MINUTES
TOWN OF AMHERST
AMHERST PLANNING BOARD MEETING
October 19, 2023
6:30 PM

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

This meeting is being video recorded.

The plans and documents that are available below for each Planning Board hearing item were submitted by the project applicant and are intended to provide general information about the proposal.

The official, complete sets of submittal documents and materials that provide more detailed information about the projects are available in the Planning Department, which is located in Amherst Town Hall, 5583 Main Street, Williamsville, NY 14221. Hours are 9 am to 5 pm, Monday through Friday. If you have any questions, please contact the Planning Department at (716) 631-7051.

Revised plans are submitted on an ongoing basis throughout the review process to address comments on the project. Every effort will be made to post the most recent version of the plans and application materials in a timely manner.

ROLL CALL

Attendee Name	Organization	Title	Status	Arrived
Robert J. Gilmour	Town of Amherst	Chair	Present	
Michael Chmiel	Town of Amherst	Board Member	Present	
Harbinder Gill	Town of Amherst	Board Member	Present	
Dal Giuliani	Town of Amherst	Board Member	Present	
Brittany Lee Penberthy	Town of Amherst	Board Member	Present	
Joseph P. Raffaele	Town of	Board Member	Absent	

Jr.	Amherst			
Carrie H. Kahn	Town of Amherst	Board Member	Present	
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	
Thomas J. Voigt	Town of Amherst	Assistant Planner	Present	
Gary Palumbo	Town of Amherst	Associate Planner	Present	
Laurie Stillwell	Town of Amherst	Director of Community Development	Present	
Amy Carrato	Town of Amherst	Community Development Assistant	Present	
Jacqualine Berger	Town of Amherst	Councilmember	Present	
Nora B. Robshaw	Town of Amherst	Deputy 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 MIXED-USE PROJECT, SP-2023-06
Property located at 1720, 1740 & 1760 Maple Road
PB Investors LLC, Petitioner

Proposal for the development of a mixed use project consisting of two four-story mixed use buildings totaling 139,680± square feet (westerly building 84,820± sq. ft., easterly building 54,860± sq. ft.) with 7,000 sq. ft. of commercial space on the first floor of the easterly building and 107 total apartment units (75 units in western building and 32 units in easterly building) for lease in the two buildings, two two-story townhome buildings with attached garages (5 units in the west building and 6 units in the east building) to the north of the mixed use buildings and three ten car garage structures north of the townhomes adjacent to residences to the north. Parking is proposed for 188 vehicles (142 surface spaces and 41 in garages) with two curb cuts to Maple Road (the easterly driveway is shared with the pediatric medical building to the east) and a shared access with the pediatric medical building to the east to Ayer Road.

Sean Hopkins, Esq., Hopkins Sorgi and McCarthy, represented the petitioner, explained the proposal and was available to answer questions from the Board. Patrick Sheedy, Carmina Wood Design, and Chris Orlott, Bliss Construction, were also present.

In response to the Board's questions, Mr. Hopkins showed the fire access and hydrants on the site plan, he stated a noise study has not been done, the petitioner would remedy any noise issues and the conditions are acceptable.

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. Kahn and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

Following the approval of the Negative Declaration, Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Ms. Kahn and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

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

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

None

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

2. REQUEST TO REZONE 5.03± ACRES OF LAND FROM R-3 TO R-4, Z-2023-07
Property located at 4774 & 4780 Sheridan Drive
RAS Development Company LLC, Petitioner

The purpose of this rezoning request is to allow for the potential future development of the subject site as single-family attached residential homes as required for the petitioner's entry into the NYSDEC Brownfield Cleanup Program to remediate hazardous materials on the subject sites. (For further information please refer to the letter from Roux Environmental Engineering & Geology, DPC to the Planning Director dated September 28, 2023.)

Sean Hopkins, Esq., Hopkins Sorgi and McCarthy, represented the petitioner, explained the proposal and was available to answer questions from the Board. Patrick Sheedy, Carmina Wood Design, and Rob Savarino, RAS Development, were also present.

In response to the Board's questions, Mr. Hopkins stated the petitioner is proceeding with 22 units, and the neighbors had the opportunity to raise concerns at a meeting held by Mr. Savarino. Mr. Savarino stated the parcel will be cleaned up to the highest level allowed for residential use and Track 4 is less expensive than Track 1.

Elliott Frank, 4784 Sheridan Drive; Edgar DeLeon, 50 Jordan Road; and Susan Wolf 45 Jordan Road spoke in opposition to the proposal.

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

Following discussion, Mr. Chmiel moved to approve the request and amend draft condition 1 that the density of the project site shall not exceed 4.3 units per acre on the resolution. The motion was seconded by Ms. Kahn and carried. Ayes 4, Noes 2 (Gill, Penberthy), Absent 1 (Raffaele).

RESULT:	**APPROVED [4 TO 2]**
MOVER:	Michael Chmiel, Board Member
SECONDER:	Carrie H. Kahn, Board Member
AYES:	Gilmour, Chmiel, Giuliani, Kahn
NAYS:	Gill, Penberthy
ABSENT:	Raffaele Jr.

3. REQUEST TO REZONE 1.09± ACRES OF LAND FROM SA TO R-3, Z-2023-08
Property located at 420 New Road
Joseph Rubino, Petitioner

The purpose of the rezoning request is to utilize the dimensional standards of the R-3 District in order to facilitate a parcel split into 3 separate lots. Each lot as proposed will consist of a single-family residential home.

Joseph Rubino explained the proposal and was available to answer questions from the Board.

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

Following discussion, Ms. Penberthy moved to approve the request based on the resolution. The motion was seconded by Mr. Chmiel and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

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

MISCELLANEOUS

4. REQUEST TO AMEND THE COMPREHENSIVE PLAN "FIGURE 6" FROM SINGLE FAMILY RESIDENTIAL TO MIXED RESIDENTIAL, BCPA-2023-02
Properties located at 46, 54, 60, 68, 74 & 84 South Linden Street
South Linden LLC, Petitioner

The purpose of this request is to amend the Bicentennial Comprehensive Plan to change the land use designation from “Single Family Residential” to “Mixed Residential”. The “Mixed Residential” land use designation is meant for a variety of residential housing types that allows for more density than single family residential housing. The subject parcels are currently zoned Residential Three (R-3) and therefore, to implement the concept plan provided the petitioner would need to file a subsequent rezoning request to one of the multifamily residential districts, provided the Town Board agrees to amend the Bicentennial Comprehensive Plan. The application materials indicate that the petitioner intends to seek a rezoning from R-3 to MFR-5 in order to develop 28 town homes.

No comments were heard on this proposal.

Mr. Giuliani moved to adjourn the request. The motion was seconded by Ms. Penberthy and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

RESULT:	**ADJOURNED [UNANIMOUS]**	**Next: 1/18/2024 6:30 PM**
MOVER:	Dal Giuliani, Board Member	
SECONDER:	Brittany Lee Penberthy, Board Member	
AYES:	Gilmour, Chmiel, Gill, Giuliani, Penberthy, Kahn	
ABSENT:	Raffaele Jr.	

5. PROPOSED AMENDMENT TO CHAPTER 203 OF TOWN CODE FOR THE STANDARD FOR ESTABLISHING AN ACCESSORY DWELLING UNIT, ZTA-2023-03
Town of Amherst, Petitioner

The proposed text amendment aims to broaden housing opportunities in the Town of Amherst by allowing for a simpler path in establishing an Accessory Dwelling Unit (ADU). The proposed changes will not require any familial connection or age requirement and will instead focus on the design of the unit itself and how the ADU fits into the fabric of an existing community.

Dan Ulatowski, Assistant Planning Director and Zoning Enforcement Officer and Laurie Stillwell, Community Development Director, explained the proposal and were available to answer questions from the Board.

Ms. Stillwell stated the current interest rate is 8.6% and the unit will have to be owner occupied. Mr. Ulatowski stated the Town Board will also hear this proposal.

Jane Cox, 4584 Harlem Road, and Laura Flumerfeldt, 1001 N. French Road, spoke in favor of the proposal.

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

Following discussion, Ms. Penberthy moved to recommend approval of the text amendments with modification as follows:

the last sentence in section 2-4 being amended to read "….. for a period of time longer than 6 months" instead of 30 days.

The motion was seconded by Mr. Chmiel and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

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

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

6. SIDEWALK WAIVER FOR NORTH BAILEY AVENUE, SP-2023-03, SP-2023-07, SP-1996-14D & SP-1983-42J
4200, 4224 (portion), 4228-4230 & 4252-4258 Ridge Lea Road and 256, 270, 280 (portion) and 306 Meyer Road
Benderson Development Co. LLC, Petitioner

The subject site plans were approved by the Planning Board at its meeting of August 17, 2023 at which meeting, the Planning Board adjourned its decision on the requested sidewalk waiver on Bailey Avenue for the development. In the interim the petitioner has modified its request as stated in the project description below.

The petitioner is requesting that public sidewalks required along the Meyer Road frontage of the Amherst Commons Center development be waived as there are no existing public sidewalk on either side of Meyer Road from Bailey Avenue easterly to the terminus of Meyer Road.

Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Mr. Gill and carried. Ayes 5, Noes 0, Abstain 1 (Chmiel), Absent 1 (Raffaele).

RESULT:	**APPROVED [5 TO 0]**
MOVER:	Dal Giuliani, Board Member
SECONDER:	Harbinder Gill, Board Member
AYES:	Gilmour, Gill, Giuliani, Penberthy, Kahn
ABSTAIN:	Chmiel
ABSENT:	Raffaele Jr.

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

None

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

None

MISCELLANEOUS

7. 2024 PLANNING BOARD MEETINGS CALENDAR
A motion was made by Ms. Penberthy to accept the Draft 2024 Schedule of Planning Board meetings. The motion was seconded by Ms. Kahn and passed. Ayes 6, Noes 0, Absent 1 (Raffaele).

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

OTHER COMMUNICATIONS

None

DIRECTOR'S REPORT

MINUTES APPROVAL

Planning Board Meeting Date
Ms. Penberthy moved to approve the minutes. The motion was seconded by Ms. Kahn and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

ADJOURNMENT

The Planning Board meeting of October 19, 2023 was adjourned at 8:20 pm.

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 10/19/23 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: 27916

ADOPTED

PLANNING BOARD ITEM (ID # 27916)

Proposed Mixed-Use Project, SP-2023-06

Property located at 1720, 1740 & 1760 Maple Road
PB Investors LLC, Petitioner

Proposal for the development of a mixed use project consisting of two four-story mixed use buildings totaling 139,680± square feet (westerly building 84,820± sq. ft., easterly building 54,860± sq. ft.) with 7,000 sq. ft. of commercial space on the first floor of the easterly building and 107 total apartment units (75 units in western building and 32 units in easterly building) for lease in the two buildings, two two-story townhome buildings with attached garages (5 units in the west building and 6 units in the east building) to the north of the mixed use buildings and three ten car garage structures north of the townhomes adjacent to residences to the north. Parking is proposed for 188 vehicles (142 surface spaces and 41 in garages) with two curb cuts to Maple Road (the easterly driveway is shared with the pediatric medical building to the east) and a shared access with the pediatric medical building to the east to Ayer Road.

Sean Hopkins, Esq., Hopkins Sorgi and McCarthy, represented the petitioner, explained the proposal and was available to answer questions from the Board. Patrick Sheedy, Carmina Wood Design, and Chris Orlott, Bliss Construction, were also present.

In response to the Board's questions, Mr. Hopkins showed the fire access and hydrants on the site plan, he stated a noise study has not been done, the petitioner would remedy any noise issues and the conditions are acceptable.

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. Kahn and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

Following the approval of the Negative Declaration, Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Ms. Kahn and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

ATTACHMENTS:

- SP-20230-06 application 101923 (PDF)
- SP-20230-06 drawings 101923(PDF)
- SP-2023-06 signed neg dec 101923 (PDF)
- SP-2023-06 signed resolution 101923 (PDF)

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dal Giuliani, Board Member
SECONDER:	Carrie H. Kahn, Board Member
AYES:	Gilmour, Chmiel, Gill, Giuliani, Penberthy, Kahn
ABSENT:	Joseph P. Raffaele Jr.

Site Plan Application & Supporting Documentation Consisting of Exhibits "1" to "9"
Applicant: PB Investors, LLC
Proposed Mixed-Use Project 1720-1740 & 1760 Maple Road

Prepared By: Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

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: PB Investors, LLC c/o Sean Hopkins, Esq.

Address: 5500 Main Street, Suite 343

Williamsville (city) New York (state) 14221 (zip code)

Phone: 716-510-4338 Fax: _____

E Mail: shopkins@hsmlegal.com

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

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

Name: Patrick Sheedy Jr, PE and Brian Slevar, AIA

Address: Carmina Wood Design

487 Main Street, Suite 500

Buffalo (city) New York (state) 14203 (zip code)

Phone: 716-842-3165 Fax: _____

E Mail: psheedy@carminawooddesign.com & bslevar@carminawooddesign.com

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

Address: 1720, 1740, 1760 Maple Road Williamsville, NY 14221

SBL No(s): 56.19-1-4.1, 56.19-1-6.1, 56.19-1-5.11

Project Name: Mixed Use Development

Project Description: Proposed 4-story multi-family building, 4-story mixed use building and townhouses with attached garages totaling 118 residential units.

The documentation attached to this Site Plan Application consists of the following: Exhibit 1: Authorization Letter; Exhibit 2: Project Description; Exhibit 3: Part 1 of the Full Environmental Assessment Form with Page 5[a] and Attachments A to C; Exhibit 4 - Legal Description of Project Site; Exhibit 5 - Reduced-Size Copy of Survey of the Project Site; Exhibit 6 - Reduced-Size Copy of the Site Plan [Drawing C-100]; Exhibit 7 - Reduced-Size Copy of the Landscape Plan [Drawing L-100]; Exhibit 8 - Copy of Resolution No. 2022-1172 as Adopted by the Town Board on February 13, 2023; and Exhibit 9 - Copy of Resolution 2022-607 as Adopted by the Town Board on July 25, 2022.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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):

	existing	proposed	total
Gross Floor Area (non-residential):	0	9,715 sf	9,715 sf
Gross Floor Area Residential:	0	151,735 sf	151,735 sf
Number of Residential Units:	0	118	118
Number of Parking Spaces:	0	189	189

Acreage of Parcel:
(list each parcel separately)
1720 Maple - 0.92 ac 1740 Maple - 0.16 ac
1760 Maple - 4.1 ac

Frontage on Public Roads:
(list each road separately)
699.55' - Maple Road

Existing Zoning District(s)
DC-5

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 1 – Authorization Form Signed on Behalf of Owner of 1760 Maple Road

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

AUTHORIZATION

I am counsel for McGuire Acquisitions LLC, the record owner of property located in the Town of Amherst located at 1760 Maple Road (the "Project Site"). McGuire Acquisitions LLC hereby authorizes PB Investors, LLC, its counsel, the law firm of Hopkins Sorgi & McCarthy PLLC, and its engineering firm, Carmina Wood Morris DPC, to seek all required approvals and permits from the Town of Amherst and other involved governmental agencies relative to the its intended use of the Project Site as mixed-use project including but not limited to an amendment of the Town of Amherst Comprehensive Plan, a rezoning of the Project Site from OB to CTR-5, site plan approval from the Planning Board and any required area variances needed from the Zoning Board of Appeals.

Date: March 17, 2022

Michael Blinkoff, Esq.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 2 – Description of Proposed Mixed –Use Project

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

EXHIBIT 2

PROJECT DESCRIPTION - PROPOSED MIXED-USE PROJECT
1720-1740 & 1760 MAPLE ROAD

I. Description of the Proposed Mixed-Use Project:

The Applicant is seeking Site Plan Approval from the Planning Board in connection with the proposed mixed-use project to be located on the parcels located at 1720, 1740 and 1760 Maple Road consisting of approximately 5.1 acres (the "Project Site"). The Project Site is properly zoned DC-5. On February 15, 2023, the Town Board adopted Resolution No. 2022-1172 for the purpose of amending the zoning classification of the Project Site from OB and R-3 to DC-5.[1]

The proposed mixed-use project consists of a four-story mixed-use building with approximately 7,000 sq. ft. of commercial space on the 1st floor, a second four-story multi-family building [total of 107 apartments for lease], 2 two-story townhouse buildings with attached garages [6 unit and 5 unit buildings], 190 parking spaces [149 surface spaces and 41 garage spaces] and related site improvements.

The documentation attached to this Site Plan Application includes the Authorization Form of the owner of 1760 Maple Road along with the following:

- Exhibit 2: Project Description;
- Exhibit 3: Part 1 of the Full Environmental Assessment Form with Page 5[a] and Attachments A to C;[2]

[1] A copy of No. 2022-1172 is attached as Exhibit "8". On July 25, 2022, the Town Board adopted Resolution 2022-607 to accommodate mixed-use development of the Project Site. A copy of Resolution 2022-607 is attached as Exhibit "9".

[2] The proposed action has been defined broadly to include all required discretionary approvals required from the municipal boards of the Town of Amherst including Site Plan Approval from the Planning Board as well as involved agencies as well as all proposed site improvements including the proposed 2 mixed-use buildings, the townhome buildings, parking spaces, access

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

- Exhibit 4 - Legal Description of Project Site;
- Exhibit 5 - Reduced-Size Copy of Survey of the Project Site;
- Exhibit 6 - Reduced-Size Copy of the Site Plan [Drawing C-100];
- Exhibit 7 - Reduced-Size Copy of the Landscape Plan [Drawing L-100];
- Exhibit 8 - Copy of Resolution No. 2022-1172 as Adopted by the Town Board on February 13, 2023; and
- Exhibit 9 - Copy of Resolution 2022-607 as Adopted by the Town Board on July 25, 2022.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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onto Maple Road, access aisles, landscaping, lighting, an on-site storm water management system, water and sanitary sewer lines as well as utility connections. Given that the proposed project ("action") will not result in any potentially significant adverse environmental impacts, the issuance of a negative declaration pursuant to SEQRA is appropriate. Copies of the negative declarations issued by the Town Board pursuant to SEQRA on February 13, 2023 and July 25, 2022 are provided at Attachments "A" and "B" of this Part 1 of the Full EAF.

