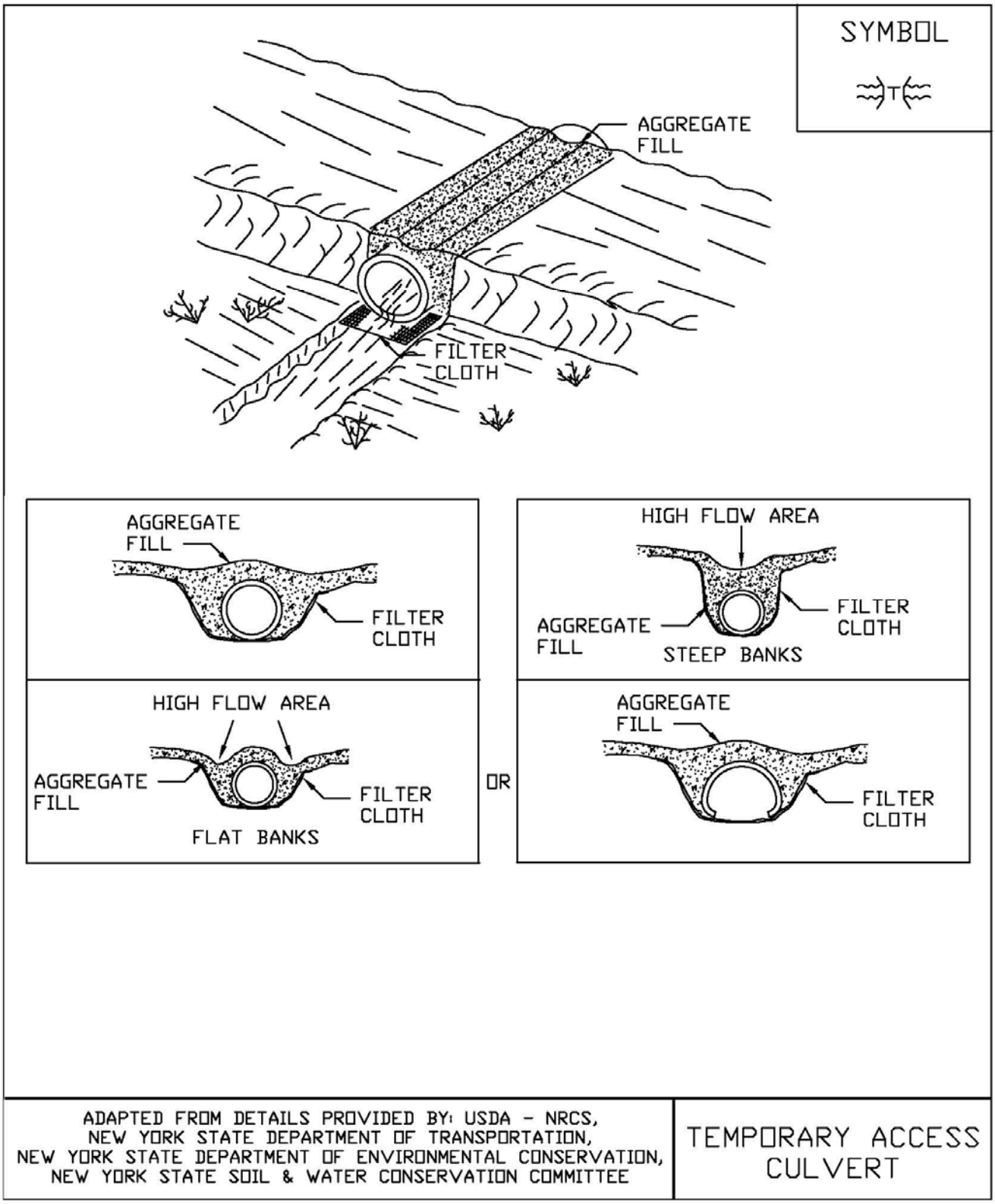
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 2.2
Temporary Access Bridge



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 2.3
Temporary Access Culvert



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION



Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR CHECK DAM



Definition & Scope

Small barriers or dams constructed of stone, bagged sand or gravel, or other durable materials across a drainageway to reduce erosion in a drainage channel by reducing the velocity of flow in the channel.

Conditions Where Practice Applies

This practice is used as a **temporary** and, in some cases, a **permanent** measure to limit erosion by reducing velocities in open channels that are degrading or subject to erosion or where permanent stabilization is impractical due to short period of usefulness and time constraints of construction.

Design Criteria

Drainage Area: Maximum drainage area above the check dam shall not exceed two (2) acres.

Height: Not greater than 2 feet. Center shall be maintained 9 inches lower than abutments at natural ground elevation.

Side Slopes: Shall be 2:1 or flatter.

Spacing: The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

Therefore: $$S = \frac{h}{s}$$

Where: S = spacing interval (ft.)
h = height of check dam (ft.)
s = channel slope (ft./ft.)

Example:

For a channel with a 4% slope and 2 ft. high stone check dams, they are spaced as follows: $$S = \frac{2\ \text{ft}}{0.04\ \frac{\text{ft}}{\text{ft}}} = 50\ \text{ft}$$

For stone check dams: Use a well graded stone matrix 2 to 9 inches in size (NYS – DOT Light Stone Fill meets these requirements).

The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure 3.1 on page 3.3 for details.

Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

For filter sock or fiber roll check dams: The check dams will be anchored by staking the dam to the earth contact surface. The dam will extend to the top of the bank. The check dam will have a splash apron of NYS DOT #2 crushed stone extending a minimum 3 feet downstream from the dam and 1 foot up the sides of the channel. The compost and materials for a filter sock check dam shall meet the requirements shown in the standard for Compost Filter Sock on page 5.7.

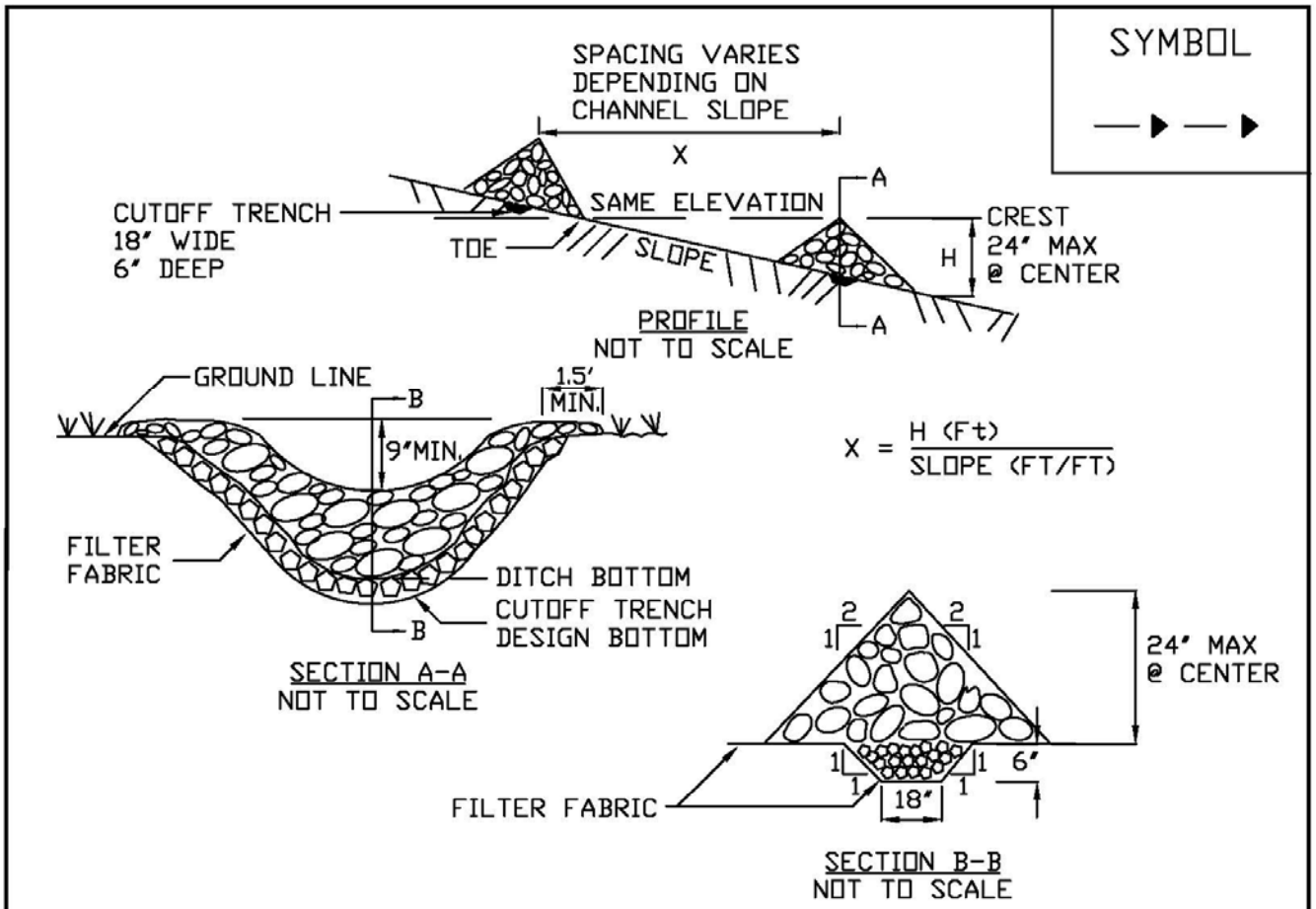
Maintenance

The check dams should be inspected after each runoff event. Correct all damage immediately. If significant erosion has occurred between structures, a liner of stone or other suitable material should be installed in that portion of the channel or additional check dams added.

Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam.

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Figure 3.1
Stone Check Dam Detail



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

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

STONE CHECK DAM

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR DEWATERING SUMP PIT



Discharge of turbid water pumped from the standpipe should be to a sediment trap, sediment basin, filter bag or stabilized area, such as a filter strip. If water from the sump pit will be pumped directly to a storm drain system, filter cloth with an equivalent sieve size between 40-80 should be wrapped around the standpipe to ensure clean water discharge. It is recommended that ¼ to ½ inch hardware cloth be wrapped around and secured to the standpipe prior to attaching the filter cloth. This will increase the rate of water seepage into the standpipe.

Definition & Scope

A **temporary** pit which is constructed using pipe and stone for pumping excessive water from excavations to a suitable discharge area.



Conditions Where Practice Applies

Sump pits are constructed when water collects during the excavation phase of construction. This practice is particularly useful in urban areas during excavation for building foundations. It may also be necessary during construction activities that encounter high ground water tables in floodplain locations.

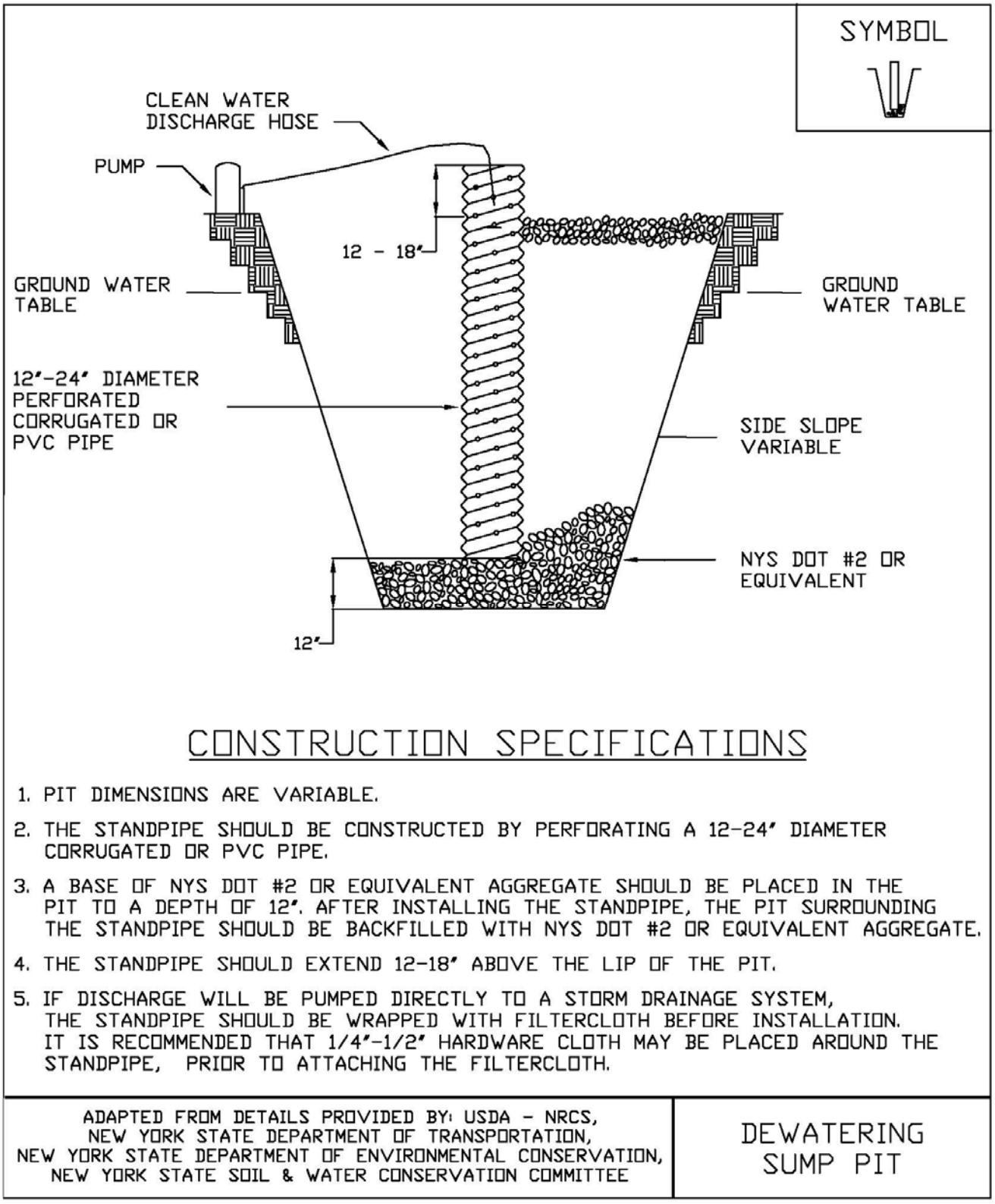
Design Criteria

The number of sump pits and their locations shall be determined by the contractor/engineer. A design is not required, but construction should conform to the general criteria outlined on Figure 3.3 on page 3.8.

A perforated vertical standpipe is placed in the center of the pit and surrounded with a stone screening material to collect filtered water. Water is then pumped from the center of the pipe to a suitable discharge area.

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Figure 3.3
Dewatering Sump Pit Detail



CONSTRUCTION SPECIFICATIONS

1. PIT DIMENSIONS ARE VARIABLE.
2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12-24" DIAMETER CORRUGATED OR PVC PIPE.
3. A BASE OF NYS DOT #2 OR EQUIVALENT AGGREGATE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD BE BACKFILLED WITH NYS DOT #2 OR EQUIVALENT AGGREGATE.
4. THE STANDPIPE SHOULD EXTEND 12-18" ABOVE THE LIP OF THE PIT.
5. IF DISCHARGE WILL BE PUMPED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE STANDPIPE SHOULD BE WRAPPED WITH FILTERCLOTH BEFORE INSTALLATION. IT IS RECOMMENDED THAT 1/4"-1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTERCLOTH.

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	DEWATERING SUMP PIT

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STANDARD AND SPECIFICATIONS FOR ROCK OUTLET PROTECTION



Definition & Scope

A **permanent** section of rock protection placed at the outlet end of the culverts, conduits, or channels to reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving downstream reach.

Conditions Where Practice Applies

This practice applies where discharge velocities and energies at the outlets of culverts, conduits, or channels are sufficient to erode the next downstream reach. This applies to:

1. Culvert outlets of all types.
2. Pipe conduits from all sediment basins, dry storm water ponds, and permanent type ponds.
3. New channels constructed as outlets for culverts and conduits.

Design Criteria

The design of rock outlet protection depends entirely on the location. Pipe outlet at the top of cuts or on slopes steeper than 10 percent, cannot be protected by rock aprons or riprap sections due to re-concentration of flows and high velocities encountered after the flow leaves the apron.

Many counties and state agencies have regulations and design procedures already established for dimensions, type and size of materials, and locations where outlet protection is required. Where these requirements exist, they shall be followed.

Tailwater Depth

The depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. If the tailwater depth is less than half the diameter of the outlet pipe, and the receiving stream is wide enough to accept divergence of the flow, it shall be classified as a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example. If the tailwater depth is greater than half the pipe diameter and the receiving stream will continue to confine the flow, it shall be classified as a Maximum Tailwater Condition; see Figure 3.17 on page 3.43 as an example. Pipes which outlet onto flat areas with no defined channel may be assumed to have a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example.

Apron Size

The apron length and width shall be determined from the curves according to the tailwater conditions:

Minimum Tailwater – Use Figure 3.16 on page 3.42
Maximum Tailwater – Use Figure 3.17 on page 3.43

If the pipe discharges directly into a well defined channel, the apron shall extend across the channel bottom and up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank, whichever is less.

The upstream end of the apron, adjacent to the pipe, shall have a width two (2) times the diameter of the outlet pipe, or conform to pipe end section if used.

Bottom Grade

The outlet protection apron shall be constructed with no slope along its length. There shall be no overfall at the end of the apron. The elevation of the downstream end of the apron shall be equal to the elevation of the receiving channel or adjacent ground.

Alignment

The outlet protection apron shall be located so that there are no bends in the horizontal alignment.

Materials

The outlet protection may be done using rock riprap, grouted riprap, or gabions. Outlets constructed on the bank of a stream or wetland shall not use grouted rip-rap, gabions or concrete.

Riprap shall be composed of a well-graded mixture of rock size so that 50 percent of the pieces, by weight, shall be larger than the d_{50} size determined by using the charts. A

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well-graded mixture, as used herein, is defined as a mixture composed primarily of larger rock sizes, but with a sufficient mixture of other sizes to fill the smaller voids between the rocks. The diameter of the largest rock size in such a mixture shall be 1.5 times the d_{50} size.

Thickness

The minimum thickness of the riprap layer shall be 1.5 times the maximum rock diameter for d_{50} of 15 inches or less; and 1.2 times the maximum rock size for d_{50} greater than 15 inches. The following chart lists some examples:

D_{50} (inches)	d_{max} (inches)	Minimum Blanket Thickness (inches)
4	6	9
6	9	14
9	14	20
12	18	27
15	22	32
18	27	32
21	32	38
24	36	43

Rock Quality

Rock for riprap shall consist of field rock or rough unhewn quarry rock. The rock shall be hard and angular and of a quality that will not disintegrate on exposure to water or weathering. The specific gravity of the individual rocks shall be at least 2.5.

Filter

A filter is a layer of material placed between the riprap and the underlying soil surface to prevent soil movement into and through the riprap. Riprap shall have a filter placed under it in all cases.

A filter can be of two general forms: a gravel layer or a plastic filter cloth. The plastic filter cloth can be woven or non-woven monofilament yarns, and shall meet these base requirements: thickness 20-60 mils, grab strength 90-120 lbs; and shall conform to ASTM D-1777 and ASTM D-1682.

Gravel filter blanket, when used, shall be designed by comparing particle sizes of the overlying material and the base material. Design criteria are available in Standard and Specification for Anchored Slope and Channel Stabilization on page 4.7.

Gabions

Gabions shall be made of hexagonal triple twist mesh with heavily galvanized steel wire. The maximum linear dimension of the mesh opening shall not exceed 4 ½ inches and the area of the mesh opening shall not exceed 10 square inches.

Gabions shall be fabricated in such a manner that the sides, ends, and lid can be assembled at the construction site into a rectangular basket of the specified sizes. Gabions shall be of single unit construction and shall be installed according to manufacturer's recommendations.

The area on which the gabion is to be installed shall be graded as shown on the drawings. Foundation conditions shall be the same as for placing rock riprap, and filter cloth shall be placed under all gabions. Where necessary, key, or tie, the structure into the bank to prevent undermining of the main gabion structure.

Maintenance

Once a riprap outlet has been installed, the maintenance needs are very low. It should be inspected after high flows for evidence of scour beneath the riprap or for dislodged rocks. Repairs should be made immediately.

Design Procedure

1. Investigate the downstream channel to assure that nonerosive velocities can be maintained.

2. Determine the tailwater condition at the outlet to establish which curve to use.

3. Use the appropriate chart with the design discharge to determine the riprap size and apron length required. It is noted that references to pipe diameters in the charts are based on full flow. For other than full pipe flow, the parameters of depth of flow and velocity must be used to adjust the design discharges.

4. Calculate apron width at the downstream end if a flare section is to be employed.

Design Examples are demonstrated in Appendix B.

Construction Specifications

1. The subgrade for the filter, riprap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grad-

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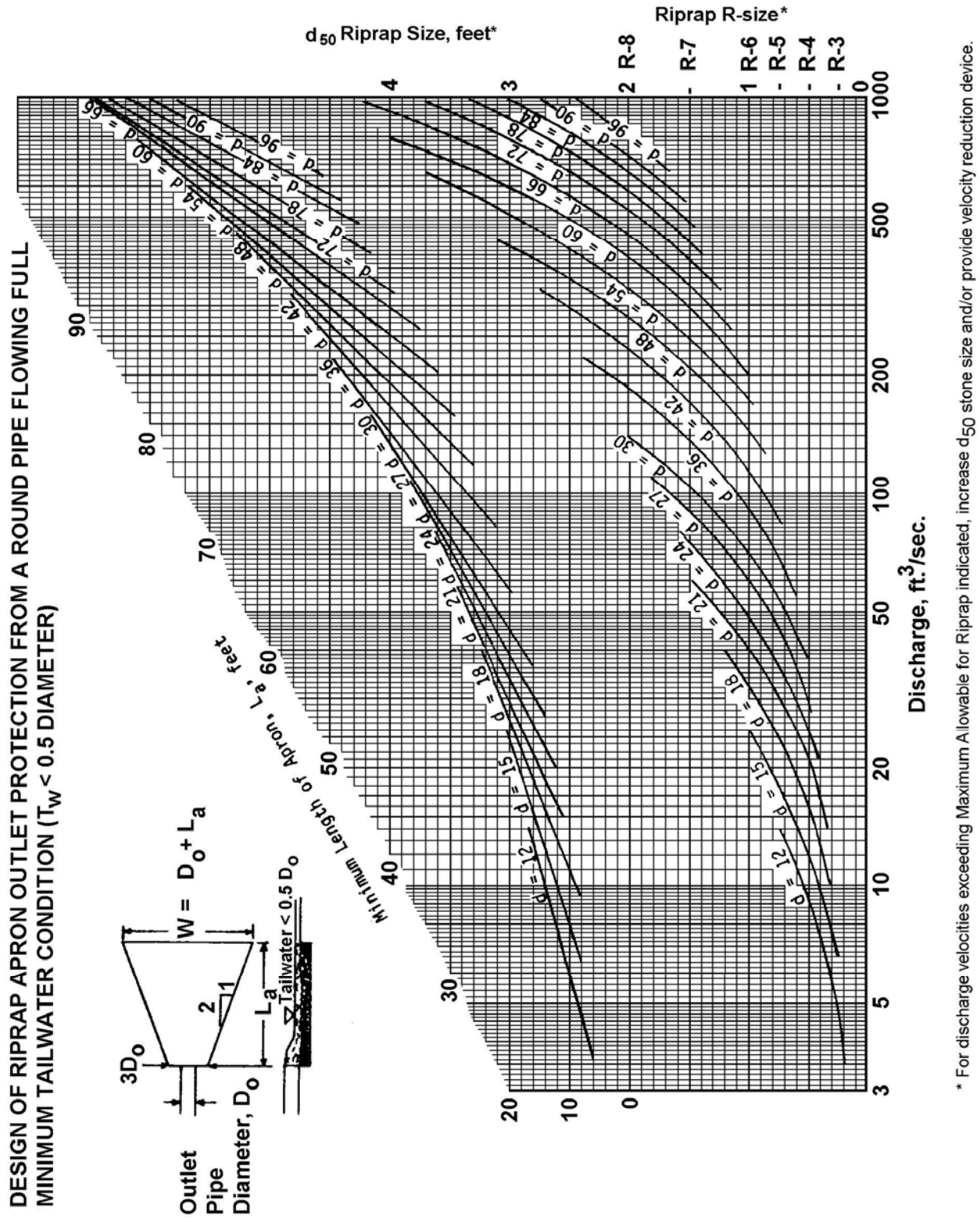
ing limits when installed respectively in the riprap or filter.

3. Filter cloth shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps, whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.

4. Rock for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The rock for riprap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogenous with the smaller rocks and spalls filling the voids between the larger rocks. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

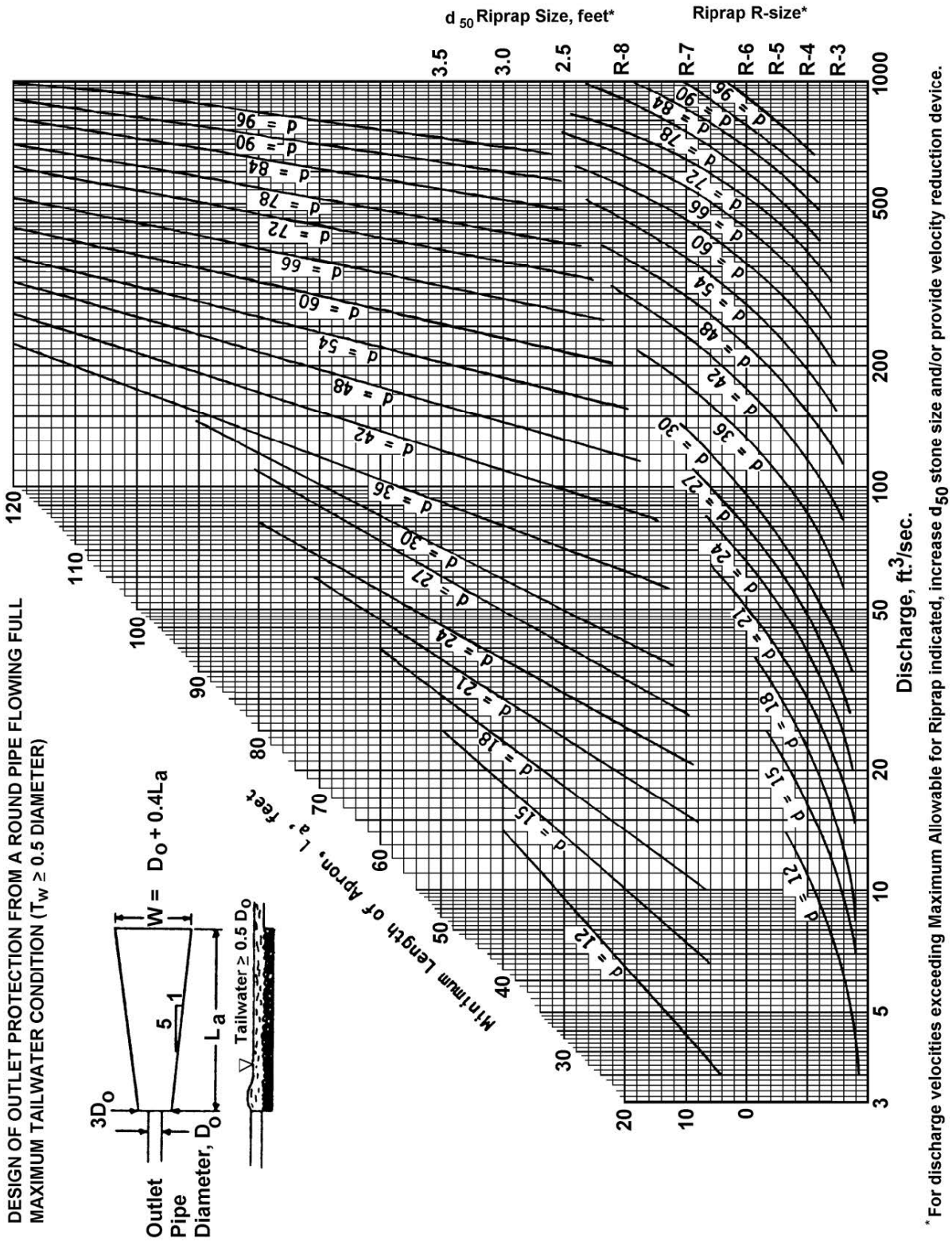
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 3.16
Outlet Protection Design—Minimum Tailwater Condition Chart (Design of Outlet Protection from a Round Pipe Flowing Full, Minimum Tailwater Condition: $T_w < 0.5D_o$) (USDA - NRCS)



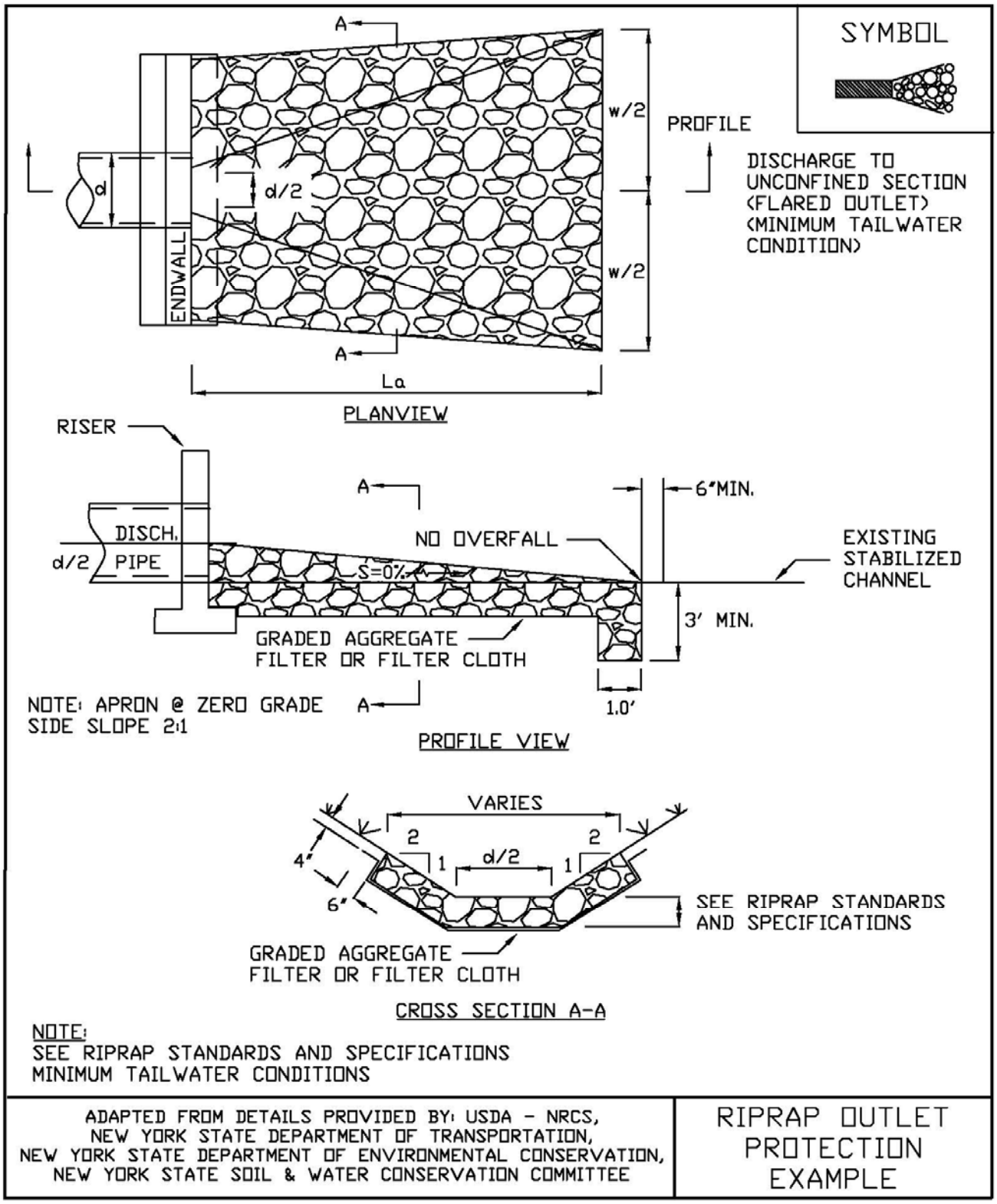
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 3.17
Outlet Protection Design—Maximum Tailwater Condition Chart (Design of Outlet Protection from a Round Pipe Flowing Full, Maximum Tailwater Condition: $T_w \geq 0.5D_o$) (USDA - NRCS)



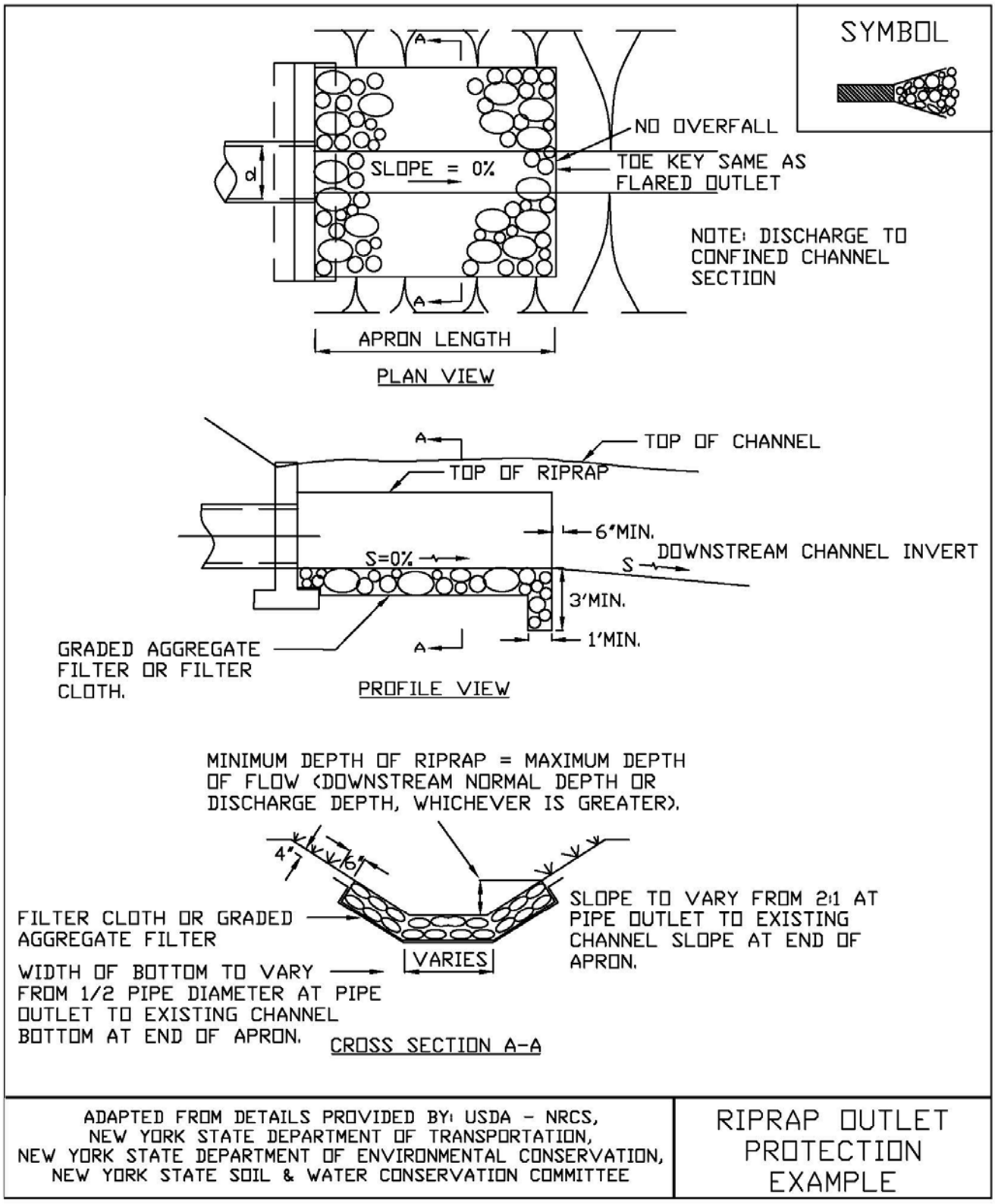
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Figure 3.18
Riprap Outlet Protection Detail (1)



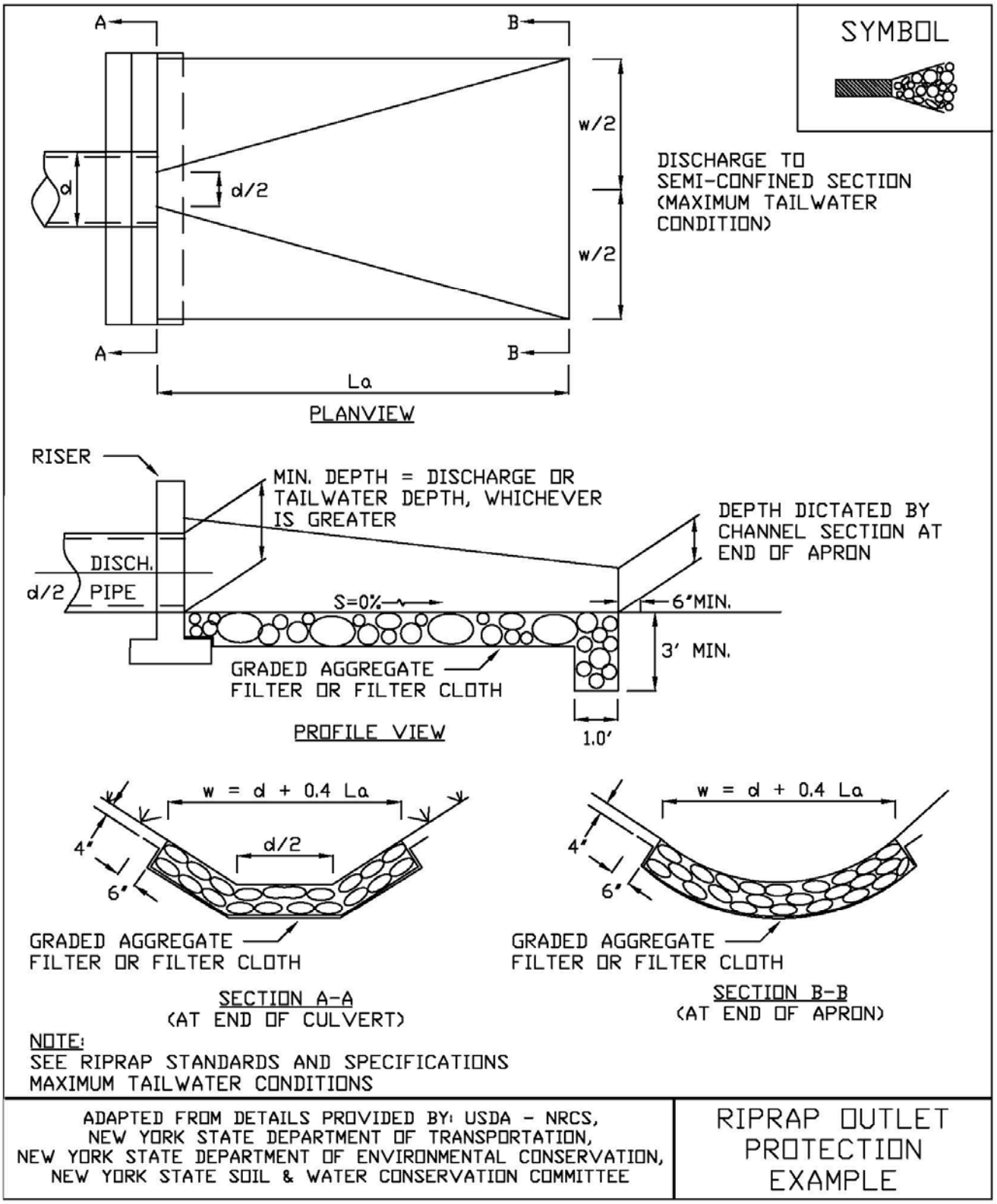
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Figure 3.19
Riprap Outlet Protection Detail (2)



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Figure 3.20
Riprap Outlet Protection Detail (3)



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STANDARD AND SPECIFICATIONS FOR LOOSE STABILIZATION BLANKETS



Definition and Scope

Blankets of various materials placed pneumatically, hydraulically, or other means on a prepared planting area or a critical area where existing vegetation can remain to reduce rain splash and sheet erosion and promote vegetative stabilization.

Conditions Where Practice Applies

Loose blankets are an appropriate stabilization practice for any soil surface that is rocky, frozen, flat, or steep. They can be used on streambanks, road cuts and embankments, and construction site areas where stormwater runoff occurs as sheet flow. They should not be used in areas of concentrated flow.

Design Criteria

Compost Blanket

Material: The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids composts produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Soild Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metal content. When using compost blankets adjacent to surface waters, the compost should have a low nutrient value.**

Compost Standards	
Organic Matter Content	25 - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	6.0 - 8.0
Moisture Content	30% - 60%
Particle Size	100% pass through 1" screen 10 - 30% pass through 3/8" screen
Soluble Salt Concentration	5.0 D_s Maximum

The physical parameter should comply with the following table:

Placement: The method of application and depth of compost depend upon site conditions. Vegetation of the compost blanket is generally archived by incorporating seed into the compost before it is applied. However, seeding may occur after the application if needed.

The compost application rate will be in accordance with the following table. Compost is not recommended for slopes steeper than 2H:1V. Slopes with problem soils and more runoff will require greater application rates.

Compost Application Rates		
Slope Length (ft)	<3H:1V Slopes	3H:1V to 2H:1V Slopes
20 or less	270 cy/acre (2" Layer)	540 cy/acre (4" Layer)
20 to 60	405 cy/acre (3" Layer)	675 cy/acre (5" Layer)
60 to 100	540 cy/acre (4" Layer)	810 cy/acre (6" Layer)*
* For slopes between 2H:1V and 1H:1V use this rate with a max. slope length of 40 ft.		

Construction Specifications

1. Compost shall be placed evenly and must provide 100% soil coverage (no soil visible). On highly unstable soils, use compost in conjunction with appropriate structural measures.

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2. Spread the compost uniformly to the design thickness by hand or mechanically (e.g. with a manure spreader, front end loader, dozer, pneumatic blower, etc.) and then track (compact) the compost layer using a bulldozer or other appropriate equipment.

3. When using a pneumatic (blower) unit, shoot the compost directly at soil, to provide a tighter interface between the soil and compost and prevent water from moving between the two layers.

4. Apply compost layer approximately 3 feet beyond the top of the slope or overlap it into existing vegetation.

5. Follow by seeding or ornamental planting as specified.

6. When planting immediate grass, wildflower, or legume seeding or ornamental planting, use only a well composted product that contains no substances toxic to plants.

7. Very coarse composts should be avoided if the slope is to be landscaped or seeded, as it will make planting and crop establishment more difficult. Composts containing fibrous particles that range in size produce a more stable mat.

Hydraulically Applied Blankets

These blankets are formed by mixing different types of materials with water and are then applied using standard hydroseeding equipment. These blankets should not be used in areas of concentrated flow such as ditches and channels.

A. Bonded Fiber Matrix (BFM) - This method makes use of a cross-linked hydrocolloid tackifier to bond thermally processed wood fibers. Application rates vary according to site conditions. For slopes up to 3H:1V the BFM should be applied at a rate of 3,000 lb/ acre. Steeper slopes may need as much as 4,000 lb/ acre in accordance with the manufacturer's recommendations.

   BFMs should only be used when no rain is forecast for at least 48 hours following the application. This is to allow the tackifier sufficient time to cure properly. Once properly applied, a BFM is very effective in preventing accelerated erosion. **Bonded Fiber Matrix should not be applied between September 30 and April 1 to allow for proper curing of the polymer.**

B. Flexible Growth Medium (FGM) - This method has the added component of 1/2 inch long, crimped manmade fibers which add a mechanical bond to the chemical bond provided by BFMs. This increases the blanket's resistance to both raindrop impact and erosion due to runoff. Unlike BFMs, a flexible growth medium typically does not require a curing time to be effective. Properly applied, an FGM is also very effective.

   There is no need to smooth the slope prior to application. In fact some roughening of the surface (either natural or mechanically induced) is preferable. However, large rocks (≥ 9 inches) and existing rills should be removed prior to application. Mixing and application rates should follow manufacturer's recommendations.

C. Polymer Stabilized Fiber Matrix (PSFM) - PSFMs make use of a linear soil stabilization tackifier that works directly on soil to maintain soil structure, maintain pore space capacity and flocculate dislodged sediment that will significantly reduce runoff turbidity. PSFMs can be used in re-vegetation applications and for site winterization and/or dormant seeding - fall planting for spring germination - applications. Application rates vary according to site conditions and should be in accordance with manufacturers recommendations.



Construction Specifications

BFMs, FGMs and PSFMs are typically applied in two stages. Unless specifically recommended to be applied in one application by the manufacturer, the seed mixture and soil amendments should be applied first. If the seed is applied at the same time as the hydraulically applied blankets, the bonded fibers may keep the seed from making sufficient contact with the soil to germinate. After the seed mixture is applied, the hydraulically applied blankets should be sprayed over the area at the required application rate, according to the manufactures recommendations.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR MULCHING



Definition and Scope

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch can also be used alone for temporary stabilization in non-growing months. Use of stone as a mulch could be more permanent and should not be limited to non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Hay mulch shall not be used in wetlands or in areas of permanent seeding. Clean straw mulch is preferred alternative in wetland application. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/ acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.



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Table 4.2
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/ yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	4' x 112.5' or 8' x 112.5'.	—	—	Use without additional mulch. Excellent for seeding establishment. Anchor as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

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Table 4.3
Mulch Anchoring Guide

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45^0 Fahrenheit are required.

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STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING



Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5 -10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:	**Variety**	**lbs./ acre**	**lbs/1000 sq. ft.**
Red Clover[1] OR	Acclaim, Rally, Red Head II, Renegade	8[2]	0.20
Common white clover[1]	Common	8	0.20
PLUS			
Creeping Red Fescue	Common	20	0.45
PLUS			
Smooth Bromegrass OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10

[1] add inoculant immediately prior to seeding
[2] Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

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To compute Pure Live Seed multiply the "germination percent" times the "purity" and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\%\,\text{Germination} \times \%\,\text{Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\%\ \text{Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9\ \text{lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.



80% Perennial Vegetative Cover



50% Perennial Vegetative Cover

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Table 4.4
Permanent Construction Area Planting Mixture Recommendations

Seed Mixture	Variety	Rate in lbs./acre (PLS)	Rate in lbs./ 1, 000 ft^2
Mix #1			
Creeping red fescue	Ensylva, Pennlawn, Boreal	10	.25
Perennial ryegrass	Pennfine, Linn	10	.25
*This mix is used extensively for shaded areas.			
Mix #2			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.50
*This rate is in pure live seed, this would be an excellent choice along the upland edge of a wetland to filter runoff and provide wildlife benefits. In areas where erosion may be a problem, a companion seeding of sand lovegrass should be added to provide quick cover at a rate of 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.).			
Mix #3			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	4	.10
Big bluestem	Niagara	4	.10
Little bluestem	Aldous or Camper	2	.05
Indiangrass	Rumsey	4	.10
Coastal panicgrass	Atlantic	2	.05
Sideoats grama	El Reno or Trailway	2	.05
Wildflower mix		.50	.01
*This mix has been successful on sand and gravel plantings. It is very difficult to seed without a warm season grass seeder such as a Truax seed drill. Broadcasting this seed is very difficult due to the fluffy nature of some of the seed, such as bluestems and indiangrass.			
Mix #4			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	10	.25
Coastal panicgrass	Atlantic	10	.25
*This mix is salt tolerant, a good choice along the upland edge of tidal areas and roadsides.			
Mix #5			
Saltmeadow cordgrass (Spartina patens)—This grass is used for tidal shoreline protection and tidal marsh restoration. It is planted by vegetative stem divisions. 'Cape' American beachgrass can be planted for sand dune stabilization above the saltmeadow cordgrass zone.			
Mix #6			
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Chewings Fescue	Common	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Red Clover	Common	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			

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STANDARD AND SPECIFICATIONS FOR RECREATION AREA SEEDING



Definition & Scope

Establishing **permanent** grasses, legumes, vines, shrubs, trees, or other plants, or selectively reducing stand density and trimming woody plants, to improve an area for recreation. To increase the attractiveness and usefulness of recreation areas and to protect the soil and plant resources.

Conditions Where Practice Applies

On any area planned for recreation use, lawns, and areas that will be maintained in a closely mowed condition.

Specifications

ESTABLISHING GRASSES (Turfgrass)

The following applies for playgrounds, parks, athletic fields, camping areas, picnic areas, passive recreation areas such as lawns, and similar areas.

1. Time of Planting

Fall planting is preferred. Seed after August 15. In the spring, plant until May 15.

If seeding is done between May 15 and August 15, irrigation may be necessary to ensure a successful seeding.

2. Site Preparation

   A. Install needed water and erosion control measures and bring area to be seeded to desired grades. A minimum of 4 in. topsoil is required.

   B. Prepare seedbed by loosening soil to a depth of 4-6 inches and decompacting required areas per Soil Restoration Standard.

   C. See Standard and Specification of Topsoiling.

   D. Lime to a pH of 6.5. See Lime Application Standard.

   E. **Fertilize as per soil test** or, if soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 850 pounds of 5-5-10 or equivalent per acre (20 lbs/1,000 sq. ft.). See Fertilizer Application Standard.

   F. Incorporate lime and fertilizer in top 2-4 inches of topsoil.

   G. Smooth. Remove sticks, foreign matter, and stones over 1 inch in diameter, from the surface. Firm the seedbed.

3. Planting

Use a cultipacker type seeder if possible. Seed to a depth of 1/8 to 1/4 inch. If seed is to be broadcast, cultipack or roll after seeding. If hyroseeded, lime and fertilizer may be applied through the seeder, and rolling is not practical.

4. Mulching

Mulch all seedings in accordance with Standard and Specifications for Mulching. Small grain straw is the best material.

5. Seed Mixtures

Select seed mixture for site conditions and intended use from Table 4.5.

6. Contact Cornell Cooperative Extension Turf Specialist for suitable varieties.

Turf-type tall fescues have replaced the old KY31 tall fescues. New varieties have finer leaves and are the most resistant grass to foot traffic. Do not mix it with fine textured grasses such as bluegrass and red fescue.

Common ryegrass and redtop, which are relatively short lived species, provide quick green cover. Improved lawn cultivars of perennial ryegrass provide excellent quality turf, but continue to lack winter hardiness.

Common white clover can be added to mixtures at the rate of 1-2 lbs/acre to help maintain green color during the dry summer period; however, they will not withstand heavy traffic. Avoid using around swimming areas as flowers attract bees which can be easily stepped on.

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Table 4.5
Recreation Turfgrass Seed Mixture

Site - Use	Species (% by weight)	lbs/1.000 ft^2 (PLS)	lbs/acre (PLS)
Sunny Sites (well, moderately well, and somewhat poorly drained soils)	***Athletic fields and similar areas***		
	80% Hard fescue	2.4-3.2	105-138
	20% Perennial ryegrass	0.6-0.8	25-37
		3.0-4.0	130-175
	OR, for southern and eastern, NY 50% Hard fescue	1.5-2.0	65-88
	50% perennial ryegrass	1.5-2.0	65-87
		3.0-4.0	130-175
	OR, 100% Creeping Red Fescue	3.4-4.6	150-200
	General recreation areas and lawns (Medium to high maintenance)		
	65% Creeping red fescue	2.0-2.6	85-114
	20% Perennial ryegrass	0.6-0.8	26-35
	15% Fine fescue	0.4-0.6	19-26
		3.0-4.0	130-175
	OR, 100% Creeping red fescue	3.4-4.6	150-200
Sunny Droughty Sites (general recreation areas and lawns, low maintenance) (somewhat excessively to excessively drained soils, excluding Long Island)	65% Fine fescue	2.6-3.3	114-143
	15% Perennial ryegrass	0.6-0.7	26-33
	20% Creeping red fescue	0.8-1.0	35-44
		4.0-5.0	175-220
	OR, 100% Creeping red fescue	3.4-4.6	150-200
Shady Dry Sites (well to somewhat poorly drained soils)	65% fine fescue	2.6-3.3	114-143
	15% perennial ryegrass	0.6-0.7	26-33
	20% Creeping red fescue	0.8-1.0	35-44
	OR	4.0-5.0	174-220
	80% blend of shade-tolerant Ceral rye	2.4-3.2	105-138
	20% perennial ryegrass	0.6-0.8	25-37
	OR	3.0-4.0	130-175
	100% Creeping red fescue	3.4-4.6	150-200
Shady Wet Sites (somewhat poor to poorly drained soils)	70% Creeping red fescue	1.4-2.1	60-91
	30% blend of shade-tolerant Hard fescue	0.6-0.9	25-39
	OR	2.0-3.0	85-130
	100% Chewings fescue	3.4-4.6	150-200

For varieties suitable for specific locations, contact Cornell Cooperative Extension Turf Specialist.

Reference: Thurn, M.C., N.W. Hummel, and A.M. Petrovic. Cornell Extension Pub. Info. Bulletin 185 Revised. HomeLawns Establishment and Maintenance. 1994.

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7. Fertilizing—First Year

Apply fertilizer as indicated by the soil test three to four weeks after germination (spring seedlings). If test results have not been obtained, apply 1 pound nitrogen/1,000 square feet using a complete fertilizer with a 2-1-1 or 4-1-3 ratio. Summer and early fall seedings, apply as above unless air temperatures are above 85ºF for an extended period. Wait for cooler temperatures to fertilize. Late fall/ winter seedings, fertilize in spring.

8. Restrict Use

New seedlings should be protected from use for one full year or a spring and fall growth cycle where possible to allow development of a dense sod with good root structure.

MAINTAINING GRASSES

1. Maintain a pH of 6.0 - 7.0.

2. Fertilize in late May to early June as follows with 5-5-10 analysis fertilizer at the rate of 5 lbs./1,000 sq. ft. and repeat in late August if sod density is not adequate. Avoid fertilizing when heat is greater than 85ºF. Top dress weak sod annually in the spring, but at least once every 2 to 3 years. **Fertilize in accordance with soil test analysis**, after determining adequate topsoil depth exists.

3. Aerate compacted or heavily used areas, like athletic fields, annually as soon as soil moisture conditions permit. Aerate area six to eight times using a spoon or hollow tine type aerator. Do not use solid spike equipment.

4. Reseed bare and thin areas annually with original seed mix.

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STANDARD AND SPECIFICATIONS FOR SOIL RESTORATION



Definition & Scope

The decompaction of areas of a development site or construction project where soils have been disturbed to recover the original properties and porosity of the soil; thus providing a sustainable growth medium for vegetation, reduction of runoff and filtering of pollutants from stormwater runoff.

Conditions Where Practice Applies

Soil restoration is to be applied to areas whose heavy construction traffic is done and final stabilization is to begin. This is generally applied in the cleanup, site restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate ground cover to maintain the soil structure. Soil restoration measures should be applied over and adjacent to any runoff reduction practices to achieve design performance.



Design Criteria

1. Soil restoration areas will be designated on the plan views of areas to be disturbed.
2. Soil restoration will be completed in accordance with Table 4.6 on page 4.53.

Specification for Full Soil Restoration

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

1. Apply 3 inches of compost over subsoil. The compost shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content.**



2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, to mix and circulate air and compost into the subsoil.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.
4. Apply topsoil to a depth of 6 inches.
5. Vegetate as required by the seeding plan. Use appropriate ground cover with deep roots to maintain the soil structure.
6. Topsoil may be manufactured as a mixture or a mineral component and organic material such as compost.

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At the end of the project an inspector should be able to push a 3/8" metal bar 12 inches into the soil just with body weight. This should not be performed within the drip line of any existing trees or over utility installations that are within 24 inches of the surface.

Maintenance

Keep the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths.

Table 4.6
Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities.
	Apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	
	Aerate* and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
** Per "Deep Ripping and De-compaction, DEC 2008".

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STANDARD AND SPECIFICATIONS FOR TOPSOILING



Definition & Scope

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas to provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

Conditions Where Practice Applies

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

Design Criteria

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.
2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established. Topsoil stockpiles must be stabilized. Stockpile surfaces can be stabilized by vegetation, geotextile or plastic covers. This can be aided by orientating the stockpile lengthwise into prevailing winds.
3. Refer to USDA Natural Resource Conservation Service soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

Site Preparation

1. As needed, install erosion and sediment control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.
2. Complete rough grading and final grade, allowing for depth of topsoil to be added.
3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompacted in accordance with the Soil Restoration Standard.
4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

Topsoil Materials

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.
2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.
3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.
4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.
5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
6. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.

Application and Grading

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.
2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by “tracking” with suitable equipment.
3. Apply topsoil in the amounts shown in Table 4.7 below:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Table 4.7 - Topsoil Application Depth		
Site Conditions	**Intended Use**	**Minimum Topsoil Depth**
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, clay loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR COMPOST FILTER SOCK



Definition & Scope

A **temporary** sediment control practice composed of a degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants associated with construction activity to prevent their migration offsite.

Condition Where Practice Applies

Compost filter socks can be used in many construction site applications where erosion will occur in the form of sheet erosion and there is no concentration of water flowing to the sock. In areas with steep slopes and/or rocky terrain, soil conditions must be such that good continuous contact between the sock and the soil is maintained throughout its length. For use on impervious surfaces such as road pavement or parking areas, proper anchorage must be provided to prevent shifting of the sock or separation of the contact between the sock and the pavement. Compost filter socks are utilized both at the site perimeter as well as within the construction areas. These socks may be filled after placement by blowing compost into the tube pneumatically, or filled at a staging location and moved into its designed location.

Design Criteria

1. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45 degree angle to prevent bypass flow.
2. Diameters designed for use shall be 12" – 32" except that 8" diameter socks may be used for residential lots to control areas less than 0.25 acres.
3. The flat dimension of the sock shall be at least 1.5 times the nominal diameter.
4. The **Maximum Slope Length** (in feet) above a compost filter sock shall not exceed the following limits:

Dia. (in.)	Slope %						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	—	—
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
* Length in feet							



5. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.**
6. The compost filter sock fabric material shall meet the minimum requirements provided in Table 5.1 - Compost Sock Fabric Minimum Specifications Table.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

7. Compost filter socks shall be anchored in earth with 2" x 2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.

8. All specific construction details and material specifications shall appear on the erosion and sediment control constructions drawings when compost filter socks are included in the plan.

Maintenance

1. Traffic shall not be permitted to cross filter socks.

2. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan.

3. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired in the manner required by the manufacturer or replaced within 24 hours of inspection notification.

4. Biodegradable filter socks shall be replaced after 6 months; photodegradable filter socks after 1 year. Polypropylene socks shall be replaced according to the manufacturer's recommendations.

5. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the stabilization plan. For removal the mesh can be cut and the compost spread as an additional mulch to act as a soil supplement.

Table 5.1 - Compost Sock Fabric Minimum Specifications Table

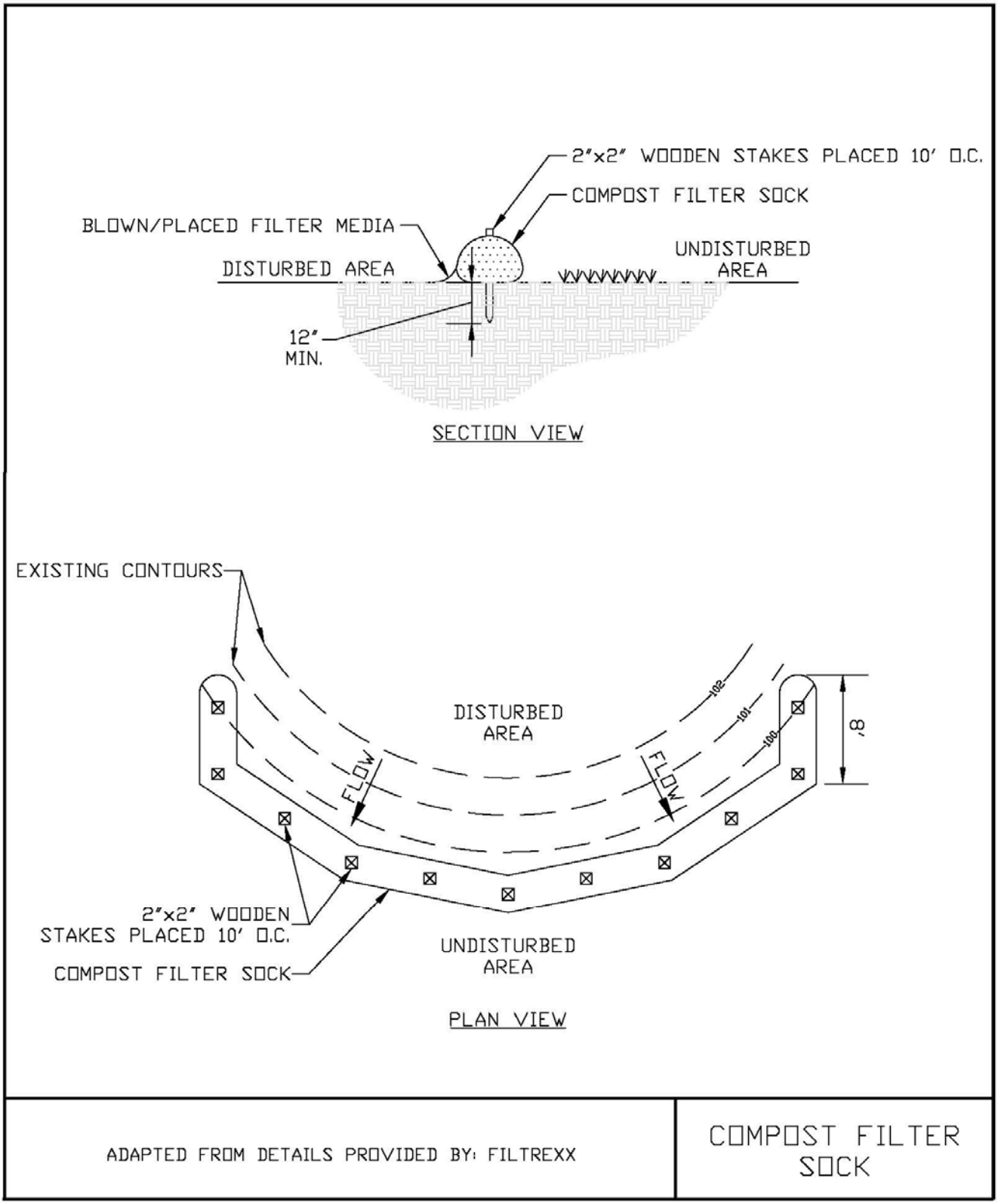
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photodegradable	Photodegradable	Biodegradable	Photodegradable	Photodegradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Table 5.2 - Compost Standards Table

Organic matter content	25% - 100% (dry weight)
Organic portion	Fibrous and elongated
pH	6.0 – 8.0
Moisture content	30% - 60%
Particle size	100% passing a 2" screen and 10 - 50% passing a 3/8" screen
Soluble salt concentration	5.0 dS/m (mmhos/cm) maximum

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 5.2
Compost Filter Sock



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR GEOTEXTILE FILTER BAG



Definition & Scope

A **temporary** portable device through which sediment laden water is pumped to trap and retain sediment prior to its discharge to drainageways or off-site.

Condition Where Practice Applies

On sites where space is limited such as urban construction or linear projects (e.g. roads and utility work) where rights-of-way are limited and larger de-silting practices are impractical.

Design Criteria

1. Location - The portable filter bag should be located to minimize interference with construction activities and pedestrian traffic. It should also be placed in a location that is vegetated, relatively level, and provides for ease of access by heavy equipment, cleanout, disposal of trapped sediment, and proper release of filtered water.

   The filter bag shall also be placed at least 50 feet from all wetlands, streams or other surface waters.

2. Size - Geotextile filter bag shall be sized in accordance with the manufacturers recommendations based on the pump discharge rate.

Materials and Installation

1. The geotextile material will have the following attributes:

Minimum Grab Tensile Strength	200 lbs.
Minimum Grab Tensile Elongation	50 %
Minimum Trapezoid Tear Strength	80 lbs.
Mullen Burst Strength	380 psi
Minimum Puncture Strength	130 lbs
Apparent Opening Size	40 - 80 US sieve
Minimum UV Resistance	70%
Minimum Flow Thru Rate	70 gpm/sq ft

2. The bag shall be sewn with a double needle machine using high strength thread, double stitched "Joe" type capable of minimum roll strength of 100 lbs/inch (ASTM D4884).

3. The geotextile filter bag shall have an opening large enough to accommodate a 4 inch diameter discharge hose with an attached strap to tie off the bag to the hose to prevent back flow.

4. The geotextile shall be placed on a gravel bed 2 inches thick, a straw mat 4 inches thick, or a vegetated filter strip to allow water to flow out of the bag in all directions.

Maintenance

1. The geotextile filter bag is considered full when remaining bag flow area has been reduced by 75%. At this point, it should be replaced with a new bag.

2. Disposal may be accomplished by removing the bag to an appropriate designated upland area, cut open, remove the geotextile for disposal, and spread sediment contents and seeded and mulched according to the vegetative plan.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.
3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/ min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.

3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated silt fence is acceptable as long as all material specifications are met.

Reinforced Silt Fence

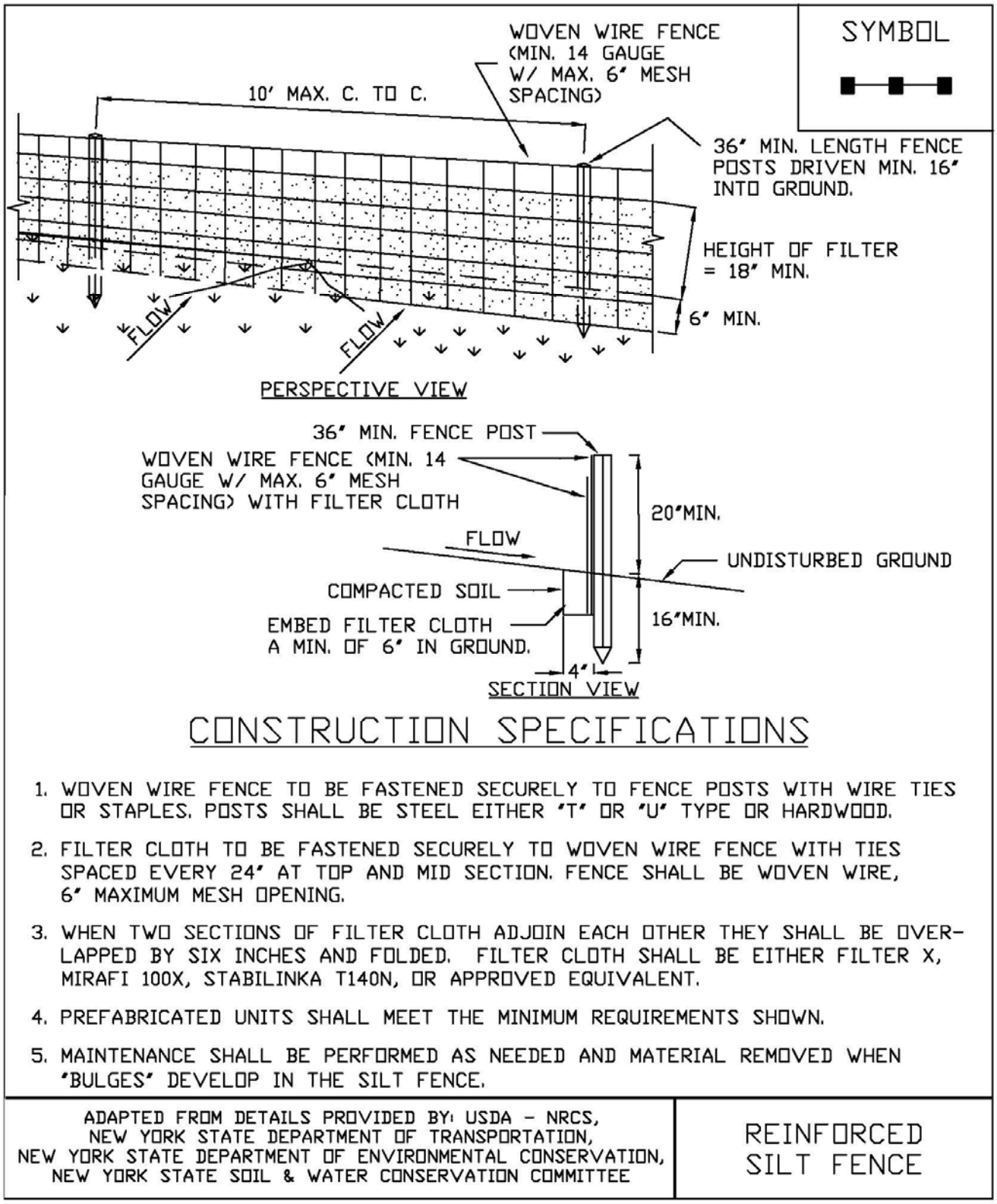


Super Silt Fence



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Figure 5.30
Reinforced Silt Fence



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

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition & Scope

A **temporary** barrier with low permeability, installed around inlets in the form of a fence, berm or excavation around an opening, detaining water and thereby reducing the sediment content of sediment laden water by settling thus preventing heavily sediment laden water from entering a storm drain system.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This practice shall be used with an upstream buffer strip if placed at a storm drain inlet on a paved surface. It may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are five (5) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

I. Excavated Drop Inlet Protection
II. Fabric Drop Inlet Protection
III. Stone & Block Drop Inlet Protection
IV. Paved Surface Inlet Protection
V. Manufactured Insert Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. Erosion control/temporary stabilization measures must be implemented on the disturbed drainage area tributary to the inlet. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

This practice is generally used during initial overlot grading after the storm drain trunk line is installed.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection



This practice is generally used during final elevation grading phases after the storm drain system is completed.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to

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unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

Type III – Stone and Block Drop Inlet Protection

This practice is generally used during the initial and intermediate overlot grading of a construction site.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet ("doughnut"). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilize in a manner appropriate to the site.

Type IV – Paved Surface Inlet Protection



This practice is generally used after pavement construction has been done while final grading and soil stabilization is occurring. These practices should be used with upstream buffer strips in linear construction applications, and with temporary surface stabilization for overlot areas, to reduce the sediment load at the practice. This practice includes sand bags, compost filter socks, geo-tubes filled with ballast, and manufactured surface barriers. Pea gravel can also be used in conjunction with these practices to improve performance. When the inlet is not at a low point, and is offset from the pavement or gutter line, protection should be selected and installed so that flows are not diverted around the inlet.



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

The drainage area should be limited to 1 acre at the drain inlet. All practices will be placed at the inlet perimeter or beyond to maximize the flow capacity of the inlet. Practices shall be weighted, braced, tied, or otherwise anchored to prevent movement or shifting of location on paved surfaces. Traffic safety shall be integrated with the use of this practice. All practices should be marked with traffic safety cones as appropriate. Structure height shall not cause flooding or by-pass flow that would cause additional erosion.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any broken or damaged components should be replaced. Check all materials for proper anchorage and secure as necessary.

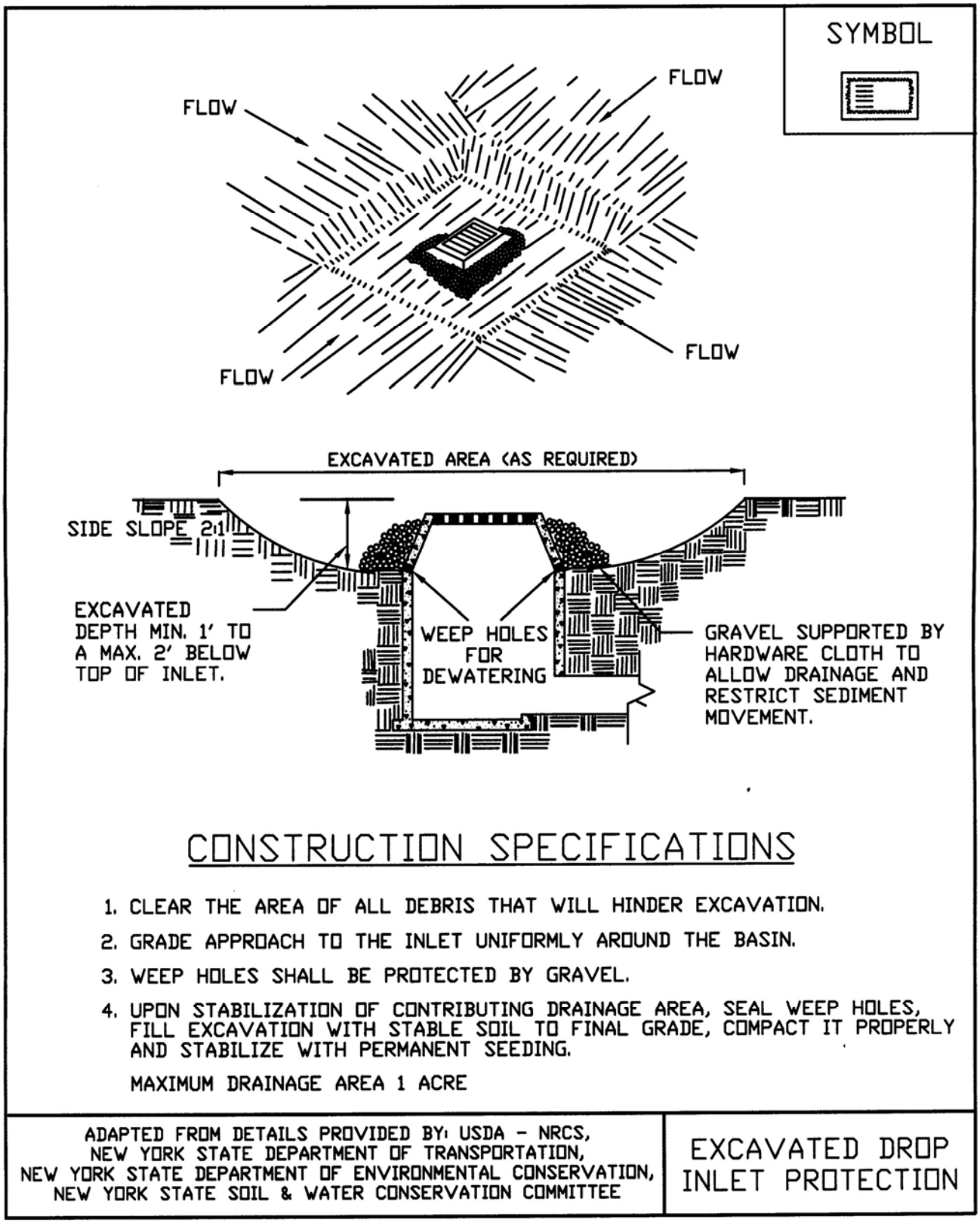
Type V - Manufactured Insert Inlet Protection



The drainage area shall be limited to 1 acre at the drain inlet. All inserts will be installed and anchored in accordance with the manufacturers recommendations and design details. The fabric portion of the structure will equal or exceed the performance standard for the silt fence fabric. The inserts will be installed to preserve a minimum of 50 percent of the open, unobstructed design flow area of the storm drain inlet opening to maintain capacity for storm events.

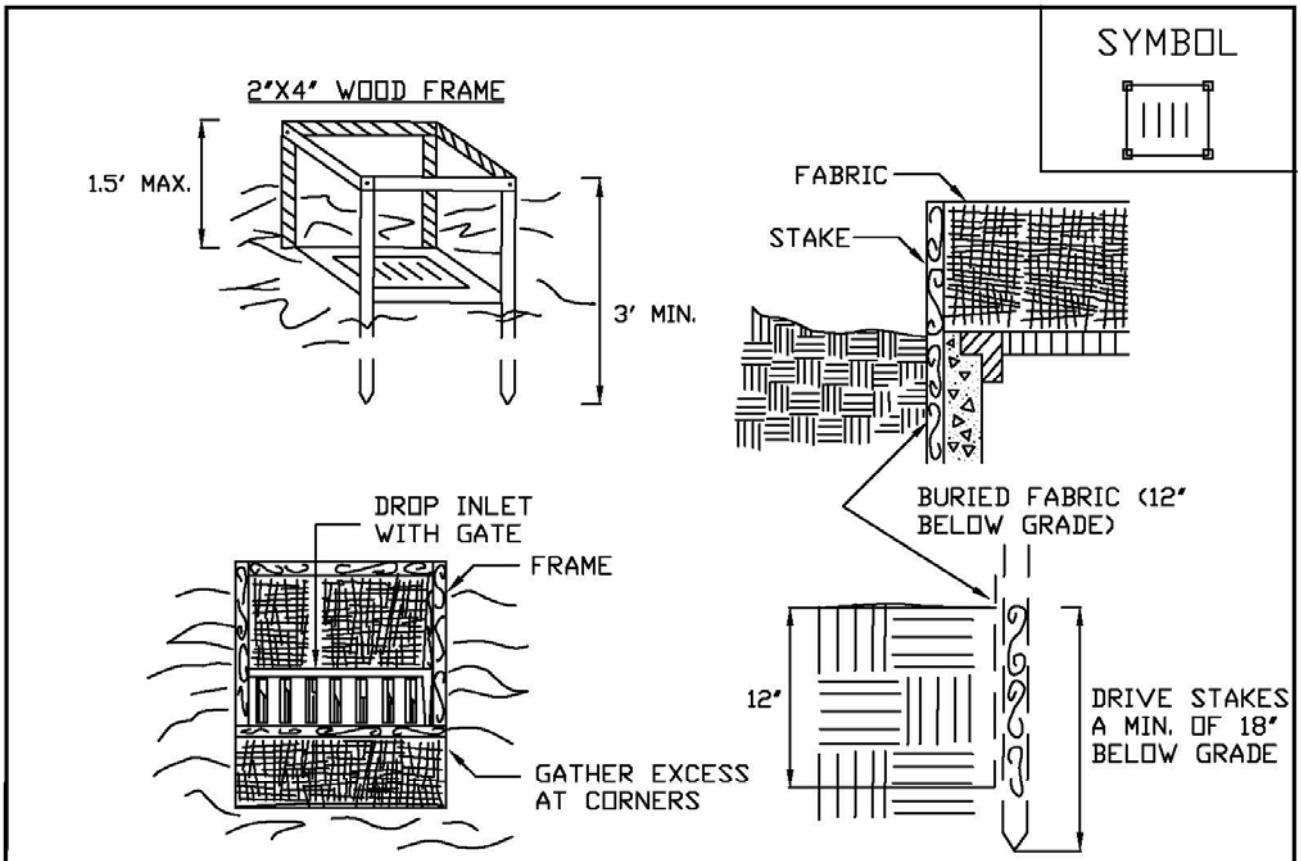
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 5.31
Excavated Drop Inlet Protection



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 5.32
Fabric Drop Inlet Protection



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.

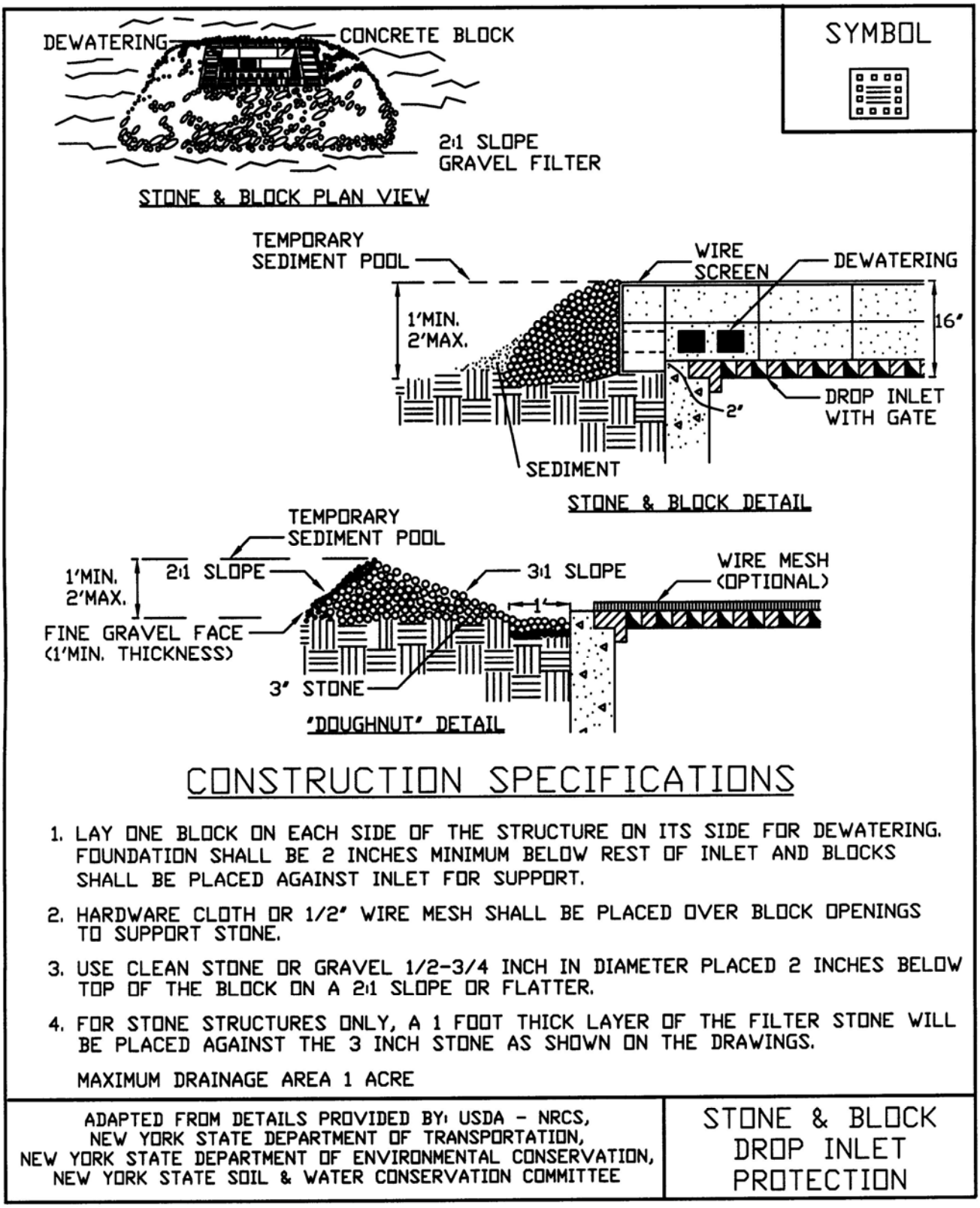
MAXIMUM DRAINAGE AREA 1 ACRE

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

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Figure 5.33
Stone & Block Drop Inlet Protection



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

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

STONE & BLOCK
DROP INLET
PROTECTION

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix D

Notice of Intent (NOI)

Notice of Termination (NOT)

Correspondence

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
TOWN OF AMHERST

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
BURROUGHS

Owner/Operator Contact Person First Name
JEFFREY

Owner/Operator Mailing Address
1100 NORTH FOREST ROAD

City
WILLIAMSVILLE

State: NY
Zip: 14221-____

Phone (Owner/Operator): 716-631-7154
Fax (Owner/Operator): ___-___-____

Email (Owner/Operator)
JBURROUGHS@AMHERST.NY.US

FED TAX ID
__-_____ (not required for individuals)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Site Information

Project/Site Name
TOWN OF AMHERST - LG BASEBALL FIELD

Street Address (NOT P.O. BOX)
50 DANN ROAD

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
AMHERST

State NY

Zip 14051 -

County ERIE

DEC Region

Name of Nearest Cross Street
SMITH ROAD

Distance to Nearest Cross Street (Feet)
200

Project In Relation to Cross Street
● **North** ○ **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel
16.00-4-20

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
-78 1250
Ex. -73.749

Y Coordinates (Northing)
43 0529
Ex. 42.652

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in impervious area**

● **Redevelopment with no increase in impervious area**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use	Post-Development Future Land Use
○ FOREST	○ SINGLE FAMILY HOME
○ PASTURE/OPEN LAND	○ SINGLE FAMILY SUBDIVISION (Number of Lots:)
○ CULTIVATED LAND	○ TOWN HOME RESIDENTIAL
○ SINGLE FAMILY HOME	○ MULTIFAMILY RESIDENTIAL
○ SINGLE FAMILY SUBDIVISION	○ INSTITUTIONAL/SCHOOL
○ TOWN HOME RESIDENTIAL	○ INDUSTRIAL
○ MULTIFAMILY RESIDENTIAL	○ COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
○ INDUSTRIAL	○ ROAD/HIGHWAY
○ COMMERCIAL	● RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	○ BIKE PATH/TRAIL
● RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
○ BIKE PATH/TRAIL	○ PARKING LOT
○ LINEAR UTILITY	○ CLEARING/GRADING ONLY
○ PARKING LOT	○ DEMOLITION, NO REDEVELOPMENT
○ OTHER	○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
	○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
91.0	4.3	3.6	3.6

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ● **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
%	%	%	100 %

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date 6 / 1 / 2025 - **End Date** 12 / 1 / 2025

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Ransom Creek

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ● Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ **Yes** ● **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ● **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ● **Yes** ○ **No**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ◉ Yes ○ No ○ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

Town of Amherst

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ◉ No ○ Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ Yes ◉ No

19. Is this property owned by a state authority, state agency, federal government or local government? ◉ Yes ○ No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ Yes ◉ No

21. 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 ○ No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ◉ Yes ○ No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ◉ Yes ○ No

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
WENDEL COMPANIES

Contact Name (Last, Space, First)
CHAPMAN, CHRISTOPHER

Mailing Address
375 ESSJAY ROAD SUITE 200

City
WILLIAMSVILLE

State Zip
NY 14221-

Phone
716-688-0766

Fax

Email
CCHAPMAN@WENDELCOMPANIES.COM

SWPPP Preparer Certification

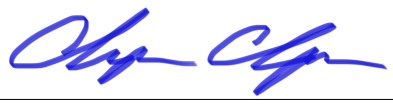
I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name
CHRISTOPHER

MI
M

Last Name
CHAPMAN

Signature



Date
06/27/2024

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ● Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ○ Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ● Mulching
- ● Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ● Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ● **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. 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 (2010 version).