Exhibit 3 – Part 1 of the Full Environmental Assessment Form Prepared Pursuant to the State Environmental Quality Review Act ("SEQRA") with Attached Page 5[a] and Attachments A, B & C

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Full Environmental Assessment Form
Part 1 - Project and Setting

Prepared By: Sean Hopkins, E
Hopkins Sorgi & McCarthy P
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

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: Proposed Mixed-Use Project		
Project Location (describe, and attach a general location map): 1720, 1740 and 1760 Maple Road - Town of Amherst - Erie County		
Brief Description of Proposed Action (include purpose or need): The proposed action consists of a mixed-use project to be located at 1720, 1740 and 1760 Maple Road ("Project Site") consisting of a four-story mixed-use building with approximately 7,000 sq. ft. of commercial space on the 1st floor, a second four-story multi-family building [total of 107 apartments for lease], 2 two-story townhouse buildings with attached garages [6 unit and 5 unit buildings], 190 parking spaces [149 surface spaces and 41 garage spaces] and related site improvements. The proposed action has been defined broadly to include all required discretionary approvals required from the municipal boards of the Town of Amherst including Site Plan Approval from the Planning Board as well as involved agencies as well as all proposed site improvements including the proposed 2 mixed-use buildings, the townhome buildings, parking spaces, access onto Maple Road, access aisles, landscaping, lighting, an on-site storm water management system, water and sanitary sewer lines as well as utility connections. Given that the proposed project ("action") will not result in any potentially significant adverse environmental impacts, the issuance of a negative declaration pursuant to SEQRA is appropriate. Copies of the negative declarations issued by the Town Board pursuant to SEQRA on February 13, 2023 and July 25, 2022 are provided at Attachments "A" and "B" of this Part 1 of the Full EAF.		
Name of Applicant/Sponsor: PB Investors, LLC, c/o Sean Hopkins, Esq.	Telephone: (716) 510-4338 E-Mail: shopkins@hsmlegal.com	
Address: 5500 Main Street, Suite 343		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): McGuire Acquisitions LLC c/o Michael Blinkoff, Esq. [1760 Maple Road]	Telephone: (716) 332-6104 E-Mail: mblinkoff@blinkoff.com	
Address: 501 John James Audubon Pkwy, Suite 400		
City/PO: Amherst, NY 14228	State: NY	Zip Code: 14228

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	August 21, 2023
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	Zoning Board of Appeals - Area Variances [If needed]	TBD
d. Other local agencies ☑Yes ☐No	Building Department - Building Permits, Eng. Dept. - Stormwater Permit, Possible PILOT - AIDA	TBD
e. County agencies ☑Yes ☐No	ECDPW - Highway Work Permit; ECWA - Water	TBD
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - SPDES and DSCA	TBD
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? [The Project Sponsor is seeking an amendment of the adopted Comprehensive Plan.] ☑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):

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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?
DC5 Deep Corridor 5 ("DC-5"). The Town Board approved the rezoning of the Project Site from Office Building District ("OB") [1760 Maple Road] and Residential District Three ("R-3") [1720 and 1740 Maple Road] on February 13, 2023.

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 Police Department

c. Which fire protection and emergency medical services serve the project site?
Volunteer Fire Department

d. What parks serve the project site?
There are various parks in the Town that will be accessible to the future residents of the mixed-use project.

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)? Mixed-Use Project consisting of first floor commercial space in one of the two-mixed use building along apartments and town home units for lease.

b. a. Total acreage of the site of the proposed action? 5.1 acres
b. Total acreage to be physically disturbed? 4.7 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.1 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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1.a

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				118
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 2 [one mixed-use building that includes 7,000 sq. ft. 1st floor commercial space]

ii. Dimensions (in feet) of largest proposed structure: 55' height; 70' width; and 307 length

iii. Approximate extent of building space to be heated or cooled: 7,000 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: Stormwater management.

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.
Stormwater runoff from impervious surfaces on the Project Site.

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: .5 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):
Excavation and does not constitute a NYSDEC regulated dam.

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☑ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

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): _____

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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:

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: 26,537 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: ECWA Consolidated Water District
- 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: 24,125 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):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No
If Yes:

- Name of wastewater treatment plant to be used: Town of Amherst Waste Water Treatment Plant
- Name of district: Town of Amherst Consolidated Sewer 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

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- 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: _____

Not Applicable.

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 3.0 acres (impervious surface)

_____ Square feet or 5.1 acres (parcel size)

ii. Describe types of new point sources. Runoff from impervious surfaces including parking lots, access aisles, parking spaces and roofs.

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)?

On-site stormwater management system and then into on-site ditch.

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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)

[Note: There are not any jurisdictional wetlands located on the Project Site per the Wetland Investigation Letter of Scott Livingstone of Earth Dimensions, Inc. dated October 12, 2022. A copy of the Wetland Investigation Letter is provided at Attachment "C" of this Part 1 of the Full Environmental Assessment Form.]

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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

[Copies of the Traffic Impact Study prepared by SRF Associates dated August 23, 2022 have been submitted with the Site Plan Application.]

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 _____ Proposed _____ Net increase/decrease _____

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:

_____

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: _____

To be determined [relatively small annual demand for the proposed 7,000 sq. ft. of 1st floor commercial space.]

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

National Grid

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: 7:00 a.m. to 7:00 p.m.
- Saturday: 7:00 a.m. to 5:00 p.m.
- Sunday: As needed
- Holidays: Not applicable

ii. During Operations:

- Monday - Friday: TBD - Commercial Tenants
- Saturday: TBD
- Sunday: TBD
- Holidays: TBD

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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:

There will be temporary and unavoidable short-term noise impacts resulting from the use of construction equipment during the construction of the proposed project.

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:

There will be on-site lighting pursuant to the lighting standards contained in the Zoning Code. Lighting will be directed onto the Project Site and the Project Sponsor will be required to submit a Photometric Plan in connection with the future Site Plan review process for the project.

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

1.a

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): Senior Housing [zoned MFR-7]

ii. If mix of uses, generally describe:

Mixture of uses in the vicinity of the Project Site including commercial uses [retail and offices], multifamily uses and residential uses.

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	0.4	2.5	+ 2.1
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	4.7	0	- 4.7
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Yard and Landscaping	0	2.6	+ 2.6

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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: _____

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:
Millard Filmore Hospital and St. Gregory the Great Church.

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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1.a

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐

- 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? >5 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:

Odessa Silt Loam	72 %
Wayland Soil Complex	24 %
Claverack Loamy Fine Sand	4 %

d. What is the average depth to the water table on the project site? Average: >3 feet

e. Drainage status of project site soils:

☑	Well Drained:	4 % of site
☐	Moderately Well Drained:	_____% of site
☑	Poorly Drained	96 % 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

[Note: There are not any wetlands located on the Project Site. The majority of the Project Site has previously been disturbed.]

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:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters 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: _____
Name - Pollutants - Uses:Ransom Creek, Lower, and tribs – Pathogens;D.O./Oxygen Demand – Recreation;Aquatic Life

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: _____
Typical suburban species _____ _____ _____
_____ _____ _____

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: _____

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 PB Investors, LLC Date August 21, 2023

Signature Sean Hopkins Title Counsel for Project Sponsor

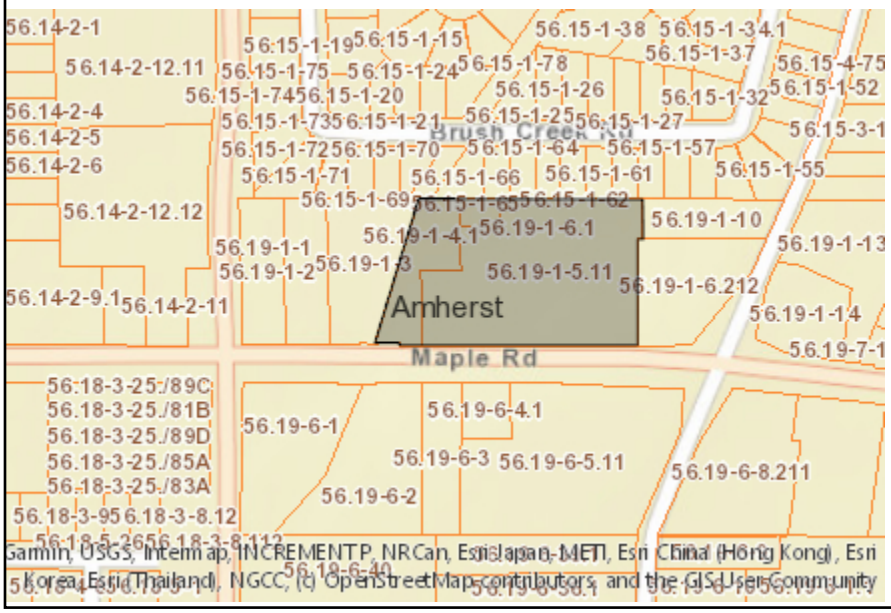
Sean Hopkins, Esq.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PRINT FORM

EAF Mapper Summary Report

Saturday, February 12, 2022 3:21 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]	Yes
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.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Ransom Creek, Lower, and tribs – Pathogens;D.O./Oxygen Demand – Recreation;Aquatic Life
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
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]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM

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	✔	✔			
Wayland soil complex	✔	✔			
Claverack loamy fine sand	✔	✔			

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:
5.18 acres 1720, 1740, 1760 Maple Road [project site]

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 hour upon completion of project 74
Source: Traffic Study by SRF Associates, dated 8/23/22

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:

23,425 average flow 96,563 peak flow.

(Please note that 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.)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment A of Part 1 of the Full Environmental Assessment Form – Negative Declaration Issued by the Town Board Pursuant to SEQRA on February 13, 2023

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard,
Planning Direct

Daniel J. Ulatowski,
Assistant Planning D r

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SEQR

NEGATIVE DECLARATION

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Town Board	**Project**:	Z-2022-08
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date**:	February 13, 2023

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: Rezoning Request.

SEQR Status: Unlisted action.

Description of Action: Rezoning of 5.1± acres of land from Residential District Three (R3) and Office Building District (OB) to Deep Corridor 5 District (DC-5) to allow for the potential future development of a mixed use project consisting of two four-story mixed use buildings totaling 128,800± square feet with 7,000 sq. ft. of commercial space on the first floor, 102 total apartment units for lease in the two four-story mixed use buildings, two two-story townhome buildings with attached garages (11 units) and three ten car garage and an eight space garage

Location: 1720, 1740 & 1760 Maple Road, Town of Amherst, Erie County, New York

Petitioner: MEL Investors, LLC

Reasons Supporting This Determination

Based on information submitted by the applicant, including a Full Environmental Assessment Form (EAF) - Part 1, a complete rezoning application, and concept plan, a preliminary staff analysis was undertaken. Based on the results of the EAF Part 2 and compared to the criteria listed in Section 617.7, all indications are that the proposed rezoning of 5.1 ± acres of land from Residential District Three (R3) and Office Building District (OB) to Deep Corridor 5 District (DC-5) for a proposed mixed-use project consisting of two four-story mixed use buildings totaling 128,800± square feet with 7,000 sq. ft. of commercial space on the first floor, 102 total apartment units for lease in the two four-story mixed use buildings, two two-story townhome buildings with attached garages (11 units) and associated accessory structures and vehicle use areas 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 Town Engineering Department on September 14, 2022 reviewed the application and EAF submitted on August 24, 2022, the Geotechnical Engineering Report prepared by Baron & Associates, PC and submitted on October 7, 2022 and had no objection or adverse comments on the proposed rezoning.

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 Landscape/Tree preservation Plan shall be required of the applicant upon submittal of a site plan application for development of the site at which stage all landscape requirements of the Zoning Ordinance will be met.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The project will comply with all regulations of the Town Zoning Ordinance before final site plan approval is granted. The Town Building Department on September 13, 2022 reviewed the application and EAF submitted on August 24, 2022, and has no objection or comments on the proposed rezoning.

4. The project is within an area identified by the State as potentially containing significant cultural or archeological resources. The site was formerly occupied by three single family homes and contains a large area of pavement previously used for parking and is being considered to be largely disturbed. The NYS Office of Parks, Recreation, Historic Preservation will review the project at site plan or before any further site disturbance and determine that there will be no impact on these resources.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The subject request is for rezoning from to R-3 & OB to DC-5. Neighboring uses are detached single family homes to the north and west zoned R-3, a medical office building to the east zoned OB and three story apartment building and two single family residences to the south zoned Multi-Family Residential District Seven (MFR-7) and R-3 respectively; therefore, the project is consistent with surrounding land use.

6. The proposed rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will not cause a major change in the use of either the quantity or type of energy.

7. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will not create any hazard to human health. The Fire Chiefs Association on December 7, 2022 has reviewed the project and has no objection or adverse comments on the proposed rezoning.

8. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will cause a substantial change in the use, and intensity of use of land.

9. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will increase the number of people using the site over its previous level of use.

10. Review of the application and EAF submitted on August 24, 2022, by the Traffic Impact Study prepared by SRF Associates dated August 23, 2022 and submitted on August 25, 2022 to the Town Traffic/Safety Board on September 12, 2022, Erie County Dept. of Public Works –Highways Division on October 10, 2022, indicate that significant negative traffic impacts are not expected to result from the proposed project.

11. Coordinated reviews of the project have been undertaken by Town Departments including Building on September 13, 2022, Engineering on September 14, 2022, Traffic/Safety Board on September 12, 2022, Assessor on September 13, 2022, Fire Chiefs Assocation on Decemer 7, 2022, and Right-of-Way Agent on September 14, 2022 along with outside agencies including Williamsville Central School District on September 13, 2022, Erie County Department of Environment & Planning on October 20, 2022, and Erie County Dept. of Public Works –Highways Division on October 10, 2022. These reviews have not identified any significant environmental issues and indicate that the proposal will not have a significant damaging impact on the environment.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 be causing significant negative environmental impacts.

Scott Marshall, Principal Planner — date 2/15/2023

Brian J. Kulpa, Supervisor — date 2/15/23

SM/ac
X:\Current_Planning\Files\Rezonings\2022\Z-2022-08_(1720_1740_&_1760_Maple_Rd)_2022\Z-2022-08_TB neg dec 021323.docxcc:
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
MEL Investors, LLC, 6790 Main St., Ste. 100, Amherst, NY 14221
Sean W. Hopkins, Hopkins Sorgi & McCarthy, PLLC, 5500 Main St., Ste. 343, Williamsville, NY 14221
Christopher Wood, Carmina Wood Design, 487 Main St., Ste. 500, Buffalo, NY 14203

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment B of Part 1 of the Full Environmental Assessment Form – Negative Declaration Issued by the Town Board Pursuant to SEQRA on July 25, 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard, A
Planning Director

Daniel J. Ulatowski, A
Assistant Planning Dir

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SEQR

NEGATIVE DECLARATION

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency: Town of Amherst
Town Board
Address 5583 Main Street
Williamsville, NY 14221
(716) 631-7051

Project: BCPA-2022-02

Date: July 25, 2022

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: Bicentennial Comprehensive Plan Amendment Request.

SEQR Status: Type 1

Description of Action: Request to Amend Figure 6 and Figure 6A of the Bicentennial Comprehensive Plan from "Commercial-Office" to "Commercial / Mixed Use" to permit the consideration of a subsequent rezoning request for 5.1 ± acres of land for a proposed mixed-use project.

Location. 1720, 1740 & 1760 Maple Road, Town of Amherst, Erie County, New York

Petitioner: PB Investors, LLC

Reasons Supporting This Determination

Based on information submitted by the applicant, including a Full Environmental Assessment Form (EAF) - Part 1, a complete Bicentennial Comprehensive Plan Amendment application, concept plan and building elevations, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that the proposed designation of 5.1 ± acres of land in the Bicentennial Comprehensive Plan from Commercial-Office to Commercial / Mixed Use to permit consideration of a subsequent rezoning request for a proposed mixed-use project will not have a significant impact on the environment, as follows:

1. The proposed change in the Town's future land use plan from "Commercial-Office" to Commercial/Mixed-Use" for a portion of lands along the north side of Maple Road, west of Ayer Road is not expected to cause substantial adverse changes in 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. Any potential impacts will be evaluated and mitigated for during a review of a specific site project when a petition is filed.

2. Changing the future land use designation for mixed-use will not result in the potential for greater vegetative losses than in the current commercial-office designation. Significant adverse impacts to fish or wildlife species, habitats or other natural resources are not anticipated. Any potential impacts will be mitigated for during an evaluation of a specific site project when a petition is filed, including opportunities for preservation of existing vegetation.

3. The action is an amendment to the Town' comprehensive plan to permit the inclusion of other lands beyond those what the current plan in Figure 6A designates. The Town's Comprehensive Plan, section 3.3.2 requires a plan amendment process to permit the expansion of the mixed-use areas beyond what is currently designated on Figure 6A Therefore, the action is consistent with such comprehensive plan requirement.

4. The geographic area of the plan amendment includes an area identified by the State as potentially containing significant cultural or archeological resources. Any potential impacts to cultural resources will be mitigated for during an evaluation of a specific site project when a petition is filed. The NYS Office of Parks Recreation and Historic Preservation will be consulted prior to any site disturbances.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

5. The change in the future land use plan designation from Commercial-Office to Commercial/Mixed-use will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. During an evaluation of a specific site project when a rezoning request and site plan is filed, impacts to community character will be evaluated and mitigated for, including overall scale of buildings, building height, building design and compatibility with neighborhood character.

6. The change in the future land use plan designation from Commercial-Office to Commercial-Mixed-use will not cause a change in the use of either the quantity or type of energy.

7. The change in the future land use plan designation will not cause a hazard to human health.

8. The change in the future land use plan designation may cause a substantial change in the use, or intensity of land use within the subject geographic area of the Town. Further inclusion of other nearby lands to permit mixed-use should be evaluated to determine the capacity to support further intensification of land use.

9. The change in the land use designation from Commercial-Office to Commercial/Mixed-use will significantly increase the number of people that could use or occupy the subject geographic area.

10. Coordinated reviews of the proposed change have been undertaken by Town Departments including Building on April 1, 2022, Engineering on April 7, 2022, Traffic/Safety Board on April 4, 2022, and Assessor on April 5, 2022. The Engineering Department has indicated that there may be downstream sanitary sewer capacity constraints which must be analyzed to determine the viability of the project. The Town Traffic Safety Coordinator has indicated that a traffic safety study may be warranted and that pedestrian safety improvements are needed at the adjacent road intersection of Maple and Ayer Roads. These can be evaluated more effectively when a specific site project petition is filed.

11. 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 be causing significant negative environmental impacts.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

ASST. PLANNING DIR. 7/25/2022
Signature & title of preparer date

Brian J. Kulpa, Supervisor 7/28/22
date

SM/ac
X:\Current_Planning\Files\Bicentennail Comp Plan Amends\2022\BCPA-2022-02_(1720_1740_&_1760_Maple_Rd)_2022\BCPA-2022-02_TB_Neg_Dec_072522.docx
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
Paul Bliss, PB Investors, LLC, 6790 Main St., Ste. 100, Amherst, NY 14221
Scan W. Hopkins, Esq. Hopkins Sorgi & McCarthy, 5500 Main St., Ste. 343, Williamsville, NY 14221
Michael Blinkoff, Esq., 501 John James Audubon Pkwy, Amherst, NY 14068

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment C of Part 1 of the Full Environmental Assessment Form – Wetland Investigation Letter of Scott Livingstone of Earth Dimensions, Inc. dated October 12, 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

EARTH DIMENSIONS, INC.
* Soil & Hydrogeologic Investigations * Wetland Delineations
1091 Jamison Road, Elma NY 14059
(716) 655-1717 * Fax (716) 655-2915 www.earthdimensions.com

October 12, 2022 W3J22

Paul Bliss
PB Investors LLC
6790 Main Street, Suite 100
Williamsville, New York 14221
716-204-2910

Re: Preliminary Wetland Investigation - ±5.17 acres
1720, 1740 & 1760 Maple Road
Town of Amherst, Erie County, New York

Dear Mr. Bliss:

Earth Dimensions, Inc. (EDI) has completed a preliminary wetland investigation at the above referenced site for the purpose of identifying potential regulated wetlands and waterways. The site investigation was conducted on October 10, 2022. EDI did not identify any wetland as defined by the U.S. Army Corps of Engineers (USACE) wetland delineation manuals.

The New York State Department of Environmental Conservation (NYSDEC) On-line Resource Mapper (attached) indicates the 500-foot "check zone" to Freshwater Wetland LA-3 encroaching on the southeast corner of the subject property. However, it is EDI's professional opinion that NYSDEC has no jurisdiction over any wetland or 100-foot upland adjacent area on the site because the mapped wetland is separated from the site by Maple Road and development on the south side of Maple Road.

Based on this site investigation, it is our professional opinion that the project may move forward without the need for a Section 404 permit from USACE or an Article 24 permit from NYSDEC.

If you have any questions, please contact our office at (716) 655-1717 or email slivingstone@earthdimensions.com.

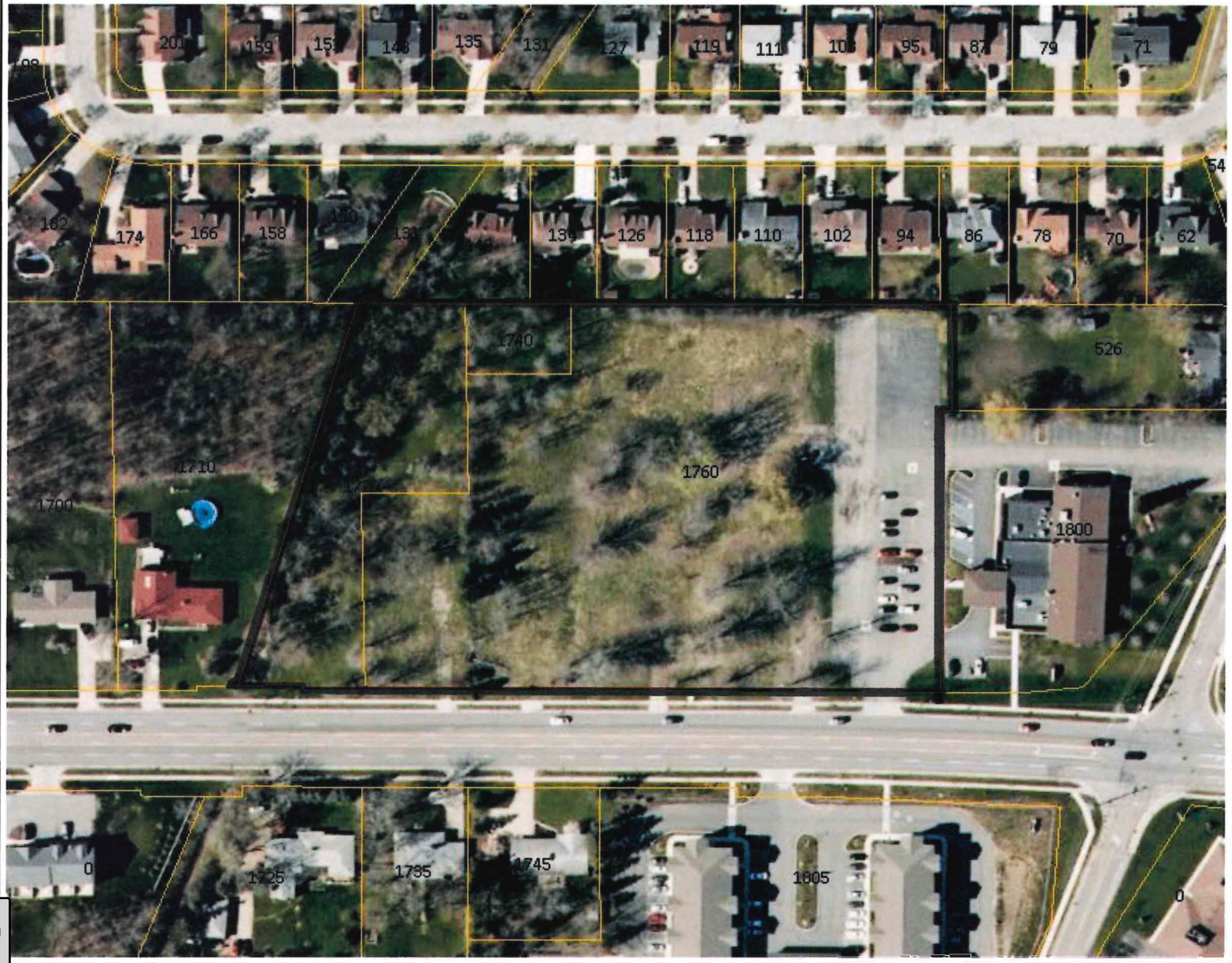
Very truly yours,
Earth Dimensions, Inc.

Scott J. Livingstone
Wetlands Operations Manager

Encl.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.04 0.1 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: 2,257

Environmental Resource Mapper



October 7, 2022

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NYS Department of Environmental Conservat
Not a legal docum

Exhibit 4 – Legal Description of Project Site

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

EXHIBIT 4

LEGAL DESCRIPTION OF PROJECT SITE

LEGAL DESCRIPTION OF 1760 MAPLE ROAD:

ALL THAT TRACT OR PARCEL OF LAND, situate in the Town of Amherst, County of Erie and State of New York, being part of Lot 92, Township 12, Range 7 of the Holland Land Company's Survey Purchase, bounded and described as follows:

BEGINNING at a point in the northerly line of Maple Road as now laid out, a distance of 455 feet easterly from the west line of said Lot Number 92 Township 12 Range 7 as measured along the northerly line of Maple Road as now laid out; Thence northerly, parallel with the west line of Lot Number 92, a distance of 188.00 feet to a point; Thence easterly, parallel with the north line of Maple Road, a distance of 100.00 feet to a point; Thence northerly, parallel with the west line of Lot Number 92, a distance of 112.00 feet to a point; Thence easterly, parallel with the north line of Maple Road, a distance of 100.00 feet to a point; Thence northerly, parallel with the west line of Lot Number 92, a distance of 68.88 feet to a point in a line 849.42 feet northerly of and parallel with the southerly line of Lot 92; Thence easterly along the said line, a distance of 360 feet to a point; Thence southerly, parallel with the west line of Lot Number 92, a distance of 100.18 feet to a point; Thence westerly at an interior angle of 88°33'33", a distance of 4 feet to a point; Thence southerly at an exterior angle of 89°50'01 ", a distance of 269.29 feet to the northerly line of Maple Road; Thence westerly along the northerly line of Maple Road, a distance of 550.00 feet to the True Point and Piace of Beginning. Parcel containing 4.13 Acres of land, more or less.

LEGAL DESCRIPTION OF 1720 and 1740 MAPLE ROAD:

PARCEL "A"

ALL THAT TRACT OR PARCEL OF LAND, situate in the Town of Amherst, County of Erie, and State of New York, being part of Lot No. ninety-two (92), Township twelve (12), Range seven (7) of the Holland Land Company's Survey and further distinguished as Subdivision Lot No. six (6) asshown on a map filed in Erie County Clerk's Office under Cover No. 1851.

EXCEPTING therefrom that part conveyed to the County of Erie for highway purposes by deedrecorded in Erie County Clerk's Office in Liber 7327 of Deeds at page 371. Also excepting that part conveyed to Evangel Assembly of God by deed recorded in the Erie County Clerk's Office in Liber 9665 of deeds, page 149.

PARCEL "B"

ALL THAT TRACT OR PARCEL OF LAND, situate in the Town of Amherst, County of Erie, and State of New York, being part of Lot Number 92, Township 12, Range 7 of the Holland LandCompany's Survey being bounded and more particularly described as follows:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

COMMENCING at a point on the northerly line of Maple Road which is 330 feet east of the westerly line of said Lot 92 as measured along the northerly line of Maple Road; running thence easterlyalong the northerly line of Maple Road a distance of 125 feet to the westerly boundary of Subdivision Lot No. 5 as shown on map filed in the Erie County Clerk's Office under Cover No. 1851; running thence north at right angles along the westerly line of said Subdivision Lot No. 5 a distance of 200 feet to a point, running thence easterly at right angles to the last described course and parallel with Maple Road a distance of 100 feet to a point on the easterly line of said Subdivision Lot No. 5; running thence northerly along said easterly line of Subdivision Lot No. 5 a distance of 180.69 feet to a point in the northerly line of said Cover No. 1851; running thence westerly along the north line of Map Cover No. 1851 and parallel to Maple Road a distance of 100 feet to a point in the westerly line of said SubdivisionLot No. 5; running thence southwesterly in a straight line a distance of 400.49 feet more or less to the point or place of beginning.

EXCEPTING therefrom lands conveyed to the County of Erie by deed recorded January 24th, 1968 in Liber 7437 of Deeds, page 592.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 5 – Reduced-Size Copy of Survey of the Project Site

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

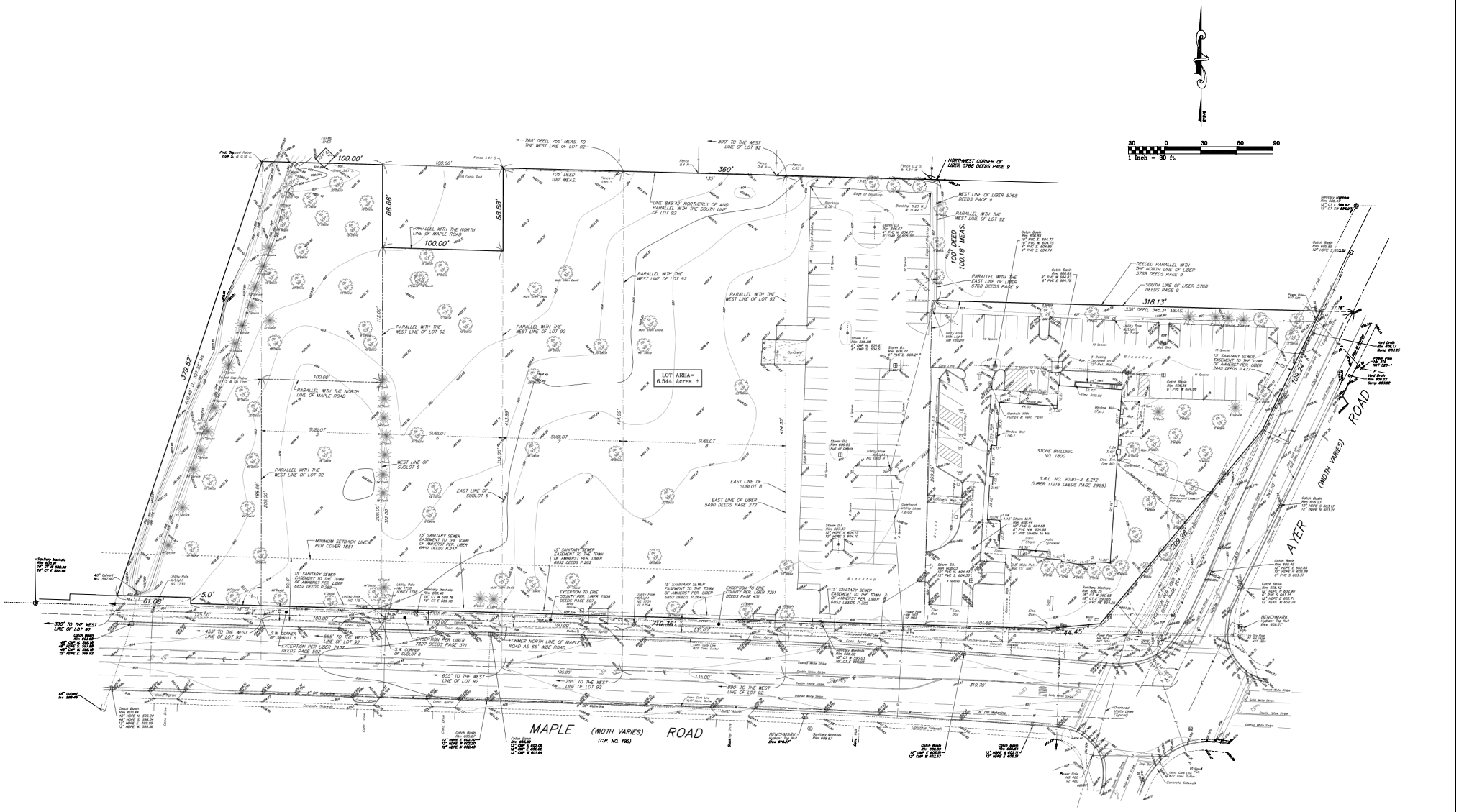
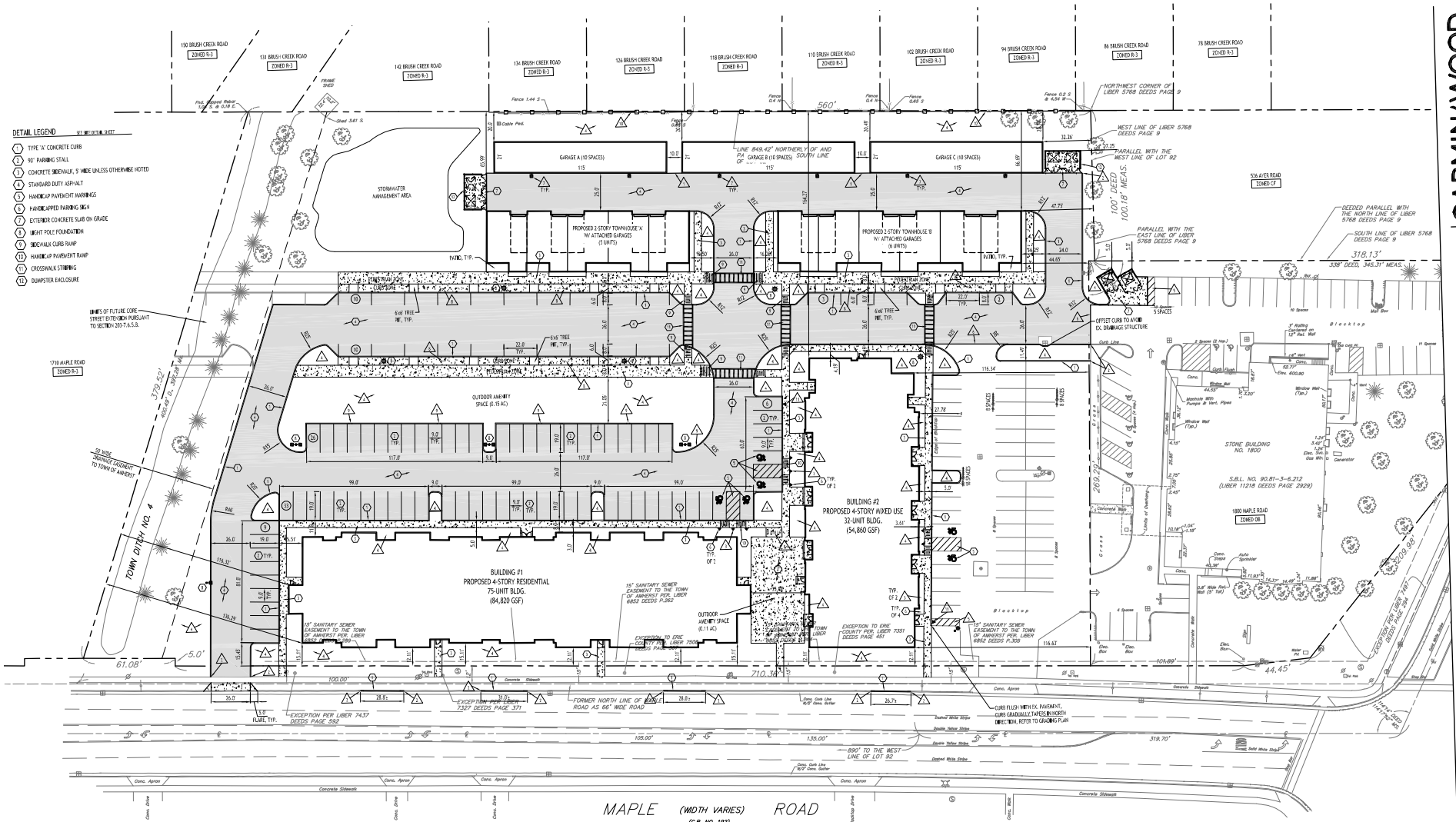