- ● 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).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

[ ][ ][ ].[2][8][ ] **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

7738089822

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	.	and/or	.
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	.	and/or	.
○ Tree Planting/Tree Pit (RR-3)	.	and/or	.
○ Disconnection of Rooftop Runoff (RR-4)	.	and/or	.
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			.
○ Rain Garden (RR-6)			.
○ Stormwater Planter (RR-7)			.
○ Rain Barrel/Cistern (RR-8)			.
○ Porous Pavement (RR-9)			.
○ Green Roof (RR-10)			.
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			.
○ Infiltration Basin (I-2)			.
○ Dry Well (I-3)			.
○ Underground Infiltration System (I-4)			.
○ Bioretention (F-5)			.
○ Dry Swale (O-1)			.
Standard SMPs			
○ Micropool Extended Detention (P-1)			.
○ Wet Pond (P-2)			.
○ Wet Extended Detention (P-3)			.
○ Multiple Pond System (P-4)			.
○ Pocket Pond (P-5)			.
○ Surface Sand Filter (F-1)			.
○ Underground Sand Filter (F-2)			.
○ Perimeter Sand Filter (F-3)			.
○ Organic Filter (F-4)			.
○ Shallow Wetland (W-1)			.
○ Extended Detention Wetland (W-2)			.
○ Pond/Wetland System (W-3)			.
○ Pocket Wetland (W-4)			.
○ Wet Swale (O-2)			.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
● Hydrodynamic	3.7
○ Wet Vault	
○ Media Filter	
○ Other [ ]	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name: First Defense High Capacity

Manufacturer: Hydro International

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

[ ].[ ] **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

[ ].[ ] **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

.395 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

.395

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

.388 **acre-feet**

CPv Provided

.388 **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

16.54 **CFS**

Post-development

13.42 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

30.37 **CFS**

Post-development

30.36 **CFS**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● Yes ○ No

If Yes, Identify the entity responsible for the long term Operation and Maintenance

TOWN OF AMHERST

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ● Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ○ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ● **Yes** ○ **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][1].[1]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● **Yes** ○ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [N][Y][R][ ][ ][ ][ ][ ][ ]

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name

Jessica

MI

Print Last Name

Boudreau

Owner/Operator Signature

Date

/ /

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Town of Amherst - Lou Gehrig Sports Complex Improvements

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Town of Amherst

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First name	MI	Last Name
Christopher	M	Chapman

Signature

8/8/2024

Date

Revised: January 2020

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Town of Amherst - Lou Gehrig Sports Complex Improvements

eNOI Submission Number: _____

eNOI Submitted by: ☑ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Jessica		Boudreau
Owner/Operator First Name	M.I.	Last Name

_____

Signature

_____

Date

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix F

Calculations

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



N

1 EXISTING DRAIANGE AREA EXHIBIT
SCALE: 1" = 50'

LEGEND:

- 493 — EXISTING CONTOUR ELEVATION
- EXISTING DRAINAGE AREA
- TIME OF CONCENTRATION PATH

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

wendel
Centerpointe Corporate Park
375 Essjay Road, Suite 200
Williamsville, NY 14221
www.wendelcompanies.com
p:716.688.0766 f:716.625.6825

Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
06/28/2024
NOT FOR CONSTRUCTION

NOTE:
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NO.	REVISIONS	DATE
A	MAJOR SITE PLAN SUBMISSION	06/28/24

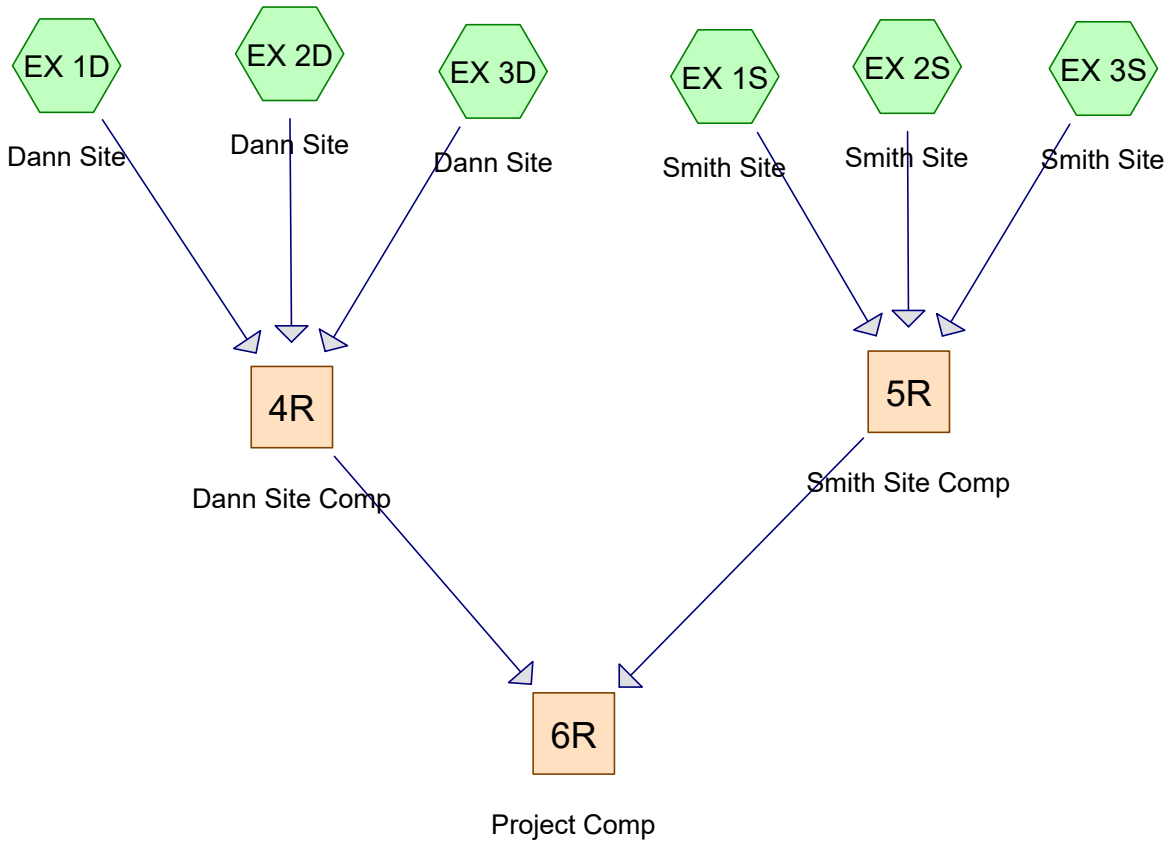
DWG. TITLE

EXISTING DRAIANGE AREA EXHIBIT

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	JUNE, 2024
SCALE	AS NOTED
DWN.	DGR CHK. CC1
PROJ. No.	261353
DWG. No.	EX-DA

Attachment: SP-1990-083_application_091924 (29174 : SP-1990-083, 50 Dann Rd)



Subcat Reach Pond Link

Routing Diagram for 240516 Existing Conditions
Prepared by WD Mgmt, LLC, Printed 6/25/2024
HydroCAD® 10.20-5a s/n 00557 © 2023 HydroCAD Software Solutions LLC

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1yr	Type II 24-hr		Default	24.00	1	1.82	2
2	10yr	Type II 24-hr		Default	24.00	1	3.12	2
3	25yr	Type II 24-hr		Default	24.00	1	3.81	2
4	100yr	Type II 24-hr		Default	24.00	1	5.17	2

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.851	80	>75% Grass cover, Good, HSG D (EX 1D, EX 1S, EX 2D, EX 2S, EX 3D, EX 3S)
3.294	96	Gravel surface, HSG D (EX 1D, EX 1S, EX 2D, EX 2S, EX 3D, EX 3S)
0.280	98	Paved parking, HSG D (EX 1D, EX 2D, EX 3D)
5.425	**91**	**TOTAL AREA**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.425	HSG D	EX 1D, EX 1S, EX 2D, EX 2S, EX 3D, EX 3S
0.000	Other	
5.425		**TOTAL AREA**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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	1.851	0.000	1.851	>75% Grass cover, Good	EX 1D, EX 1S, EX 2D, EX 2S, EX 3D, EX 3S
0.000	0.000	0.000	3.294	0.000	3.294	Gravel surface	EX 1D, EX 1S, EX 2D, EX 2S, EX 3D, EX 3S
0.000	0.000	0.000	0.280	0.000	0.280	Paved parking	EX 1D, EX 2D, EX 3D
0.000	**0.000**	**0.000**	**5.425**	**0.000**	**5.425**	**TOTAL AREA**	

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX 1D: Dann Site Runoff Area=0.535 ac 16.82% Impervious Runoff Depth>1.23"
Tc=6.0 min CN=95 Runoff=1.16 cfs 0.055 af

SubcatchmentEX 1S: Smith Site Runoff Area=1.877 ac 0.00% Impervious Runoff Depth>0.81"
Flow Length=721' Tc=15.1 min CN=89 Runoff=2.11 cfs 0.126 af

SubcatchmentEX 2D: Dann Site Runoff Area=1.026 ac 7.80% Impervious Runoff Depth>1.23"
Tc=6.0 min CN=95 Runoff=2.22 cfs 0.105 af

SubcatchmentEX 2S: Smith Site Runoff Area=0.755 ac 0.00% Impervious Runoff Depth>0.70"
Flow Length=157' Tc=3.4 min CN=87 Runoff=1.12 cfs 0.044 af

SubcatchmentEX 3D: Dann Site Runoff Area=0.334 ac 32.93% Impervious Runoff Depth>1.15"
Tc=6.0 min CN=94 Runoff=0.69 cfs 0.032 af

SubcatchmentEX 3S: Smith Site Runoff Area=0.898 ac 0.00% Impervious Runoff Depth>0.81"
Tc=6.0 min CN=89 Runoff=1.36 cfs 0.061 af

Reach 4R: Dann Site Comp Inflow=4.06 cfs 0.192 af
Outflow=4.06 cfs 0.192 af

Reach 5R: Smith Site Comp Inflow=3.86 cfs 0.231 af
Outflow=3.86 cfs 0.231 af

Reach 6R: Project Comp Inflow=7.91 cfs 0.423 af
Outflow=7.91 cfs 0.423 af

Total Runoff Area = 5.425 ac Runoff Volume = 0.423 af Average Runoff Depth = 0.93"
94.84% Pervious = 5.145 ac 5.16% Impervious = 0.280 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1D: Dann Site

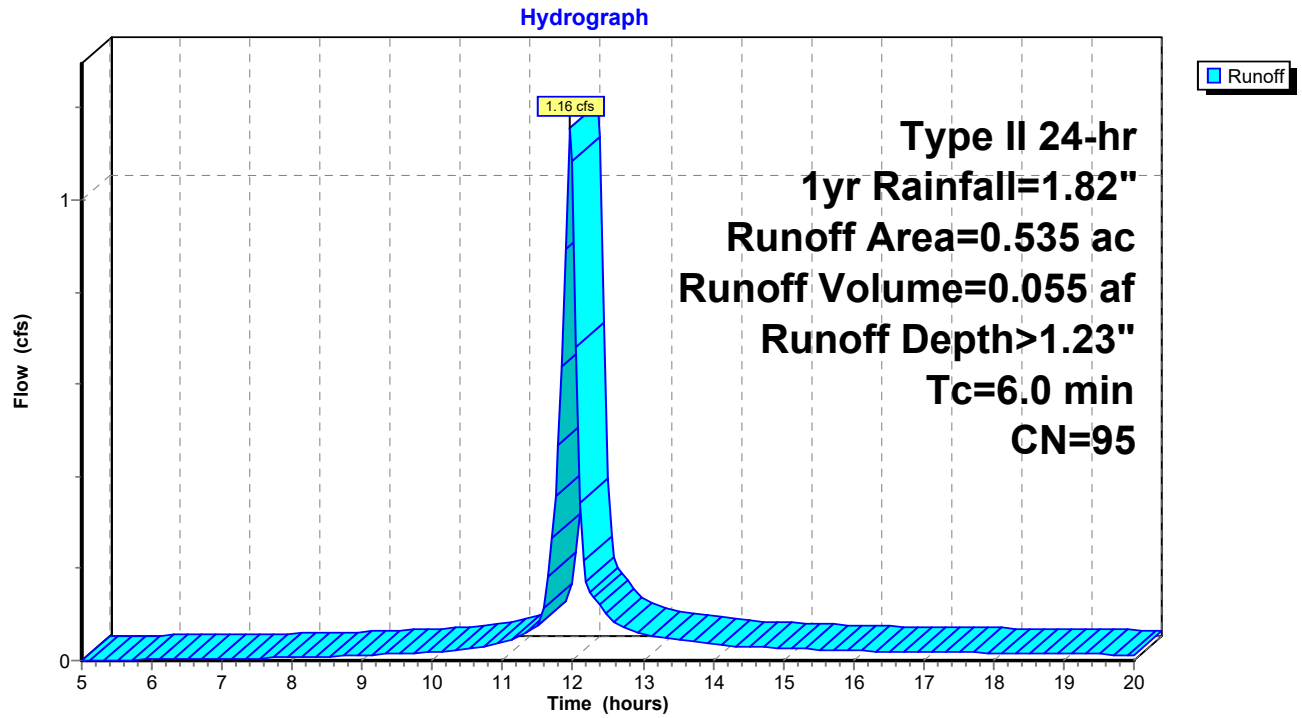
Runoff = 1.16 cfs @ 11.97 hrs, Volume= 0.055 af, Depth> 1.23"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.385	96	Gravel surface, HSG D
0.060	80	>75% Grass cover, Good, HSG D
0.090	98	Paved parking, HSG D
0.535	95	Weighted Average
0.445		83.18% Pervious Area
0.090		16.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1S: Smith Site

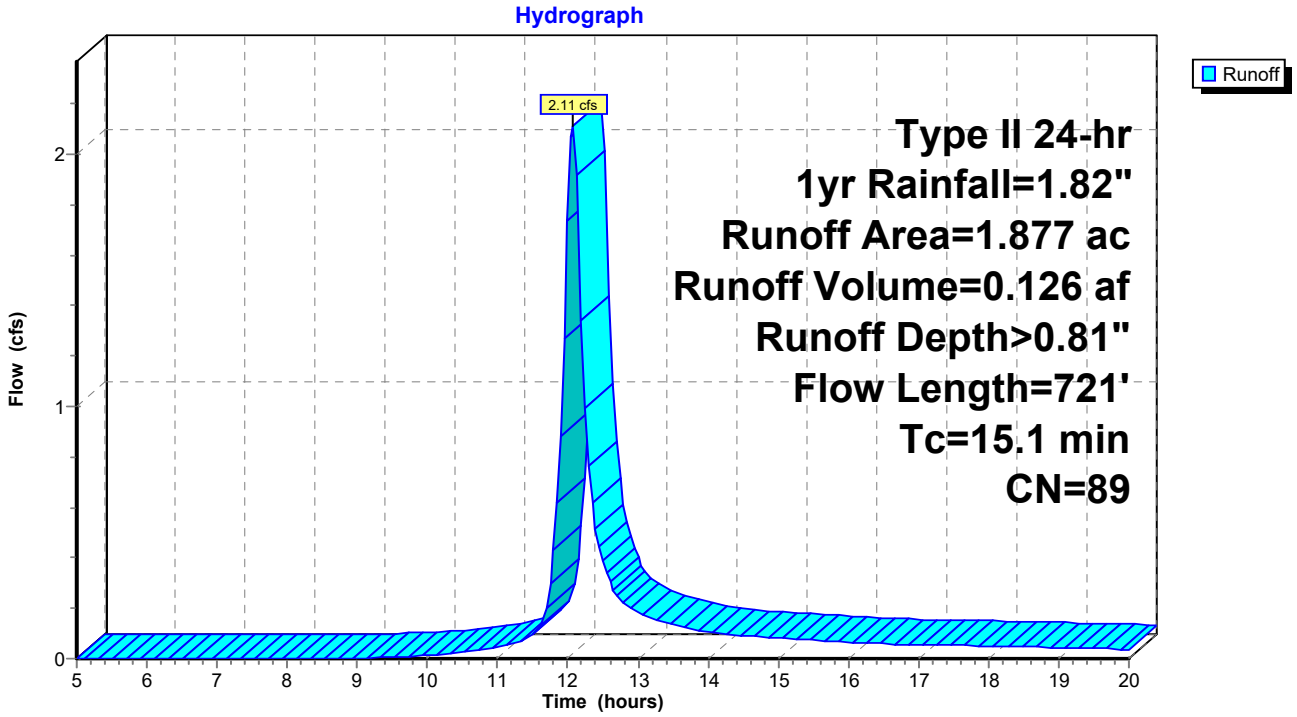
Runoff = 2.11 cfs @ 12.07 hrs, Volume= 0.126 af, Depth> 0.81"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
1.000	96	Gravel surface, HSG D
0.877	80	>75% Grass cover, Good, HSG D
1.877	89	Weighted Average
1.877		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0271	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
13.8	621	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.1	721	Total			

Subcatchment EX 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2D: Dann Site

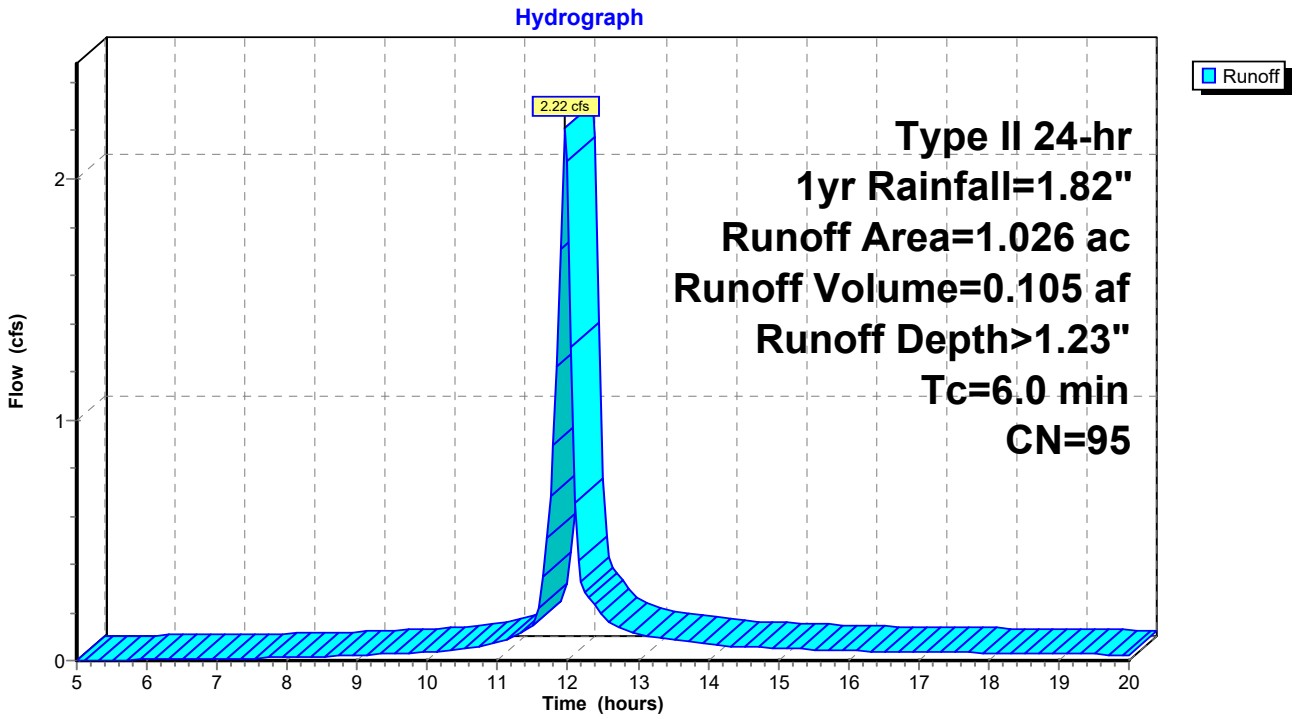
Runoff = 2.22 cfs @ 11.97 hrs, Volume= 0.105 af, Depth> 1.23"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.887	96	Gravel surface, HSG D
0.059	80	>75% Grass cover, Good, HSG D
0.080	98	Paved parking, HSG D
1.026	95	Weighted Average
0.946		92.20% Pervious Area
0.080		7.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

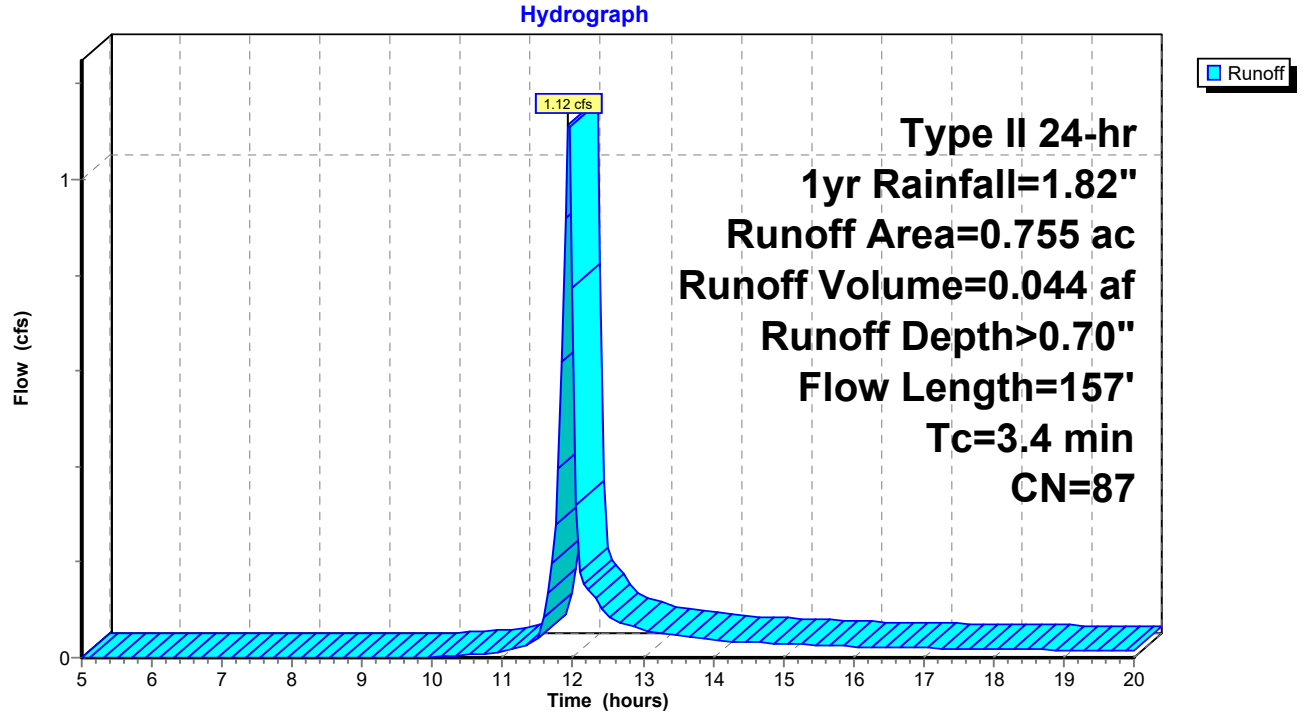
Runoff = 1.12 cfs @ 11.94 hrs, Volume= 0.044 af, Depth> 0.70"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.335	96	Gravel surface, HSG D
0.420	80	>75% Grass cover, Good, HSG D
0.755	87	Weighted Average
0.755		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	56	0.0048	0.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
1.8	101	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.4	157	Total			

Subcatchment EX 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3D: Dann Site

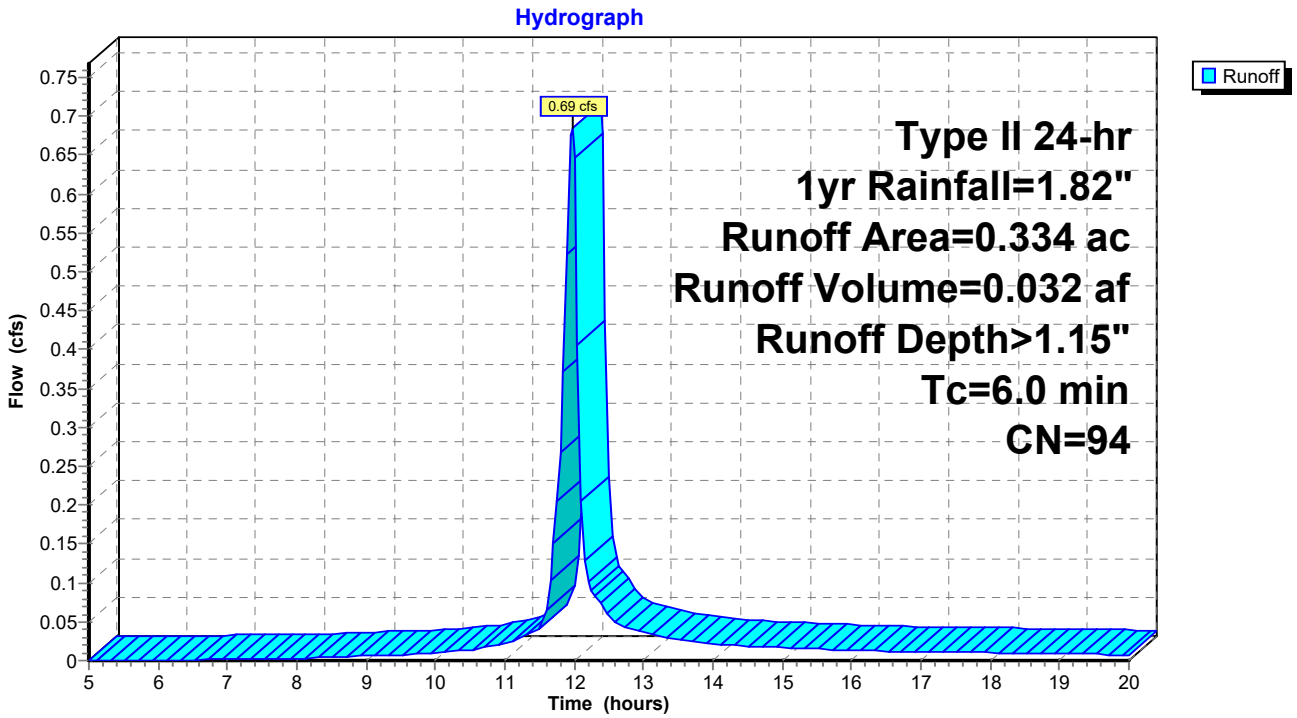
Runoff = 0.69 cfs @ 11.97 hrs, Volume= 0.032 af, Depth> 1.15"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.169	96	Gravel surface, HSG D
0.055	80	>75% Grass cover, Good, HSG D
0.110	98	Paved parking, HSG D
0.334	94	Weighted Average
0.224		67.07% Pervious Area
0.110		32.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3S: Smith Site

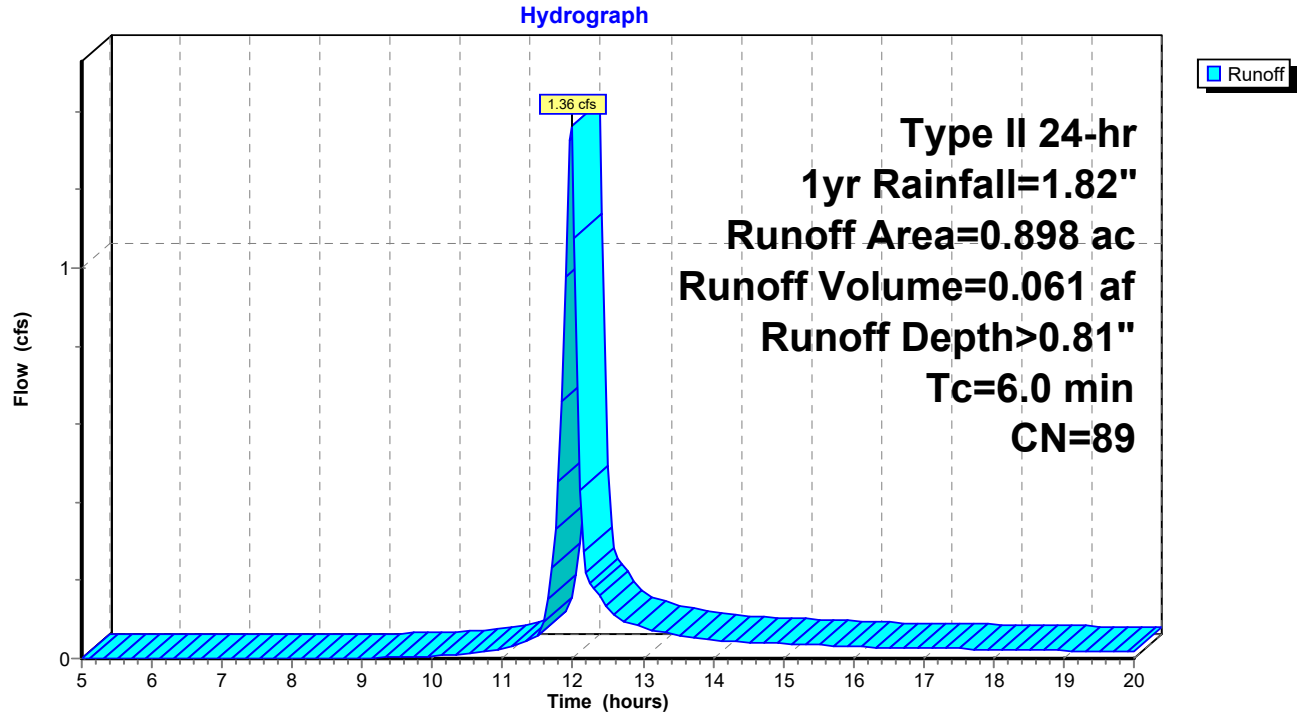
Runoff = 1.36 cfs @ 11.97 hrs, Volume= 0.061 af, Depth> 0.81"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.518	96	Gravel surface, HSG D
0.380	80	>75% Grass cover, Good, HSG D
0.898	89	Weighted Average
0.898		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

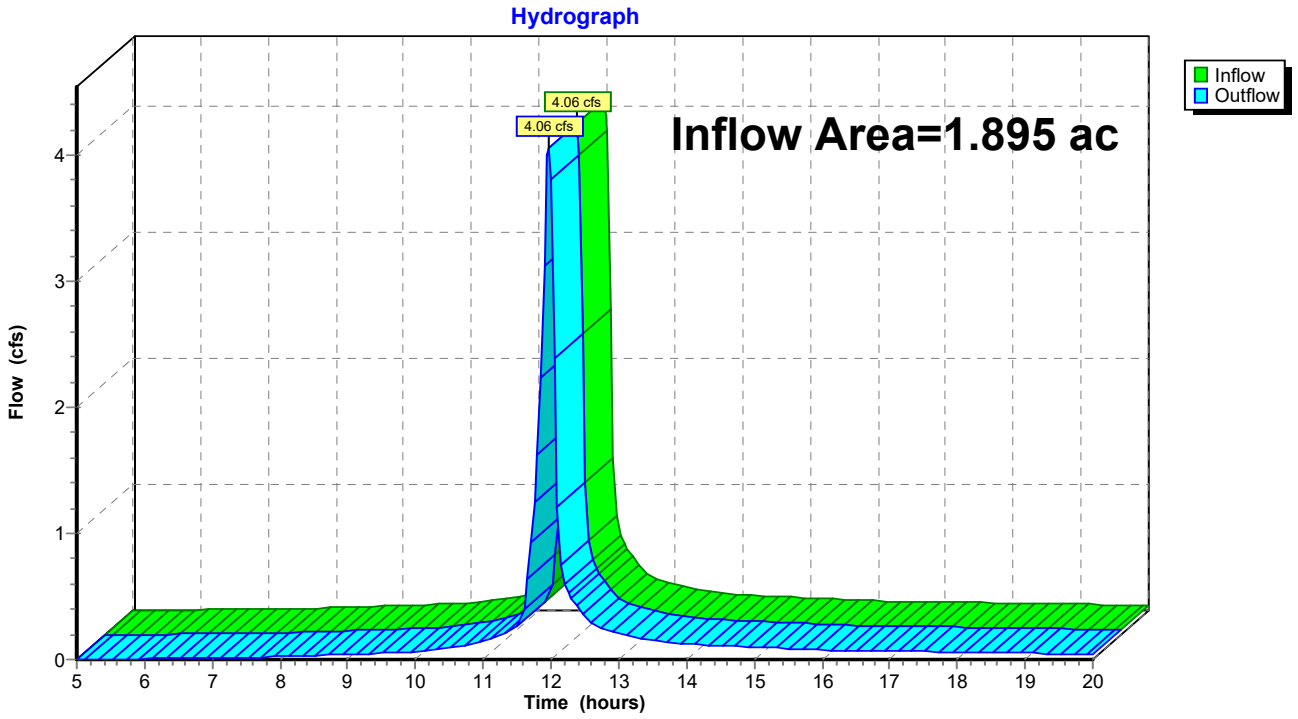
Summary for Reach 4R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 14.78% Impervious, Inflow Depth > 1.21" for 1yr event
Inflow = 4.06 cfs @ 11.97 hrs, Volume= 0.192 af
Outflow = 4.06 cfs @ 11.97 hrs, Volume= 0.192 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 4R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

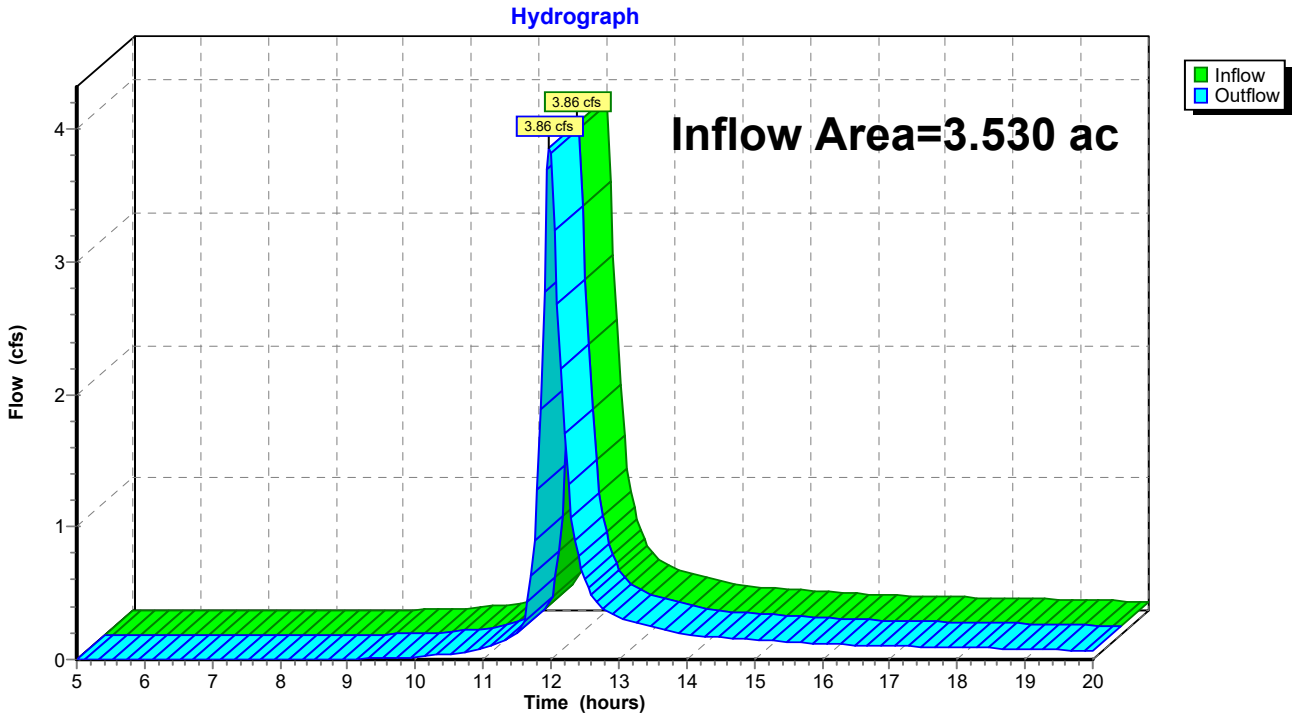
Summary for Reach 5R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 0.00% Impervious, Inflow Depth > 0.78" for 1yr event
Inflow = 3.86 cfs @ 11.98 hrs, Volume= 0.231 af
Outflow = 3.86 cfs @ 11.98 hrs, Volume= 0.231 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

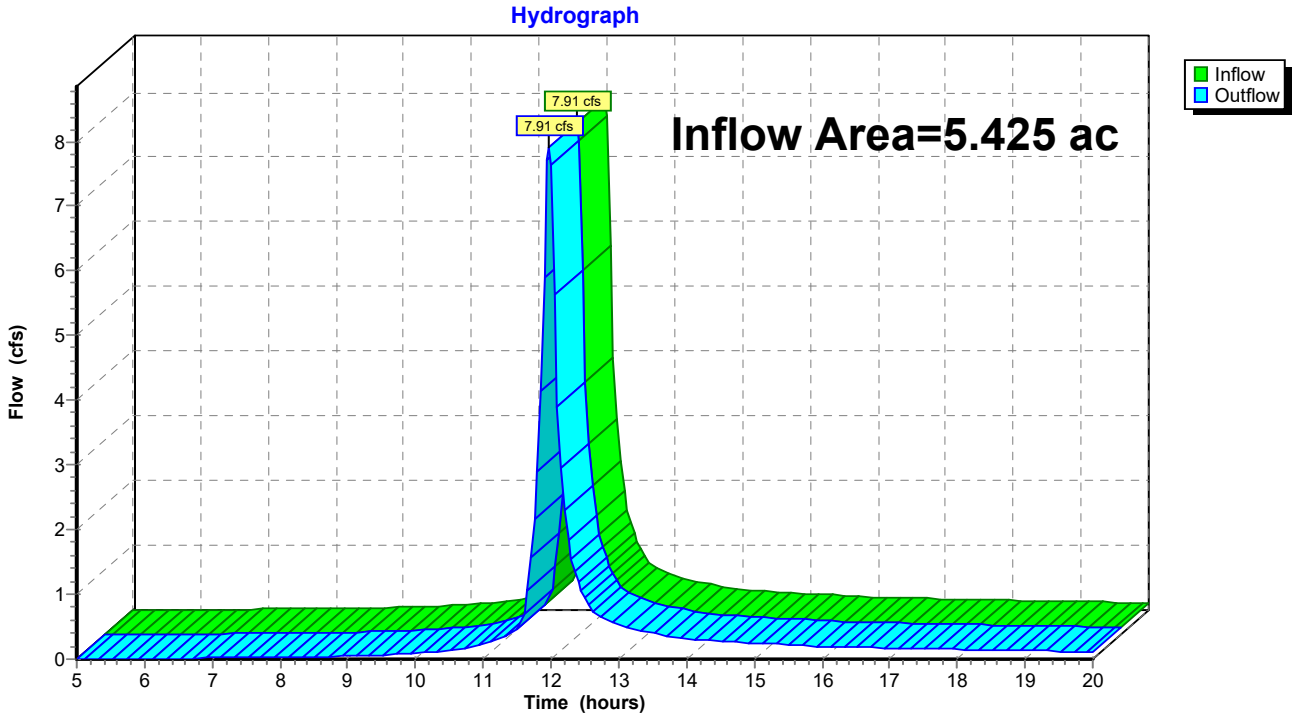
Summary for Reach 6R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 5.16% Impervious, Inflow Depth > 0.93" for 1yr event
Inflow = 7.91 cfs @ 11.97 hrs, Volume= 0.423 af
Outflow = 7.91 cfs @ 11.97 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 6R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX 1D: Dann Site Runoff Area=0.535 ac 16.82% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=95 Runoff=2.17 cfs 0.107 af

SubcatchmentEX 1S: Smith Site Runoff Area=1.877 ac 0.00% Impervious Runoff Depth>1.87"
Flow Length=721' Tc=15.1 min CN=89 Runoff=4.79 cfs 0.292 af

SubcatchmentEX 2D: Dann Site Runoff Area=1.026 ac 7.80% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=95 Runoff=4.16 cfs 0.206 af

SubcatchmentEX 2S: Smith Site Runoff Area=0.755 ac 0.00% Impervious Runoff Depth>1.71"
Flow Length=157' Tc=3.4 min CN=87 Runoff=2.62 cfs 0.108 af

SubcatchmentEX 3D: Dann Site Runoff Area=0.334 ac 32.93% Impervious Runoff Depth>2.31"
Tc=6.0 min CN=94 Runoff=1.32 cfs 0.064 af

SubcatchmentEX 3S: Smith Site Runoff Area=0.898 ac 0.00% Impervious Runoff Depth>1.87"
Tc=6.0 min CN=89 Runoff=3.04 cfs 0.140 af

Reach 4R: Dann Site Comp Inflow=7.65 cfs 0.377 af
Outflow=7.65 cfs 0.377 af

Reach 5R: Smith Site Comp Inflow=8.87 cfs 0.539 af
Outflow=8.87 cfs 0.539 af

Reach 6R: Project Comp Inflow=16.54 cfs 0.917 af
Outflow=16.54 cfs 0.917 af

Total Runoff Area = 5.425 ac Runoff Volume = 0.917 af Average Runoff Depth = 2.03"
94.84% Pervious = 5.145 ac 5.16% Impervious = 0.280 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1D: Dann Site

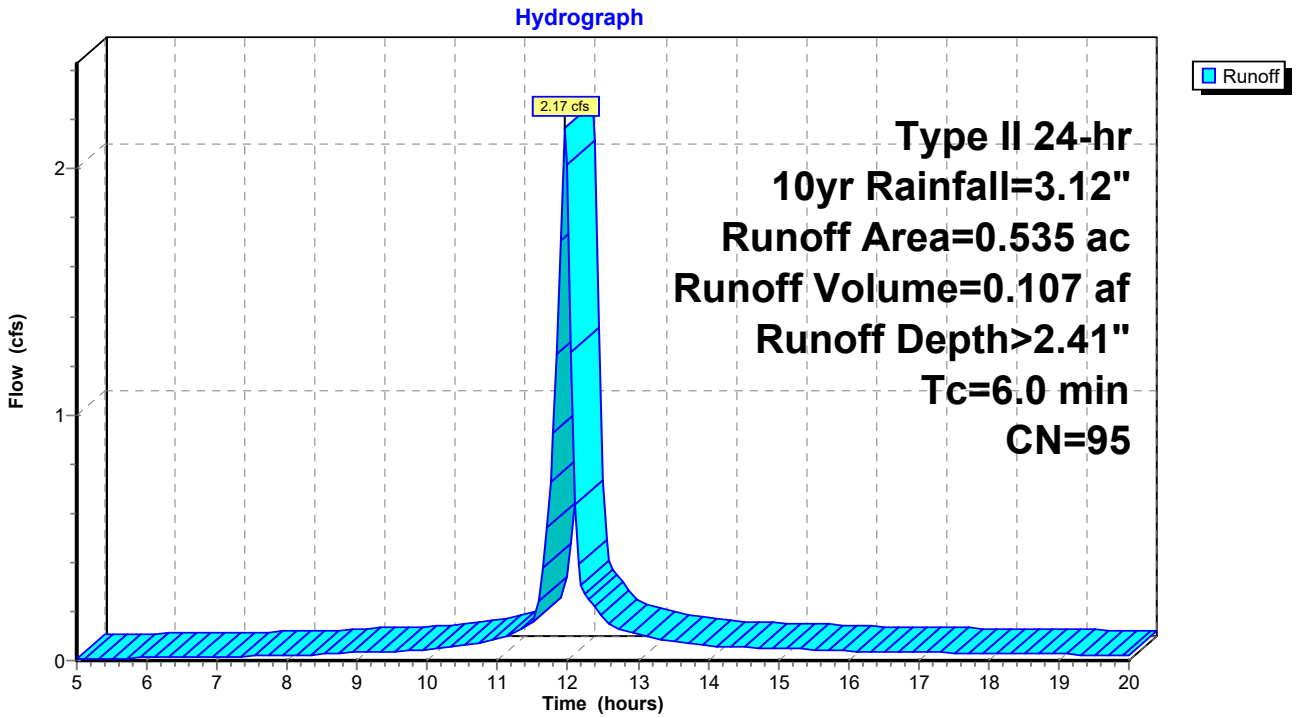
Runoff = 2.17 cfs @ 11.96 hrs, Volume= 0.107 af, Depth> 2.41"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.385	96	Gravel surface, HSG D
0.060	80	>75% Grass cover, Good, HSG D
0.090	98	Paved parking, HSG D
0.535	95	Weighted Average
0.445		83.18% Pervious Area
0.090		16.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1S: Smith Site

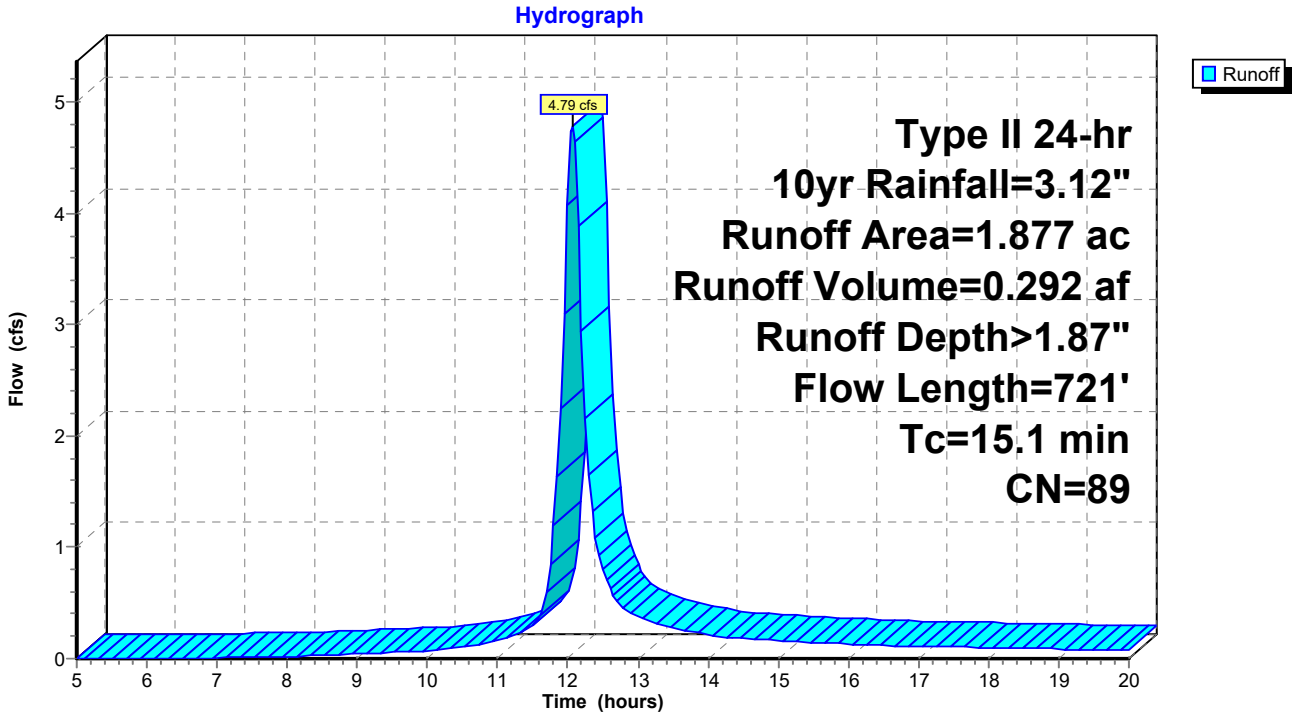
Runoff = 4.79 cfs @ 12.07 hrs, Volume= 0.292 af, Depth> 1.87"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
1.000	96	Gravel surface, HSG D
0.877	80	>75% Grass cover, Good, HSG D
1.877	89	Weighted Average
1.877		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0271	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
13.8	621	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.1	721	Total			

Subcatchment EX 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2D: Dann Site

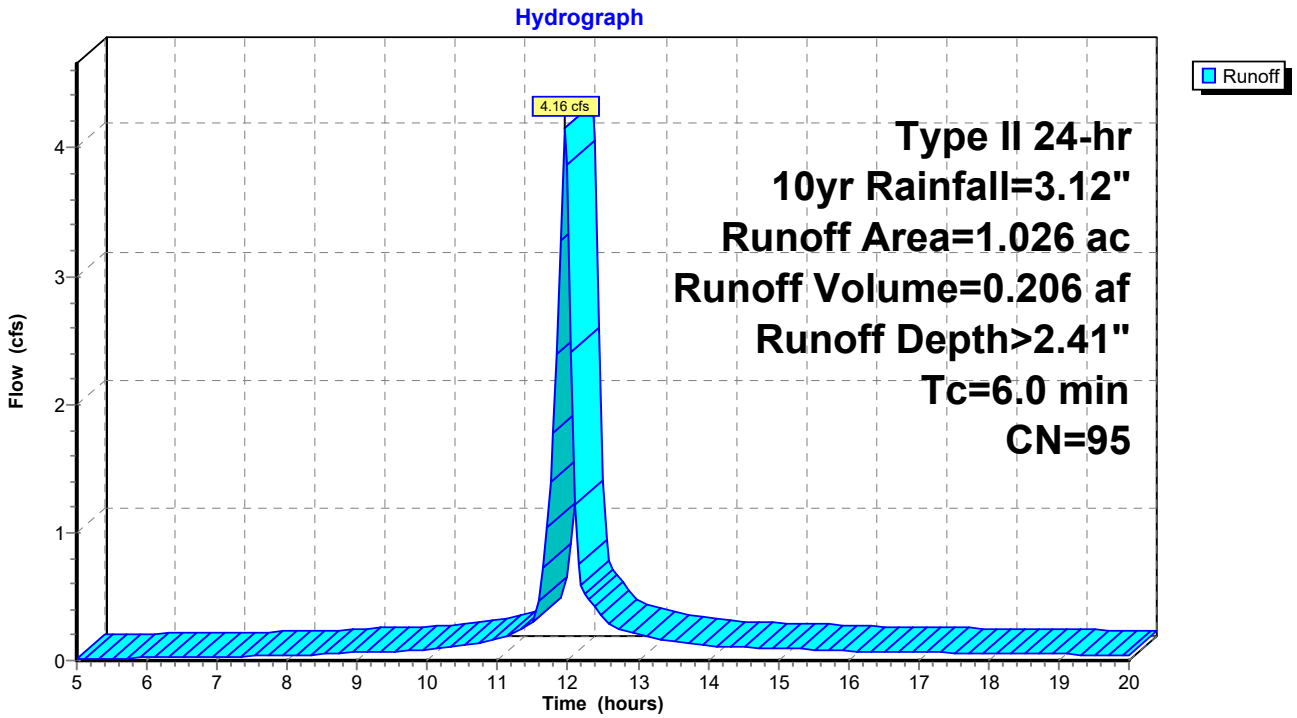
Runoff = 4.16 cfs @ 11.96 hrs, Volume= 0.206 af, Depth> 2.41"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.887	96	Gravel surface, HSG D
0.059	80	>75% Grass cover, Good, HSG D
0.080	98	Paved parking, HSG D
1.026	95	Weighted Average
0.946		92.20% Pervious Area
0.080		7.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

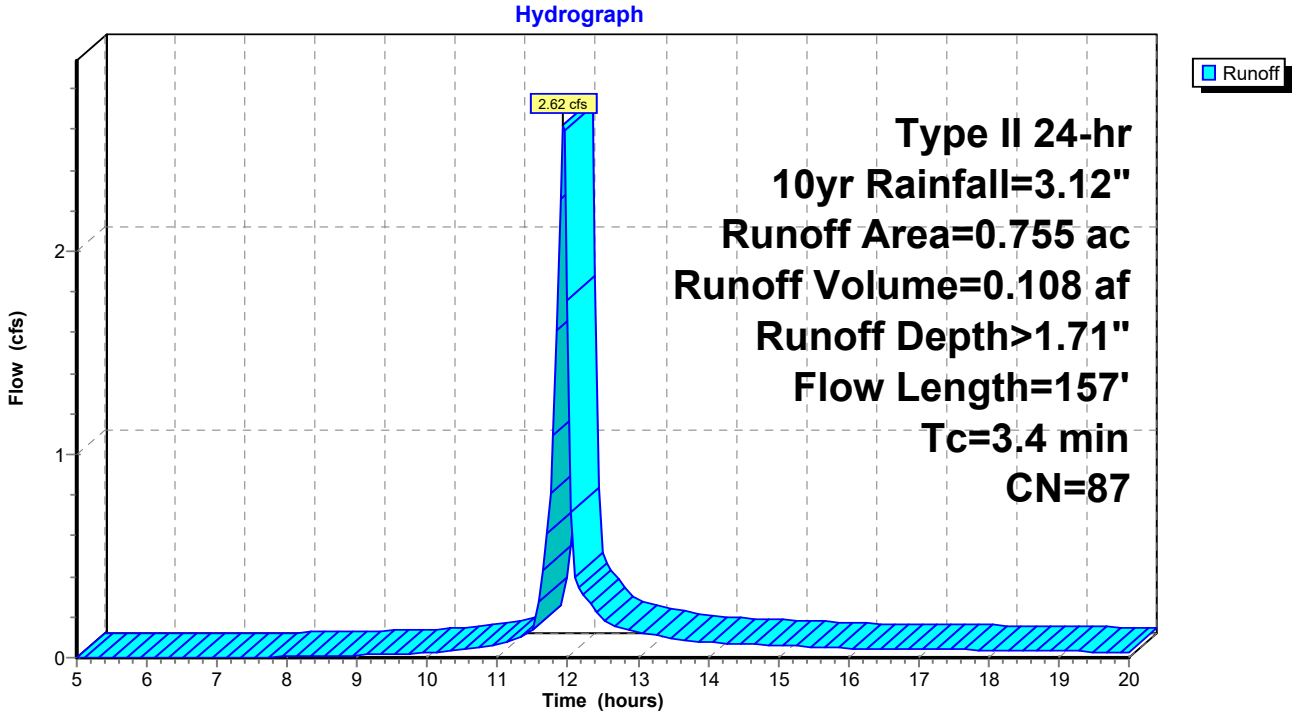
Runoff = 2.62 cfs @ 11.94 hrs, Volume= 0.108 af, Depth> 1.71"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.335	96	Gravel surface, HSG D
0.420	80	>75% Grass cover, Good, HSG D
0.755	87	Weighted Average
0.755		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	56	0.0048	0.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
1.8	101	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.4	157	Total			

Subcatchment EX 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3D: Dann Site

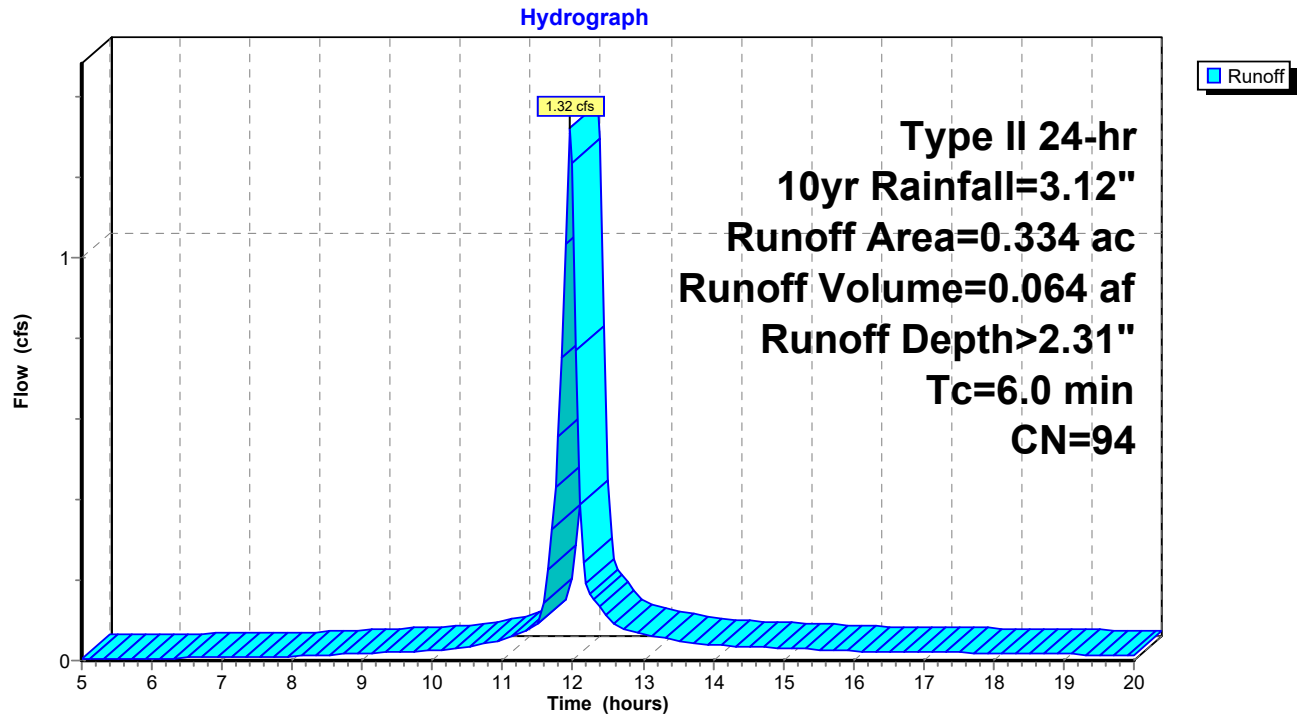
Runoff = 1.32 cfs @ 11.96 hrs, Volume= 0.064 af, Depth> 2.31"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.169	96	Gravel surface, HSG D
0.055	80	>75% Grass cover, Good, HSG D
0.110	98	Paved parking, HSG D
0.334	94	Weighted Average
0.224		67.07% Pervious Area
0.110		32.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3S: Smith Site

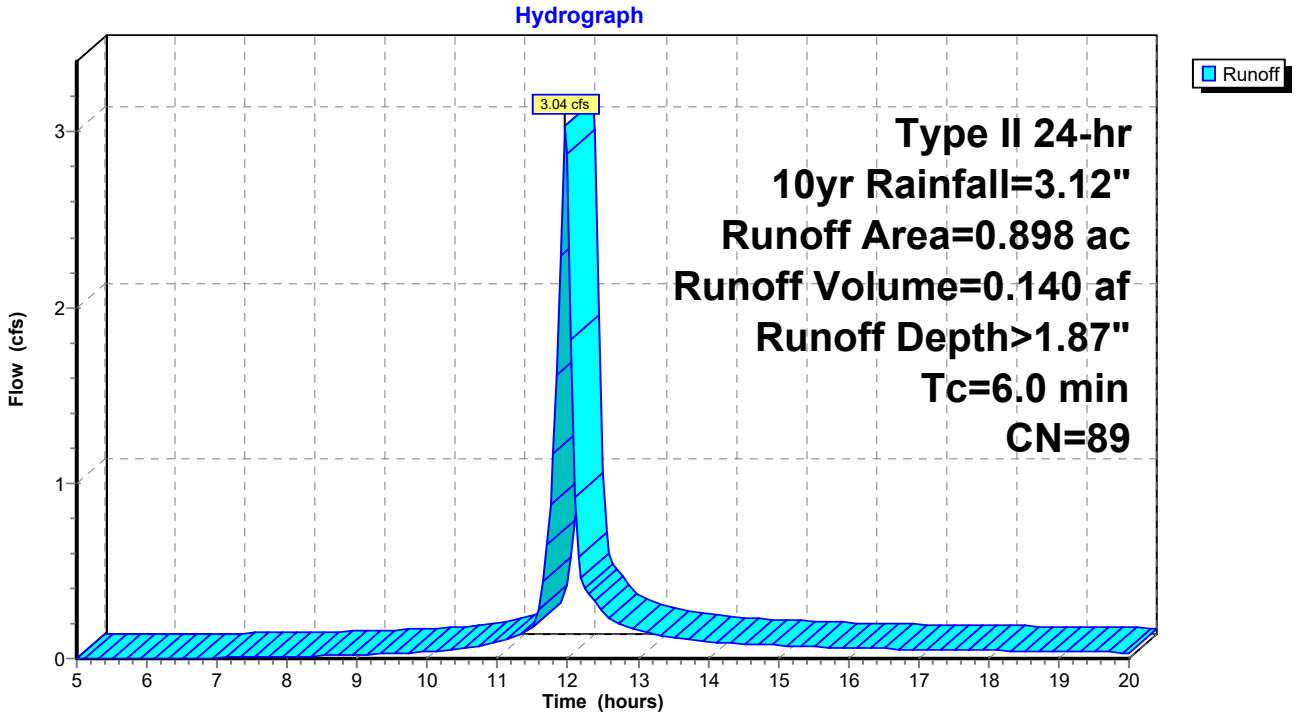
Runoff = 3.04 cfs @ 11.97 hrs, Volume= 0.140 af, Depth> 1.87"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.518	96	Gravel surface, HSG D
0.380	80	>75% Grass cover, Good, HSG D
0.898	89	Weighted Average
0.898		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

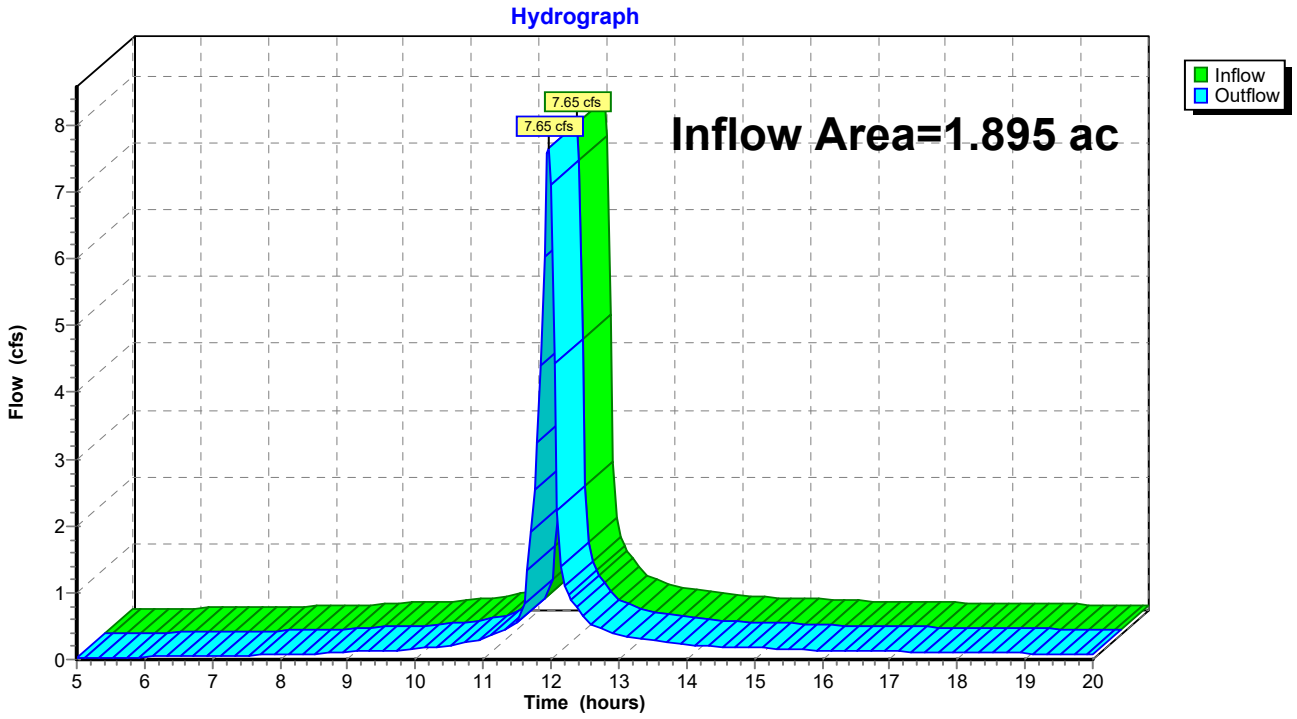
Summary for Reach 4R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 14.78% Impervious, Inflow Depth > 2.39" for 10yr event
Inflow = 7.65 cfs @ 11.96 hrs, Volume= 0.377 af
Outflow = 7.65 cfs @ 11.96 hrs, Volume= 0.377 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 4R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

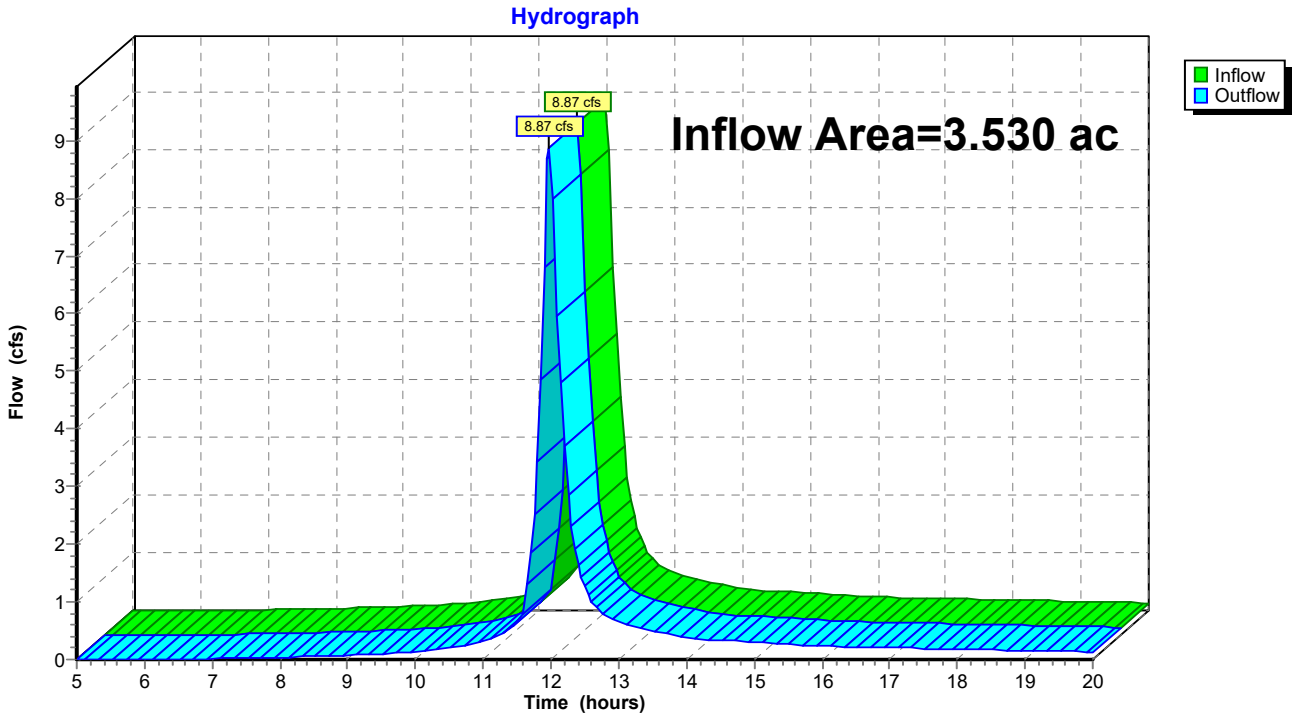
Summary for Reach 5R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 0.00% Impervious, Inflow Depth > 1.83" for 10yr event
Inflow = 8.87 cfs @ 11.98 hrs, Volume= 0.539 af
Outflow = 8.87 cfs @ 11.98 hrs, Volume= 0.539 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

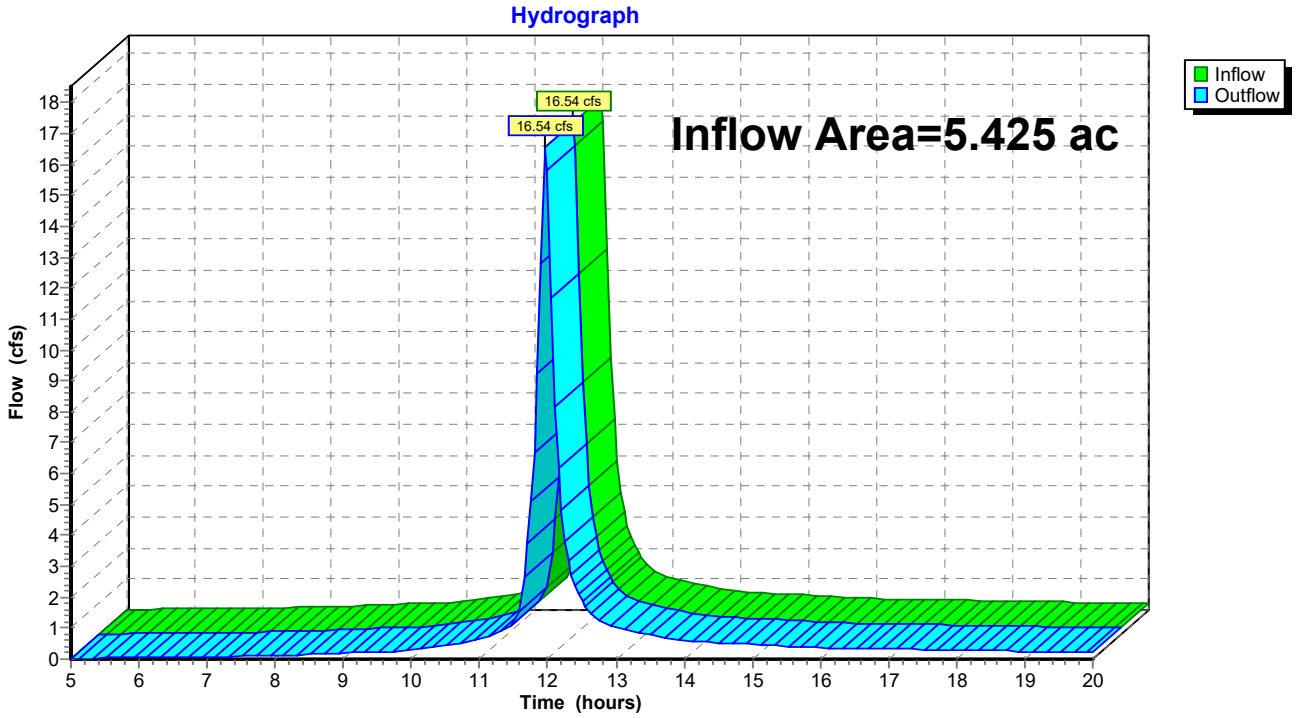
Summary for Reach 6R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 5.16% Impervious, Inflow Depth > 2.03" for 10yr event
Inflow = 16.54 cfs @ 11.97 hrs, Volume= 0.917 af
Outflow = 16.54 cfs @ 11.97 hrs, Volume= 0.917 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 6R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX 1D: Dann Site Runoff Area=0.535 ac 16.82% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=95 Runoff=2.70 cfs 0.135 af

SubcatchmentEX 1S: Smith Site Runoff Area=1.877 ac 0.00% Impervious Runoff Depth>2.47"
Flow Length=721' Tc=15.1 min CN=89 Runoff=6.25 cfs 0.386 af

SubcatchmentEX 2D: Dann Site Runoff Area=1.026 ac 7.80% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=95 Runoff=5.18 cfs 0.260 af

SubcatchmentEX 2S: Smith Site Runoff Area=0.755 ac 0.00% Impervious Runoff Depth>2.30"
Flow Length=157' Tc=3.4 min CN=87 Runoff=3.45 cfs 0.144 af

SubcatchmentEX 3D: Dann Site Runoff Area=0.334 ac 32.93% Impervious Runoff Depth>2.94"
Tc=6.0 min CN=94 Runoff=1.66 cfs 0.082 af

SubcatchmentEX 3S: Smith Site Runoff Area=0.898 ac 0.00% Impervious Runoff Depth>2.47"
Tc=6.0 min CN=89 Runoff=3.95 cfs 0.185 af

Reach 4R: Dann Site Comp Inflow=9.54 cfs 0.477 af
Outflow=9.54 cfs 0.477 af

Reach 5R: Smith Site Comp Inflow=11.69 cfs 0.715 af
Outflow=11.69 cfs 0.715 af

Reach 6R: Project Comp Inflow=21.20 cfs 1.192 af
Outflow=21.20 cfs 1.192 af

Total Runoff Area = 5.425 ac Runoff Volume = 1.192 af Average Runoff Depth = 2.64"
94.84% Pervious = 5.145 ac 5.16% Impervious = 0.280 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1D: Dann Site

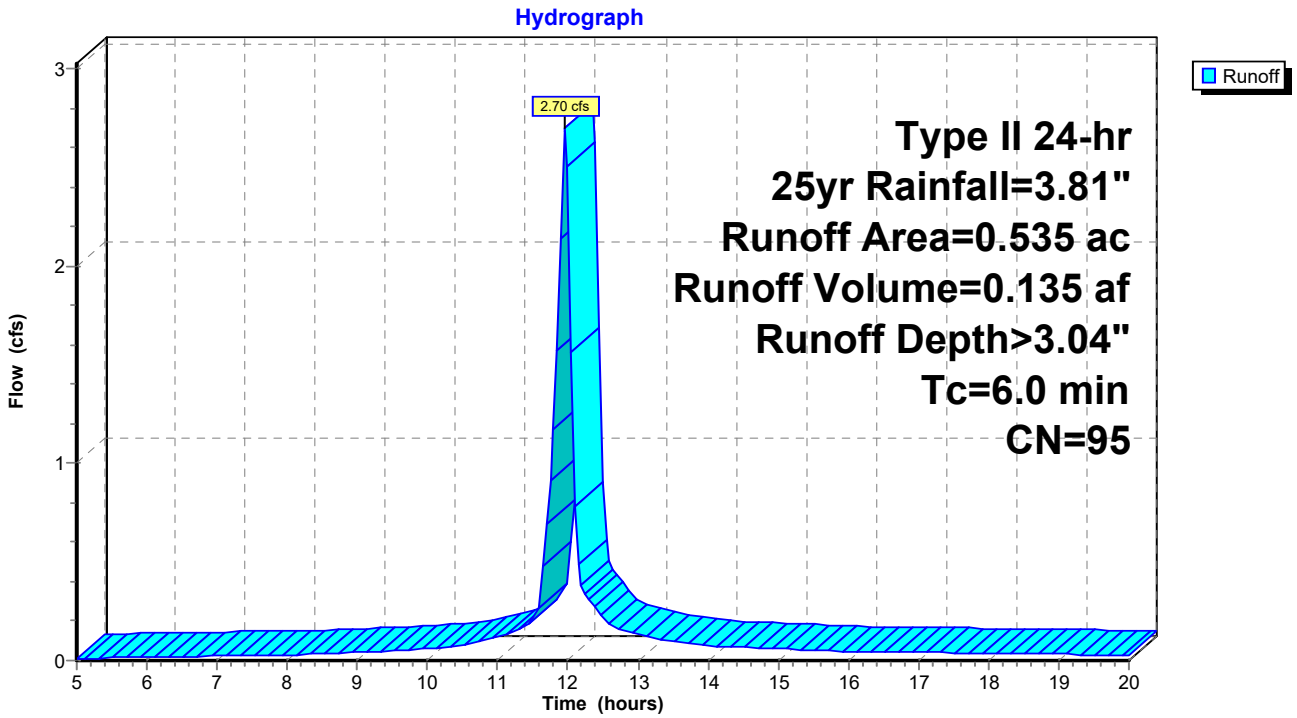
Runoff = 2.70 cfs @ 11.96 hrs, Volume= 0.135 af, Depth> 3.04"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.385	96	Gravel surface, HSG D
0.060	80	>75% Grass cover, Good, HSG D
0.090	98	Paved parking, HSG D
0.535	95	Weighted Average
0.445		83.18% Pervious Area
0.090		16.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1S: Smith Site

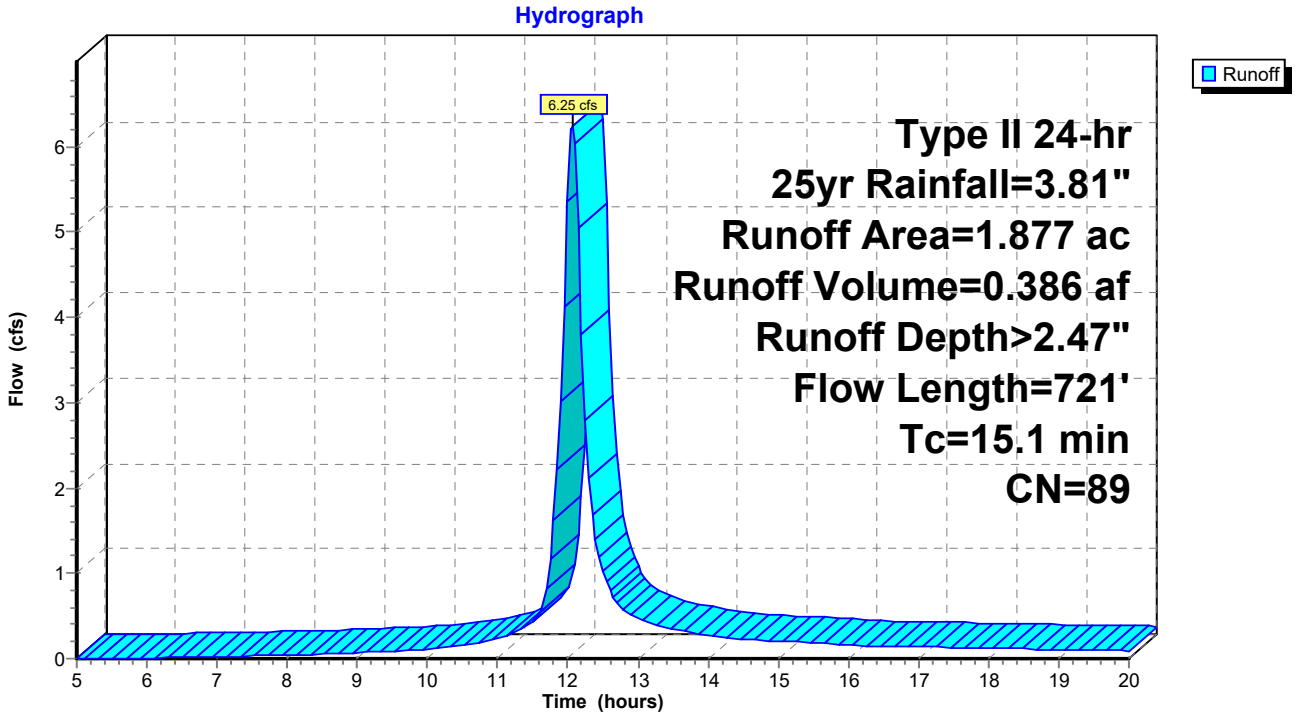
Runoff = 6.25 cfs @ 12.07 hrs, Volume= 0.386 af, Depth> 2.47"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
1.000	96	Gravel surface, HSG D
0.877	80	>75% Grass cover, Good, HSG D
1.877	89	Weighted Average
1.877		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0271	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
13.8	621	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.1	721	Total			

Subcatchment EX 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2D: Dann Site

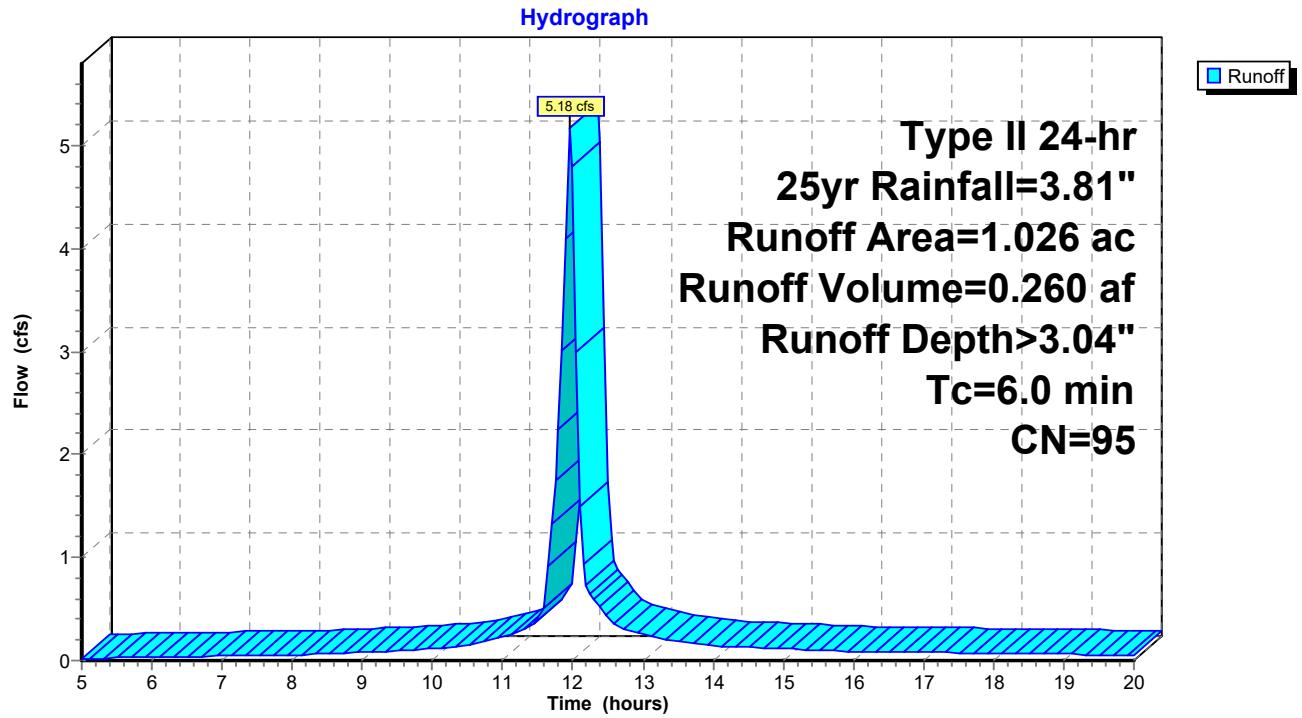
Runoff = 5.18 cfs @ 11.96 hrs, Volume= 0.260 af, Depth> 3.04"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.887	96	Gravel surface, HSG D
0.059	80	>75% Grass cover, Good, HSG D
0.080	98	Paved parking, HSG D
1.026	95	Weighted Average
0.946		92.20% Pervious Area
0.080		7.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

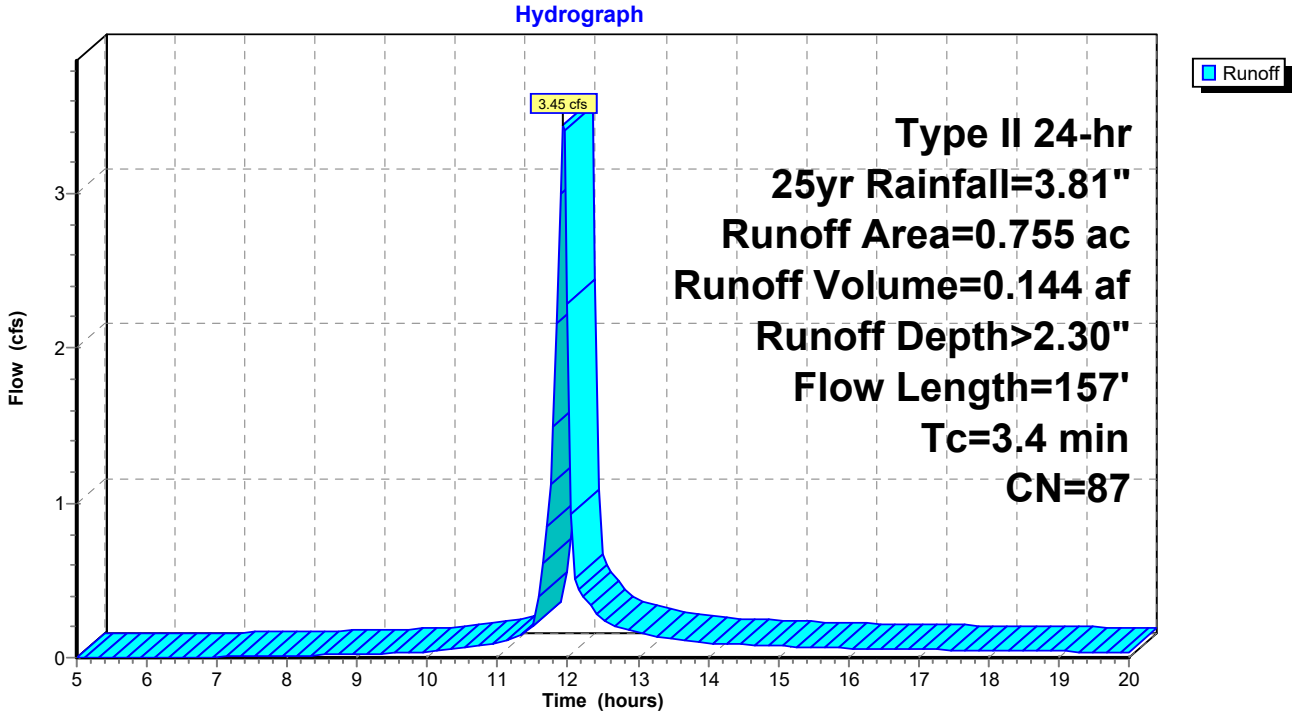
Runoff = 3.45 cfs @ 11.94 hrs, Volume= 0.144 af, Depth> 2.30"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.335	96	Gravel surface, HSG D
0.420	80	>75% Grass cover, Good, HSG D
0.755	87	Weighted Average
0.755		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	56	0.0048	0.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
1.8	101	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.4	157	Total			

Subcatchment EX 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3D: Dann Site

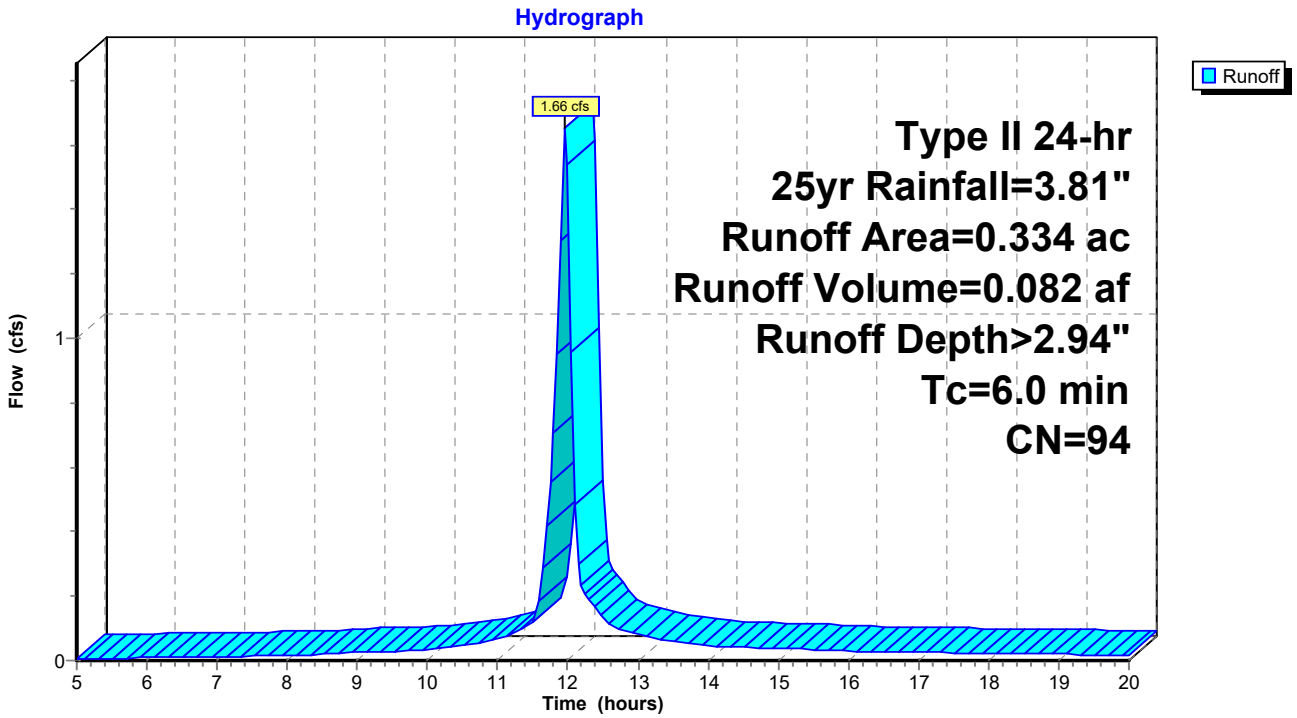
Runoff = 1.66 cfs @ 11.96 hrs, Volume= 0.082 af, Depth> 2.94"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.169	96	Gravel surface, HSG D
0.055	80	>75% Grass cover, Good, HSG D
0.110	98	Paved parking, HSG D
0.334	94	Weighted Average
0.224		67.07% Pervious Area
0.110		32.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3S: Smith Site

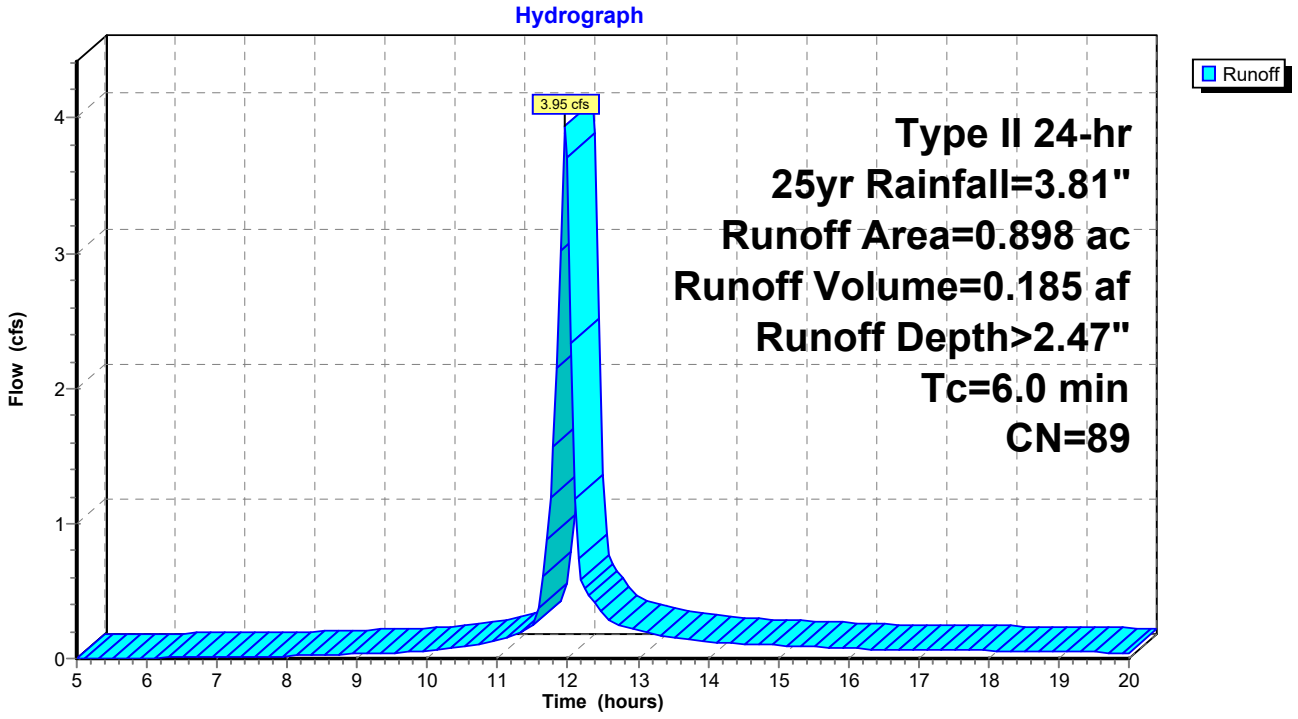
Runoff = 3.95 cfs @ 11.97 hrs, Volume= 0.185 af, Depth> 2.47"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.518	96	Gravel surface, HSG D
0.380	80	>75% Grass cover, Good, HSG D
0.898	89	Weighted Average
0.898		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