1 Inch = 30 ft.
MAPLE (WIDTH VARIES) ROAD
(C.H. NO. 192)
AYER ROAD (WIDTH VARIES)
LOT AREA=
6.544 Acres ±
NORTHWEST CORNER OF LIBER 5768 DEEDS PAGE 9
760' DEED, 755' MEAS. TO THE WEST LINE OF LOT 92
890' TO THE WEST LINE OF LOT 92
105' DEED 100' MEAS.
100' DEED 100.18' MEAS.
LINE BAR 43' NORTHERLY OF AND PARALLEL WITH THE SOUTH LINE OF LOT 92
PARALLEL WITH THE NORTH LINE OF MAPLE ROAD
PARALLEL WITH THE WEST LINE OF LOT 92
PARALLEL WITH THE EAST LINE OF LIBER 5768 DEEDS PAGE 9
DEEDED PARALLEL WITH THE NORTH LINE OF LIBER 5768 DEEDS PAGE 9
SOUTH LINE OF LIBER 5768 DEEDS PAGE 9
338' DEED, 345.31' MEAS.
318.13'
379.52'
68.68'
68.88'
100.00'
SUBLOT 5
SUBLOT 6
SUBLOT 7
SUBLOT 8
WEST LINE OF SUBLOT 6
EAST LINE OF SUBLOT 6
EAST LINE OF SUBLOT 8
EAST LINE OF LIBER 5490 DEEDS PAGE 272
MINIMUM SETBACK LINE PER COVER 1851
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.247
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.289
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.262
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.264
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.305
15' Storm EXCEPTION TO ERIE COUNTY PER LIBER 7508 DEEDS PAGE 507
EXCEPTION TO ERIE COUNTY PER LIBER 7351 DEEDS PAGE 451
EXCEPTION PER LIBER 7437 DEEDS PAGE 371
EXCEPTION PER LIBER DEEDS PAGE 592
FORMER NORTH LINE OF MAPLE ROAD AS 66' WIDE ROAD
330' TO THE WEST LINE OF LOT 92
455' TO THE WEST LINE OF LOT 92
555' TO THE WEST LINE OF LOT 92
655' TO THE WEST LINE OF LOT 92
755' TO THE WEST LINE OF LOT 92
890' TO THE WEST LINE OF LOT 92
S.W. CORNER OF SUBLOT 5
S.W. CORNER OF SUBLOT 6
61.08'
5.0'
710.36'
44.45'
209.98'
108.24'
319.70'
STONE BUILDING NO. 1800
S.B.L. NO. 90.81-3-6.212
(LIBER 11218 DEEDS PAGE 2929)
BENCHMARK
Elev. 613.23'
Sanitary Manhole Rim 625.21 12" CI E 598.86 12" CI E 598.86
48" Culvert Inv. 597.90
48" Culvert Inv. 599.69
Catch Basin Rim 625.80 48" CMP S 596.29 48" HDPE S 596.34 48" HDPE S 599.69 12" HDPE W 599.58
Catch Basin Rim 625.21 12" HDPE S 602.04 12" HDPE S 602.40
Catch Basin Rim 625.08 12" CMP S 602.08 12" CMP S 602.48
Catch Basin Rim 625.63 12" HDPE S 602.88 12" HDPE E 602.83
Catch Basin Rim 625.42 12" HDPE S 602.90 12" PVC S 603.25 12" PVC E 602.71 12" HDPE W 602.78
Catch Basin Rim 625.23 12" HDPE S 603.17 12" HDPE W 603.21
Catch Basin Rim 625.80 12" HDPE S 603.17 Sump 602.05
Yard Drain Rim 626.17 Sump 602.65
Yard Drain Rim 626.12 INV 620.1
Yard Drain Rim 626.12 Sump 602.62
Catch Basin Rim 626.77 12" HDPE S 604.77 4" PVC S 604.76 4" PVC S 604.74
Catch Basin Rim 626.85 12" HDPE S 603.58
Catch Basin Rim 626.83 8" PVC E 604.83 4" PVC S 604.78
Catch Basin Rim 626.88 8" PVC N 604.83 8" CMP S 604.51
Storm D.I. Rim 626.77 8" PVC E 605.21
Storm D.I. Rim 626.73 8" PVC N 604.51 8" CMP S 604.31
Storm D.I. Rim 626.77 4" PVC E 604.77 8" CMP S 603.25
Catch Basin Rim 626.64 12" HDPE S 603.17 12" HDPE W 603.21
Catch Basin Rim 626.56 8" PVC W 604.90
Storm D.I. Rim 626.64 12" HDPE W 604.58 8" PVC Unable to Ms.
Storm D.I. Rim 626.64 12" HDPE W 604.15 12" HDPE S 604.10
Storm M.H. Rim 626.64 18" CI E 598.65 18" CI S 598.45 12" PVC W 598.45 12" HDPE W 604.29
Storm D.I. Rim 626.58 12" PVC N 604.53 12" PVC S 604.33
Storm D.I. Rim 626.43 12" PVC S 604.23 4" PVC S 604.18
Sanitary Manhole Rim 626.60 18" CI E 596.65 18" CI S 596.45 12" PVC S 603.25 12" PVC E 602.71 12" HDPE W 602.78
Sanitary Manhole Rim 626.66 18" CI E 590.65 18" CI S 590.45 12" HDPE S 590.55 12" HDPE W 594.05
Sanitary Manhole Rim 626.67
Sanitary Manhole Rim 626.17 12" CI E 594.87 18" CI S 594.67
Catch Basin Rim 625.85 12" HDPE S 603.58
Power Pole HOT 620
Utility Pole with Light HW 585.09
Utility Pole HW 1730 WIRES 1745
Utility Pole NO 1731
Utility Pole NO 1729
Utility Pole HW 1726
Utility Pole NO 1728
Utility Pole HW 1727
Utility Pole NO 1732
Utility Pole HW 1733
Utility Pole NO 1734
Utility Pole NO 1735
Utility Pole NO 1736
Utility Pole NO 1737
Utility Pole NO 1738
Utility Pole NO 1739
Utility Pole NO 1740
Utility Pole NO 1741
Utility Pole NO 1742
Utility Pole NO

Exhibit 6 - Reduced-Size Copy of the Site Plan [Drawing C-100]

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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Site Data

SITE AREA = 5.18 AC
ZONED: DC - 5
USE: PROPOSED 4-STORY MIXED USE BUILDING, 4-STORY MULTI-FAMILY BUILDING, 5 & 6 UNIT 2-STORY TOWNHOME BLDG WITH ATTACHED GARAGES

	REQUIRED	PROVIDED
SETBACKS - BUILDING		
FRONT	5 FT.	12.1' MIN.
SIDE (< 3 STORIES / > 3 STORIES)	30 FT/60 FT	44.65' MIN. / 116.32' MIN.
REAR (< 3 STORIES / > 3 STORIES)	30 FT/60 FT	66.69' / 164.27' MIN.
ACCESSORY STRUCT.	20 FT	20 FT MIN.
SETBACKS - PARKING		
FRONT	10 FT.	15.45 FT. MIN.
SIDE	N/A	> 10 FT.
REAR	N/A	> 10 FT.
E SPACES	143	149 + 41 GAR. = 190
CLE STATION	33	34
	2	2
ING GREENSPACE:	5% (0.1 AC)	12.5% (0.25 AC)
	N/A	38% (2.0 AC)
G HEIGHT	5 stories / 75'	4 stories / 50'
ENITY SPACE	5% (0.26 AC)	5% (0.26 AC)

PARKING CALCULATION (per Section 5A-9-1-4)

RETAIL SALES: (3,500 GSF)
REQD: 2.5 per 1,000 sf
REQD = (3,500 / 1,000) x 2.5 = 9 SPACES REQD

OFFICE: (3,500 GSF)
REQD: 2.5 per 1,000 sf
REQD = (3,500 / 1,000) x 2.5 = 9 SPACES REQD

APARTMENTS/TOWN-HOMES:
REQD: 1 space per 1/2-bdrm unit = 1 x 105 units = 105 spaces
1.5 space per 3+brm unit = 1.5 x 13 units = 20 spaces
REQD = 125 SPACES REQD

TOTAL PARKING SPACES REQUIRED = 143 SPACES

BICYCLE CALCULATION (per Section 5A-9-1-4)

RESIDENTIAL:
REQD: 0.5 per UNIT (20 max.)
REQD = 0.5 x 118 = 59 therefore 20 SPACES REQD.

COMMERCIAL:
REQD: 1 space per 3,000 sf
REQD = 7,000/ 3,000 = 3 SPACES REQD

TOTAL BICYCLE SPACES REQUIRED = 23 SPACES

ELECTRIC VEHICLE CALCULATION (per Section 5A-9-1-D)

1% OF TOTAL PARKING = 190 x 0.01 = 2 SPACES REQD.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURERS RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNERS APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THE WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
10. SANITARY SEWER EASEMENTS SHOWN ARE APPROXIMATE BASED ON RECORD PLANS PROVIDED BY TOWN OF AMHERST ENGINEERING DEPARTMENT. SURVEYOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

Site Plan

SCALE: 1"=30'

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
6. ALL HANDICAP RAMPS (NOT WITHIN THE NYSDOT R.O.W.) AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPS WHERE ENTERING PARKING AREAS/DRIVEWAYS. SIDEWALKS FLUSH TO PAVEMENT WITHIN THE NYSDOT R.O.W. SHALL ADHERE TO THE NOTES AND DESIGN REGULATIONS AS STATED ON NYSDOT STANDARD SHEET 608-01.

NOTE LEGEND

1 EDGE OF PAVEMENT
2 RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3 INSTALL "NO PARKING SIGN, M.U.T.C.D. SIGN NO. R7-1C
4 LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
5 4" WIDE WHITE PAINT STRIPE @ 45° & 2' O.C., INFILL AREA AS SHOWN
6 MATCH EX. PAVEMENT, SAWCUT AS REQ'D TO ACHIEVE SQUARE EDGE TO MATCH
7 WALL PACK LIGHT, REFER TO LIGHTING PLAN LP-100
8 BIKE RACK, BELSON OUTDOORS "U-RACK" OR APPROVED EQUAL
9 2' CUT OUT IN CURBING
10 6' HT. WHITE VINYL FENCE
11 ELECTRIC VEHICLE CHARGING STATION

SITE LEGEND

PROPERTY LINE
PROPOSED SIDEWALK / CONCRETE PAD
NUMBER OF PARKING SPACES
PROPOSED SIGN
PROPOSED STANDARD DUTY ASPHALT PAVEMENT
PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR IT'S ACCURACY.

30 0 30 60FT.

CARMINAWOOD DESIGN
111 Bain Street, Suite 332
Greensboro, North Carolina 27406
Phone: (336) 937-0099

487 Main Street, Suite 500
Buffalo, New York 14203
Phone: (716) 842-1165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:
No. Description Date

DRAWING NAME:
Site Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-100

Project No. 20230

Packet Pg. 54

1.a

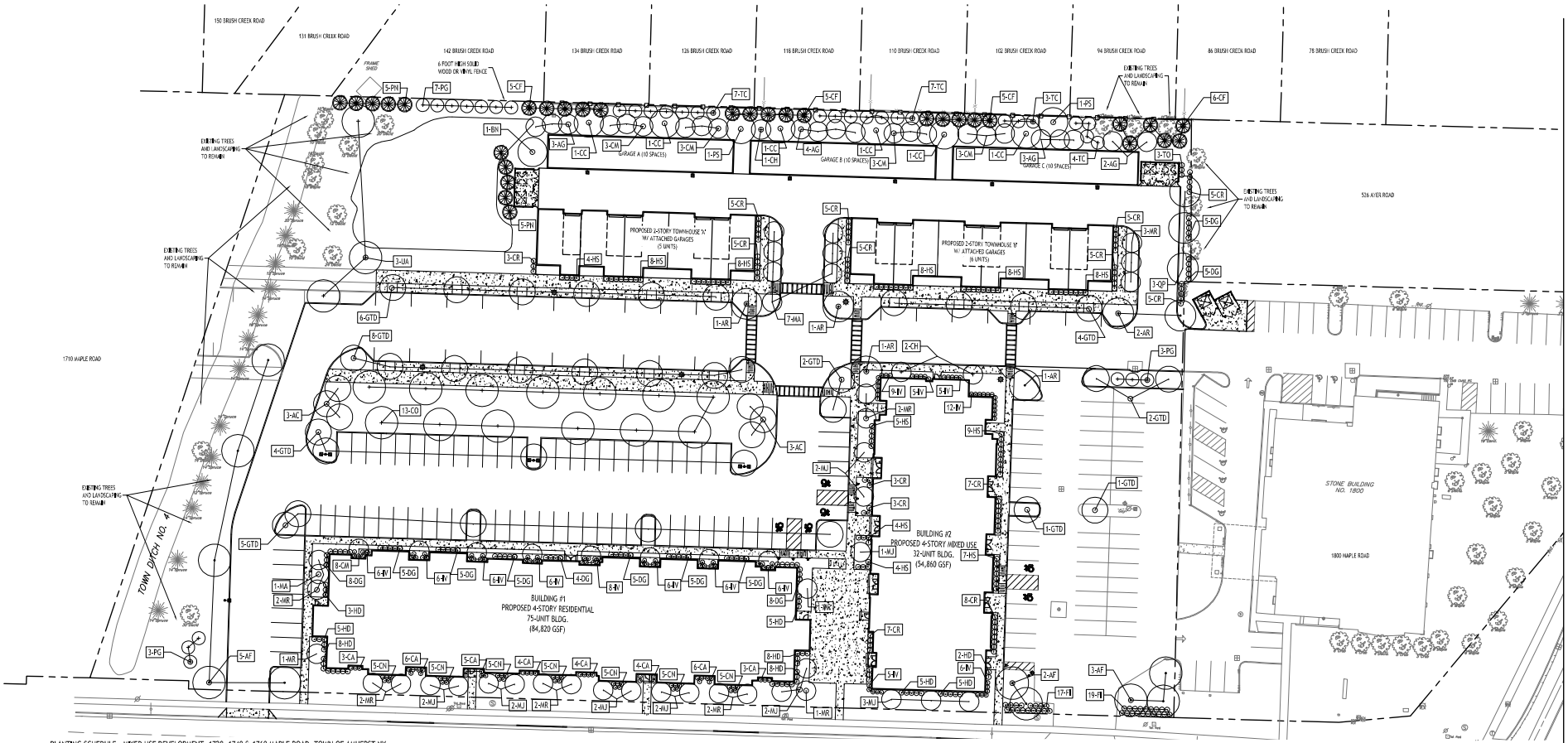
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 7 - Reduced-Size Copy of the Landscape Plan [Drawing L-100]

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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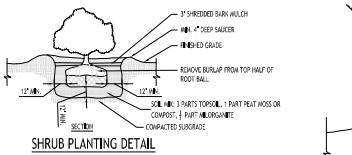
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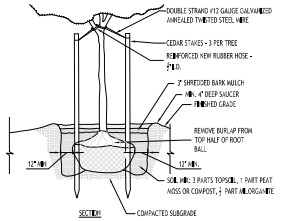
PLANTING SCHEDULE - MIXED USE DEVELOPMENT, 1720, 1740 & 1760 MAPLE ROAD, TOWN OF AMHERST NY

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
AF	10	ACER x FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	2–1/2" – 3" CAL.	B&B
AG	12	GINKGO BIOBA	GINKGO "AUTUMN GOLD"	2 1/2" – 3" CAL.	B&B
AR	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	1 1/2" – 2" CAL.	B&B
BN	1	BETULA NIGRA 'DULLY'	HERITAGE RIVER BIRCH	10'–12' HT.	MIN. MULTI-STEM (3-MIKE MIN)
CC	6	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2" – 3" CAL.	B&B
CO	13	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE'	PRAIRIE PRIDE HACKBERRY	2 1/2" – 3" CAL.	B&B
GTD	33	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	DRAVES THORNLESS HONEYLOCUST	2 1/2" – 3" CAL.	B&B, HT. OF 45' & 20' WIDE
PS	2	PRUNUS SEROTINA	BLACK CHERRY	2 1/2" – 3" CAL.	B&B
QP	3	QUERCUS PALUSTRIS	PIN OAK	2 1/2" – 3" CAL.	B&B
TC	21	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LITTLELEAF LINDEN	2 1/2" – 3" CAL.	B&B
UA	3	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON ELM	2 1/2" – 3" CAL.	B&B
		SMALL/ORNAMENTAL TREES			
AC	6	AMELANCHIER CANADENSIS	SERVICEBERRY	7' – 8' HT.	B&B, MULTI-STEM
CH	3	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1 3/4" – 2" CAL.	B&B, THORNLESS
CM	20	CERCIS CANADENSIS 'MERLOT'	MERLOT EASTERN REDBUD	1–3/4" – 2" CAL.	B&B
MA	8	MALUS 'ADIRONDACK'	ADIRONDACK FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MJ	18	MALUS 'RED JEWEL'	RED JEWEL FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MR	17	MALUS 'ROYAL RAINDROPS'	ROYAL RAINDROP CRABAPPLE	1–3/4" – 2" CAL.	B&B, 15' WIDE
		EVERGREEN TREES			
CF	21	ABIES CONCOLOR	CONCOLOR FIR	5' – 6' MIN. HT.	B&B, FULL TO GROUND
PG	13	PICEA GLAUCA	WHITE SPRUCE	5 ' –6' MIN. HT.	B&B, FULL TO GROUND
PN	10	PINUS RESINOSA	RED PINE	5' – 6' MIN. HT.	B&B, FULL TO GROUND
TC	11	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LITTLELEAF LINDEN	2–1/2" – 3" CAL.	B&B
		SHRUBS			
CN	35	CALLICARPA X 'NCCX2'	PEARL GLAM BEAUTYBERRY	24" HIGH MIN.	NO. 3 CONT
CR	76	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1–3/4" – 2" CAL.	B&B, THORNLESS
DQ	60	DIERVILLA 'G2XBB644'	KODIAK ORANGE DIERVILLA	24" HT MIN., NO. 3 CONT.	
FI	36	FORSYTHIA X INTERMEDIA 'KOLGOLD'	MAGICAL GOLD FORSYTHIA	24" HIGH MIN.	NO. 3 CONT.
HD	47	HYPERICUM X 'DEPPE'	SUNNY BOULEVARD HYPERICUM	24" HIGH MIN.	NO. 5 CONT.
HS	78	HYDRANGEA SERRATA 'SWMAKTSR'	TUFF STUFF RED HYDRANGEA	24" HIGH MIN.	B&B
IV	92	ITEA VIRGINICA 'SMNVOFC'	SCENTLANDIA SWEETSPIRE	18" HIGH MIN.	NO. 3 CONT.
TO	3	THUJA OCCIDENTALIS 'ART BOE'	NORTH POLE ARBORVITAE	4' HIGH, NO. 3 CONT.	B&B, FULL TO GROUND
		ORNAMENTAL GRASS			
CA	35	CALAMAGROSTIS X ACUTIFOLA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 3 CONT.	

NOTES:
1. EVERGREEN TREE HEIGHT SHALL BE MEASURED FROM THE BOTTOM OF LEADER.
2. ORNAMENTAL GRASSES SHOULD BE PRUNED BACK IN LATE FALL OR EARLY SPRING, TO ALLOW FOR NEW FOLIAGE TO GROW IN SPRING.
3. ALL PLANTING BEDS & TREE PITS SHALL RECEIVE A MIN. 3" DEPTH OF DARK SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE CALLED OUT ON PLANS.



SHRUB PLANTING DETAIL



TREE PLANTING DETAIL

N Landscape Plan
SCALE: 1"=30'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30' 10 0 30 60FT.

CARMINAWOOD DESIGN
111 Main Street, Suite 332
Hamburg, New York 14075
Phone: (336) 937-0909

487 Main Street, Suite 300
Buffalo, New York 14203
Phone: (716) 842-1165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:
No. Description Date

Robert C. Walter, RLA
Registered Landscape Architect
American Society of Landscape Architects
3765 Dodge Road, East Amherst, NY 14051-2113
Phone: 716-634-4704
RCWLandscapeArchitect@gmail.com

DRAWING NAME:
Landscape Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
L-100

Project No:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 8 - Copy of Resolution No. 2022-1172 as Adopted by the Town Board on February 13, 2023

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst Town Board
5583 Main Street
Williamsville, NY 14221
www.amherst.ny.us

Francina J. Spoth
Town Clerk

Meeting: 02/13/23 07:00 PM
Department: Town Clerk
Initiated by: **Timothy Koller**
Co-Sponsored by:

DOC ID: 26797 **RESOLUTION 2022-1172** **ROLL CALL VOTE (ADOPTED AS AMENDED)**

Adoption of Local Law to Amend the Zoning Map 1720, 1740 & 1760 Maple Road (Z-2022-08)

RESOLVED, that pursuant to 6NYCRR Part 617 (SEQR) and Town Code Section 104, as amended, that the requirements of SEQR have been completed, and be it further

RESOLVED, that pursuant to NYS Town Law Sec.272-a, the Town Board concurs with the findings of the Planning Board as stated in their resolution of November 17, 2022 that the proposed Deep Corridor 5 District (DC-5) zoning at 1720, 1740 and 1760 Maple Road is consistent with the adopted Bicentennial Comprehensive Plan, as amended, and be it further

RESOLVED, that in accordance with Section 203-8-3 of the Town Code (Zoning), the Town Board adopts Local Law (_____#) to amend the Town Zoning map subject to the conditions as recommended by the Planning Board

1. That smaller scale residential uses 1 to 2 stories in height, a maximum of 35 feet in height above finished grade be provided between any proposed buildings along Maple Road and the detached single family homes located to the north of the subject parcels.