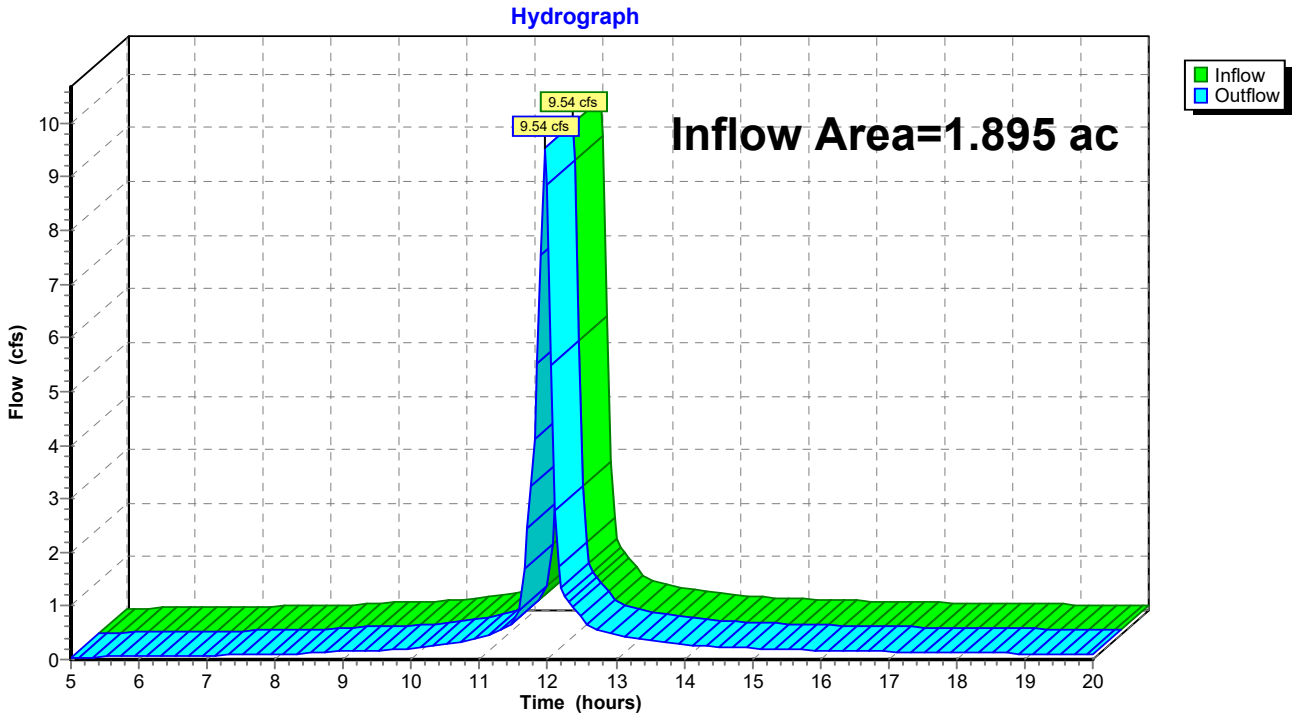
Summary for Reach 4R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 14.78% Impervious, Inflow Depth > 3.02" for 25yr event
Inflow = 9.54 cfs @ 11.96 hrs, Volume= 0.477 af
Outflow = 9.54 cfs @ 11.96 hrs, Volume= 0.477 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 4R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

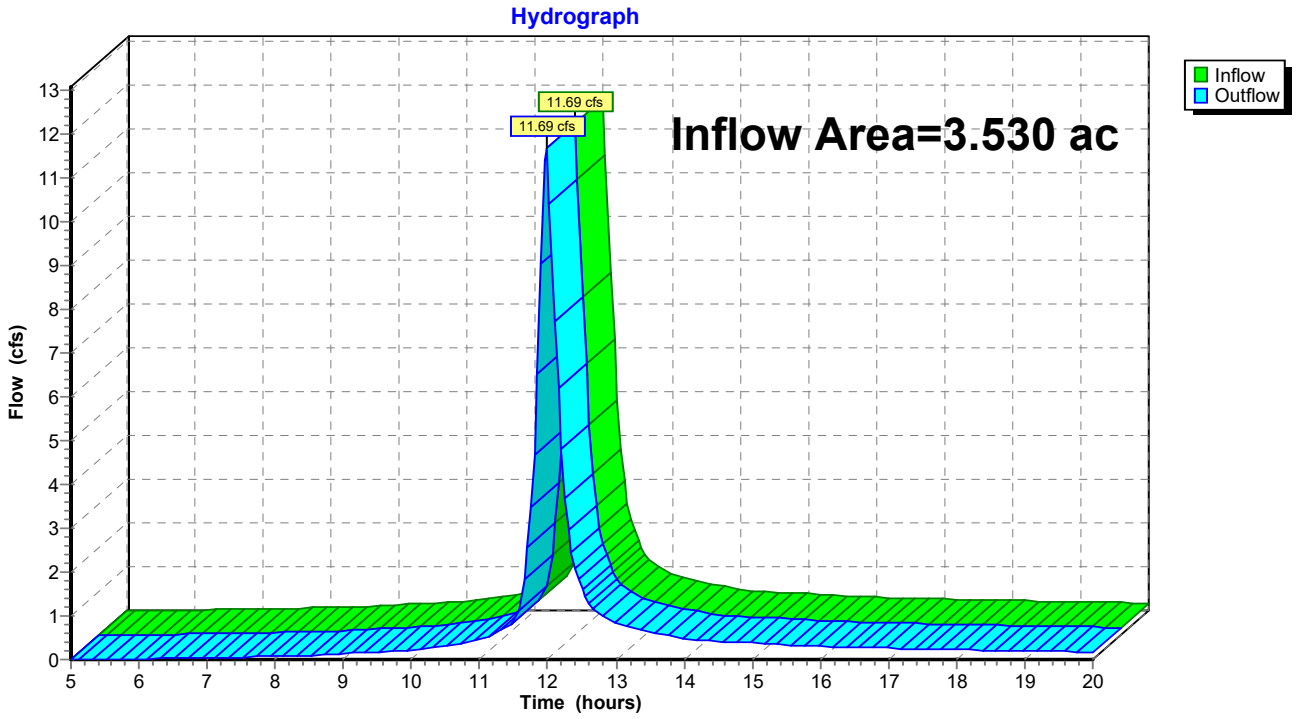
Summary for Reach 5R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 0.00% Impervious, Inflow Depth > 2.43" for 25yr event
Inflow = 11.69 cfs @ 11.97 hrs, Volume= 0.715 af
Outflow = 11.69 cfs @ 11.97 hrs, Volume= 0.715 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

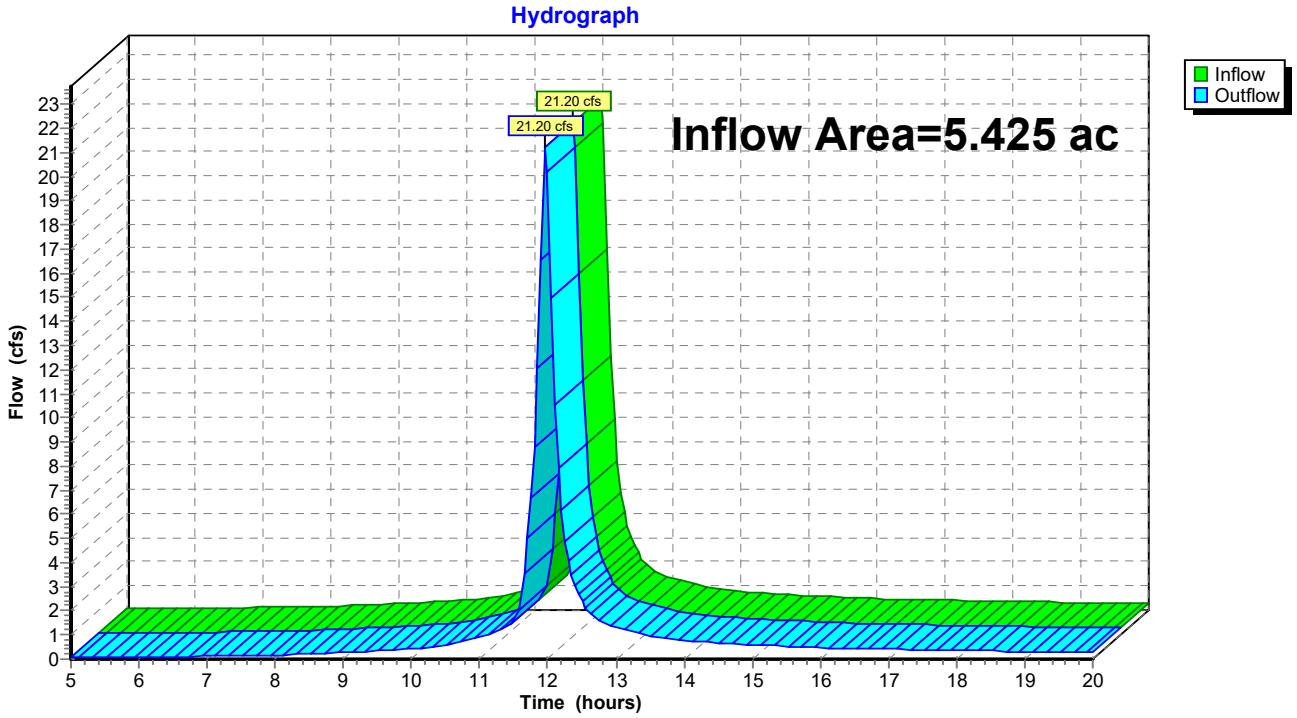
Summary for Reach 6R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 5.16% Impervious, Inflow Depth > 2.64" for 25yr event
Inflow = 21.20 cfs @ 11.97 hrs, Volume= 1.192 af
Outflow = 21.20 cfs @ 11.97 hrs, Volume= 1.192 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 6R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX 1D: Dann Site Runoff Area=0.535 ac 16.82% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=95 Runoff=3.74 cfs 0.191 af

SubcatchmentEX 1S: Smith Site Runoff Area=1.877 ac 0.00% Impervious Runoff Depth>3.68"
Flow Length=721' Tc=15.1 min CN=89 Runoff=9.13 cfs 0.576 af

SubcatchmentEX 2D: Dann Site Runoff Area=1.026 ac 7.80% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=95 Runoff=7.17 cfs 0.366 af

SubcatchmentEX 2S: Smith Site Runoff Area=0.755 ac 0.00% Impervious Runoff Depth>3.49"
Flow Length=157' Tc=3.4 min CN=87 Runoff=5.09 cfs 0.220 af

SubcatchmentEX 3D: Dann Site Runoff Area=0.334 ac 32.93% Impervious Runoff Depth>4.18"
Tc=6.0 min CN=94 Runoff=2.31 cfs 0.116 af

SubcatchmentEX 3S: Smith Site Runoff Area=0.898 ac 0.00% Impervious Runoff Depth>3.69"
Tc=6.0 min CN=89 Runoff=5.74 cfs 0.276 af

Reach 4R: Dann Site Comp Inflow=13.22 cfs 0.673 af
Outflow=13.22 cfs 0.673 af

Reach 5R: Smith Site Comp Inflow=17.18 cfs 1.071 af
Outflow=17.18 cfs 1.071 af

Reach 6R: Project Comp Inflow=30.37 cfs 1.744 af
Outflow=30.37 cfs 1.744 af

Total Runoff Area = 5.425 ac Runoff Volume = 1.744 af Average Runoff Depth = 3.86"
94.84% Pervious = 5.145 ac 5.16% Impervious = 0.280 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1D: Dann Site

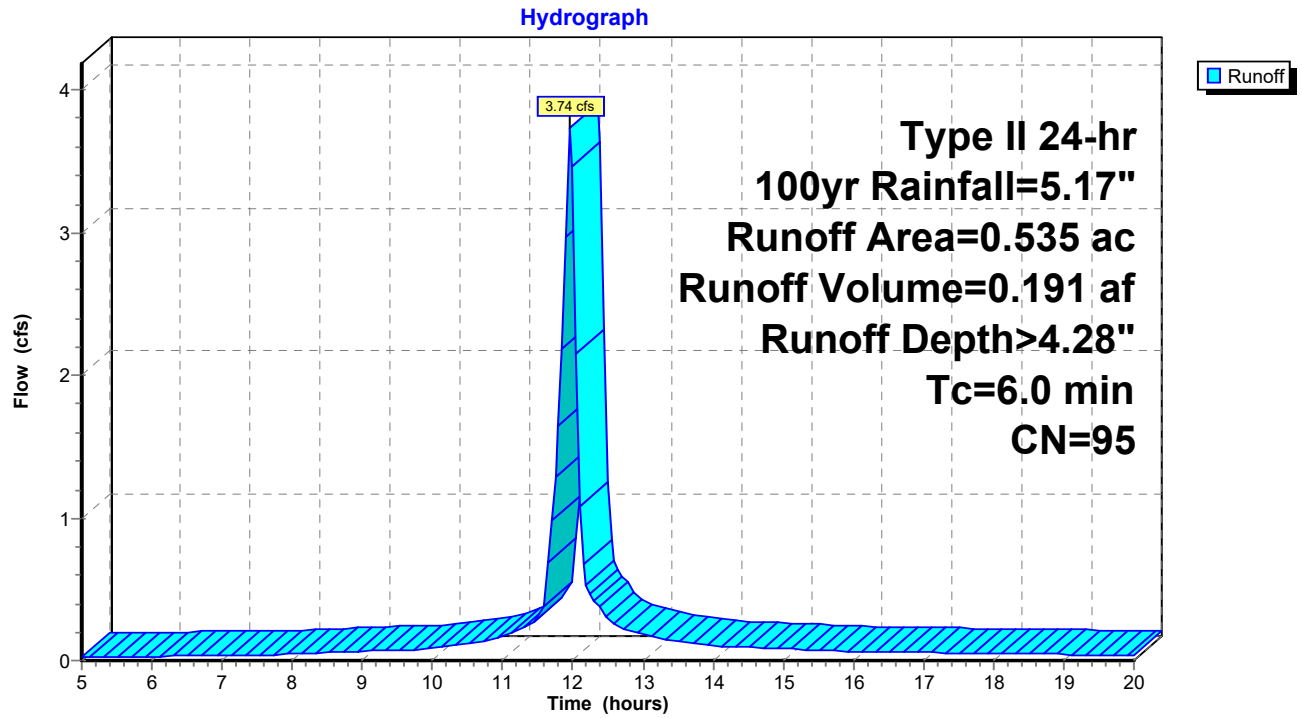
Runoff = 3.74 cfs @ 11.96 hrs, Volume= 0.191 af, Depth> 4.28"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.385	96	Gravel surface, HSG D
0.060	80	>75% Grass cover, Good, HSG D
0.090	98	Paved parking, HSG D
0.535	95	Weighted Average
0.445		83.18% Pervious Area
0.090		16.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 1S: Smith Site

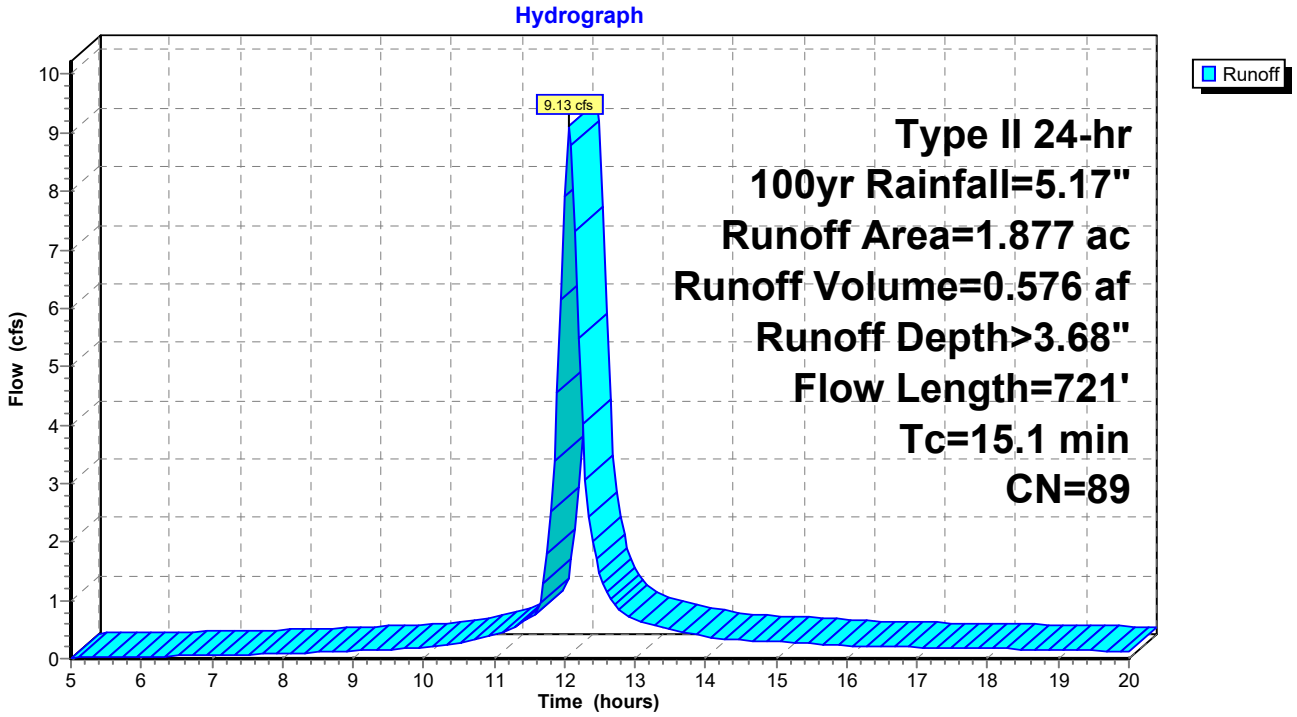
Runoff = 9.13 cfs @ 12.07 hrs, Volume= 0.576 af, Depth> 3.68"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
1.000	96	Gravel surface, HSG D
0.877	80	>75% Grass cover, Good, HSG D
1.877	89	Weighted Average
1.877		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0271	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
13.8	621	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.1	721	Total			

Subcatchment EX 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2D: Dann Site

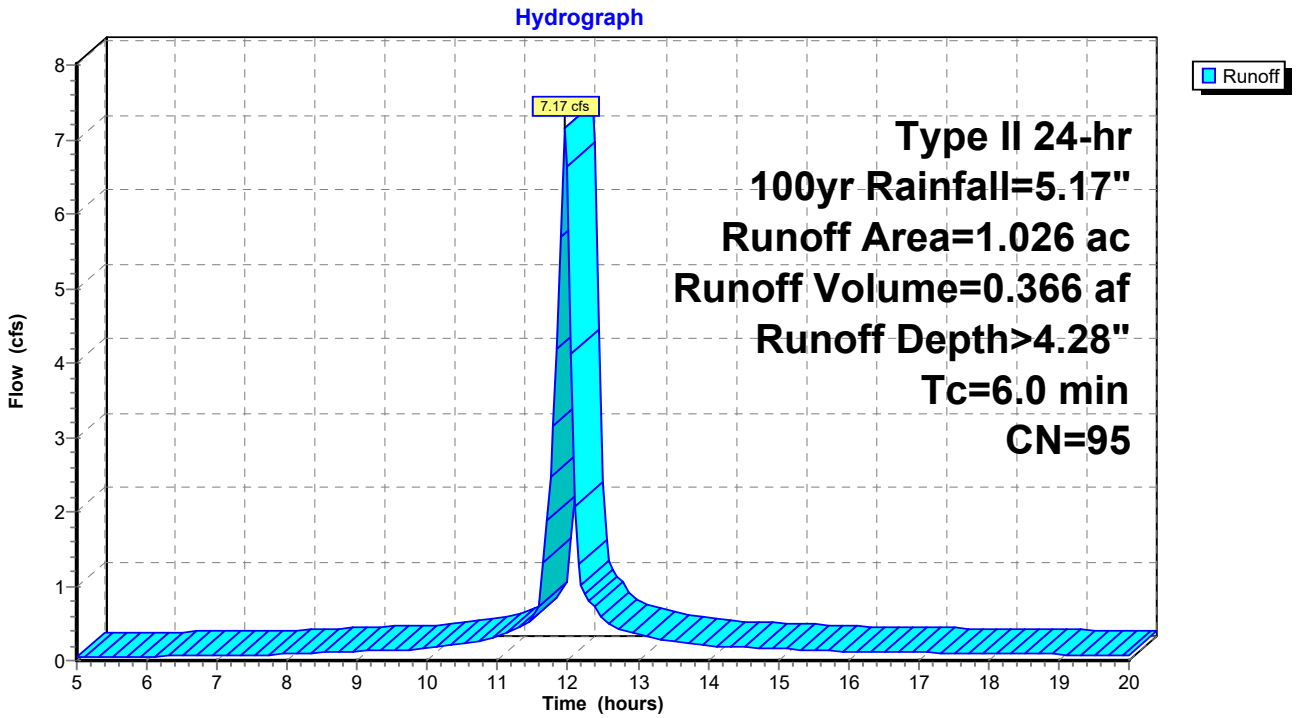
Runoff = 7.17 cfs @ 11.96 hrs, Volume= 0.366 af, Depth> 4.28"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.887	96	Gravel surface, HSG D
0.059	80	>75% Grass cover, Good, HSG D
0.080	98	Paved parking, HSG D
1.026	95	Weighted Average
0.946		92.20% Pervious Area
0.080		7.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

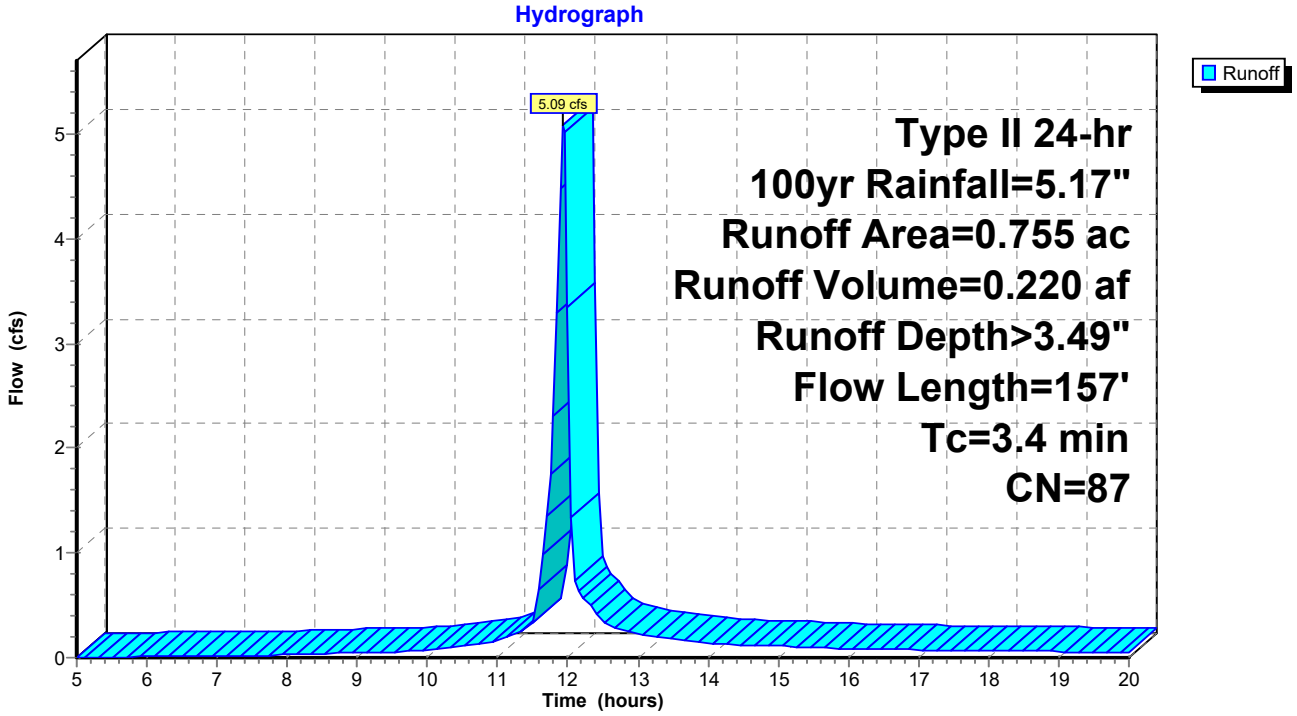
Runoff = 5.09 cfs @ 11.94 hrs, Volume= 0.220 af, Depth> 3.49"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.335	96	Gravel surface, HSG D
0.420	80	>75% Grass cover, Good, HSG D
0.755	87	Weighted Average
0.755		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	56	0.0048	0.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.19"
1.8	101	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.4	157	Total			

Subcatchment EX 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3D: Dann Site

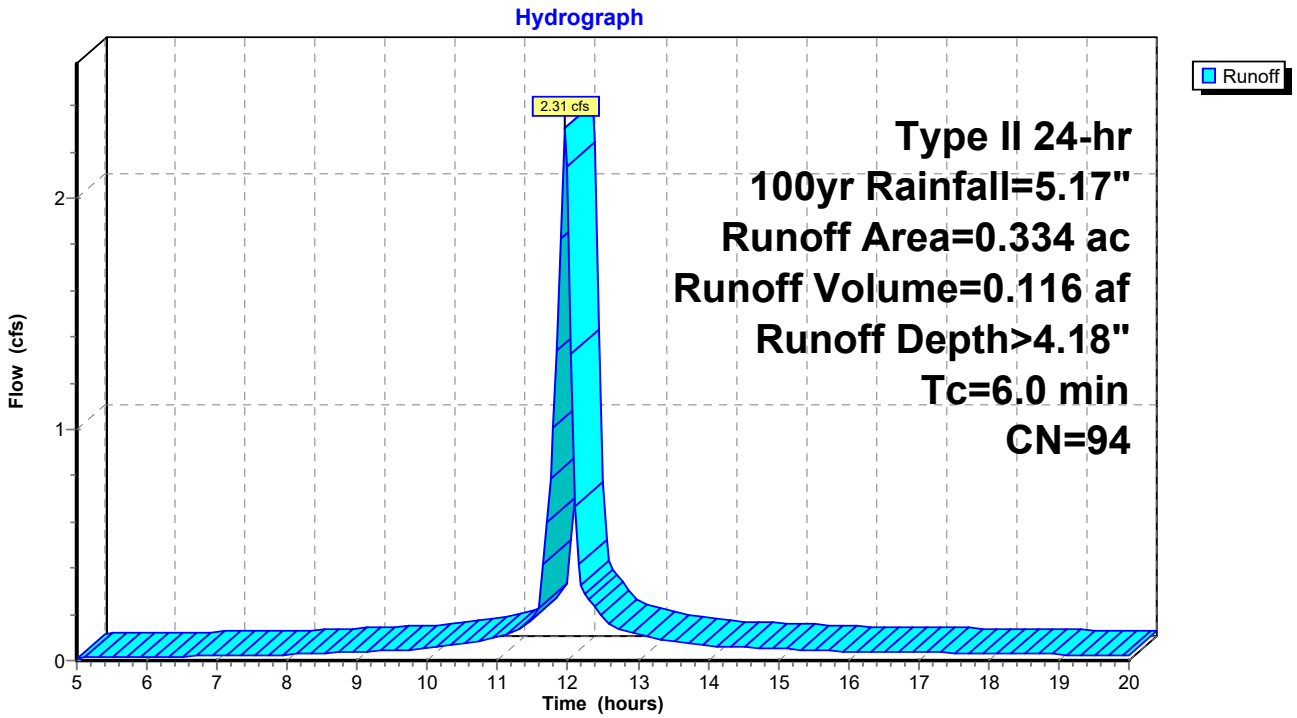
Runoff = 2.31 cfs @ 11.96 hrs, Volume= 0.116 af, Depth> 4.18"
Routed to Reach 4R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.169	96	Gravel surface, HSG D
0.055	80	>75% Grass cover, Good, HSG D
0.110	98	Paved parking, HSG D
0.334	94	Weighted Average
0.224		67.07% Pervious Area
0.110		32.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment EX 3S: Smith Site

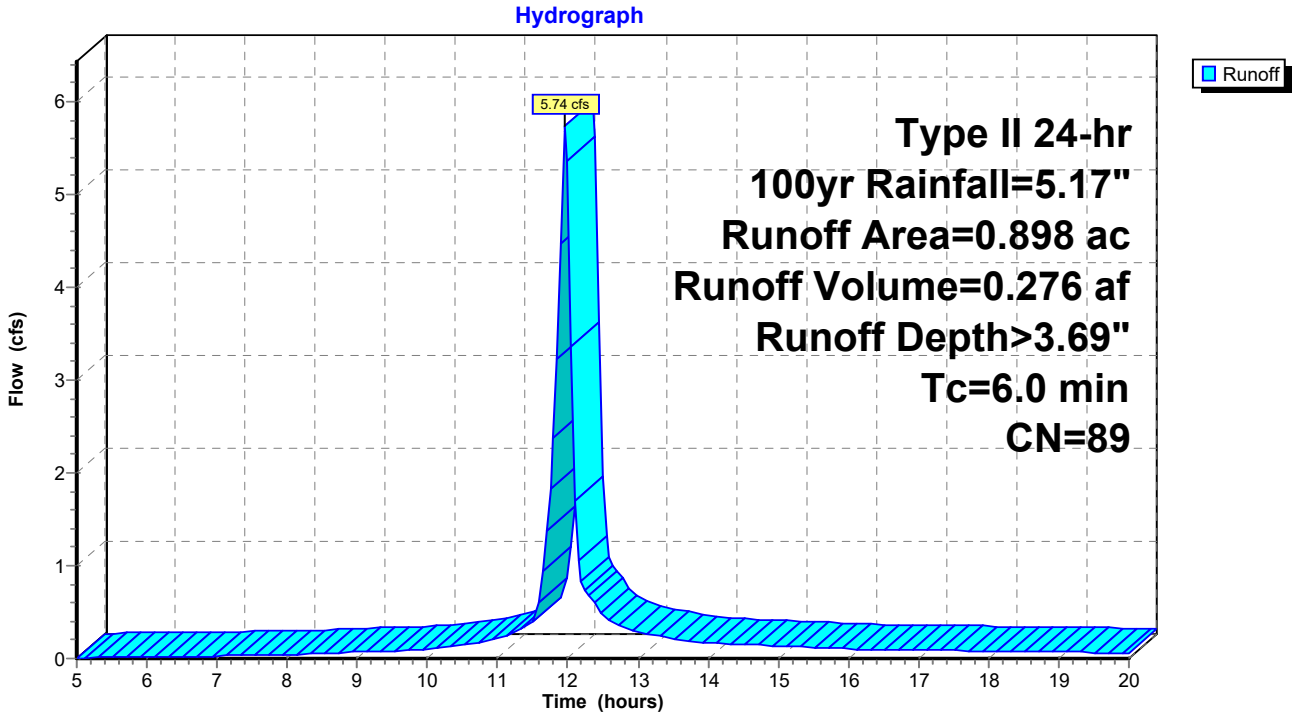
Runoff = 5.74 cfs @ 11.96 hrs, Volume= 0.276 af, Depth> 3.69"
Routed to Reach 5R : Smith Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.518	96	Gravel surface, HSG D
0.380	80	>75% Grass cover, Good, HSG D
0.898	89	Weighted Average
0.898		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

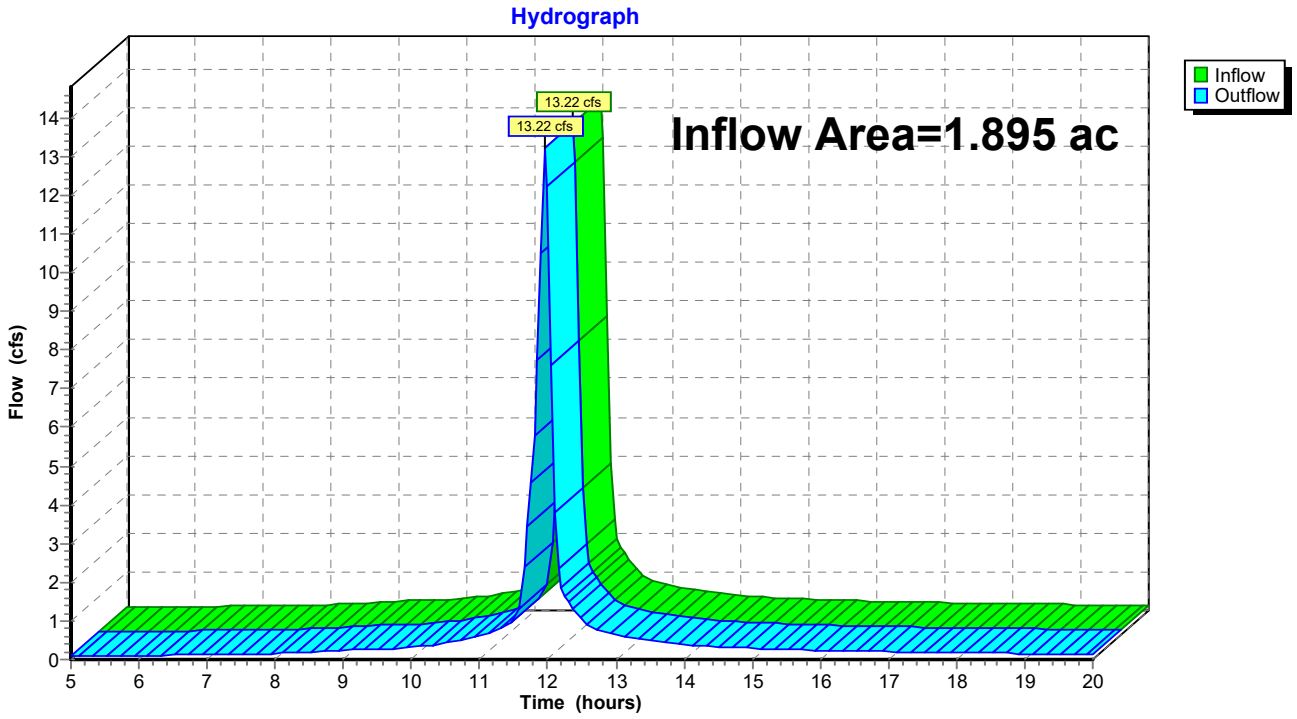
Summary for Reach 4R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 14.78% Impervious, Inflow Depth > 4.26" for 100yr event
Inflow = 13.22 cfs @ 11.96 hrs, Volume= 0.673 af
Outflow = 13.22 cfs @ 11.96 hrs, Volume= 0.673 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 4R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

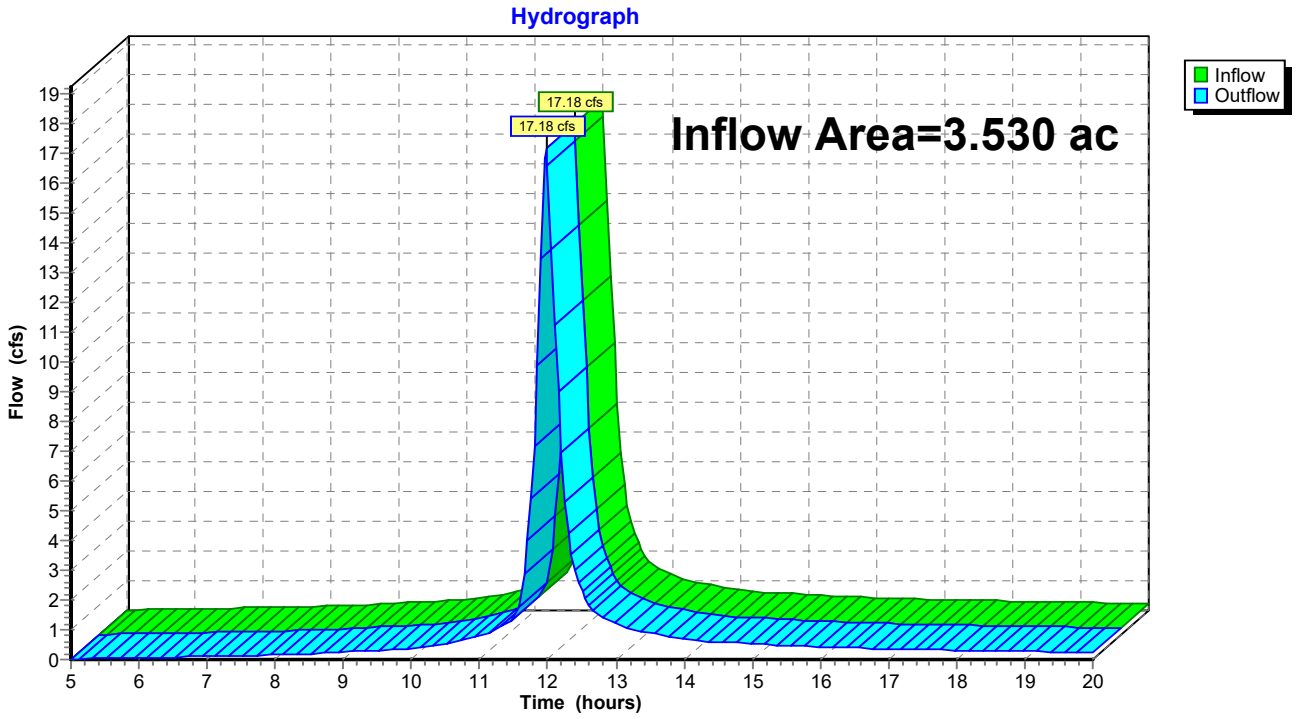
Summary for Reach 5R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 0.00% Impervious, Inflow Depth > 3.64" for 100yr event
Inflow = 17.18 cfs @ 11.97 hrs, Volume= 1.071 af
Outflow = 17.18 cfs @ 11.97 hrs, Volume= 1.071 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

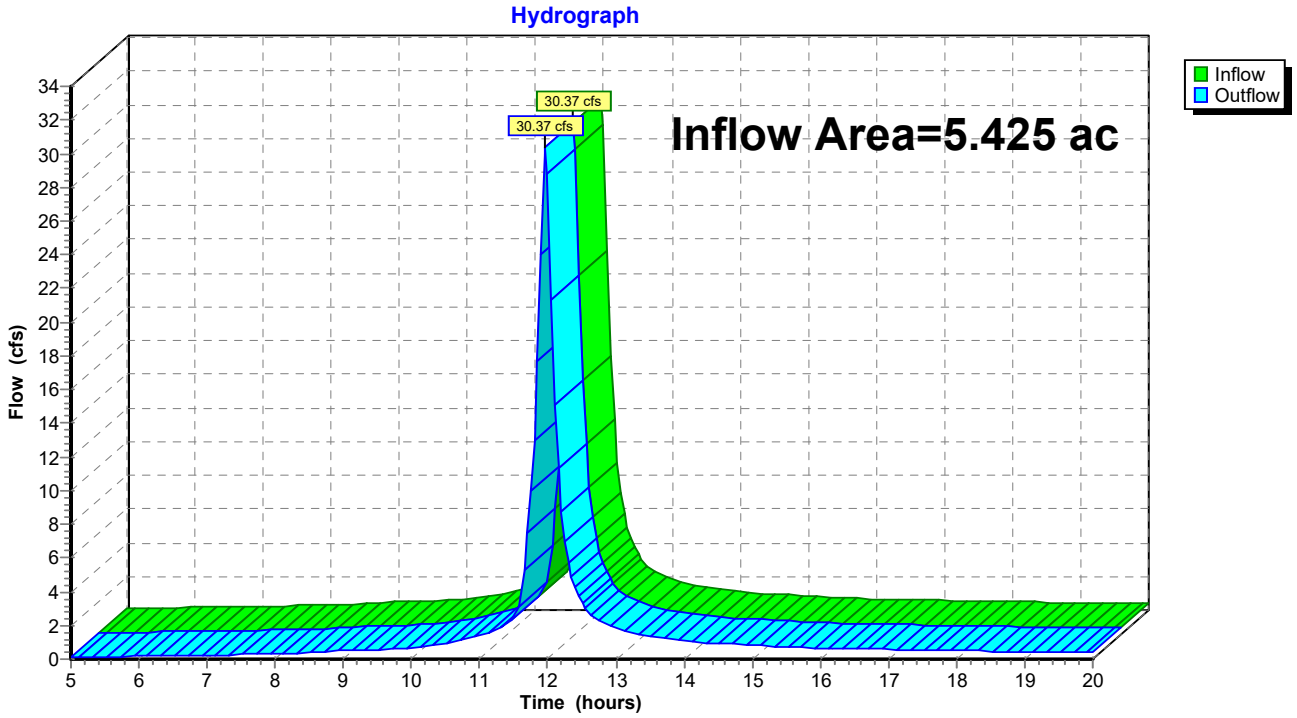
Summary for Reach 6R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

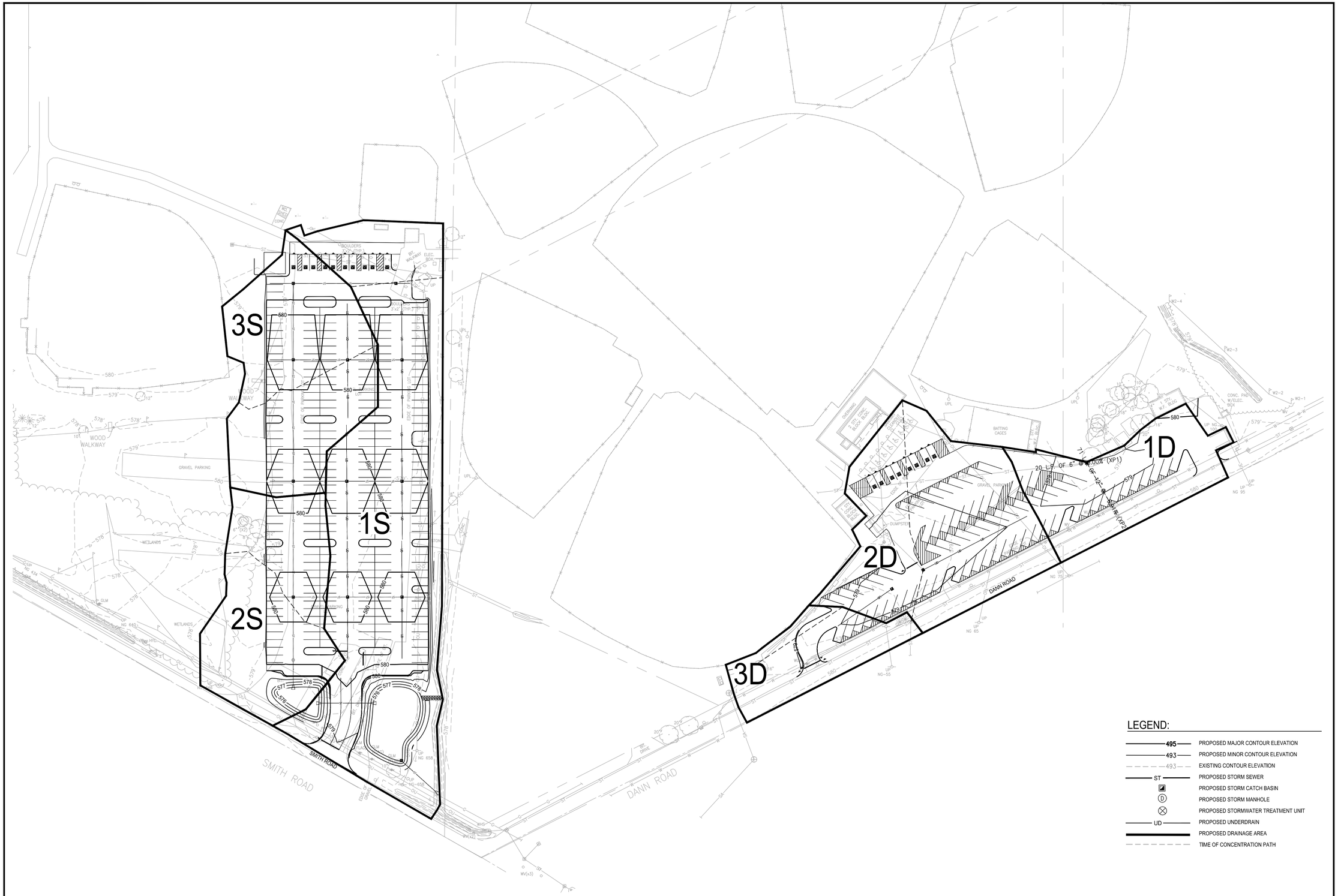
Inflow Area = 5.425 ac, 5.16% Impervious, Inflow Depth > 3.86" for 100yr event
Inflow = 30.37 cfs @ 11.97 hrs, Volume= 1.744 af
Outflow = 30.37 cfs @ 11.97 hrs, Volume= 1.744 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 6R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



LEGEND:

495	PROPOSED MAJOR CONTOUR ELEVATION
493	PROPOSED MINOR CONTOUR ELEVATION
493	EXISTING CONTOUR ELEVATION
ST	PROPOSED STORM SEWER
	PROPOSED STORM CATCH BASIN
D	PROPOSED STORM MANHOLE
	PROPOSED STORMWATER TREATMENT UNIT
UD	PROPOSED UNDERDRAIN
	PROPOSED DRAINAGE AREA
	TIME OF CONCENTRATION PATH

N

1 PROPOSED DRAIANGE AREA EXHIBIT
SCALE: 1" = 50'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

wendel
Centerpointe Corporate Park
375 Essjay Road, Suite 200
Williamsville, NY 14221
www.wendelcompanies.com
p:716.688.0766 f:716.625.6825

Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
06/28/2024
NOT FOR CONSTRUCTION

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NO.	REVISIONS	DATE
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

PROPOSED DRAIANGE AREA EXHIBI

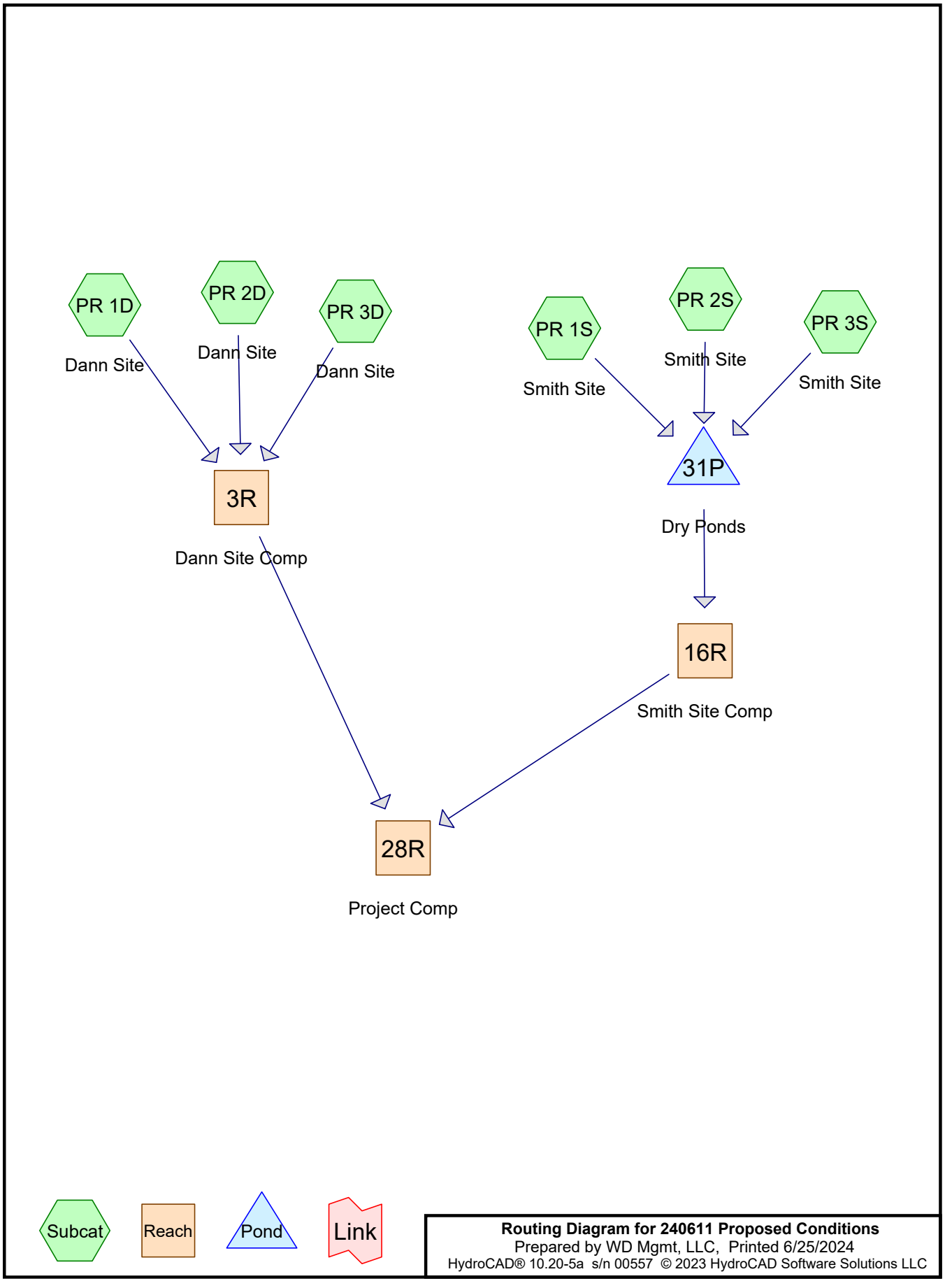
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING.
IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	JUNE, 2024		
SCALE	AS NOTED		
DWN.	DGR	CHK.	CC1
PROJ. No.	261353		

DWG. No.

PR-DA

Attachment: SP-1990-083_application_091924 (29174 : SP-1990-083, 50 Dann Rd)



Routing Diagram for 240611 Proposed Conditions
Prepared by WD Mgmt, LLC, Printed 6/25/2024
HydroCAD® 10.20-5a s/n 00557 © 2023 HydroCAD Software Solutions LLC

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1yr	Type II 24-hr		Default	24.00	1	1.82	2
2	10yr	Type II 24-hr		Default	24.00	1	3.12	2
3	25yr	Type II 24-hr		Default	24.00	1	3.81	2
4	100yr	Type II 24-hr		Default	24.00	1	5.17	2

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.692	80	>75% Grass cover, Good, HSG D (PR 1D, PR 1S, PR 2D, PR 2S, PR 3D, PR 3S)
3.733	98	Paved roads w/curbs & sewers, HSG D (PR 1D, PR 1S, PR 2D, PR 2S, PR 3D, PR 3S)
5.425	**92**	**TOTAL AREA**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.425	HSG D	PR 1D, PR 1S, PR 2D, PR 2S, PR 3D, PR 3S
0.000	Other	
5.425		**TOTAL AREA**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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	1.692	0.000	1.692	>75% Grass cover, Good	PR 1D, PR 1S, PR 2D, PR 2S, PR 3D, PR 3S
0.000	0.000	0.000	3.733	0.000	3.733	Paved roads w/curbs & sewers	PR 1D, PR 1S, PR 2D, PR 2S, PR 3D, PR

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Ground Covers (selected nodes) (continued)

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**	**5.425**	**0.000**	**5.425**	**TOTAL AREA**	

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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)	M M e
1	31P	575.36	575.20	53.9	0.0030	0.011	0.0	12.0	0.0	

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR 1D: Dann Site Runoff Area=0.535 ac 86.73% Impervious Runoff Depth>1.40"
Tc=5.0 min CN=96 Runoff=1.09 cfs 0.062 af

SubcatchmentPR 1S: Smith Site Runoff Area=1.877 ac 64.73% Impervious Runoff Depth>1.08"
Tc=6.0 min CN=92 Runoff=3.22 cfs 0.168 af

SubcatchmentPR 2D: Dann Site Runoff Area=1.026 ac 87.04% Impervious Runoff Depth>1.40"
Tc=6.0 min CN=96 Runoff=2.17 cfs 0.120 af

SubcatchmentPR 2S: Smith Site Runoff Area=0.755 ac 45.43% Impervious Runoff Depth>0.82"
Tc=6.0 min CN=88 Runoff=1.01 cfs 0.052 af

SubcatchmentPR 3D: Dann Site Runoff Area=0.334 ac 55.99% Impervious Runoff Depth>0.94"
Tc=6.0 min CN=90 Runoff=0.51 cfs 0.026 af

SubcatchmentPR 3S: Smith Site Runoff Area=0.898 ac 70.27% Impervious Runoff Depth>1.15"
Tc=6.0 min CN=93 Runoff=1.63 cfs 0.086 af

Reach 3R: Dann Site Comp Inflow=3.78 cfs 0.208 af
Outflow=3.78 cfs 0.208 af

Reach 16R: Smith Site Comp Inflow=1.07 cfs 0.292 af
Outflow=1.07 cfs 0.292 af

Reach 28R: Project Comp Inflow=4.65 cfs 0.500 af
Outflow=4.65 cfs 0.500 af

Pond 31P: Dry Ponds Peak Elev=576.51' Storage=5,530 cf Inflow=5.86 cfs 0.306 af
Outflow=1.07 cfs 0.292 af

Total Runoff Area = 5.425 ac Runoff Volume = 0.514 af Average Runoff Depth = 1.14"
31.19% Pervious = 1.692 ac 68.81% Impervious = 3.733 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

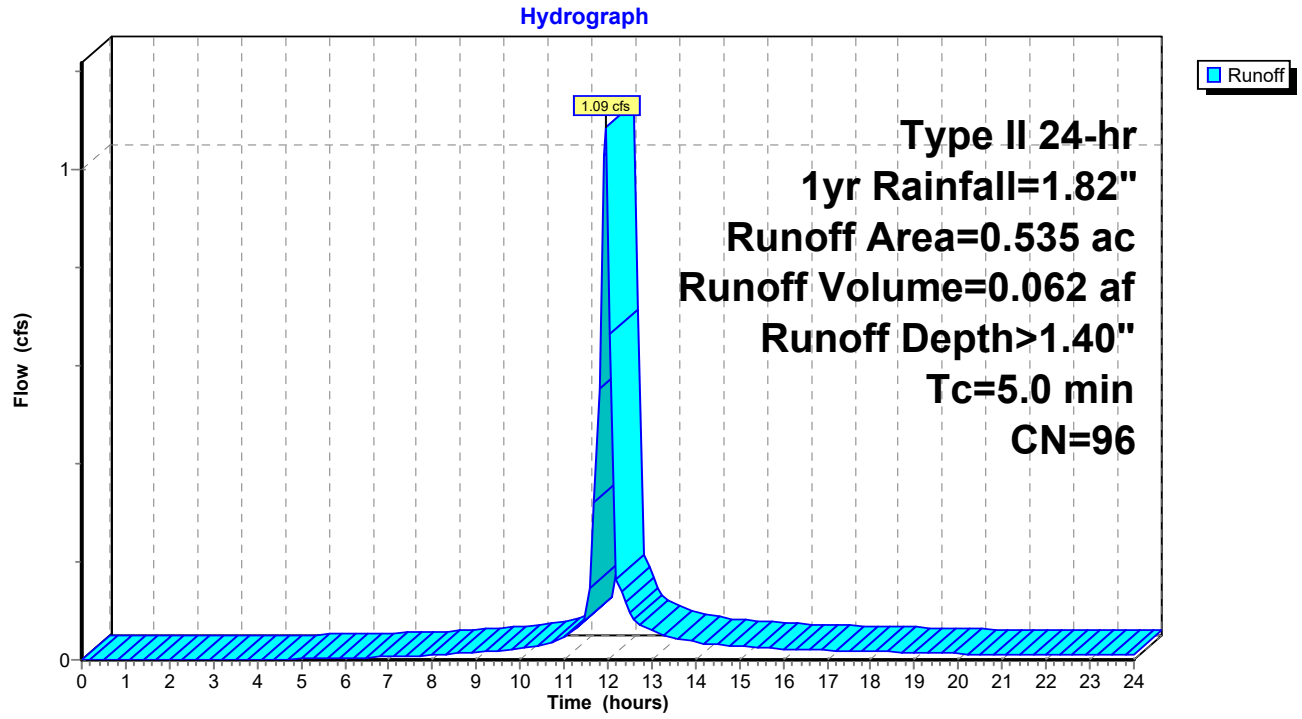
Runoff = 1.09 cfs @ 11.95 hrs, Volume= 0.062 af, Depth> 1.40"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.464	98	Paved roads w/curbs & sewers, HSG D
0.071	80	>75% Grass cover, Good, HSG D
0.535	96	Weighted Average
0.071		13.27% Pervious Area
0.464		86.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

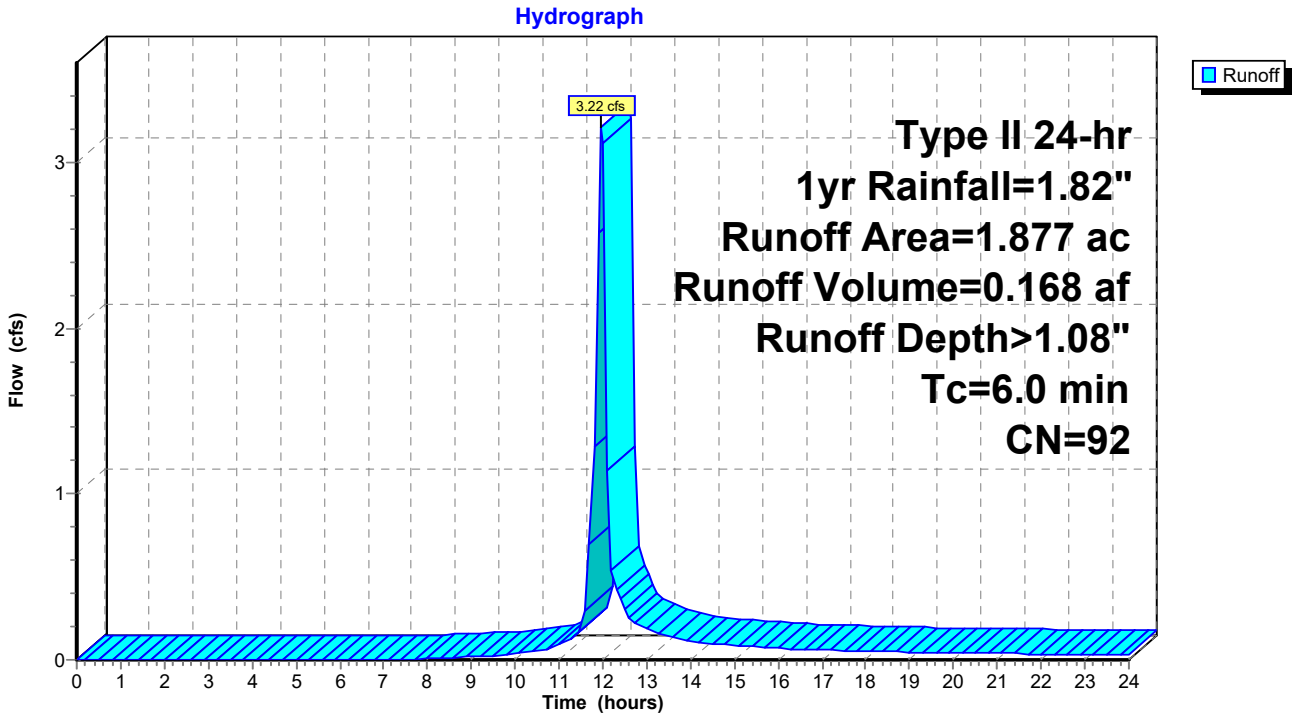
Runoff = 3.22 cfs @ 11.97 hrs, Volume= 0.168 af, Depth> 1.08"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
1.215	98	Paved roads w/curbs & sewers, HSG D
0.662	80	>75% Grass cover, Good, HSG D
1.877	92	Weighted Average
0.662		35.27% Pervious Area
1.215		64.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

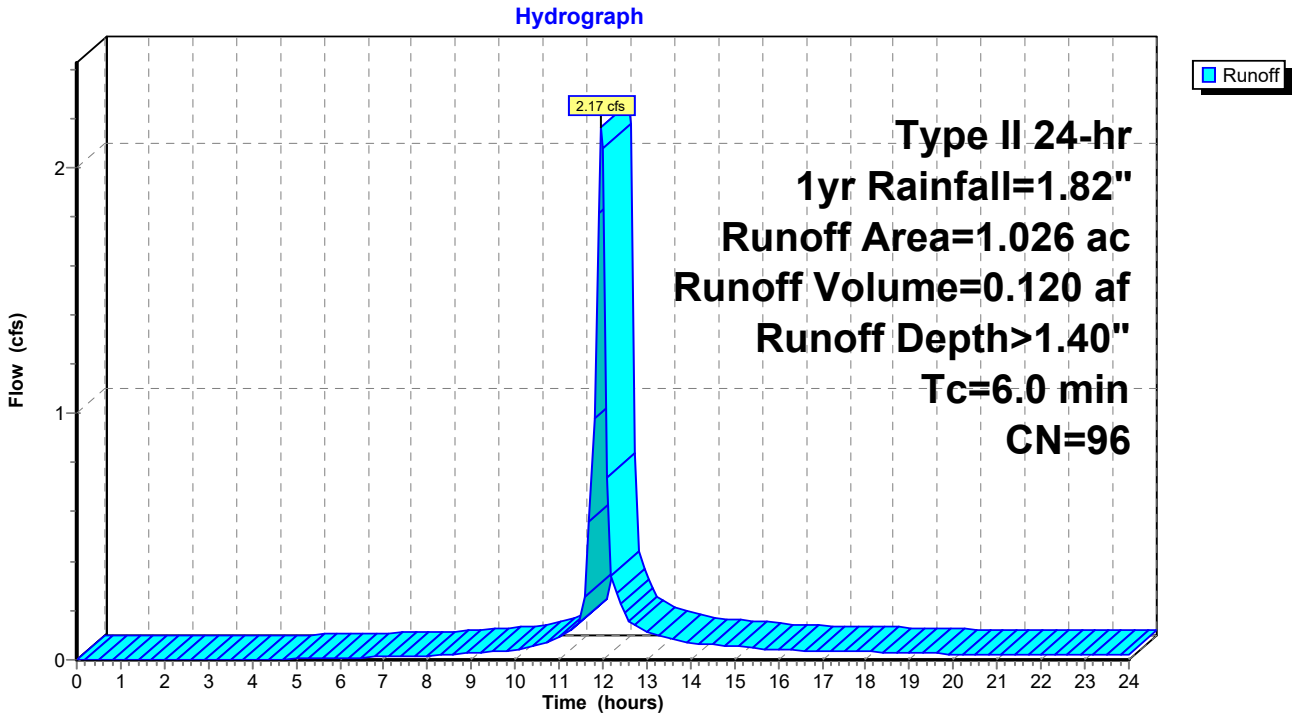
Runoff = 2.17 cfs @ 11.97 hrs, Volume= 0.120 af, Depth> 1.40"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.893	98	Paved roads w/curbs & sewers, HSG D
0.133	80	>75% Grass cover, Good, HSG D
1.026	96	Weighted Average
0.133		12.96% Pervious Area
0.893		87.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

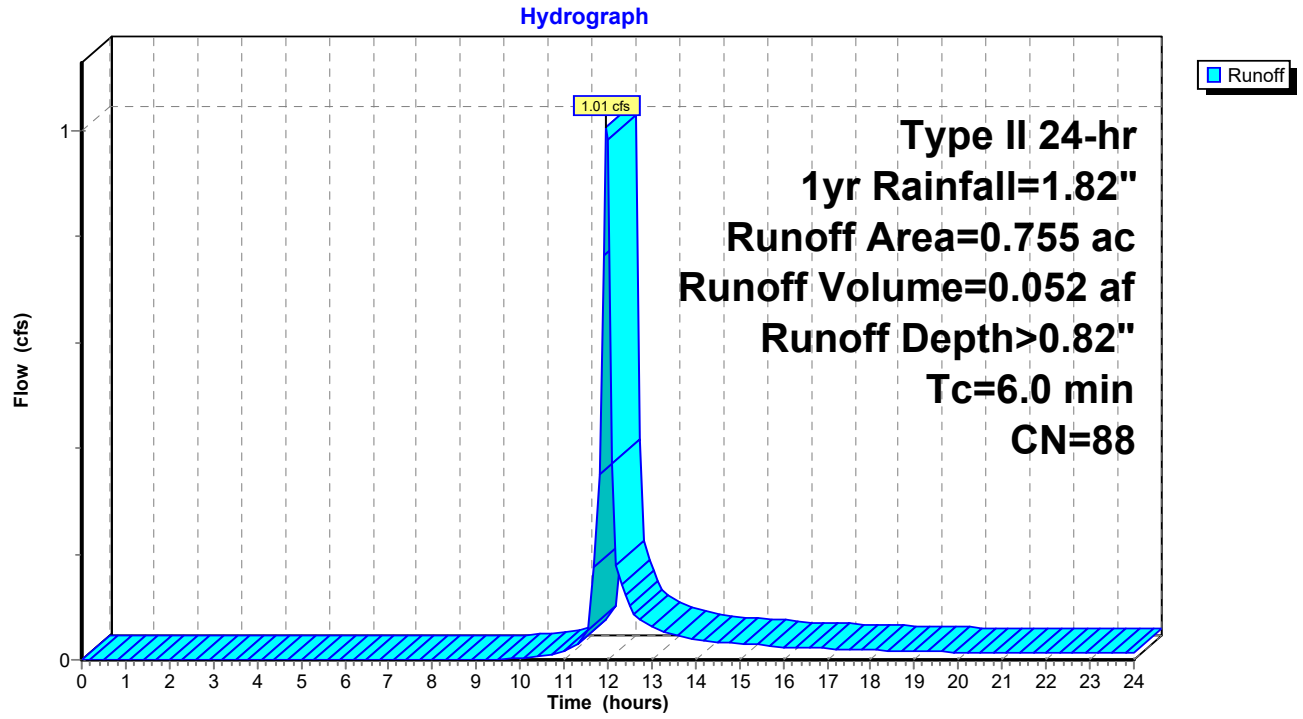
Runoff = 1.01 cfs @ 11.98 hrs, Volume= 0.052 af, Depth> 0.82"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.343	98	Paved roads w/curbs & sewers, HSG D
0.412	80	>75% Grass cover, Good, HSG D
0.755	88	Weighted Average
0.412		54.57% Pervious Area
0.343		45.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

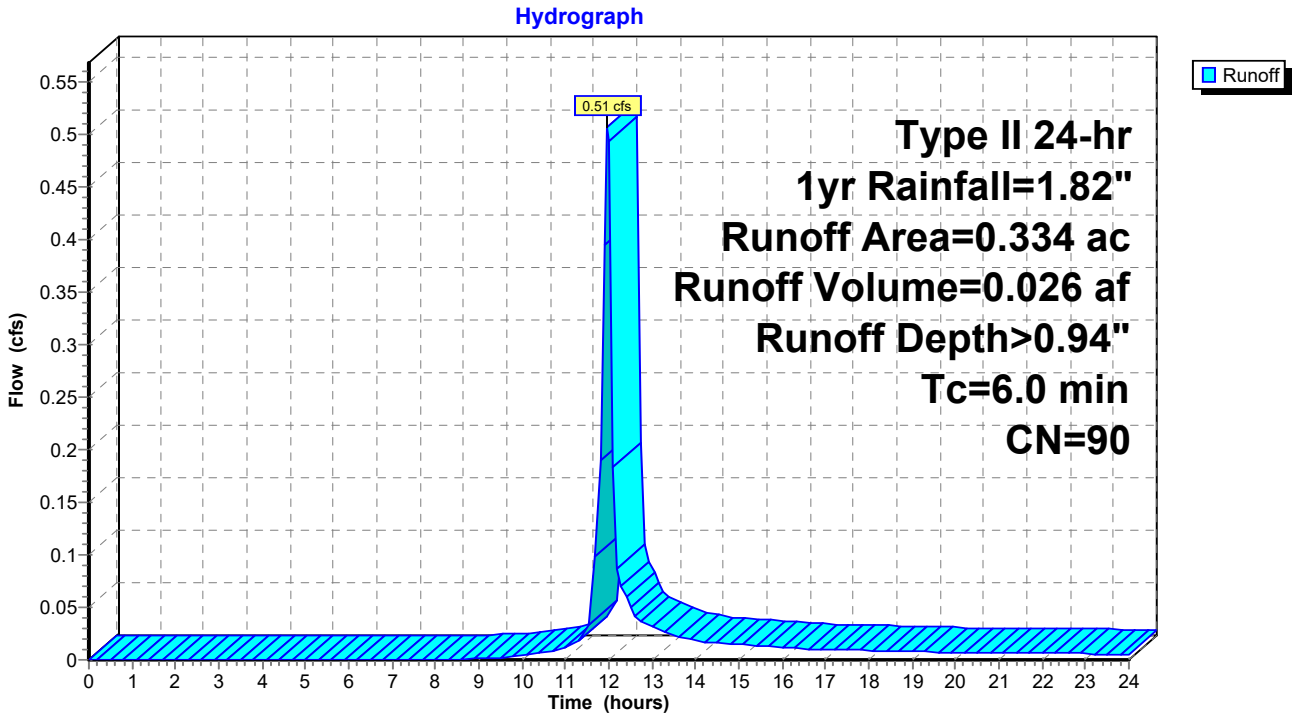
Runoff = 0.51 cfs @ 11.97 hrs, Volume= 0.026 af, Depth> 0.94"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.187	98	Paved roads w/curbs & sewers, HSG D
0.147	80	>75% Grass cover, Good, HSG D
0.334	90	Weighted Average
0.147		44.01% Pervious Area
0.187		55.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

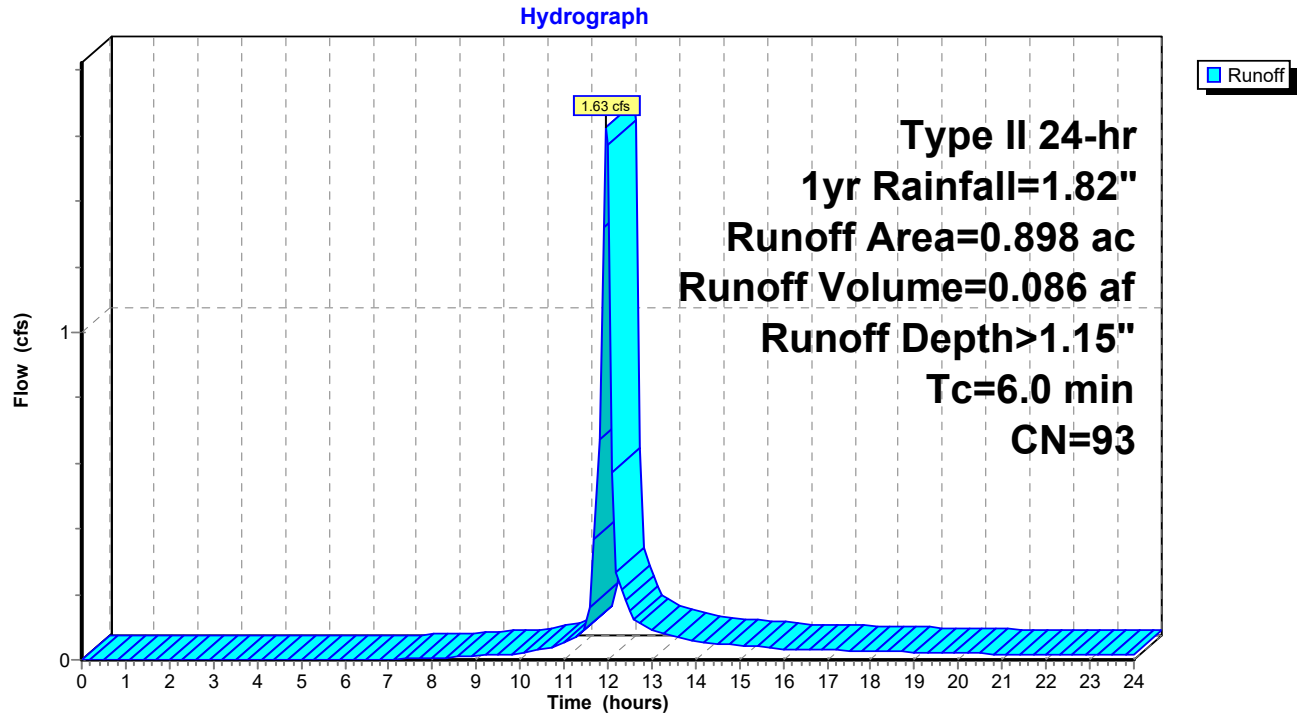
Runoff = 1.63 cfs @ 11.97 hrs, Volume= 0.086 af, Depth> 1.15"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 1yr Rainfall=1.82"

Area (ac)	CN	Description
0.631	98	Paved roads w/curbs & sewers, HSG D
0.267	80	>75% Grass cover, Good, HSG D
0.898	93	Weighted Average
0.267		29.73% Pervious Area
0.631		70.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

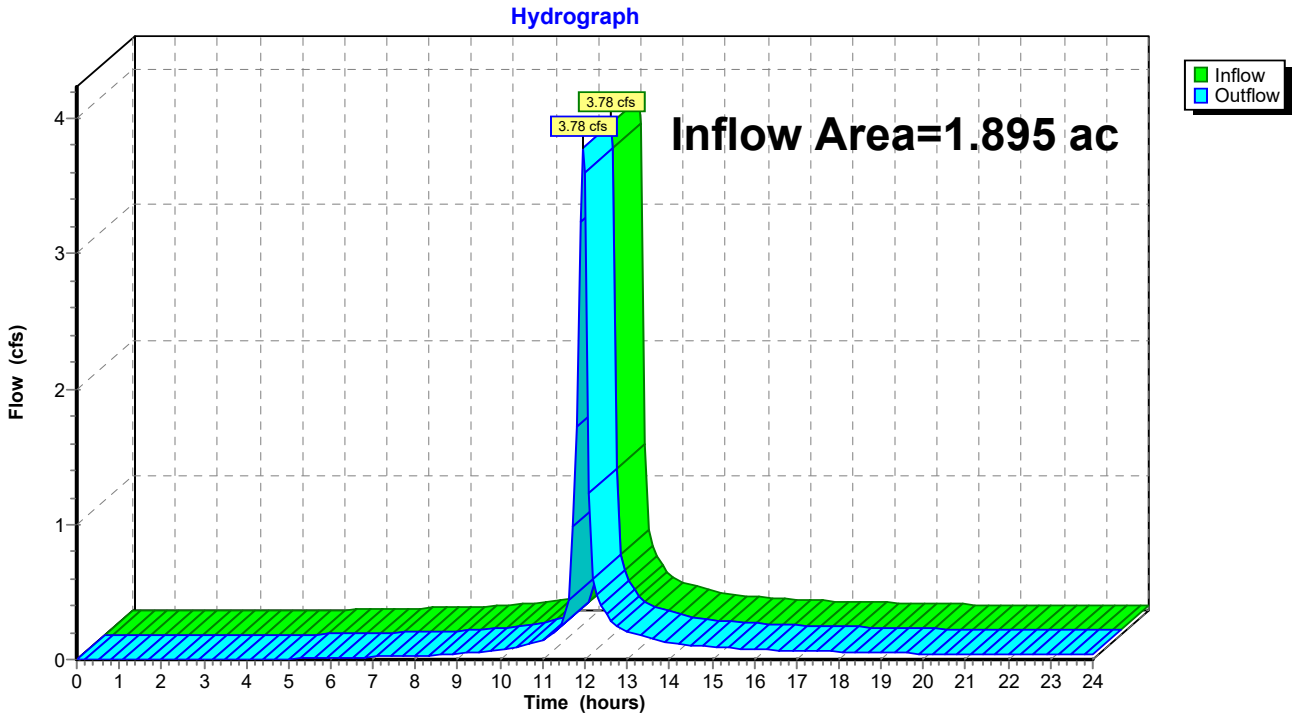
Summary for Reach 3R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 81.48% Impervious, Inflow Depth > 1.32" for 1yr event
Inflow = 3.78 cfs @ 11.96 hrs, Volume= 0.208 af
Outflow = 3.78 cfs @ 11.96 hrs, Volume= 0.208 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 3R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

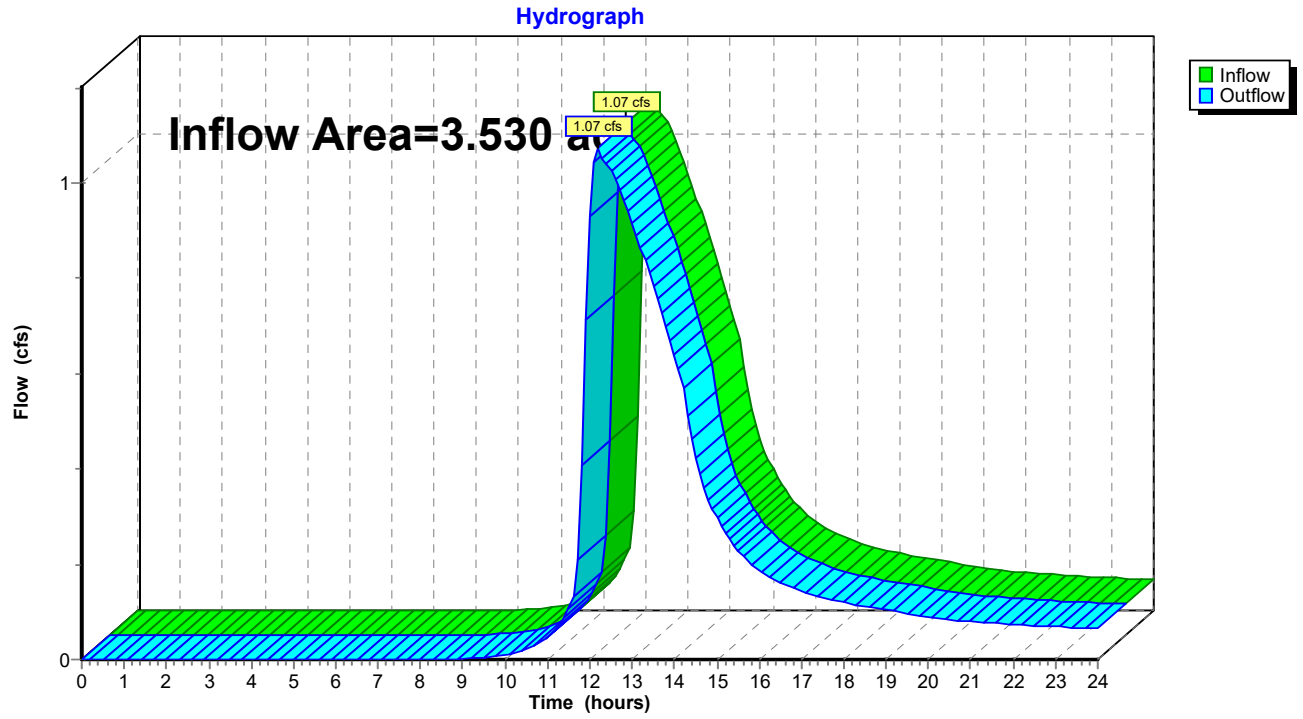
Summary for Reach 16R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 0.99" for 1yr event
Inflow = 1.07 cfs @ 12.21 hrs, Volume= 0.292 af
Outflow = 1.07 cfs @ 12.21 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 16R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

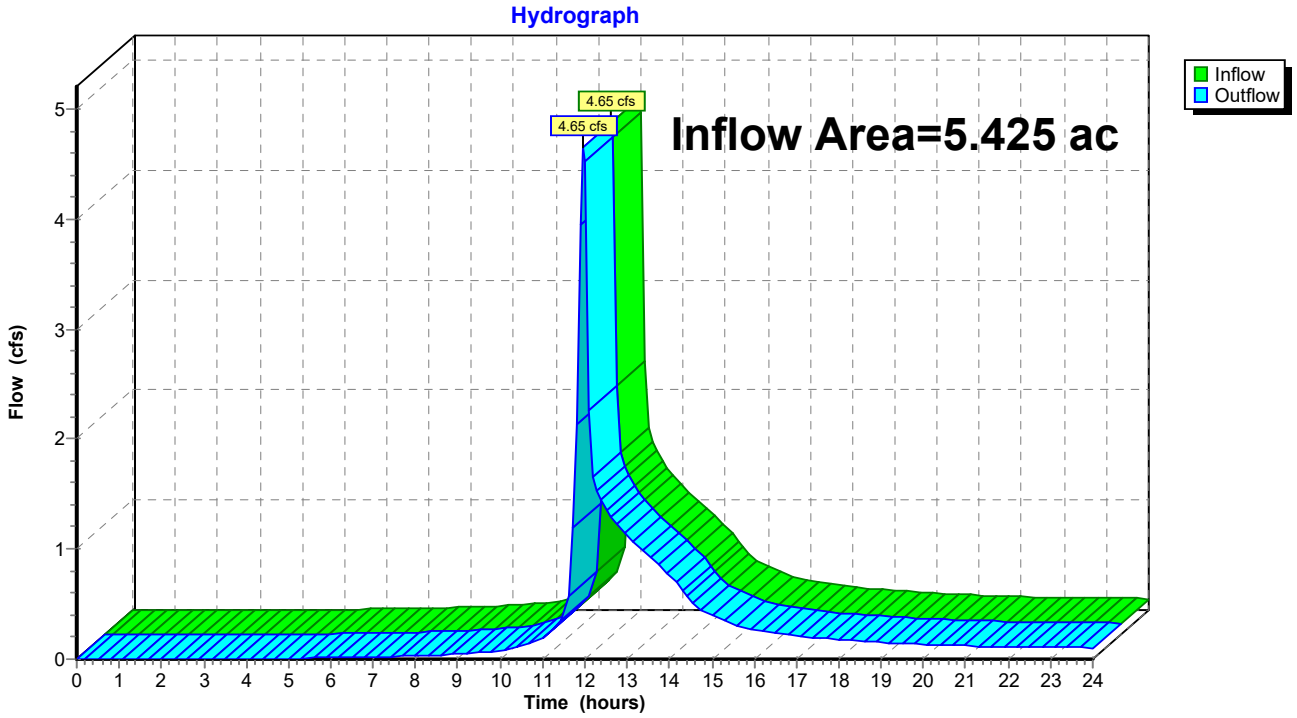
Summary for Reach 28R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 68.81% Impervious, Inflow Depth > 1.11" for 1yr event
Inflow = 4.65 cfs @ 11.97 hrs, Volume= 0.500 af
Outflow = 4.65 cfs @ 11.97 hrs, Volume= 0.500 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 28R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Pond 31P: Dry Ponds

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 1.04" for 1yr event
Inflow = 5.86 cfs @ 11.97 hrs, Volume= 0.306 af
Outflow = 1.07 cfs @ 12.21 hrs, Volume= 0.292 af, Atten= 82%, Lag= 14.3 min
Primary = 1.07 cfs @ 12.21 hrs, Volume= 0.292 af
Routed to Reach 16R : Smith Site Comp

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 576.51' @ 12.22 hrs Surf.Area= 5,528 sf Storage= 5,530 cf

Plug-Flow detention time= 86.5 min calculated for 0.292 af (95% of inflow)
Center-of-Mass det. time= 60.3 min (878.4 - 818.1)

Volume	Invert	Avail.Storage	Storage Description
#1	575.36'	15,176 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

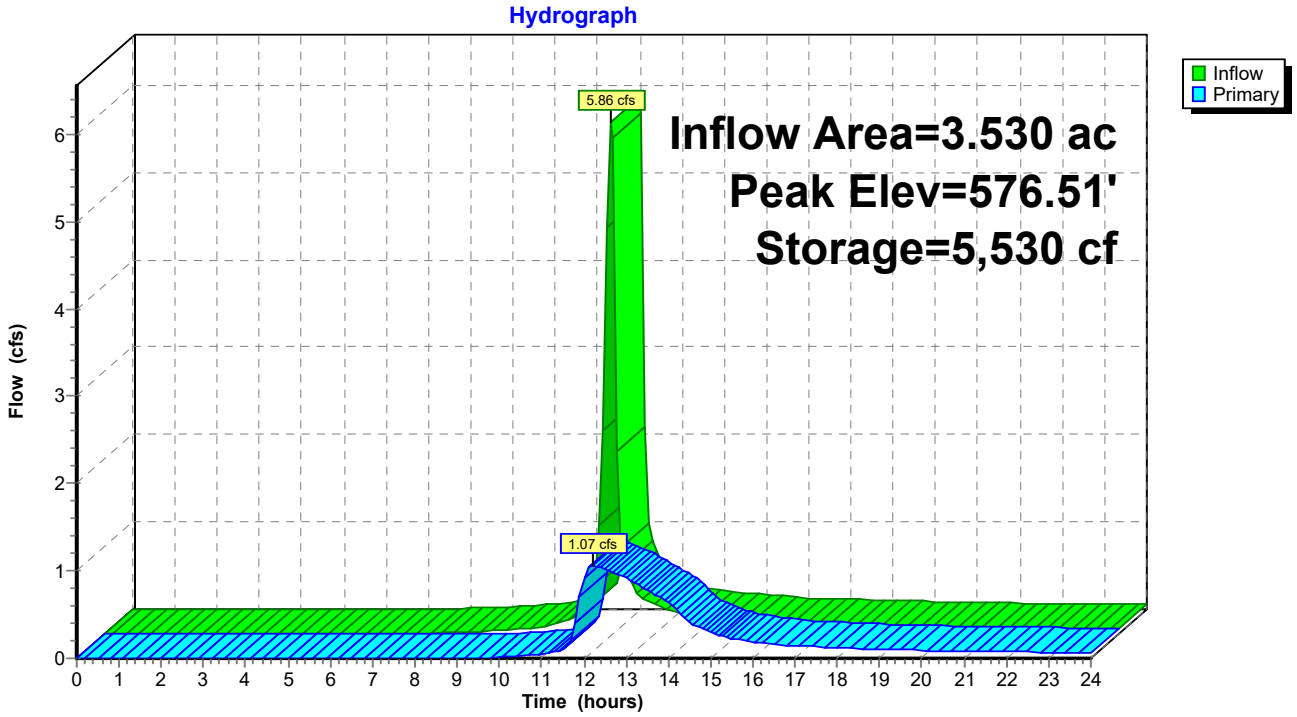
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
575.36	3,329	227.0	0	0	3,329
575.48	4,363	359.0	460	460	9,485
576.00	4,938	379.0	2,417	2,877	10,675
577.00	6,132	417.0	5,524	8,401	13,114
578.00	7,438	455.0	6,775	15,176	15,787

Device	Routing	Invert	Outlet Devices
#1	Primary	575.36'	**12.0" Round Culvert** L= 53.9' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 575.36' / 575.20' S= 0.0030 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf
#2	Device 1	575.36'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	577.20'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	576.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.40 Width (feet) 4.50 4.50 4.50

Primary OutFlow Max=1.06 cfs @ 12.21 hrs HW=576.50' (Free Discharge)
- **1=Culvert** (Passes 1.06 cfs of 2.37 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.06 cfs @ 4.76 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Custom Weir/Orifice** (Weir Controls 0.01 cfs @ 0.23 fps)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Pond 31P: Dry Ponds



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR 1D: Dann Site Runoff Area=0.535 ac 86.73% Impervious Runoff Depth>2.67"
Tc=5.0 min CN=96 Runoff=1.99 cfs 0.119 af

SubcatchmentPR 1S: Smith Site Runoff Area=1.877 ac 64.73% Impervious Runoff Depth>2.27"
Tc=6.0 min CN=92 Runoff=6.54 cfs 0.356 af

SubcatchmentPR 2D: Dann Site Runoff Area=1.026 ac 87.04% Impervious Runoff Depth>2.67"
Tc=6.0 min CN=96 Runoff=3.96 cfs 0.228 af

SubcatchmentPR 2S: Smith Site Runoff Area=0.755 ac 45.43% Impervious Runoff Depth>1.92"
Tc=6.0 min CN=88 Runoff=2.30 cfs 0.121 af

SubcatchmentPR 3D: Dann Site Runoff Area=0.334 ac 55.99% Impervious Runoff Depth>2.09"
Tc=6.0 min CN=90 Runoff=1.09 cfs 0.058 af

SubcatchmentPR 3S: Smith Site Runoff Area=0.898 ac 70.27% Impervious Runoff Depth>2.37"
Tc=6.0 min CN=93 Runoff=3.22 cfs 0.177 af

Reach 3R: Dann Site Comp Inflow=7.08 cfs 0.405 af
Outflow=7.08 cfs 0.405 af

Reach 16R: Smith Site Comp Inflow=7.60 cfs 0.634 af
Outflow=7.60 cfs 0.634 af

Reach 28R: Project Comp Inflow=13.42 cfs 1.040 af
Outflow=13.42 cfs 1.040 af

Pond 31P: Dry Ponds Peak Elev=577.07' Storage=8,817 cf Inflow=12.06 cfs 0.654 af
Outflow=7.60 cfs 0.634 af

Total Runoff Area = 5.425 ac Runoff Volume = 1.059 af Average Runoff Depth = 2.34"
31.19% Pervious = 1.692 ac 68.81% Impervious = 3.733 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

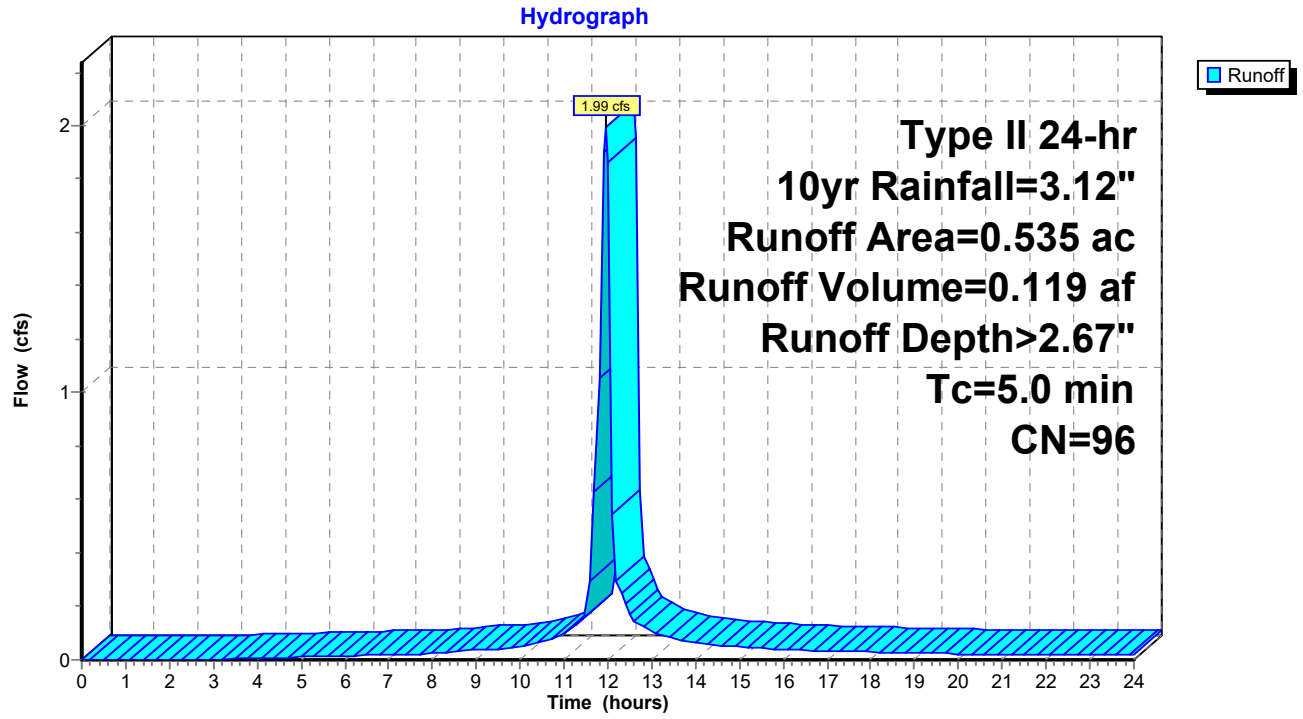
Runoff = 1.99 cfs @ 11.95 hrs, Volume= 0.119 af, Depth> 2.67"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.464	98	Paved roads w/curbs & sewers, HSG D
0.071	80	>75% Grass cover, Good, HSG D
0.535	96	Weighted Average
0.071		13.27% Pervious Area
0.464		86.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

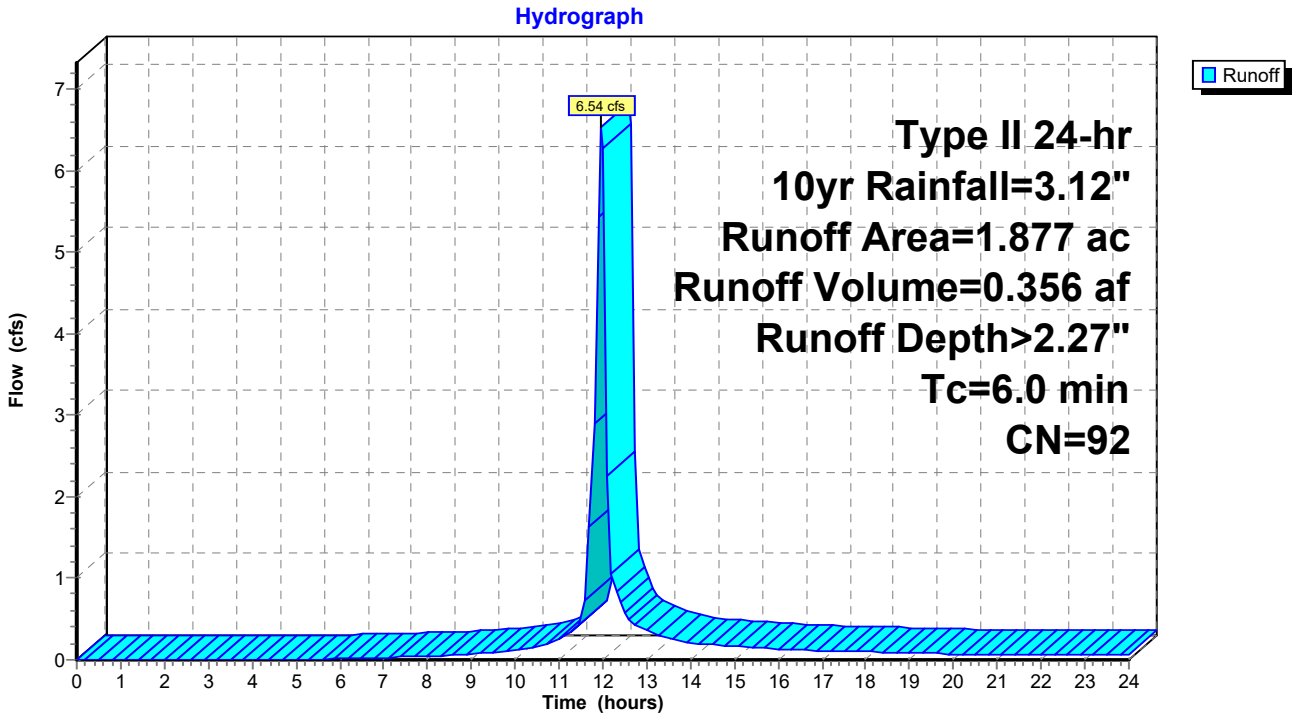
Runoff = 6.54 cfs @ 11.97 hrs, Volume= 0.356 af, Depth> 2.27"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
1.215	98	Paved roads w/curbs & sewers, HSG D
0.662	80	>75% Grass cover, Good, HSG D
1.877	92	Weighted Average
0.662		35.27% Pervious Area
1.215		64.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

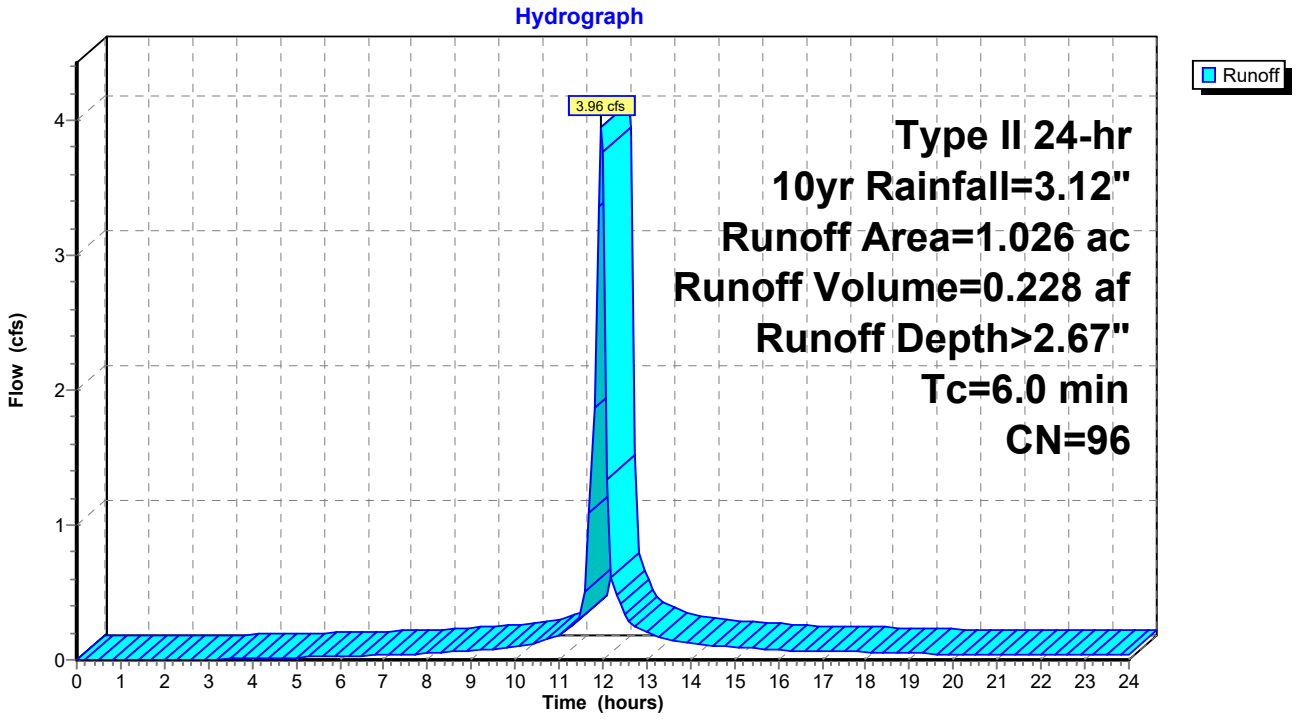
Runoff = 3.96 cfs @ 11.96 hrs, Volume= 0.228 af, Depth> 2.67"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.893	98	Paved roads w/curbs & sewers, HSG D
0.133	80	>75% Grass cover, Good, HSG D
1.026	96	Weighted Average
0.133		12.96% Pervious Area
0.893		87.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

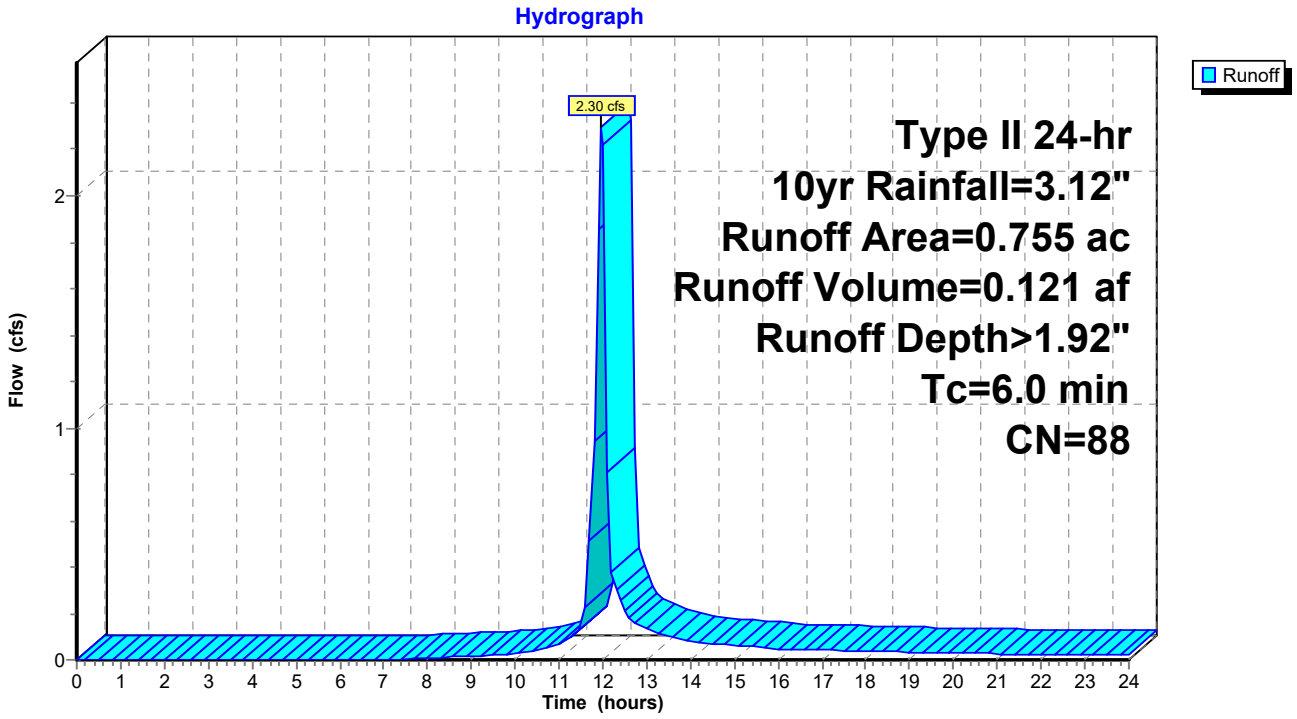
Runoff = 2.30 cfs @ 11.97 hrs, Volume= 0.121 af, Depth> 1.92"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.343	98	Paved roads w/curbs & sewers, HSG D
0.412	80	>75% Grass cover, Good, HSG D
0.755	88	Weighted Average
0.412		54.57% Pervious Area
0.343		45.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

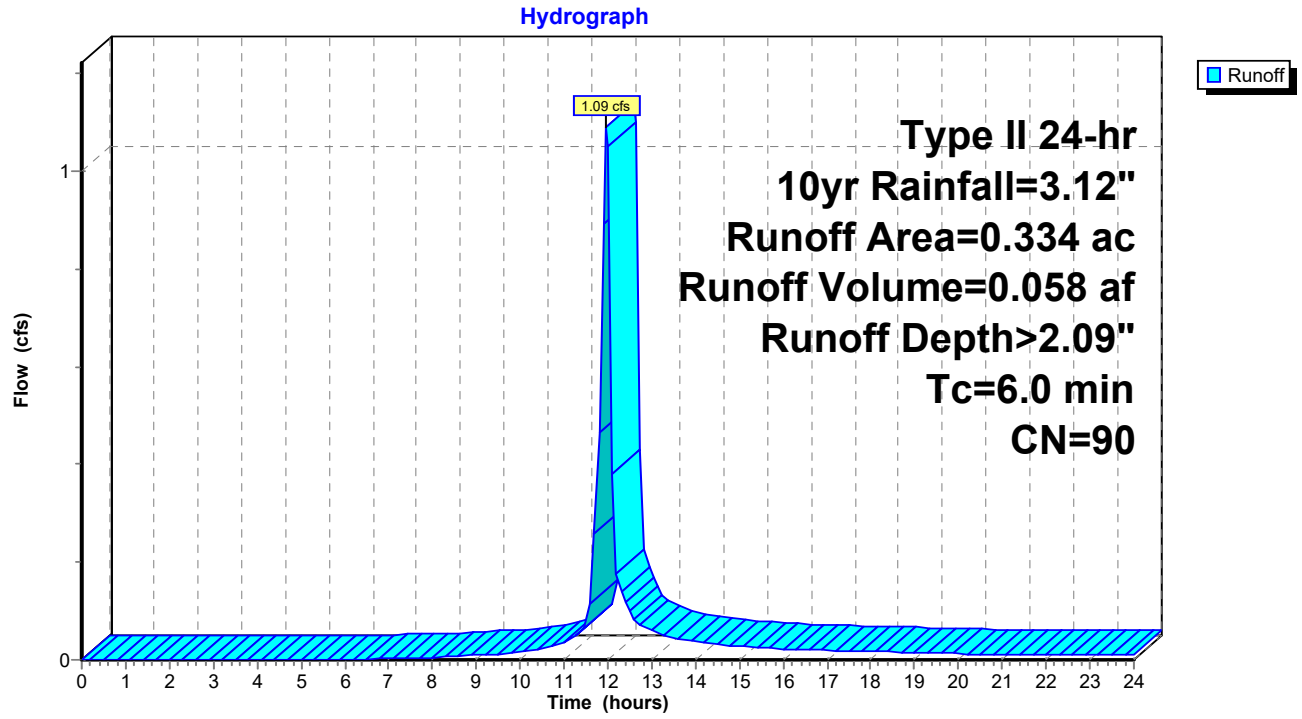
Runoff = 1.09 cfs @ 11.97 hrs, Volume= 0.058 af, Depth> 2.09"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.187	98	Paved roads w/curbs & sewers, HSG D
0.147	80	>75% Grass cover, Good, HSG D
0.334	90	Weighted Average
0.147		44.01% Pervious Area
0.187		55.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

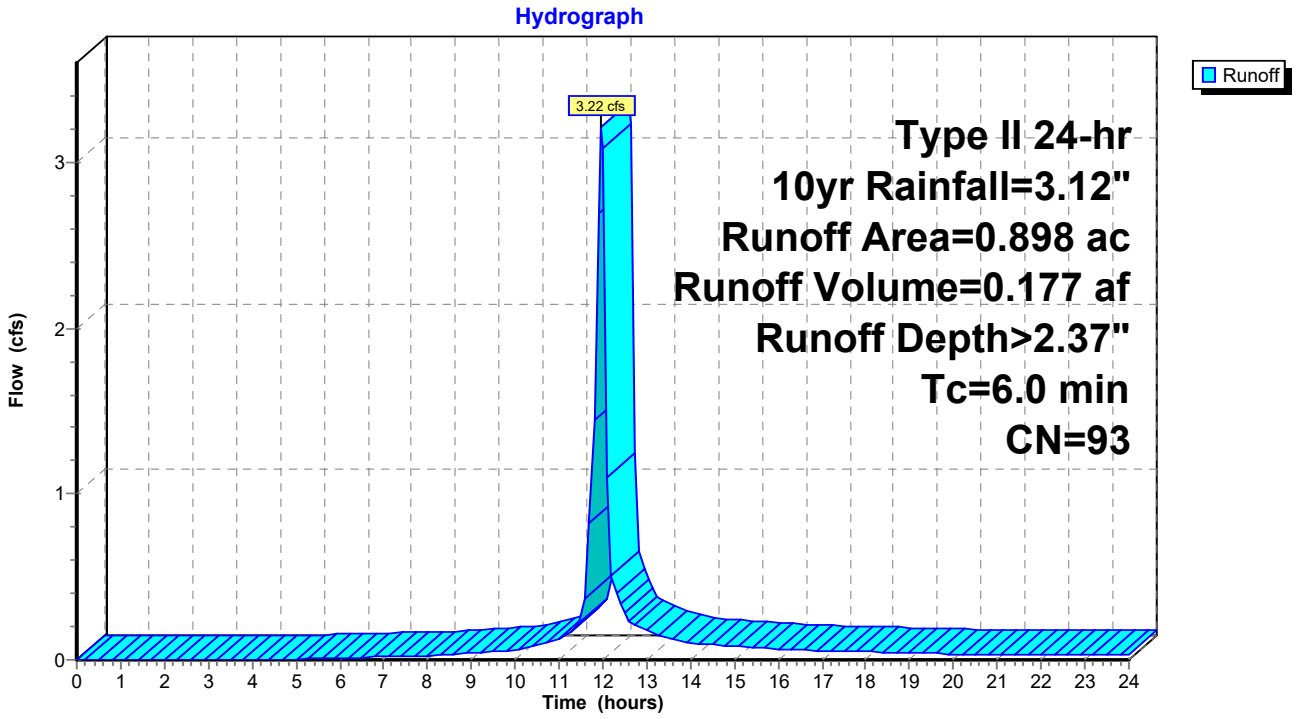
Runoff = 3.22 cfs @ 11.97 hrs, Volume= 0.177 af, Depth> 2.37"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 10yr Rainfall=3.12"

Area (ac)	CN	Description
0.631	98	Paved roads w/curbs & sewers, HSG D
0.267	80	>75% Grass cover, Good, HSG D
0.898	93	Weighted Average
0.267		29.73% Pervious Area
0.631		70.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

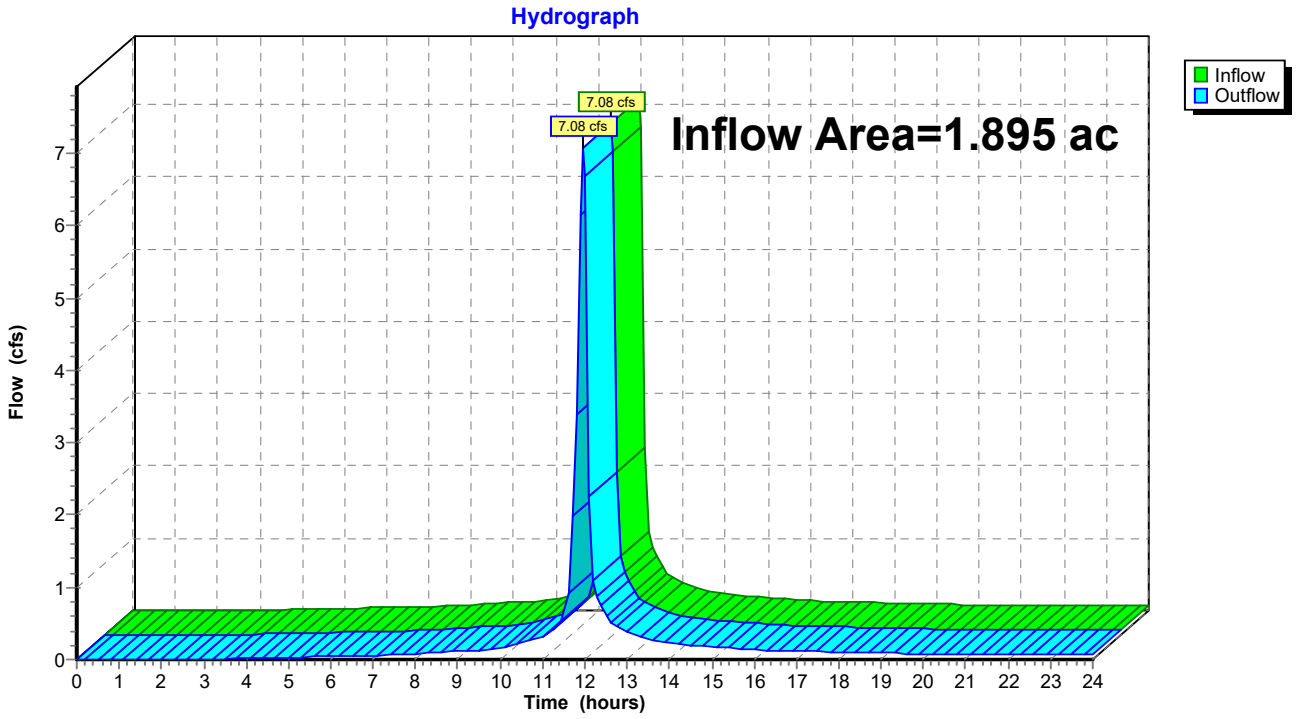
Summary for Reach 3R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 81.48% Impervious, Inflow Depth > 2.57" for 10yr event
Inflow = 7.08 cfs @ 11.96 hrs, Volume= 0.405 af
Outflow = 7.08 cfs @ 11.96 hrs, Volume= 0.405 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 3R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

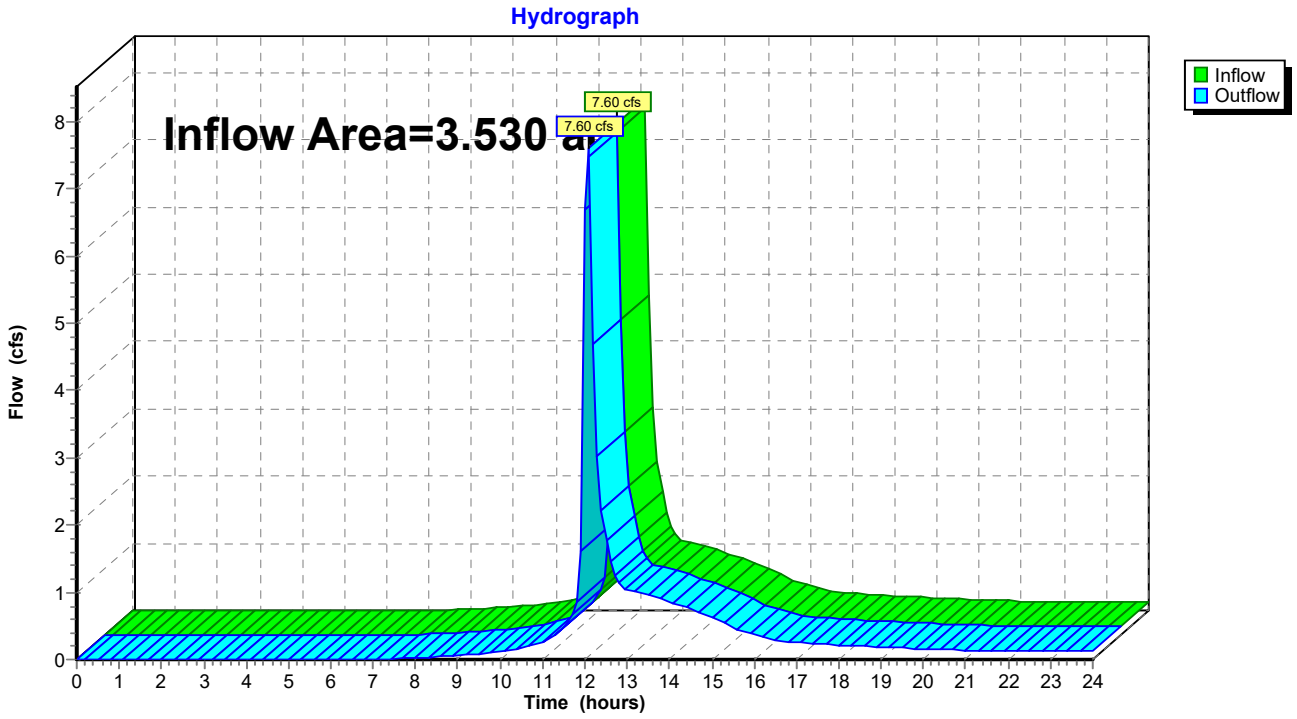
Summary for Reach 16R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 2.16" for 10yr event
Inflow = 7.60 cfs @ 12.07 hrs, Volume= 0.634 af
Outflow = 7.60 cfs @ 12.07 hrs, Volume= 0.634 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 16R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

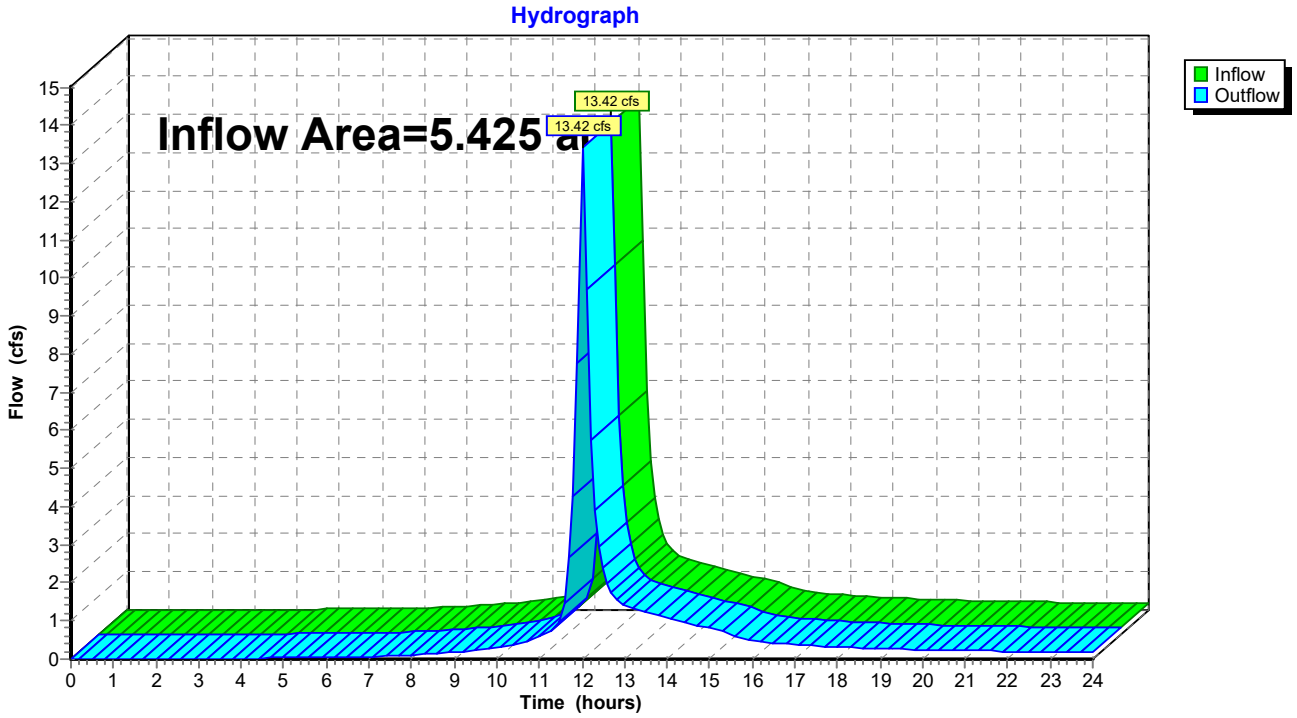
Summary for Reach 28R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 68.81% Impervious, Inflow Depth > 2.30" for 10yr event
Inflow = 13.42 cfs @ 12.01 hrs, Volume= 1.040 af
Outflow = 13.42 cfs @ 12.01 hrs, Volume= 1.040 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 28R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Pond 31P: Dry Ponds

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 2.22" for 10yr event
Inflow = 12.06 cfs @ 11.97 hrs, Volume= 0.654 af
Outflow = 7.60 cfs @ 12.07 hrs, Volume= 0.634 af, Atten= 37%, Lag= 6.2 min
Primary = 7.60 cfs @ 12.07 hrs, Volume= 0.634 af
Routed to Reach 16R : Smith Site Comp

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 577.07' @ 12.07 hrs Surf.Area= 6,216 sf Storage= 8,817 cf

Plug-Flow detention time= 63.0 min calculated for 0.634 af (97% of inflow)
Center-of-Mass det. time= 45.1 min (842.0 - 796.9)

Volume	Invert	Avail.Storage	Storage Description
#1	575.36'	15,176 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

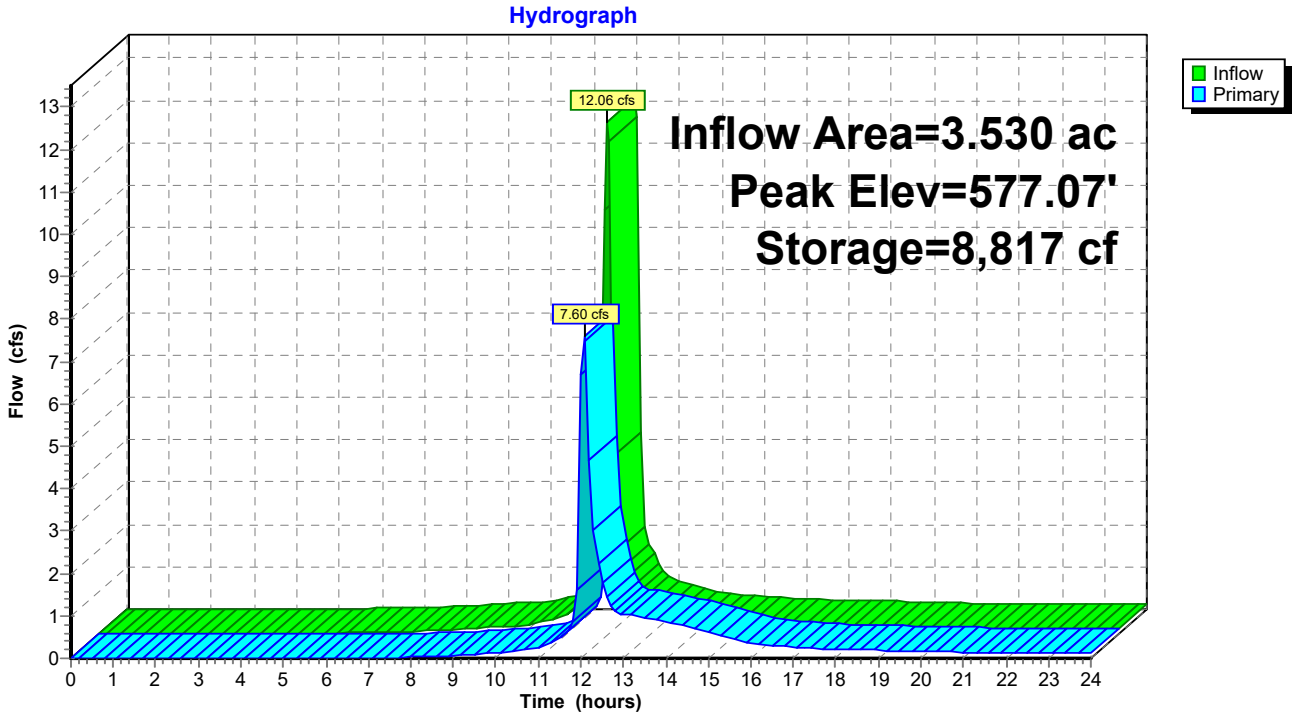
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
575.36	3,329	227.0	0	0	3,329
575.48	4,363	359.0	460	460	9,485
576.00	4,938	379.0	2,417	2,877	10,675
577.00	6,132	417.0	5,524	8,401	13,114
578.00	7,438	455.0	6,775	15,176	15,787

Device	Routing	Invert	Outlet Devices
#1	Primary	575.36'	**12.0" Round Culvert** L= 53.9' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 575.36' / 575.20' S= 0.0030 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf
#2	Device 1	575.36'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	577.20'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	576.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.40 Width (feet) 4.50 4.50 4.50

Primary OutFlow Max=7.24 cfs @ 12.07 hrs HW=577.04' (Free Discharge)
- **1=Culvert** (Passes 1.32 cfs of 3.39 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.32 cfs @ 5.93 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Custom Weir/Orifice** (Weir Controls 5.92 cfs @ 2.42 fps)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Pond 31P: Dry Ponds



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR 1D: Dann Site Runoff Area=0.535 ac 86.73% Impervious Runoff Depth>3.35"
Tc=5.0 min CN=96 Runoff=2.47 cfs 0.149 af

SubcatchmentPR 1S: Smith Site Runoff Area=1.877 ac 64.73% Impervious Runoff Depth>2.93"
Tc=6.0 min CN=92 Runoff=8.30 cfs 0.459 af

SubcatchmentPR 2D: Dann Site Runoff Area=1.026 ac 87.04% Impervious Runoff Depth>3.35"
Tc=6.0 min CN=96 Runoff=4.90 cfs 0.286 af

SubcatchmentPR 2S: Smith Site Runoff Area=0.755 ac 45.43% Impervious Runoff Depth>2.55"
Tc=6.0 min CN=88 Runoff=3.01 cfs 0.161 af

SubcatchmentPR 3D: Dann Site Runoff Area=0.334 ac 55.99% Impervious Runoff Depth>2.74"
Tc=6.0 min CN=90 Runoff=1.41 cfs 0.076 af

SubcatchmentPR 3S: Smith Site Runoff Area=0.898 ac 70.27% Impervious Runoff Depth>3.03"
Tc=6.0 min CN=93 Runoff=4.06 cfs 0.227 af

Reach 3R: Dann Site Comp Inflow=8.81 cfs 0.512 af
Outflow=8.81 cfs 0.512 af

Reach 16R: Smith Site Comp Inflow=11.20 cfs 0.824 af
Outflow=11.20 cfs 0.824 af

Reach 28R: Project Comp Inflow=18.90 cfs 1.336 af
Outflow=18.90 cfs 1.336 af

Pond 31P: Dry Ponds Peak Elev=577.26' Storage=10,058 cf Inflow=15.37 cfs 0.846 af
Outflow=11.20 cfs 0.824 af

Total Runoff Area = 5.425 ac Runoff Volume = 1.358 af Average Runoff Depth = 3.00"
31.19% Pervious = 1.692 ac 68.81% Impervious = 3.733 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

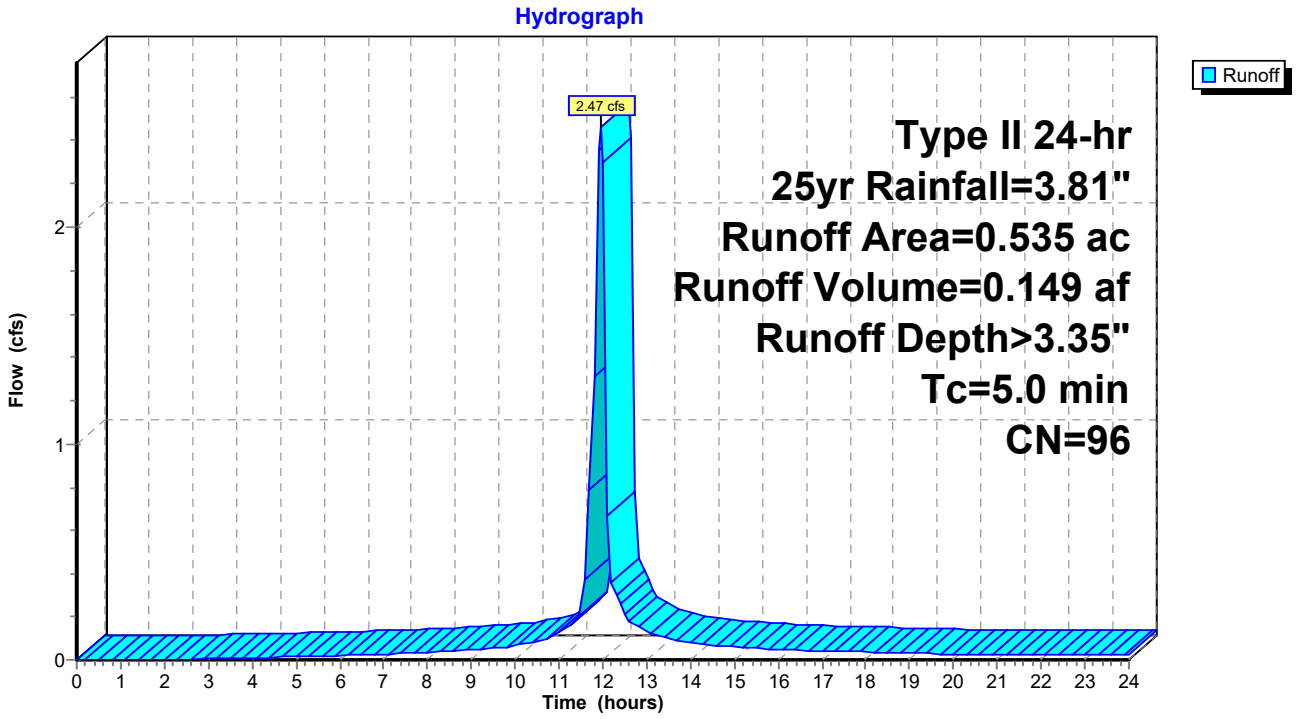
Runoff = 2.47 cfs @ 11.94 hrs, Volume= 0.149 af, Depth> 3.35"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.464	98	Paved roads w/curbs & sewers, HSG D
0.071	80	>75% Grass cover, Good, HSG D
0.535	96	Weighted Average
0.071		13.27% Pervious Area
0.464		86.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

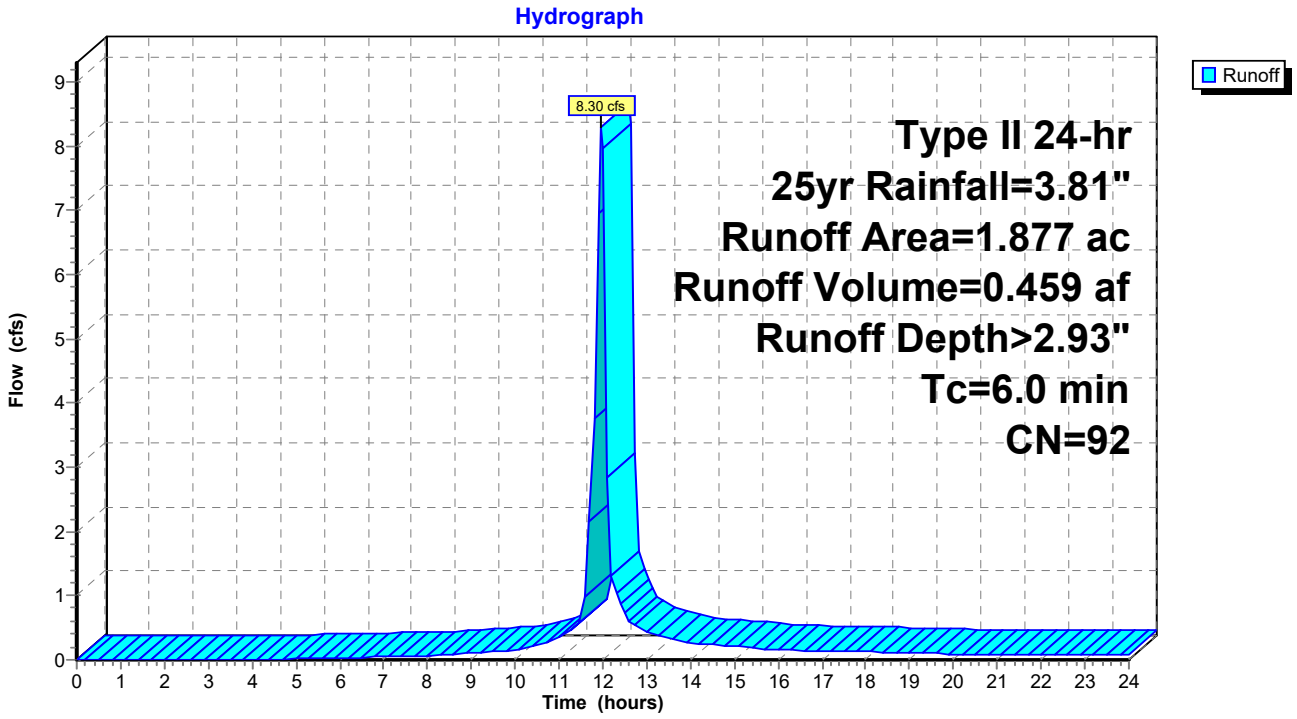
Runoff = 8.30 cfs @ 11.97 hrs, Volume= 0.459 af, Depth> 2.93"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
1.215	98	Paved roads w/curbs & sewers, HSG D
0.662	80	>75% Grass cover, Good, HSG D
1.877	92	Weighted Average
0.662		35.27% Pervious Area
1.215		64.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

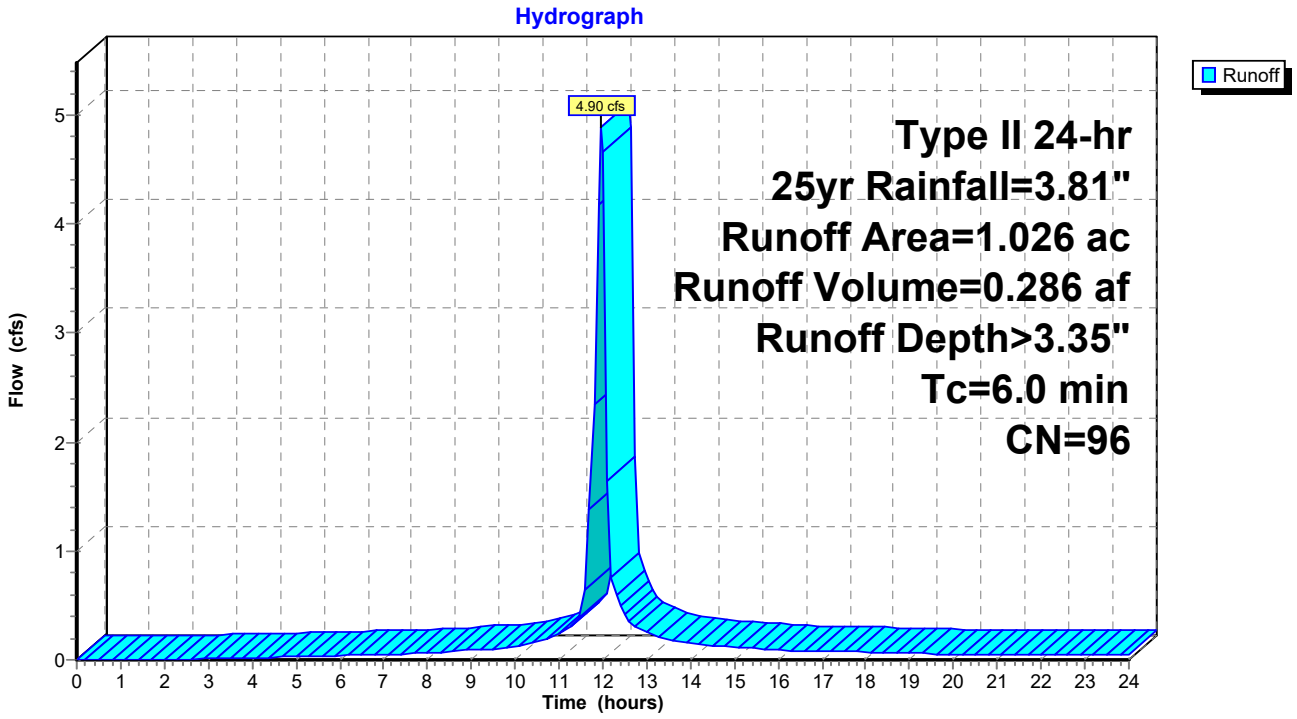
Runoff = 4.90 cfs @ 11.96 hrs, Volume= 0.286 af, Depth> 3.35"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.893	98	Paved roads w/curbs & sewers, HSG D
0.133	80	>75% Grass cover, Good, HSG D
1.026	96	Weighted Average
0.133		12.96% Pervious Area
0.893		87.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

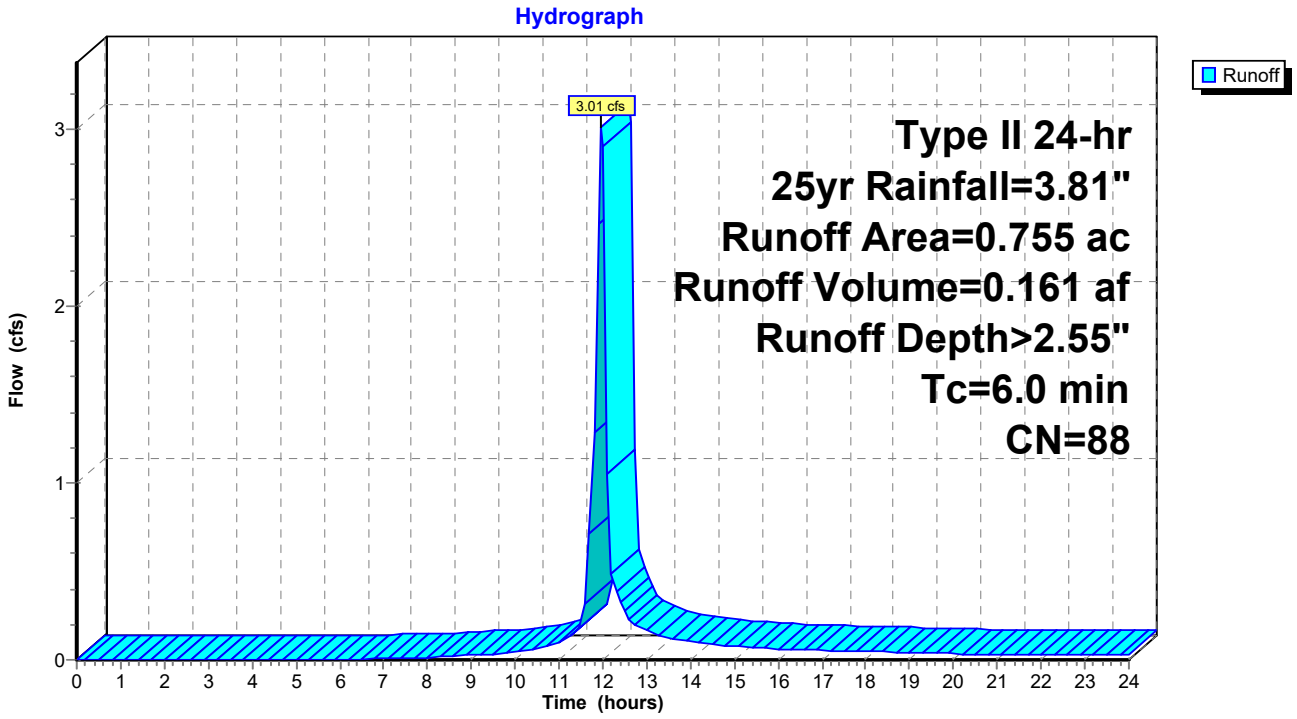
Runoff = 3.01 cfs @ 11.97 hrs, Volume= 0.161 af, Depth> 2.55"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.343	98	Paved roads w/curbs & sewers, HSG D
0.412	80	>75% Grass cover, Good, HSG D
0.755	88	Weighted Average
0.412		54.57% Pervious Area
0.343		45.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

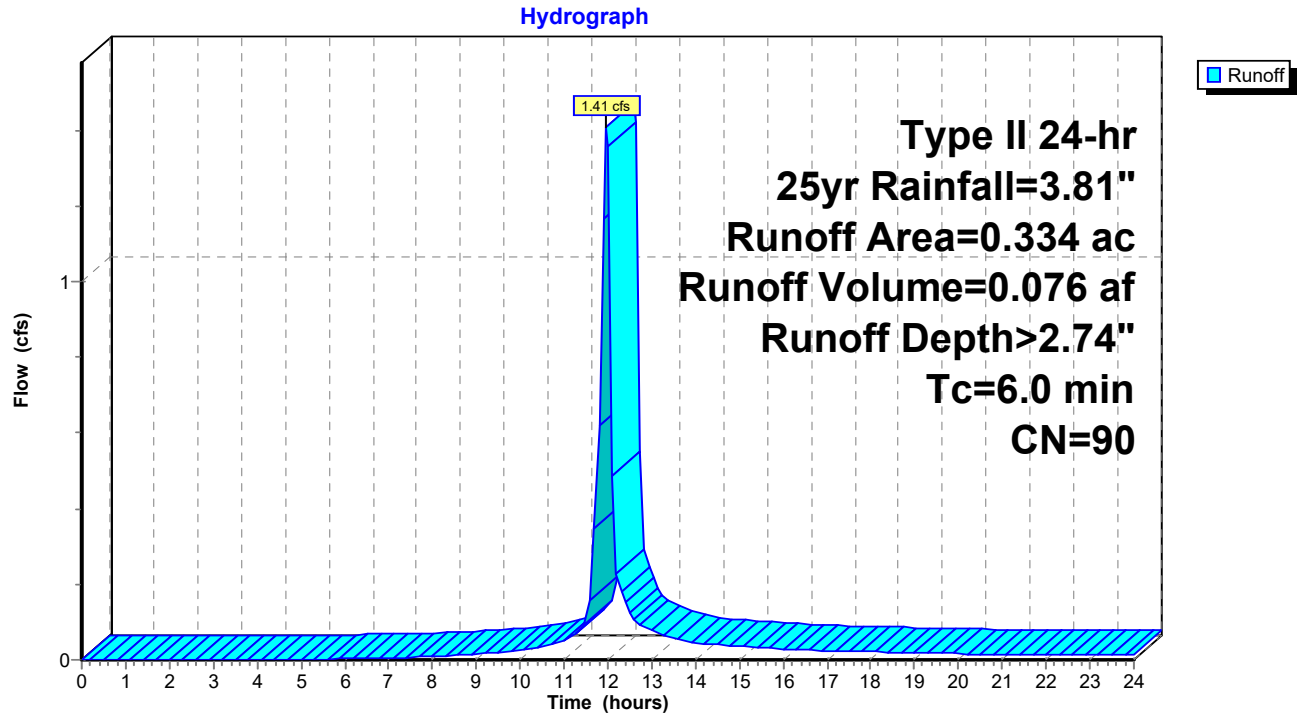
Runoff = 1.41 cfs @ 11.97 hrs, Volume= 0.076 af, Depth> 2.74"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.187	98	Paved roads w/curbs & sewers, HSG D
0.147	80	>75% Grass cover, Good, HSG D
0.334	90	Weighted Average
0.147		44.01% Pervious Area
0.187		55.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

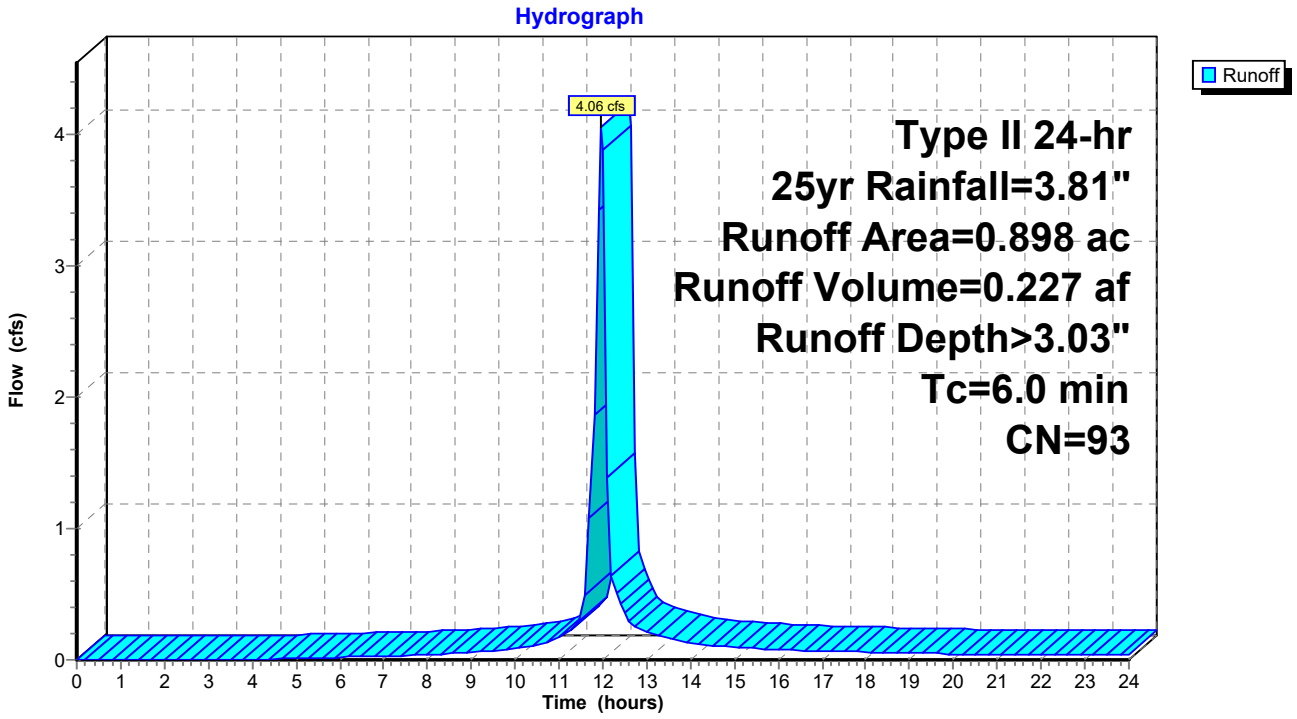
Runoff = 4.06 cfs @ 11.97 hrs, Volume= 0.227 af, Depth> 3.03"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr Rainfall=3.81"

Area (ac)	CN	Description
0.631	98	Paved roads w/curbs & sewers, HSG D
0.267	80	>75% Grass cover, Good, HSG D
0.898	93	Weighted Average
0.267		29.73% Pervious Area
0.631		70.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

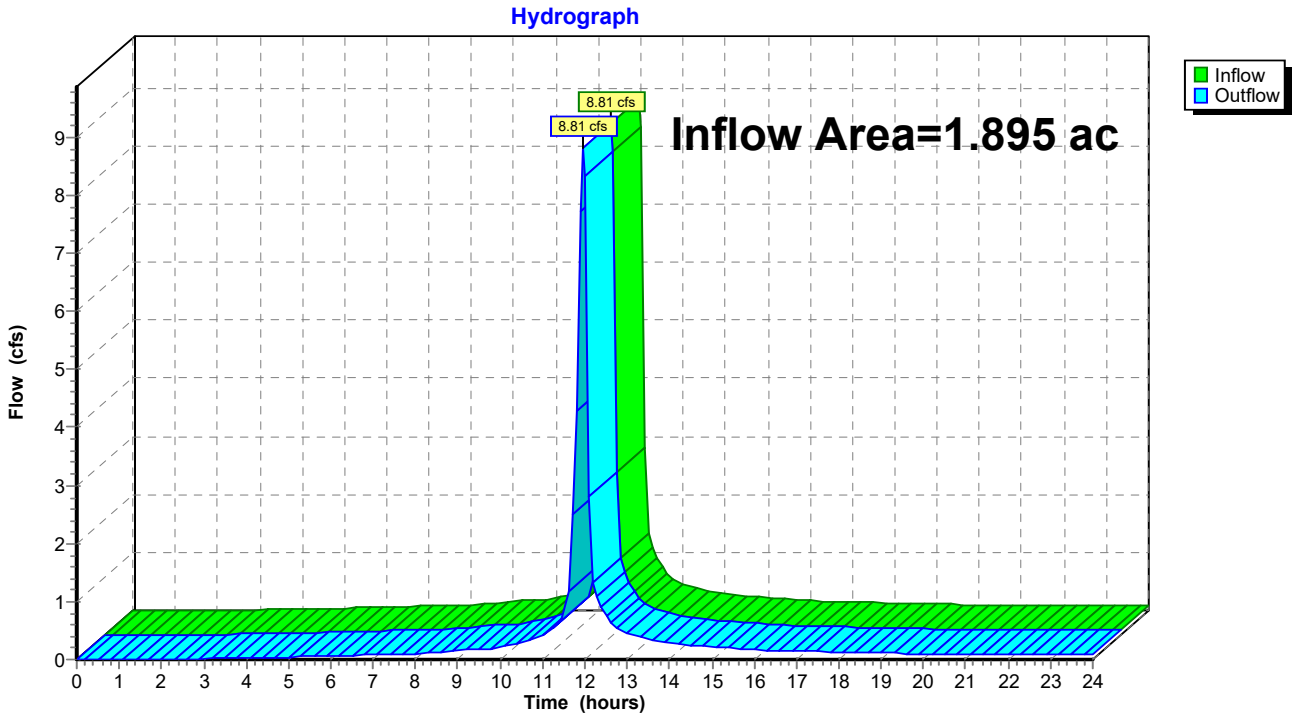
Summary for Reach 3R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 81.48% Impervious, Inflow Depth > 3.24" for 25yr event
Inflow = 8.81 cfs @ 11.96 hrs, Volume= 0.512 af
Outflow = 8.81 cfs @ 11.96 hrs, Volume= 0.512 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 3R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

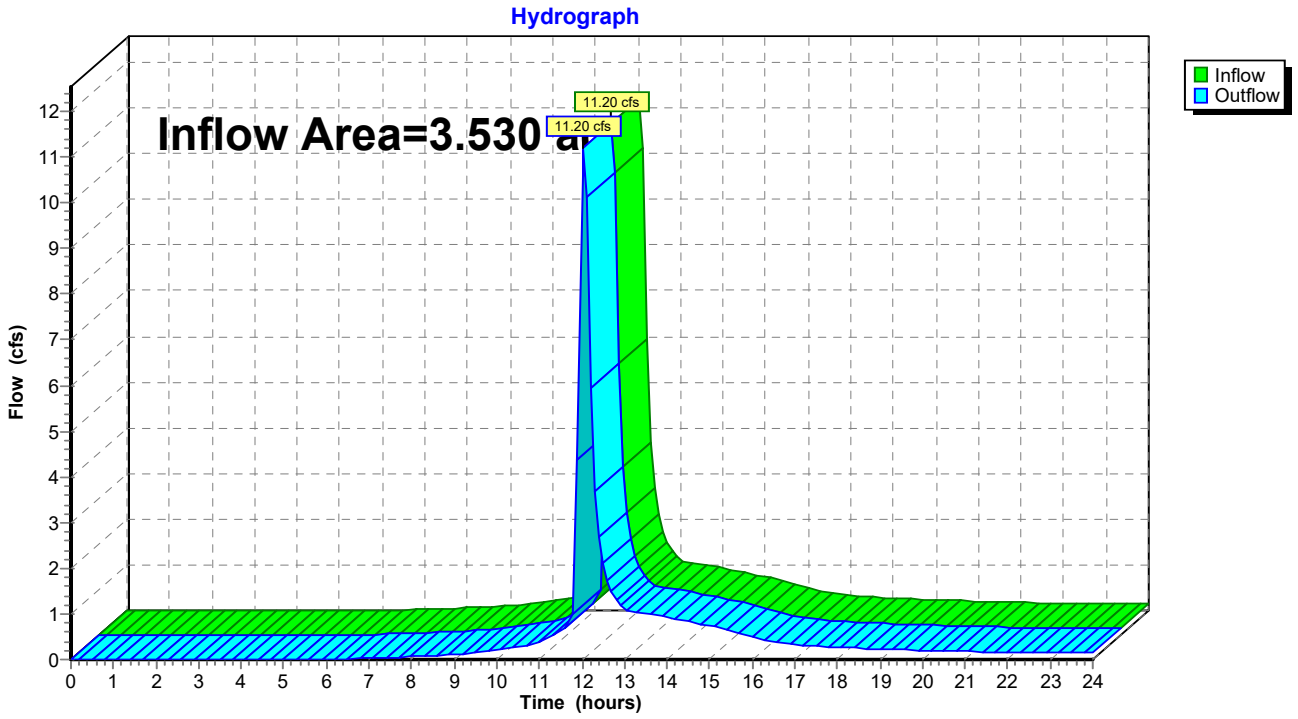
Summary for Reach 16R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 2.80" for 25yr event
Inflow = 11.20 cfs @ 12.04 hrs, Volume= 0.824 af
Outflow = 11.20 cfs @ 12.04 hrs, Volume= 0.824 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 16R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

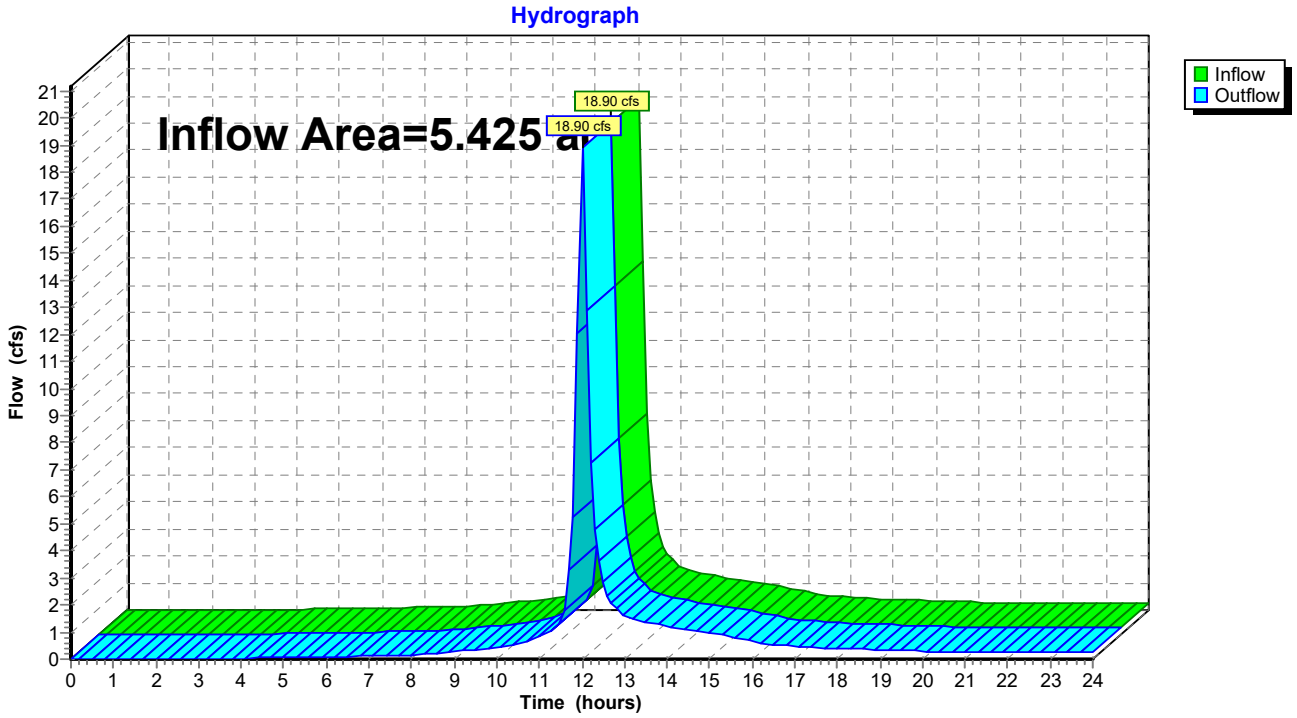
Summary for Reach 28R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 68.81% Impervious, Inflow Depth > 2.96" for 25yr event
Inflow = 18.90 cfs @ 12.00 hrs, Volume= 1.336 af
Outflow = 18.90 cfs @ 12.00 hrs, Volume= 1.336 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 28R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Pond 31P: Dry Ponds

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 2.88" for 25yr event
Inflow = 15.37 cfs @ 11.97 hrs, Volume= 0.846 af
Outflow = 11.20 cfs @ 12.04 hrs, Volume= 0.824 af, Atten= 27%, Lag= 4.6 min
Primary = 11.20 cfs @ 12.04 hrs, Volume= 0.824 af
Routed to Reach 16R : Smith Site Comp

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 577.26' @ 12.05 hrs Surf.Area= 6,463 sf Storage= 10,058 cf

Plug-Flow detention time= 56.3 min calculated for 0.821 af (97% of inflow)
Center-of-Mass det. time= 40.7 min (830.5 - 789.8)

Volume	Invert	Avail.Storage	Storage Description
#1	575.36'	15,176 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

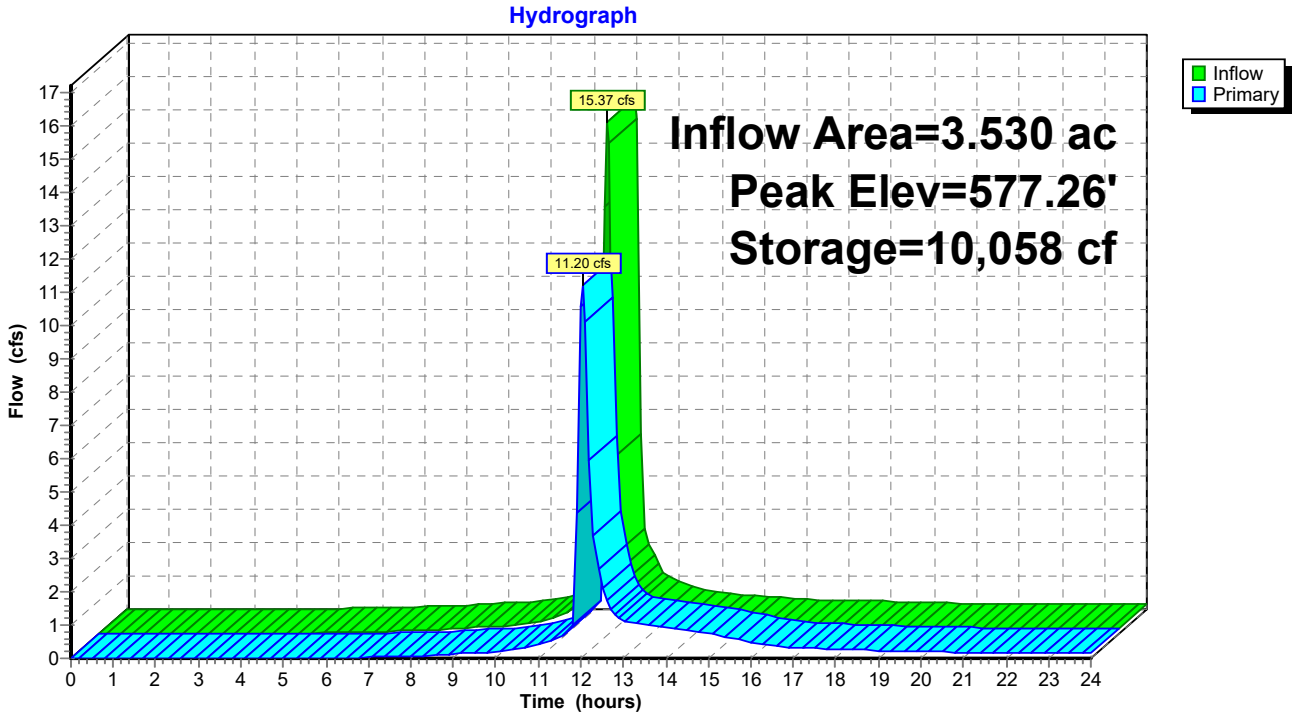
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
575.36	3,329	227.0	0	0	3,329
575.48	4,363	359.0	460	460	9,485
576.00	4,938	379.0	2,417	2,877	10,675
577.00	6,132	417.0	5,524	8,401	13,114
578.00	7,438	455.0	6,775	15,176	15,787

Device	Routing	Invert	Outlet Devices
#1	Primary	575.36'	**12.0" Round Culvert** L= 53.9' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 575.36' / 575.20' S= 0.0030 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf
#2	Device 1	575.36'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	577.20'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	576.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.40 Width (feet) 4.50 4.50 4.50

Primary OutFlow Max=10.36 cfs @ 12.04 hrs HW=577.22' (Free Discharge)
- **1=Culvert** (Passes 1.44 cfs of 3.72 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.39 cfs @ 6.25 fps)
  - **3=Orifice/Grate** (Weir Controls 0.05 cfs @ 0.41 fps)
- **4=Custom Weir/Orifice** (Weir Controls 8.92 cfs @ 2.77 fps)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Pond 31P: Dry Ponds



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR 1D: Dann Site Runoff Area=0.535 ac 86.73% Impervious Runoff Depth>4.70"
Tc=5.0 min CN=96 Runoff=3.40 cfs 0.210 af

SubcatchmentPR 1S: Smith Site Runoff Area=1.877 ac 64.73% Impervious Runoff Depth>4.25"
Tc=6.0 min CN=92 Runoff=11.75 cfs 0.665 af

SubcatchmentPR 2D: Dann Site Runoff Area=1.026 ac 87.04% Impervious Runoff Depth>4.70"
Tc=6.0 min CN=96 Runoff=6.73 cfs 0.402 af

SubcatchmentPR 2S: Smith Site Runoff Area=0.755 ac 45.43% Impervious Runoff Depth>3.83"
Tc=6.0 min CN=88 Runoff=4.41 cfs 0.241 af

SubcatchmentPR 3D: Dann Site Runoff Area=0.334 ac 55.99% Impervious Runoff Depth>4.04"
Tc=6.0 min CN=90 Runoff=2.02 cfs 0.112 af

SubcatchmentPR 3S: Smith Site Runoff Area=0.898 ac 70.27% Impervious Runoff Depth>4.36"
Tc=6.0 min CN=93 Runoff=5.70 cfs 0.326 af

Reach 3R: Dann Site Comp Inflow=12.21 cfs 0.724 af
Outflow=12.21 cfs 0.724 af

Reach 16R: Smith Site Comp Inflow=18.99 cfs 1.206 af
Outflow=18.99 cfs 1.206 af

Reach 28R: Project Comp Inflow=30.36 cfs 1.930 af
Outflow=30.36 cfs 1.930 af

Pond 31P: Dry Ponds Peak Elev=577.50' Storage=11,624 cf Inflow=21.85 cfs 1.233 af
Outflow=18.99 cfs 1.206 af

Total Runoff Area = 5.425 ac Runoff Volume = 1.956 af Average Runoff Depth = 4.33"
31.19% Pervious = 1.692 ac 68.81% Impervious = 3.733 ac

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

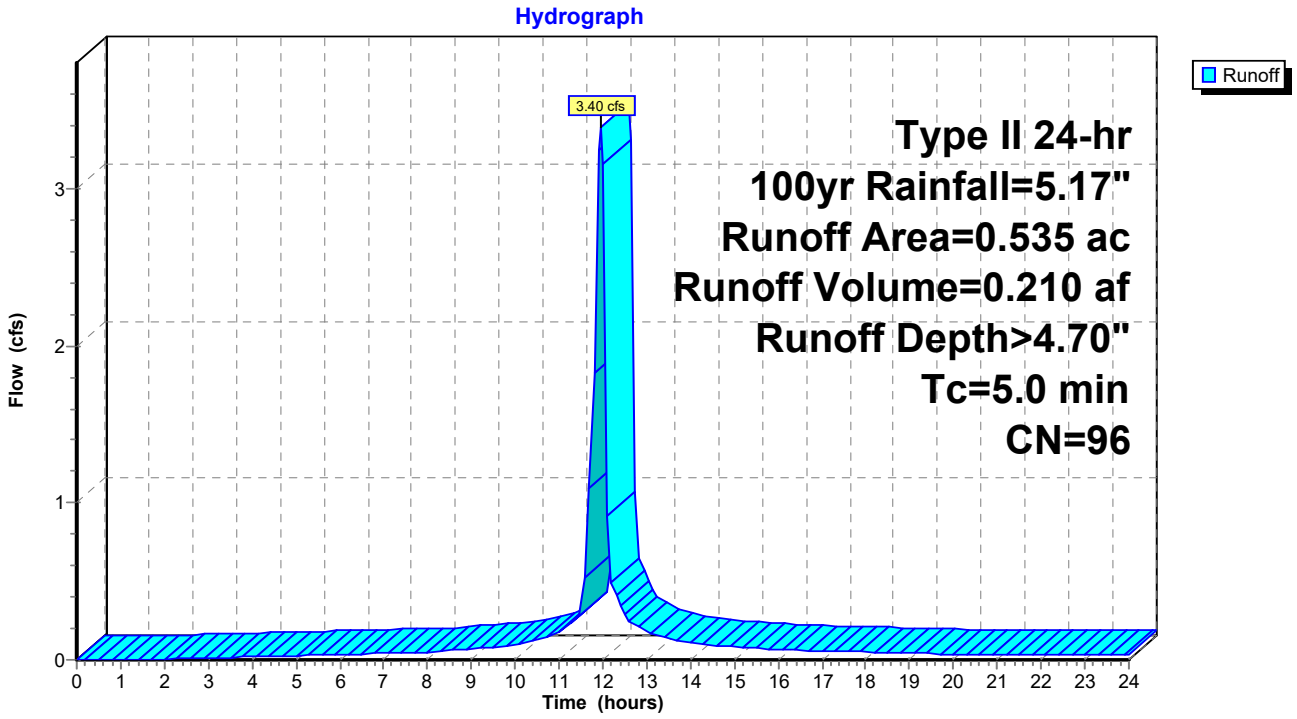
Runoff = 3.40 cfs @ 11.94 hrs, Volume= 0.210 af, Depth> 4.70"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.464	98	Paved roads w/curbs & sewers, HSG D
0.071	80	>75% Grass cover, Good, HSG D
0.535	96	Weighted Average
0.071		13.27% Pervious Area
0.464		86.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 1S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

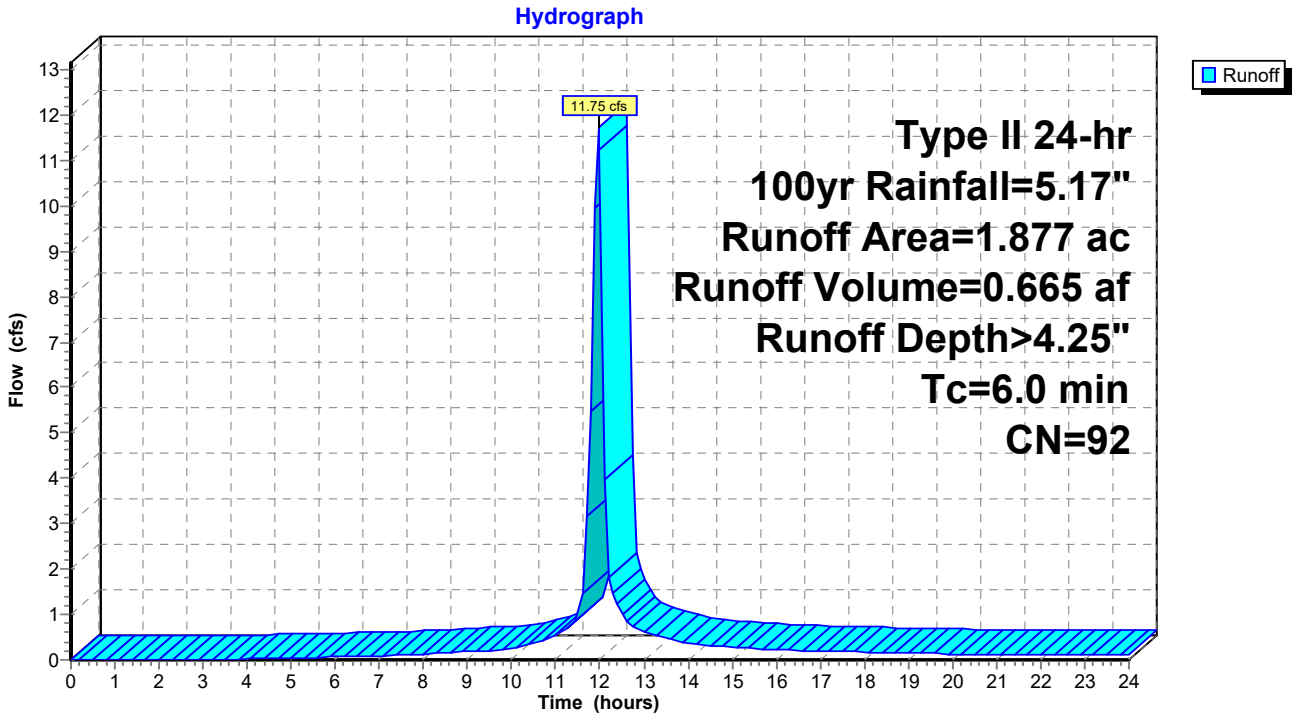
Runoff = 11.75 cfs @ 11.96 hrs, Volume= 0.665 af, Depth> 4.25"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
1.215	98	Paved roads w/curbs & sewers, HSG D
0.662	80	>75% Grass cover, Good, HSG D
1.877	92	Weighted Average
0.662		35.27% Pervious Area
1.215		64.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 1S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

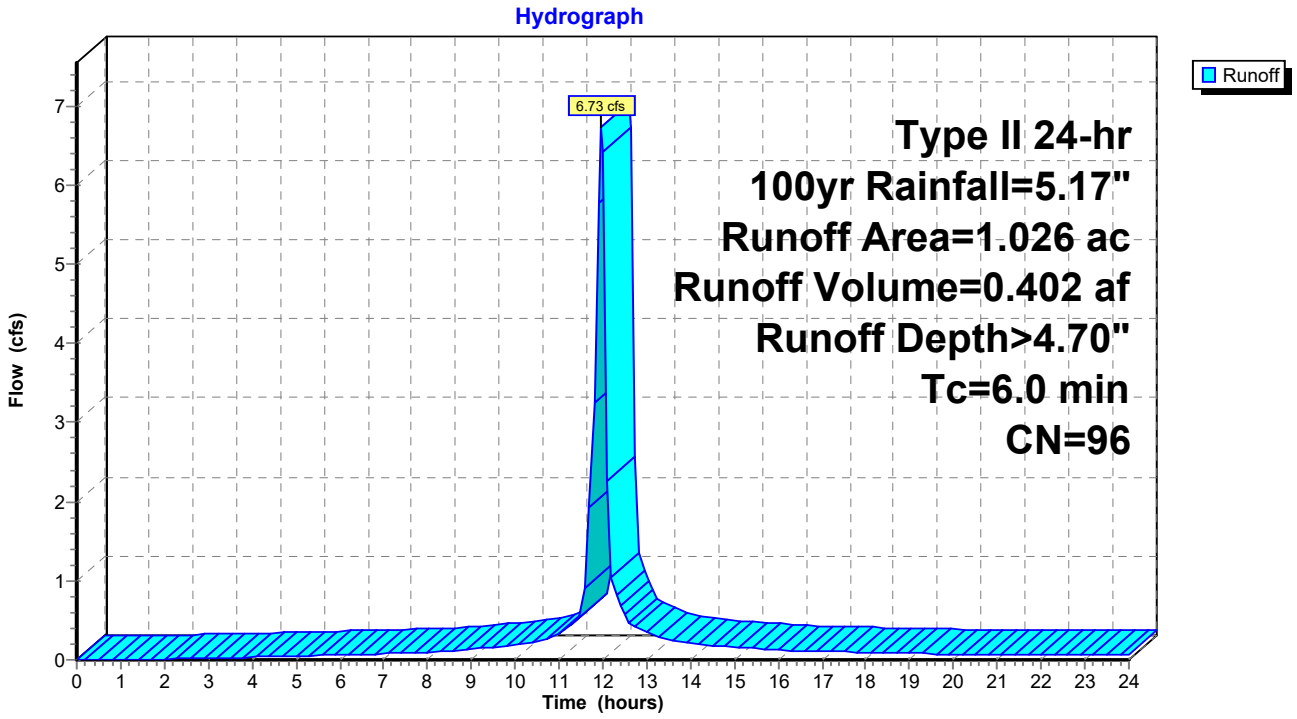
Runoff = 6.73 cfs @ 11.96 hrs, Volume= 0.402 af, Depth> 4.70"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.893	98	Paved roads w/curbs & sewers, HSG D
0.133	80	>75% Grass cover, Good, HSG D
1.026	96	Weighted Average
0.133		12.96% Pervious Area
0.893		87.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 2S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

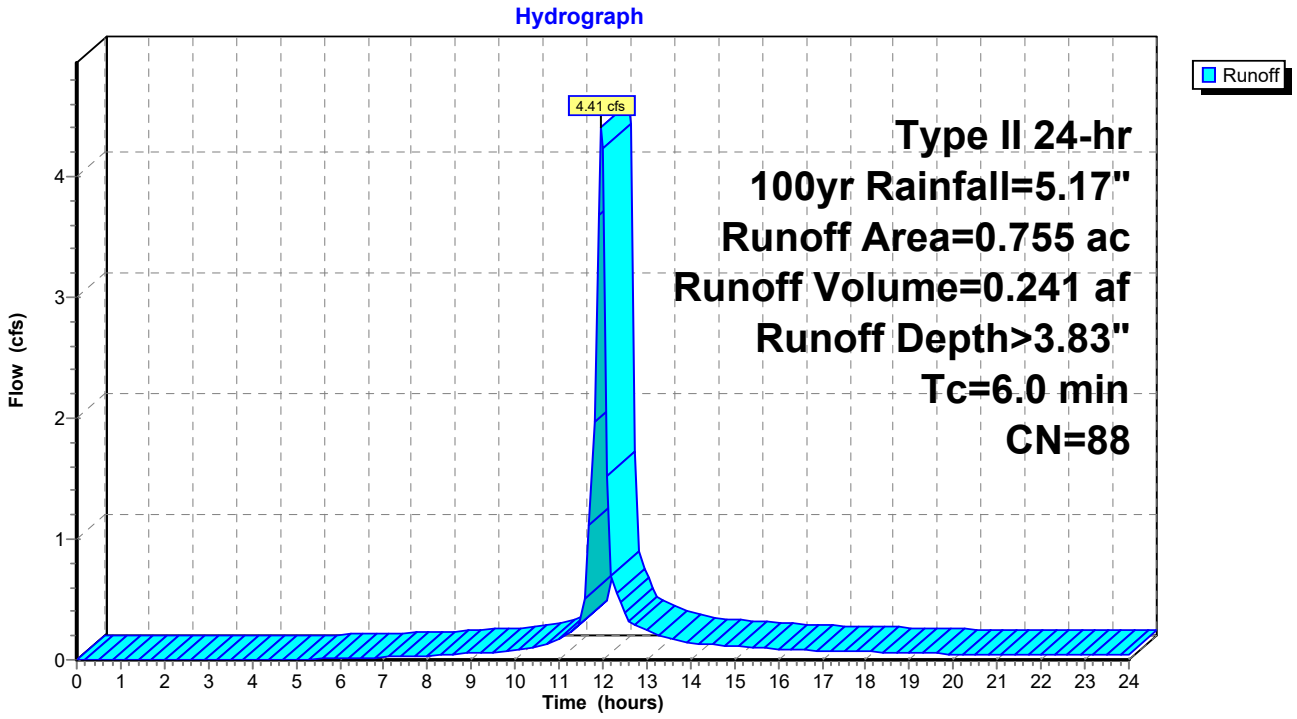
Runoff = 4.41 cfs @ 11.97 hrs, Volume= 0.241 af, Depth> 3.83"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.343	98	Paved roads w/curbs & sewers, HSG D
0.412	80	>75% Grass cover, Good, HSG D
0.755	88	Weighted Average
0.412		54.57% Pervious Area
0.343		45.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 2S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3D: Dann Site

[49] Hint: Tc<2dt may require smaller dt

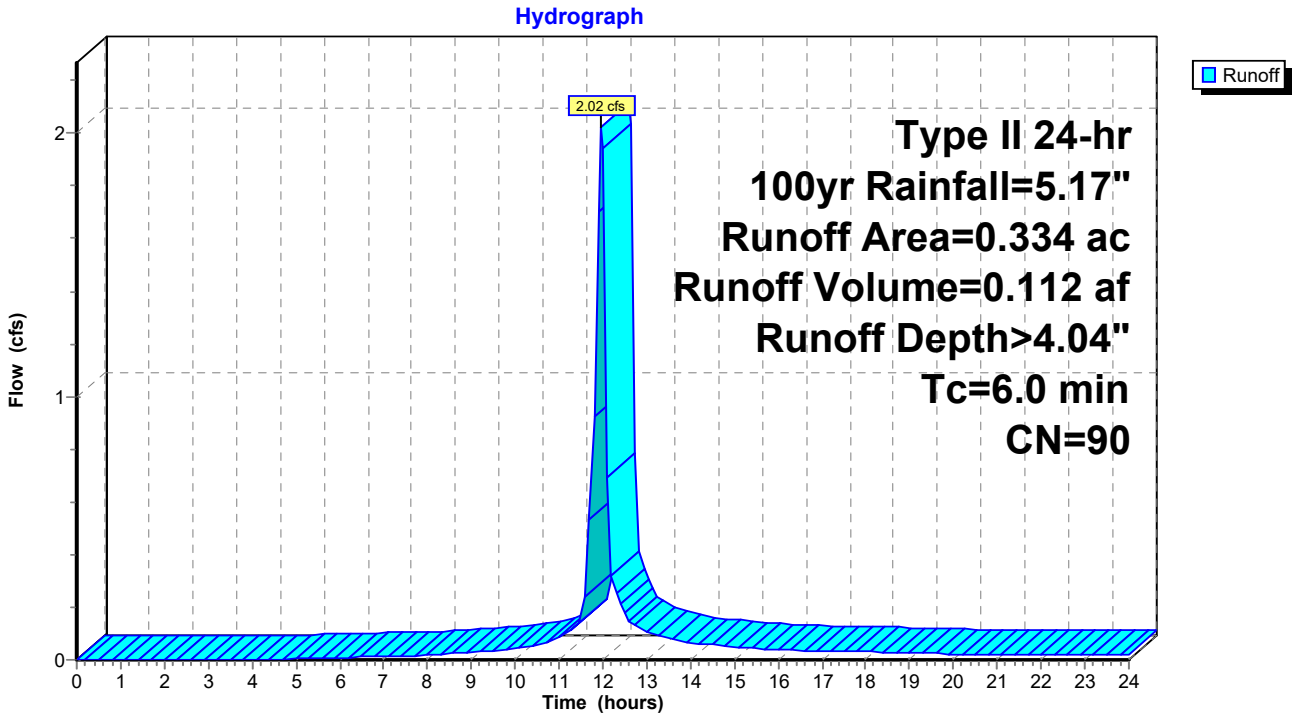
Runoff = 2.02 cfs @ 11.97 hrs, Volume= 0.112 af, Depth> 4.04"
Routed to Reach 3R : Dann Site Comp

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.187	98	Paved roads w/curbs & sewers, HSG D
0.147	80	>75% Grass cover, Good, HSG D
0.334	90	Weighted Average
0.147		44.01% Pervious Area
0.187		55.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3D: Dann Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Subcatchment PR 3S: Smith Site

[49] Hint: Tc<2dt may require smaller dt

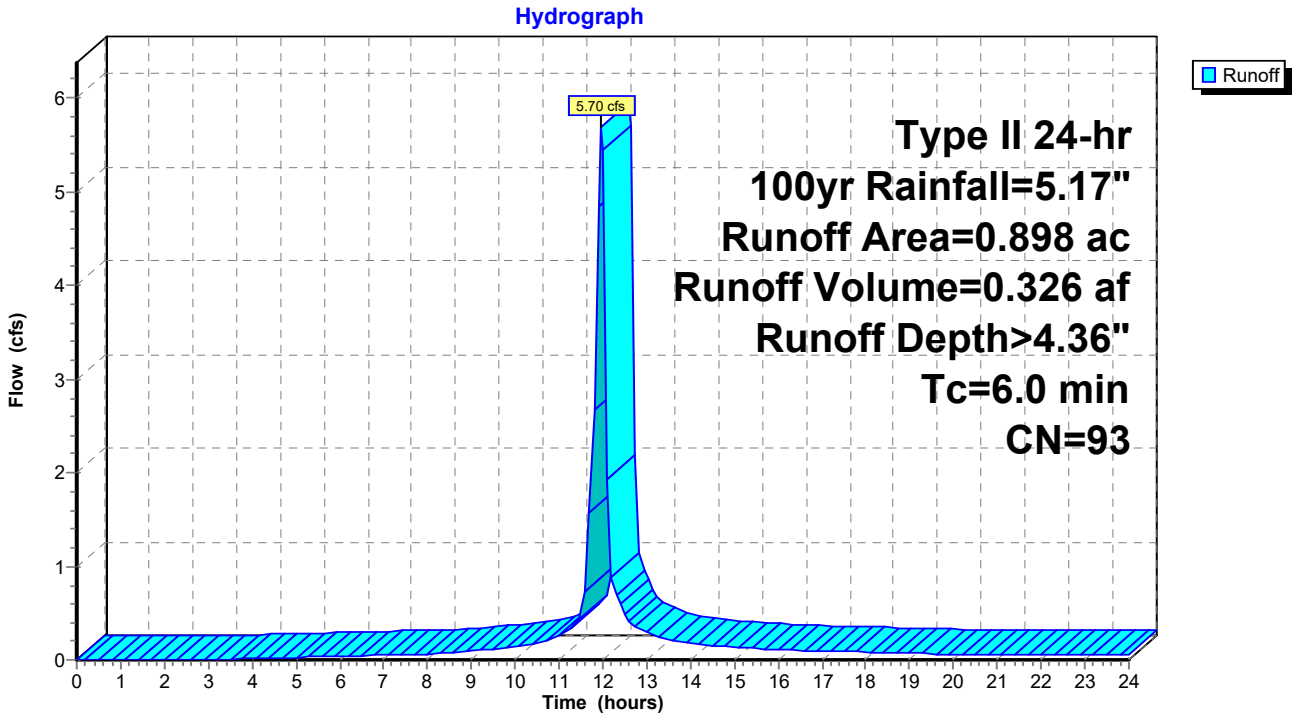
Runoff = 5.70 cfs @ 11.96 hrs, Volume= 0.326 af, Depth> 4.36"
Routed to Pond 31P : Dry Ponds