2. That any proposed buildings be designed to achieve a harmonious transition with surrounding uses and the overall neighborhood. Such design shall be reviewed by the Design Advisory Board.

3. That any mixed-use buildings be located no closer than 150 feet to the residential properties to the north, not exceed 4 stories and a maximum of 60 feet in height from finished grade.

4. That accessory drive-thru facilities be prohibited.

5. That cannabis dispensaries and cannabis consumption cafes be prohibited.

12/12/2022
A motion to open the public hearing was made by Supervisor Kulpa, seconded by Councilmember Bucki and unanimously approved 4-0. The public hearing was opened at 7:20 PM.

Attorney Sean Hopkins presented.

The following speakers addressed the Town Board and spoke in opposition:
Bob Divita, 1725 Maple Rd
David Saia, 70 Hamlin Sq Unit 5
Erie County Legislator Jeanne Vinal
Debra Norton, 145 Northington Dr

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Joanne Wylie, 1683 Maple Rd Unit C
Karen Sterman, 1689 Maple Rd Unit Unit B

There were no further speakers from the public, therefore Supervisor Kulpa moved to close the hearing and set a decision date for the January 17th Town Board meeting, seconded by Councilmember Lavin and unanimously approved 4-0. The public hearing was closed at 8:27 PM.

2/13/2023

A motion to approve was made by Supervisor Kulpa and seconded by Councilmember Berger. A motion to amend was made by Supervisor Kulpa, seconded by Councilmember Berger and unanimously approved 5-0. Amendment adds the underlined language. A motion to approve as amended was made by Supervisor Kulpa, seconded by Councilmember Berger and approved 4-1 (nay, Bucki).

RESULT:	**ROLL CALL VOTE (ADOPTED AS AMENDED) [4 TO 1]**
MOVER:	Brian J. Kulpa, Supervisor
SECONDER:	Jacqualine Berger, Councilmember
AYES:	Kulpa, Berger, Lavin, Szukala
NAYS:	Bucki

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Exhibit 9 - Copy of Resolution 2022-607 as Adopted by the Town Board on July 25, 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

TOWN CLERK'S OFFICE

5583 MAIN STREET
WILLIAMSVILLE, NEW YORK 14221
(716) 631-7021
FAX (716) 631-7152
www.amherst.ny.us

Francina J. Spoth
Town Clerk

Timothy Koller
Deputy Town Clerk

CERTIFICATE OF TOWN CLERK

I, Timothy Koller, Deputy Town Clerk of the Town of Amherst, in the County of Erie, State of New York, HEREBY CERTIFY, as follows:

That the attached Resolution 2022-607 "1720, 1740 & 1760 Maple Road – Amendment to Bicentennial Comprehensive Plan" is a true and exact copy of the Resolution enacted by the Town Board at its meeting on July 25, 2022.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Town of Amherst this 26th day of July, 2022.

Timothy Koller
Deputy Town Clerk
Town of Amherst, Erie County, NY

Sworn to before me
This 26th day of July, 2022

Notary Public

ASHLEY BROWNSON
NOTARY PUBLIC STATE OF NEW YORK
ERIE COUNTY
LIC. #01BR6412344
COMM. EXP. 12/28/2024

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst Town Board
5583 Main Street
Williamsville, NY 14221
www.amherst.ny.us

Francina J. Spoth
Town Clerk

Meeting: 07/25/22 07:00 PM
Department: Town Clerk
Initiated by: **Timothy Koller**
Co-Sponsored by:

DOC ID: 26032 **RESOLUTION 2022-607** **ROLL CALL VOTE (ADOPTED)**

1720, 1740 & 1760 Maple Road - Amendment to Bicentennial Comprehensive Plan

Adoption of an action to Amend the Bicentennial Comprehensive Plan
(1720, 1740 & 1760 Maple Road, BCPA-2022-02)

RESOLVED, that pursuant to 6NYCRR Part 617 (SEQR) and Town Code Section 104, as amended, that the requirements of SEQR have been completed and the Town Board issues the attached Negative Declaration, and be it further

RESOLVED, that pursuant to NYS Town Law Sec.272-a, the Town Board concurs with the findings of the Planning Board as stated in their resolution of May 19, 2022 that the proposed designation of 5.1 ± acres of land in the Bicentennial Comprehensive Plan from Commercial-Office to Commercial/Mixed Use for a proposed mixed use project is consistent with the goals and objectives of the Bicentennial Comprehensive Plan, and be it further

RESOLVED, that in accordance with NYS Town Law Sec.272-a, the Town Board amends the Bicentennial Comprehensive Plan for 5.1 ± acres of land from Commercial-Office to Commercial Mixed-Use for property located at 1720, 1740 and 1760 Maple Road.

6/27/2022
A motion to open the public hearing was made by Supervisor Kulpa, seconded by Deputy Supervisor Berger and unanimously approved 5-0. The public hearing was opened at 8:03 PM.

Attorney Sean Hopkins presented.

The following speakers addressed the Town Board and spoke in opposition:
Bob Divita, 1725 Maple Rd
Karen Sterman, 1689 Maple Rd
Beverlee Hill (letter), 46 Brush Creek Rd
Randy Clark, 126 Brush Creek Rd
Robert Divita, 1735 Maple Rd

There were no further speakers from the public, therefore Supervisor Kulpa moved to adjourn the hearing until the July 25th Town Board meeting, seconded by Deputy Supervisor Berger and unanimously approved 5-0. The public hearing was adjourned at 9:08 PM.

7/25/2022
A motion to open the public hearing was made by Supervisor Kulpa, seconded by Councilmember Lavin and unanimously approved 5-0. The public hearing was opened at 7:06 PM.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attorney Sean Hopkins presented.

The following speakers addressed the Town Board and spoke in opposition:
Bob Divita, 1725 Maple Rd
Joanne Wylie, 1683 Maple Rd Unit C
Thomas Divita, 1735 Maple Rd
Randy Clark, 126 Brush Creek Rd
Rosemary Spano, 88 Shade Tree Ct
Karen Sterman, 1689 Maple Rd Unit B

There were no further speakers from the public, therefore Supervisor Kulpa moved to close the hearing, seconded by Deputy Supervisor Berger and unanimously approved 5-0. The public hearing was closed at 7:55 PM.

A motion to adopt the SEQR determination was made by Supervisor Kulpa, seconded by Deputy Supervisor Berger and approved via Roll Call vote 4-1 (nay, Bucki). A motion to approve was made by Supervisor Kulpa, seconded by Deputy Supervisor Berger and approved via Roll Call vote 4-1 (nay, Bucki).

RESULT:	**ROLL CALL VOTE (ADOPTED) [4 TO 1]**
MOVER:	Brian J. Kulpa, Supervisor
SECONDER:	Jacqualine Berger, Deputy Supervisor
AYES:	Kulpa, Berger, Lavin, Szukala
NAYS:	Bucki

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Full Environmental Assessment Form
Part 1 - Project and Setting

Prepared By: Sean Hopkins, E
Hopkins Sorgi & McCarthy P
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

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: Proposed Mixed-Use Project		
Project Location (describe, and attach a general location map): 1720, 1740 and 1760 Maple Road - Town of Amherst - Erie County		
Brief Description of Proposed Action (include purpose or need): The proposed action consists of a mixed-use project to be located at 1720, 1740 and 1760 Maple Road ("Project Site") consisting of a four-story mixed-use building with approximately 7,000 sq. ft. of commercial space on the 1st floor, a second four-story multi-family building [total of 107 apartments for lease], 2 two-story townhouse buildings with attached garages [6 unit and 5 unit buildings], 190 parking spaces [149 surface spaces and 41 garage spaces] and related site improvements. The proposed action has been defined broadly to include all required discretionary approvals required from the municipal boards of the Town of Amherst including Site Plan Approval from the Planning Board as well as involved agencies as well as all proposed site improvements including the proposed 2 mixed-use buildings, the townhome buildings, parking spaces, access onto Maple Road, access aisles, landscaping, lighting, an on-site storm water management system, water and sanitary sewer lines as well as utility connections. Given that the proposed project ("action") will not result in any potentially significant adverse environmental impacts, the issuance of a negative declaration pursuant to SEQRA is appropriate. Copies of the negative declarations issued by the Town Board pursuant to SEQRA on February 13, 2023 and July 25, 2022 are provided at Attachments "A" and "B" of this Part 1 of the Full EAF.		
Name of Applicant/Sponsor: PB Investors, LLC, c/o Sean Hopkins, Esq.	Telephone: (716) 510-4338 E-Mail: shopkins@hsmlegal.com	
Address: 5500 Main Street, Suite 343		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): McGuire Acquisitions LLC c/o Michael Blinkoff, Esq. [1760 Maple Road]	Telephone: (716) 332-6104 E-Mail: mblinkoff@blinkoff.com	
Address: 501 John James Audubon Pkwy, Suite 400		
City/PO: Amherst, NY 14228	State: NY	Zip Code: 14228

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	August 21, 2023
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	Zoning Board of Appeals - Area Variances [If needed]	TBD
d. Other local agencies ☑Yes ☐No	Building Department - Building Permits, Eng. Dept. - Stormwater Permit, Possible PILOT - AIDA	TBD
e. County agencies ☑Yes ☐No	ECDPW - Highway Work Permit; ECWA - Water	TBD
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - SPDES and DSCA	TBD
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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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?
DC5 Deep Corridor 5 ("DC-5"). The Town Board approved the rezoning of the Project Site from Office Building District ("OB") [1760 Maple Road] and Residential District Three ("R-3") [1720 and 1740 Maple Road] on February 13, 2023.

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 Police Department

c. Which fire protection and emergency medical services serve the project site?
Volunteer Fire Department

d. What parks serve the project site?
There are various parks in the Town that will be accessible to the future residents of the mixed-use project.

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)? Mixed-Use Project consisting of first floor commercial space in one of the two-mixed use building along apartments and town home units for lease.

b. a. Total acreage of the site of the proposed action? 5.1 acres
b. Total acreage to be physically disturbed? 4.7 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.1 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: _____

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

1.a

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				118
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 _____ [one mixed-use building that includes 7,000 sq. ft. 1st floor commercial space]

ii. Dimensions (in feet) of largest proposed structure: 55' height; 70' width; and 307 length

iii. Approximate extent of building space to be heated or cooled: 7,000 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: Stormwater management.

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.
Stormwater runoff from impervious surfaces on the Project Site.

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: .5 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):
Excavation and does not constitute a NYSDEC regulated dam.

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): _____

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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:

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: 26,537 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: ECWA Consolidated Water District
- 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: 24,125 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):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Town of Amherst Waste Water Treatment Plant
- Name of district: Town of Amherst Consolidated Sewer 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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

- 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: Not Applicable.

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 3.0 acres (impervious surface)

_____ Square feet or 5.1 acres (parcel size)

ii. Describe types of new point sources. Runoff from impervious surfaces including parking lots, access aisles, parking spaces and roofs.

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)?

On-site stormwater management system and then into on-site ditch.

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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)

[Note: There are not any jurisdictional wetlands located on the Project Site per the Wetland Investigation Letter of Scott Livingstone of Earth Dimensions, Inc. dated October 12, 2022. A copy of the Wetland Investigation Letter is provided at Attachment "C" of this Part 1 of the Full Environmental Assessment Form.]

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

1.a

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

[Copies of the Traffic Impact Study prepared by SRF Associates dated August 23, 2022 have been submitted with the Site Plan Application.]

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 _____ Proposed _____ Net increase/decrease _____

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:

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: _____

To be determined [relatively small annual demand for the proposed 7,000 sq. ft. of 1st floor commercial space.]

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

National Grid

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: 7:00 a.m. to 7:00 p.m.
- Saturday: 7:00 a.m. to 5:00 p.m.
- Sunday: As needed
- Holidays: Not applicable

ii. During Operations:

- Monday - Friday: TBD - Commercial Tenants
- Saturday: TBD
- Sunday: TBD
- Holidays: TBD

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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:

There will be temporary and unavoidable short-term noise impacts resulting from the use of construction equipment during the construction of the proposed project.

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:

There will be on-site lighting pursuant to the lighting standards contained in the Zoning Code. Lighting will be directed onto the Project Site and the Project Sponsor will be required to submit a Photometric Plan in connection with the future Site Plan review process for the project.

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:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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): Senior Housing [zoned MFR-7]

ii. If mix of uses, generally describe:

Mixture of uses in the vicinity of the Project Site including commercial uses [retail and offices], multifamily uses and residential uses.

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	0.4	2.5	+ 2.1
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	4.7	0	- 4.7
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Yard and Landscaping	0	2.6	+ 2.6

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No
i. If Yes: explain: _____

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:
Millard Filmore Hospital and St. Gregory the Great Church.

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):

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐

- 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? >5 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:

Odessa Silt Loam	72 %
Wayland Soil Complex	24 %
Claverack Loamy Fine Sand	4 %

d. What is the average depth to the water table on the project site? Average: >3 feet

e. Drainage status of project site soils:
☑ Well Drained: 4 % of site
☐ Moderately Well Drained: _____ % of site
☑ Poorly Drained 96 % 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.

[Note: There are not any wetlands located on the Project Site. The majority of the Project Site has previously been disturbed.]

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:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters 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: _____
Name - Pollutants - Uses:Ransom Creek, Lower, and tribs – Pathogens;D.O./Oxygen Demand – Recreation;Aquatic Life

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: _____

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

m. Identify the predominant wildlife species that occupy or use the project site:
Typical suburban species

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:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 PB Investors, LLC Date September 14, 2023

Signature _____ Title Project Engineer

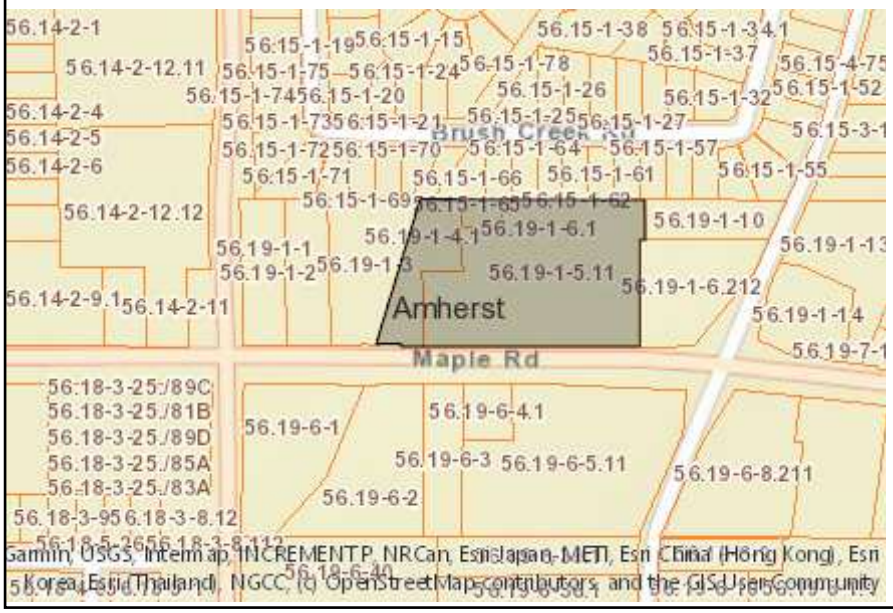
Patrick Sheedy Jr., P.E.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PRINT FORM

EAF Mapper Summary Report

Saturday, February 12, 2022 3:2



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]	Yes
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.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Ransom Creek, Lower, and tribs – Pathogens;D.O./Oxygen Demand – Recreation;Aquatic Life
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
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]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM

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	✔	✔			
Wayland soil complex	✔	✔			
Claverack loamy fine sand	✔	✔			

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:
5.18 acres 1720, 1740, 1760 Maple Road [project site]

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 hour upon completion of project 74
Source: Traffic Study by SRF Associates, dated 8/23/22

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:

23,425 average flow 96,563 peak flow.

(Please note that 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.)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment A of Part 1 of the Full Environmental Assessment Form – Negative Declaration Issued by the Town Board Pursuant to SEQRA on February 13, 2023

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard,
Planning Direct

Daniel J. Ulatowski,
Assistant Planning D r

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SEQR

NEGATIVE DECLARATION

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Town Board	**Project**:	Z-2022-08
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date**:	February 13, 2023

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: Rezoning Request.

SEQR Status: Unlisted action.

Description of Action: Rezoning of 5.1± acres of land from Residential District Three (R3) and Office Building District (OB) to Deep Corridor 5 District (DC-5) to allow for the potential future development of a mixed use project consisting of two four-story mixed use buildings totaling 128,800± square feet with 7,000 sq. ft. of commercial space on the first floor, 102 total apartment units for lease in the two four-story mixed use buildings, two two-story townhome buildings with attached garages (11 units) and three ten car garage and an eight space garage

Location: 1720, 1740 & 1760 Maple Road, Town of Amherst, Erie County, New York

Petitioner: MEL Investors, LLC

Reasons Supporting This Determination

Based on information submitted by the applicant, including a Full Environmental Assessment Form (EAF) - Part 1, a complete rezoning application, and concept plan, a preliminary staff analysis was undertaken. Based on the results of the EAF Part 2 and compared to the criteria listed in Section 617.7, all indications are that the proposed rezoning of 5.1 ± acres of land from Residential District Three (R3) and Office Building District (OB) to Deep Corridor 5 District (DC-5) for a proposed mixed-use project consisting of two four-story mixed use buildings totaling 128,800± square feet with 7,000 sq. ft. of commercial space on the first floor, 102 total apartment units for lease in the two four-story mixed use buildings, two two-story townhome buildings with attached garages (11 units) and associated accessory structures and vehicle use areas 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 Town Engineering Department on September 14, 2022 reviewed the application and EAF submitted on August 24, 2022, the Geotechnical Engineering Report prepared by Baron & Associates, PC and submitted on October 7, 2022 and had no objection or adverse comments on the proposed rezoning.