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type II 24-hr 100yr Rainfall=5.17"

Area (ac)	CN	Description
0.631	98	Paved roads w/curbs & sewers, HSG D
0.267	80	>75% Grass cover, Good, HSG D
0.898	93	Weighted Average
0.267		29.73% Pervious Area
0.631		70.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min. Assumption**

Subcatchment PR 3S: Smith Site



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

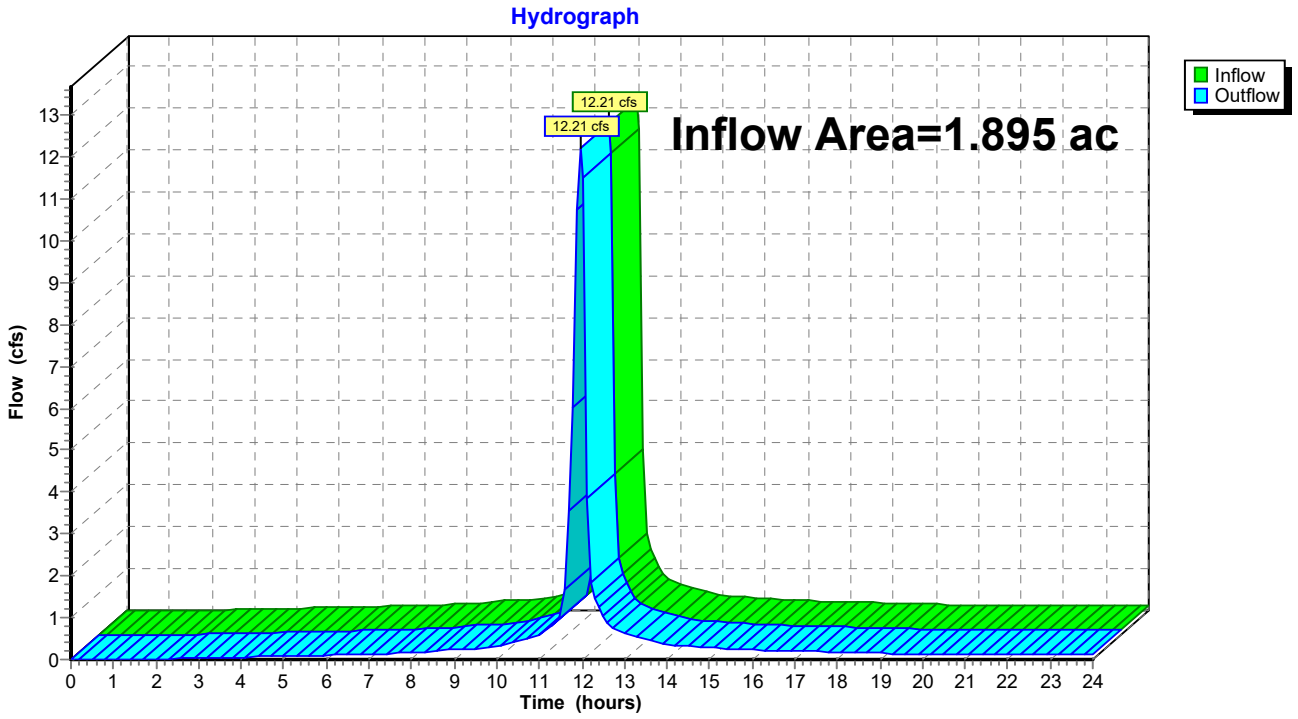
Summary for Reach 3R: Dann Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.895 ac, 81.48% Impervious, Inflow Depth > 4.58" for 100yr event
Inflow = 12.21 cfs @ 11.96 hrs, Volume= 0.724 af
Outflow = 12.21 cfs @ 11.96 hrs, Volume= 0.724 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 3R: Dann Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

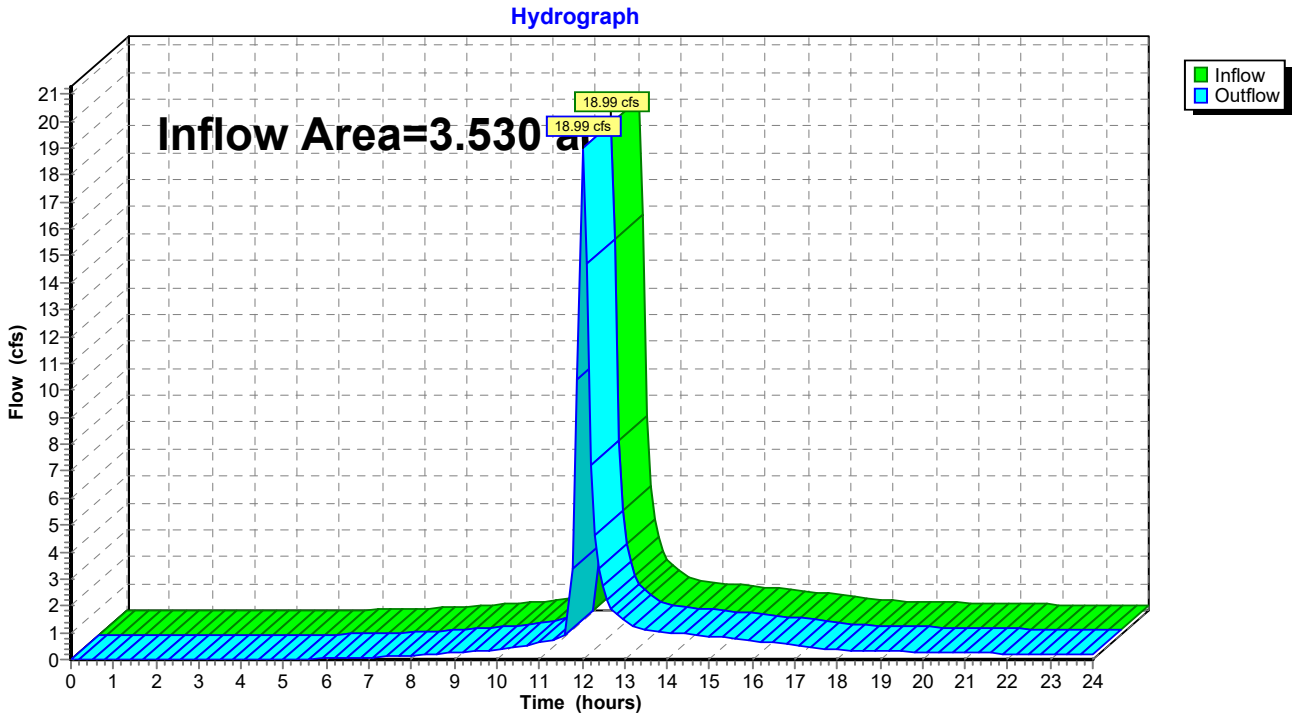
Summary for Reach 16R: Smith Site Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 4.10" for 100yr event
Inflow = 18.99 cfs @ 12.02 hrs, Volume= 1.206 af
Outflow = 18.99 cfs @ 12.02 hrs, Volume= 1.206 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 28R : Project Comp

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 16R: Smith Site Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

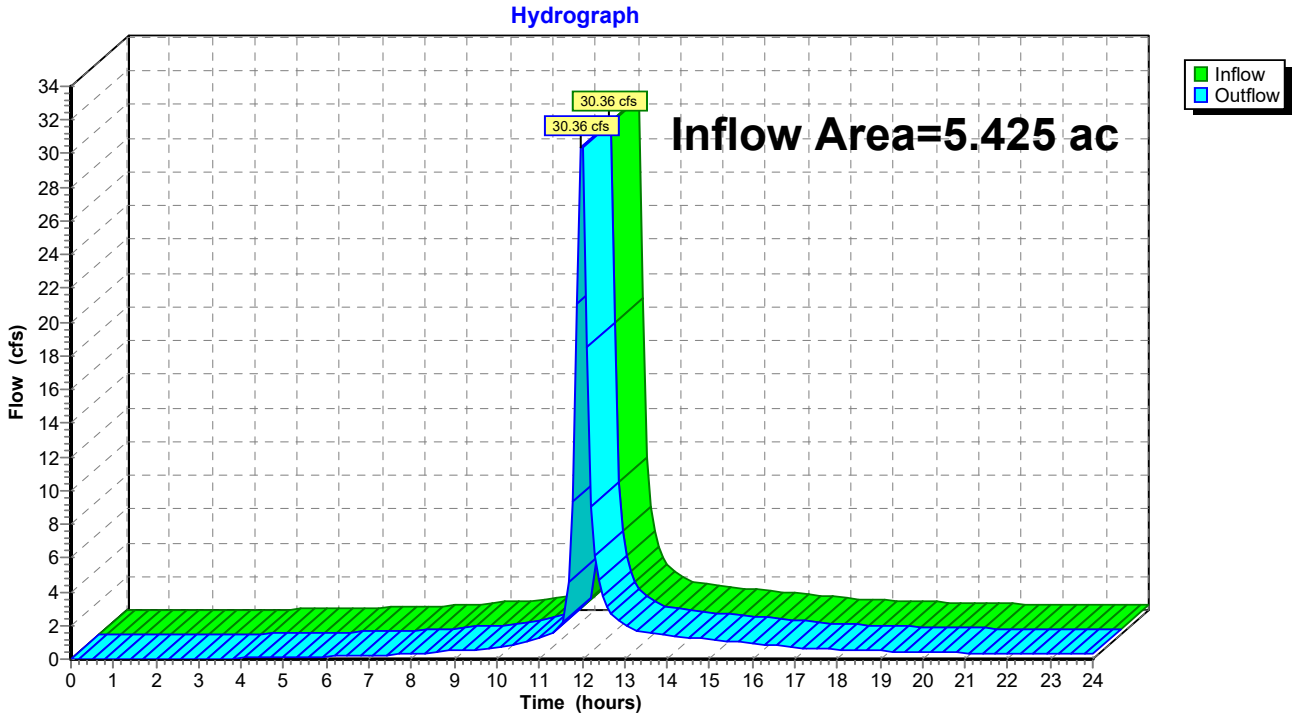
Summary for Reach 28R: Project Comp

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.425 ac, 68.81% Impervious, Inflow Depth > 4.27" for 100yr event
Inflow = 30.36 cfs @ 11.99 hrs, Volume= 1.930 af
Outflow = 30.36 cfs @ 11.99 hrs, Volume= 1.930 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs

Reach 28R: Project Comp



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Summary for Pond 31P: Dry Ponds

Inflow Area = 3.530 ac, 62.01% Impervious, Inflow Depth > 4.19" for 100yr event
Inflow = 21.85 cfs @ 11.97 hrs, Volume= 1.233 af
Outflow = 18.99 cfs @ 12.02 hrs, Volume= 1.206 af, Atten= 13%, Lag= 3.1 min
Primary = 18.99 cfs @ 12.02 hrs, Volume= 1.206 af
Routed to Reach 16R : Smith Site Comp

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 577.50' @ 12.02 hrs Surf.Area= 6,769 sf Storage= 11,624 cf

Plug-Flow detention time= 48.5 min calculated for 1.201 af (97% of inflow)
Center-of-Mass det. time= 35.4 min (815.1 - 779.7)

Volume	Invert	Avail.Storage	Storage Description
#1	575.36'	15,176 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

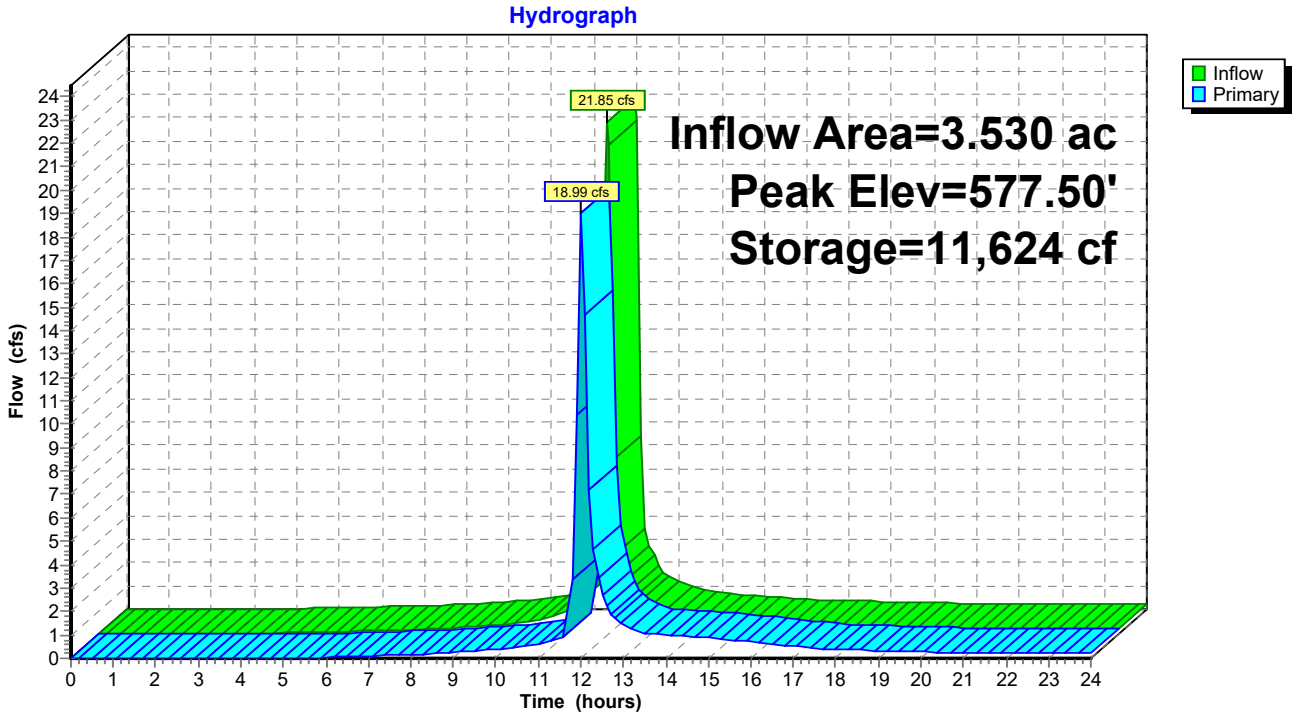
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
575.36	3,329	227.0	0	0	3,329
575.48	4,363	359.0	460	460	9,485
576.00	4,938	379.0	2,417	2,877	10,675
577.00	6,132	417.0	5,524	8,401	13,114
578.00	7,438	455.0	6,775	15,176	15,787

Device	Routing	Invert	Outlet Devices
#1	Primary	575.36'	**12.0" Round Culvert** L= 53.9' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 575.36' / 575.20' S= 0.0030 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf
#2	Device 1	575.36'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	577.20'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	576.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.40 Width (feet) 4.50 4.50 4.50

Primary OutFlow Max=18.25 cfs @ 12.02 hrs HW=577.47' (Free Discharge)
- **1=Culvert** (Barrel Controls 4.16 cfs @ 5.30 fps)
  - **2=Orifice/Grate** (Passes < 1.49 cfs potential flow)
  - **3=Orifice/Grate** (Passes < 3.68 cfs potential flow)
- **4=Custom Weir/Orifice** (Weir Controls 14.09 cfs @ 3.23 fps)

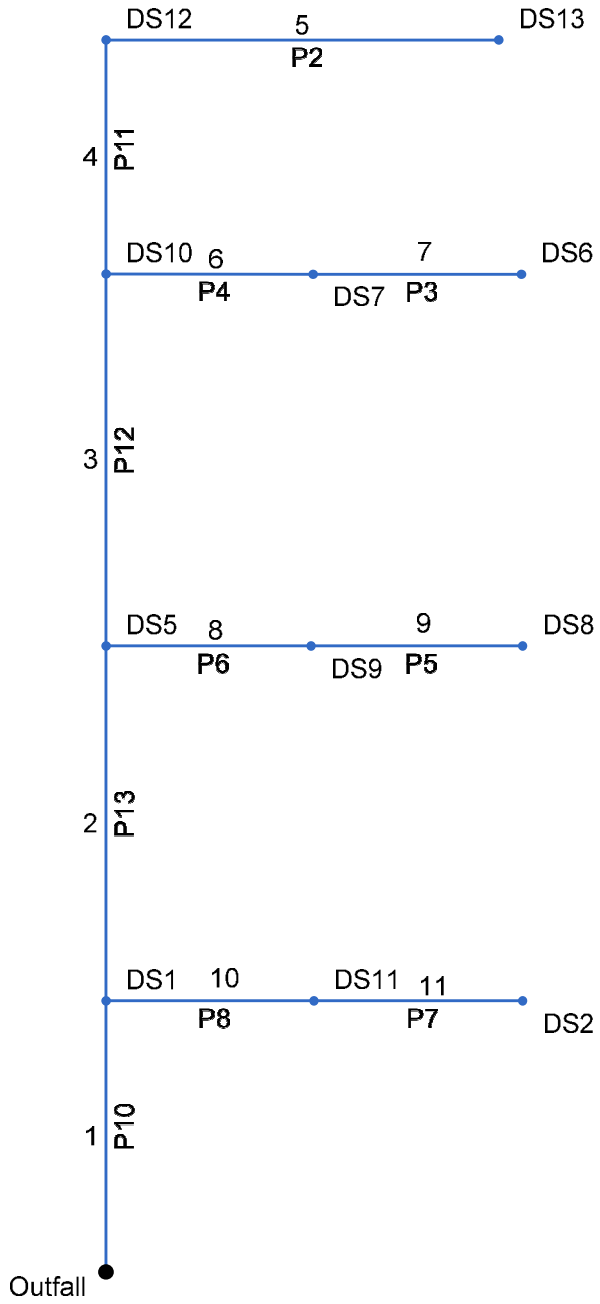
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Pond 31P: Dry Ponds



Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: LG Storm_Smith.stm	Number of lines: 11	Date: 6/27/2024

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	103.08	-90.00	DrCrb	0.00	0.17	0.90	5.0	575.86	0.20	576.07	18	Cir	0.012	1.50	579.51	P10
2	1	135.00	0.00	DrCrb	0.00	0.20	0.90	5.0	576.07	0.20	576.34	15	Cir	0.012	1.50	579.39	P13
3	2	141.50	0.00	DrCrb	0.00	0.19	0.90	5.0	576.34	0.20	576.62	12	Cir	0.012	1.50	579.45	P12
4	3	89.00	0.00	DrCrb	0.00	0.07	0.90	5.0	576.62	0.20	576.80	12	Cir	0.012	1.50	579.42	P11
5	4	119.53	90.00	DrCrb	0.00	0.06	0.90	5.0	576.80	0.20	577.04	12	Cir	0.012	1.00	579.42	P2
6	3	63.00	90.09	DrCrb	0.00	0.20	0.90	5.0	576.62	0.21	576.75	12	Cir	0.012	0.50	579.42	P4
7	6	63.39	-0.09	DrCrb	0.00	0.19	0.90	5.0	576.75	0.19	576.87	12	Cir	0.012	1.00	579.43	P3
8	2	62.38	90.02	DrCrb	0.00	0.21	0.90	5.0	576.34	0.19	576.46	12	Cir	0.012	0.50	579.39	P6
9	8	64.33	-0.02	DrCrb	0.00	0.21	0.90	5.0	576.46	0.20	576.59	12	Cir	0.012	1.00	579.38	P5
10	1	63.27	89.97	DrCrb	0.00	0.18	0.90	5.0	576.07	0.21	576.20	12	Cir	0.012	0.50	579.51	P8
11	10	63.44	0.03	DrCrb	0.00	0.17	0.90	5.0	576.20	0.19	576.32	12	Cir	0.012	1.00	579.51	P7

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	DS1	DropCurb	579.51	Cir	2.00	2.00	18	Cir	576.07	15 12	Cir Cir	576.07 576.07
2	DS5	DropCurb	579.39	Cir	2.00	2.00	15	Cir	576.34	12 12	Cir Cir	576.34 576.34
3	DS10	DropCurb	579.45	Cir	2.00	2.00	12	Cir	576.62	12 12	Cir Cir	576.62 576.62
4	DS12	DropCurb	579.42	Cir	2.00	2.00	12	Cir	576.80	12	Cir	576.80
5	DS13	DropCurb	579.42	Cir	2.00	2.00	12	Cir	577.04			
6	DS7	DropCurb	579.42	Cir	2.00	2.00	12	Cir	576.75	12	Cir	576.75
7	DS6	DropCurb	579.43	Cir	2.00	2.00	12	Cir	576.87			
8	DS9	DropCurb	579.39	Cir	2.00	2.00	12	Cir	576.46	12	Cir	576.46
9	DS8	DropCurb	579.38	Cir	2.00	2.00	12	Cir	576.59			
10	DS11	DropCurb	579.51	Cir	2.00	2.00	12	Cir	576.20	12	Cir	576.20
11	DS2	DropCurb	579.51	Cir	2.00	2.00	12	Cir	576.32			

Project File: LG Storm_Smith.stm | Number of Structures: 11 | Run Date: 6/27/2024

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2.a

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	P10	5.61	18	Cir	103.08	575.86	576.07	0.204	577.36	577.57	0.23	577.80	End	DropCurb
2	P13	4.09	15	Cir	135.00	576.07	576.34	0.200	577.80*	578.27*	0.26	578.53	1	DropCurb
3	P12	2.24	12	Cir	141.50	576.34	576.62	0.198	578.53*	579.00*	0.19	579.19	2	DropCurb
4	P11	0.44	12	Cir	89.00	576.62	576.80	0.202	579.19*	579.20*	0.01	579.21	3	DropCurb
5	P2	0.27	12	Cir	119.53	576.80	577.04	0.201	579.21*	579.22*	0.00	579.22	4	DropCurb
6	P4	1.66	12	Cir	63.00	576.62	576.75	0.206	579.19*	579.31*	0.03	579.34	3	DropCurb
7	P3	0.86	12	Cir	63.39	576.75	576.87	0.189	579.34*	579.37*	0.02	579.39	6	DropCurb
8	P6	1.79	12	Cir	62.38	576.34	576.46	0.192	578.53*	578.66*	0.04	578.70	2	DropCurb
9	P5	0.93	12	Cir	64.33	576.46	576.59	0.202	578.70*	578.74*	0.02	578.76	8	DropCurb
10	P8	1.49	12	Cir	63.27	576.07	576.20	0.205	577.80*	577.90*	0.03	577.92	1	DropCurb
11	P7	0.77	12	Cir	63.44	576.20	576.32	0.189	577.92*	577.95*	0.01	577.96	10	DropCurb

Project File: LG Storm_Smith.stm | Number of lines: 11 | Run Date: 6/27/2024

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown).

Packet Pg. 1047

2.a

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

vers v2

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	103.08	0.17	1.85	0.90	0.16	1.66	5.0	14.0	3.4	5.61	5.14	3.17	18	0.20	575.86	576.07	577.36	577.57	577.00	579.51	P10
2	1	135.00	0.20	1.32	0.90	0.18	1.19	5.0	13.4	3.4	4.09	3.13	3.34	15	0.20	576.07	576.34	577.80	578.27	579.51	579.39	P13
3	2	141.50	0.19	0.71	0.90	0.17	0.64	5.0	12.8	3.5	2.24	1.72	2.85	12	0.20	576.34	576.62	578.53	579.00	579.39	579.45	P12
4	3	89.00	0.07	0.13	0.90	0.06	0.12	5.0	10.8	3.8	0.44	1.73	0.57	12	0.20	576.62	576.80	579.19	579.20	579.45	579.42	P11
5	4	119.53	0.06	0.06	0.90	0.05	0.05	5.0	5.0	5.0	0.27	1.73	0.35	12	0.20	576.80	577.04	579.21	579.22	579.42	579.42	P2
6	3	63.00	0.20	0.39	0.90	0.18	0.35	5.0	6.0	4.8	1.66	1.75	2.11	12	0.21	576.62	576.75	579.19	579.31	579.45	579.42	P4
7	6	63.39	0.19	0.19	0.90	0.17	0.17	5.0	5.0	5.0	0.86	1.68	1.09	12	0.19	576.75	576.87	579.34	579.37	579.42	579.43	P3
8	2	62.38	0.21	0.42	0.90	0.19	0.37	5.0	5.9	4.8	1.79	1.69	2.28	12	0.19	576.34	576.46	578.53	578.66	579.39	579.39	P6
9	8	64.33	0.21	0.21	0.90	0.18	0.18	5.0	5.0	5.0	0.93	1.73	1.18	12	0.20	576.46	576.59	578.70	578.74	579.39	579.38	P5
10	1	63.27	0.18	0.35	0.90	0.16	0.31	5.0	6.1	4.7	1.49	1.75	1.89	12	0.21	576.07	576.20	577.80	577.90	579.51	579.51	P8
11	10	63.44	0.17	0.17	0.90	0.15	0.15	5.0	5.0	5.0	0.77	1.68	0.98	12	0.19	576.20	576.32	577.92	577.95	579.51	579.51	P7

Project File: LG Storm_Smith.stm | Number of lines: 11 | Run Date: 6/27/2024

NOTES:Intensity = 33.57 / (Inlet time + 7.70) ^ 0.75; Return period =Yrs. 10 ; c = cir e = ellip b = box

MyReport

Line No.	Area Dn (sqft)	Area Up (sqft)	Byp Ln No	Coeff C1 (C)	Coeff C2 (C)	Coeff C3 (C)	Capac Full (cfs)	Crit Depth (ft)	Cross Sl, Sw (ft/ft)	Cross Sl, Sx (ft/ft)	Curb Len (ft)	Defl Ang (Deg)	Depth Dn (ft)	Depth Up (ft)	DnStm Ln No	Drng Area (ac)	Easting X (ft)	EGL Dn (ft)	EGL Up (ft)	Energy Loss (ft)
1	1.77	1.77	Sag	0.20	0.50	0.90	5.14	0.91	0.000	0.000	1.36	-90.00	1.50	1.50	Outfall	0.17	1113119.62	577.52	577.72	0.247
2	1.23	1.23	Sag	0.20	0.50	0.90	3.13	0.82	0.000	0.000	1.57	0.00	1.25	1.25	1	0.20	1113119.62	577.98	578.44	0.462
3	0.79	0.79	Sag	0.20	0.50	0.90	1.72	0.64	0.000	0.000	1.50	0.00	1.00	1.00	2	0.19	1113119.62	578.65	579.13	0.476
4	0.79	0.79	Sag	0.20	0.50	0.90	1.73	0.28	0.000	0.000	1.00	0.00	1.00	1.00	3	0.07	1113119.62	579.20	579.21	0.012
5	0.79	0.79	Sag	0.20	0.50	0.90	1.73	0.21	0.000	0.000	1.00	90.00	1.00	1.00	4	0.06	1113239.16	579.21	579.22	0.006
6	0.79	0.79	Sag	0.20	0.50	0.90	1.75	0.55	0.000	0.000	1.54	90.09	1.00	1.00	3	0.20	1113182.62	579.26	579.38	0.116
7	0.79	0.79	Sag	0.20	0.50	0.90	1.68	0.39	0.000	0.000	1.49	-0.09	1.00	1.00	6	0.19	1113246.01	579.36	579.39	0.031
8	0.79	0.79	Sag	0.20	0.50	0.90	1.69	0.57	0.000	0.000	1.65	90.02	1.00	1.00	2	0.21	1113182.00	578.61	578.74	0.134
9	0.79	0.79	Sag	0.20	0.50	0.90	1.73	0.40	0.000	0.000	1.61	-0.02	1.00	1.00	8	0.21	1113246.33	578.72	578.76	0.037
10	0.79	0.79	Sag	0.20	0.50	0.90	1.75	0.52	0.000	0.000	1.40	89.97	1.00	1.00	1	0.18	1113182.89	577.86	577.95	0.094
11	0.79	0.79	Sag	0.20	0.50	0.90	1.68	0.37	0.000	0.000	1.33	0.03	1.00	1.00	10	0.17	1113246.33	577.94	577.96	0.025

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

NOTES: ** Critical depth

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2.a

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MyReport

Flow Rate (cfs)	Sf Ave (ft/ft)	Sf Dn (ft/ft)	Grate Area (sqft)	Grate Len (ft)	Grate Width (ft)	Gnd/Rim El Dn (ft)	Gnd/Rim El Up (ft)	Gutter Depth (ft)	Gutter Slope (ft/ft)	Gutter Spread (ft)	Gutter Width (ft)	HGL Dn (ft)	HGL Up (ft)	HGL Jnct (ft)	HGL Jmp Dn (ft)	HGL Jmp Up (ft)	Incr CxA	Incr Q (cfs)	Inlet Depth (ft)	Inlet Eff (%)
5.61	0.239	0.243	....	....	....	577.00	579.51	0.33	Sag	inf.00	....	577.36	577.57	577.80	....	....	0.16	0.78	0.33	100
4.09	0.343	0.343	....	....	....	579.51	579.39	0.33	Sag	inf.00	....	577.80	578.27	578.53	....	....	0.18	0.90	0.33	100
2.24	0.337	0.337	....	....	....	579.39	579.45	0.33	Sag	inf.00	....	578.53	579.00	579.19	....	....	0.17	0.86	0.33	100
0.44	0.013	0.013	....	....	....	579.45	579.42	0.22	Sag	inf.00	....	579.19	579.20	579.21	....	....	0.06	0.32	0.22	100
0.27	0.005	0.005	....	....	....	579.42	579.42	0.20	Sag	inf.00	....	579.21	579.22	579.22	....	....	0.05	0.27	0.20	100
1.66	0.185	0.185	....	....	....	579.45	579.42	0.33	Sag	inf.00	....	579.19	579.31	579.34	....	....	0.18	0.89	0.33	100
0.86	0.050	0.050	....	....	....	579.42	579.43	0.33	Sag	inf.00	....	579.34	579.37	579.39	....	....	0.17	0.86	0.33	100
1.79	0.215	0.215	....	....	....	579.39	579.39	0.33	Sag	inf.00	....	578.53	578.66	578.70	....	....	0.19	0.95	0.33	100
0.93	0.058	0.058	....	....	....	579.39	579.38	0.33	Sag	inf.00	....	578.70	578.74	578.76	....	....	0.18	0.93	0.33	100
1.49	0.148	0.148	....	....	....	579.51	579.51	0.33	Sag	inf.00	....	577.80	577.90	577.92	....	....	0.16	0.81	0.33	100
0.77	0.040	0.040	....	....	....	579.51	579.51	0.33	Sag	inf.00	....	577.92	577.95	577.96	....	....	0.15	0.77	0.33	100

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

NOTES: ** Critical depth

MyReport

Inlet ID	Inlet Loc	(ft)	Inlet Time (min)	i Sys (in/hr)	i Inlet (in/hr)	Invert Dn (ft)	Invert Up (ft)	Jump Loc (ft)	Jump Len (ft)	Vel Hd Jmp Dn (ft)	Vel Hd Jmp Up (ft)	J-Loss Coeff	Junct Type	Known Q (cfs)	Cost RCP	Cost CMP	Cost PVC	
DS1	Sag		5.0	3.37	5.03	575.86	576.07	....	....	0.00	0.00	1.50	Dp-Curb	0.00	3,396	3,056	2,887	
DS5	Sag		5.0	3.44	5.03	576.07	576.34	....	....	0.00	0.00	1.50	Dp-Curb	0.00	4,150	3,735	3,528	
DS10	Sag		5.0	3.51	5.03	576.34	576.62	....	....	0.00	0.00	1.50	Dp-Curb	0.00	4,062	3,656	3,453	
DS12	Sag		5.0	3.80	5.03	576.62	576.80	....	....	0.00	0.00	1.50	Dp-Curb	0.00	2,592	2,333	2,203	
DS13	Sag		5.0	5.03	5.03	576.80	577.04	....	....	0.00	0.00	1.00	Dp-Curb	0.00	3,446	3,101	2,929	
DS7	Sag		5.0	4.76	5.03	576.62	576.75	....	....	0.00	0.00	0.50	Dp-Curb	0.00	1,864	1,678	1,584	
DS6	Sag		5.0	5.03	5.03	576.75	576.87	....	....	0.00	0.00	1.00	Dp-Curb	0.00	1,864	1,678	1,584	
DS9	Sag		5.0	4.77	5.03	576.34	576.46	....	....	0.00	0.00	0.50	Dp-Curb	0.00	1,836	1,652	1,561	
DS8	Sag		5.0	5.03	5.03	576.46	576.59	....	....	0.00	0.00	1.00	Dp-Curb	0.00	1,892	1,703	1,608	
DS11	Sag		5.0	4.73	5.03	576.07	576.20	....	....	0.00	0.00	0.50	Dp-Curb	0.00	1,864	1,678	1,584	
DS2	Sag		5.0	5.03	5.03	576.20	576.32	....	....	0.00	0.00	1.00	Dp-Curb	0.00	1,864	1,678	1,584	

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

NOTES: Intensity = 33.57 / (Inlet time + 7.70) ^ 0.75 -- Return period = 10 Yrs. ; ** Critical depth

MyReport

Line ID	Line Length (ft)	Line Size (in)	Line Slope (%)	Line Type	Local Depr (in)	n-val Gutter	n-val Pipe	Minor Loss (ft)	Northing Y (ft)	Pipe Travel (min)	Q Byp (cfs)	Q Capt (cfs)	Q Carry (cfs)	Line Rise (in)	Runoff Coeff (C)	Line Span (in)	Area A1 (ac)	Area A2 (ac)	Area A3 (ac)	Tc (min)	
P10	103.08	18	0.20	Cir	....	....	0.012	0.23	1112160.51	0.42	0.00	0.78	0.00	18	0.90	18	0.00	0.00	0.00	14.0	
P13	135.00	15	0.20	Cir	....	....	0.012	0.26	1112295.51	0.51	0.00	0.90	0.00	15	0.90	15	0.00	0.00	0.00	13.4	
P12	141.50	12	0.20	Cir	....	....	0.012	0.19	1112437.01	0.62	0.00	0.86	0.00	12	0.90	12	0.00	0.00	0.00	12.8	
P11	89.00	12	0.20	Cir	....	....	0.012	0.01	1112526.01	2.06	0.00	0.32	0.00	12	0.90	12	0.00	0.00	0.00	10.8	
P2	119.53	12	0.20	Cir	....	....	0.012	0.00	1112526.01	5.76	0.00	0.27	0.00	12	0.90	12	0.00	0.00	0.00	5.0	
P4	63.00	12	0.21	Cir	....	....	0.012	0.03	1112436.91	0.48	0.00	0.89	0.00	12	0.90	12	0.00	0.00	0.00	6.0	
P3	63.39	12	0.19	Cir	....	....	0.012	0.02	1112436.91	0.97	0.00	0.86	0.00	12	0.90	12	0.00	0.00	0.19	5.0	
P6	62.38	12	0.19	Cir	....	....	0.012	0.04	1112295.49	0.44	0.00	0.95	0.00	12	0.90	12	0.00	0.00	0.00	5.9	
P5	64.33	12	0.20	Cir	....	....	0.012	0.02	1112295.49	0.91	0.00	0.93	0.00	12	0.90	12	0.00	0.00	0.00	5.0	
P8	63.27	12	0.21	Cir	....	....	0.012	0.03	1112160.54	0.54	0.00	0.81	0.00	12	0.90	12	0.00	0.00	0.00	6.1	
P7	63.44	12	0.19	Cir	....	....	0.012	0.01	1112160.54	1.08	0.00	0.77	0.00	12	0.90	12	0.00	0.00	0.00	5.0	

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

NOTES: ** Critical depth

MyReport

Throat Ht (in)	Total Area (ac)	Total CxA	Total Runoff (cfs)	Vel Ave (ft/s)	Vel Dn (ft/s)	Vel Hd Dn (ft)	Vel Hd Up (ft)	Vel Up (ft/s)	Cover Dn (ft)	Cover Up (ft)	Storage (cft)
4.0	1.85	1.66	5.61	3.17	3.17	0.16	0.16	3.17	-0.36	1.94	182.13
4.0	1.32	1.19	4.09	3.34	3.34	0.17	0.17	3.34	2.19	1.80	165.64
4.0	0.71	0.64	2.24	2.85	2.85	0.13	0.13	2.85	2.05	1.83	111.11
4.0	0.13	0.12	0.44	0.57	0.57	0.00	0.00	0.57	1.83	1.62	69.89
4.0	0.06	0.05	0.27	0.35	0.35	0.00	0.00	0.35	1.62	1.38	93.86
4.0	0.39	0.35	1.66	2.11	2.11	0.07	0.07	2.11	1.83	1.67	49.47
4.0	0.19	0.17	0.86	1.09	1.09	0.02	0.02	1.09	1.67	1.56	49.78
4.0	0.42	0.37	1.79	2.28	2.28	0.08	0.08	2.28	2.05	1.93	48.98
4.0	0.21	0.18	0.93	1.18	1.18	0.02	0.02	1.18	1.93	1.79	50.51
4.0	0.35	0.31	1.49	1.89	1.89	0.06	0.06	1.89	2.44	2.31	49.68
4.0	0.17	0.15	0.77	0.98	0.98	0.01	0.01	0.98	2.31	2.19	49.82

Project File: LG Storm_Smith.stm | Number of lines: 11 | Date: 6/27/2024

NOTES: ** Critical depth

Storm Sewer Inlet Time Tabulation

Line No.	Line ID	Tc Method	Sheet Flow					Shallow Concentrated Flow					Channel Flow							Total Travel Time (min)
			n-Value	flow Length (ft)	2-yr 24h P (in)	Land Slope (%)	Travel Time (min)	flow Length (ft)	Water Slope (%)	Surf Descr	Ave Vel (ft/s)	Travel Time (min)	X-sec Area (sqft)	Wetted Perim (ft)	Chan Slope (%)	n-Value	Vel	flow Length (ft)	Travel Time (min)	
1	P10	User																		5.00
2	P13	User																		5.00
3	P12	User																		5.00
4	P11	User																		5.00
5	P2	User																		5.00
6	P4	User																		5.00
7	P3	User																		5.00
8	P6	User																		5.00
9	P5	User																		5.00
10	P8	User																		5.00
11	P7	User																		5.00

Project File: LG Storm_Smith.stm | Min. Tc used for intensity calculations = 5 min | Number of lines: 11 | Date: 6/27/2024

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)		Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)		
(1)	(in) (2)	(cfs) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(ft) (12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(K) (23)	(ft) (24)
1	18	5.61	575.86	577.36	1.50	1.77	3.17	0.16	577.52	0.243	103.08	576.07	577.57	1.50	1.77	3.17	0.16	577.72	0.236	0.239	0.247	1.50	0.23
2	15	4.09	576.07	577.80	1.25	1.23	3.34	0.17	577.98	0.343	135.00	576.34	578.27	1.25	1.23	3.34	0.17	578.44	0.343	0.343	0.462	1.50	0.26
3	12	2.24	576.34	578.53	1.00	0.79	2.85	0.13	578.65	0.337	141.50	576.62	579.00	1.00	0.79	2.85	0.13	579.13	0.337	0.337	0.476	1.50	0.19
4	12	0.44	576.62	579.19	1.00	0.79	0.57	0.00	579.20	0.013	89.00	576.80	579.20	1.00	0.79	0.57	0.00	579.21	0.013	0.013	0.012	1.50	0.01
5	12	0.27	576.80	579.21	1.00	0.79	0.35	0.00	579.21	0.005	119.53	577.04	579.22	1.00	0.79	0.35	0.00	579.22	0.005	0.005	0.006	1.00	0.00
6	12	1.66	576.62	579.19	1.00	0.79	2.11	0.07	579.26	0.185	63.00	576.75	579.31	1.00	0.79	2.11	0.07	579.38	0.185	0.185	0.116	0.50	0.03
7	12	0.86	576.75	579.34	1.00	0.79	1.09	0.02	579.36	0.050	63.39	576.87	579.37	1.00	0.79	1.09	0.02	579.39	0.050	0.050	0.031	1.00	0.02
8	12	1.79	576.34	578.53	1.00	0.79	2.28	0.08	578.61	0.215	62.38	576.46	578.66	1.00	0.79	2.28	0.08	578.74	0.215	0.215	0.134	0.50	0.04
9	12	0.93	576.46	578.70	1.00	0.79	1.18	0.02	578.72	0.058	64.33	576.59	578.74	1.00	0.79	1.18	0.02	578.76	0.058	0.058	0.037	1.00	0.02
10	12	1.49	576.07	577.80	1.00	0.79	1.89	0.06	577.86	0.148	63.27	576.20	577.90	1.00	0.79	1.89	0.06	577.95	0.148	0.148	0.094	0.50	0.03
11	12	0.77	576.20	577.92	1.00	0.79	0.98	0.01	577.94	0.040	63.44	576.32	577.95	1.00	0.79	0.98	0.01	577.96	0.040	0.040	0.025	1.00	0.01

Project File: LG Storm_Smith.stm | Number of lines: 11 | Run Date: 6/27/2024

; c = cir e = ellip b = box

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Name: LG Parking
Project Number: 261353
Calculated By: CC1
Checked By:
Approved By:
Date: 6/10/2024
Revised 8/15/2024

Calculations for Water Quality Volume - Hydro Unit

Reference: Chapter 4 SMDM

I. Initial Water Quality Volume

WQv = P*Rv*A/12

P	=	1	inches	
I	=	62	%	
Rv	=	0.608		
A	=	187743.6	ft^2	
A	=	4.31	acres	
WQv_i	=	0.164	acre-feet	75%
WQv_i	=	7122	ft^3	

P = 90% Rainfall Fig 4.1 from SMDM (same used in WQv calculation)
I = Percent Area Impervious of Proposed Area
Rv = 0.05+0.009(I) where I is percent impervious (%)
A = Area of Disturbance
WQv = Water Quality Volume

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Project Name: LG Parking
Project Number: 261353
Calculated By: CC1
Checked By:
Approved By:
Date: 6/10/2024
Revised:

Calculations for Water Quality Volume Flow Rate - Hydro Unit

Reference: Appendix B SMDM

II. Water Quality Volume Flow Rate **WQvF = (Q*A*qu)/640**

WQv_T	=	0.164	acre-feet
A	=	4.31	acres
P	=	1.00	inches
Q	=	0.46	inches
CN	=	93	
Ia	=	0.15	
Ia/P Ratio	=	0.15	
Tc	=	0.15	hours
q_u	=	1000	
WQvF	=	3.07	cfs

WQv_T = Water Quality Volume to convert to flowrate
A = Area of Disturbance
P = 90% Rainfall Fig 4.1 from SMDM (same used in WQv calculation)
Q = Runoff volume in inches = WQv_T/A
CN = Weighted Curve Number = 1000 / (10+5P+10Q-10(Q2+1.25*Q*P)^.5)
Ia = Initial Abstraction = (200/CN-2)
Ia/P = ratio
Tc = Time of concentration
qu = Unit Peak Discharge in cubic feet per second per square mile per year (csm/in) - Exhibit 4-III from TR55
Qp = qu * A * Q

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Hydraflow HGL Computation Procedure

General Procedure:

Hydraflow computes the HGL using the Bernoulli energy equation. Manning's equation is used to determine energy losses due to pipe friction. In a standard step, iterative procedure, Hydraflow assumes upstream HGLs until the energy equation balances. If the energy equation cannot balance, supercritical flow exists and critical depth is temporarily assumed at the upstream end. A supercritical flow Profile is then computed using the same procedure in a downstream direction using momentum principles.

Col. 1 The line number being computed. Calculations begin at Line 1 and proceed upstream.

Col. 2 The line size. In the case of non-circular pipes, the line rise is printed above the span.

Col. 3 Total flow rate in the line.

Col. 4 The elevation of the downstream invert.

Col. 5 Elevation of the hydraulic grade line at the downstream end. This is computed as the upstream HGL + Minor loss of this line's downstream line.

Col. 6 The downstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 7 Cross-sectional area of the flow at the downstream end.

Col. 8 The velocity of the flow at the downstream end, (Col. 3 / Col. 7).

Col. 9 Velocity head (Velocity squared / 2g).

Col. 10 The elevation of the energy grade line at the downstream end, HGL + Velocity head, (Col. 5 + Col. 9).

Col. 11 The friction slope at the downstream end (the S or Slope term in Manning's equation).

Col. 12 The line length.

Col. 13 The elevation of the upstream invert.

Col. 14 Elevation of the hydraulic grade line at the upstream end.

Col. 15 The upstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 16 Cross-sectional area of the flow at the upstream end.

Col. 17 The velocity of the flow at the upstream end, (Col. 3 / Col. 16).

Col. 18 Velocity head (Velocity squared / 2g).

Col. 19 The elevation of the energy grade line at the upstream end, HGL + Velocity head, (Col. 14 + Col. 18) .

Col. 20 The friction slope at the upstream end (the S or Slope term in Manning's equation).

Col. 21 The average of the downstream and upstream friction slopes.

Col. 22 Energy loss. Average Sf/100 x Line Length (Col. 21/100 x Col. 12). Equals (EGL upstream - EGL downstream) +/- tolerance.

Col. 23 The junction loss coefficient (K).

Col. 24 Minor loss. (Col. 23 x Col. 18). Is added to upstream HGL and used as the starting HGL for the next upstream line(s).

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix G

Operation & Maintenance Plan

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Operation and Maintenance Plan

Lou Gehrig Sports Complex

The Stormwater Management System, which includes the storm sewer system, shall be maintained in fully functional condition. The Town of Amherst shall be responsible for monitoring and conducting inspections of the facilities and removing excess sediment, trash, debris, etc. per the inspection frequencies outlined below. Additional inspections will be required if it becomes apparent that facilities are not functioning properly. Corrective actions will be taken by Town of Amherst within a reasonable timeframe of discovery of the deficiencies to ensure continuing operation of stormwater facilities. The facilities shall be cleaned, repaired and/or replaced as necessary to meet the original design criteria.

Inspection Frequencies: The Owner shall be responsible for inspecting the entire storm sewer system (including, but not limited to, catch basins, storm sewer pipes, and manholes) at least two (2) times a year; on or before April 1 or after the first snow melt, whichever happens first, and on or before October 1 or after the leaves have fallen, whichever happens first. Additional inspections shall be required if it becomes apparent that the system is not functioning as designed.

Inlets, Manholes, and Storm Sewer Pipes: Inspect the condition of storm sewer pipes and monitor for evidence of damage or accumulated silt, sediment, and debris. Clean or repair as needed per the inspection frequency outlined above. Inspect catch basins and manholes and monitor for evidence of damage or accumulated silt, sediment, and debris. Clean or repair as needed per the inspection frequency outlined above. Accumulated material in drainage structure sumps must be removed and properly disposed of when the sump has reach 50% of its capacity (i.e. 12” for a 24” sump).

Hydrodynamic Units: Units shall be inspected and maintained in accordance with the methods and frequencies recommended by the manufacturer. The First Defense HC Operation and Maintenance Manual is included with this document. The units should be visually inspected regularly during the first year of operation and every 6-months after the first year. Oil, floatables, and sediment should be removed once per year or as needed.

Detention Pond: Refer to the attached Stormwater Pond Operation, Maintenance and Management Inspection Checklist from the New York State Stormwater Management Design Manual. Maintenance activities are focused on sediment and debris accumulation, maintaining healthy vegetation, and the

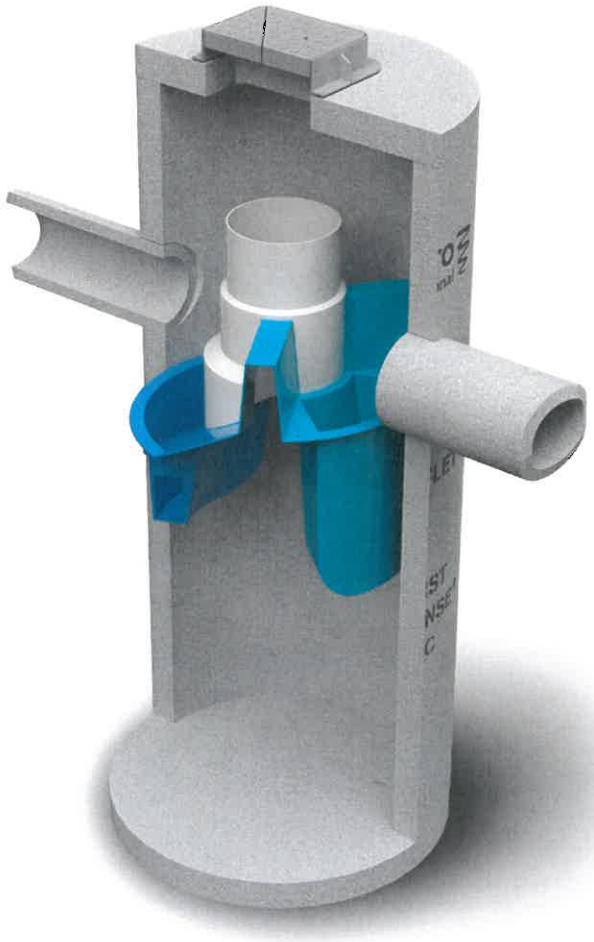
Open Channels: Refer to the attached Open Channel Operation, Maintenance and Management Inspection Checklist from the New York State Stormwater Management Design Manual. Maintenance activities are focused on debris cleanout, maintaining healthy vegetation, and monitoring for evidence of erosion.

General Lawn/Landscape areas (in accordance with Soil Restoration requirements): Reseed to repair bare or eroding areas to assure grass stabilization. Water once every three days for the first month, and then provide a half inch of water per week during the first year. Fertilization may be needed in the fall after the first growing season to increase plant vigor. Maintain the appropriate ground cover with deep roots to maintain the soil structure. Keep the site (pervious areas) free of vehicular and foot traffic or other weight loads. Sometimes it may be necessary to de-thatch the turf every few years.

Driveways / Parking Lots: Driveway sweeping shall be performed to keep silt and sediment from accumulating within the storm structures. It is most critical to complete this maintenance in the spring, once the snow has melted, and the build-up of sand from snow plowing is evident.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)



Operation and Maintenance Manual

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

First Defense® and First Defense®-HC

Vortex Separator for Stormwater Treatment

Stormwater Solutions

Turning Water Around ...®

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- **Pollutant Capture and Retention**

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- **First Defense® Components**

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- **Overview**
- **Maintenance Equipment Considerations**
- **Determining Your Maintenance Schedule**

6 **Maintenance Procedures**
- **Inspection**
- **Floatables and Sediment Clean Out**

8 **First Defense® Installation Log**

9 **First Defense® Inspection and Maintenance Log**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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DISCLAIMER: Information and data contained in this manual is exclusively for the purpose of assisting in the operation and maintenance of Hydro International plc's First Defense®. No warranty is given nor can liability be accepted for use of this information for any other purpose. Hydro International plc has a policy of continuous product development and reserves the right to amend specifications without notice.

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

I. First Defense® by Hydro International

Introduction

The First Defense® is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® is available in several model configurations (refer to *Section II. Model Sizes & Configurations*, page 4) to accommodate a wide range of pipe sizes, peak flows and depth constraints.

Operation

The First Defense® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense® has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

Pollutant Capture and Retention

The internal components of the First Defense® have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense® retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

Applications

- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for "offline" arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 500% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

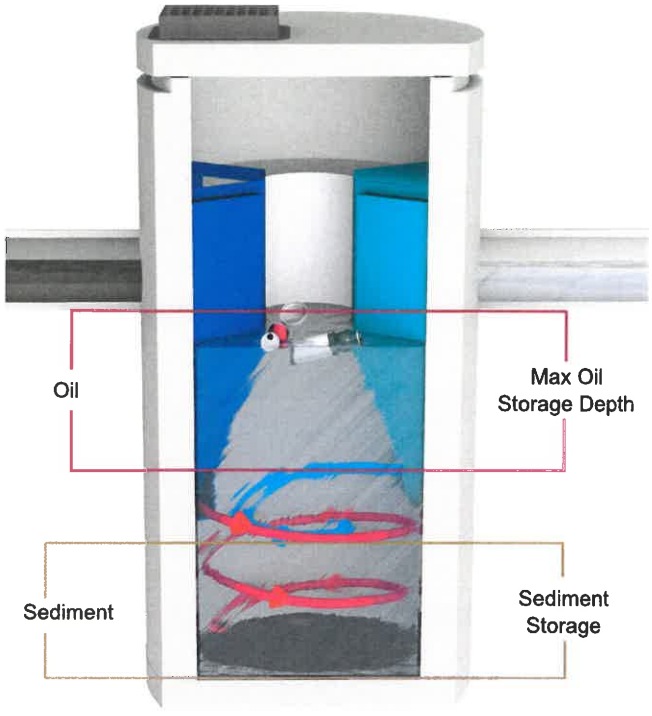


Fig.1 Pollutant storage volumes in the First Defense®.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

II. Model Sizes & Configurations

The First Defense® inlet and internal bypass arrangements are available in several model sizes and configurations. The components of the First Defense®-4HC and First Defense®-6HC have modified geometries as to allow greater design flexibility needed to accommodate various site constraints.

All First Defense® models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2a - 2b). First Defense® model parameters and design criteria are shown in Table 1.

First Defense® Components

1. **Built-In Bypass**
2. **Inlet Pipe**
3. **Inlet Chute**
4. **Floatables Draw-off Port**
5. **Outlet Pipe**
6. **Floatables Storage**
7. **Sediment Storage**
8. **Inlet Grate or Cover**

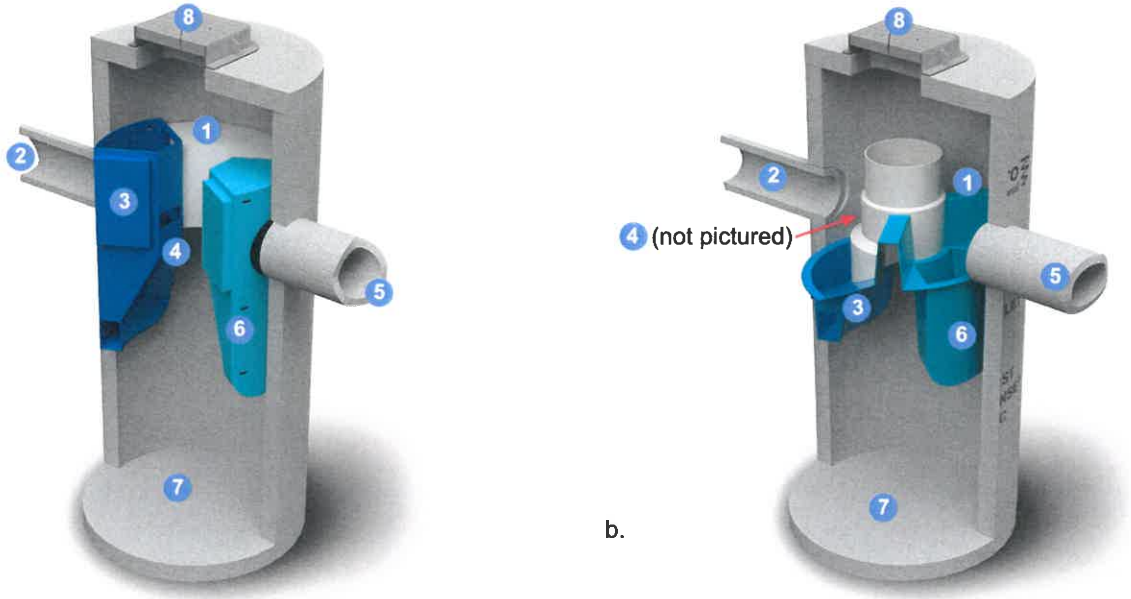


Fig.2a) First Defense®-4 and First Defense®-6; b) First Defense®-4HC and First Defense®-6HC, with higher capacity dual internal bypass and larger maximum pipe diameter.

Table 1. First Defense® Pollutant Storage Capacities and Maximum Clean out Depths

First Defense® Model Number	Diameter	Oil Storage Capacity	Oil Clean Out Depth	Maximum Sediment Storage Capacity[1]		Recommended Sediment Clean-out Capacity	
				Volume	Depth	Volume	Depth
	(ft / m)	(gal / L)	(in / cm)	(yd^3 / m^3)	(in / cm)	(yd^3 / m^3)	(in / cm)
FD-4	4 / 1.2	180 / 681	<23.5 / 60	1.3 / 1.0	33 / 84	0.7 / 0.5	18 / 46
FD-4HC		191 / 723	<24.4 / 62				
FD-6	6 / 1.8	420 / 1,590	<23.5 / 60	3.3 / 2.5	37.5 / 95	1.6 / 1.2	18 / 46
FD-6HC		496 / 1,878	<28.2 / 72				

NOTE

[1] Sediment storage capacity and clean out depth may vary, as larger sediment storage sump volumes are provided when required.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

III. Maintenance

Overview

The First Defense® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense®. The First Defense® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

The First Defense® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense®, nor do they require the internal components of the First Defense® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

Maintenance Equipment Considerations

The internal components of the First Defense®-HC have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.

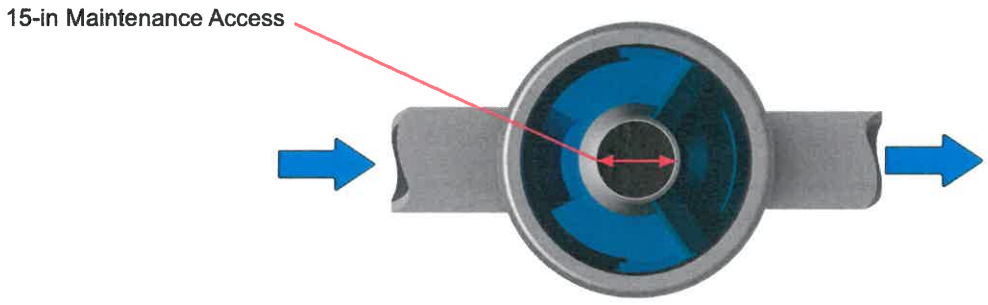


Fig.3 The central opening to the sump of the First Defense®-HC is 15 inches in diameter.

Determining Your Maintenance Schedule

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / flotables removal, for a 6-ft First Defense® typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the grate or lid to the manhole.

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.

4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.

5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel.

6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.

7. Securely replace the grate or lid.

8. Take down safety equipment.

9. Notify Hydro International of any irregularities noted during inspection.

Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.5).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.

- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.

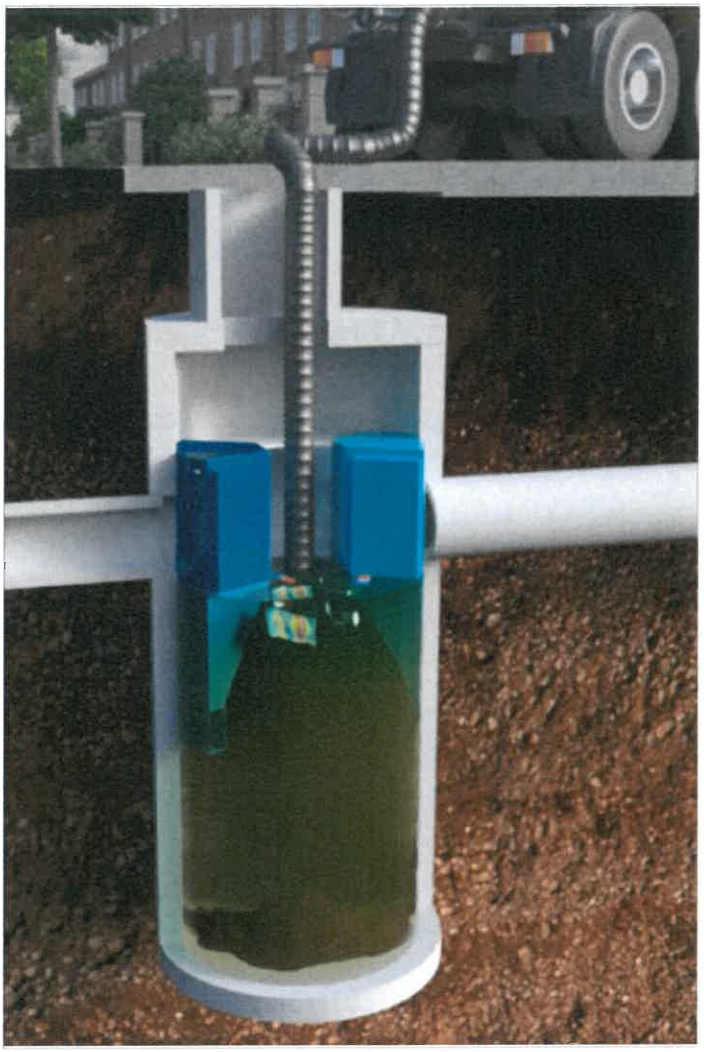


Fig.4 Floatables are removed with a vactor hose (First Defense model FD-4, shown).

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (flexible hose recommended)
- First Defense® Maintenance Log

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Floatables and sediment Clean Out Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the grate or lid to the manhole.

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.

4. Remove oil and floatables stored on the surface of the water with the vactor hose (Fig.5) or with the skimmer or net (not pictured).

5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).

6. Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor (Fig.5).

7. Retract the vactor hose from the vessel.

8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.

9. Securely replace the grate or lid.



Fig.5 Sediment is removed with a vactor hose (First Defense model FD-4, shown).

Maintenance at a Glance

Activity	Frequency
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area
NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.	

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE: / /

MODEL SIZE (CIRCLE ONE): FD-4 FD-4HC FD-6 FD-6HC

INLET (CIRCLE ALL THAT APPLY): GRATED INLET (CATCH BASIN) INLET PIPE (FLOW THROUGH)

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Hydro International®

First Defense® Inspection and Maintenance Log

Date	Initials	Depth of Floatables and Oils	Sediment Depth Measured	Volume of Sediment Removed	Site Activity and Comments

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Notes

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

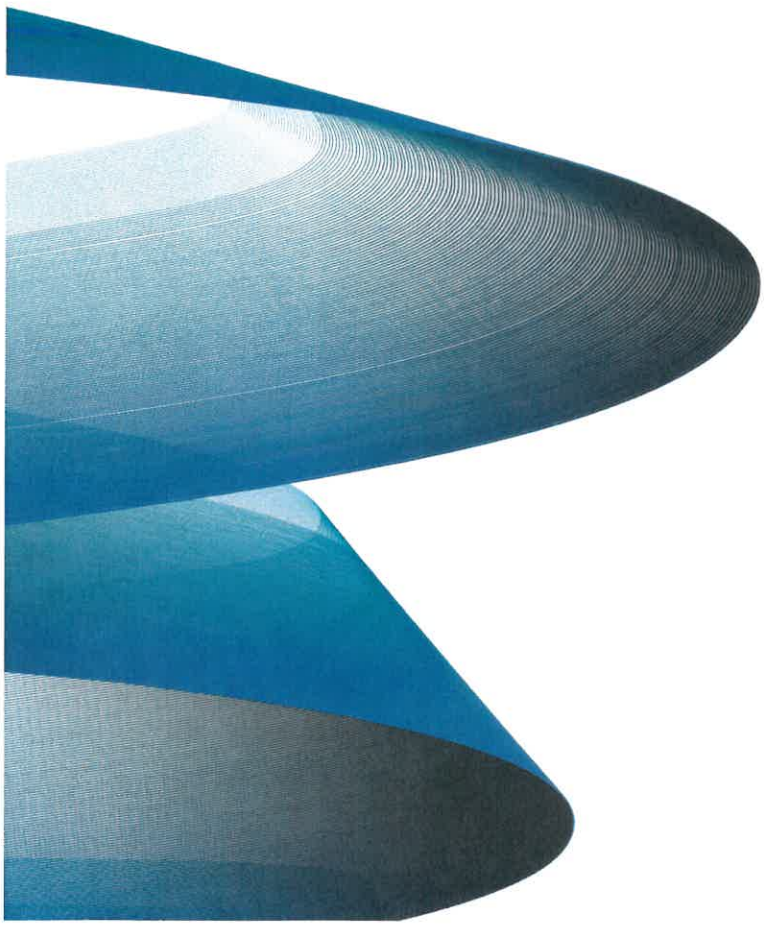
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Stormwater Solutior

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Portland, ME 04

Tel: (207) 756-6
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stormwaterinquiry@hydro-int.c

www.hydro-int.c

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Turning Water Around...®

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Actions to be Taken:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Comments:

Actions to be Taken:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Open Channel Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
2. Check Dams or Energy Dissipators (Annual, After Major Storms)		
No evidence of flow going around structures		
No evidence of erosion at downstream toe		
Soil permeability		
Groundwater / bedrock		
3. Vegetation (Monthly)		
Mowing done when needed		
Minimum mowing depth not exceeded		
No evidence of erosion		
Fertilized per specification		
4. Dewatering (Monthly)		
Dewaters between storms		

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Sediment deposition (Annual)		
Clean of sediment		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion		

Comments:

Actions to be Taken:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix H

Wetland Mitigation Plan

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Proposed Article 24 Wetland Mitigation Plan

for

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Town of Amherst

Erie County, New York

for

Wendel

EARTH DIMENSIONS, INC.

Wetland Delineations • Wetland Mitigation

June 13, 2024

EDI Project Code: **W6D93e**

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PROPOSED ARTICLE 24 WETLAND MITIGATION AND RESTORATION PLAN

FOR

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Prepared for Submission to:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
700 DELAWARE AVENUE
BUFFALO, NEW YORK 14209

Prepared By:

EARTH DIMENSIONS, INC.
1091 JAMISON ROAD
ELMA, NEW YORK 14059

Prepared For:

LEANNE VOIT
WENDEL
CENTERPOINTE CORPORATE PARKWAY
350 ESSJAY ROAD, SUITE 200
WILLIAMSVILLE, NEW YORK 14221

REPORT DATE: June 13, 2024

EDI PROJECT CODE: W6D93e

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

PROJECT INFORMATION

Project and Mitigation Site Information

Project Name ..... Lou Gehrig Field Parking Lots

Street Address ..... 550 Smith Road

SBL Number ..... 16.00-4-20.1 & 16.00-4-16.1

Town ..... Amherst

County ..... Erie

State ..... New York

Latitude/Longitude (NAD83) ..... 43.05207°N, -78.71373°W

Hydrologic Unit Code 04120104

General Information

Property Owner (Project and Mitigation Site) ..... Town of Amherst
c/o Jessica Boudreau
1100 North Forest Road
Williamsville, New York 14221

Responsible Parties

Consultant ..... Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14095

Point of Contact ..... Jody M. Celeste
(716) 655-1717
jceleste@earthdimensions.com

Engineer ..... Wendel

Construction Company ..... NA

Mitigation Site Protection & Maintenance ..... Town of Amherst

Mitigation Monitoring ..... NA

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

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Figure 1: Aerial Photograph

Figure 2: USGS 7.5 Minute Topographical Map

Figure 3: National Wetlands Inventory Map

Figure 4: NRCS Soil Survey Map

Figure 5: NYSDEC Environmental Resource Mapper

Appendix B: Overall Site Plan & Wetland Impact Map

Appendix C: Functional Assessment Data Form

Appendix D: Mitigation plans

D1: Topography Map

D2: Project Details

D3: Cross-sections

D4: Annual Monitoring Benchmark Map

Appendix E: Maintenance and Inspection Schedule

Appendix F: Joint Application for Permit

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

EXECUTIVE SUMMARY

Wendel, on behalf of the Town of Amherst, has proposed the construction of additional parking at the existing Lou Gehrig Fields at 550 Smith Road project located on the north side of Smith Road in the Town of Amherst, County of Erie, and State of New York. In addition, the applicant is proposing restoration on a 0.815± acre area of state regulated wetland and the creation of a 0.101± acre area of wetland as mitigation. The mitigation is for the unauthorized fill of 0.815± acre of state regulated wetland and proposed impact of 0.067± acre of state regulated wetland and 1.008± acre of regulated adjacent area for additional parking spaces. The project will not impact any federal wetlands. Please see Appendix B: Overall Site Plan and Wetland Impact Map. The restoration area was previously used as overflow parking for ballpark users, was cleared, filled and graded. The proposed parking area impact area is located to the northeast of the restoration area. To compensate for the above wetland losses, Wendel on behalf of the Town of Amherst, is proposing the restoration of 0.815± acres of NYSDEC wetland area and the creation of 0.101± acre of scrub/shrub swamp. The creation and restoration areas will be seeded and planted with a variety of native species.

To compensate for Upland Adjacent Area impacts, the applicant is proposing the enhancement of the adjacent uplands by planting a row of trees along the edges of development. A total of 54 tree plantings will be planted to protect the state regulated arears. In addition, permanent monuments will be placed along the limits of disturbance and deed restrictions will be placed on the remaining wetland and buffer. Please refer to Appendix D-2 for the Project Details.

The proposed state wetland impact area at the Lou Gehrig Field Parking Lots- 550 Smith Road site consisted of a former scrub/shrub swamp. The state wetland restoration area currently consists of mown lawn, gravel areas and successional shrubland. The principal functions of the wetlands include floodflow alteration, wildlife habitat and nutrient removal. The proposed wetland mitigation is intended to compensate for these impacts through the restoration of 0.815± acre of scrub/shrub wetland and the creation of 0.101± acre of scrub/shrub swamp, creating a mitigation basin that will be seeded with an approved wetland seed mix and planted with wetland

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shrubs. The created wetland is intended to compensate for and enhance the functions lost from the impact areas.

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

SECTION I: OVERALL MITIGATION GOALS & OBJECTIVES

The goal of this mitigation project is to create and restore a sustainable scrub/shrub swamp that will replace the wetlands impacted at the proposed Lou Gehrig Field Parking Lots-550 Smith Road project site. Replacing the functions lost by the impact to the existing wetland are critical to the success of the wetland creation area. In addition, this plan is intended to compensate for the impact to NYSDEC Upland Adjacent Area (AA).

The objective of the wetland creation and restoration plan is to replace the wetland impact areas, with a ratio of 1.5:1, creating a minimum of 0.101± acre of scrub/shrub swamp and restoring a minimum of 0.815± acre of scrub/shrub swamp. The creation to impact ratio of 1.5:1 was determined to be appropriate given the quality of the wetland impact area. In addition to the wetland creation, NYSDEC upland adjacent area impacts will be mitigated for through the planting of fifty-four (54) native conifer plantings as well as permanent monuments delineating the limits of protected area and development.

The project design will rely on using the appropriate seed mix and supplemental plantings. Please refer to Section IV for specific seeding and planting details. The Mitigation Plan (Appendix D) includes: a map showing the existing topography within the mitigation area, details of the proposed wetland creation area, cross-section drawings and the proposed monitoring locations.

It is anticipated that the creation area will attract a wide variety of wildlife species and increase the diversity of wildlife utilizing the area. The proposed mitigation design will allow for contrasting diversified habitats for mammals, amphibians, reptiles, and bird species. The newly created wetland will serve as refuge for many of the smaller and more ubiquitous members of the desired wetland community, namely invertebrates.

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SECTION II: BASELINE INFORMATION

Appendix A contains Figures that depict the proposed project impact and wetland mitigation plans. The proposed impact site is located on the north side of Smith Road, to the west of the existing parking lot. The proposed mitigation areas are contiguous to NYSDEC Freshwater wetland CC-45 and the impact areas in the Town of Amherst, County of Erie, and State of New York.

2.1 IMPACT SITE CONDITIONS

2.1.1 RESOURCE TO BE IMPACTED

The project consists of the restoration 0.882± acre of unauthorized impact to state jurisdictional wetland and a proposed fill area totaling 0.067± acre, that consists of scrub/shrub swamp. In addition, 1.008± acre of NYSDEC AA is proposed to be impacted by the proposed . It should be noted that there are no impacts to federal wetlands as part of the project.

2.1.2 FUNCTIONAL ASSESSMENT

Appendix C includes the Functions and Values Assessment form prepared by EDI. The primary function and values provided by the wetland area proposed for impact include floodflow alteration, wildlife habitat and sediment/toxicant retention.

2.1.3 UPLAND BUFFERS AND ADJACENT LAND USES

The upland buffer areas adjacent to the current and proposed impact sites consist of mown lawn, gravel parking, ball fields and successional shrubland communities.

2.2 MITIGATION SITE CONDITIONS

2.2.1 EXISTING RESOURCES

The location of the mitigation consists of an area that was previously used as overflow parking for ballpark users, was cleared, filled and graded. The published Soil Survey of Erie County identifies soils within the proposed wetland creation area as Odessa silt

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

loam. This soil has the potential to contain hydric inclusions and suitable for wetland creation and restoration.

2.2.2 ADJACENT LAND USES

The mitigation site lies within an area adjacent to the ball park and surrounded on other sides by state and federally regulated wetland and regulated upland adjacent area.

2.2.3 PRESENCE OF INVASIVE PLANT SPECIES

The existing wetland on-site contains scattered occurrences of purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*) and cattail (*Typha* spp.). Please refer to Section 4.2.2 for specific recommendations regarding invasive species.

2.2.4 CONTRIBUTIONS OF MITIGATION TO WATERSHED AND/OR REGIONAL FUNCTION

Functions and values to be gained by the watershed include sediment /toxicant retention, floodflow alteration and wildlife habitat. The wetland creation area will provide additional area for retention of toxicants, sediment and nutrients from adjacent development. These functions will be performed by the ability of the mitigation area and adjacent preserved wetland to hold excess storm water, and in turn, remove nutrients and sediment by settling as well as provide quality wildlife habitat.

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SECTION III: MITIGATION SITE SELECTION & JUSTIFICATION

3.1 SITE SELECTION

The mitigation site was chosen based on the proximity to the NYSDEC impact areas. Per NYSDEC mitigation requirements, the mitigation location is adjacent to (connected to) the existing NYSDEC Freshwater Wetland (CC-45) that is proposed for impact. The mitigation site has suitable soil characteristics for successful hydrology and there are minimal invasive plant species adjacent to the mitigation site. The mitigation site is currently owned by the Town of Amherst and is therefore available for carrying out the proposed mitigation.

3.2 SITE RESTRICTIONS

Restrictions to the development of the site and the creation of the wetland mitigation include federal and state regulated wetlands and state regulated upland Adjacent Area. There are no listed threatened or endangered species within the site.

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SECTION IV: MITIGATION CONSTRUCTION PLAN

EDI recommends that a Pre-Construction meeting take place between the project design team, the earthwork contractor(s) and the project sponsor in order to ensure design specifications are understood.

4.1 TIMING OF WORK AUTHORIZED BY THE PERMIT(S)

4.1.1 REQUIRED DOCUMENTATION

Prior to conducting any work authorized in the NYSDEC Permit, the permittee must comply with any pre-construction Permit requirements including but not limited to any required financial assurances, deed restrictions and pre-notification requirements. In addition, the wetland mitigation must be constructed prior to or concurrently with the construction of the proposed project, unless otherwise specified in the permits.

4.1.2 SWPPP

A Stormwater Pollution Prevention Control Plan will be prepared in accordance with NYS blue book standards by the project engineer.

Silt fencing or other approved siltation control measures should be installed where necessary per NYS bluebook standards to prevent siltation. Silt fence should be installed to prevent inadvertent disturbance to adjacent wetlands. When required, any Permits and/or SWPPP approvals must be posted on-site.

4.2. SITE PREPARATION

4.2.1 SURVEY CONTROL

A licensed land surveyor should locate the footprint of the proposed creation area based on the Mitigation Plans (Appendix D). The perimeter of the work area is to be outlined, using wooden stakes marked with cut and fill information. All contractors should be fully aware of work limits, as well as adjacent wetlands and buffer areas to be avoided. This also includes areas off limits for storage of equipment. Survey control measures must be

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implemented during construction of the mitigation area to ensure the wetland is built according to the proposed specifications.

4.2.2 INVASIVE PLANT SPECIES CONTROL PLAN

A wetland delineation was conducted within the project site and invasive plant species were identified at that time. There are known scattered populations of invasive plant species within the adjacent wetland and upland communities. To reduce the potential for introduction of invasive plant species to the mitigation area, it is critical that soils encumbered with invasive species propagules not be re-applied to the mitigation area.

To prevent the unintentional introduction or spread of invasive species, the applicant must ensure that all construction equipment be cleaned of mud, seeds, vegetation and other debris before entering either the project or mitigation site. The construction contractor should guarantee that all equipment and vehicles will be cleaned prior to entering the mitigation area. Loose plant and soil material shall be removed from clothing and boots of any persons entering the mitigation area.

The mitigation area was designed to limit the spread of invasive species. The monitoring protocol calls for close monitoring of invasive species. If invasive species are found, at any time, removal methods will include, but are not limited to manual removal. Contingent on the extent of potential invasions, other methods may be employed.

4.2.3 SOILS

It is recommended that the wetland be constructed during a drier time of the year in order to aid in the ease of construction and to minimize the disturbance of the surrounding areas and the destruction of the granular soil structure of the topsoil. Soil compaction and destruction of the subsoil /substratum soil structure will inhibit proper drainage and desired plant growth as well as encourage invasive plant establishment. The project will be constructed using on-site soils. The excavated subsoil from the construction of the wetland mitigation area will be utilized within the development footprint. Excess soils will not be placed in any regulated wetlands or buffers.

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The following Earthwork protocols are being recommended:

(1) Strip the gravel off of the former parking areas. Strip the topsoil (if present) from the restoration and creation areas and stockpile in a separate staging area for re-use as a seed bed in the appropriate zone and as fill for future construction. (No stockpiling of topsoil or subsoil will occur within any regulated wetlands or buffers).

(2) Excavate as per specifications shown on the Mitigation Plans included in Appendix D. It is recommended that low impact and or tracked equipment is utilized in the construction of the mitigation area. Rough finish grading should create rough surfaces on all side slopes and a ragged shoreline. It is important that survey control be established in order to assure that the final planned elevations are obtained. The wetland mitigation area should be over-excavated by six (6) inches to allow for the reapplication of topsoil.

(3) Place a minimum of six inches of topsoil within the wetland creation area and to bring the restoration and creation areas to the proposed elevations shown on the Mitigation Plans in Appendix D. This soil should come from the topsoil excavated from this area (if present) but must be free of rocks, debris, gravel or invasive species propagules, in which case the topsoil should be sourced from an area that does not contain gravel or invasive plant parts or seeds. If no topsoil is present within the restoration or creation areas, clean topsoil may be imported.

(4) It is critical if heavy equipment and or untracked equipment is utilized within the mitigation areas that the soils are decompacted prior to planting. The soils should be fluffed-ripped using a disc, chisel plow or other means prior to planting. Disc the surface to an approximate depth of six (6) inches after topsoil has been replaced within ALL creation and restoration areas. While performing decompacting efforts, avoid mixing subsoil and topsoil to the maximum extent possible. After disking, a hand operated cone penetrometer or other method should be used to confirm acceptable compaction levels and planting can commence.

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4.2.4 HYDROLOGY

The success of mitigation relies primarily on attaining wetland hydrology. The creation areas are underlain by Odessa and Lakemont silt loam soils. The parent material of Odessa soils consists of very deep, somewhat poorly drained soils formed in red, clayey lacustrine deposits. These soils are in moderately low areas on lake plains and valley terraces. Slope ranges from 0 to 20 percent. Mean annual temperature is 8 degrees C (46 degrees F), and mean annual precipitation is 995 mm (39 in). The parent material of Lakemont soils consists of deep, poorly drained and very poorly drained soils of lake plains. They are nearly level soils formed in very slowly permeable reddish colored clayey lacustrine sediments. Slope ranges from 0 to 3 percent. Permeability is moderately slow in the surface and very slow in the subsoil sand substratum. Mean annual temperature is about 48 degrees F. and mean annual precipitation is about 34 inches.

Hydrology is expected to imitate the adjacent wetland areas. The wetland creation will be connected to the existing wetland to the east and the proposed elevations will mimic those elevations. The design will rely heavily on seasonal saturation and inundation from the adjacent wetland community.

As shown on the wetland cross-sectional drawings included as Appendix D-3, EDI is proposing one (1) hydrologic zone to correspond with the proposed vegetative community, scrub/shrub swamp. The creation and restoration areas are proposed to have 2-8 inches of seasonal inundation. The side slopes to the mitigation basin are proposed at a minimum 4:1 slope. It is anticipated that the creation and restoration areas will have periods of fluctuation and will likely have decreased water levels and/or draw down during dry summer months or increased amounts in certain cases of high precipitation or runoff.

4.2.5 PLANTING/SEEDING

Immediately following mitigation construction, all areas including wetland restoration and creation areas and disturbed upland areas should be seeded with the respective seed mixtures and rates specified in Section 5. The upland areas and side slopes to the

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creation and restoration areas should be seeded and mulched with clean straw to reduce soil erosion and to keep the soil moist for germination. Planting of the proposed wetland shrubs should take place concurrent with seeding or during the fall after seeding.

The following Seeding/Planting protocols are being recommended:
(1) It is recommended that an appropriate cover crop be added to seeded areas to promote the proper moisture and shade levels for optimal plant growth. Annual rye germinates rather quickly and provides nursery crop for wetland seed as well as adding to the organic layer when it dies back. In addition, straw mulch is recommended to further optimize germination and growth. Hay is not to be used as mulch, as it may contain many seeds of undesirable invasive species that may spread throughout the mitigation areas.

(2) It is recommended that seeding be completed prior to June 15th or after September 15th. Seeding during drier times may require some type of irrigation to promote germination. It is also recommended that hydro-seeding techniques be avoided due to the light requirements required for the germination of many wetland species. Hydro-seeding fibers can block the solar rays and deter the wetland seed mixture from proper germination and ultimately affect the success of the mitigation.

(3) Upon completion of seeding the mitigation area, the upland buffer tree planting and the wetland restoration and creation area shrub plantings are to be installed as per specifications outlined in Section 5.2.1.

(4) Branches and logs will be placed opportunistically throughout the wetland restoration and creation areas. The additional woody material will not only increase the habitat diversity within the area, but also deter potential anthropogenic impacts (e.g., all-terrain vehicle damage).

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SECTION V: PLANTING AND ENHANCEMENT PLAN

5.1 SPECIFICATIONS AND CHARACTERISTICS

The wetland restoration and creation areas are proposed as scrub/swamp communities. Shrub plantings will be throughout the wetland creation and restoration areas, a total of 183 shrubs will be planted. Tree plantings will be placed along the limits of disturbance, a total of 54 trees will be planted as part of the mitigation plans. A Northeast Wetland Forest Herb Mix will be used for the scrub/shrub swamp restoration areas and a Native Wetland Hummock Mix will be used in the wetland creation areas. Any upland areas disturbed by the wetland creation or restoration work will be seeded with a Northeast Upland Native/Naturalized Wildflower mix. The purpose is to create a diverse habitat, maximizing the variety of species to inhabit this area. The project design relies on natural colonization and growth of existing propagules as well as the appropriate seed mix.

It is anticipated that the water levels in the scrub/shrub swamp will fluctuate between 0 and 8 inches during portions of the wetter portions of the growing season. The proposed bottom elevation of the restoration and creation areas is set between elevations of 577.5 & 578 feet. The scrub/shrub swamp is anticipated to draw down in the summer months similar to the hydrology of the wetlands adjacent to the creation and restoration areas.

5.2 PLANTING PLAN

As outlined below, the wetland creation and restoration areas are proposed to include shrub plantings, a forested wetland and hummock wetland mix. The on-site regulated adjacent area mitigation consists of a row of native conifer plantings as well as permanent monuments proposed between the development footprint and the jurisdictional area boundary.

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5.2.1 WETLAND CREATION AND RESTORATION AREAS

WETLAND SHRUB PLANTING

One hundred and eighty-three (183) shrub plantings are proposed for the wetland creation and restoration areas. The shrubs proposed for planting within the mitigation area were selected by considering soil conditions, climate, hydrology, inundation tolerance, shade tolerance, wildlife benefit and other factors in determining suitable species for planting. The following species and amounts were selected:

Common Name	Latin Name	Indicator Status	Number of Plantings	Type
Silky Willow	*Salix sericea*	FACW	61	Live Stake
Silky Dogwood	*Cornus amomum*	FACW	60	Live Stake
Pussy Willow	*Salix discolor*	FACW	62	Live Stake

The wetland creation and restoration areas are designed to be a scrub/shrub swamp community. The plan utilizes the expectation that volunteer shrub species will establish in addition to the planted shrubs. The planting scheme is random to mimic what occurs naturally.

WETLAND SEEDING

Wetland seeding with a cover crop is scheduled for this area followed immediately by straw mulch to retain moisture. It is expected that ground water and precipitation will allow for proper hydrology within the basin. Vegetation is expected to come from previously existing native species as well as the seed mixes. The seed mix can take up to a year to germinate as some wetland species seeds need to cold stratify before emerging. The applicant is proposing the following seed mix for the wetland creation and restoration areas:

Cover Crop

Recommended at ten pounds per acre

Common Name	Latin Name	Indicator Status	Percent by Number of seeds (not weight)
Annual Rye Grass	*Lolium multiflorum*	NI	100%

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Northeast Wetland Hummock Mix Scrub/Shrub Swamp Wetland Creation and Restoration Areas Recommended at 3.5 pounds per acre		
Percent by No. of seeds (not weight)	**Scientific Name**	**Common Name**
43.6%	*Scirpus atrovirens*	Green Bulrush
19.0%	*Juncus effusus*	Soft Rush
33.5%	*Carex vulpinoidea*	Fox Sedge
1.3%	*Leersia oryzoides*	Rice Cut Grass
1.3%	*Carex comosa*	Bearded Sedge
0.9%	*Carex crinita*	Fringed Sedge
0.2%	*Carex lurida*	Shallow Sedge
0.2%	*Carex lupulina*	Hop Sedge

Northeast Wetland Forest Herb Mix Hardwood Swamp Recommended at four pounds per acre		
Percent by No. of seeds (not weight)	**Scientific Name**	**Common Name**
25.96%	*Scirpus atrovirens*	Green Bulrush
25.41%	*Scirpus cyperinus*	Wool Grass
8.33%	*Carex vulpinoidea*	Fox Sedge
7.68%	*Glyceria canadensis*	Canada Mannagrass
7.63%	*Verbena hastata*	Blue Vervain
6.02%	*Glyceria grandis*	Reed Meadowgrass
5.70%	*Glyceria striata*	Fowl Mannagrass
2.12%	*Panicum clandestinum*	Deertongue
1.53%	*Verbena urticifolia*	White Vervain
1.51%	*Glyceria melicaria*	Melic Mannagrass
0.94%	*Boehmeria cylindrica*	False Nettle
0.94%	*Urtica dioica*	Stinging Nettle
0.85%	*Solidago gigantea*	Giant Goldenrod
0.85%	*Solidago rugosa*	Wrinkled Goldenrod
0.75%	*Cinna arundinacea*	Wood Reed
0.62%	*Leersia virginica*	Whitegrass
0.57%	*Cephalanthus occidentalis*	Buttonbush
0.45%	*Elymus canadensis*	Wild Rye
0.38%	*Sium suave*	Water Parsnip
0.32%	*Elymus virginicus*	Virginia Wild Rye
0.29%	*Polygonum pensylvanicum*	Pennsylvania Smartweed
0.24%	*Geum macrophyllum*	Large-Leaf Avens
0.22%	*Elymus riparius*	Riverbank Wild Rye
0.19%	*Rumex verticillatus*	Water Dock
0.16%	*Asclepias incarnata*	Swamp Milkweed
0.09%	*Carex lurida*	Shallow Sedge
0.09%	*Lilium superbum*	Turk's Cap Lily
0.09%	*Rubus allegheniensis*	Blackberry
0.07%	*Carex lupulina*	Hop Sedge

5.2.2 UPLAND ENHANCEMENT AREAS, AREAS DISTURBED BY CONSTRUCTION, UPLAND BUFFERS

UPLAND TREE PLANTING

Fifty-four (54) tree plantings are proposed for the upland buffer area. The tree plantings will be placed along the limits of the impact areas, within the 100-foot upland adjacent area to Freshwater Wetland CC-45. The trees proposed for planting

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within the enhancement areas were selected by considering soil conditions, climate, hydrology, wildlife benefit and other factors in determining suitable species for planting. The planting scheme is random to mimic what occurs naturally.

The following species and amounts were selected:

Common Name	Latin Name	Number of Plantings	Type
White Spruce	*Picea glauca*	13	#3 Container
White Pine	*Pinus strobus*	14	#3 Container
Eastern Red Cedar	*Juniperus virginiana*	14	#3 Container
Arborvitae	*Quercus palustris*	13	#3 Container

UPLAND SEEDING

Upland areas disturbed by the construction of the wetland creation area will need to be seeded and mulched immediately after the earthwork has been completed in order to stabilize these areas and minimize the risk of soil erosion. The Applicant is proposing the following seed mixes for all disturbed upland areas:

Northeast Upland Native/ Naturalized wildflower Mix
Hardwood Swamp
Recommended at twenty-three pounds per acre

Common Name	Latin Name	Percent by Number of seeds (not weight)
Sheep Fescue	*Festuca ovina*	28.1%
Switchgrass	*Panicum virgatum*	26.0%
Foxtail Millet	*Setaria italica*	15.3%
Sweet Vernal Grass	*Anthoxanthum odoratum*	12.8%
Annual Ryegrass	*Lolium multiflorum*	11.1%
Wild Rye	*Elymus canadensis*	6.7%
Common Yarrow	*Achillea millefolium*	47.5%
Black Eyed Susan	*Rudbeckia hirta*	9.1%
Ox-Eye Daisy	*Chrysanthemum leucanthemum*	7.5%
Blue Vervain	*Verbena hastata*	7.4%
Cichory	*Cichorium intybus*	7.3%
Birdsfoot Trefoil	*Lotus corniculatus*	6.8%
Dame's Rocket	*Hesperis matronalis*	5.0%
Queen Anne's Lace	*Daucus carota*	2.2%
Canada Goldenrod	*Solidago canadensis*	2.0%
Grass Leaf Goldenrod	*Euthamia graminifolia*	2.0%
Wild Bergamot	*Monarda fistulosa*	1.5%
New England Aster	*Aster novae-angliae*	1.3%
Common Milkweed	*Asclepias syriaca*	0.4%

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5.3 HABITAT ENHANCEMENT EFFORTS

5.3.1 NATURAL HABITAT ENHANCEMENTS

The existing regulated adjacent area will be enhanced by tree plantings to promote increased habitat and diversity. In addition to the proposed tree plantings, the Adjacent Area where the trees will be planted will not be mowed as it was in the past. When mowing is stopped, the natural vegetation will diversify, and shrubs and saplings will begin growing.

5.3.2 BUFFERS

The mitigation area will be buffered from the adjacent development by existing wetland to the north and west of the proposed impact areas. These buffers are sufficient to protect the natural resources of the existing wetlands and the proposed wetland restoration and creation areas.

5.3.3 EXPECTED VOLUNTEER SPECIES

It is expected that existing native volunteer species will also establish in the proposed mitigation area. Most of these will come from adjacent seed sources. The species in the vicinity of the mitigation area which are anticipated to establish include: pin oak (*Quercus palustris*), American elm (*Ulmus americana*), upright sedge (*Carex stricta*), pussy willow (*Salix discolor*) and common rush (*Juncus effusus*).

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SECTION VI: PERFORMANCE STANDARDS

Performance goals for shallow emergent marsh:

6.1 CREATION ACREAGE

The project will include at a minimum, the restoration of two areas previously impacted which total 0.815± acre of scrub/shrub swamp and mitigation for the proposed wetland impact area of 0.067 acre with a minimum ratio of 1.5:1, creating approximately 0.101± acre of scrub/shrub swamp. In addition, 1.008± acres of regulated upland adjacent area is proposed to be impacted by this project. For this upland impact, enhancement is proposed which includes the planting of native conifer trees, ceasing of mowing activities and adding permanent monuments delineating the limits of protected area and proposed development.

6.2 VEGETATION STRUCTURE

Establish and maintain 85% coverage of beneficial FAC, FACW, and OBL species; total coverage shall meet or exceed 80%, with no more than 50% coverage of one species. Less than 5% of the wetland vegetative composition will include invasive species (i.e., Lythrum salicaria and Phragmites australis).

6.3 HYDROLOGY/ WATER LEVELS

Establish and maintain seasonal inundation/saturation of between 0 and 8 inches of water, for at least 12.5% of the growing season for 80% of the monitoring years.

6.4 HABITAT ATTRIBUTES

The wetland creation area will provide adequate protection and habitat for an array of nesting birds, amphibians and reptiles.

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SECTION VII: CONSTRUCTION MONITORING & POST CONSTRUCTION MONITORING REQUIREMENTS

7.1 BASELINE POST CONSTRUCTION REPORT

A Baseline Post-Construction report must be submitted to the New York State Department of Environmental Conservation by December 31 of the year of construction completion (including all site grading, seeding and/or planting activities).

This baseline report must include the following:

1. An as-built topographic survey of the mitigation area including all as-built elevations completed by a licensed land surveyor at 0.5' (1/2') contour intervals.
2. Photographs from fixed locations including a photo-location map.
3. A list of plants introduced through seeding and/or planting including approximate planting and/ or seeding dates.
4. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.
5. A detailed description of all time-of-construction field design modifications to the original design plans.

7.2 ANNUAL MONITORING REQUIREMENTS

The permittee is required to submit annual monitoring reports to the NYSDEC for the five (5) years following completion of construction and initial planting efforts. Please see Appendix E for the proposed Maintenance and Inspection Schedule. The report must include a summary of the data collected between May and October for that monitoring year.

These reports must include the following:

1. Comparison of site conditions to an as-built survey.
2. Wetland Delineation including a map of the wetland boundary.
3. Photographs (minimum of 5) from fixed locations including a photo-location map.
4. A plants species list including wetland indicator status, strata, dominant plants and aerial coverage.
5. A list of plants introduced through seeding and/or planting.

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6. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
7. Fish and wildlife observations at the mitigation site.
8. A summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation plan as well as current wetland functions. These reports must also address any potential problem areas and include suggestions and a timetable for correction if it is anticipated that projected goals may not be met.
9. Date(s) of field inspection(s).

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SECTION VIII: LONG-TERM SITE MANAGEMENT

8.1 FUTURE LAND USE PLANS

There are no future planned uses for the mitigation site. Areas to the east are being utilized for existing ball fields and parking. It is anticipated that the mitigation site will be utilized for recreation and educational purposes by nearby residents. It is EDI's opinion that these future land use plans are compatible with the mitigation project.

8.2 REAL ESTATE RESTRICTIONS

There are no existing deed restrictions or right-of-way agreements which would prevent or restrict the development of the mitigation area. There are no current restrictions on the mitigation area.

8.3 MITIGATION SUSTAINABILITY

The project has been designed to be sustainable and self-maintaining. Once the wetland hydrology and hydrophytic vegetation has been established, it is anticipated that the wetland will continue to function without human intervention.

8.4 ADAPTIVE MANAGEMENT PLAN

The Applicant will be responsible for first successfully meeting the short-term requirements of the permit, including any necessary adaptive management measures. If invasive species control measures are required, the Applicant will develop a plan to control the species that establish and present a plan to NYSDEC for approval. Minor occurrences of invasive species will be manually removed during scheduled monitoring visits. Should hydrology not properly establish, the Applicant will develop a plan to attain planned hydrology.

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LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix A - Figures

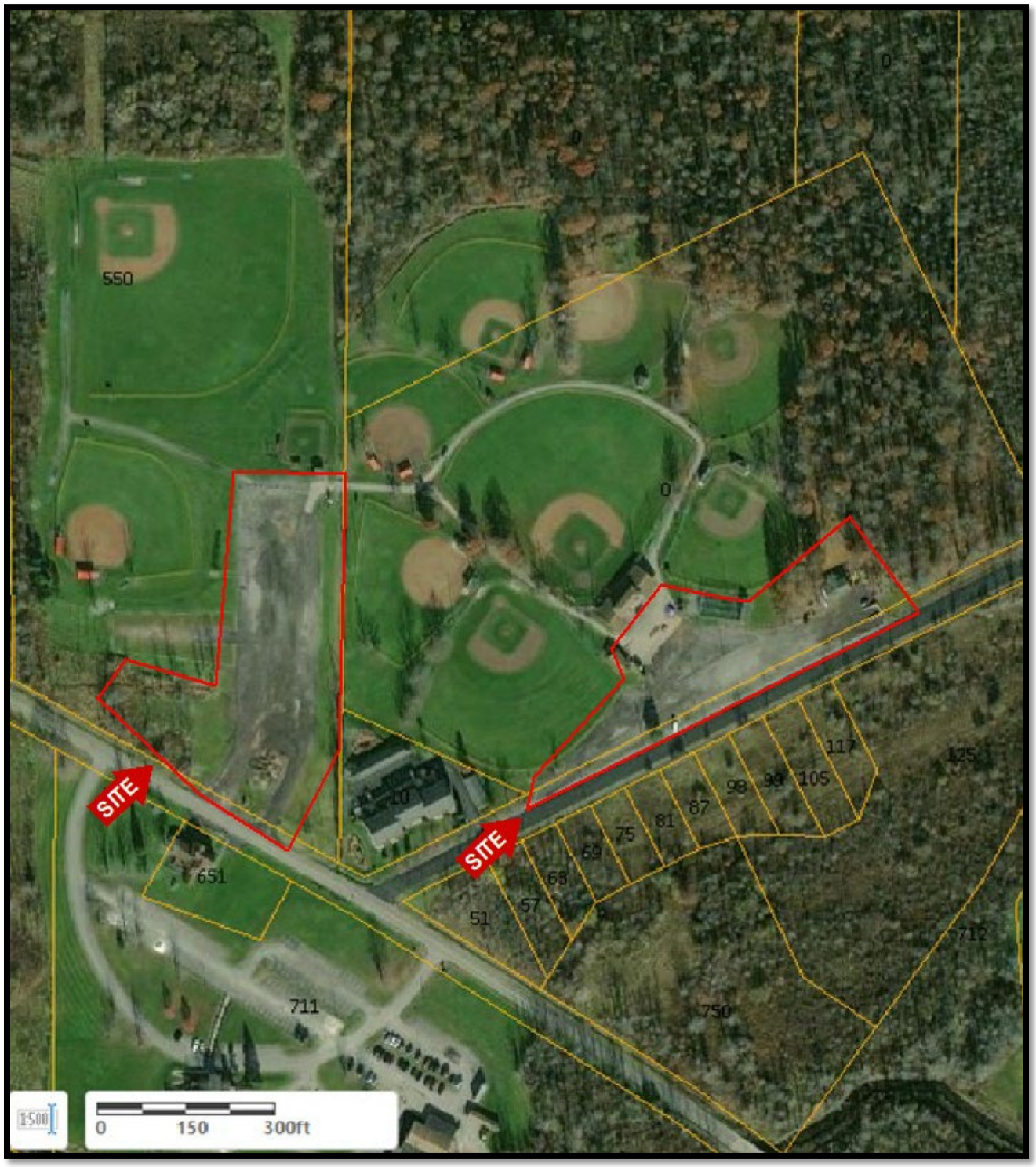


Figure 1: Aerial Photograph

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

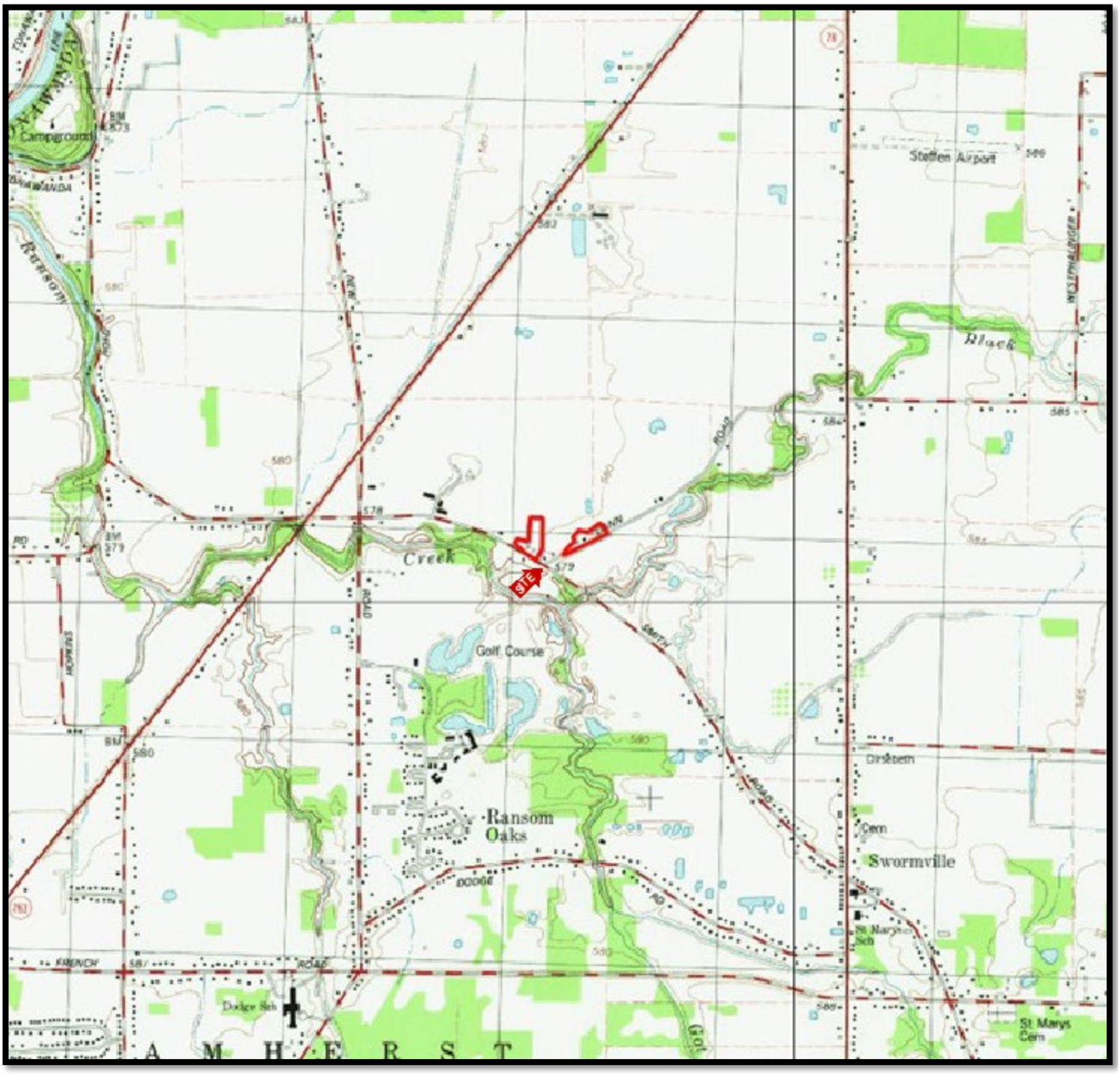


Figure 2: USGS 7.5 Minute Topographical Map

Clarence Center Quadrangle / 2002 DeLorme

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

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Figure 3: National Wetlands Inventory Map

http://www.fws.gov/wetlands/data/mapper.HTML

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

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Figure 4: NRCS Erie County Soil Survey Map

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

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Figure 5: NYSDEC Environmental Resource Mapper

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm

Lou Gehrig Field Parking Lots- 550 Smith Road

Town of Amherst, Erie County, New York

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LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix B - Overall Site Plan & Wetland Impact Map

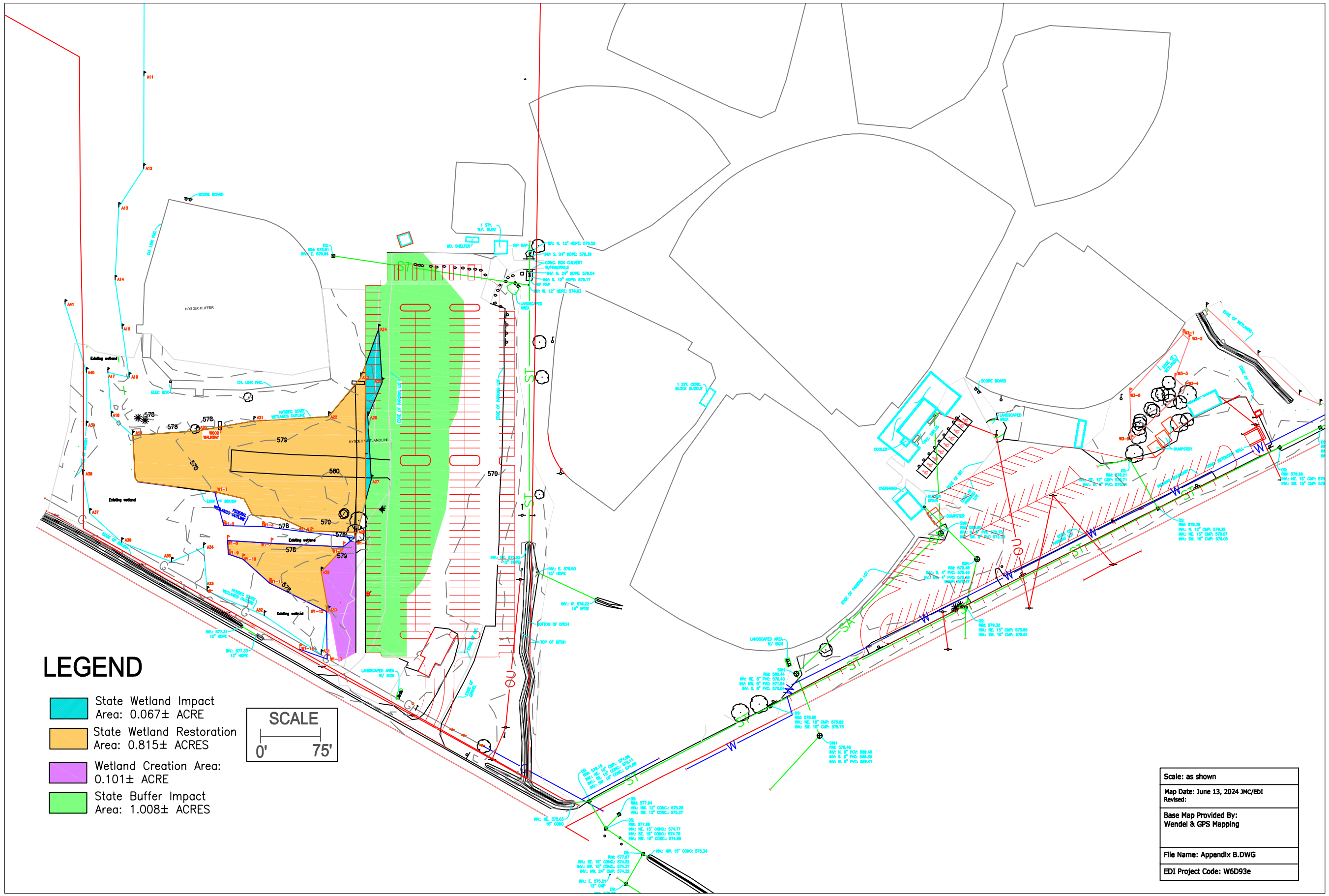
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NORTH

Appendix B: Overall Site Plan and
Wetland Impact Map
Lou Gehrig Field Parking Lots
Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation



LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

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Appendix C - Functional Assessment Data Form

Wetland Function-Value Evaluation Form

Total area of wetland 0.067± acres Human made? No s wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use undeveloped, recreational facilities Distance to nearest roadway or other development <20 feet

Dominant wetland systems present PSS/EM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Contiguous to Black Creek corridor across road.

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Please refer to the Wetland Delineation Report. dated 04-21-2022

Wetland ID Wetland 1

Latitude 43.05274ºN Longitude -78.71543ºW

Prepared by: JMC/EDI Date 05-14-2024

Wetland Impact: Type Fill Area 0.0.067± acre

Evaluation based on: Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y	Suitability N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge		N	7,15	N	Topographic gradient is minimal, overland flow present, retention low
Floodflow Alteration	X		1,5,6,7,9	Y	Flood storage potential in wetland, adjacent to impervious surfaces
Fish and Shellfish Habitat		X	NA	N	NA
Sediment/Toxicant Retention	X		1,2,3,5,7,8	Y	Sediments held temporarily during low flow events
Nutrient Removal		X	3,9	N	Potential for nutrient and sediment removal exists.
Production Export		X	1,4,12	N	Overland flow constricted by topographic gradient
Sediment/Shoreline Stabilization		X	3	N	Low flow volumes
Wildlife Habitat	X		5,6,7,8,17,19,20,21	Y	Wildlife habitat exists, mediocre quality due to invasive species and minor distrubances
Recreation	X		1,4,5,10	Y	Has potential for recreational opportunities since located on town owned lands
Educational/Scientific Value		X	5	N	No known education uses currently
Uniqueness/Heritage		X		N	NA
Visual Quality/Aesthetics		X	8	N	NA
ES Endangered Species Habitat		X		N	None found or known to occur on-site.
Other					

Notes:

* Refer to backup list of numbered considerations.

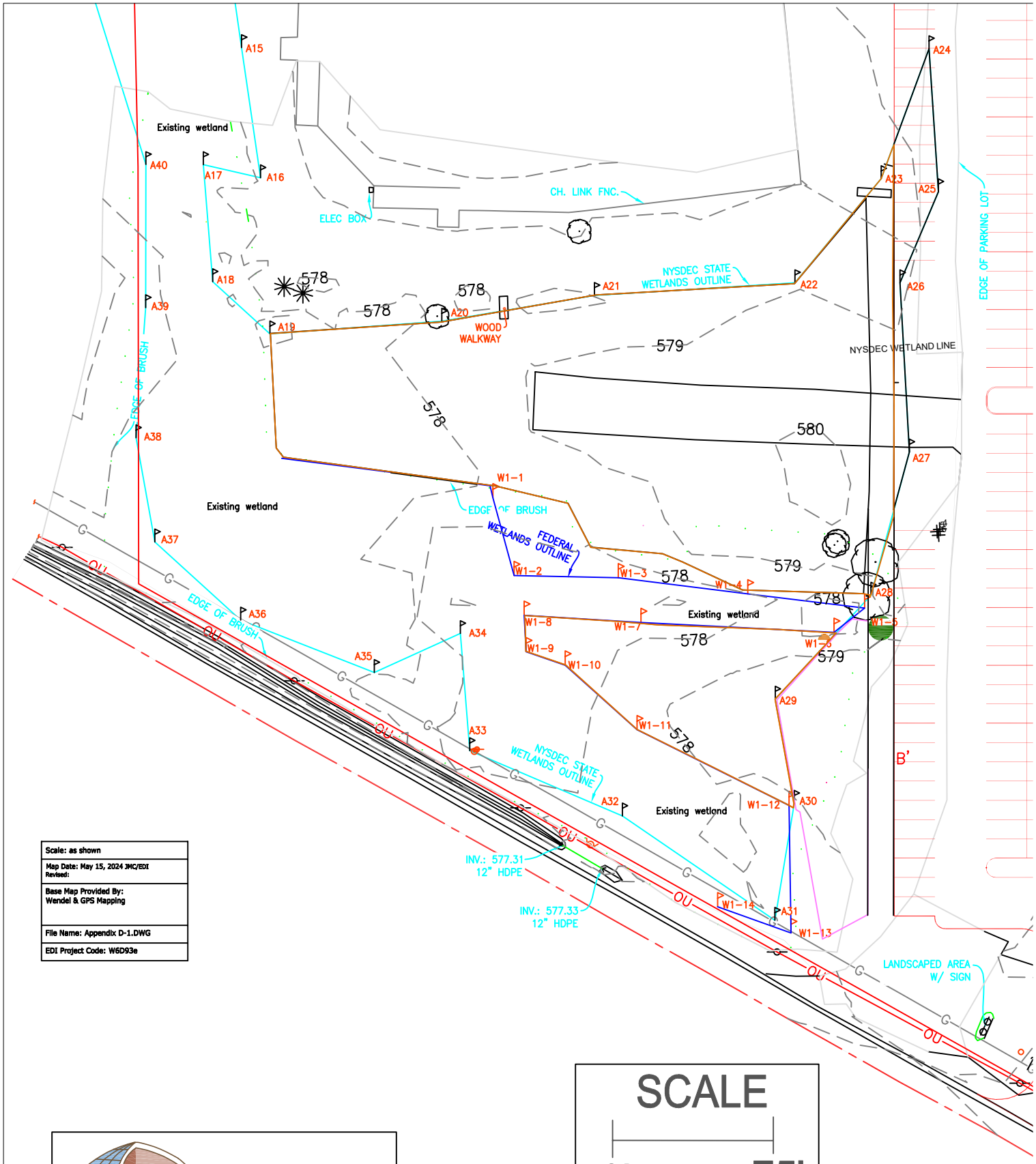
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix D - Mitigation Plans

Appendix D-1: Topography Map
Lou Gehrig Field Parking Lots
Town of Amherst Erie County, New York



Scale: as shown
Map Date: May 15, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Appendix D-1.DWG
EDI Project Code: W6D93e

SCALE

0' 75'

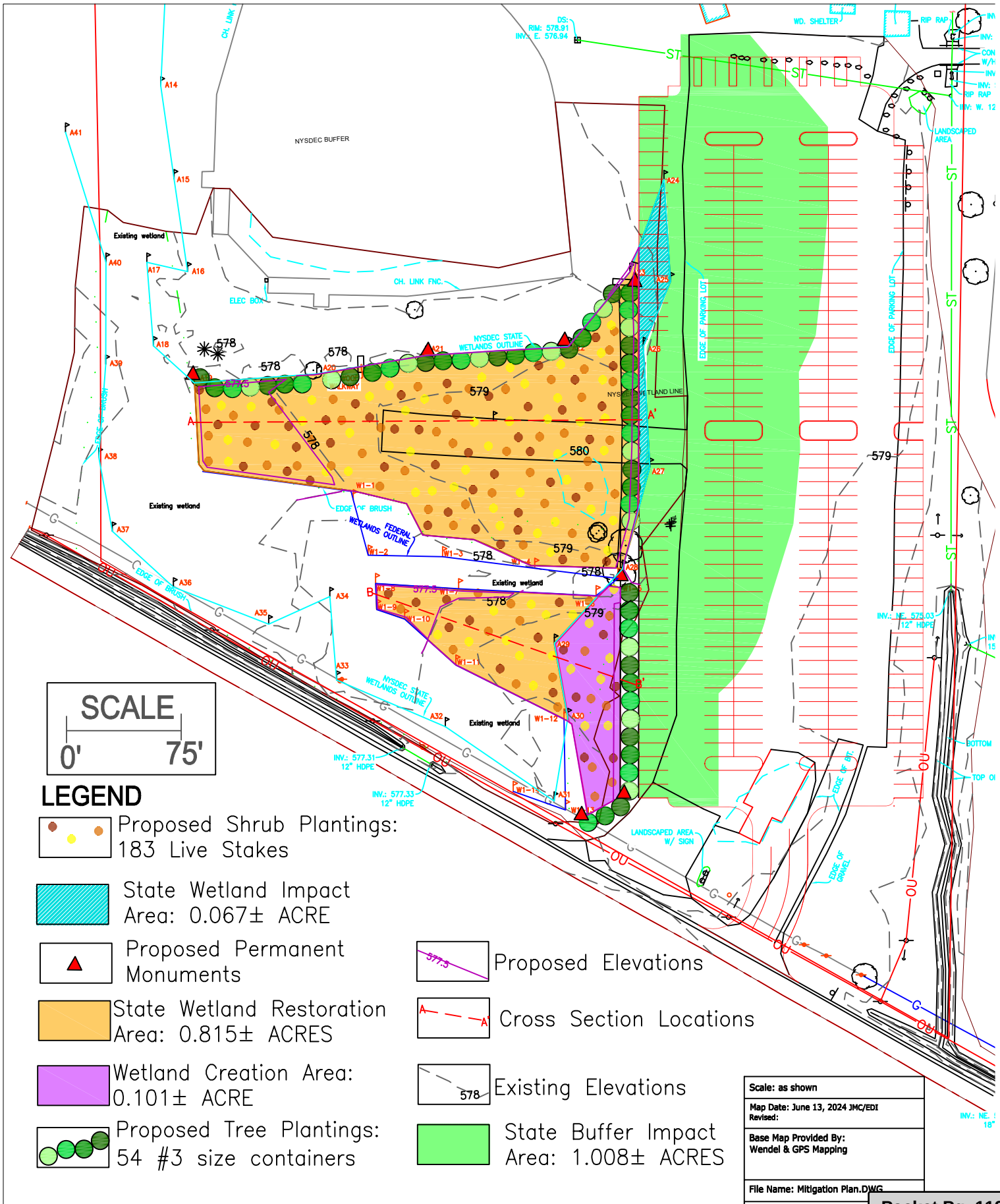
EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Appendix D-2: Project Details
Lou Gehrig Field Parking Lots
Mitigation Plan
Town of Amherst Erie County, New York

NORTH



SCALE
0' 75'

LEGEND

- Proposed Shrub Plantings: 183 Live Stakes
- State Wetland Impact Area: 0.067± ACRE
- Proposed Permanent Monuments
- State Wetland Restoration Area: 0.815± ACRES
- Wetland Creation Area: 0.101± ACRE
- Proposed Tree Plantings: 54 #3 size containers
- 577.5 Proposed Elevations
- A — A' Cross Section Locations
- 578 Existing Elevations
- State Buffer Impact Area: 1.008± ACRES

Scale: as shown
Map Date: June 13, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Mitigation Plan.DWG
EDI Project Code: W6D93e

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

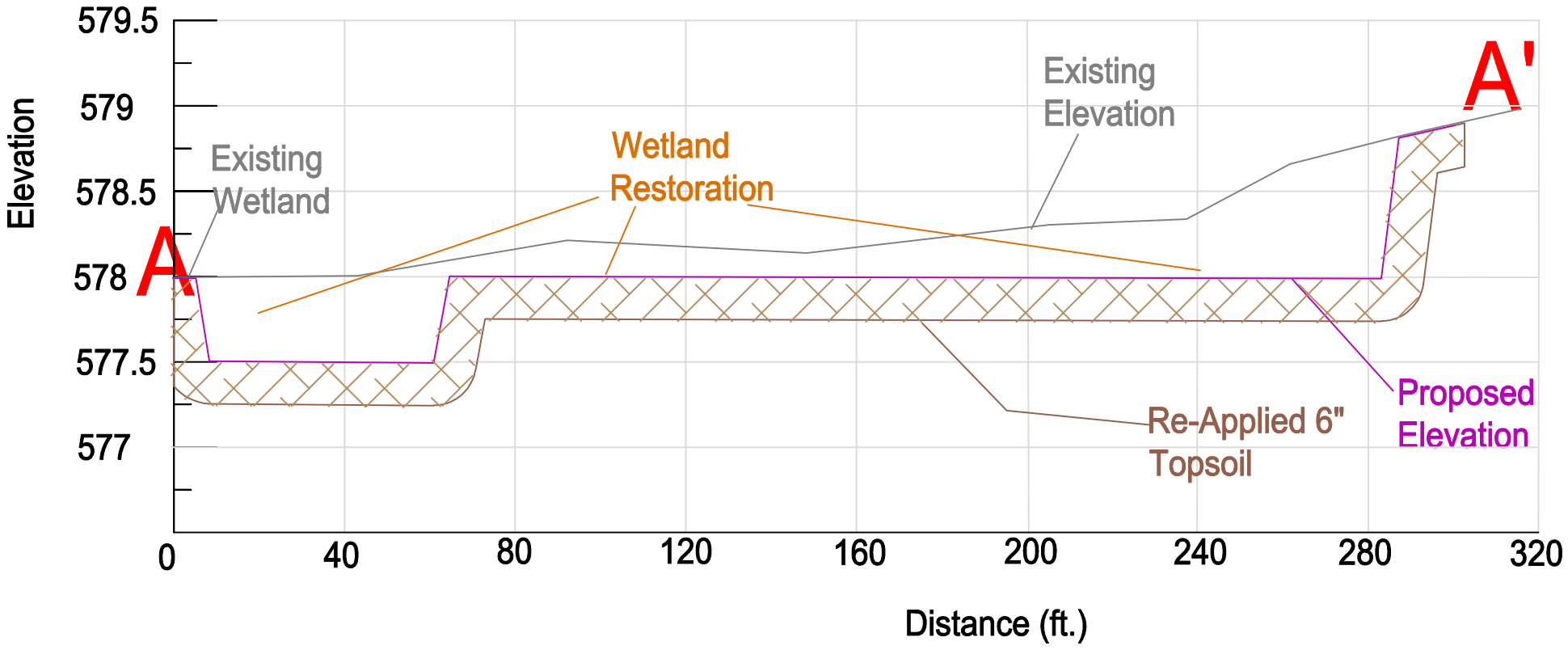
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Appendix D-3 - Cross Section A-A'

Lou Gehrig Field Parking Lots- 550 Smith Road

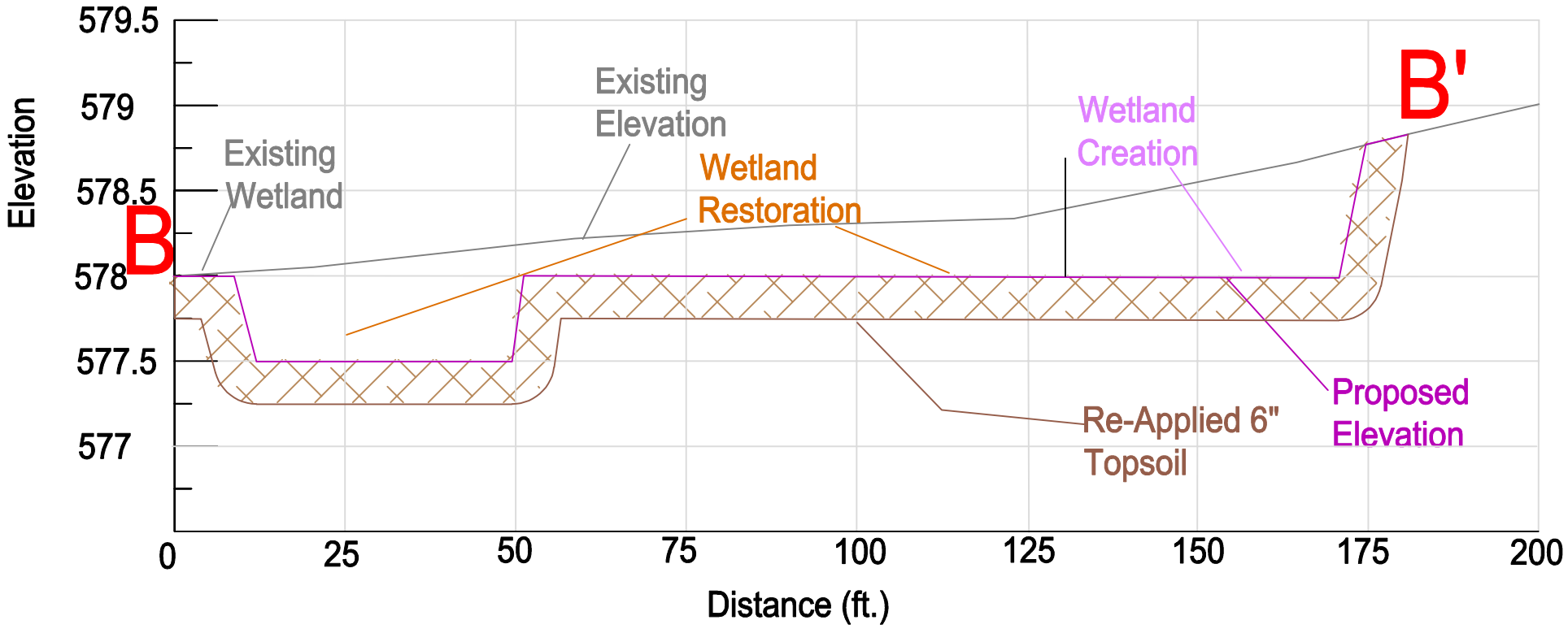
Town of Amherst Erie County, New York



Attachment: SP-1990-083_application_091924 (29174 : SP-1990-083, 50 Dann Rd)

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

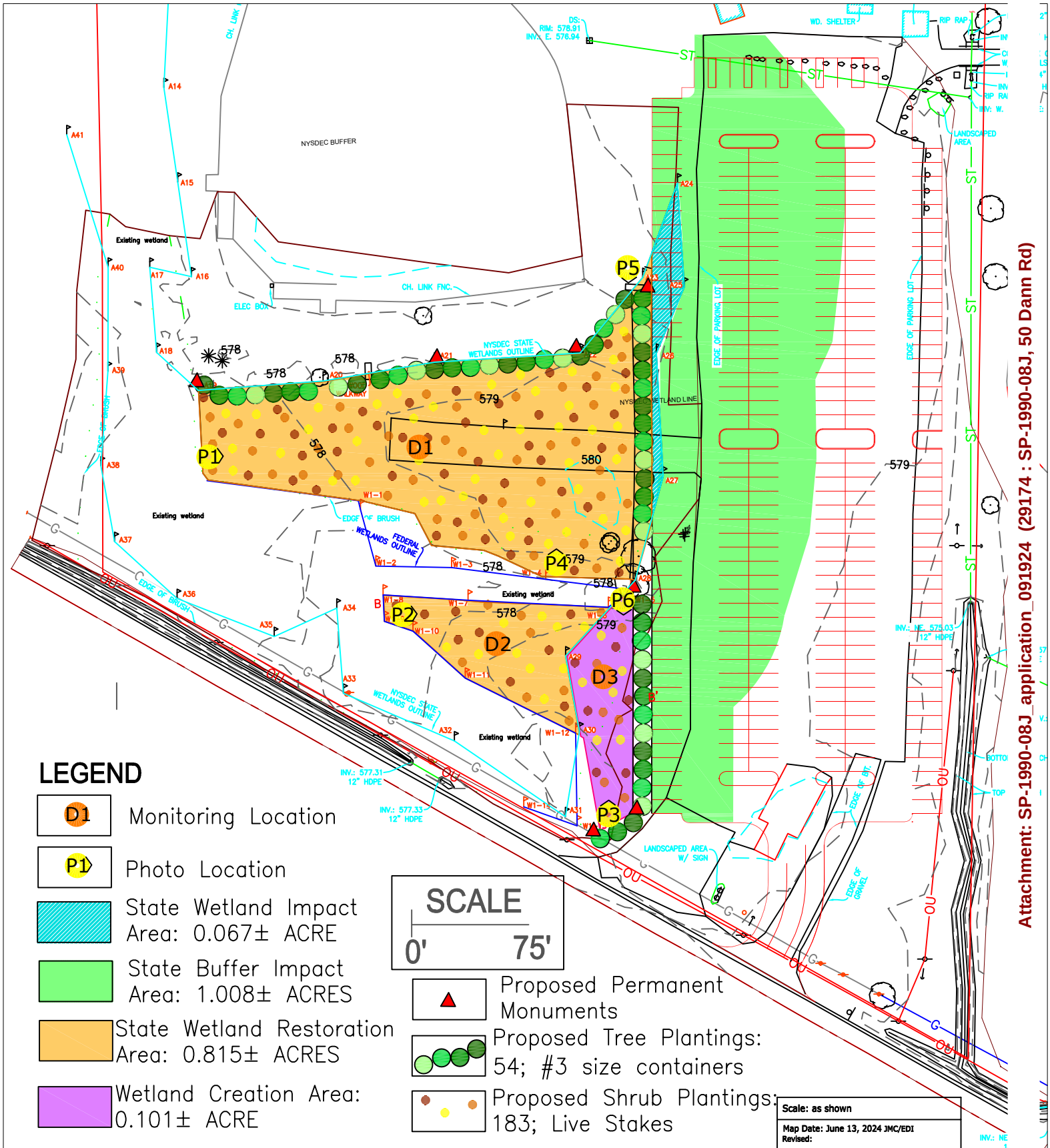
Appendix D-3 - Cross Section B-B'
Lou Gehrig Field Parking Lots- 550 Smith Road
Town of Amherst Erie County, New York



EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Appendix D-4: Annual Monitoring
Benchmark Map
Lou Gehrig Field Parking Lots Mitigation Plan
Town of Amherst Erie County, New York

NORT



LEGEND

- D1 — Monitoring Location
- P1 — Photo Location
- State Wetland Impact Area: 0.067± ACRE
- State Buffer Impact Area: 1.008± ACRES
- State Wetland Restoration Area: 0.815± ACRES
- Wetland Creation Area: 0.101± ACRE

SCALE
0' 75'

- Proposed Permanent Monuments
- Proposed Tree Plantings: 54; #3 size containers
- Proposed Shrub Plantings: 183; Live Stakes

Scale: as shown
Map Date: June 13, 2024 JMC/EDI Revised:
Base Map Provided By: Wendel & GPS Mapping
File Name: Mitigation Plan.DWG
EDI Project Code: W6D

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix E - Maintenance & Inspection Schedule

Appendix E: Maintenance & Inspection Schedule

Activity	Timeframe
CONSTRUCTION	
Receive Authorization from NYSDEC & USACE	Fall 2024
Mitigation Site Construction	Fall and Winter 2024
Mitigation site planting & seeding	Spring 2025
Post Construction Report	December 31, 2025
MONITORING	
Year of Construction (For Remaining Months During the Growing Season)	Monthly Visits (July to October) 2026
1st Year Monitoring Field Visits	Monthly Visits (April to October) 2026
1st Year Monitoring Report	December 31, 2026
2nd Year Monitoring Field Visits	Two Site Visits During Growing Season 2027
2nd Year Monitoring Report	December 31, 2027
3rd Year Monitoring Field Visits	Two Site Visits During Growing Season 2028
3rd Year Monitoring Report	December 31, 2028
4th Year Monitoring Field Visits	Two Site Visits During Growing Season 2029
4th Year Monitoring Report	December 31, 2029
5th Year Monitoring Field Visits	Two Site Visits During Growing Season 2030
5th Year Monitoring Report	December 31, 2030
USACE & NYSDEC Sign-off	Winter 2030/Spring 2031

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

LOU GEHRIG FIELD PARKING LOTS- 550 SMITH ROAD

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

Appendix F – Joint Application for Permit

NEW YORK STATE | Department of Environmental Conservation | Office of General Services | Department of State

US Army Corps of Engineers

JOINT APPLICATION FORM

For Permits for activities activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. **Applications To:**

>NYS Department of Environmental Conservation ☑ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

- ☐ Stream Disturbance
- ☐ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☐ 401 Water Quality Certification
- ☑ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Coastal Erosion Management
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ Incidental Take of Endangered / Threatened Species

>US Army Corps of Engineers ☐ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☐ Section 404 Clean Water Act ☐ Section 10 Rivers and Harbors Act

Is the project Federally funded? ☐ Yes ☑ No

If yes, name of Federal Agency:

General Permit Type(s), if known:

Preconstruction Notification: ☐ Yes ☑ No

>NYS Office of General Services ☐ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

- ☐ State Owned Lands Under Water
- ☐ Utility Easement (pipelines, conduits, cables, etc.)
- ☐ Docks, Moorings or Platforms

>NYS Department of State ☐ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. **Name of Applicant**

Town of Amherst Engineering Department

Taxpayer ID (if applicant is NOT an individual)

Mailing Address: 1100 North Forest Road

Post Office / City: Williamsville

State: NY

Zip: 14221

Telephone: 716-631-7222

Email: jboudreau@amherst.ny.us

Applicant Must be (check all that apply): ☑ Owner ☐ Operator ☐ Lessee

3. **Name of Property Owner (if different than Applicant)**

Town of Amherst

Mailing Address: 5583 Main Street

Post Office / City: Williamsville

State: NY

Zip: 14221

Telephone: 716-631-7000

Email: jboudreau@amherst.ny.us

For Agency Use Only	Agency Application Number:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

4. **Name of Contact / Agent**

Jody M. Celeste

Mailing Address: Earth Dimensions, Inc.
1091 Jamison Road

Post Office / City: Elma

State: NY

Zip: 14059

Telephone: 716-655-1717

Email: jceleste@earthdimensions.com

5. **Project / Facility Name**

Lou Gehrig Field Parking Lots

Property Tax Map Section / Block / Lot Number: 16.00-4-20.1, 16.00-4-16.1

Project Street Address, if applicable: 550 Smith Road

Post Office / City: Amherst

State: NY

Zip: 14051

Provide directions and distances to roads, intersections, bridges and bodies of water

The site is located on the north side of Smith Road, east of Millersport Highway and west of Dann Road.

☑ Town ☐ Village ☐ City

Amherst

County: Erie

Stream/Waterbody Name: FWW CC-45

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 43 ° 3 ' 16.2N " Longitude: 78 ° 42 ' 56.5W "

6. **Project Description:** Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

The proposed project involves improvements to an existing gravel parking lot within the NYSDEC 100-foot buffer to Freshwater Wetland CC-45. The project includes re-shaping the parking lots.

b. Description of current site conditions:

The site of the proposed action is currently a baseball field within a large sports complex.

c. Proposed site changes:

The project will involve the expansion and re-grading of the existing parking lots involving the disturbance of approximately 0.067 acre NYSDEC Freshwater Wetland CC-45 and 1.008± acre of NYSDEC Adjacent Area to CC-45. All disturbance will be within an existing parking lot and maintained lawn area.

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

The project includes the filling of 0.067 acre NYSDEC Freshwater Wetland CC-45 and 1.008± acre of NYSDEC Adjacent Area to CC-45.

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

The project does not involve dredging.

f. Is tree cutting or clearing proposed? ☐ Yes If Yes, explain below. ☑ No

Timing of the proposed cutting or clearing (month/year):

Number of trees to be cut:

Acreage of trees to be cleared:

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

g. Work methods and type of equipment to be used:

Standard construction practices and equipment, including excavators and bull dozers will be utilized during the construction of the project.

h. Describe the planned sequence of activities:

Site work will take place in the fall of 2024. Permanent monument and tree/shrub planting will take place immediately after final site grading.

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

Standard Blue Book SWPPP measures will be used to prevent sediment from entering waterways or wetlands during construction.

j. Erosion and silt control methods that will be used to prevent water quality impacts:

Silt fence or silt sock will be placed along the approved limits of disturbance. Immediately after final grading, seeding and mulching will take place.

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

The project has been designed to minimize impacts. No wetlands will be impacted by the proposed project nor will the project require any clearing as it is entirely within an existing maintained lawn area.

l. Proposed use: ☐ Private ☑ Public ☐ Commercial

m. Proposed Start Date: Fall 2024 Estimated Completion Date: Summer 2025

n. Has work begun on project? ☐ Yes If Yes, explain below. ☑ No

o. Will project occupy Federal, State, or Municipal Land? ☑ Yes If Yes, explain below. ☐ No

Yes, the project is within the Town-owned Lou Gehrig baseball complex.

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

DA# 2012-00704

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☑ Yes If Yes, list below. ☐ No

SEQR
Town Approval

Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

7. **Signatures.**

Applicant and Owner (If different) must sign the application.
Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant | Date

Applicant Must be (check all that apply): ☐ Owner ☑ Operator ☐ Lessee

Printed Name: Town of Amherst (c/o Jessica Boudreau, PE) | Title: Operator

Signature of Owner (if different than Applicant) | Date

Printed Name | Title

Signature of Contact / Agent | Date

Printed Name: Jody M. Celeste | Title: Ecologist

For Agency Use Only **DETERMINATION OF NO PERMIT REQUIRED**

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name | Title

Signature | Date

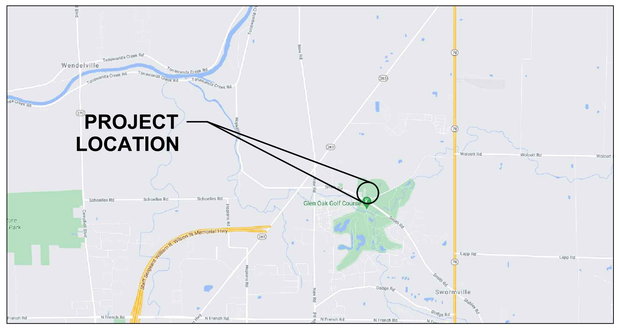
Attachment: SP-1990-08J_application_091924 (29174 : SP-1990-08J, 50 Dann Rd)

MAJOR SITE PLAN APPROVAL SUBMISSION

TOWN OF AMHERST

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS PROJECT

550 SMITH ROAD/50 DANN ROAD
EAST AMHERST, NY 14051



N

SITE LOCATION MAP

AUGUST 16, 2024

REGISTERED LANDSCAPE ARCHITECT — DAVID L. KENYON — 001890 — STATE OF NEW YORK

STATE OF NEW YORK — CHRISTOPHER MICHAEL CHARLES — 089617-01 — LICENSED PROFESSIONAL ENGINEER — 08/15/2024

STATE OF NEW YORK — JESSE F. WENGERT — 082500 — LICENSED PROFESSIONAL ENGINEER — 08/16/2024

wendel

Centerpointe Corporate Park
375 Essjay Road, Suite 200
Williamsville, NY 14221
www.wendelcompanies.com
p:716.688.0766 f:716.625.6825

Wendel Project No. 261353
TOA Project No. 2021.035A

DRAWING SHEET INDEX	
DWG. No.	DWG. TITLE
G001	COVER SHEET
G002	GENERAL NOTES
C100	OVERALL EXISTING CONDITIONS PLAN
C101	SMITH ROAD - SITE PREPARATION & EROSION SEDIMENT CONTROL PLAN
C102	DANN ROAD - SITE PREPARATION & EROSION SEDIMENT CONTROL PLAN
C200	OVERALL SITE PLAN
C201	SMITH ROAD - SITE LAYOUT & UTILITY PLAN
C202	DANN ROAD - SITE LAYOUT & UTILITY PLAN
C203	EMERGENCY VEHICLE TURNING MOVEMENT PLAN
C300	OVERALL GRADING & DRAINAGE PLAN
C301	SMITH ROAD - SITE GRADING & DRAINAGE PLAN
C302	DANN ROAD - SITE GRADING & DRAINAGE PLAN
C303	STORM PROFILES
C400	OVERALL PLANTING PLAN
C401	PLANTING PLAN SMITH ROAD
C402	PLANTING PLAN DANN ROAD
C501	SITE DETAILS
C502	SITE DETAILS
C503	SITE DETAILS
C504	SITE DETAILS
C505	PLANTING DETAILS
E001	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES
E101	OVERALL ELECTRICAL SITE PLAN
E301	SITE PHOTOMETRICS
E401	ELECTRICAL DETAILS

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

wendel

NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

G001

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)

ABBREVIATIONS:

A	
ACP, AC	ASBESTOS CEMENT PIPE
AC.	ACRES
A.I.P.	ABANDON IN PLACE
A/K/A	ALSO KNOWN AS
AOBE	AS ORDERED BY ENGINEER
APPROX.	APPROXIMATE
APPROX. HWY. BDRY. AVE.	APPROXIMATE HIGHWAY BOUNDARY AVENUE
B	
BC	BOTTOM OF CURB
BIT.	BITUMINOUS
℄	BASELINE
BLDG.	BUILDING
BM	BENCH MARK
BS	BOTTOM OF SLOPE
BV	BUTTERFLY VALVE
C	
CATV	CABLE TELEVISION LINE
CB	CATCH BASIN
CD	TEMPORARY STONE CHECK DAM
CE	CONSTRUCTION ENTRANCE
CH.	CHAIN
CI	CAST IRON
CIP	CAST IRON PIPE, CAST IN PLACE
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC.	CONCRETE
COR.	CORNER
CP	CONTROL POINT
CPP	CORRUGATED PLASTIC PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	COUNTY ROAD
C.T.V.	CABLE TELEVISION BOX
CULV.	CULVERT
D	
D	DEED
DEMO	DEMOLITION
D.I., DI	DUCTILE IRON
D.I.P., DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIST.	DISTANCE
DMH	DRAINAGE MANHOLE
D.O.T.	DEPARTMENT OF TRANSPORTATION
DR.	DRIVEWAY
DS	DRAINAGE STRUCTURE SQUARE
DSR	DRAINAGE STRUCTURE ROUND
DWG.	DRAWING
E	
E	EAST
EJ	EXPANSION JOINT
EJB	ELECTRICAL JUNCTION BOX
ELEC.	ELECTRIC
EL., ELEV.	ELEVATION
EM	ELECTRIC METER
EMH	ELECTRIC MANHOLE
ENC.	ENCROACHMENT
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ESMT.	EASEMENT
EX., EXIST.	EXISTING
EXT	EXTERIOR
F	
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FFIP	FILTER FABRIC INLET PROTECTION
F/K/A	FORMERLY KNOWN AS
FL, FLG.	FLANGED
FLR	FLOOR
FNC.	FENCE
FNDN	FOUNDATION
FOC	FIBER OPTIC CABLE
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
G	
G	GAS
GAR.	GARAGE
GLM	GAS LINE MARKER
GM	GAS METER
GPU	GRINDER PUMP UNIT
GV	GAS VALVE, GATE VALVE
H	
H	HEIGHT
HDPE	HIGH DENSITY POLYETHYLENE
HO	HOUSE
HP	HIGH POINT, HIGH PRESSURE
HYD	FIRE HYDRANT
I	
ID	INSIDE DIAMETER, INSIDE DIMENSION
IN	INCHES
INCL	INCLUDED
INV.	INVERT
IP	TEMPORARY DROP INLET PROTECTION, IRON PIPE
L	
L	LENGTH, LIBER
LF	LINEAR FEET
LOD	LIMITS OF DISTURBANCE
LP	LIGHT POLE, LOW PRESSURE
M	
MATL	MATERIAL
MAX	MAXIMUM
MB	MAIL BOX
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ, M.J.	MECHANICAL JOINT
mm	MILLIMETER
MON.	MONUMENT
MP	METAL POST, MEDIUM PRESSURE
MP.	MAP
MS.	MEASURED

N	
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
No.	NUMBER
NTS	NOT TO SCALE
O	
OD	OUTSIDE DIAMETER, OUTSIDE DIMENSION
OE, OHE	OVERHEAD ELECTRIC
O/H	OVERHEAD
OHW	OVERHEAD WIRE
O/L	ON LINE
P	
P	PAGE
PAV'T	PAVEMENT
PB	PAPER BOX
PCCP, P.C.C.P.	PRE-STRESSED CONCRETE CYLINDRICAL PIPE
PE	PLAIN END, POLYETHYLENE
PERF	PERFORATED
P.I.	POINT OF INTERSECTION
PO.	PORCH
PRELIM	PRELIMINARY
PSICPP	PERFORATED SMOOTH INTERIOR CORRUGATED PLASTIC PIPE
PVC	POLYVINYL CHLORIDE
Q	
QTY	QUANTITY
R	
R	RADIUS, RESTRAINED
RCP	REINFORCED CONCRETE PIPE
RCMP	ROUND CORRUGATED METAL PIPE
RCPP	ROUND CORRUGATED PLASTIC PIPE
RD	ROOF DRAIN, ROAD
RE	REFERENCE TO
REQD	REQUIRED
RMP	ROUND METAL PIPE
ROW	RIGHT-OF-WAY
S	
S	SOUTH
SF	SQUARE FOOT
S.H.	STATE HIGHWAY
SHLDR.	SHOULDER
SMH	SANITARY MANHOLE
SS	STAINLESS STEEL
ST.	STREET
STA.	STATION
STD	STANDARD
STL	STEEL
STMH	STORM MANHOLE
STN.	STONE
STY.	STORY
T	
TC	TOP OF CURB
TCSP	TRAFFIC CONTROL SIGNAL POLE
T.H.	TOWN HIGHWAY
TJB	TELEPHONE JUNCTION BOX
TLM	TELEPHONE LINE MARKER
TMH	TELEPHONE MANHOLE
T.O. CONC.	TOP OF CONCRETE
T.O. FNDN.	TOP OF FOUNDATION
T.O. SLAB	TOP OF SLAB
TP	TOP OF PAD
TS	TOP OF SLOPE
TSF	TEMPORARY SILT FENCE
TV	TEMPORARY VEGETATION
TYP.	TYPICAL
U	
UE	UNDERGROUND ELECTRIC
UFO	UNDERGROUND FIBER OPTIC
UMH	UNKNOWN UTILITY MANHOLE
UP	UTILITY POLE
UPL	UTILITY POLE WITH LIGHT
V	
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
VP	VENT PIPE
VT	VITRIFIED TILE
VCP	VITRIFIED CLAY PIPE
W	
W	WEST, WIDTH
WD.	WOOD
W/	WITH
W.F.	WOOD FRAME
WM	WATER METER
WMH	WATER MANHOLE
WP	WOOD POST
WHS	WATER HOUSE SERVICE
WSB	WATER SERVICE BOX
WT	WEIGHT
WV	WATER VALVE
Y	
YD	YARD DRAIN

SYMBOLS

∠	ANGLE
@	AT
℄	CENTERLINE
Ø	DIAMETER
#	NUMBER, POUND
℔	PLATE, PROPERTY LINE

ORGANIZATIONS

ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BSA	BUFFALO SEWER AUTHORITY
ECWA	ERIE COUNTY WATER AUTHORITY
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY
NCDPW	NIAGARA COUNTY DEPARTMENT OF PUBLIC WORKS-HIGHWAYS
NCHD	NIAGARA COUNTY HEALTH DEPARTMENT
NCSD	NIAGARA COUNTY SEWER DISTRICT
NCWD	NIAGARA COUNTY WATER DISTRICT
NFG	NATIONAL FUEL GAS
NYPA	NEW YORK POWER AUTHORITY
NYSDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDOT	NEW YORK STATE DEPARTMENT OF TRANSPORTATION
NYSEG	NEW YORK STATE ELECTRIC & GAS
TGP	TENNESSEE GAS PIPELINE
UFPO	UNDERGROUND FACILITIES PROTECTION ORGANIZATION
USACOE	UNITED STATES ARMY CORP OF ENGINEERS

GENERAL NOTES:

1. ALL WORK CONTEMPLATED UNDER THIS CONTRACT TO BE IN CONFORMITY WITH THE SPECIFICATIONS, EXCEPT AS MODIFIED ON THESE PLANS OR BY THE ENGINEER IN THE FIELD, ANY WORK CALLED FOR IN THE PLANS AND NOT PARTICULARLY MENTIONED IN THE SPECIFICATIONS, OR DESCRIBED IN THE SPECIFICATIONS AND NOT SPECIFICALLY SHOWN ON THE PLANS, IS TO BE REGARDED AS UNDER THIS CONTRACT THE SAME AS IF FULLY SET FORTH IN THE SPECIFICATIONS AND EXHIBITED IN THE PLANS. ALL WORK OBVIOUSLY NECESSARY FOR THE COMPLETION OF THE CONTRACT SHALL BE INCLUDED, WHETHER OR NOT SPECIFICALLY SHOWN OR SPECIFIED. WHENEVER STANDARD SPECIFICATIONS, OR DETAILS, OR PART THERE OF, IS REFERRED TO IT SHALL THEREBY BECOME A PART OF THESE REQUIREMENTS AS IF WRITTEN OUT HEREIN IN FULL.
2. CONTRACTOR TO COORDINATE ALL WORK WITH OTHER ON-SITE CONTRACTORS AND OWNER'S CONTRACTORS INCLUDING TESTING LABORATORIES TO ENSURE EFFICIENT AND ORDERLY SEQUENCE OF INSTALLATION OF ALL CONSTRUCTION ELEMENTS INCLUSIVE OF PROPOSED FOUNDATION, BUILDING, ABOVE AND BELOW GRADE MECHANICAL, ELECTRICAL, COMMUNICATION AND PLUMBING IMPROVEMENTS FOR THE PROJECT.
3. SOIL BORING REPORTS ARE AVAILABLE FROM THE OWNER'S REPRESENTATIVE FOR INFORMATION ONLY. CONDITIONS ARE NOT INTENDED AS REPRESENTATIONS OR WARRANTIES OF ACCURACY OR CONTINUITY BETWEEN SOIL BORINGS. THE OWNER AND THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONCLUSIONS DRAWN FROM THIS DATA BY THE CONTRACTOR. ADDITIONAL TEST BORINGS AND OTHER EXPLORATORY WORK MAY BE PERFORMED BY THE CONTRACTOR AT HIS OPTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. IT IS POSSIBLE THAT NOT ALL EXISTING UTILITY LINES OR STRUCTURES ARE SHOWN ON THE PLANS. CONTRACTOR TO LOCATE &/OR VERIFY LOCATION OF UTILITIES IN THE FIELD BEFORE BEGINNING WORK. CONTRACTOR TO PAY ANY FEES REQUIRED FOR UTILITY LINE LOCATIONS. NEW WORK TO BE ADJUSTED TO REFLECT ACTUAL LOCATIONS AS MARKED IN FIELD OF ALL UTILITIES. PRIOR TO REMOVAL & EXCAVATION WORK, CONTRACTOR TO NOTIFY UTILITY COMPANIES REGARDING DISCONNECT OF SERVICES & MARKING EXACT LOCATION OF BURIED UTILITIES.
5. PRIOR TO START OF CONSTRUCTION, CONTRACTOR TO NOTIFY ENGINEER AND OWNER'S REPRESENTATIVE OF DISCREPANCIES FOUND BETWEEN INFORMATION SHOWN ON PLANS & ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC. IN THE FIELD AND NOTIFY THE OWNERS REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO THE START OF SHOP DRAWINGS AND CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY LOCATIONS, CONNECTIONS, SIZES AND MATERIALS OF ALL EXISTING WATER, STORM, SANITARY AND COMBINED SEWER MAINLINES PRIOR TO MAKING CONNECTIONS.
7. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATION TO PROJECT DRAWINGS, DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL BID AND PERFORM WORK BASED ON ACTUAL FIELD CONDITIONS.
8. PAVEMENT NOT NOTED TO BE REMOVED, BUT DAMAGED DURING CONSTRUCTION, SHALL BE REPAIRED OR REPLACED, FLUSH WITH EXISTING GRADE AT CONTRACTOR'S EXPENSE.
9. RESTORE TO ORIGINAL CONDITION OR REPAIR/REPLACE IN KIND ANY DAMAGE TO EXISTING AREAS OR IMPROVEMENTS.
10. ITEMS NOT NOTED TO BE REMOVED &/OR DEMOLISHED ARE TO REMAIN & TO BE PROTECTED AS NECESSARY.
11. ALL ITEMS TO BE DEMOLISHED OR REMOVED BECOME THE PROPERTY OF THE CONTRACTOR AND ARE TO BE REMOVED FROM SITE AND LEGALLY DISPOSED OF UNLESS NOTED ON PLANS OR SPECIFICATIONS.
12. SAW-CUT PAVEMENT & CURBING AT LIMITS OF REMOVAL.
13. DIMENSIONS ARE FROM FACE OF BUILDING, CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
14. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION &/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
15. PIPE CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUBGRADE WITH COMPACTED, SELECT GRANULAR MATERIAL TO FIVE (5) FEET OUTSIDE THE PAVEMENT EDGE.
16. CONSTRUCTION STAGING, STORAGE AND AND TRUCK WASHDOWN AREAS TO BE COORDINATED WITH AND APPROVED BY OWNER'S REPRESENTATIVE.
17. MAINTAIN IN OPERATION ALL EXISTING UTILITIES NOT NOTED TO BE REMOVED. DO NOT DAMAGE OR DISTURB EXISTING, ACTIVE UTILITIES DURING CONSTRUCTION/EXCAVATION OPERATIONS.
18. CONTRACTOR SHALL OBTAIN AND PAY ASSOCIATED FEES FOR ALL PERMITS OR APPROVALS REQUIRED FOR SITE AND UTILITY CONSTRUCTION OF THIS PROJECT.
19. THE CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO CONFIRM THE EXISTING SITE CONDITIONS AND SCOPE OF REMOVAL AND NEW CONSTRUCTION WORK.
20. PROVIDE DUST CONTROL MEASURES AS SPECIFIED OR REQUIRED BY LOCAL CODES/REGULATIONS.
21. AFTER REMOVAL OF FOOTERS, STRUCTURES, ETC., BACKFILL AS FOLLOWS:

    a. IN LAWN AREAS: BACKFILL HOLE WITH ORDINARY FILL, COMPACT IN 8" LIFTS TO PROPOSED SUBGRADE, AND PLACE TOPSOIL, MIN. 4" DEPTH, FLUSH WITH EXISTING GRADE, FINE GRADE, FERTILIZE, SEED AND MULCH.

    b. IN PAVEMENT AREAS: BACKFILL HOLE WITH CRUSHER-RUN STONE, COMPACT IN 8" LIFTS TO PROPOSED SUBGRADE.
22. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING CONSTRUCTION FENCING AND GATES AS WELL AS ANY ADDITIONAL CONSTRUCTION FENCING THAT THE CONTRACTOR DEEMS NECESSARY IN ORDER TO MAINTAIN A BARRIER AROUND THE PERIMETER OF THE WORK AREA PREVENTING UNAUTHORIZED ENTRY. BARRIER SHALL BE CLEARLY MARKED "DANGER CONSTRUCTION AREA" OR LIKE WARNING UNTIL ALL EXCAVATIONS HAVE BEEN CLOSED OR PERMANENTLY SECURED.
23. NO SIGNAGE SHALL BE REMOVED IN WHOLE OR IN PART THAT CONSTITUTES A HAZARD TO THE PUBLIC SAFETY UNTIL NEW, REPLACEMENT OR TEMPORARY SIGNAGE IS IN PLACE. SIGNS THAT ARE REMOVED DURING CONSTRUCTION SHALL BE STORED FOR REINSTALLATION BY THE CONTRACTOR IN SUCH A MANNER AS TO PREVENT DAMAGE TO THE SIGNAGE. DAMAGED SIGNS SHALL BE REPLACED BY THE CONTRACTOR.
24. INFORMATION OBTAINED FOR THIS EXISTING CONDITIONS PLAN WAS OBTAINED FROM MULTIPLE SOURCES, INCLUDING WENDEL SURVEY (DATED 2022), ALL UTILITIES, ABOVE AND BELOW GRADE, SHOWN ON THE CONTRACT DRAWINGS HAVE BEEN IDENTIFIED FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR EXACT LOCATIONS. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
25. ALL EXISTING UNSUITABLE SURFACE MATERIALS SHALL BE REMOVED DOWN TO LOCATION OF SUITABLE SUBGRADE AS DIRECTED BY OWNERS SOIL TESTING AGENCY. ALL UNSUITABLE MATERIALS WILL BE DISPOSED OF IN A SAFE AND LEGAL MANNER.
26. NO UTILITY SERVICE MAY BE DISCONNECTED WITHOUT PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE OR UTILITY OWNER.
27. "PROVIDE" SHALL MEAN FURNISH, INSTALL, CONNECT, COMPLETE, TEST AND PLACE IN OPERATION AND SERVICE. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE, ABANDON AND DISPOSE OF THE ELEMENTS IDENTIFIED ON THE CONTRACT DRAWINGS.
28. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM PROPERTY AND DISPOSE OF IN A LEGAL MANNER. MAINTAIN JOB SITE IN A NEAT AND ORDERLY CONDITION.
29. THE CONTRACTOR SHALL REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AS A RESULT OF HIS WORK. DAMAGED ITEMS SHALL BE REPLACED IN KIND AND AT NO ADDITIONAL COST TO THE OWNER.
30. THE CONTRACTOR SHALL DESIGN AND PROVIDE ANY TEMPORARY SHORING, BRACING, ETC., AS NEEDED FOR THE WORK SO AS NOT TO ENDANGER ANY EXISTING STRUCTURAL INTEGRITY OR EXISTING INFRASTRUCTURE AND APPURTENANCES.
31. UNLESS OTHERWISE NOTED, EXISTING COMBINED SEWERS AND STORM SEWERS ARE ACTIVE AND CONTRACTOR MUST MAINTAIN SEWER FLOWS AT ALL TIMES DURING CONSTRUCTION.
32. THE CONTRACTOR'S ATTENTION IS DIRECTED TO ALL APPLICABLE SPECIFICATIONS REQUIREMENTS FOR RESTORATION TO PRE-CONSTRUCTION CONDITIONS OF PAVEMENT, SIDEWALKS, CURBS, LAWNS, AND DRIVEWAYS DAMAGED OR ALTERED DURING AND AFTER CONSTRUCTION.
33. FOUNDATIONS/PILES/PILE CAPS/CAISSONS/GRADE BEAMS ARE SHOWN PER EXISTING CONDITION DRAWINGS. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN FIELD AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES IN WRITING 24 HOURS PRIOR TO THE BEGINNING OF ANY WORK.

ABBREVIATIONS:

AC.	ACRES	INV.	INVERT
BIT.	BITUMINOUS	L-	LIBER
CIP	CAST IRON PIPE	LP	LIGHT POLE
CO	CLEAN OUT	MB	MAIL BOX
CONC.	CONCRETE	MS.	MEASURED
D.	DEED	N.	NORTH
DIA.	DIAMETER	P-	PAGE
DS	DRAINAGE STRUCTURE	S.	SOUTH
DSR	DRAINAGE STRUCTURE ROUND	SMH	SANITARY MANHOLE
DSM	DRAINAGE STRUCTURE MANHOLE	SQ.	SQUARE
E.	EAST	TMH	TELEPHONE MANHOLE
FNC.	FENCE	W.	WEST
FT.	FEET	W/	WITH
HDPE	HIGH DENSITY POLYETHYLENE	WV	WATER VALVE
HYD.	HYDRANT		

EROSION & SEDIMENT CONTROL LEGEND:

- LOD — LIMITS OF DISTURBANCE
- TSF — TEMPORARY SILT FENCE
- CE — TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
- TV — TEMPORARY VEGETATION
- CW — CONCRETE WASHOUT
- IP — TEMPORARY DROP INLET PROTECTION
- FFIP — TEMPORARY FILTER FABRIC INLET PROTECTION

SITE LAYOUT & UTILITIES LEGEND:

- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE PAD
- CONCRETE SIDEWALK
- PROPOSED BUILDING
- BOLLARD (CONCRETE FILLED)
- EMBEDDED FLEXIBLE DELINEATOR WARNING POST
- L.E.D. AREA LIGHT
- ONE-WAY SIGNS
- SIGN
- STORM DRAIN INLET
- TRANSFORMER
- RECESSED CURB WITH 1" REVEAL
- RECESSED CURB WITH 0" REVEAL (FLUSH)
- G — GAS LINE
- OE — OVERHEAD ELECTRIC
- SA — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- UE — UNDERGROUND ELECTRIC CONDUIT
- W — WATER LINE
- WHITE DIRECTIONAL PAVEMENT ARROWS (ONLY)
- SIGN (SINGLE POST)
- 1" — STUMP & SIZE
- B-X — SOIL BORE & DESIGNATION (APPROX. LOCATION)
- TMH — TELEPHONE MANHOLE
- X 569.50 — SPOT ELEVATION
- X PE:569.50 — PAVEMENT EDGE ELEVATION
- X TC:569.50 — TOP OF CURB ELEVATION
- COM — COMMUNICATIONS LINE
- 100 — CONTOUR LINE (MAJOR)
- 101 — CONTOUR LINE (MINOR)
- OE — OVERHEAD ELECTRIC
- ROW — RIGHT-OF-WAY LINE
- ST — STORM SEWER LINE
- UCTV — UNDERGROUND CABLE TELEVISION
- W — WATER LINE

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

STATE OF NEW YORK
CHRISTOPHER MICHAEL CHAPIN
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

GENERAL NOTES & LEGEND

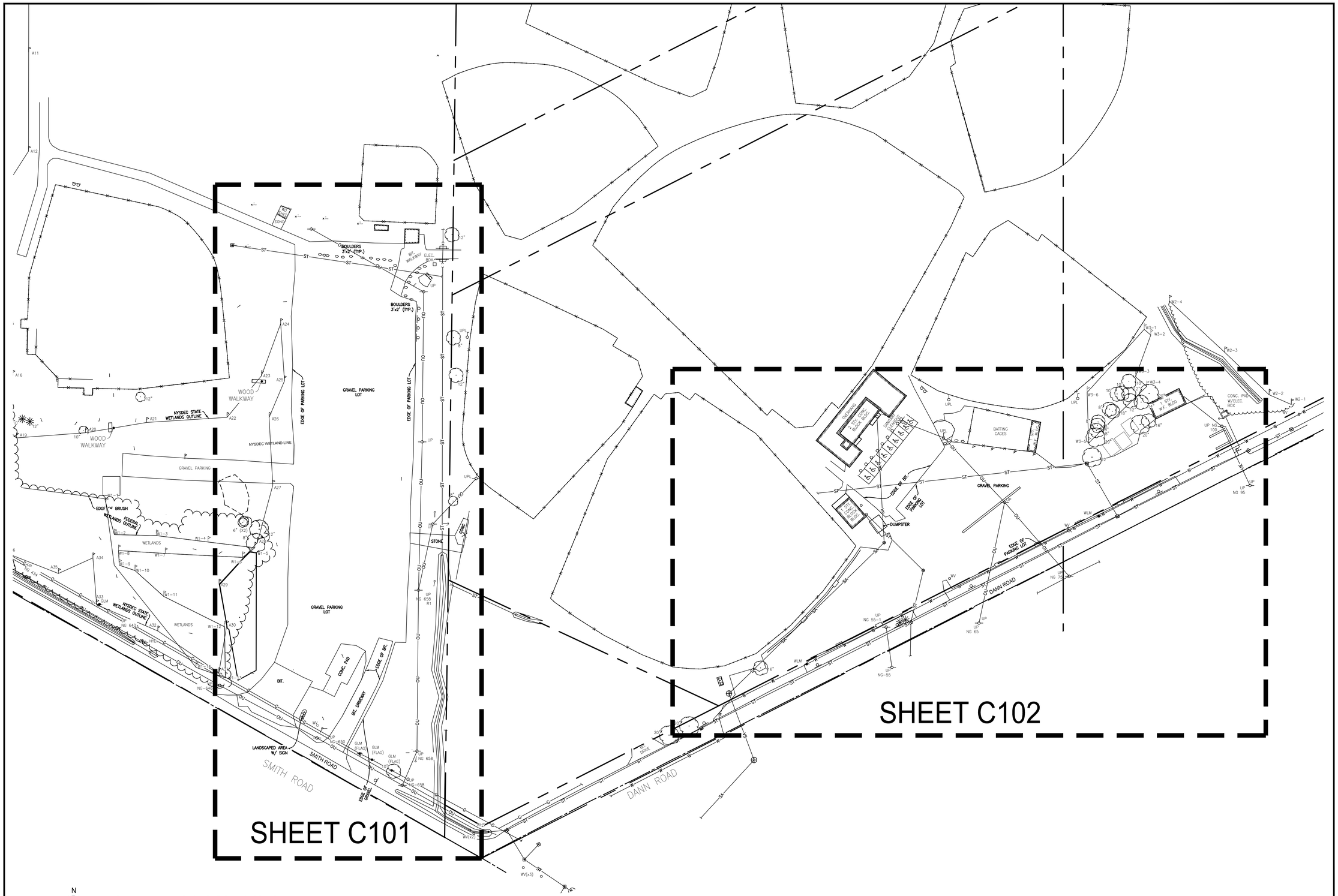
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GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

DWG. No.

G002

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 OVERALL EXISTING CONDITIONS PLAN
SCALE: 1" = 50'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

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CHRISTOPHER MICHAEL CAMPBELL
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

OVERALL EXISTING CONDITIONS PLAN

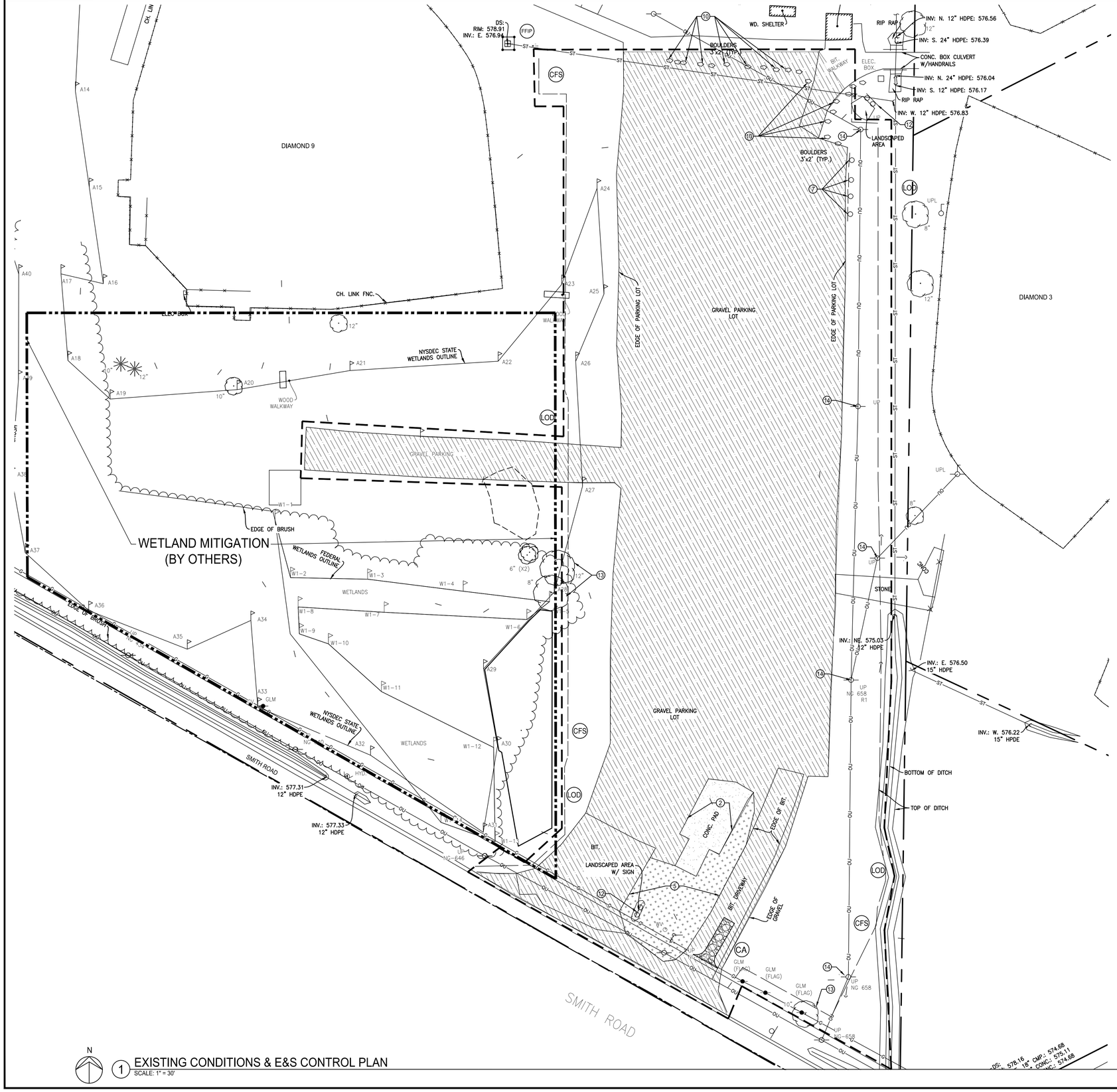
0 1" 2"
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	KMK	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C100

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 EXISTING CONDITIONS & E&S CONTROL PLAN
SCALE: 1" = 30'

E&S CONTROL LEGEND

- LOD = LIMITS OF DISTURBANCE
- CFS = COMPOST FILTER SOCK; RE: 1, C501.
- CA = TEMPORARY STABILIZED CONSTRUCTION ACCESS; RE: 3, C501.
- TV = TEMPORARY VEGETATION
- CW = TEMPORARY CONCRETE WASHOUT; RE: 4, C501.
- IP = TEMPORARY DROP INLET PROTECTION; RE: 2, C501.
- FFIP = TEMPORARY FILTER FABRIC INLET PROTECTION; RE: 5, C501.

SITE PREPARATION NOTES:

1. REMOVE AND DISPOSE OF ASPHALT PAVEMENT/BROKEN ASPHALT, GRAVEL & MILLINGS. (INCLUDING SUBBASE MATERIAL) AND ASSOCIATED CURBING.
2. REMOVE AND DISPOSE OF CONCRETE PAVEMENT (INCLUDING SIDEWALKS) AND ASSOCIATED CURBING.
3. SAWCUT PAVEMENT.
4. REMOVE CURBING IN ITS ENTIRETY.
5. REMOVE GRASS/ TOPSOIL, SHRUBS, PLANTINGS & LANDSCAPED AREA.
6. REMOVE AND STRUCTURE IN ITS ENTIRETY. RECONNECT EXISTING PIPING TO NEW STRUCTURE.
7. REMOVE SIGN. SAVE SIGN PANEL FOR POTENTIAL REUSE. DISPOSE OF SIGN POSTS AND FOOTINGS.
8. REMOVE AND DISPOSE OF STORM PIPE FROM STRUCTURE TO STRUCTURE.
9. REMOVE AND RELOCATE BOULDER OUTSIDE NEW PARKING LIMITS.
10. REMOVE ACCESS RISER FRAME AND COVER AND REINSTALL PER GRADING AND DRINAGE PLAN AND REFERENCED DETAIL. REMOVE AND DISPOSE OF CLEANOUT FRAME AND COVER.
11. COMPLETELY REMOVE WATER, SEDIMENT, AND DEBRIS VIA VACTOR TRUCK FROM EXISTING CONNECTED PIPES, VERIFY EXISTING PIPING CLEAR OF DEBRIS.
12. EXISTING SIGNAGE AND FOUNDATION TO BE REMOVED AND RELOCATED PER OWNER REPRESENTATIVE DIRECTION. CONTRACTOR RESPONSIBLE FOR RESETTING OF SIGNAGE AND FOUNDATION REQUIRED.
13. PROTECT EXISTING TREES & VEGETATION DURING CONSTRUCTION.
14. PROTECT EXISTING POWER POLES AND APPURTENANCES.
15. REMOVE AND STORE CONCRETE WHEEL STOPS.
16. REMOVE AND DISPOSE OF EXISTING TIMBER POLES.
17. REMOVE PIPE IN ITS ENTIRETY, BULKHEAD AS REQUIRED AT STRUCTURES.

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

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STATE OF NEW YORK
CHRISTOPHER MICHAEL CHOJNACKI
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SMITH ROAD

SITE PREPARATION & E&S CONTROL PLAN

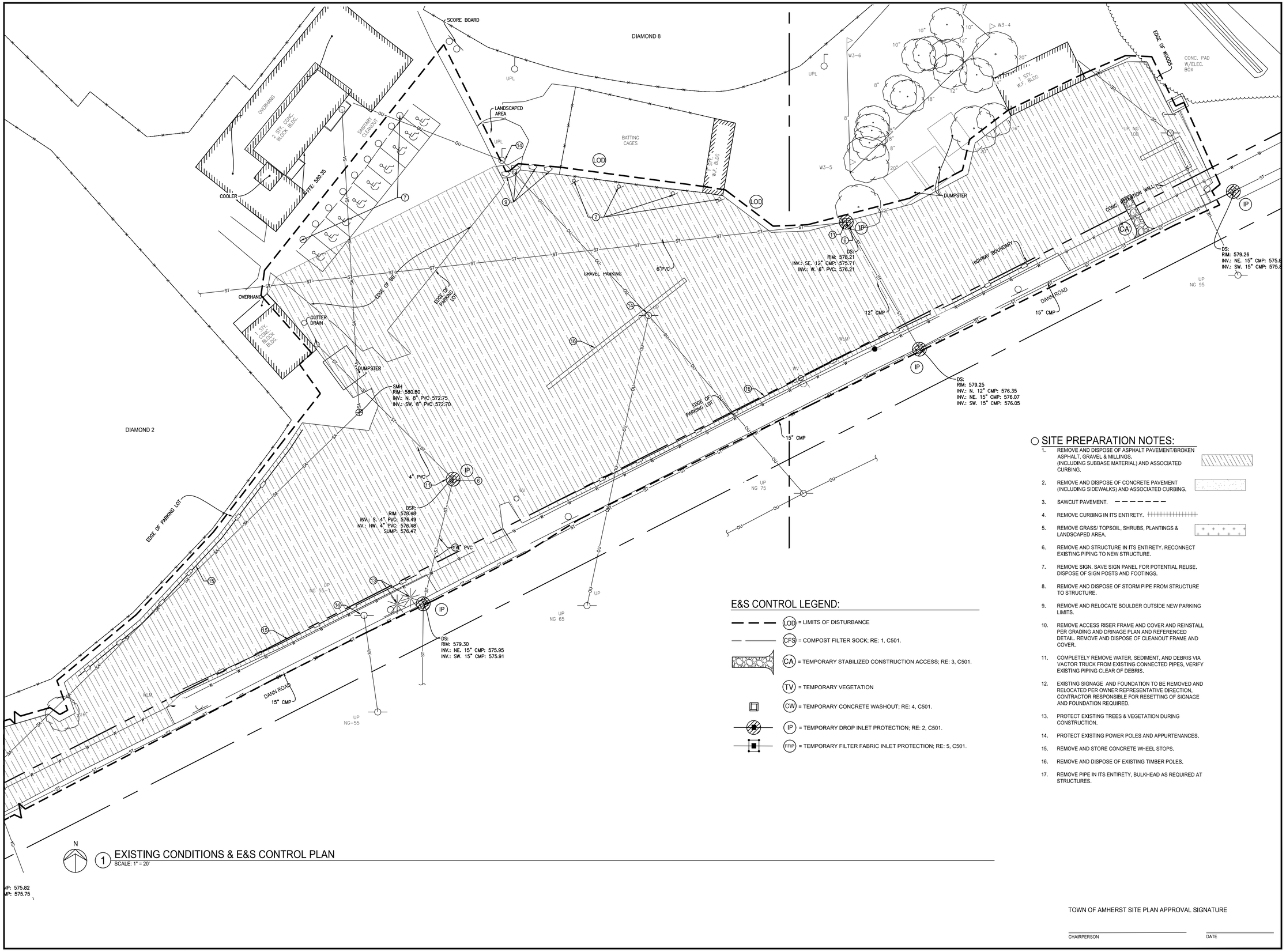
0 1" 2"
GENERIC SCALE BAR
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C101

Attachment: SP-1990-08J drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



SITE PREPARATION NOTES:

1. REMOVE AND DISPOSE OF ASPHALT PAVEMENT/BROKEN ASPHALT, GRAVEL & MILLINGS. (INCLUDING SUBBASE MATERIAL) AND ASSOCIATED CURBING.
2. REMOVE AND DISPOSE OF CONCRETE PAVEMENT (INCLUDING SIDEWALKS) AND ASSOCIATED CURBING.
3. SAWCUT PAVEMENT.
4. REMOVE CURBING IN ITS ENTIRETY.
5. REMOVE GRASS/ TOPSOIL, SHRUBS, PLANTINGS & LANDSCAPED AREA.
6. REMOVE AND STRUCTURE IN ITS ENTIRETY. RECONNECT EXISTING PIPING TO NEW STRUCTURE.
7. REMOVE SIGN. SAVE SIGN PANEL FOR POTENTIAL REUSE. DISPOSE OF SIGN POSTS AND FOOTINGS.
8. REMOVE AND DISPOSE OF STORM PIPE FROM STRUCTURE TO STRUCTURE.
9. REMOVE AND RELOCATE BOULDER OUTSIDE NEW PARKING LIMITS.
10. REMOVE ACCESS RISER FRAME AND COVER AND REINSTALL PER GRADING AND DRINAGE PLAN AND REFERENCED DETAIL. REMOVE AND DISPOSE OF CLEANOUT FRAME AND COVER.
11. COMPLETELY REMOVE WATER, SEDIMENT, AND DEBRIS VIA VACTOR TRUCK FROM EXISTING CONNECTED PIPES, VERIFY EXISTING PIPING CLEAR OF DEBRIS.
12. EXISTING SIGNAGE AND FOUNDATION TO BE REMOVED AND RELOCATED PER OWNER REPRESENTATIVE DIRECTION. CONTRACTOR RESPONSIBLE FOR RESETTING OF SIGNAGE AND FOUNDATION REQUIRED.
13. PROTECT EXISTING TREES & VEGETATION DURING CONSTRUCTION.
14. PROTECT EXISTING POWER POLES AND APPURTENANCES.
15. REMOVE AND STORE CONCRETE WHEEL STOPS.
16. REMOVE AND DISPOSE OF EXISTING TIMBER POLES.
17. REMOVE PIPE IN ITS ENTIRETY, BULKHEAD AS REQUIRED AT STRUCTURES.

E&S CONTROL LEGEND:

- LOD = LIMITS OF DISTURBANCE
- CFS = COMPOST FILTER SOCK; RE: 1, C501.
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TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

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STATE OF NEW YORK
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08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

DANN ROAD

SITE PREPARATIONS & E&S CONTROL PLAN

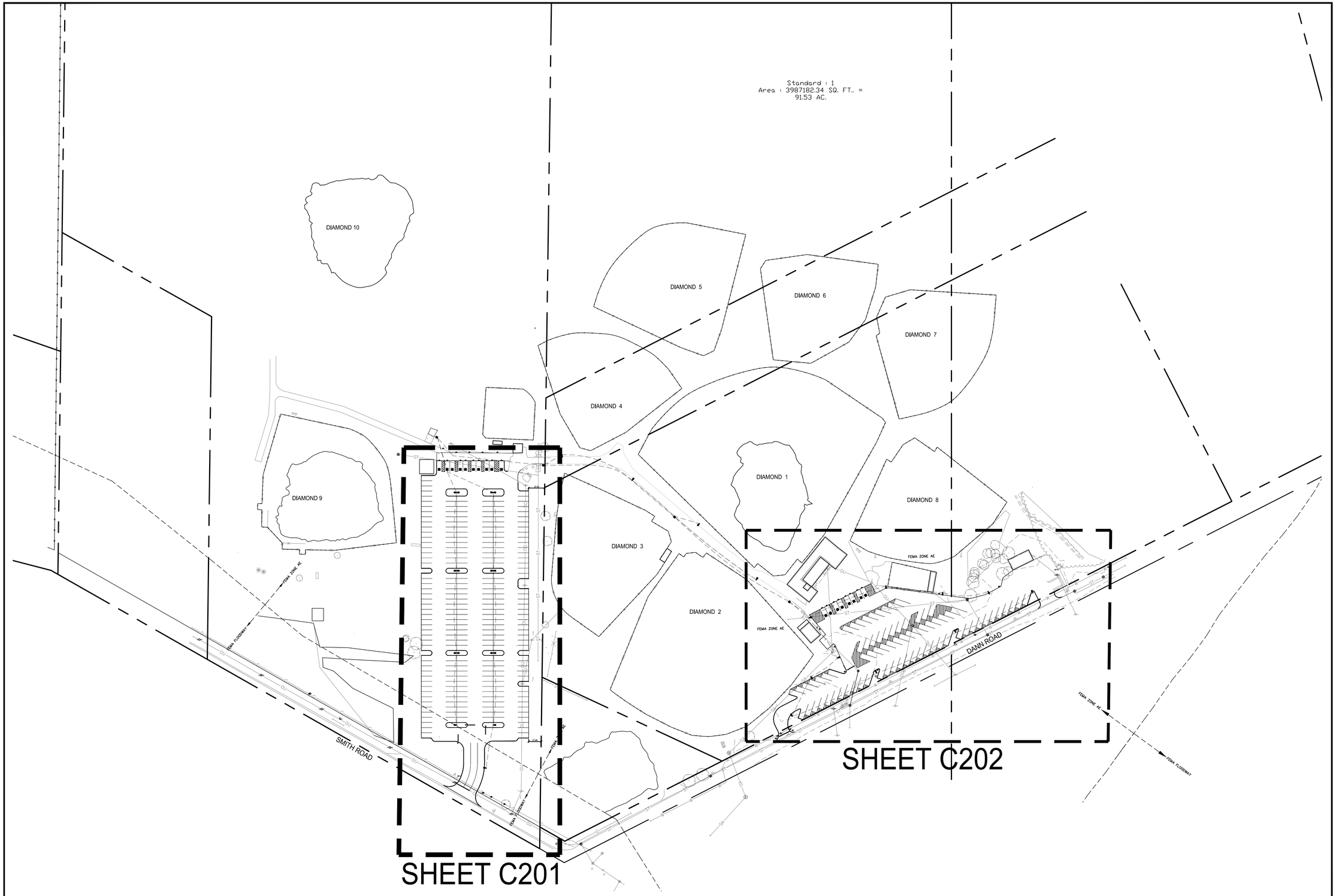
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
SCALE	AS NOTED
DWN.	CC1
CHK.	CC1
PROJ. No.	261353

DWG. No.