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 Landscape/Tree preservation Plan shall be required of the applicant upon submittal of a site plan application for development of the site at which stage all landscape requirements of the Zoning Ordinance will be met.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The project will comply with all regulations of the Town Zoning Ordinance before final site plan approval is granted. The Town Building Department on September 13, 2022 reviewed the application and EAF submitted on August 24, 2022, and has no objection or comments on the proposed rezoning.

4. The project is within an area identified by the State as potentially containing significant cultural or archeological resources. The site was formerly occupied by three single family homes and contains a large area of pavement previously used for parking and is being considered to be largely disturbed. The NYS Office of Parks, Recreation, Historic Preservation will review the project at site plan or before any further site disturbance and determine that there will be no impact on these resources.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The subject request is for rezoning from to R-3 & OB to DC-5. Neighboring uses are detached single family homes to the north and west zoned R-3, a medical office building to the east zoned OB and three story apartment building and two single family residences to the south zoned Multi-Family Residential District Seven (MFR-7) and R-3 respectively; therefore, the project is consistent with surrounding land use.

6. The proposed rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will not cause a major change in the use of either the quantity or type of energy.

7. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will not create any hazard to human health. The Fire Chiefs Association on December 7, 2022 has reviewed the project and has no objection or adverse comments on the proposed rezoning.

8. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will cause a substantial change in the use, and intensity of use of land.

9. The rezoning to DC-5 for the proposed multi-story mixed use buildings and eleven townhomes will increase the number of people using the site over its previous level of use.

10. Review of the application and EAF submitted on August 24, 2022, by the Traffic Impact Study prepared by SRF Associates dated August 23, 2022 and submitted on August 25, 2022 to the Town Traffic/Safety Board on September 12, 2022, Erie County Dept. of Public Works –Highways Division on October 10, 2022, indicate that significant negative traffic impacts are not expected to result from the proposed project.

11. Coordinated reviews of the project have been undertaken by Town Departments including Building on September 13, 2022, Engineering on September 14, 2022, Traffic/Safety Board on September 12, 2022, Assessor on September 13, 2022, Fire Chiefs Assocation on Decemer 7, 2022, and Right-of-Way Agent on September 14, 2022 along with outside agencies including Williamsville Central School District on September 13, 2022, Erie County Department of Environment & Planning on October 20, 2022, and Erie County Dept. of Public Works –Highways Division on October 10, 2022. These reviews have not identified any significant environmental issues and indicate that the proposal will not have a significant damaging impact on the environment.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 be causing significant negative environmental impacts.

Scott Marshall, Principal Planner — date 2/15/2023

Brian J. Kulpa, Supervisor — date 2/15/23

SM/ac
X:\Current_Planning\Files\Rezonings\2022\Z-2022-08_(1720_1740_&_1760_Maple_Rd)_2022\Z-2022-08_TB neg dec 021323.docxcc:
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
MEL Investors, LLC, 6790 Main St., Ste. 100, Amherst, NY 14221
Sean W. Hopkins, Hopkins Sorgi & McCarthy, PLLC, 5500 Main St., Ste. 343, Williamsville, NY 14221
Christopher Wood, Carmina Wood Design, 487 Main St., Ste. 500, Buffalo, NY 14203

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment B of Part 1 of the Full Environmental Assessment Form – Negative Declaration Issued by the Town Board Pursuant to SEQRA on July 25, 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard, A
Planning Director

Daniel J. Ulatowski, A
Assistant Planning Dir

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SEQR

NEGATIVE DECLARATION

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency: Town of Amherst
Town Board
Address 5583 Main Street
Williamsville, NY 14221
(716) 631-7051

Project: BCPA-2022-02

Date: July 25, 2022

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: Bicentennial Comprehensive Plan Amendment Request.

SEQR Status: Type 1

Description of Action: Request to Amend Figure 6 and Figure 6A of the Bicentennial Comprehensive Plan from "Commercial-Office" to "Commercial / Mixed Use" to permit the consideration of a subsequent rezoning request for 5.1 ± acres of land for a proposed mixed-use project.

Location. 1720, 1740 & 1760 Maple Road, Town of Amherst, Erie County, New York

Petitioner: PB Investors, LLC

Reasons Supporting This Determination

Based on information submitted by the applicant, including a Full Environmental Assessment Form (EAF) - Part 1, a complete Bicentennial Comprehensive Plan Amendment application, concept plan and building elevations, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that the proposed designation of 5.1 ± acres of land in the Bicentennial Comprehensive Plan from Commercial-Office to Commercial / Mixed Use to permit consideration of a subsequent rezoning request for a proposed mixed-use project will not have a significant impact on the environment, as follows:

1. The proposed change in the Town's future land use plan from "Commercial-Office" to Commercial/Mixed-Use" for a portion of lands along the north side of Maple Road, west of Ayer Road is not expected to cause substantial adverse changes in 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. Any potential impacts will be evaluated and mitigated for during a review of a specific site project when a petition is filed.

2. Changing the future land use designation for mixed-use will not result in the potential for greater vegetative losses than in the current commercial-office designation. Significant adverse impacts to fish or wildlife species, habitats or other natural resources are not anticipated. Any potential impacts will be mitigated for during an evaluation of a specific site project when a petition is filed, including opportunities for preservation of existing vegetation.

3. The action is an amendment to the Town' comprehensive plan to permit the inclusion of other lands beyond those what the current plan in Figure 6A designates. The Town's Comprehensive Plan, section 3.3.2 requires a plan amendment process to permit the expansion of the mixed-use areas beyond what is currently designated on Figure 6A Therefore, the action is consistent with such comprehensive plan requirement.

4. The geographic area of the plan amendment includes an area identified by the State as potentially containing significant cultural or archeological resources. Any potential impacts to cultural resources will be mitigated for during an evaluation of a specific site project when a petition is filed. The NYS Office of Parks Recreation and Historic Preservation will be consulted prior to any site disturbances.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

5. The change in the future land use plan designation from Commercial-Office to Commercial/Mixed-use will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. During an evaluation of a specific site project when a rezoning request and site plan is filed, impacts to community character will be evaluated and mitigated for, including overall scale of buildings, building height, building design and compatibility with neighborhood character.

6. The change in the future land use plan designation from Commercial-Office to Commercial-Mixed-use will not cause a change in the use of either the quantity or type of energy.

7. The change in the future land use plan designation will not cause a hazard to human health.

8. The change in the future land use plan designation may cause a substantial change in the use, or intensity of land use within the subject geographic area of the Town. Further inclusion of other nearby lands to permit mixed-use should be evaluated to determine the capacity to support further intensification of land use.

9. The change in the land use designation from Commercial-Office to Commercial/Mixed-use will significantly increase the number of people that could use or occupy the subject geographic area.

10. Coordinated reviews of the proposed change have been undertaken by Town Departments including Building on April 1, 2022, Engineering on April 7, 2022, Traffic/Safety Board on April 4, 2022, and Assessor on April 5, 2022. The Engineering Department has indicated that there may be downstream sanitary sewer capacity constraints which must be analyzed to determine the viability of the project. The Town Traffic Safety Coordinator has indicated that a traffic safety study may be warranted and that pedestrian safety improvements are needed at the adjacent road intersection of Maple and Ayer Roads. These can be evaluated more effectively when a specific site project petition is filed.

11. 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 be causing significant negative environmental impacts.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

ASST. PLANNING DIR. 7/25/2022
Signature & title of preparer date

Brian J. Kulpa, Supervisor 7/28/22
date

SM/ac
X:\Current_Planning\Files\Bicentennail Comp Plan Amends\2022\BCPA-2022-02_(1720_1740_&_1760_Maple_Rd)_2022\BCPA-2022-02_TB_Neg_Dec_072522.docx
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
Paul Bliss, PB Investors, LLC, 6790 Main St., Ste. 100, Amherst, NY 14221
Scan W. Hopkins, Esq. Hopkins Sorgi & McCarthy, 5500 Main St., Ste. 343, Williamsville, NY 14221
Michael Blinkoff, Esq., 501 John James Audubon Pkwy, Amherst, NY 14068

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment C of Part 1 of the Full Environmental Assessment Form – Wetland Investigation Letter of Scott Livingstone of Earth Dimensions, Inc. dated October 12, 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

EARTH DIMENSIONS, INC.
* Soil & Hydrogeologic Investigations * Wetland Delineations
1091 Jamison Road, Elma NY 14059
(716) 655-1717 * Fax (716) 655-2915 www.earthdimensions.com

October 12, 2022 W3J22

Paul Bliss
PB Investors LLC
6790 Main Street, Suite 100
Williamsville, New York 14221
716-204-2910

Re: Preliminary Wetland Investigation - ±5.17 acres
1720, 1740 & 1760 Maple Road
Town of Amherst, Erie County, New York

Dear Mr. Bliss:

Earth Dimensions, Inc. (EDI) has completed a preliminary wetland investigation at the above referenced site for the purpose of identifying potential regulated wetlands and waterways. The site investigation was conducted on October 10, 2022. EDI did not identify any wetland as defined by the U.S. Army Corps of Engineers (USACE) wetland delineation manuals.

The New York State Department of Environmental Conservation (NYSDEC) On-line Resource Mapper (attached) indicates the 500-foot "check zone" to Freshwater Wetland LA-3 encroaching on the southeast corner of the subject property. However, it is EDI's professional opinion that NYSDEC has no jurisdiction over any wetland or 100-foot upland adjacent area on the site because the mapped wetland is separated from the site by Maple Road and development on the south side of Maple Road.

Based on this site investigation, it is our professional opinion that the project may move forward without the need for a Section 404 permit from USACE or an Article 24 permit from NYSDEC.

If you have any questions, please contact our office at (716) 655-1717 or email slivingstone@earthdimensions.com.

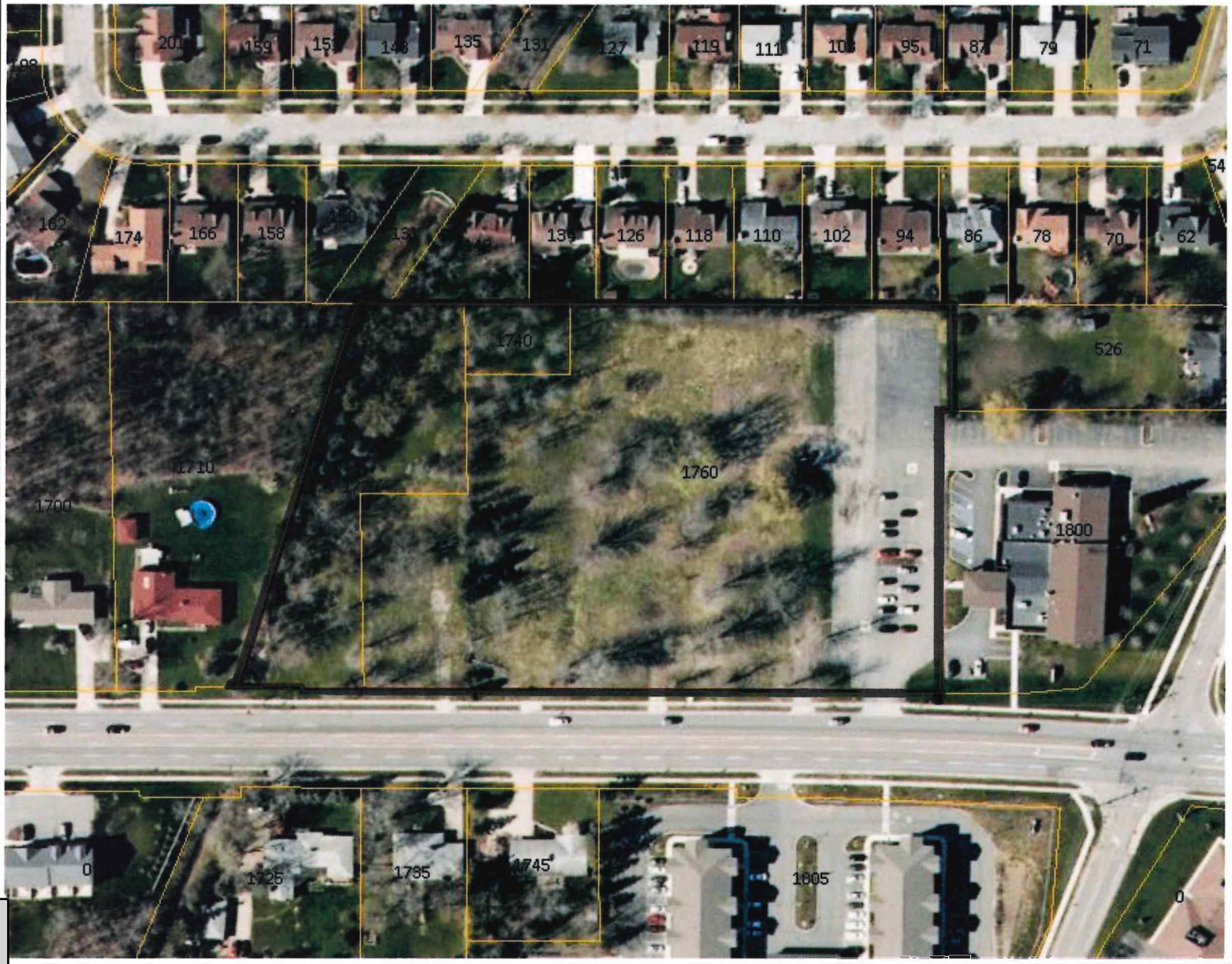
Very truly yours,
Earth Dimensions, Inc.

Scott J. Livingstone
Wetlands Operations Manager

Encl.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.04 0.1 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: 2,257

Environmental Resource Mapper



October 7, 2022

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NYS Department of Environmental Conservat
Not a legal docum

CARMINAWOOD
DESIGN

DOWNSTREAM SANITARY SEWER CAPACITY ANALYSIS REPORT

for

Mixed-Use Development

1720, 1740, 1760 Maple Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, New York 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

February 2023



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Project Description

This project is a development of an 5.1 acre site located at 1720, 1740 and 1760 Maple Road in the Town of Amherst. Construction will consist of two, four story mixed-use buildings totaling 7,000 sf of commercial space, 102 units, 11 townhouse units with attached garages, and detached garage buildings to include associated utility, lighting and landscaping improvements.

An existing 18" public sanitary sewer main is located along the north side of Maple Road and will be utilized for this project. A new 6" PVC private sanitary sewer lateral will be installed and connected to this existing sewer.

Wastewater from the proposed project will flow west along Maple Road via an 18" sanitary sewer, and then north along Hopkins Road via a 21" sanitary sewer. Flows then continue north and are conveyed north through the 54" Peanut Line sewer, and then ultimately north to the Town of Amherst Wastewater Treatment Facility. Refer to the sewer routing map located in the TECSmith monitoring section of this downstream sewer capacity analysis report. Two routing options were presented from the Town of Amherst, Option 1 is the desired routing utilizing Nodes 1 and 2 as summarized below.

Node 1 - Hopkins (21"):

Existing Peak Flow measured (wet weather event)	= 6.545 cfs (4.231 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.706 cfs

Theoretical capacity of existing 21" PVC pipe @ 0.083% = 5.929 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 21" PVC pipe. 1 time during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 1.

Node 2 - Maple (18"):

Existing Peak Flow measured (wet weather event)	= 5.903 cfs (3.816 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.064 cfs

Theoretical capacity of existing 18" RCP pipe @ 0.12% = 3.939 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 18" RCP pipe. 5 times during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 2.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Node 3 - Peanut Line (54”):

Existing Peak Flow measured (wet weather event)	= 28.620 cfs (18.50 mgd)*
Proposed Multi-Family Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 28.781 cfs

Capacity of existing 66” Peanut Line sewer = 55.692 cfs (36.0 mgd)

Conclusion: The proposed total peak flow is less than the capacity of the 54” Peanut Line sewer, therefore there is sufficient capacity.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Foot Notes:

Downstream capacity node information provided by Town of Amherst Engineering Department

*Converted from measurements in TECSmith report dated 10/18/22

**See Sanitary Sewage Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Downstream Manhole Analysis - 1720, 1740, 1760 Maple Roac

Manhole	RIM	INV	MH Depth (ft)	Observed depth (ft)*	Remaining depth in manhole (ft)	Rainfall Event Depth (in)
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.724	6.086	1.73
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.008	6.802	1.93
Maple 18" (Node 2)	607.83	589.03	18.80	4.270	14.531	1.73
Maple 18" (Node 2)	607.83	589.03	18.80	2.316	16.484	1.93

*Observed depth is the peak depth measured at Node 1 & 2 from the previoulsy performed downstream sewer monitering performec by TECSmith, report dated 10/18/22, based on the observed peak levels from the two largest storms events of the monitering period

Note: RIM and INV depths provided by Town of Amherst Engineering Department

Location Map

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.07 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

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1: 4,514

Sanitary Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.060 Date: 2/23/2023

Project Name: Mixed-Use Development

Project Address: 1720, 1740, 1760 Maple Road Amherst, NY

Subject: Sanitary Sewer & Water Demand Calcs

Sheet: 1 of 1

1.a

Sanitary Sewage Demand Calculations:

	110	gal/d/unit	x	18	units	=	1,980	gpd	*use 110 gallons per unit per day (1-bdrm)
	220	gal/d/unit	x	80	units	=	17,600	gpd	*use 220 gallons per unit per day (2-bdrm)
	330	gal/d/unit	x	15	units	=	4,950	gpd	*use 330 gallons per unit per day (3-bdrm)
retail	0.1	gal/d/sf	x	3,500	sf	=	350	gpd	*use 0.1 gallons per square foot per day
office	15	gal/d/emp	x	35	emp	=	525	gpd	*use 0.1 gallons per square foot per day

Total Site Sanitary Demand: = 25,405 gpd

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 25,405 gpd / 100 gpcd = 254 per capita

Population (P) = 254 people

Peaking Factor : (18 +/P) / (4 + /P) where P is in thousands

Peaking Factor = 4.11

Peak Sanitary Demand = 25,405 x 4.11 = 104,372 gpd

= 0.104 MGD

= 0.161 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow = 104,372 gpd = 72.48 gpm

4:1 offset flow per NYSDEC requirements = 72.48 x 4 = 289.92 gpm req'd

Mitigation Credit = $250 / gpm

Mitigation Agreement Amount = $72,480.55

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECSmith Monitoring Report

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Date: October 18, 2022

SANITARY SEWER FLOW CAPACITY STUDY – Summary Review

Prepared For: 1760 Maple Rd Capacity Analysis

Christopher Wood, PE Partner
487 Main Street, Suite 500
Buffalo, New York 14203

Project Name: 1760 Maple Rd Capacity Analysis

Flow Monitoring Period: September 19, 2022 to October 17, 2022

Rain Events (> 0.5-inches) Monitored: September 19 (1.93”), September 25 (0.63”), September 26 (0.62”), September 27 (1.01”), and October 13 (1.73”)

Number of Monitoring Nodes: Four (4) downstream manholes

Node Locations and Descriptions:

- Node 1 Hopkins 21" (20.5")
- Node 2 Maple 18" (18")
- Node 3 Youngs & Renaissance (17.5")
- Node 4 Youngs 18" (17.5")

Summary Conclusion:

Based on the data presented in this report, specifically the flow depth measurements recorded (see graphs below)

- At no time did the flow depth exceed pipe diameter at Node 3 and Node 4 of the downstream monitoring points during the wet weather events monitored.
- Five times the flow depth exceed pipe diameter at Node 2 of the downstream monitoring points during the wet weather events monitored.
- One time the flow depth exceed pipe diameter at Node 1 of the downstream monitoring points during the wet weather events monitored.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

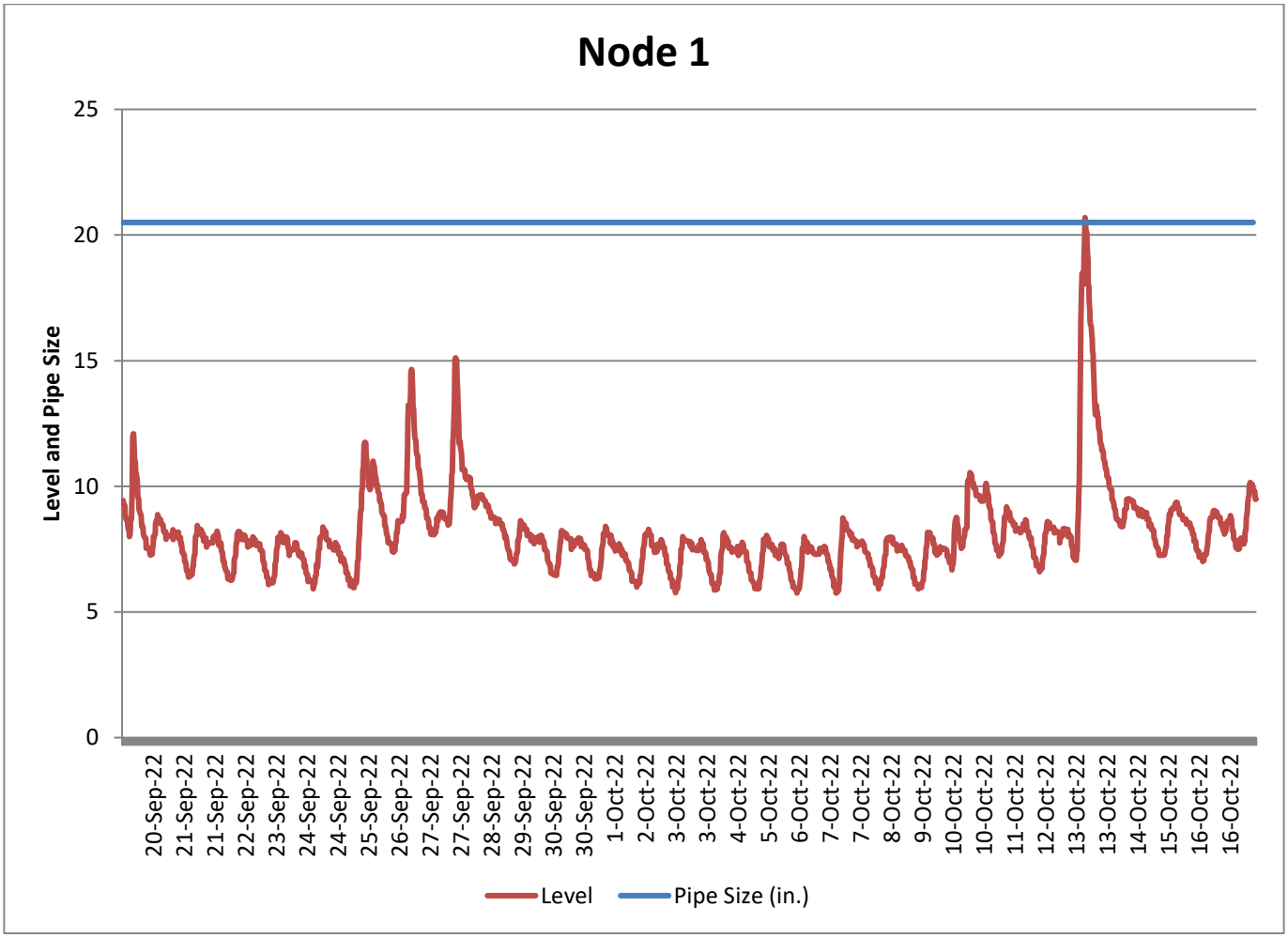
TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Depth of Flow Capacity Summary:

Depth of flow capacity is based on diameter of pipe. See graphs below.

- One time during the monitoring period did depth of flow exceed pipe diameter at Node 1.

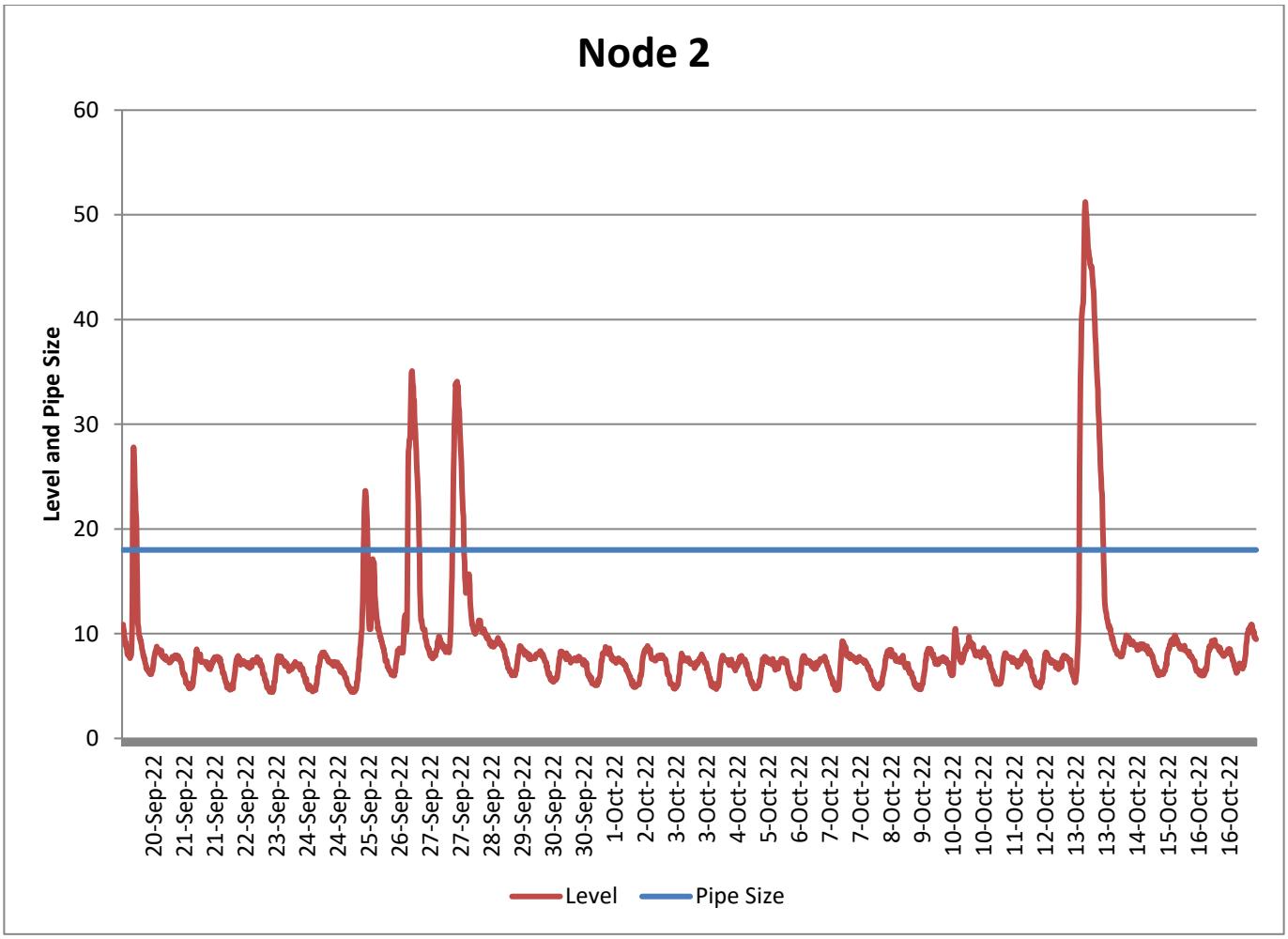


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- Five times during the monitoring period did depth of flow exceed pipe diameter at Node 2.

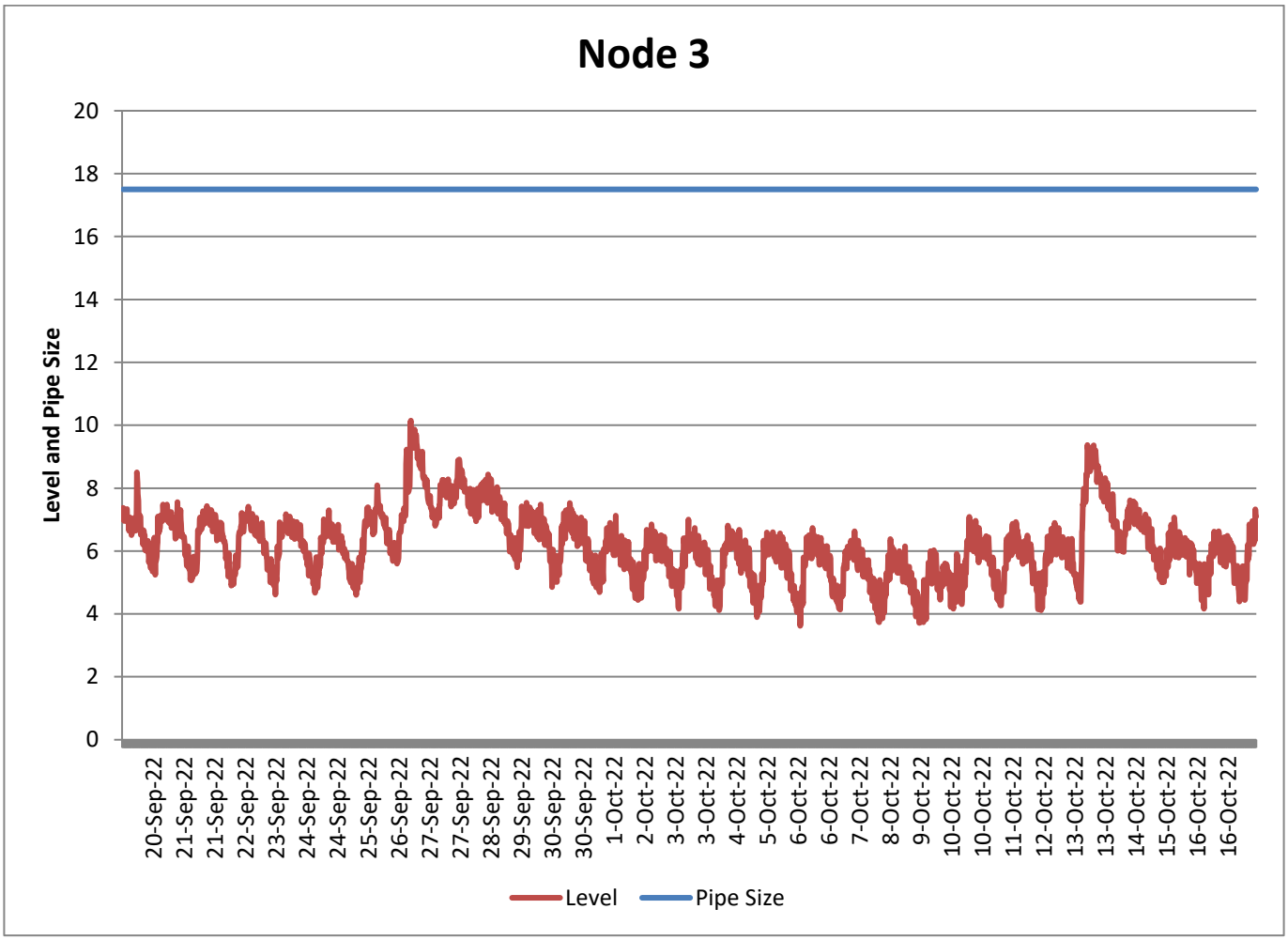


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 3.

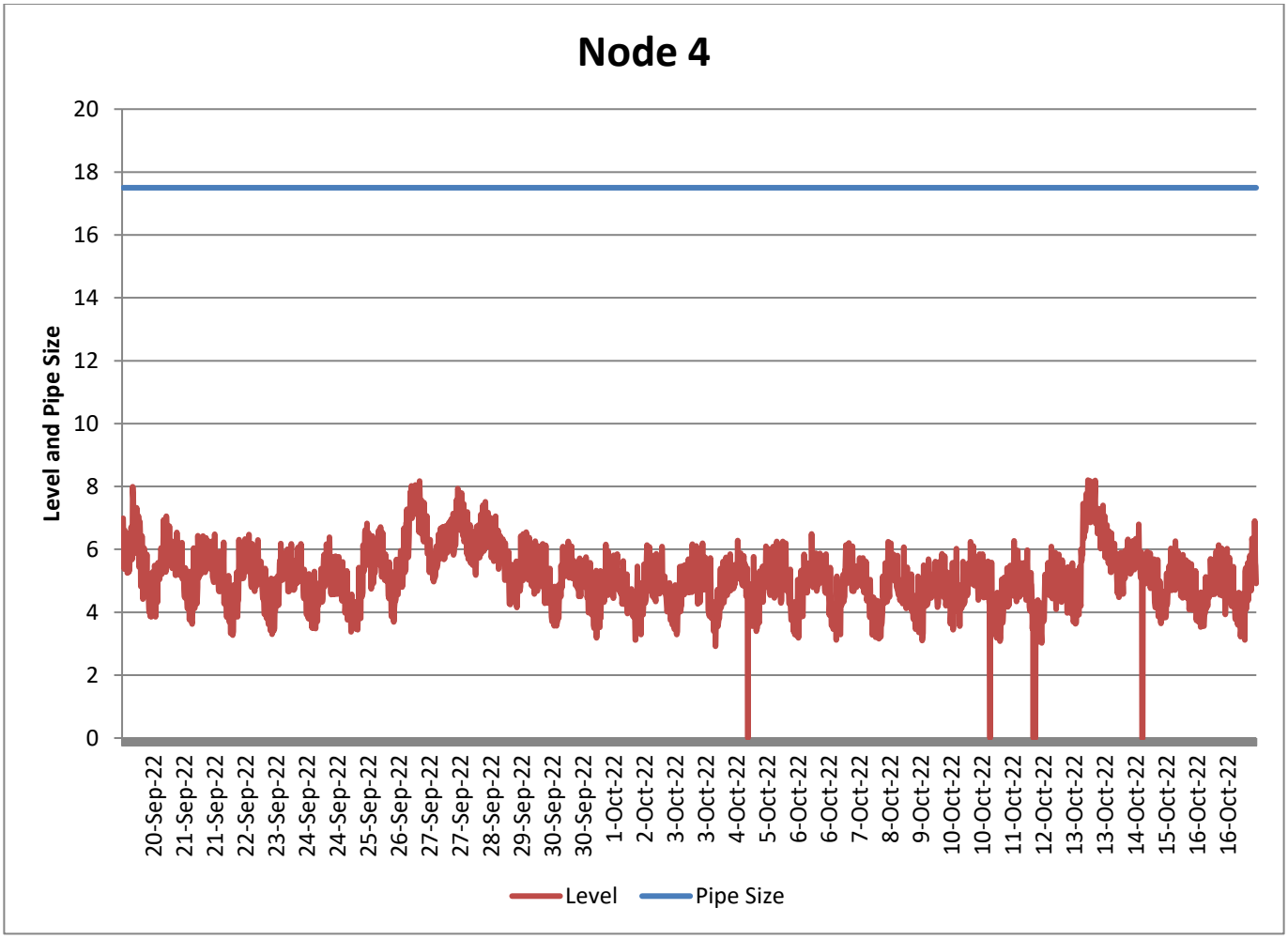


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 4.