C102

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 OVERALL SITE PLAN
SCALE: 1" = 75'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Centerpointe Corporate Park
375 Essjay Road, Suite 200
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p:716.688.0766 f:716.625.6825
Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

STATE OF NEW YORK
CHRISTOPHER MICHAEL CHAMBERLAIN
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

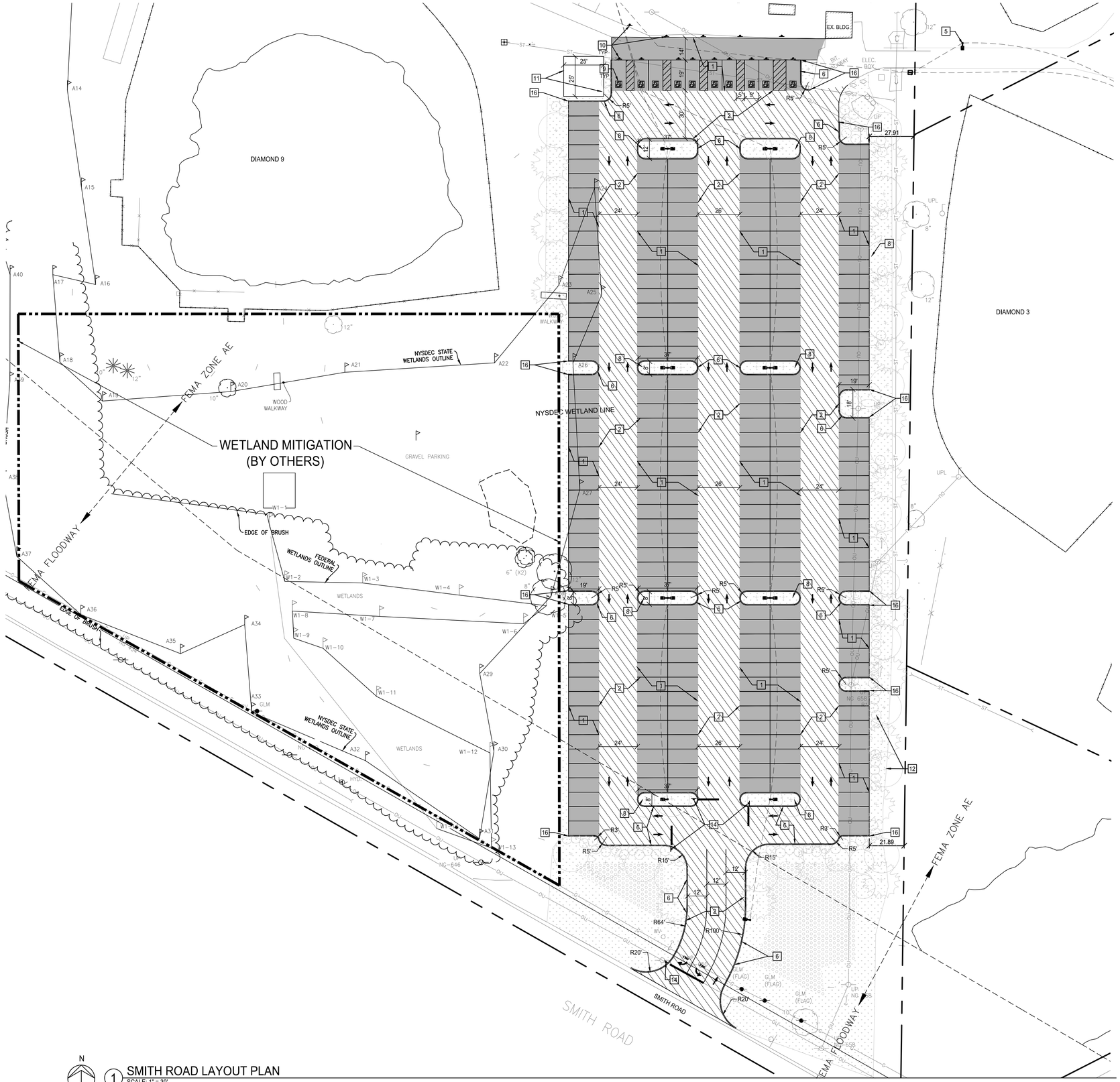
DWG. TITLE

OVERALL SITE PLAN

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
SCALE	AS NOTED
DWN.	KMK CHK. CC1
PROJ. No.	261353
DWG. No.	C200

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 SMITH ROAD LAYOUT PLAN
SCALE: 1" = 30'

SITE DATA SUMMARY

PROPERTY LOCATION:	550 SMITH ROAD EAST AMHERST, ERIE COUNTY, NEW YORK		
LOT AREA:	62.32 AC.		
CURRENT ZONING:	RECREATION & ENTERTAINMENT		
EXISTING USE:	RECREATION SPACE		
PROPOSED USE:	RECREATION SPACE		
LOT AND AREA REQUIREMENTS:		REQUIRED	PROPOSED
PARKING SPACE SIZE: 90 DEGREE PARKING		9' x 19' (MIN)	9' x 19'
DRIVE AISLE WIDTH: 90 DEGREE, 2 WAY		24' (MIN)	24', 26' & 30'
PARKING SPACE REQUIREMENTS:		EXISTING	PROPOSED
550 SMITH ROAD (9'x19'):		160	271
ACCESSIBLE PARKING SPACES		REQUIRED (7 TOTAL)	10 PROVIDED

SITE LAYOUT AND UTILITIES LEGEND

SITE LIGHTING (SEE ELECTRICAL DRAWINGS)

ONLY — WHITE DIRECTIONAL PAVEMENT ARROWS

SIGN

SITE IMPROVEMENT NOTES:

1. LIGHT DUTY ASPHALT PAVEMENT; RE: 8, C502
2. HEAVY DUTY ASPHALT PAVEMENT; RE 9, C502
3. PORTLAND CEMENT CONCRETE PAVEMENT; RE: 2, C502.
4. 2-1/2" - TOP COURSE OVERLAY, TACK COAT, TRUING, LEVELING.
5. ADDITIONAL PEDESTRIAN LIGHTING, REFER TO ELECTRICAL FOR SITE LIGHTING IMPROVEMENTS.
6. CONCRETE CURB; RE: 5, C502.
7. ACCESSIBLE CURB RAMP; RE: 6, C502.
8. SITE LIGHTING CONCRETE POLE BASE. (REFER TO ELECTRICAL PLANS FOR BASE & FIXTURE)
9. ACCESSIBLE PED. PAVEMENT MARKING; RE: 10, C502.
10. ACCESSIBLE PARKING SIGN / NO PARKING SIGN; RE: 7, C502.
11. CONCRETE PAD; RE: 1, C502.
12. LANDSCAPING & PLANTINGS, REFER TO PLANTING PLAN.
13. DETECTABLE WARNING SURFACE. COMPLIANCE WITH NYSDOT ITEM 726.01 OR 726.02
14. PROPOSED "STOP" SIGNAGE AND POSTS; RE: 11, C502.
15. PROPOSED "DO NOT ENTER" SIGNAGE AND POSTS; RE: 11, C502
16. CONCRETE CURB TAPER.
17. DUMPSTER CORRAL; RE: 5, C603

GENERAL NOTES:

1. REFER TO C300's FOR DRAINAGE AND GRADING IMPROVEMENTS.
2. REFER TO PLANTING PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO WETLAND MITIGATION PROJECT FOR ADDITIONAL INFORMATION.

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SMITH ROAD

LAYOUT PLAN

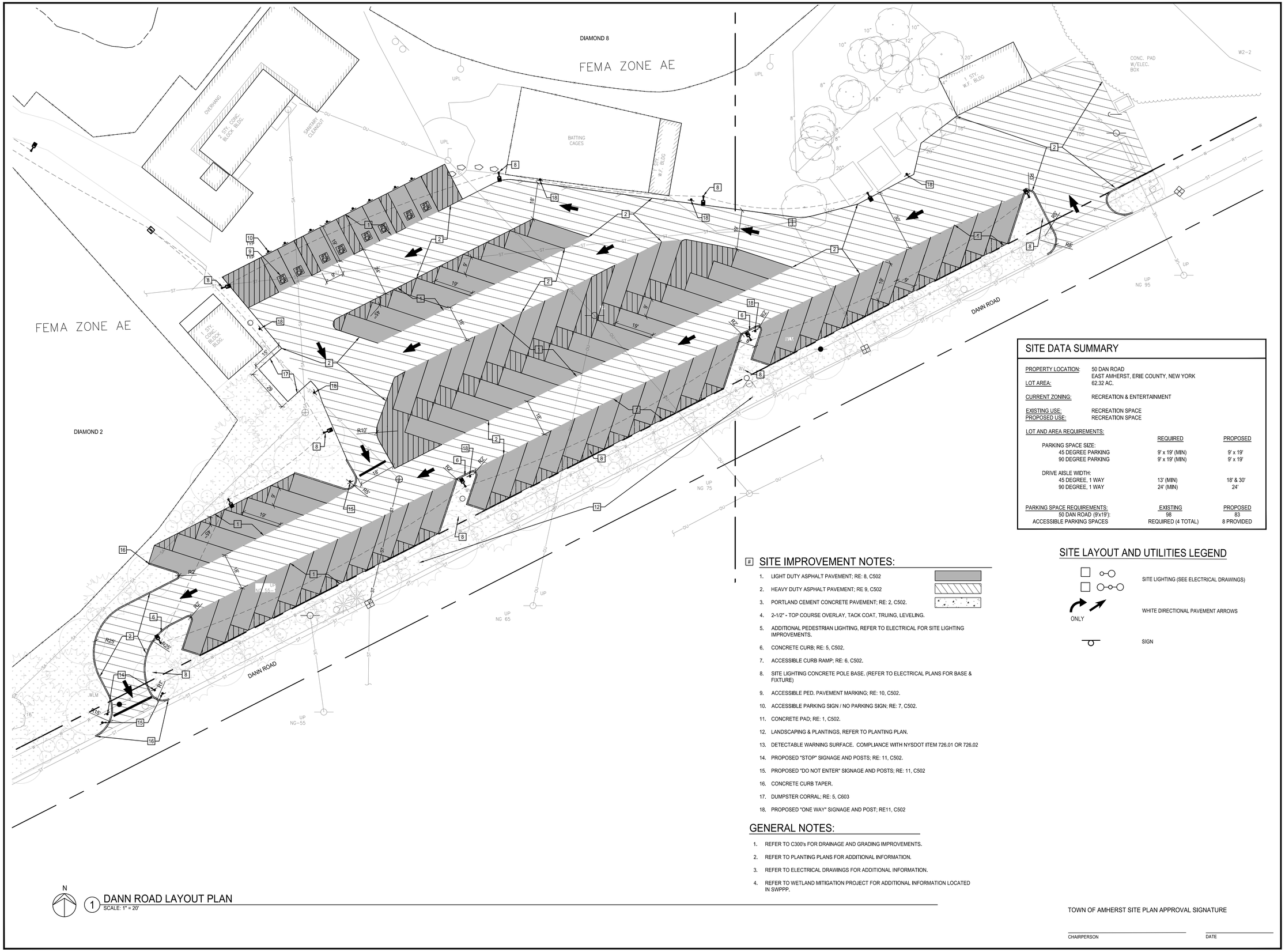
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING.
IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C201

Attachment: SP-1990-08J drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



SITE DATA SUMMARY

PROPERTY LOCATION:	50 DAN ROAD EAST AMHERST, ERIE COUNTY, NEW YORK
LOT AREA:	62.32 AC.
CURRENT ZONING:	RECREATION & ENTERTAINMENT
EXISTING USE: PROPOSED USE:	RECREATION SPACE RECREATION SPACE

LOT AND AREA REQUIREMENTS:

	REQUIRED	PROPOSED
PARKING SPACE SIZE:		
45 DEGREE PARKING	9' x 19' (MIN)	9' x 19'
90 DEGREE PARKING	9' x 19' (MIN)	9' x 19'
DRIVE AISLE WIDTH:		
45 DEGREE, 1 WAY	13' (MIN)	18' & 30'
90 DEGREE, 1 WAY	24' (MIN)	24'

PARKING SPACE REQUIREMENTS:	EXISTING	PROPOSED
50 DAN ROAD (9'x19'):	98	83
ACCESSIBLE PARKING SPACES	REQUIRED (4 TOTAL)	8 PROVIDED

SITE IMPROVEMENT NOTES:

1. LIGHT DUTY ASPHALT PAVEMENT; RE: 8, C502
2. HEAVY DUTY ASPHALT PAVEMENT; RE 9, C502
3. PORTLAND CEMENT CONCRETE PAVEMENT; RE: 2, C502.
4. 2-1/2" - TOP COURSE OVERLAY, TACK COAT, TRUING, LEVELING.
5. ADDITIONAL PEDESTRIAN LIGHTING, REFER TO ELECTRICAL FOR SITE LIGHTING IMPROVEMENTS.
6. CONCRETE CURB; RE: 5, C502.
7. ACCESSIBLE CURB RAMP; RE: 6, C502.
8. SITE LIGHTING CONCRETE POLE BASE. (REFER TO ELECTRICAL PLANS FOR BASE & FIXTURE)
9. ACCESSIBLE PED. PAVEMENT MARKING; RE: 10, C502.
10. ACCESSIBLE PARKING SIGN / NO PARKING SIGN; RE: 7, C502.
11. CONCRETE PAD; RE: 1, C502.
12. LANDSCAPING & PLANTINGS, REFER TO PLANTING PLAN.
13. DETECTABLE WARNING SURFACE. COMPLIANCE WITH NYSDOT ITEM 726.01 OR 726.02
14. PROPOSED "STOP" SIGNAGE AND POSTS; RE: 11, C502.
15. PROPOSED "DO NOT ENTER" SIGNAGE AND POSTS; RE: 11, C502
16. CONCRETE CURB TAPER.
17. DUMPSTER CORRAL; RE: 5, C603
18. PROPOSED "ONE WAY" SIGNAGE AND POST; RE11, C502

GENERAL NOTES:

1. REFER TO C300's FOR DRAINAGE AND GRADING IMPROVEMENTS.
2. REFER TO PLANTING PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO WETLAND MITIGATION PROJECT FOR ADDITIONAL INFORMATION LOCATED IN SWPPP.

SITE LAYOUT AND UTILITIES LEGEND

SITE LIGHTING (SEE ELECTRICAL DRAWINGS)

ONLY — WHITE DIRECTIONAL PAVEMENT ARROWS

SIGN

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

N

1 DANN ROAD LAYOUT PLAN
SCALE: 1" = 20'

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

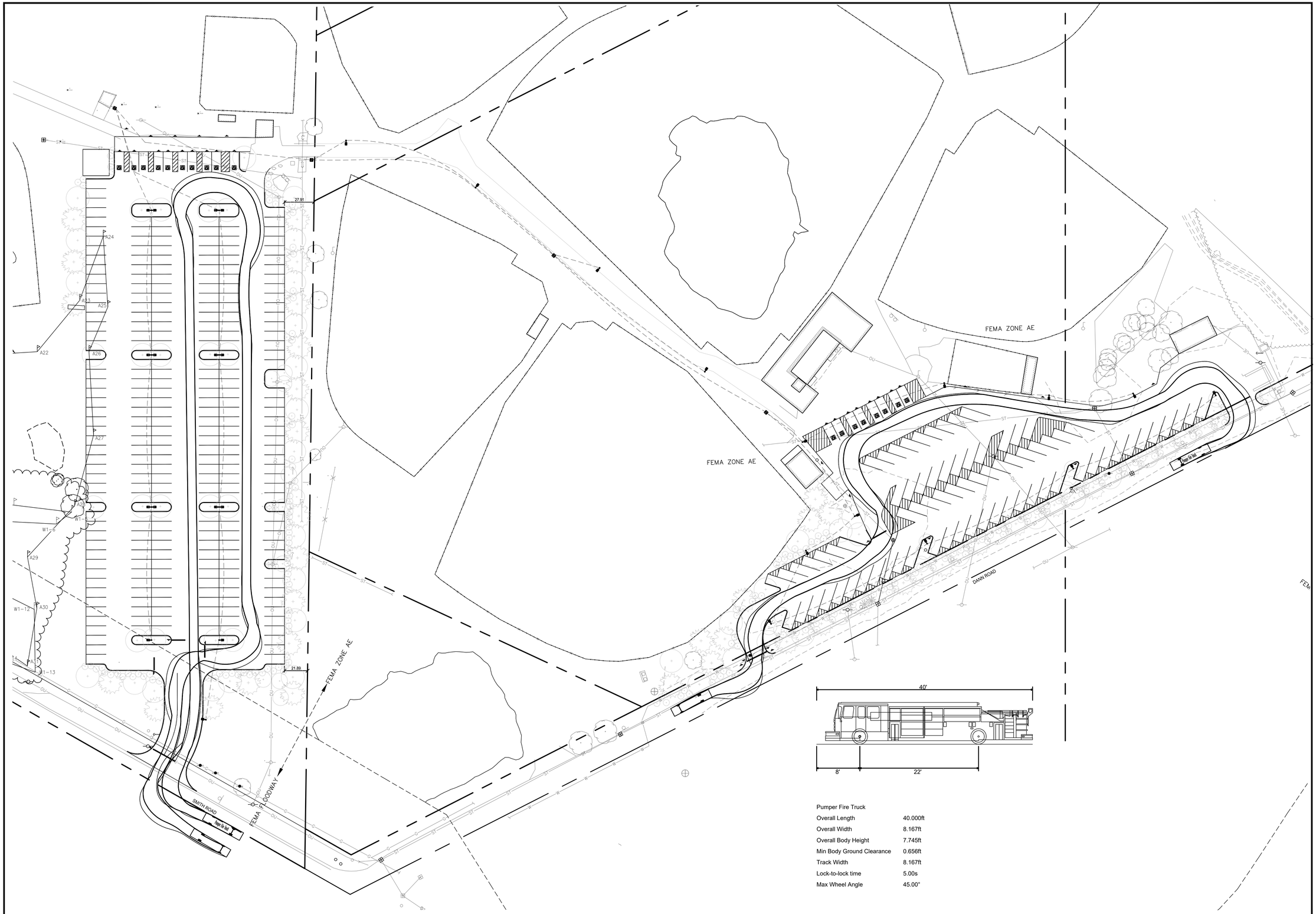
DANN ROAD

LAYOUT PLAN

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
SCALE	AS NOTED
DWN.	CC1
CHK.	CC1
PROJ. No.	261353
DWG. No.	C202

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

N

1 EMERGENCY VEHICLE TURNING MOVEMENT PLAN
SCALE: 1" = 40'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON DATE

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

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DWG. TITLE

EMERGENCY VEHICLE TURNING MOVEMENT PLAN

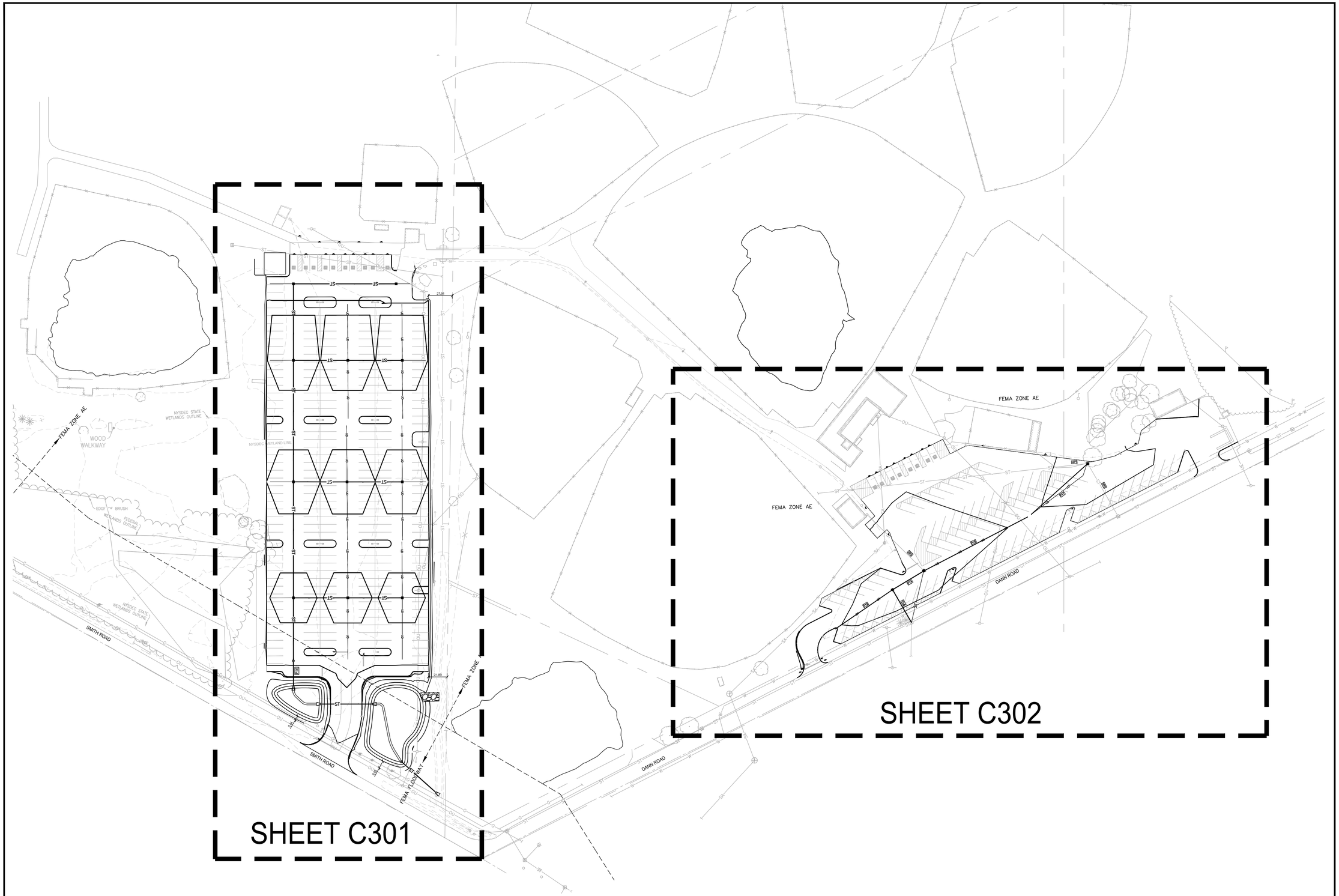
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	KMK	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C203

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 OVERALL GRADING & DRAINAGE PLAN
SCALE: 1" = 50'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

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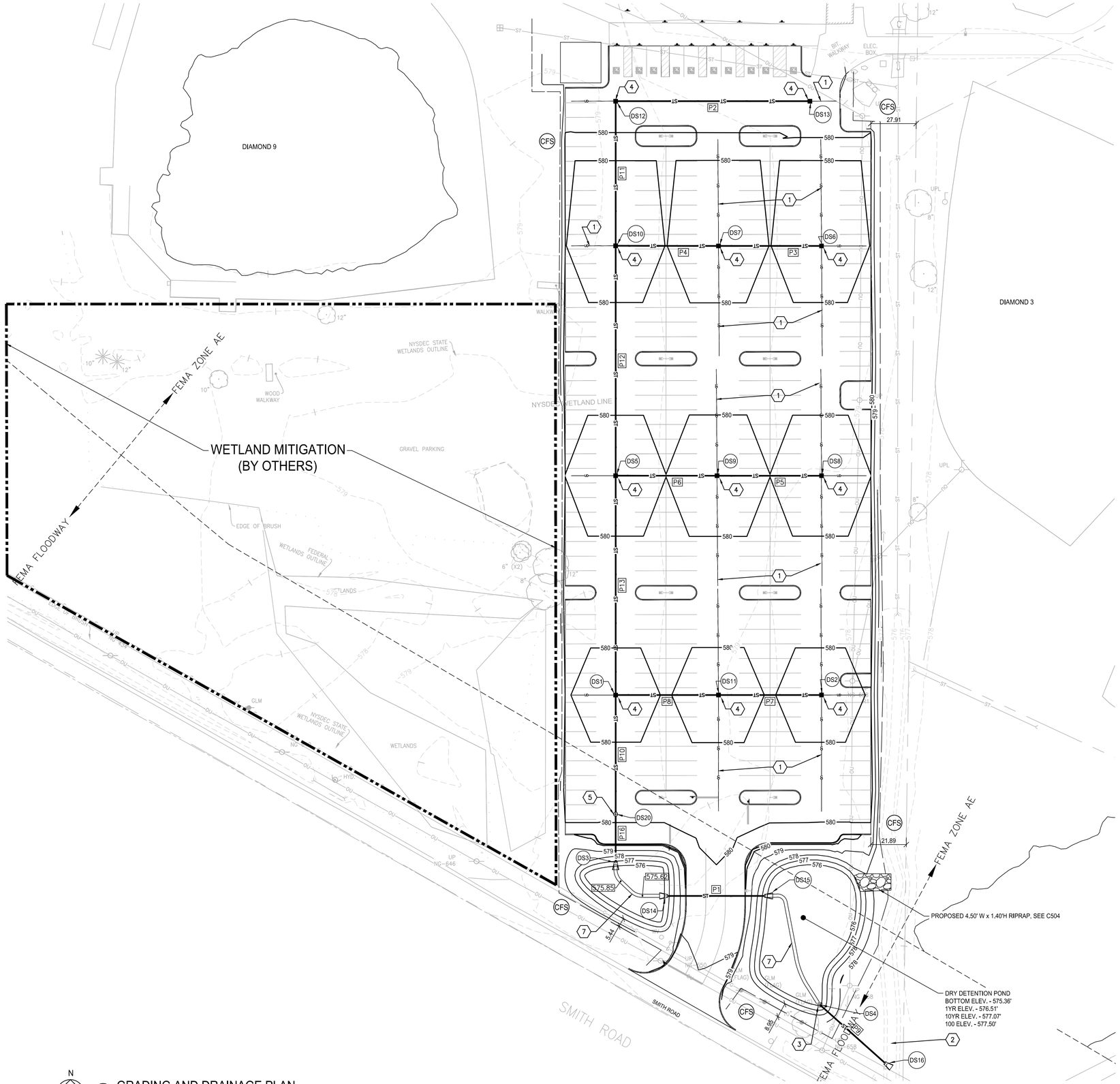
DWG. TITLE

OVERALL GRADING & DRINAGE PLAN

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING.
IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
SCALE	AS NOTED
DWN.	CC1
CHK.	CC1
PROJ. No.	261353
DWG. No.	C300

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 GRADING AND DRAINAGE PLAN
SCALE: 1" = 30'

LEGEND:

123.45	PROPOSED FINISHED GRADE ELEVATION
123.45	EXISTING ELEVATION
TYP	TYPICAL
TC	TOP OF CURB
BC	BOTTOM OF CURB
HP	HIGH POINT
FF	FINISH FLOOR
ME	MATCH EXISTING
495	PROPOSED MAJOR CONTOUR ELEVATION
493	PROPOSED MINOR CONTOUR ELEVATION
493	EXISTING CONTOUR ELEVATION
	PROPOSED GRADE BREAK
	PROPOSED SWALE
ST	PROPOSED STORM SEWER
	PROPOSED STORM CATCH BASIN
D	PROPOSED STORM MANHOLE
	PROPOSED STORMWATER TREATMENT UNIT
UD	PROPOSED UNDERDRAIN

SITE GRADING AND DRAINAGE NOTES:

1. 4"Ø PERFORATED HDPE UNDERDRAIN PIPE WITH FITTING.
2. EXISTING SWALE TO BE GRADED TO ENSURE POSITIVE DRAINAGE TO SMITH AND DANN COLLECTION SYSTEM.
3. DRY POND OUTLET STRUCTURE; RE: 2-4, C504.
4. CATCH BASIN; RE: 1, C503.
5. STORMWATER TREATMENT UNIT; MODEL FIRST DEFENSE OPTIMUM FDO-6.
6. CORE EXISTING STRUCTURE TO INSTALL NEW STORM SEWER, BULKHEAD AND GROUT EXISTING OPENING AS REQUIRED.
7. NEW "V" CONCRETE GUTTER; THIS SHEET.

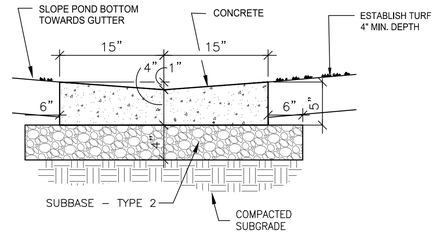
GENERAL NOTES:

1. REFER TO C303 FOR STORM PROFILES AND DRAINAGE TABLES.
2. REFER TO PLANTING PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO WETLAND MITIGATION PROJECT FOR ADDITIONAL INFORMATION.

SYMBOL LEGEND

NOTE: REFER TO DRAWING C100s FOR EROSION AND SEDIMENT CONTROL NOTES AND OTHER INFORMATION. THIS LEGEND IS TO REPRESENT ADDITIONAL EROSION AND SEDIMENT CONTROLS REQUIRED AS A RESULT OF CONSTRUCTION.

LOD	=	LIMITS OF DISTURBANCE
CFS	=	COMPOST FILTER SOCK; RE: 1, C501. SILT FENCE (RE: 6, C501) MAY BE USED INSTEAD OF FILTER SOCK IN NON-PAVED AREAS.
FFIP	=	TEMPORARY FILTER FABRIC INLET PROTECTION; RE: 5, C501. COMPOST FILTER SOCK (RE: 1, C501) MAY BE USED INSTEAD OF FILTER FABRIC INLET PROTECTION IN NON-PAVED AREAS.
IP	=	TEMPORARY DROP INLET PROTECTION; RE: 2, C501, COMPOST FILTER SOCK (RE: 1, C501) MAY BE USED ONLY IN PAVED AREAS NOT OPEN TO VEHICULAR TRAFFIC.



1 CONCRETE GUTTER FOR DRY POND
SCALE: N.T.S.

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

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STATE OF NEW YORK
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LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SMITH ROAD

GRADING & DRAINAGE PLAN

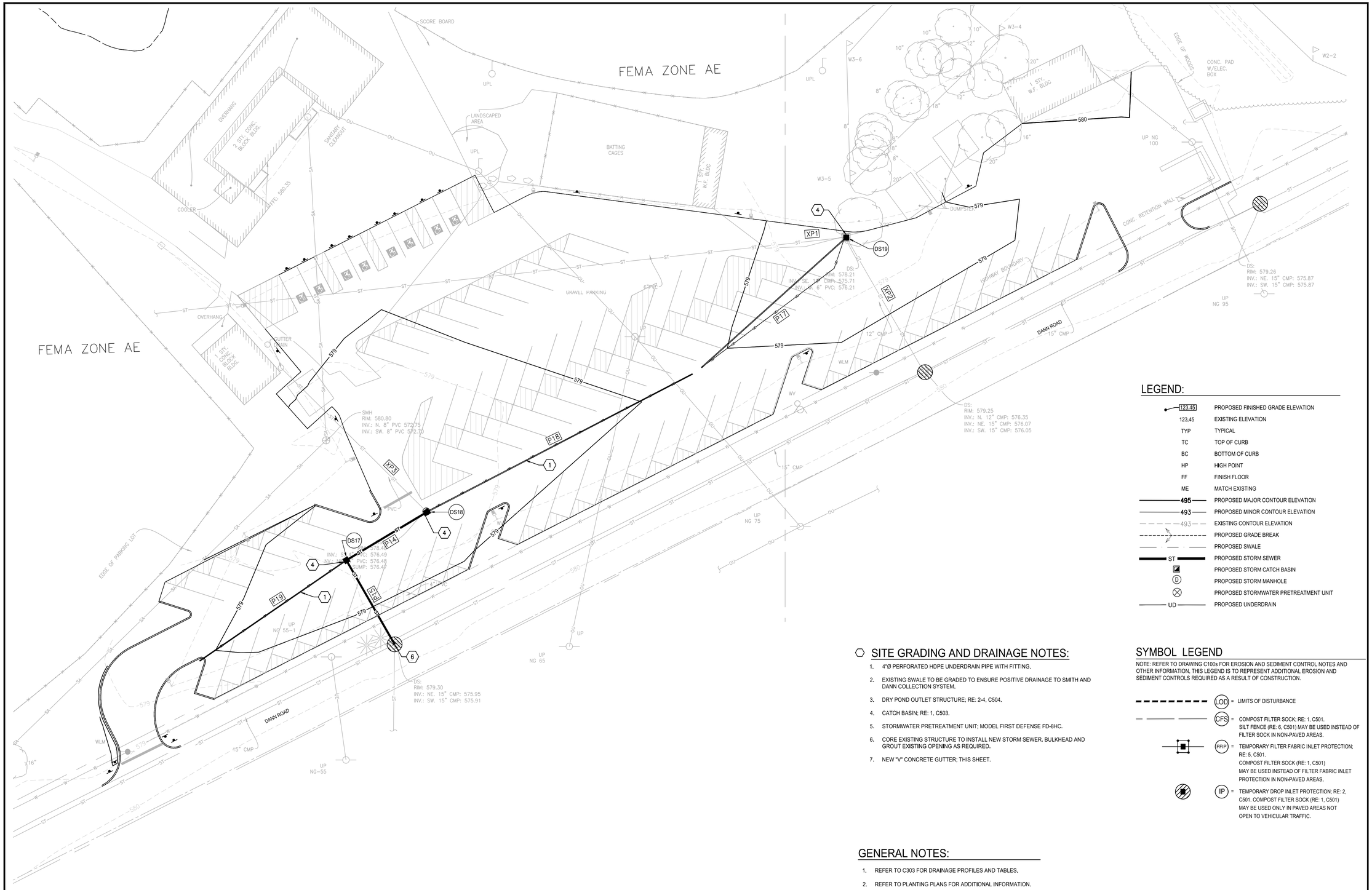
0 1" 2"
GENERIC SCALE BAR
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C301

Attachment: SP-1990-083 drawings 091924 (29174 : SP-1990-083, 50 Dann Rd)



LEGEND:

123.45	PROPOSED FINISHED GRADE ELEVATION
123.45	EXISTING ELEVATION
TYP	TYPICAL
TC	TOP OF CURB
BC	BOTTOM OF CURB
HP	HIGH POINT
FF	FINISH FLOOR
ME	MATCH EXISTING
495	PROPOSED MAJOR CONTOUR ELEVATION
493	PROPOSED MINOR CONTOUR ELEVATION
493	EXISTING CONTOUR ELEVATION
	PROPOSED GRADE BREAK
	PROPOSED SWALE
ST	PROPOSED STORM SEWER
	PROPOSED STORM CATCH BASIN
D	PROPOSED STORM MANHOLE
	PROPOSED STORMWATER PRETREATMENT UNIT
UD	PROPOSED UNDERDRAIN

SITE GRADING AND DRAINAGE NOTES:

1. 4"Ø PERFORATED HDPE UNDERDRAIN PIPE WITH FITTING.
2. EXISTING SWALE TO BE GRADED TO ENSURE POSITIVE DRAINAGE TO SMITH AND DANN COLLECTION SYSTEM.
3. DRY POND OUTLET STRUCTURE; RE: 2-4, C504.
4. CATCH BASIN; RE: 1, C503.
5. STORMWATER PRETREATMENT UNIT; MODEL FIRST DEFENSE FD-8HC.
6. CORE EXISTING STRUCTURE TO INSTALL NEW STORM SEWER. BULKHEAD AND GROUT EXISTING OPENING AS REQUIRED.
7. NEW "V" CONCRETE GUTTER; THIS SHEET.

SYMBOL LEGEND

NOTE: REFER TO DRAWING C100s FOR EROSION AND SEDIMENT CONTROL NOTES AND OTHER INFORMATION. THIS LEGEND IS TO REPRESENT ADDITIONAL EROSION AND SEDIMENT CONTROLS REQUIRED AS A RESULT OF CONSTRUCTION.

	LOD	= LIMITS OF DISTURBANCE
	CFS	= COMPOST FILTER SOCK; RE: 1, C501. SILT FENCE (RE: 6, C501) MAY BE USED INSTEAD OF FILTER SOCK IN NON-PAVED AREAS.
	FFIP	= TEMPORARY FILTER FABRIC INLET PROTECTION; RE: 5, C501. COMPOST FILTER SOCK (RE: 1, C501) MAY BE USED INSTEAD OF FILTER FABRIC INLET PROTECTION IN NON-PAVED AREAS.
	IP	= TEMPORARY DROP INLET PROTECTION; RE: 2, C501. COMPOST FILTER SOCK (RE: 1, C501) MAY BE USED ONLY IN PAVED AREAS NOT OPEN TO VEHICULAR TRAFFIC.

GENERAL NOTES:

1. REFER TO C303 FOR DRAINAGE PROFILES AND TABLES.
2. REFER TO PLANTING PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO WETLAND MITIGATION PROJECT FOR ADDITIONAL INFORMATION.

N

1 GRADING AND DRAINAGE PLAN
SCALE: 1" = 20'

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON DATE

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

STATE OF NEW YORK
CHRISTOPHER MICHAEL CHAMBERLAIN
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

DANN ROAD

GRADING & DRAINAGE PLAN

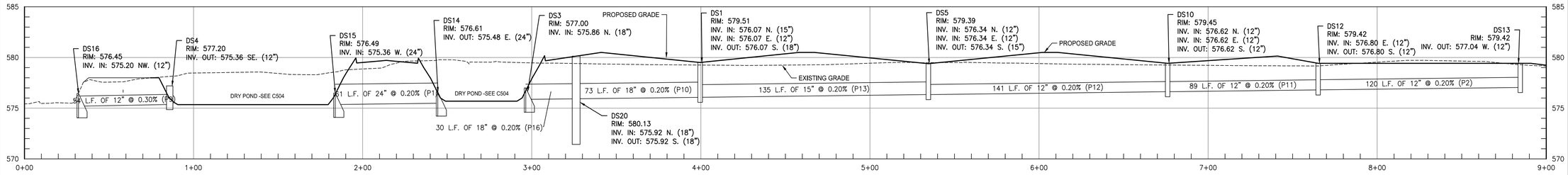
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

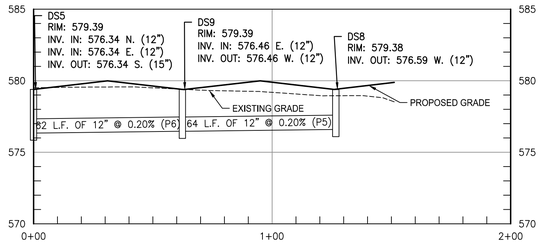
DWG. No.

C302

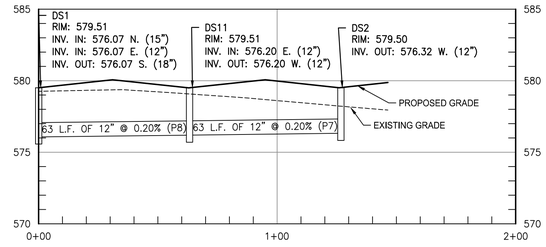
Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



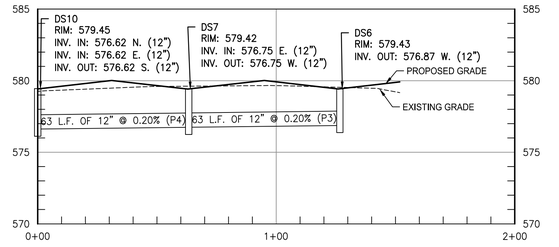
1 STORM PROFILE DS16 - DS13
SCALE: H:1" = 30'; V:1"=5'



2 STORM PROFILE DS5 - DS8
SCALE: H:1" = 30'; V:1"=5'



3 STORM PROFILE DS1 - DS2
SCALE: H:1" = 30'; V:1"=5'



4 STORM PROFILE DS10 - DS6
SCALE: H:1" = 30'; V:1"=5'

STRUCTURE TABLE

I.D.	DESCRIPTION	RIM	PIPES IN	PIPES OUT
* DS1	2'X2' CATCH BASIN	579.51	P13, INV IN = 576.07 N (15") P8, INV IN = 576.07 E (12")	P10, INV OUT = 576.07 S (18")
* DS2	2'X2' CATCH BASIN	579.50		P7, INV OUT = 576.32 W (12")
DS3	END SECTION	577.00	P16, INV IN = 575.86 N (18")	
** DS4	2'X2' CATCH BASIN	577.20		P9, INV OUT = 575.36 SE (12")
* DS5	2'X2' CATCH BASIN	579.39	P12, INV IN = 576.34 N (12") P6, INV IN = 576.34 E (12")	P13, INV OUT = 576.34 S (15")
* DS6	2'X2' CATCH BASIN	579.43		P3, INV OUT = 576.87 W (12")
* DS7	2'X2' CATCH BASIN	579.42	P3, INV IN = 576.75 E (12")	P4, INV OUT = 576.75 W (12")
* DS8	2'X2' CATCH BASIN	579.38		P5, INV OUT = 576.59 W (12")
* DS9	2'X2' CATCH BASIN	579.39	P5, INV IN = 576.46 E (12")	P6, INV OUT = 576.46 W (12")
*DS10	2'X2' CATCH BASIN	579.45	P11, INV IN = 576.62 N (12") P4, INV IN = 576.62 E (12")	P12, INV OUT = 576.62 S (12")
DS11	2'X2' CATCH BASIN	579.51	P7, INV IN = 576.20 E (12")	P8, INV OUT = 576.20 W (12")
*DS12	2'X2' CATCH BASIN	579.42	P2, INV IN = 576.80 E (12")	P11, INV OUT = 576.80 S (12")
*DS13	2'X2' CATCH BASIN	579.42		P2, INV OUT = 577.04 W (12")
DS14	END SECTION	576.61		P1, INV OUT = 575.48 E (24")
DS15	END SECTION	576.49	P1, INV IN = 575.36 W (24")	
DS16	END SECTION	576.45	P9, INV IN = 575.20 NW (12")	
DS17	2'x2' CATCH BASIN	5777.22	P14, INV IN = 576.35 NE (12") P19, INV IN = 576.35 SW (4")	P15, INV OUT = 576.35 SE (12")
DS18	2'x2' CATCH BASIN	578.49	XP3, INV IN = 576.47 NW (4") P18, INV IN = 576.78 NE (4")	P14, INV OUT = 576.78 SW (12")
DS19	2'x2' CATCH BASIN	578.24	XP1, INV IN = 575.21 W (6") P17, INV IN = 575.71 SW (4")	XP2, INV OUT = 575.71 SE (12")
DS20	8' MH - HYDRO UNIT	580.13	P10, INV IN = 575.92 N (18")	P16, INV OUT = 575.92 S (18")

*4" PERFORTED UNDERDRAINS @ 0.20% SLOPES REQUIRED FOR STRUCTURE. PROVIDE 4" INVERT AT OR ABOVE INVERT OUT AS NOTED DRAINAGE TABLE. REFER TO C301 & C302 FOR LAYOUT.

**OUTLET STRUCTURE - REFER TO C504 FOR ADDITIONAL INFORMATION.

DRAINAGE PIPE TABLE

PIPE I.D.	SIZE	LENGTH (L.F.)	SLOPE	MATERIAL
P1	24"	61	0.20%	HDPE
P2	12"	120	0.20%	HDPE
P3	12"	64	0.20%	HDPE
P4	12"	64	0.20%	HDPE
P5	12"	65	0.20%	HDPE
P6	12"	63	0.20%	HDPE
P7	12"	64	0.20%	HDPE
P8	12"	64	0.20%	HDPE
P9	12"	54	0.30%	HDPE
P10	18"	74	0.20%	HDPE
P11	12"	90	0.20%	HDPE
P12	12"	142	0.20%	HDPE
P13	15"	135	0.20%	HDPE
P14	12"	43	1.00%	HDPE
P15	12"	45	1.00%	HDPE
P16	18"	30	0.20%	HDPE
P17	4"	89	0.20%	HDPE
P18	4"	136	0.20%	HDPE
P19	4"	81	0.20%	HDPE
XP1	6"	20	0.00%	CMP
XP2	12"	71	-0.91%	CMP
XP3	4"	38	0.00%	CMP

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON

DATE

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

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08/16/2024
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STATE OF NEW YORK
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089617-01
LICENSED PROFESSIONAL ENGINEER
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DWG. TITLE

STORM PROFILES & DRAINAGE TABLES

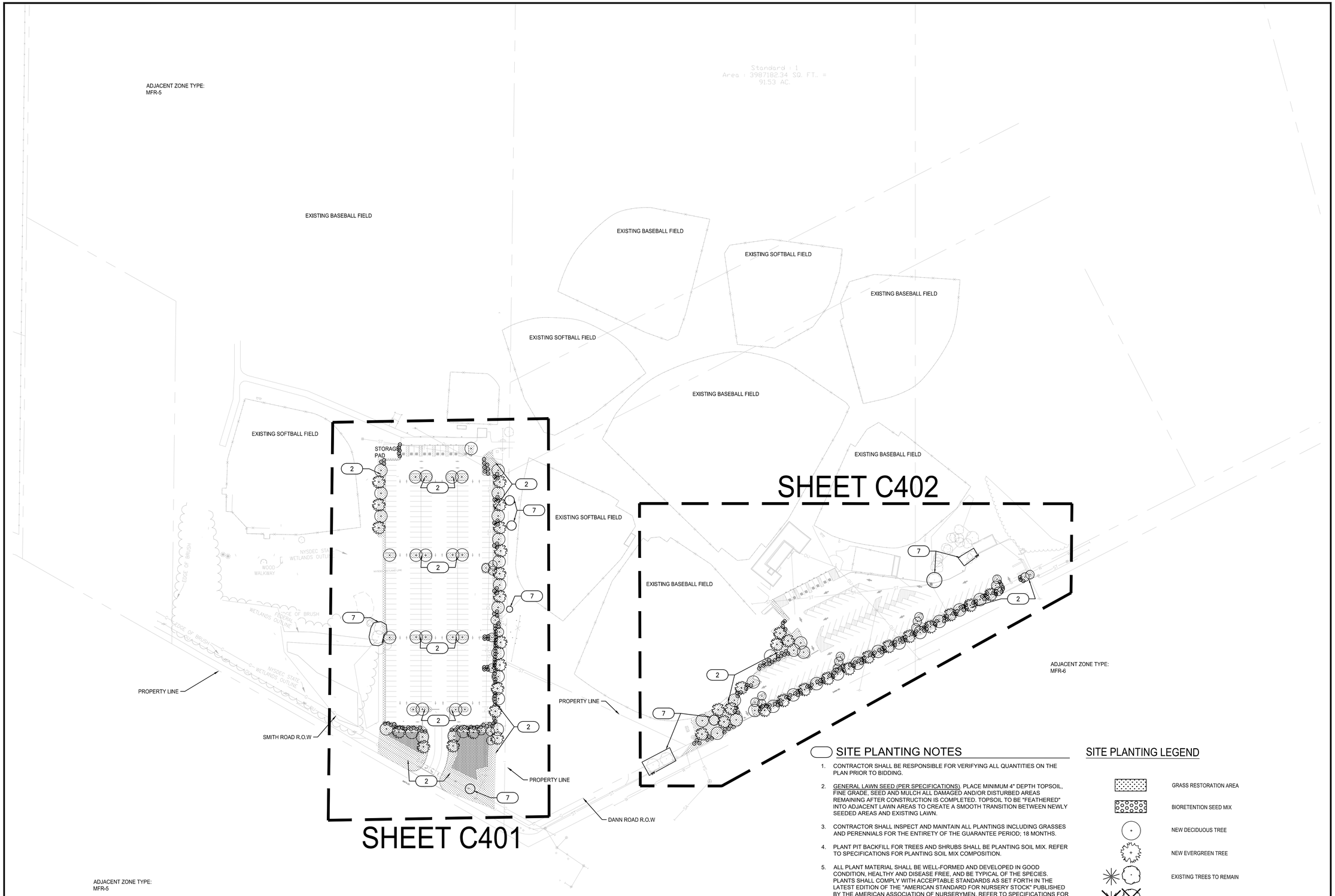
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

DWG. No.

C303

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 OVERALL PLANTING PLAN
SCALE: 1" = 50'

SITE PLANTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON THE PLAN PRIOR TO BIDDING.
2. GENERAL LAWN SEED (PER SPECIFICATIONS). PLACE MINIMUM 4" DEPTH TOPSOIL, FINE GRADE, SEED AND MULCH ALL DAMAGED AND/OR DISTURBED AREAS REMAINING AFTER CONSTRUCTION IS COMPLETED. TOPSOIL TO BE "FEATHERED" INTO ADJACENT LAWN AREAS TO CREATE A SMOOTH TRANSITION BETWEEN NEWLY SEEDED AREAS AND EXISTING LAWN.
3. CONTRACTOR SHALL INSPECT AND MAINTAIN ALL PLANTINGS INCLUDING GRASSES AND PERENNIALS FOR THE ENTIRETY OF THE GUARANTEE PERIOD; 18 MONTHS.
4. PLANT PIT BACKFILL FOR TREES AND SHRUBS SHALL BE PLANTING SOIL MIX. REFER TO SPECIFICATIONS FOR PLANTING SOIL MIX COMPOSITION.
5. ALL PLANT MATERIAL SHALL BE WELL-FORMED AND DEVELOPED IN GOOD CONDITION, HEALTHY AND DISEASE FREE, AND BE TYPICAL OF THE SPECIES. PLANTS SHALL COMPLY WITH ACCEPTABLE STANDARDS AS SET FORTH IN THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. ALL PLANT LOCATIONS ARE APPROXIMATE. ADJUSTMENTS MAY BE NECESSARY TO AVOID CONFLICTS. INFORM LANDSCAPE ARCHITECT TO ADJUST PLANT LOCATIONS AS NECESSARY.
7. TREE PROTECTION FENCE TO BE INSTALLED RE; 4,C505

SITE PLANTING LEGEND

- GRASS RESTORATION AREA
- BIORETENTION SEED MIX
- NEW DECIDUOUS TREE
- NEW EVERGREEN TREE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMOVE
- TREE PROTECTION FENCE

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

REGISTERED LANDSCAPE ARCHITECT
DAVID L. KENYON
001890
STATE OF NEW YORK

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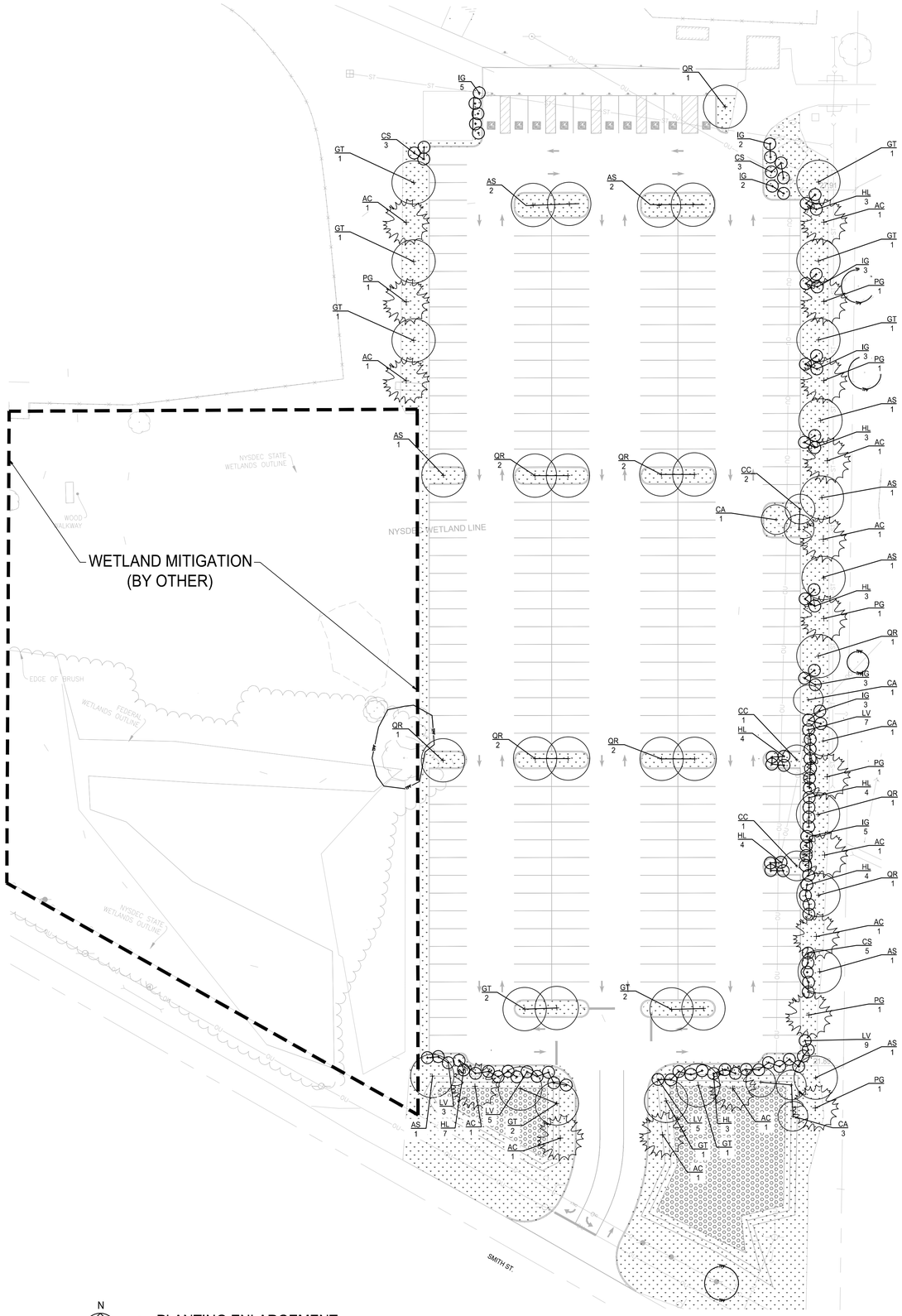
DWG. TITLE

OVERALL PLANTING PLAN

0 1" 2"
GENERIC SCALE BAR
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DATE	08.16.24
SCALE	AS NOTED
DWN.	SRP
CHK.	DLK
PROJ. No.	261353
DWG. No.	C400

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 PLANTING ENLARGEMENT
SCALE: 1" = 30'

OVERALL PLANTING SCHEDULE

TREES

KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES	QTY
AC	*Abies concolor*	White Fir	7' ht.	B+B		19
CC	*Cercis canadensis*	Eastern Redbud	2.5" cal,	B+B	Single truck - 5' min. branching ht.	18
AS	*Acer saccharum*	Sugar Maple	2.5" cal,	B+B		22
CA	*Cornus alternifolia*	Alternate-Leaf Dogwood	10' ht.	B+B	Clump Form	9
GT	*Gleditsia triacanthos var. inermis 'Shademaster*	Shademaster Honeylocust	2.5" cal,	B+B		20
PG	*Picea glauca*	White Spruce	7' ht.	B+B		19
QR	*Quercus rubra*	Northern Red Oak	2.5" cal,	B+B	Fall Dig Hazard	17
					TOTAL:	**124**

SHRUBS

KEY	BOTANICAL NAME	COMMON NAME	SIZE		NOTES	QTY
CS	*Cornus sericea 'Farrow'*	Arctic Fire Dogwood	24-30" ht.	#5 Cont.		44
HL	*Hydrangea paniculata 'Limelight'*	Limelight Hydrangea	24-30" ht.	#5 Cont.		80
IG	*Ilex glabra 'Shamrock'*	Shamrock Holly	24-30" ht.	#3 Cont.		73
LV	*Ligistrum x vicaryi*	Golden Vicary Privet	24-30" ht.	#3 Cont.		42
					TOTAL:	**239**

INTERIOR LANDSCAPE AREA

IF PARKING AREA EXCEEDS 1 ACRE, MINIMUM INTERIOR PLANTING IS 10% - SEE C201 FOR PROPOSED AREA	PROPOSED INTERIOR PLANTING: 2.5%
INTERIOR PLANTING AREA MUST BE EVERY 15 PARKING SPACES MAX	
INTERIOR PARKING AREAS MUST RECEIVE 1 LG. DECID. TREE / 128SF AND 1 ADDITIONAL LG DECID. TREE / 100 ADDITIONAL SF	
ALL PARKING AREAS MUST END WITH A PLANTING AREA	

BUFFER & SCREENING

SCREEN ALL VEHICLE USE AREAS ADJACENT TO PUBLIC STREETS
PLANTS MUST BE NO LESS THAN 36" IN HEIGHT AFTER 2 YEARS
AREAS SHALL RECEIVE 1 LG DECID. TREE, 2 SMALL TREES, OR 3 EVERGREEN TREES EVERY 40 LF
IF ADJOINING LAND USES EXIST (SUCH AS MFR-5 AND MFR-6) THE FOLLOWING SCREENING MUST BE USED - REFER TO C400 FOR ADJACENT ZONING
36" HIGH BERM, 1 DECIDIOUS TREE / 4' , 1 EVERGREEN TREE/40', 1 SHRUB / 5'

REQUIRED LANDSCAPE AREA ADJACENT TO BUILDINGS

MINIMUM 6' WIDTH LANDSCAPE BEDS AS BUFFERS FROM PARKING AND BUILDING AREAS
50% PLANTING WITH TREES, SHRUBS, PERENNIALS IN LANDSCAPE BEDS
IF BACK OF A STRUCTURE IS FACING A PARKING AREA, IT MUST BE SCREENED

SITE PLANTING LEGEND

- GRASS RESTORATION AREA
- BIORETENTION SEED MIX
- NEW DECIDUOUS TREE
- NEW EVERGREEN TREE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMOVE
- TREE PROTECTION FENCE

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON _____ DATE _____

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REGISTERED LANDSCAPE ARCHITECT DAVID L. KENTON 001890 STATE OF NEW YORK

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A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SMITH STREET

PLANTING PLAN

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
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DWN.	SRP CHK. DLK
PROJ. No.	261353
DWG. No.	**C401**

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



N

1 PLANTING ENLARGEMENT
SCALE: 1" = 30'

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- GRASS RESTORATION AREA
- BIORETENTION SEED MIX
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- NEW EVERGREEN TREE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMOVE
- TREE PROTECTION FENCE

OVERALL PLANTING SCHEDULE

TREES

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Centerpointe Corporate Park
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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

REGISTERED LANDSCAPE ARCHITECT
DAVID L. KENYON
001890
STATE OF NEW YORK

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

DANN ROAD

PLANTING PLAN

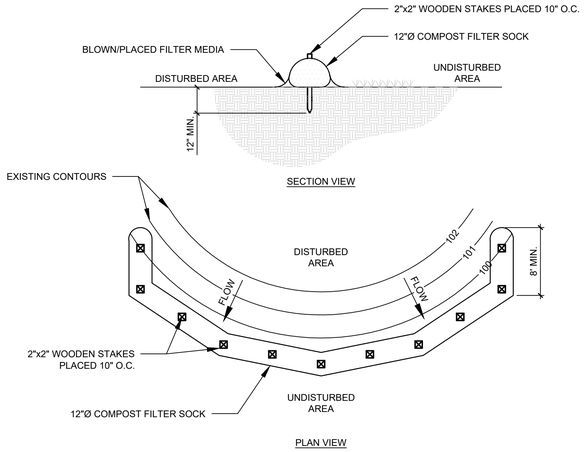
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GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

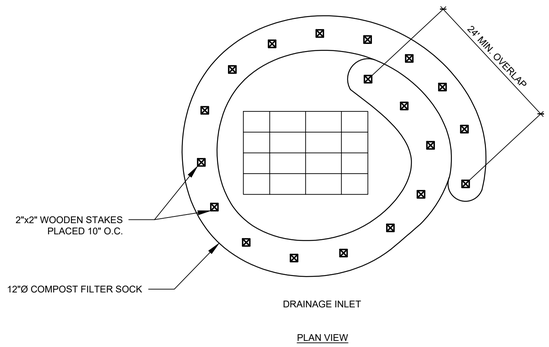
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PROJ. No.	261353

DWG. No.

C402

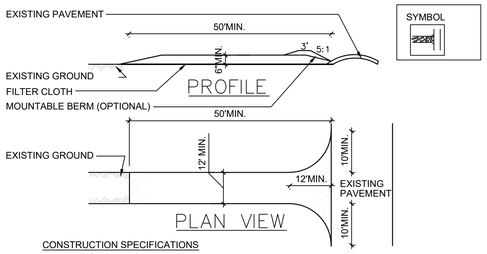
Attachment: SP-1990-083_091924 (29174 : SP-1990-083, 50 Dann Rd)





NOTES:
1. COMPOST FILTER SOCK MUST MEET THE STANDARDS AND SPECIFICATIONS OUTLINED IN SECTTION 5 OF THE NEW YORK STATE STANDARD SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, (JULY 2016).
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER SPECIFIED.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATER CASE, THE MESH SHALL BE CUT OPEN AND THE COMPOST SPREAD AS A SOIL SUPPLEMENT.

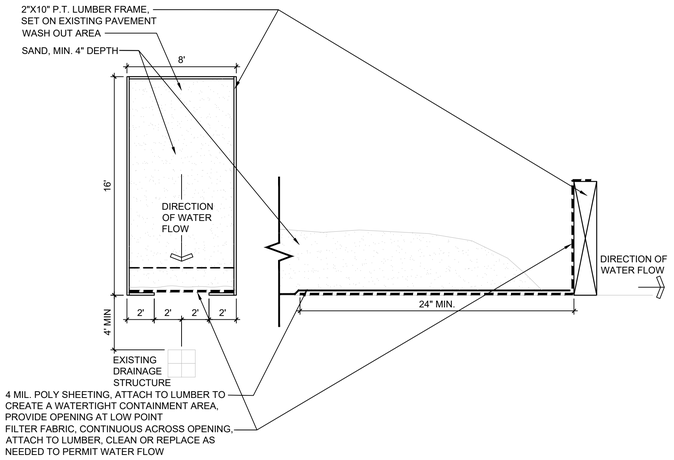
1 COMPOST FILTER SOCK
NTS



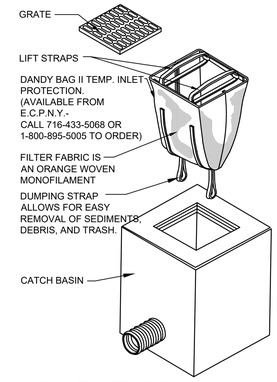
CONSTRUCTION SPECIFICATIONS

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.

3 STABILIZED CONSTRUCTION ENTRANCE
NTS



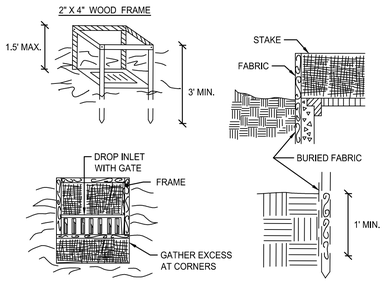
4 READY-MIX TRUCK WASH OUT STATION
NTS



INSTALLATION INSTRUCTIONS:
1. REMOVE THE GRATE FROM THE CATCH BASIN AND STAND ON END.
2. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG II UNIT SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. THE GRATE SHOULD BE CRADLED BETWEEN THE UPPER AND LOWER STRAPS.
3. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET, BEING CAREFUL THAT THE GRATE REMAINS IN THE PLACE AND BEING CAREFUL NOT TO DAMAGE THE DANDY BAG II UNIT.
4. CONTACT DESIGNATED EROSION CONTROL INSPECTOR IF NECESSARY TO ASSIST IN INSTALLATION.

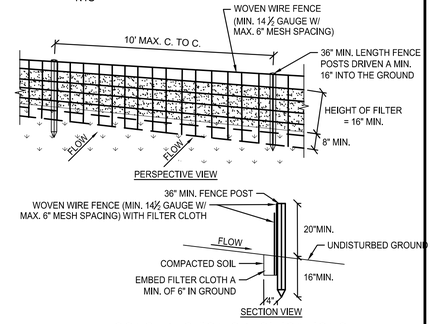
MAINTENANCE INSTRUCTIONS:
1. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STROM EVENT.
2. AFTER EACH STROM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY BAG II UNIT. IF THE UNIT IS MORE THAN 1/3 FULL OF ACCUMULATED SEDIMENT, THE UNIT MUST BE EMPTIED.
3. TO EMPTY THE UNIT, USING THE LIFTING STRAPS LIFT THE UNIT OUT OF THE INLET AND REMOVE THE GRATE. TRANSPORT THE UNIT TO AN APPROPRIATE LOCATION FOR REMOVAL OF THE CONTENTS. HOLDING THE DUMPING STRAPS ON THE OUTSIDE AT THE BOTTOM OF THE UNIT, TURN THE UNIT UPSIDE DOWN, EMPTYING THE CONTENTS. REINSTALL UNIT AS PER INSTALLATION INSTRUCTIONS. DISPOSE OF SEDIMENTS AND DEBRIS AT AN APPROPRIATE OFF-SITE LOCATION.
4. DISPOSE OF UNIT AND/OR ABSORBENT IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS AND REGULATIONS.

2 TEMPORARY INLET PROTECTION
NTS



CONSTRUCTION SPECIFICATIONS:
1. FILTER FABRIC SHALL HAVE AN EQUIVALENT OPENING SIZE 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.

5 TEMPORARY FILTER FABRIC INLET PROTECTION
SCALE: N.T.S.



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, 12-1/2 GAUGE, 6" MAX. MESH OPENING.
3. WHEN TWO SECTION OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 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.

NOTE:
SILT FENCE MAY BE SUBSTITUTED FOR COMPOST FILTER SOCK WITH THE APPROVAL BY THE ENGINEER

6 TEMPORARY SILT FENCE
SCALE: N.T.S.

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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FOR PERMITTING PURPOSES
08/16/2024
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Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)

STATE OF NEW YORK
CHRISTOPHER MICHAEL CHAPIN
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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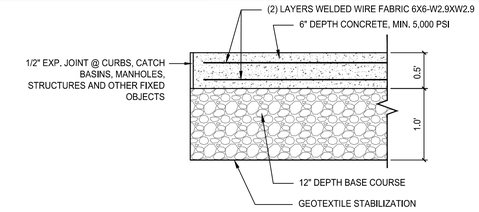
NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SITE DETAILS

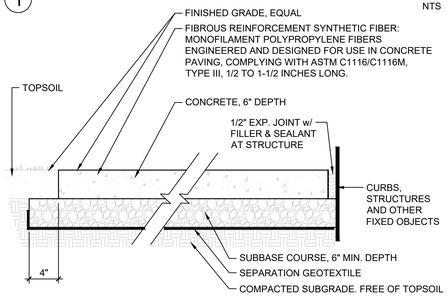
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GENERIC SCALE BAR
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DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		
DWG. No.	C501		



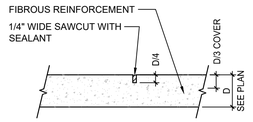
1 DUMPSTER AREA PAVEMENT

NTS



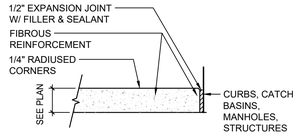
2 CONCRETE PAVEMENT

NTS

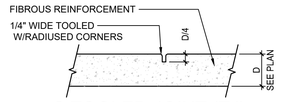


NOTE:
*SAWCUT JOINT 24 HOURS AFTER CONCRETE PLACEMENT - FILL WITH JOINT SEALANT AFTER SHRINKAGE OF CONCRETE

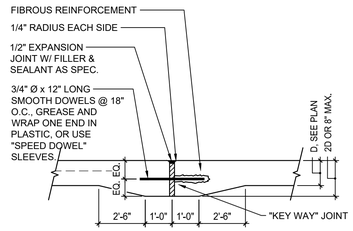
A SAWCUT JOINT (SJ)



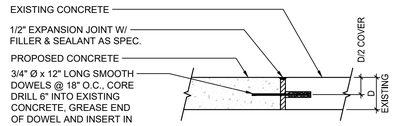
B EXPANSION JOINT



C TOOLED JOINT (TJ)



D CONSTRUCTION JOINT (CJ)

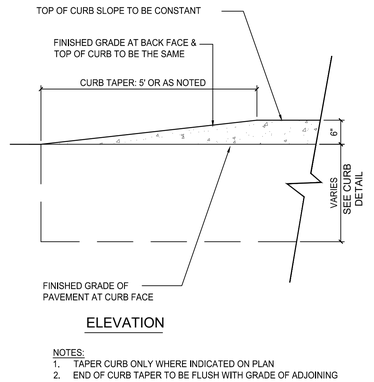


NOTE :
"D" IS EQUAL TO DEPTH OF CONCRETE.

E LOAD TRANSFER - SLIP DOWEL JOINT

3 TYPICAL CONCRETE JOINTS

NTS

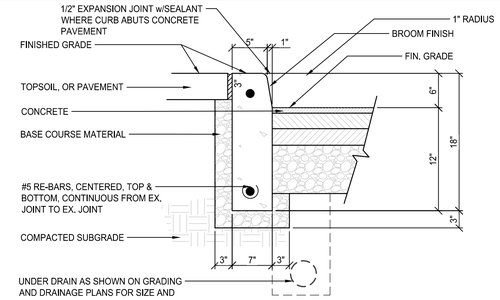


ELEVATION

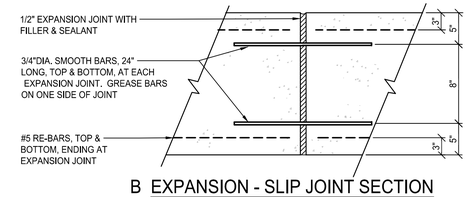
NOTES:
1. TAPER CURB ONLY WHERE INDICATED ON PLAN
2. END OF CURB TAPER TO BE FLUSH WITH GRADE OF ADJOINING PAVEMENT

4 CONCRETE CURB TAPER

NTS



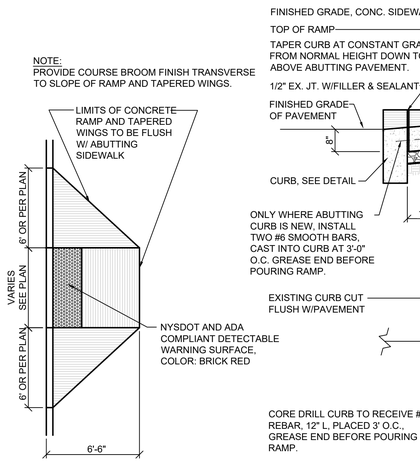
A CURB CROSS SECTION



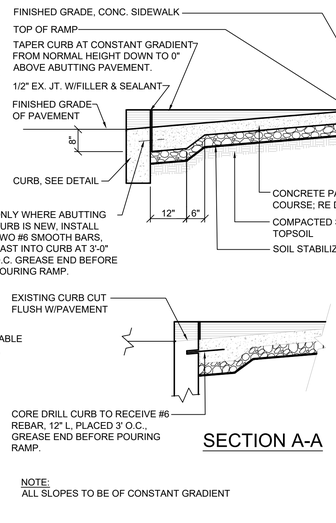
B EXPANSION - SLIP JOINT SECTION

5 CONCRETE CURB

NTS



PLAN (STRAIGHT)

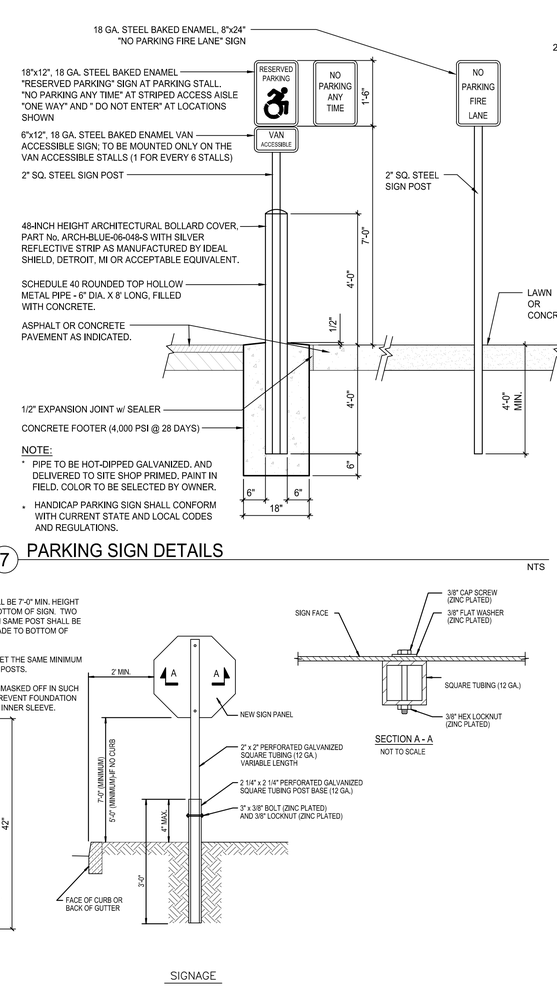


SECTION A-A

NOTE:
ALL SLOPES TO BE OF CONSTANT GRADIENT

6 ACCESSIBLE CURB CUT AND RAMP

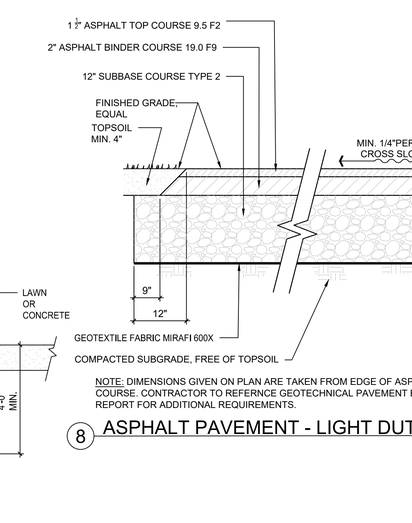
NTS



NOTE:
* PIPE TO BE HOT-DIPPED GALVANIZED, AND DELIVERED TO SITE SHOP PRIMED. PAINT IN FIELD. COLOR TO BE SELECTED BY OWNER.
* HANDICAP PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.

7 PARKING SIGN DETAILS

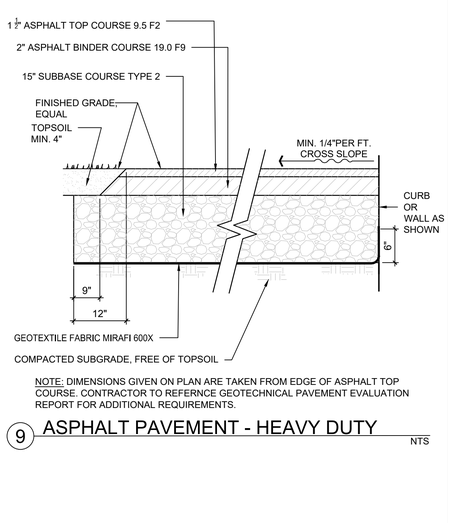
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NOTE: DIMENSIONS GIVEN ON PLAN ARE TAKEN FROM EDGE OF ASPHALT TOP COURSE. CONTRACTOR TO REFERNCE GEOTECHNICAL PAVEMENT EVALUATION REPORT FOR ADDITIONAL REQUIREMENTS.

8 ASPHALT PAVEMENT - LIGHT DUTY

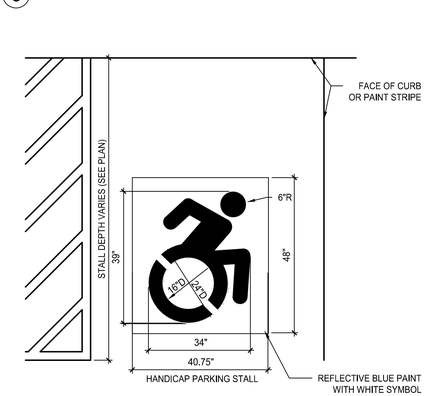
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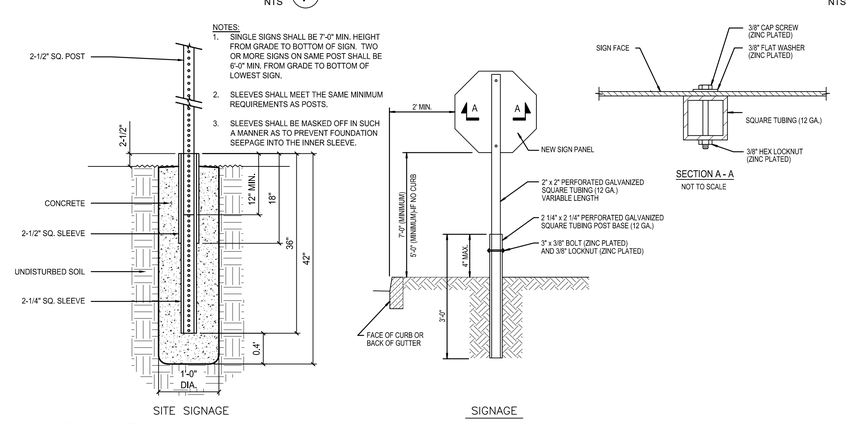
9 ASPHALT PAVEMENT - HEAVY DUTY

NTS



10 ACCESSIBLE PARKING SPACE SYMBOL

NTS



11 SIGNAGE

NTS

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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STATE OF NEW YORK
CHRISTOPHER MICHAEL CONLEY
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SITE DETAILS

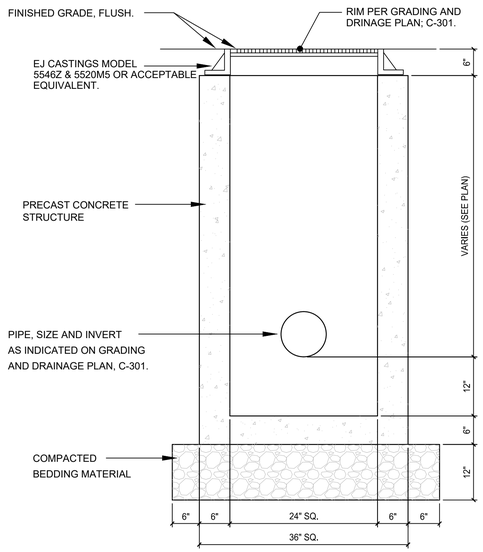
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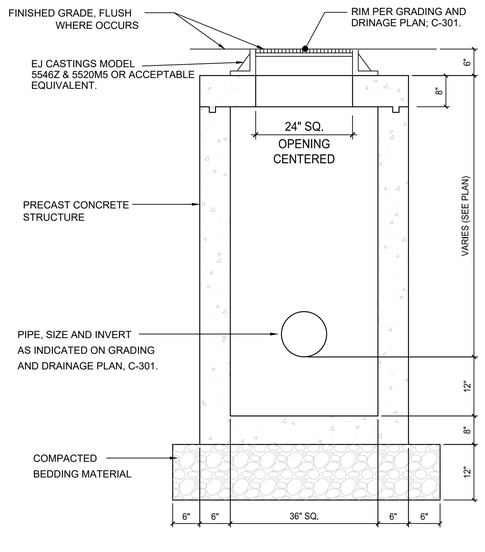
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PROJ. No.	261353		

DWG. No.

C502

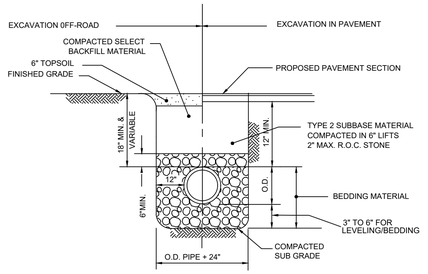
Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



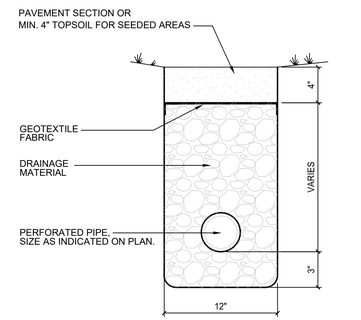


1. MAXIMUM FRAME AND RIM ADJUSTMENT TO BE 12", SEE NOTES 4 & 5.
2. WALL THICKNESS FOR STRUCTURES TO BE 6".
3. ALL PIPES SHALL BE CUT FLUSH WITH INSIDE WALLS OF STRUCTURE.
4. FOR ALL DRAINAGE STRUCTURES A MAXIMUM OF 2" OF MORTAR ALONE SHALL BE USED FOR TOP SLAB AND/OR FRAME AND GRATE ADJUSTMENT. FOR ADJUSTMENTS, NOT TO EXCEED 12", CAST IN PLACE CONCRETE OR A PRECAST CONCRETE ADJUSTMENT ELEMENT(S) MANUFACTURED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATIONS SHALL BE USED. A MAXIMUM 2" OF MORTAR SHALL BE ALLOWED ON BOTH THE TOP AND BOTTOM OF THE PRECAST DEVICES. MORTAR SHALL BE MORTAR FOR CONCRETE MASONRY CONFORMING TO NYSDOT STANDARD SPECIFICATIONS.
5. THE USE OF PRECAST CONCRETE PAVERS AND MORTAR FOR FRAME AND GRATE ADJUSTMENT WILL NOT BE ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER. IF APPROVED, PAVERS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION, MAX. 6" HEIGHT.
6. PRECAST CATCH BASIN TO BE 4000 PSI MINIMUM.
7. FOR CATCH BASINS IN PAVED AREAS, BACKFILL EXCAVATION WITH COMPACTED SUBBASE MATERIAL. FOR CATCH BASINS IN LAWN AREAS, BACKFILL EXCAVATION WITH COMPACTED SELECT BACKFILL MATERIAL.

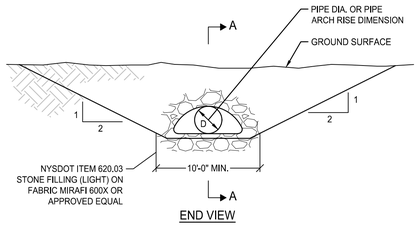
1 CATCH BASIN - TYPE A
NTS

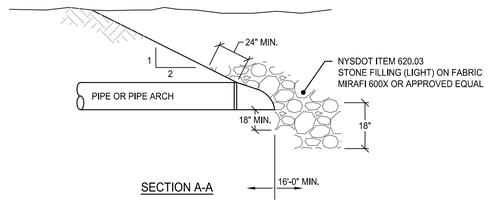


2 STORM SEWER TRENCH DETAIL
NTS

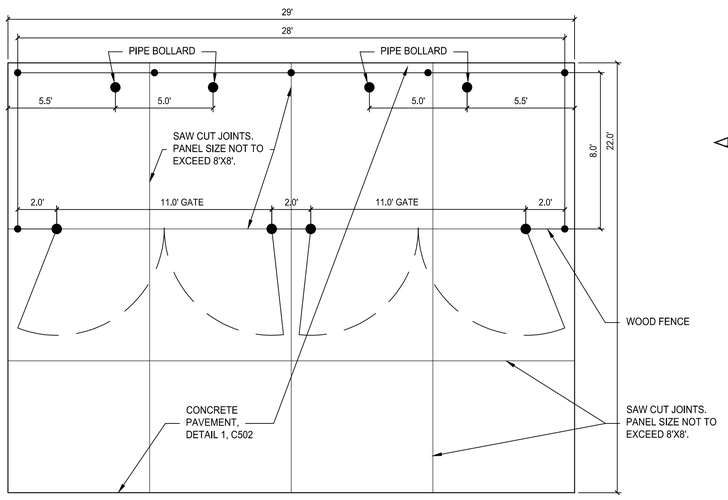


3 UNDERDRAIN TRENCH
NTS



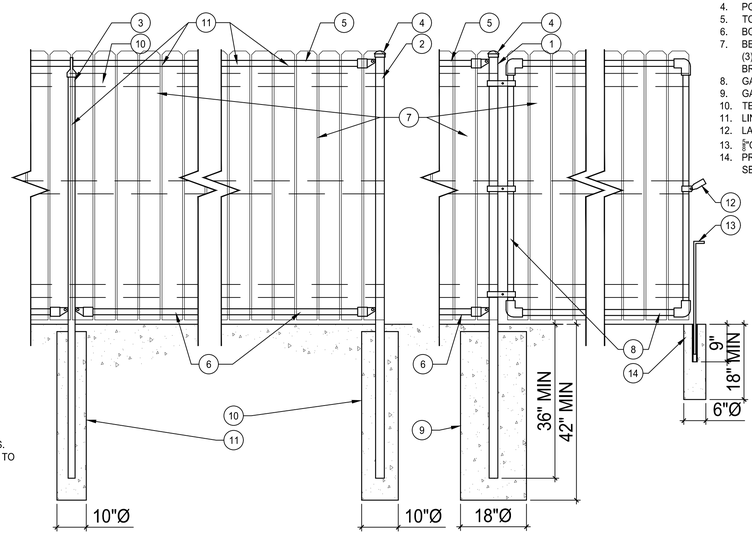


4 FLARED END SECTION WITH RIPRAP DETAIL
NTS



A DUMPSTER CORRAL LAYOUT
NTS

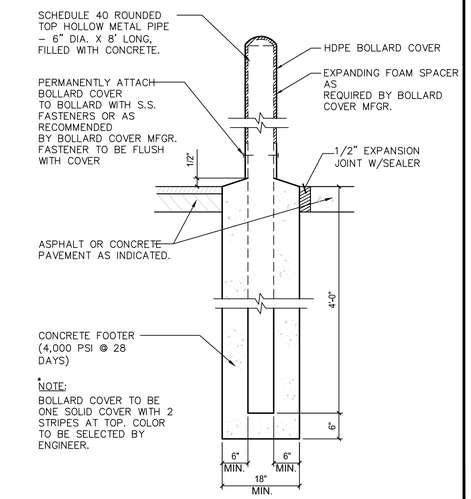
5 DUMPSTER CORRAL DETAIL
NTS



1. GATE POST, 6" Ø
2. TERMINAL/CORNER POST, 4"Ø
3. LINE POST, 4"Ø
4. POST CAP
5. TOP RAIL, 1-5/8"Ø
6. BOTTOM RAIL, 1-5/8"Ø
7. BEVELED STOCK 1" X 6" CEDAR FENCE PANELS, ATTACH TO (3) 2"X4" CEDAR HORIZONTAL BRACES/NAILERS WHICH ARE BRACKETED TO STEEL FRAMING
8. GATE
9. GATE POST FOOTING
10. TERMINAL POST FOOTING
11. LINE POST FOOTING
12. LATCH AND LOCKING HARDWARE
13. GATE KEEPER
14. PROVIDE KEEPER FOOTINGS FOR GATE IN CLOSED AND SECOND KEEPER FOOTING FOR GATE IN OPEN POSITION

NOTES:
a. FINISHED FENCE HEIGHT 6'-0"
b. FENCE FRAME MATERIAL GALVANIZED STEEL

B STEEL FRAME FENCE WITH CEDAR WOOD PANELS
NTS



6 BOLLARD WITH HDPE COVER
NTS

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
NOT FOR CONSTRUCTION

STATE OF NEW YORK
CHRISTOPHER MICHAEL CHASE
089617-01
LICENSED PROFESSIONAL ENGINEER
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SITE DETAILS

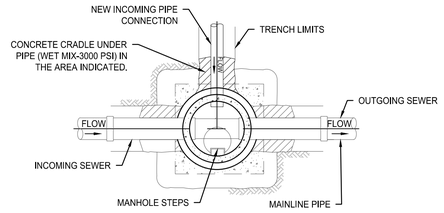
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	CC1	CHK.	CC1
PROJ. No.	261353		

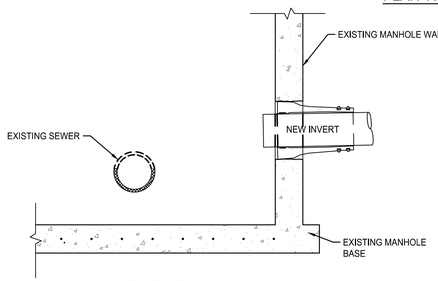
DWG. No.

C503

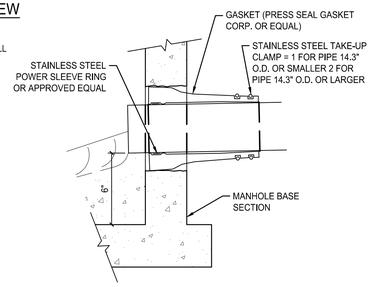
Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



PLAN VIEW



SIDE VIEW

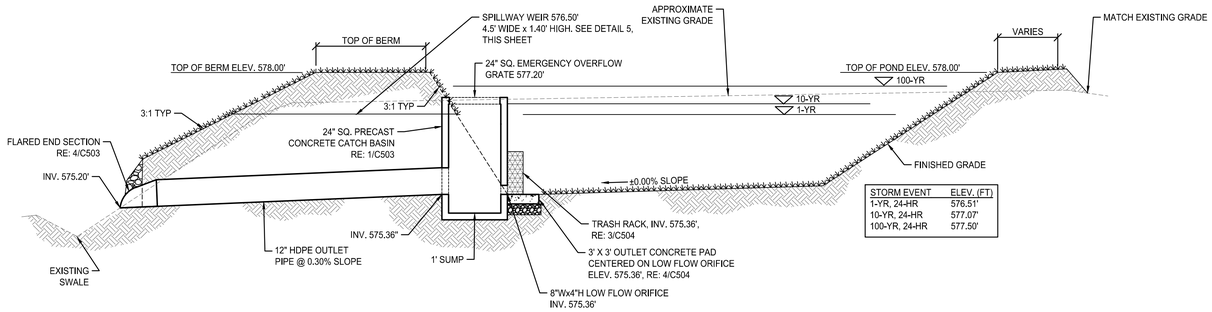


DETAIL OF CONNECTION

NOTES:

1. CORE DRILL ENTRANCE HOLE IN PRECAST MANHOLE BARREL, BASE AND/OR BENCH FOR REQUIRED PIPE CLEARANCE, PER MANUFACTURERS RECOMMENDATIONS.
2. DOES NOT APPLY TO HOUSE LATERALS.
3. WATERTIGHT PIPE TO MANHOLE BOOT SEAL REQUIRED FOR ALL CORE DRILLED ENTRANCE HOLES IN MANHOLE BARREL AS SHOWN BELOW.

1 CONNECT TO EXISTING STORM MANHOLE DETAIL
SCALE: N.T.S.

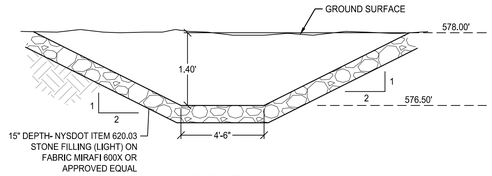


STORM EVENT	ELEV. (FT)
1-YR, 24-HR	576.51'
10-YR, 24-HR	577.07'
100-YR, 24-HR	577.50'

2 DRY DETENTION POND & OUTLET STRUCTURE CROSS SECTION
SCALE: N.T.S.

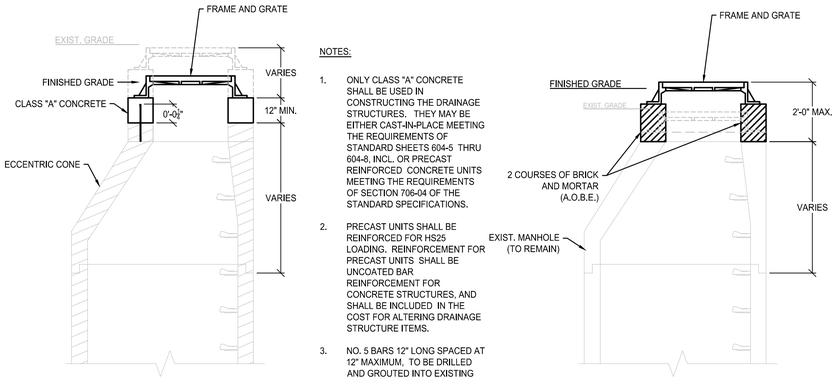
NOTES FOR TRASH RACK:
1. TRASH RACK TO BE CENTERED OVER OPENING.
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.

3 LOW FLOW ORIFICE TRASH RACK DETAIL
SCALE: N.T.S.



END VIEW

5 RIPRAP SPILLWAY SECTION
SCALE: N.T.S.



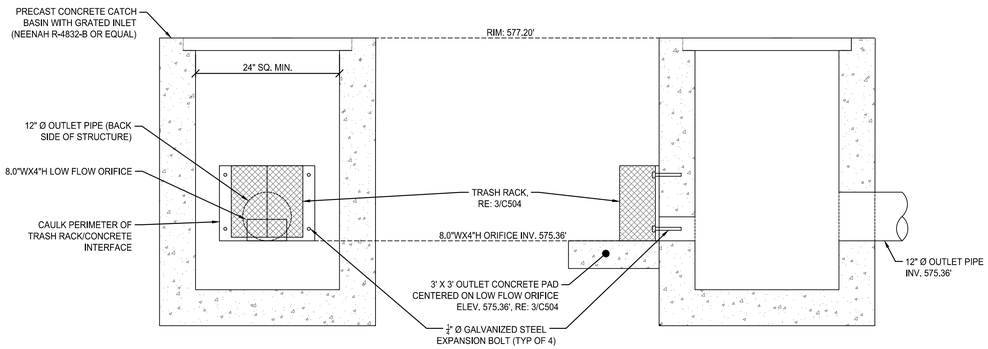
LOWER MANHOLE FRAME AND COVER

NOTES:

1. ONLY CLASS "A" CONCRETE SHALL BE USED IN CONSTRUCTING THE DRAINAGE STRUCTURES. THEY MAY BE EITHER CAST-IN-PLACE MEETING THE REQUIREMENTS OF STANDARD SHEETS 604-5 THRU 604-8, INCL. OR PRECAST REINFORCED CONCRETE UNITS MEETING THE REQUIREMENTS OF SECTION 706-04 OF THE STANDARD SPECIFICATIONS.
2. PRECAST UNITS SHALL BE REINFORCED FOR HS25 LOADING. REINFORCEMENT FOR PRECAST UNITS SHALL BE UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES, AND SHALL BE INCLUDED IN THE COST FOR ALTERING DRAINAGE STRUCTURE ITEMS.
3. NO. 5 BARS 12" LONG SPACED AT 12" MAXIMUM, TO BE DRILLED AND GROUTED INTO EXISTING WALLS WITH 150mm EMBEDMENT. COST TO BE INCLUDED IN RESPECTIVE DROP INLET ALTERATION ITEM.

RAISE MANHOLE FRAME AND COVER

5 MANHOLE ADJUSTMENT DETAIL
SCALE: N.T.S.



FRONT VIEW SIDE VIEW

4 DRY POND OUTLET STRUCTURE DETAIL
SCALE: N.T.S.

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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08/16/2024
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CHRISTOPHER MICHAEL CHADY
LICENSED PROFESSIONAL ENGINEER
089617-01
08/15/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

SITE DETAILS

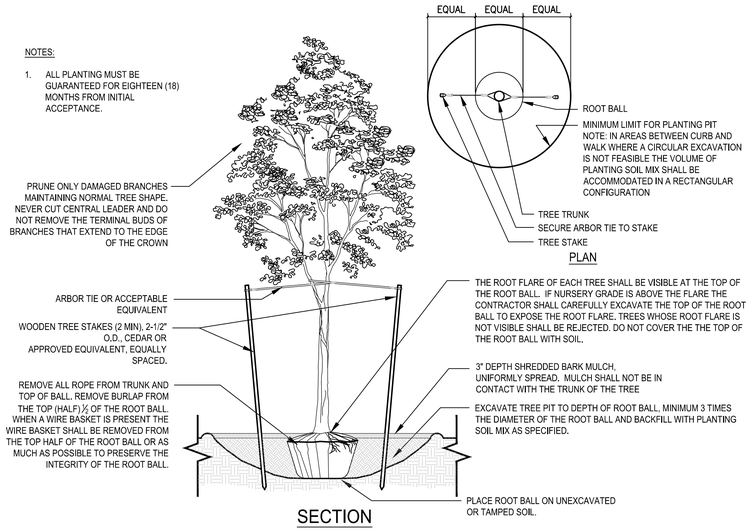
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GENERIC SCALE BAR
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DATE	08.16.24
SCALE	AS NOTED
DWN.	CC1
CHK.	CC1
PROJ. No.	261353
DWG. No.	C504

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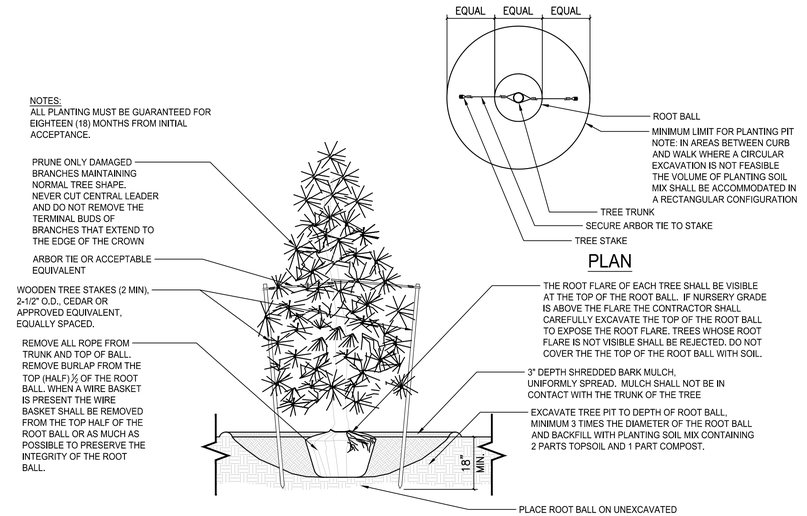
NOTES:

1. ALL PLANTING MUST BE GUARANTEED FOR EIGHTEEN (18) MONTHS FROM INITIAL ACCEPTANCE.

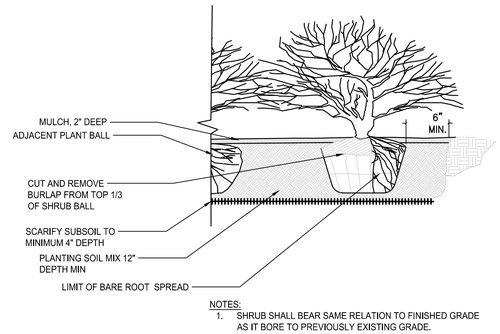


1 TREE PLANTING
NTS

NOTES:
ALL PLANTING MUST BE GUARANTEED FOR EIGHTEEN (18) MONTHS FROM INITIAL ACCEPTANCE.



2 EVERGREEN PLANTING
NTS

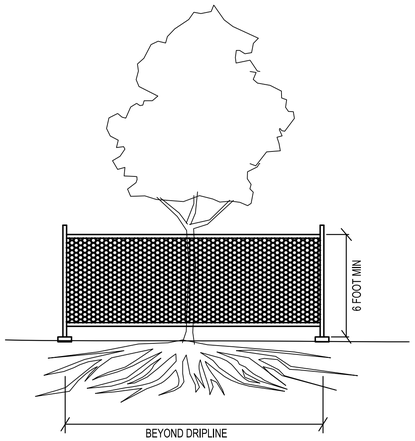


NOTES:
1. SHRUB SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE.
2. PRUNE ONLY DAMAGED BRANCHES MAINTAINING NORMAL SHRUB FORM

3 SHRUB PLANTING
NTS



PLAN VIEW OF ROOTS



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.

TOWN OF AMHERST TREE PROTECTION DETAIL
NOT TO SCALE

4 TEMPORARY TREE PROTECTION FENCING - SECTION
NTS

TOWN OF AMHERST SITE PLAN APPROVAL SIGNATURE

CHAIRPERSON

DATE

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

PLANTING DETAILS

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	SRP	CHK.	DLK
PROJ. No.	261353		

DWG. No.

C505

Attachment: SP-1990-083 drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)

SYMBOLS & ABBREVIATIONS SCHEDULE

POWER

TYPICAL WALL

ELECTRICAL PANELBOARD, SURFACE MOUNTED. UNLESS OTHERWISE NOTED, INSTALL AT 72" A.F.F. TO THE TOP OF THE BOX.

POWER OR COMMUNICATIONS HANDHOLE. REFER TO DETAIL No.2 ON THIS DRAWING.

LIGHTING

(REFER TO LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION, LUMINAIRE SYMBOLS ARE SHOWN TO INDICATE GENERAL SHAPE & SIZE, ACTUAL SYMBOLS MY VARY)

TYPICAL SITE LUMINAIRE (EXACT SYMBOL MAY VARY). SHALL INCLUDE LUMINAIRE HEAD, POLE, & CONCRETE BASE. REFER TO LUMINAIRE SCHEDULE & SITE LIGHTING PLAN FOR ADDITIONAL INFORMATION.

[X] CONSTRUCTION NOTES:

1. PROVIDE CIRCUIT BREAKER AS INDICATED IN THIS AVAILABLE SPACE. NEW CIRCUIT BREAKER MATCH EXISTING PANEL MAKE, MODEL, STYLE AND AIC RATING.

EXISTING PANELBOARD SCHEDULE

PANELBOARD NAME: **HPP1** — VOLTS: **480** V — 3Ø 4-WIRE — BUS CAPACITY: **300** A — AIC: **42kA** — MCB: **300** A — MTG: **SURFACE** — MLO: — ENCL.: **NEMA 1** — STORAGE LOCATION: **SHED**

	No.	BKR	DESCRIPTION	TYPE	LOAD	L1	L2	L3	LOAD	TYPE	DESCRIPTION	BKR	No.	
	1			LTG	3575	7150			3575	LTG			2	
	3	30A/3P	MUSCO POLE A1	LTG	3575		7150		3575	LTG	MUSCO POLE A1	30A/3P	4	
	5			LTG	3575			7150	3575	LTG			6	
	7			LTG	7649	15131			7482	LTG			8	
	9	40A/3P	MUSCO POLE B1	LTG	7649		15131		7482	LTG	MUSCO POLE B2	40A/3P	10	
	11			LTG	7649			15131	7482	LTG			12	
	13			LTG	7482	14964			7482	LTG			14	
	15	40A/3P	MUSCO POLE C1	LTG	7482		14964		7482	LTG	MUSCO POLE C2	40A/3P	16	
	17			LTG	7482			14964	7482	LTG			18	
1	19	20A/1P	SITE LIGHTING	LGT	441	617			176	LTG	SITE LIGHTING	20A/1P	20	1
1	21	20A/1P	SITE LIGHTING	LTG	504		756		252	LTG	SITE LIGHTING	20A/1P	22	1
1	23	20A/1P	LIGHTING RELAY PANEL	PWR	100			478	378	LTG	SITE LIGHTING	20A/1P	24	1
1	25	20A/1P	SPARE			1080			1080	PWR			26	
1	27	20A/1P	SPARE				720		720	PWR	PANELBOARD LPP1 VIA XFMR	50A/3P	28	
1	29	20A/1P	SPARE					1140	1140	PWR			30	

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	SHIELDING	DRIVER	LIGHT SOURCE	INPUT WATTS	BASIS OF DESIGN
SL2	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE II WITH SPILL CONTROL (SL2)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 12 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 5,979 LUMENS, 4000K, MINIMUM CRI 70.	44	McGRAW-EDISON - GPC SERIES OR EQUAL
SL2T	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE II WITH SPILL CONTROL (SL2)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,422 LUMENS, 4000K, MINIMUM CRI 70.	63	McGRAW-EDISON - GALN SERIES OR EQUAL
SL3	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE III WITH SPILL CONTROL (SL3)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,342 LUMENS, 4000K, MINIMUM CRI 70.	63	McGRAW-EDISON - GALN SERIES OR EQUAL
SL4	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE IV FORWARD THROW (T4FT)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,418 LUMENS, 4000K, MINIMUM CRI 70.	63	McGRAW-EDISON - GALN SERIES OR EQUAL
SL42	DOUBLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE IV FORWARD THROW (T4FT)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,418 LUMENS, 4000K, MINIMUM CRI 70 FOR EACH HEAD.	126	McGRAW-EDISON - GALN SERIES OR EQUAL
SL4W	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE IV WIDE (T4W)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,451 LUMENS, 4000K, MINIMUM CRI 70.	63	McGRAW-EDISON - GALN SERIES OR EQUAL
SL5	SINGLE HEAD,POLE MOUNTED LUMINAIRE WITH FOLLOWING MINIMUM SPECIFICATIONS: HOUSING SHALL BE EXTRUDED ALUMINUM WITH THERMALLY ISOLATED DRIVER AND OPTICAL CHAMBERS. INTEGRAL DRIVER AND HEAT SINK. EXTRUDED ARM MATCHING THE FIXTURE. OPTICS SHALL BE **TYPE V SQUARE WIDE (SLWO)**. UL LISTED FOR WET LOCATION (IP66 MINIMUM) THIS LED FIXTURE SHALL BE DESIGNED & TESTED IN ACCORDANCE WITH IESNA LM-79 & 80. ENTIRE ASSEMBLY SHALL BE FINISHED BLACK. PROVIDE COMPLETE WITH CONCRETE BASE. PROVIDE TAMPER RESISTANT HAND HOLE COVER FOR POLE. POLE SHALL BE 24.5 FEET HIGH & COMPATIBLE WITH LIGHT FIXTURE. FINISH TO MATCH THE LUMINAIRE.	NA	(1) INTEGRAL ELECTRONIC LED DRIVER (800mA), 120-277V	(1) ARRAY OF (2) LED LIGHT BARS PRODUCING NOT LESS THAN 11,976 LUMENS, 4000K, MINIMUM CRI 70.	63	McGRAW-EDISON - GALN SERIES OR EQUAL

GENERAL LUMINAIRE SCHEDULE NOTES:

A. UNLESS OTHERWISE NOTED, BASIS OF DESIGN MANUFACTURER'S NAMES AND CATALOG NUMBERS ARE USED FOR QUALITY AND PERFORMANCE ONLY. WHERE INDICATED "OR EQUAL" LUMINAIRE AND THEIR ASSOCIATED DEVICES MANUFACTURED BY OTHERS SHALL BE EQUALY ACCEPTABLE PROVIDED THEY MEET OR EXCEED IN PERFORMACE AND QUALITY OF THE BASIS OF DESIGN LUMINAIRE.

B. CONTRACTOR SHALL VERIFY VOLTAGE SUPPLY TO EACH LUMINAIRE PRIOR TO ORDERING THE APPROVED FIXTURE.

C. ALL LUMINIARES SHALL BE FURNISHED COMPLETE WITH SPECIFIED LAMPS IF APPLICABLE.

D. LUMINAIRES SHALL BE INDEPENDENTLY SUPPORTED IN ACCORDANCE WITH ALL APPLICABLE CODES & SPECIFICATIONS

E. CONTRACTOR SHALL VERIFY CEILING TYPE FOR EACH LUMINAIRE LOCATION & ORDER ACCORDINGLY.

F. ALL LED LUMINAIRES SHALL BE DESIGNED & MANUFACTURED IN ACCORDANCE WITH IESNA LM-79 & LM-80 STANDARDS.

G. CONTRACTOR SHALL VERIFY ALL MOUTING REQUIREMETNS OF EACH EXIT SIGN PRIOR TO ORDERING, AS WELL AS DIRECTIONAL REQUIREMENTS.

H. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING LUMINAIRE AND INSTALLATION REQUIREMENTS. PROVIDE ALL LSITED OPTIONS AND ACCESSORIES.

GENERAL NOTES: (FOR ALL DRAWINGS)

A. THE DRAWINGS ARE DIAGRAMMATIC & INDICATE GENERALLY THE LOCATIONS OF THE MATERIAL & EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE.

B. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION & OPERATION, SHALL BE INCLUDED IN THE CONTRACTOR'S BID, THE SAME AS IF HEREIN SPECIFIED OR SHOWN.

C. ALL MATERIAL & INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE NATIONAL ELECTRIC CODE, LATEST EDITION OF LOCAL CODES, & ORDINANCES.

D. INTERIOR RECEPTACLE & LIGHT FIXTURE BRANCH CIRCUITS SHALL BE IN EMT CONDUIT. A MAXIMUM OF (3) CIRCUITS CAN BE GROUPED TOGETHER IN A HOMERUN CONDUIT. EACH CIRCUIT SHALL HAVE SEPARATE NEUTRAL, GROUPING OF NEUTRALS SHALL NOT BE ACCEPTABLE. EACH CIRCUIT SHALL ALSO HAVE A GROUND WIRE SIZED PER NEC. USING CONDUIT, OR MC CABLE AS GROUND PATH SHALL NOT BE ACCEPTABLE. CABLE MUST BE SUPPORTED PER NEC, GROUPING OF GROUND WIRES [(1) GROUND PER (3) CIRCUITS] IS ACCEPTABLE. MAXIMUM 6' LENGTH OF MC CABLE ALLOWED FOR A WHIP CONNECTION TO LUMINAIRE ONLY. EXTERIOR (OUTDOOR) RECEPTACLE & LIGHT FIXTURE BRANCH CIRCUITS SHALL BE IN RMC CONDUIT OR AS PERMITTED IN THE SPECIFICATIONS.

E. CONTRACTOR SHALL PROVIDE INFORMATION LABELS ON ALL RECEPTACLES, PANELBOARDS, JUNCTION BOXES, WALL SWITCHES, & DISCONNECT SWITCHES. LABELS SHALL BE PHENALIC TYPE WITH BLACK BACKGROUND & WHITE ENGRAVED LETTERING. LABEL SHALL INDICATED CIRCUIT/FEEDER SOURCE & EQUIPMENT ID NAME.

ABBREVIATIONS:

WP	INDICATES WEATHERPROOF DEVICE OR EQUIPMENT
WG	INDICATES DEVICE SHALL HAVE WIRE GUARD PROTECTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
(ETR)	EXISTING EQUIPMENT SHALL REMAIN IN PLACE
OC	OVER COUNTER (INSTALL 12" ABOVE COUNTER HEIGHT)
UC	UNDER COUNTER (INSTALL 18" ABOVE FINISHED FLOOR)
SLC	SIGNALING LINE CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
HP	HORSEPOWER
kW	KILOWATT
kVA	KILOVOLT-AMPERES
LTG	LIGHTING
CPWR	CONTINUOUS LOAD (POWER)
PWR	POWER
EH	ELECTRIC HEAT
KIT	KITCHEN EQUIPMENT
LMTR	LARGEST MOTOR
EQP	SHOP EQUIPMENT
NEC	NATIONAL ELECTRICAL CODE
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
AWG	AMERICAN WIRE GAGE

BRANCH CIRCUIT WIRING NOTES:

A. UNLESS OTHERWISE NOTED, MINIMUM HOMERUN (HOMERUN SHALL BE CONSIDERED TOTAL LENGTH FROM SOURCE TO LAST DEVICE ON THE CIRCUIT) CONDUCTORS FOR 20A/1P BRANCH CIRCUITS INCLUDING LIGHTING SHALL BE AS FOLLOWS:
- 1-100FT - #12 AWG
- 101-150FT - #10 AWG
- 151-250FT - #8 AWG
- 251-400FT - #6 AWG.
- 401 & LONGER - #4 AWG.

REDUCE CONDUCTORS SIZE TO A MAXIMUM CONDUCTOR SIZE THAT THE LOAD TERMINALS CAN ACCOMMODATE, REDUCED SIZE NOT LONGER THAN ONE FOOT. INCREASE RACEWAY SIZE AS NEEDED PER NEC, FOR THE LARGER SIZES OF CONDUCTORS.

GENERAL SYMBOLS NOTE:

THIS SYMBOLS & ABBREVIATIONS SCHEDULE IS FOR THE ELECTRICAL CONTRACTOR REFERENCE ONLY. NOT ALL SYMBOLS OR ABBREVIATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS SCHEDULE DOES NOT IMPLY INCLUSION AND / OR EXCLUSION OF ANY PARTICULAR ITEM FROM THE PROJECT.

TOWN OF AMHERST, NY

LOU GEHRIG SPORTS COMPLEX IMPROVEMENTS

550 SMITH ROAD/50 DANN ROAD,
EAST AMHERST, NY 14051

TOA PROJECT No.: 2021.035A

MAJOR SITE PLAN APPROVAL

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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

FOR PERMITTING PURPOSES
08/16/2024
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STATE OF NEW YORK · JESSE F. WENDEL · 082500 · LICENSED PROFESSIONAL ENGINEER
08/16/2024

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NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

ELECTRICAL SYMBOLS, ABBREVIATIONS, & NOTES

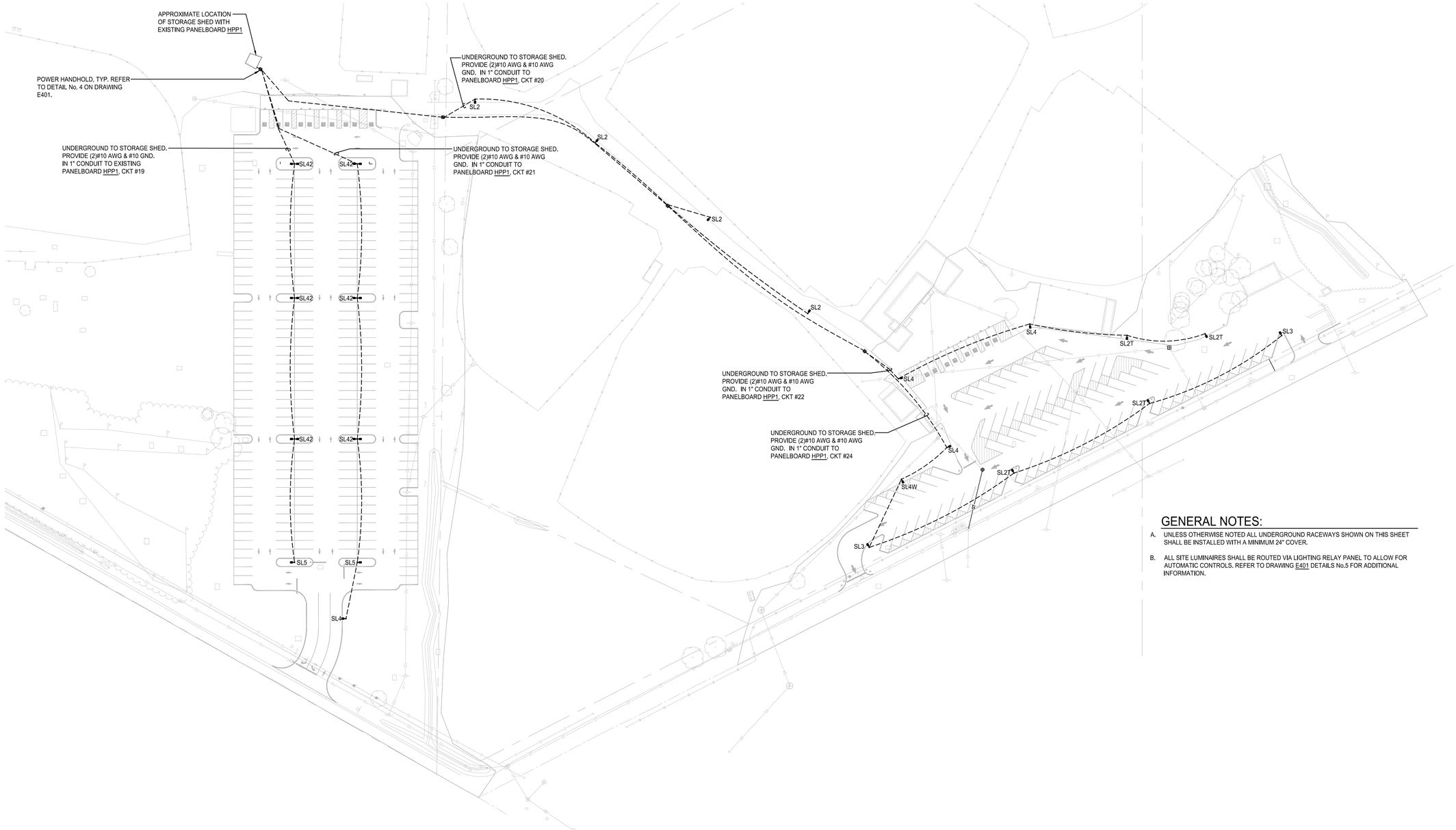
0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	MAP	CHK.	
PROJ. No.	261353		

DWG. No.

E001

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



1 ELECTRICAL SITE PLAN
SCALE: 1" = 50' - 0"

GENERAL NOTES:

A. UNLESS OTHERWISE NOTED ALL UNDERGROUND RACEWAYS SHOWN ON THIS SHEET SHALL BE INSTALLED WITH A MINIMUM 24" COVER.

B. ALL SITE LUMINAIRES SHALL BE ROUTED VIA LIGHTING RELAY PANEL TO ALLOW FOR AUTOMATIC CONTROLS. REFER TO DRAWING E401 DETAILS No.5 FOR ADDITIONAL INFORMATION.

TOWN OF AMHERST, NY

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A	MAJOR SITE PLAN SUBMISSION	06/28/24

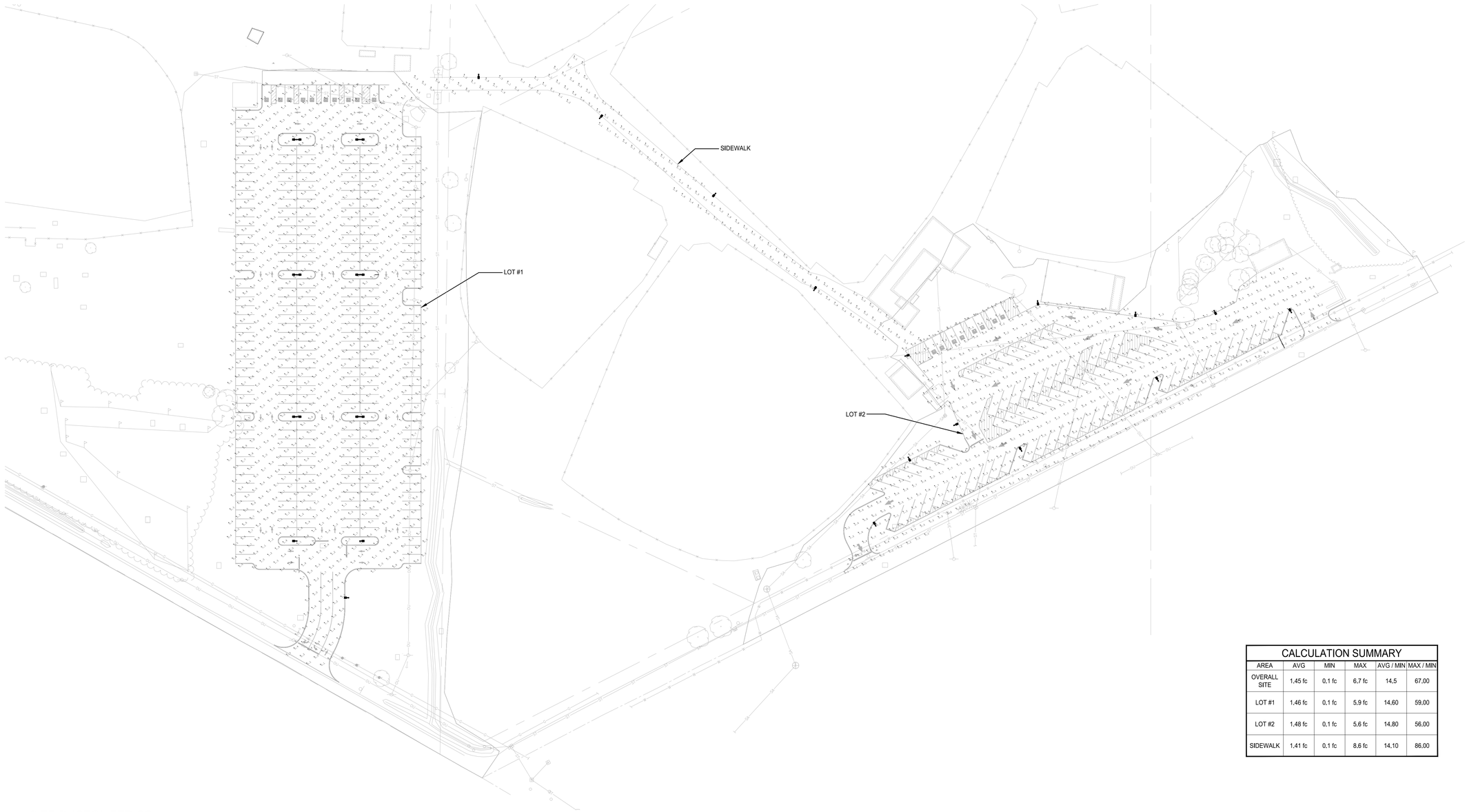
DWG. TITLE

ELECTRICAL SITE PLAN

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24
SCALE	AS NOTED
DWN.	MAP
CHK.	JFW
PROJ. No.	261353
DWG. No.	E101

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



CALCULATION SUMMARY					
AREA	AVG	MIN	MAX	AVG / MIN	MAX / MIN
OVERALL SITE	1.45 fc	0.1 fc	6.7 fc	14.5	67.00
LOT #1	1.46 fc	0.1 fc	5.9 fc	14.60	59.00
LOT #2	1.48 fc	0.1 fc	5.6 fc	14.80	56.00
SIDEWALK	1.41 fc	0.1 fc	8.6 fc	14.10	86.00

1 SITE PHOTOMETRICS
SCALE: 1" = 50' - 0"

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DWG. TITLE

SITE PHOTOMETRICS

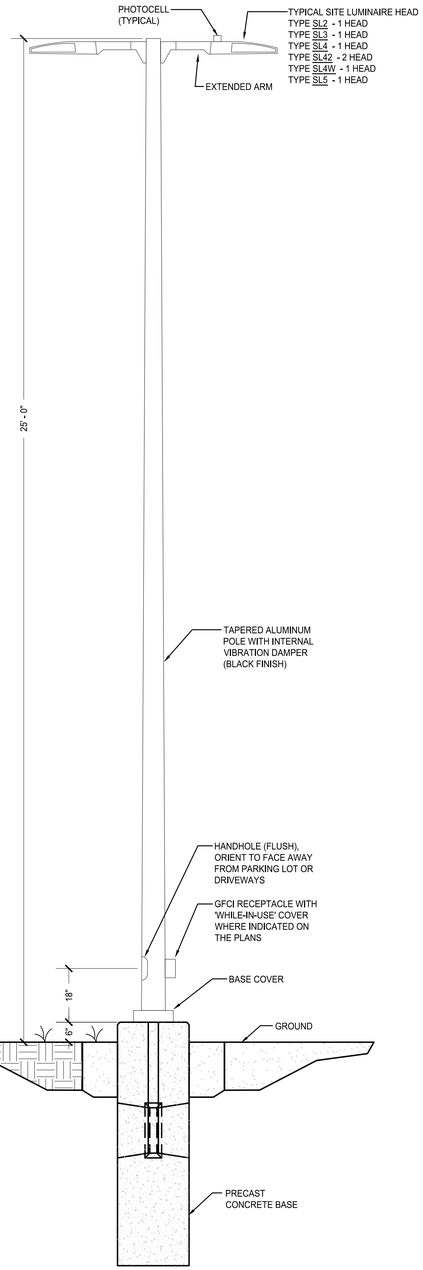
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DATE	08.16.24		
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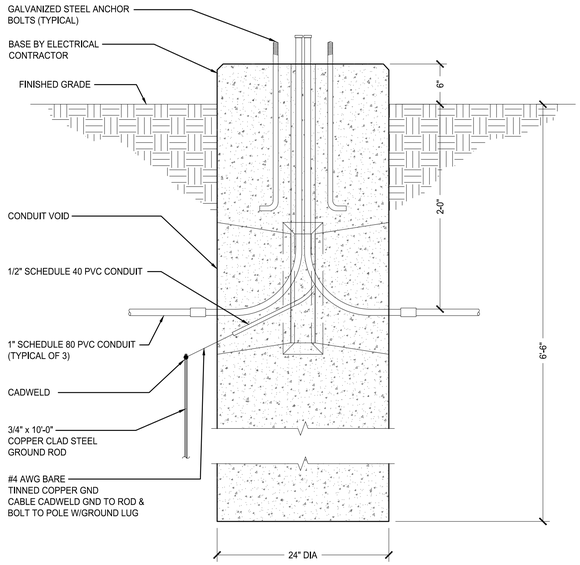
DWG. No.

E301

Attachment: SP-1990-083_drawings_091924 (29174 : SP-1990-083, 50 Dann Rd)



1 SITE POLE ELEVATION DETAIL
SCALE: NONE



NOTES:

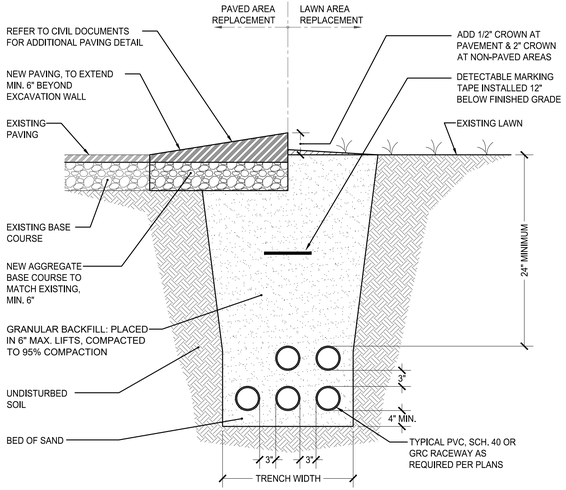
A. CONTRACTOR SHALL COMPACT ALL BACKFILL.

B. THE BASE SHALL BE PRECAST CONCRETE, 24" ROUND, 4000 PSI @28 DAYS. BASES SHALL BE DESIGNED TO RESIST/TRANSFER THE FOLLOWING SHEAR & MOMENT - V_{MAX}=2.5k & M_{MAX}=7.5-FT-k AS MANUFACTURED BY KISTNER PRECAST OR EQUAL.

C. EXTEND ALL CONDUITS 6" INTO POLE CAVITY.

D. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH SELECTED LUMINAIRE MANUFACTURER & ADJUST (INCREASE) ANY DIMENSIONS AS REQUIRED.

2 SITE LIGHTING POLE BASE DETAIL
SCALE: NONE



3 DIRECT BURIED
ELECTRICAL TRENCH DETAIL
SCALE: NONE

SPECIFICATIONS:

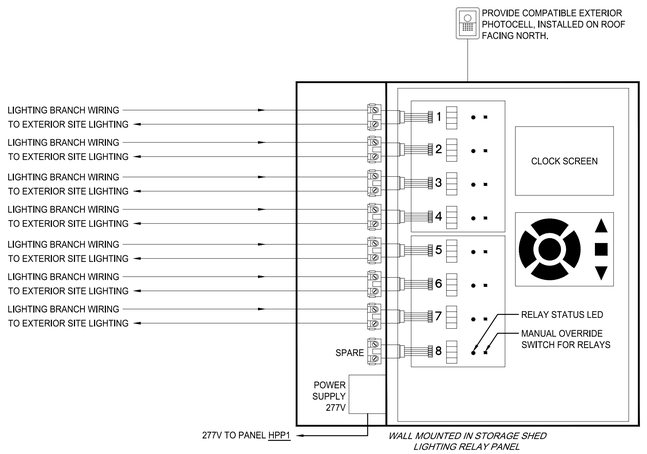
PROVIDE A SINGLE RELAY PANEL WITH UP TO 24 RELAYS OR AS REQUIRED. EACH RELAY TO BE INDIVIDUALLY SCHEDULED THROUGH AN EASY TO USE INTEGRAL CLOCK WITH A BACKLIT 8-LINE LCD DISPLAY. RELAYS ARE TO BE SPST 20 AMP RATED, MECHANICALLY HELD CONTACTORS CAPABLE OF SWITCHING EITHER 120 OR 277VAC LOADS. ADJACENT TO EACH RELAY SHOULD BE A LED TO ANNUNCIATE STATUS & A PUSHBUTTON TO TOGGLE THE RELAY'S STATE. PANEL SHALL HAVE A MULTITAP TRANSFORMER, DESIGNED & MANUFACTURED FOR 120V/277V OPERATION.

LIGHTING RELAY PANEL ENCLOSURE SHALL BE NEMA 1, RATED FOR ENVIRONMENTS FROM 32 - 139°F, 5 - 95% RH NON-CONDENSING. PANEL SHALL BE PROVIDED WITH A SPLIT COVER HINGED IN THE CENTER SUCH THAT THE HIGH VOLTAGE SIDE MUST BE UNSCREWED TO ACCESS THE RELAYS, BUT THE LOW VOLTAGE SIDE CAN BE OPENED VIA A LOCKING LATCH.

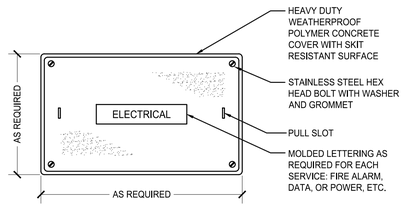
ALL PROGRAMMING TO BE ENTERED VIA A SIMPLE KEYPAD. EACH RELAY CAN BE PROGRAMMED INDEPENDENTLY, OR RELAYS CAN BE GROUPED TOGETHER IN FIRMWARE TO FOLLOW THE SAME CHANNEL SCHEDULE. ON A DAILY 7-DAY REPEATING BASIS, RELAYS CAN BE ASSIGNED TO FOLLOW ANY OF THE FOLLOWING SCENARIOS:

(1) MANUAL ON / SCHED OFF
(2) SCHEDULED ON/OFF
(3) MANUAL ON / AS SWITCH OFF (FOR USE WITH AS-100 SWITCHES)
(4) PHOTOCELL ON/OFF
(5) PHOTO & SCHED ON/OFF
(6) ASTRONOMIC ON/OFF
(7) ASTRO AND SCHED ON/OFF

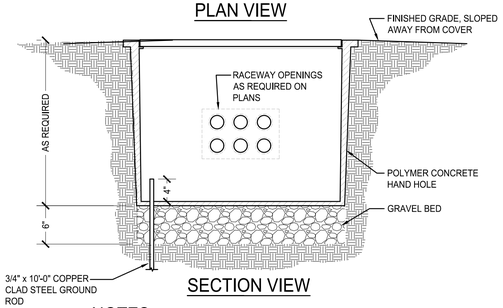
THE LCD SCREEN SHOULD NORMALLY SHOW THE CURRENT TIME & DATE, AS WELL AS SUNRISE & SUNSET TIMES FOR THAT DAY. RELAY CHANNELS CAN ALSO BE MONITORED FROM THE DISPLAY TO SEE THEIR STATUS - EITHER ON, OFF, OR MIXED. ADDITIONALLY THE RELAY GROUPS CAN BE OVERRIDEN FROM THE SCREEN. CONTEXT SENSITIVE HELP SHALL BE AVAILABLE FOR EACH SCREEN.



5 LIGHTING RELAY PANEL
SCALE: NONE



PLAN VIEW



SECTION VIEW

NOTES:

A. ALL HANDHOLES SHALL BE PROVIDED WITH A CLOSED BOTTOM, UNLESS OTHERWISE INDICATED ON PLANS OR SPECIFICATIONS.

4 CLOSED BOTTOM HANDHOLE DETAIL
SCALE: NONE

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08/16/2024

NOTE:
THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF WENDEL WD ARCHITECTURE, ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE, P.C. AND IS NOT TO BE USED IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF WENDEL. UNAUTHORIZED ALTERATION OR ADDITION TO ANY SURVEY DRAWING, DESIGN, SPECIFICATION, PLAN OR REPORT IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

NO.	REVISIONS	DATE
B	REVISIONS PER AGENCY COMMENTS	08/16/24
A	MAJOR SITE PLAN SUBMISSION	06/28/24

DWG. TITLE

ELECTRICAL DETAILS

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING.
IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	08.16.24		
SCALE	AS NOTED		
DWN.	MAP	CHK.	JFW
PROJ. No.	261353		

DWG. No.

E401

Amherst
Town of Amherst Planning Department
Erie County, New York

Brian J. Kul
Superviso

Daniel C. Howar
Planning Dire

Daniel J. Ulatowsk
Assistant Planning

SEP 27 2024 AME

Attachment: SP-1990-08J signed neg dec 091924 (29174 : SP-1990-08J, 50 Dann Rd)

SEQR
Negative Declaration

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Planning Board	**Project:**	SP-1990-08_J
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date:**	September 19, 2024

This notice is issued pursuant to Part 617 and Local Law #3-82, as amended, of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The Lead Agency has determined that the proposed action described below will not have a significant adverse effect on the environment.

Title of Action: Site Plan Review

SEQR Status: Type 1 action

Description of Action: Expansion to and reconstruction parking area for two (2) existing parking lots at Lou Gehrig Amherst Park to provide for 354 vehicle parking spaces. One parking lot is accessed from Dann Road and the other from Smith Road. Additional work includes installation of storm drainage, installation of paved parking, curbing, pathway lights, and landscaping throughout. Work will also include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 50 Dann Road and 550 Smith Road, Amherst, Erie County

Petitioner: Town of Amherst

SEP 27 2024 AMB

REASONS SUPPORTING THIS DETERMINATION

Based on information submitted by the applicant including a Full Environmental Assessment Form (EAF) - Part I, (as amended) and a complete site plan application, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that this action will not have a significant impact on the environment, as follows:

1. The project is not expected to cause a substantial adverse change in existing air quality, ground or surface water quality or quantity, or noise levels; a substantial increase in solid waste production; or a substantial increase in the potential for erosion, flooding, leaching or drainage problems. The Engineering Department Engineering Services Division on September 13, 2024 reviewed the Grading, Drainage and Utility Plans submitted on August 20, 2024 Engineer's Report submitted on July 1, 2024 and Erosion Control Plan submitted on August 20, 2024. The Stormwater Pollution Prevention Plan (SWPPP) submitted on July 1, 2024 was also reviewed. Based on its review of these documents, the Department has determined that the project has or will have met all applicable requirements and has no objection to its approval.

2. The project will not result in the removal or destruction of large quantities of vegetation or fauna; or in significant adverse impacts to fish or wildlife species, habitats or other natural resources. A Wetland and Waterbodies Report along with a Proposed Article 24 Wetlands Mitigation Plan prepared by Earth Dimensions, Inc. and received on July 1, 2024. The NYSDEC reviewed these documents on July 8, 2024 along with the proposed plans and application received on July 1, 2024 and had no objection to approval of the project.
   The Planning Department reviewed a Landscape Plan submitted on August 20, 2024 and determined that it meets or exceeds Zoning Ordinance requirements for greenspace. The Landscape Plan has or will have met all Zoning Ordinance and Town requirements for landscaping.

3. The project is not expected to create any substantive conflict with the Town Comprehensive Plan. The Planning Department in their review of August 23, 2024, the Zoning Enforcement Officer in his/her review of August 23, 2024 have reviewed the application documents and Building Department in their review of July 18, 2024 has reviewed the application documents and determined that the subject project has or will have met all International Building Code – 2018 and Zoning Ordinance regulations.

4. The project is not within an area identified by the State as potentially containing significant cultural or archeological resources, nor will it impair the character or quality of important historical resources.

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The project is located in the Recreation Conservation District (RC) zoning district; neighboring uses are multifamily residential, single family residential and parkland and zoned RC, Multifamily Residential District Five (MFR-5) and Multifamily Residential District Six (MFR-6) ; therefore, the project is consistent with surrounding land use.

6. The proposed subject development will include 354 vehicle parking spaces that will access Smith and Dann Roads which will not cause a major change in the use of either the quantity or type of energy.

Attachment: SP-1990-08J signed neg dec 091924 (29174 : SP-1990-08J, 50 Dann Rd)

SEP 27 2024 AMB

7. The project will not create any hazard to human health. The Fire Chief's Association on July 22, 2024 has reviewed the project and has no objection to the approval of the site plan, as all requirements of this agency has or will have been met.
8. The project will not cause a substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses. 354 vehicle parking spaces will be consistent with the scale of surrounding land uses.
9. The function of the proposed 354 vehicle parking spaces will not significantly increase the number of people using the site over its previous level of use.
10. Review by the Town Traffic/Safety Board dated July 26, 2024 indicates that significant negative traffic impacts are not expected to result from the proposed project.
11. A coordinated review of the project has been undertaken by Town Departments, in addition to those mentioned above, Assessor on July 9, 2024, Plumbing Division on July 8, 2024, Stormwater Management Officer on September 18, 2024 and Right-of-Way Agent on September 6, 2024 along with outside agencies including the Erie County Department of Environment and Planning on July 5, 2024 and New York State Department of Environmental Conservation on July 8, 2024. These reviews have not identified any significant environmental issues and indicate that the proposal will not have a significant damaging impact on the environment.
12. Issues not specifically mentioned above and/or those not specifically reviewed were not raised by Town departments, outside agencies or the public and are not determined to cause significant negative environmental impacts.

Planning Board Approval
Moved by: Giuliani; Seconded by: Penberthy; Ayes 5; Noes 0; Absent 2 (Davis, Raffaele)

Scott Marshall, Principal Planner — 9/23/2024 Date

Michael J. Chmiel, Planning Board Chair — 9/26/24 Date

SM/ac
X:\Current_Planning\Files\Site Plans\1990\SP-1990-08_J_(50_Dann_Rd)_2024\SP-1990-08_J_neg dec_091924.docx

cc: Commissioner of Building
Fire Chiefs'
Traffic/Safety
NYSDEC
Town Engineer
Highway
ECDEP
Daniel Rizzo, Building Maintenance
Christopher Chapman, Wendel Companies, 375 Essjay Road, Suite 200, Amherst, NY 14221
Brian J. Armstrong, Director of Engineering Services
Jessica Boudreau, Engineering

Attachment: SP-1990-08J signed neg dec 091924 (29174 : SP-1990-08J, 50 Dann Rd)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-1990-08_J

PETITIONER

Town of Amherst
5583 Main Street
Williamsville, NY 14221

PROPERTY LOCATION

50 Dann Road and 550 Smith Road

SEP 27 2024 AM8

WHEREAS, the Town of Amherst Planning Board on Thursday, September 19, 2024 held a public hearing on a Site Plan for the reconstruction of 2 existing parking lots to provide for 354 vehicle parking spaces at Amherst Lou Gehrig Park, and

WHEREAS, the Planning Board reviewed the plans and specifications for the proposed project, and

WHEREAS, the Site Plan was referred to the Town's various review agencies, and

WHEREAS, in accordance with Section 8-7-9 of the Zoning Ordinance, the Planning Board finds that:

A. The proposed site plan is consistent with the development plan if one is required.

B. The proposed site plan is consistent with the purpose and specific requirements of the Zoning Ordinance and generally consistent with the policies of the Comprehensive Plan.

C. Adequate services and utilities will be available prior to occupancy.

D. The site plan is consistent with all other applicable laws.

E. Pursuant to Local Law #3-82, as amended, the Planning Board has determined that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act is required since hydric / potentially hydric soils have been identified on the parcel and will be handled as a joint permit by the NYSDEC.

NOW THEREFORE BE IT RESOLVED that in accordance with 6 NYCRR, Part 617 and Local Law #3-82, as amended, the Planning Board has issued a Negative Declaration attached hereto, and

NOW THEREFORE BE IT FURTHER RESOLOVED that the Planning Board, in accordance with Part II, Chapter 83, Part IX, Section 1-2 of Town Law waives sidewalks required along the Smith Road and Dann Road frontages of the parcel adjacent to the parking lots until required at some future time by the Town Board, and

NOW THEREFORE BE IT FURTHER RESOLVED that the Planning Board, in accordance with Section 8-7 of the Zoning Ordinance approves said Site Plan subject to the following conditions:

Attachment: SP-1990-08J signed resolution 091924 (29174 : SP-1990-08J, 50 Dann Rd)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-1990-08_J

PETITIONER	PROPERTY LOCATION
Town of Amherst	50 Dann Road and 550 Smith Road

SEP 27 2024 AMB

1. That the consideration of signs is specifically excluded from this approval as they require a separate review and approval by the Town.

2. That all dumpsters/trash containers and all mechanical equipment, utility structures, multiple meter boards, generators, and similar appurtenances, including those which are mounted on any part of a primary structure shall be appropriately screened with a fence, wall, and/or landscaping. Provide gate on dumpster enclosure that shall be closed whenever dumpster is not being serviced, enclosure shall be high enough to screen the dumpster(s) within.

3. That as-built record drawings and an as-built survey, including location of utilities, be provided to the Engineering Department prior to issuance of a Certificate of Occupancy by the Building Department.

4. That the concerns raised in the Amherst Traffic Safety Boards' letter dated July 26, 2024 are addressed to the satisfaction of that board.

5. That the concerns raised by the Zoning Enforcement Officer, Planning Department staff and the Towns' Landscape Architect in the Planning Department letter dated August 23, 2024 are address to the satisfaction of the respective bodies.

6. That the concern raised in the Amherst Right of Way Agents' letter dated July 11, 2024 are addressed to the satisfaction of the agent.

7. That the concerns raised by the Amherst Engineering Department – Engineering Service Division in their letter dated September 13, 2024 are addressed to the satisfaction of that division.

8. That any concerns raised by the Amherst Engineering Department – Sanitary Sewer Division are addressed to the satisfaction of that division.

9. That the concerns raised by the Amherst Stormwater Management Officer in his/her letter dated September 18, 2024 are addressed to the satisfaction of the officer.

10. That the petitioner obtain the required permits from the NYSDEC prior to issuance of approved plans by the Planning Department.

11. That the petitioner obtain any required highway work permits for work within the Smith Road right-of-way from the Erie County Department of Public works – Division of Highways.

12. That the petitioner consider the addition of internal walkways or painted pedestrian paths within the paved areas connecting the parking lots to the recreation areas (ball diamonds/batting cages/concession area).

Attachment: SP-1990-08J signed resolution 091924 (29174 : SP-1990-08J, 50 Dann Rd)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-1990-08_J

PETITIONER

Town of Amherst

PROPERTY LOCATION

SEP 27 2024 AME

50 Dann Road and 550 Smith Road

The foregoing resolution was adopted by the Town of Amherst Planning Board, September 19, 2024; moved by Penberthy; seconded by Giuliani; ayes 5; noes 0; absent 2 (Davis, Raffaele).

Michael J. Chmiel, Planning Board Chair

9/26/24
Date

SM/ac
X:\Current_Planning\Files\Site Plans\1990\SP-1990-08_J_(50_Dann_Rd)_2024\SP-1990-08_J_resolution_091924.doc

cc: Commissioner of Building
Town Engineer
Fire Chiefs
Traffic/Safety
Highway Superintendent
ECDEP
NYSDEC
Daniel Rizzo, Building Maintenance
Christopher Chapman, Wendel Companies, 375 Essjay Road, Suite 200, Amherst, NY 14221
Brian J. Armstrong, Director of Engineering Services
Jessica Boudreau, Engineering

Approved Plan: August 16, 2024
Received: August 20, 2024

Attachment: SP-1990-08J signed resolution 091924 (29174 : SP-1990-08J, 50 Dann Rd)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 09/19/24 06:30 PM
Department: Planning
Category: Subdivisions & Relief from Conditions
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 29165

ADOPTED

PLANNING BOARD ITEM (ID # 29165)

Proposed Sketch Plan Review for a 27-Lot Subdivision, Ashley Green Phase II, SUB-2024-01SK

Property located at 10060 Transit Rd. (portion)
DJC Land Inc., Petitioner

Proposed subdivision of 8.97± acres of land into 27 lots for detached single-family homes. A proposed 60 foot public right-of-way is shown roughly through the center of the site connecting Transit Road to the proposed terminus of the "Ashley Green" subdivision to the west on the east side of Town Ditch 26D-1. Proposed lots range in size from 7,540 sq. ft. to 23,671 sq. ft. and have frontages that range in size from 52 ft. to 124 ft.

August 27, 2024

Ken Zollitsch, Greenman-Pedersen, Inc., represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Zollitsch stated DJC Land Inc. is under contract to purchase the property but doesn't have a letter from the current land owners yet, they are aware of the downstream sewer capacity issues and intend to move forward with the subdivision process while working with the Engineering Department on the sewer issues, will provide a stub street for future connection to the north and south, and access to Transit Road will be provided.

Susan Kobus, 1079 Smith Road; Fran Daumeb, 418 Glen Oak Drive; and Steve Massaro, 1116 Smith Road spoke in opposition of the proposal.

No further comments were heard on this proposal.

Following discussion, Mr. Gill moved to keep the public hearing open and adjourn the request. The motion was seconded by Mr. Raffaele and carried. Ayes 4, Noes 0, Absent 3 (Davis, Giuliani, Penberthy).

September 19, 2024

Ken Zollitsch, Greenman-Pedersen, Inc., represented the petitioner, explained the proposal and was available to answer questions from the Board.

In response to the Board's questions, Mr. Zollitsch stated the proposed single-family homes are allowed by code and is less dense then townhomes that were previously considered for this site, the overall plan always included different levels of housing and he is unsure if the petitioner will seek condo status.

Dan Rosenthal, 1200 Smith Road, and Steve Massaro, 1116 Smith Road, spoke in opposition of the proposal.

No further comments were heard on this proposal. The hearing was closed.

Following discussion, Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Mr. Gill and carried. Ayes 5, Noes 0, Absent 2 (Davis, Raffaele).

HISTORY:

08/27/24 Planning Board ADJOURNED Next: 09/19/24

ATTACHMENTS:

- SUB-2024-01SK_application_082724 (PDF)
- SUB-2024-01SK_drawings_082724 (PDF)
- SUB-2024-01SK_application_091924 (PDF)
- SUB-2024-01SK_drawings_091924 (PDF)
- SUB-2024-01SK_drawings uploaded 091724_091924 (PDF)
- SUB-2024-01SK signed resolution 091924 (PDF)

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dal Giuliani, Board Member
SECONDER:	Harbinder Gill, Board Member
AYES:	Chmiel, Gill, Giuliani, Kahn, Penberthy
ABSENT:	John B. Davis, Joseph P. Raffaele Jr.

RECEIVED
JUN 24 2024
TOWN OF AMHERST
PLANNING DEPT.

TOWN OF AMHERST PLANNING DEPARTMENT

Subdivision Application

For Official Use

File # _____ **Acreage** _____ **Fee $** _____

Type of Subdivision Application (check one):

Sketch Plan _____
Preliminary Plat _____
Final Plat _____

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Received by Planning Department _____ RECEIVED BY DATE

Fee Paid to Town Clerk _____ RECEIVED BY DATE

		Fill In Applicable Fees
Sketch Plan	**$1,150.00**	$ 1,150.00
Preliminary Plat		
* 1 acre or less	**$1,250.00**	_____
* Each additional acre or fraction thereof *(fraction to be counted as 1 acre)*	**$ 650.00/acre**	_____
Amendments to Subdivisions	$1,150.00	_____
Request for Relief of / or Change to Conditions of Subdivision Approval	$1,150.00	_____
Request for Extension of Subdivision Approval	$ 450.00	_____
Minor Modification to a Subdivision Plat	$ 325.00	_____
Stormwater Pollution Prevention Plan		
1 - 4.99 Acres	$ 500.00	_____
5 - 10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	**$ 15.00**	$ 15.00
Final Plat	**$ 450.00**	_____
	TOTAL FEE:	$1,165.00

Town of Amherst Planning Department • 5583 Main Street • Williamsville • New York 14221
(716) 631-7051 • Fax: • (716) 631-7153 • Web: www.amherst.ny.us

Attachment: SUB-2024-01SK_application_082724 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))

SUBDIVISION APPLICATION (con't)

To Be Completed By Applicant

Petitioner: Name: DJC Land, Inc., Attn: David Capretto

Address: 470 Cayuga Road

Buffalo (city) NY (state) 14225 (zip code)

Phone: (716) 688-5597 Fax:

E Mail: dcapretto@forbeshomes.com

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney)**:**

Name: Greenman-Pedersen, Inc. (Attn: Ken Zollitsch)

Address: 4950 Genesee Street, Suite 100

Buffalo (city) NY (state) 14225 (zip code)

Phone: 633-4844 Fax: 633-4940

E Mail: kzollitsch@gpinet.com

Subdivision Location & Address: 10060 Transit Road (SBL 29.01-2-5.1)

Town of Amherst, Erie County, New York

Zoning District(s): MFR-5

Number of Proposed Sublots: 27

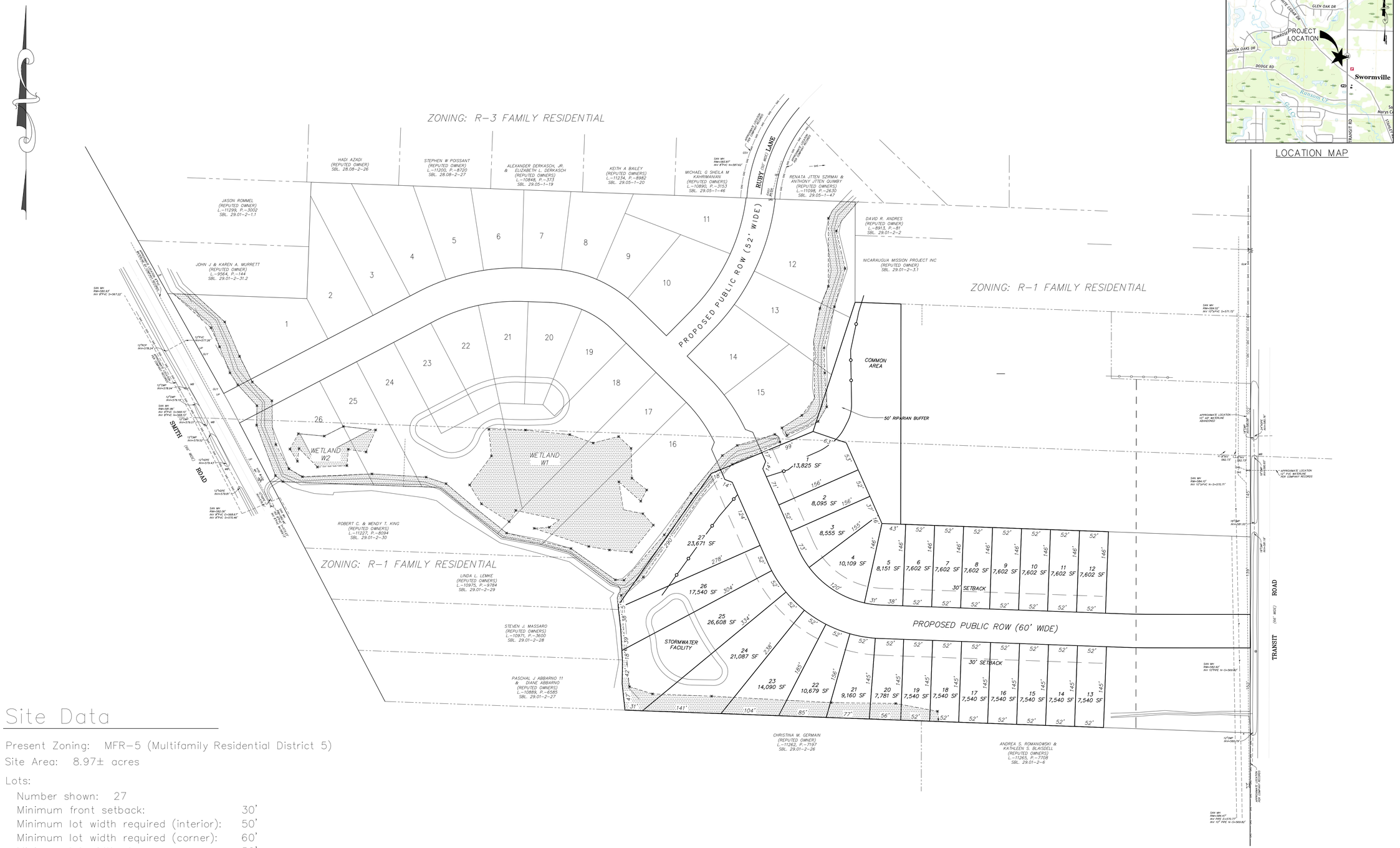
Proposed Subdivision Name: Ashley Green, Phase 2

Proposed Street Names:

Name to be determined	☒ Public	☐ Private
	☐ Public	☐ Private
	☐ Public	☐ Private
	☐ Public	☐ Private

Current Planning/Application Forms 2019/Subdivision Application Form 2019
REVISED February 2021

Attachment: SUB-2024-01SK_application_082724 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))





LOCATION MAP

Site Data

Present Zoning: MFR-5 (Multifamily Residential District 5)

Site Area: 8.97± acres

Lots:

Number shown:	27
Minimum front setback:	30'
Minimum lot width required (interior):	50'
Minimum lot width required (corner):	60'
Minimum lot width shown:	52'
Minimum lot area required (interior):	6,000± sq.ft.
Minimum lot area required (corner):	7,200± sq.ft.
Minimum lot area shown:	7,540± sq.ft.

Greenman-Pedersen, Inc.
Engineering and Construction Services
In Western New York:
BUFFALO (716) 633-4844 • ROCHESTER (585) 486-4859 • JAMESTOWN (716) 488-2803

GPI

SCALE: 1"=80'
DATE: JUNE 2024
DRAWN BY: E.W.
CHECKED BY: K.Z.
JOB NO.: 2020097
DWG NO.: 01

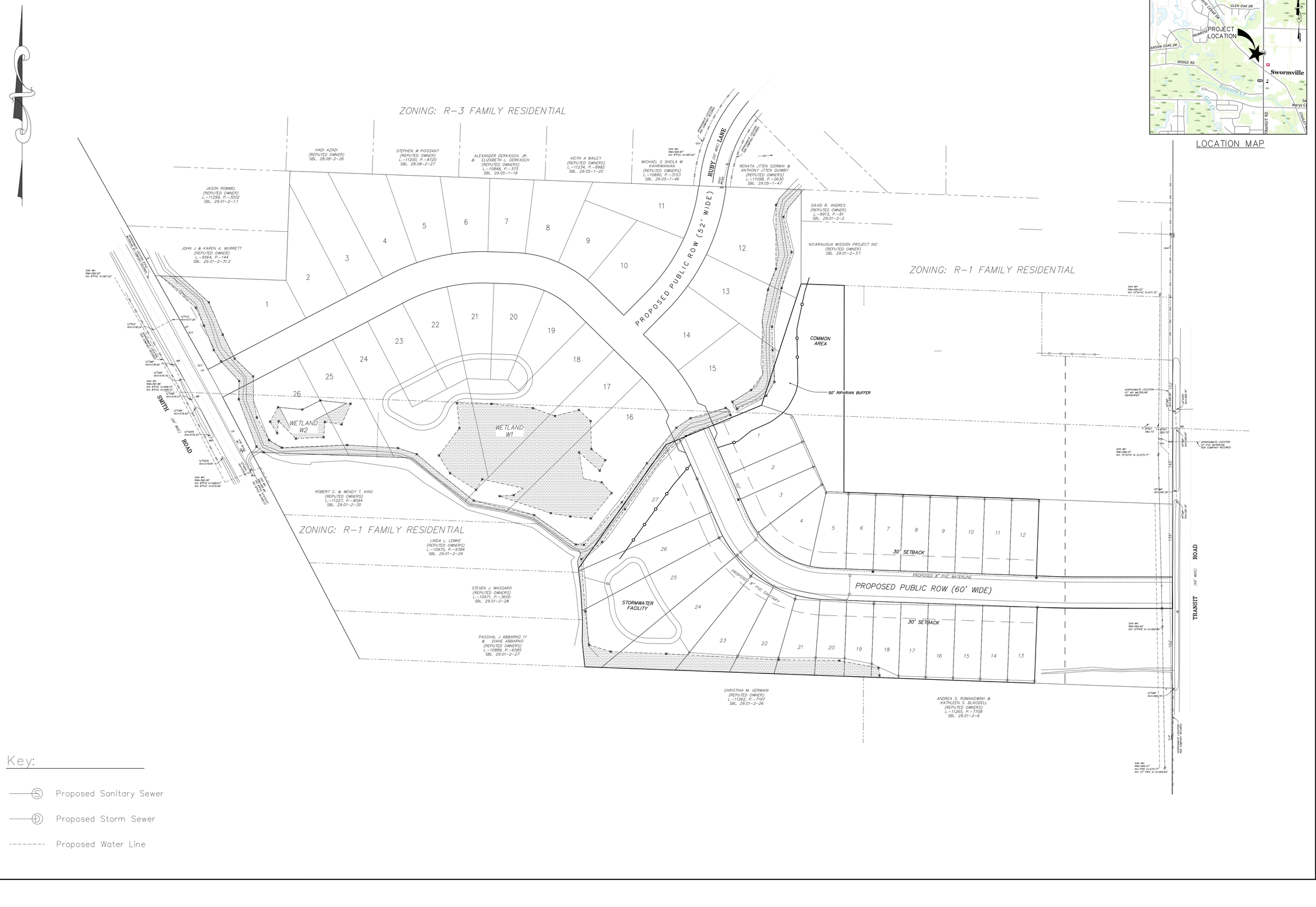
NO.	REVISIONS:	BY	DATE

SKETCH PLAN

ASHLEY GREEN, PHASE 2
TOWN OF AMHERST

SHEET NO.
01

Attachment: SUB-2024-015K_drawings_082724 (29165 : SUB-2024-015K: 1060 Transit Rd. (Portion))



Key:

- Proposed Sanitary Sewer
- Proposed Storm Sewer
- Proposed Water Line

Greenman-Pedersen, Inc.
Engineering and Construction Services
In Western New York:
BUFFALO (716) 633-4844 • ROCHESTER (585) 486-4859 • JAMESTOWN (716) 488-2803

GPI

SCALE:	1"=80'
DATE:	JUNE 2024
DWG NO.:	01
JOB NO.:	2020097
DRAWN BY:	E.W.
CHECKED BY:	K.Z.

NO.	REVISIONS:	BY	DATE

SKETCH UTILITY PLAN

ASHLEY GREEN, PHASE 2
TOWN OF AMHERST

SHEET NO.
01

Attachment: SUB-2024-015K_drawings_082724 (29165 : SUB-2024-015K_1060 Transit Rd. (Portion))

RECEIVED
JUN 24 2024
TOWN OF AMHERST
PLANNING DEPT.

TOWN OF AMHERST PLANNING DEPARTMENT

Subdivision Application

For Official Use

File # _____ **Acreage** _____ **Fee $** _____

Type of Subdivision Application (check one):

Sketch Plan _____
Preliminary Plat _____
Final Plat _____

Address Verified by Assessor's Office
_____
VERIFIED BY DATE

Materials Received by Planning Department
_____
RECEIVED BY DATE

Fee Paid to Town Clerk
_____
RECEIVED BY DATE

		Fill In Applicable Fees
Sketch Plan	**$1,150.00**	$ 1,150.00
Preliminary Plat		
* 1 acre or less	**$1,250.00**	_____
* Each additional acre or fraction thereof *(fraction to be counted as 1 acre)*	**$ 650.00/acre**	_____
Amendments to Subdivisions	$1,150.00	_____
Request for Relief of / or Change to Conditions of Subdivision Approval	$1,150.00	_____
Request for Extension of Subdivision Approval	$ 450.00	_____
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Stormwater Pollution Prevention Plan		
1 - 4.99 Acres	$ 500.00	_____
5 - 10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	**$ 15.00**	$ 15.00
Final Plat	**$ 450.00**	_____
	TOTAL FEE:	$1,165.00

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SUBDIVISION APPLICATION (con't) ***Page 2***

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E Mail: dcapretto@forbeshomes.com

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney)**:**

Name: Greenman-Pedersen, Inc. (Attn: Ken Zollitsch)

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Phone: 633-4844 Fax: 633-4940

E Mail: kzollitsch@gpinet.com

Subdivision Location & Address: 10060 Transit Road (SBL 29.01-2-5.1)

Town of Amherst, Erie County, New York

Zoning District(s): MFR-5

Number of Proposed Sublots: 27

Proposed Subdivision Name: Ashley Green, Phase 2

Proposed Street Names:

Name to be determined	☒ Public	☐ Private
	☐ Public	☐ Private
	☐ Public	☐ Private
	☐ Public	☐ Private

Current Planning/Application Forms 2019/Subdivision Application Form 2019
REVISED February 2021

Attachment: SUB-2024-01SK_application_091924 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))

AGRICULTURAL DATA STATEMENT

NYS Agricultural and Markets Law requires the submission of an agricultural data statement by an applicant to the municipality for a rezoning, special use permit, site plan approval, use variance, or subdivision of parcel(s) occurring on property within an agricultural district containing a farm operation or on property within 500 feet of an active farm operation located in an agricultural district.

Applicant's Name & Address	Owner's Name & Address *(if different from applicant)*
DJC Land, Inc.	Fritz Lotter/The Estate of Theresa Lotter
470 Cayuga Road	10060 Transit Rd
Buffalo, NY 14225	Amherst, NY 14051

Type of Application			
	☐ Rezoning	☐ Special Use Permit	☒ Site Plan Approval
	☐ Use Variance	☒ Subdivision Approval	

Project Description: Proposed mixed-use site include 26 single family detached homes, 52 townhouse units, 16 apartments, and approximately 13,000 sq ft of commercial space.

Project Address: 10060 Transit Road

Project Location: West side of Transit Road, East of Smith Rd
(Example: west side of Main Street or 250 feet south of Second Avenue)

Project Size: 24.2 acres
(Square footage, acreage, etc.)

Current Use of Site: Idle, partial brush and forest
(Identify: idle, hay, pasture, crop, brushland, forest, dairy, tilled, orchard, single residence, etc.)

Attachment: SUB-2024-01SK_application_091924 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))

History of Farming on Site:
(Last year farmed, type of activity, number of acres, by owner or another, etc.)

18+/- acres of property was last farmed with hay planted in 2023 by owner.

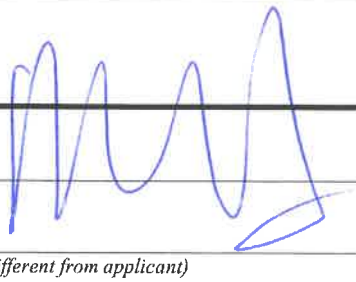
Other Site Information:
(Drainage direction and features, e.g. ditches, tiles, streams, gullies, proposed changes, etc.)

Hickory Creek and Town of Amherst Ditch 26D1A

Include a tax or other map with project boundaries clearly marked and with nearby farm operations indicated. *(Municipal assessor or County tax office may be able to assist with this requirement.)*

Use the space below to provide the full mailing address of all farm operations within 500 feet of this project, including lands used in agricultural production. If necessary, please continue on a separate sheet. *(Municipal assessor or County tax office may be able to assist with this requirement.)*

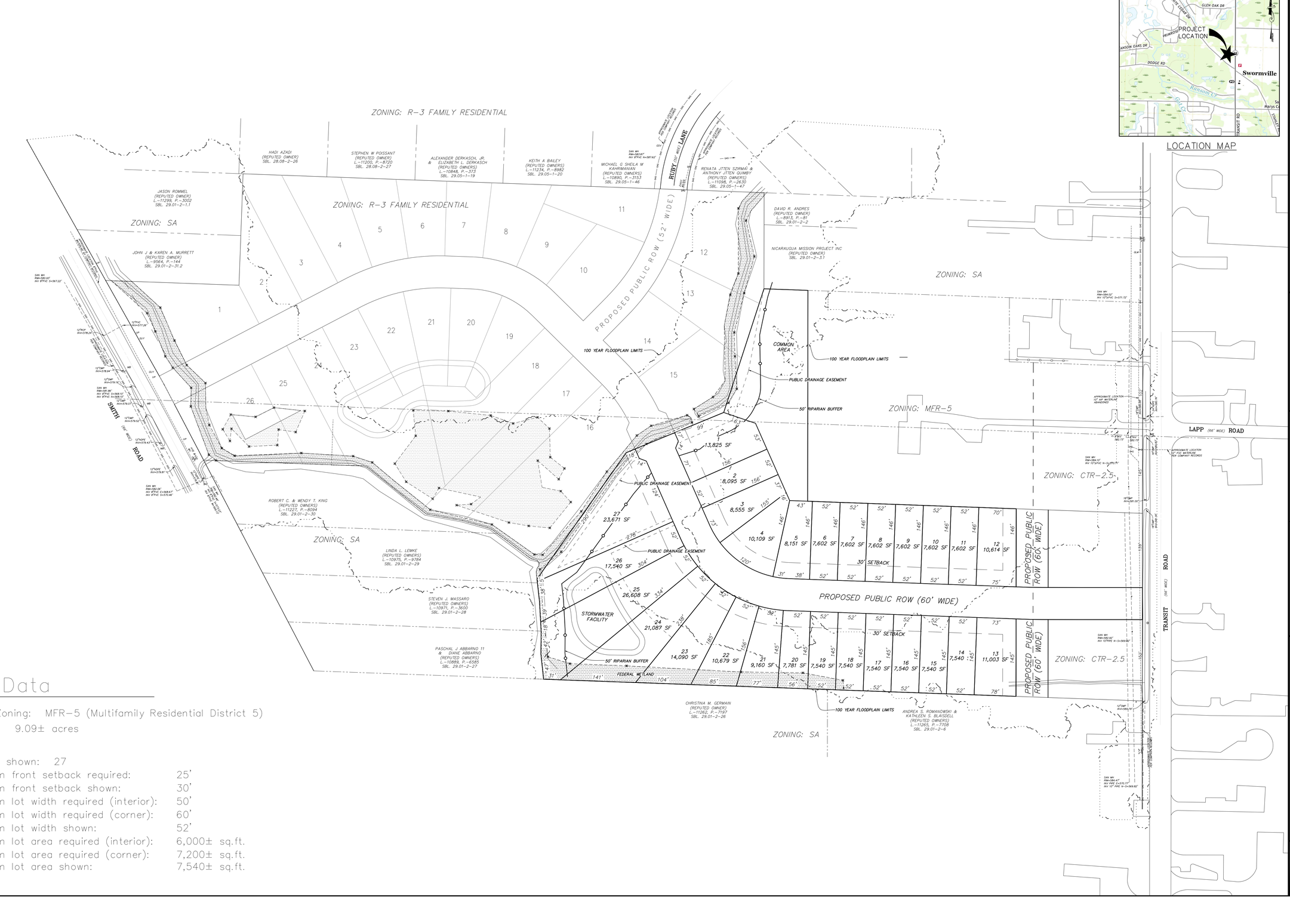
There are no farming operations within 500 feet of the project site.

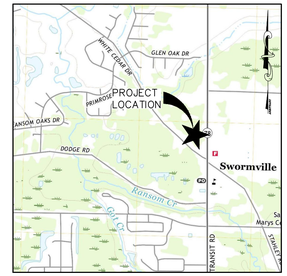
Applicant Signature: 

Owner Signature:
(If different from applicant)

THE MUNICIPALITY MUST REFER A COPY OF THIS STATEMENT TO THE ERIE COUNTY DEPARTMENT OF ENVIRONMENT & PLANNING AT 95 FRANKLIN STREET, BUFFALO, NY 14202 OR TO AGRICULTURE@ERIE.GOV AND TO ALL ADDRESSES ON THE FARM OPERATION MAILING LIST

Attachment: SUB-2024-01SK_application_091924 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))





LOCATION MAP

Site Data

Present Zoning: MFR-5 (Multifamily Residential District 5)

Site Area: 9.09± acres

Lots:

Number shown: 27

Minimum front setback required:	25'
Minimum front setback shown:	30'
Minimum lot width required (interior):	50'
Minimum lot width required (corner):	60'
Minimum lot width shown:	52'
Minimum lot area required (interior):	6,000± sq.ft.
Minimum lot area required (corner):	7,200± sq.ft.
Minimum lot area shown:	7,540± sq.ft.

Greenman-Pedersen, Inc.
Engineering and Construction Services
In Western New York:
BUFFALO (716) 633-4844 • ROCHESTER (585) 486-4859 • JAMESTOWN (716) 488-2803

GPI

NO.	REVISIONS:	BY	DATE
1	REVISED PLAN PER TOWN COMMENTS	KCZ	8/29/24

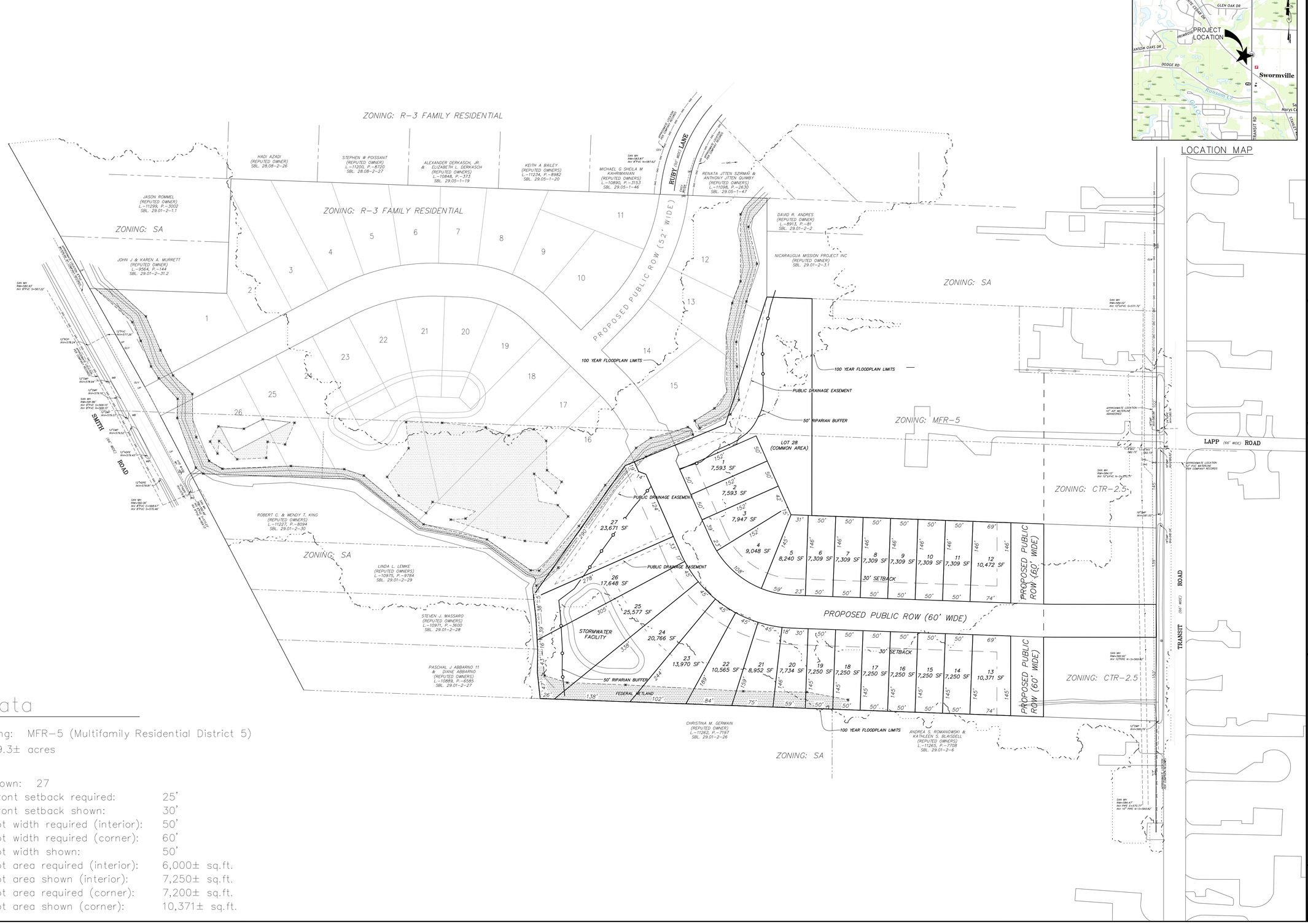
SCALE: 1"=80'
DATE: JUNE 2024
DWG NO.: 01
DRAWN BY: E.W.
CHECKED BY: K.Z
JOB NO.: 2020097

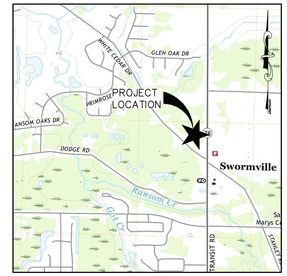
SKETCH PLAN

ASHLEY GREEN, PHASE 2
TOWN OF AMHERST

SHEET NO.
01

Attachment: SUB-2024-01SK_drawings_091924 (29165 : SUB-2024-01SK_1060 Transit Rd. (Portion))





LOCATION MAP

Site Data

Present Zoning: MFR-5 (Multifamily Residential District 5)

Site Area: 9.3± acres

Lots:

Number shown:	27
Minimum front setback required:	25'
Minimum front setback shown:	30'
Minimum lot width required (interior):	50'
Minimum lot width required (corner):	60'
Minimum lot width shown:	50'
Minimum lot area required (interior):	6,000± sq.ft.
Minimum lot area shown (interior):	7,250± sq.ft.
Minimum lot area required (corner):	7,200± sq.ft.
Minimum lot area shown (corner):	10,371± sq.ft.

Greenman-Pedersen, Inc.
Engineering and Construction Services
In Western New York:
BUFFALO (716) 633-4844 • ROCHESTER (585) 486-4859 • JAMESTOWN (716) 488-2803

GPI

SCALE:	1"=80'
DRAWN BY:	E.W.
DATE:	JUNE 2024
CHECKED BY:	K.Z
DWG NO.:	01
JOB NO.:	2020097

NO.	REVISIONS:	BY	DATE
2	REVISED STUB LOCATIONS	KCZ	9/16/24
1	REVISED PLAN PER TOWN COMMENTS	KCZ	8/29/24

SKETCH PLAN

ASHLEY GREEN, PHASE 2
TOWN OF AMHERST

SHEET NO.
01

Attachment: SUB-2024-01SK_drawings uploaded 091724_091924 (29165 : SUB-2024-01SK_10060 Transit Rd. (Portion))

TOWN OF AMHERST
PLANNING BOARD
SKETCH PLAN RESOLUTION
SUB-2024-01_SK

PETITIONER

DJC Land, Inc

David Capretto
470 Cayuga Road
Buffalo, NY 14225

PROPERTY LOCATION

10060 Transit Road (portion)

SEP 27 2024 AM

WHEREAS the Town of Amherst Planning Board on Tuesday, August 27, 2024 and Thursday, September 19, 2024 held a public hearing on a sketch plan for a 28-lot subdivision, "Ashley Green Phase II" and

WHEREAS the Planning Board has reviewed plans and specifications for the proposed subdivision in accordance with Part 4-6-1 of the Subdivision Regulations, and

WHEREAS the Subdivision has been referred to the Town's various review agencies, and

WHEREAS the Planning Board finds that:

1. The proposed subdivision is generally consistent with the intent, goals, objectives, and policies of the Comprehensive Plan with respect to natural and cultural resources.

2. The proposed subdivision is consistent with the intent, objectives and specific requirements of the Zoning Ordinance.

3. Adequate services and utilities to service the proposed subdivision will be available prior to occupancy.

4. The subdivision is consistent with all other applicable laws.

5. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers has determined that it has jurisdiction. A Preliminary Jurisdictional Determination which is non-binding and advisory in nature has been issued based on the submitted wetland delineation map that the wetland and water boundaries on the map accurately represent on-site conditions. An approved Jurisdictional Determination will be required at preliminary plat.

NOW THEREFORE BE IT RESOLVED that the Planning Board, in accordance with Section 8-7 of the Zoning Ordinance and Part 4-6-1 of the Subdivision Regulations approves said subdivision sketch plan subject to the follow conditions:

Attachment: SUB-2024-01SK signed resolution 091924 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))

TOWN OF AMHERST
PLANNING BOARD
SKETCH PLAN RESOLUTION
SUB-2024-01_SK

PETITIONER

DJC Land, Inc

PROPERTY LOCATION

10060 Transit Road (portion)

SEP 27 2024 AME

1. That the proposed north south stub streets be relocated westerly so that its eastern right-of-way is also the north south zoning district boundary for the mixed use zoning and future development along the Transit Road frontage.

2. That the remaining concerns raised by Planning Department staff in the Planning Department letter dated September 18, 2024 are addressed to the satisfaction of planning staff.

3. That drafts of riparian and all other easements, if any, are to be provided to the Amherst Right-of-way Agent for review at submittal of preliminary plat.

4. That the issued raised by NYSDOT in their email of July 24, 2024 are addressed at preliminary plat.

The foregoing resolution was adopted by the Town of Amherst Planning Board, September 19, 2024; moved by Giuliani; seconded by Gill; ayes 5; noes 0; absent 2 (Davis, Raffaele).

Michael J. Chmiel, Planning Board Chair

9/20/24
Date

SM/ac
X:\Current_Planning\Files\Subdivisions\SUB-2024\SUB-2024-01_(10060_Transit_Rd)_2024\SUB-2024-01_SK_(10060_Transit_Rd)_2024\SUB-2024-01_SK_ resolution_091924.doc

cc: Commissioner of Building
Town Engineer
Highway Superintendent
Fire Chiefs Council
ECDEP
David Capretto, DJC Land, Inc., 470 Cayuga Road, Buffalo, NY 14225
Ken Zollitsch, Greenman-Pedersen, Inc., 4950 Genesee St., Ste. 100, Buffalo, NY 14225

Approved Plan: September 16, 2024
Received: September 17, 2024

Attachment: SUB-2024-01SK signed resolution 091924 (29165 : SUB-2024-01SK, 10060 Transit Rd. (Portion))