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Town of Amherst Sanitary Sewer Downstream Routing Maps

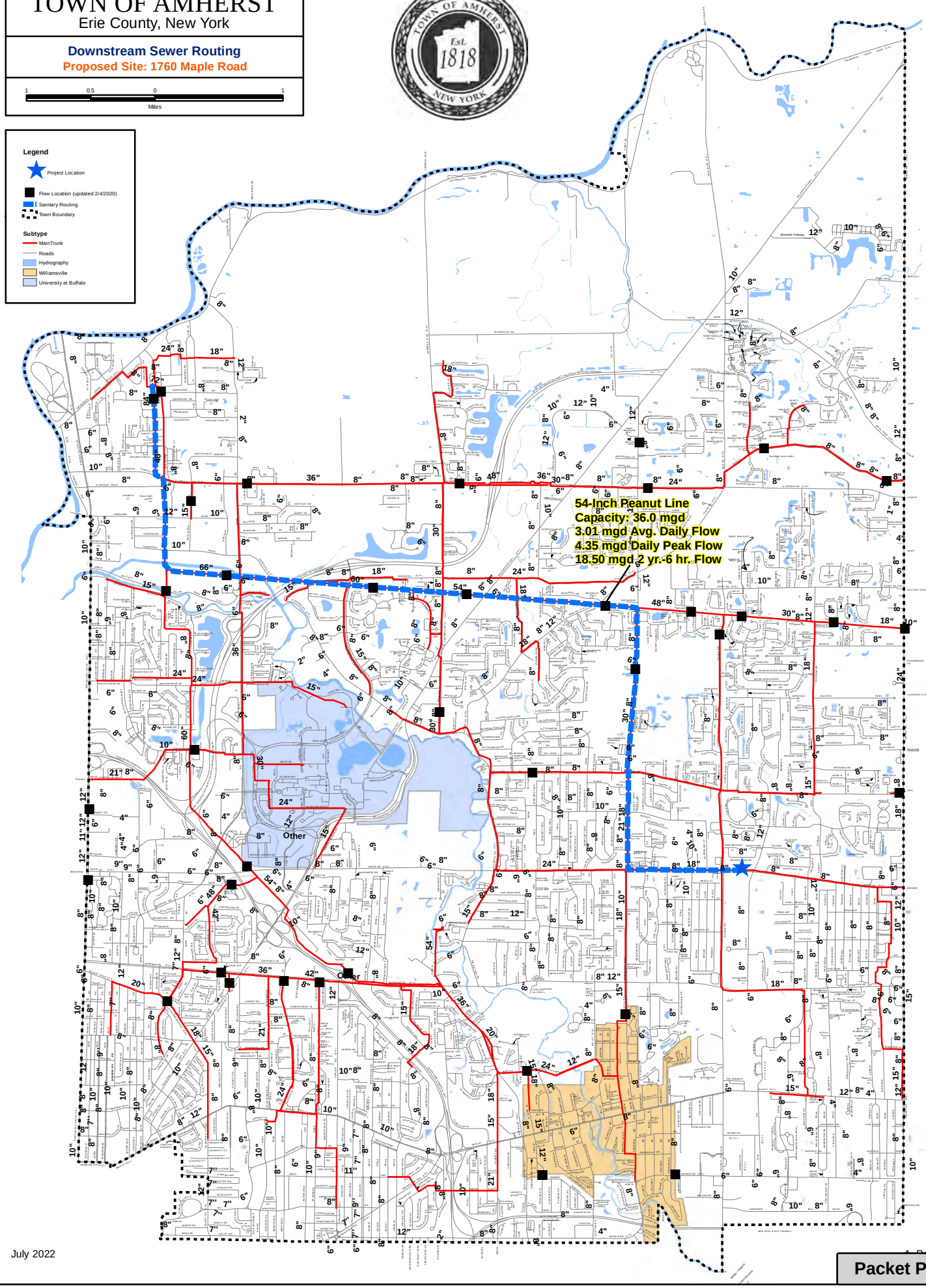
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
Erie County, New York

Downstream Sewer Routing
Proposed Site: 1760 Maple Road

1 0.5 0 1
Miles

N



July 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

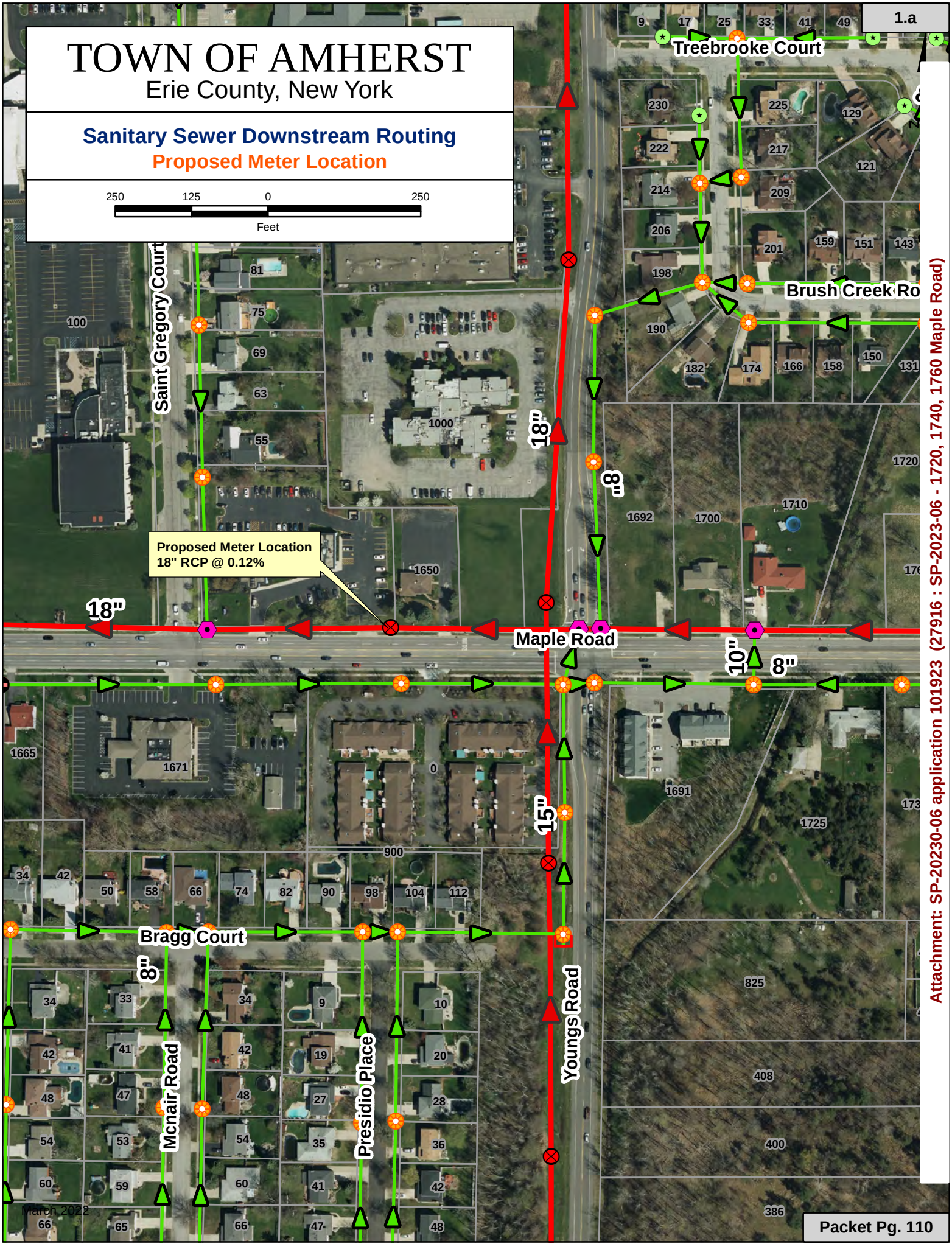
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

250 125 0 250

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

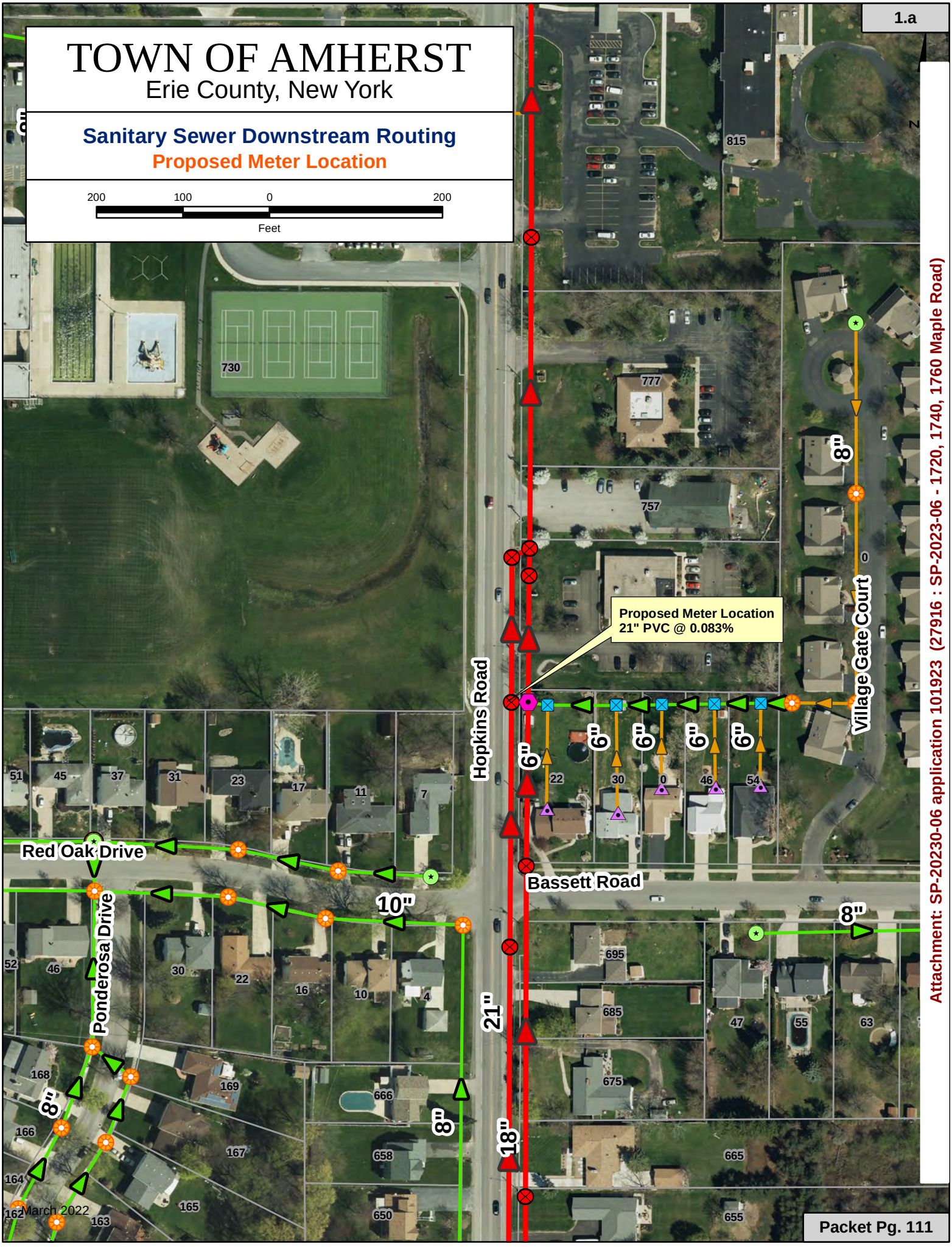
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

200 100 0 200

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

March 2022

CARMINAWOOD
DESIGN

ENGINEER'S REPORT

for

Mixed Use Development
1720, 1740, 1760 Maple Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, NY 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

August 2023



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 Sanitary Sewer and Water Demand Calculations

- Downstream Sewer Capacity Analysis

Appendix B Storm Sewer System Drainage Calculations

- Existing Runoff
- Proposed Runoff
    - Green Infrastructure & Water Quality Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Section 1 - Location & Description

This project is a development of an 5.18 acre site located on Maple Road in the Town of Amherst. Construction will consist of a two, four story multi-family & mixed-use buildings and townhouse buildings with detached garage buildings, totaling 118 units to include associated utility, lighting and landscaping improvements. Currently the site is mainly undeveloped consisting of mostly open grass areas. There is an existing asphalt parking area that is shared by the neighboring medical use property to the east. An existing ditch (Amherst Ditch #4) borders the west boundary of the project site. The proposed site development area to be disturbed for this project is approximately 4.7 acres when construction is completed.

Section 2 - Water Service

Water service for the buildings will be tapped off the existing 8" ECWA water main on the south side of Maple Road. The service will be a 6" Class 52 DI combined water service, then split into a 6" PVC fire service and a 4" polyethylene domestic service at the ROW line. Both services will continue into an internal mechanical room where the 4" domestic service will have a meter and RPZ and the 6" fire service will have a RPDA. Proper heat and lighting will be provided to the enclosure, drainage due to testing or failure of the RPZ will be to the outside grade. The owner will be responsible for keeping the drainage ports clear of snow and debris. Water inside the buildings will be used for typical domestic uses.

The multi-family and mixed use buildings are to be sprinklered, interior fire protection system to be designed by others. One private hydrant will be installed on site and two existing public hydrants along Maple Road will ensure fire hose coverage not exceeding 600' for the multi-family and mixed use buildings and 400' for the townhouse buildings.

Domestic Summary:	
Peak Operating Demand:	64.42 gpm
Water Main:	8" on Maple Road
Static Pressure:	82 psi (ECWA)
Friction Loss:	0.0 psi
Loss through meter/RPZ:	13.2 psi
Elevation Loss:	0.0 psi
Pressure after RPZ:	68.8 psi

Repairs to all devices will be made during off hours, dual backflow preventers are not required. The site is 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 buildings will each have a 6" SDR-35 PVC sanitary lateral at 1.0% minimum slope. Each of these laterals will connect and ultimate connect to the existing public sanitary sewer along the north side of Maple Road.

Design Parameters

Commercial Space:	0.1 gal/day/sf x 3,500 sf = 350 gpd
Office Space:	15 gal/day/emp x 35 emp = 525
1-bedroom unit:	110 gal/day/units x 44 units = 4,840 gpd
2-bedroom unit:	220 gal/day/units x 61 units = 13,420 gpd
3-bedroom unit:	330 gal/day/units x 13 units = 4,290 gpd
	Total = 23,425 gpd

23,425 gpd * 4.12 = 96,563 gpd *use peaking factor of 4.12

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC.

Downstream sewer capacity analysis report is included in Appendix A of this report.

Section 4 - Storm Sewer Service

The existing site currently sheet drains west to the existing ditch (Town of Amherst Ditch 4) along the west side of the property.

Stormwater runoff collected onsite as a result of the proposed development will be routed through the proposed storm sewer system consisting of bioretention areas and dry detention basin connected by a series of catch basins, yard drains and smooth interior HDPE pipe. The bioretention areas on site are designed to provide 100% of the required runoff reduction volume (RRv) and water quality volume treatment (WQv) for the 4.7 acre tributary area. The soils in the vicinity of the bioretention areas are mainly USDA hydrologic group 'C' and therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention areas will consist of 6" perforated HDPE underdrains in 12" of drainage gravel, followed by filter fabric and then finally 18" minimum of planting soil. Overflow yard drains will be installed to allow 6" maximum ponding for RRv treatment. A 12" outlet control pipe will be provided within the dry detention pond. Discharge from the outlet pipe will outlet to the existing Town of Amherst Ditch 4 along the west side of the property.

Runoff reduction volume (RRv), water quality volume (WQv) and stormwater volume attenuation for the site are designed in accordance with Chapter 4 of the NYSDEC Stormwater design manual. The bioretention area is provided as a "green infrastructure" practice to provide runoff reduction and water quality treatment to meet the Chapter 4 requirements for the currently undeveloped areas. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The existing site has a pre-development total of 0.8 acres of impervious cover. The amount of impervious cover post-development is 3.0 acres, an increase of 2.2 acres. The proposed dry detention field is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates, as well as the below stated Town stormwater runoff requirements.

Town of Amherst Requirement:
The Town of Amherst requires that the 25-year proposed storm event be attenuated with detention and that the outlet flowrate be restricted to the 10-year existing storm event. This volume of 7,898 cf is accommodated in the dry detention basin at elevation 601.76. At this elevation, the outlet discharge will be restricted to 4.02 cfs, which is less than the existing 10-year peak runoff outflow of 4.31 cfs of the western subcatchment that discharges to the existing Town Ditch 4.

Water Quality Summary:
WQv req'd = 9,747 cf (0.224 ac-ft)
RRv min. req'd = 1,862 cf (0.043 ac-ft)
RRv provided - bioretention areas = 3,899 cf (0.090 ac-ft)
WQv provided – bioretention areas = 5,848 cf (0.134 ac-ft)
Total RRv + WQv provided = 3,899 cf + 5,848 cf = 9,747 cf (0.224 ac-ft)

Bioretention: 100% of minimum post-development Runoff Reduction volume (RRv) & Water Quality Volume Treatment (WQv)
Area: 7,310 sf (total)
Bottom Elevation: 605.00 & 603.25

Detention: Comparison of the existing 1-year vs. the proposed 1-year runoff
Comparison of the existing 10-year vs. the proposed 10-year runoff
Comparison of the existing 10-year vs. the proposed 25-year runoff
Comparison of the existing 100-year vs. the proposed 100-year runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Runoff Summary:

Event	Ex. Runoff (cfs)*	Pro. Runoff (cfs)**	Result (cfs)
1-year	3.58	3.52	-0.08
10-year	8.09	6.32	-1.77
25-year	10.80	7.60	-3.20
100-year	16.40	9.88	-6.52

* Existing runoff is the summation of the runoff flowrate from multiple subcatchments shown Appendix B of this report.

** Proposed runoff flowrate is the rate controlled by the 10" outlet pipe from the dry detention basin which ultimately discharges to the existing Town of Amherst Ditch 4 as shown Appendix B of this report.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix A

Sanitary Sewer and Water Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.060 Date: 8/21/2023

1.a

Project Name: Mixed-Use Development
Project Address: 1720, 1740, 1760 Maple Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

	110	gal/d/unit	x	44	units	=	4,840	gpd	*use 110 gallons per unit per day (1-bdrm)
	220	gal/d/unit	x	61	units	=	13,420	gpd	*use 220 gallons per unit per day (2-bdrm)
	330	gal/d/unit	x	13	units	=	4,290	gpd	*use 330 gallons per unit per day (3-bdrm)
retail	0.1	gal/d/sf	x	3,500	sf	=	350	gpd	*use 0.1 gallons per square foot per day
office	15	gal/d/emp	x	35	emp	=	525	gpd	*use 0.1 gallons per square foot per day
Total Site Sanitary Demand:						=	23,425	gpd	

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 23,425 gpd / 100 gpcd = 234 per capita

Population (P) = 234 people

Peaking Factor : (18 +/P) / (4 + /P) where P is in thousands

Peaking Factor = 4.12

Peak Sanitary Demand = 23,425 x 4.12 = 96,563 gpd
= 0.097 MGD
= 0.149 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow	=	96,563	gpd	=	67.06	gpm
4:1 offset flow per NYSDEC requirements	=	67.06	x 4	=	268.23	gpm req'd
Mitigation Credit	=	$250	/ gpm			
Mitigation Agreement Amount	=	**$67,057.59**				

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.085 Date: 8/21/2023
Project Name: Multi-Family Development
Project Address: 2635 North Forest Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 2 of 2

Water Demand Calculations (domestic):

Proposed mixed Use

23,425 gpd x 1.1 = 25,768 gpd *use 110% of sewage demand

*use 1.8 peaking factor and assume a 12 hour day

25,768 gpm x 1day/12hr x 1hr/60min = 35.79 gpm

35.79 gpm x 1.8 = 64.42 gpm Q_{peak}

Headlosses:

Q_{peak} = 64.42 gpm
Pipe = 4 inch PVC C = 140
Length = 150 LF (approx. distance from tap to RPZ in hot box)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(150)(64.42)^{1.85}}{(140)^{1.85}\ (4)^{4.866}} = 0.44 \text{ ft} = 0.19 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss through meter = 1 psi
Loss through RPZ = 12 psi
Total Losses = 13.2 psi
Static Pressure = 82 psi (per ECWA)
Residual Pressure Following RPZ = 82 - 13.2 = 68.8 psi (available after rpz & meter)

Residual Pressure 30" above 4th Floor
Δ elev = 39 ft = 16.67 psi
Residual Pressure 30" above 4th Floor = 52.1 psi

Water Demand Calculations (fire):

Proposed Mixed Use

Q = 1,000 gpd

Headlosses:

Q_{peak} = 1000 gpm
Pipe = 6 inch Ductile Iron C = 140
Length = 150 LF (approx. distance from tap to RPDA in hot box)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(90)(1000)^{1.85}}{(140)^{1.85}\ (6)^{4.866}} = 9.73 \text{ ft} = 4.21 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss Through RPZ = 12.0 psi
Total Losses = 16.2 psi
Static Pressure = 82.0 psi (per ECWA)
Residual Pressure after RPDA = 82 - 16.2 = 65.8 psi

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Downstream Sewer Capacity Analysis

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINAWOOD
DESIGN

DOWNSTREAM SANITARY SEWER CAPACITY ANALYSIS REPORT

for

Mixed-Use Development

1720, 1740, 1760 Maple Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, New York 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

February 2023



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Project Description

This project is a development of an 5.1 acre site located at 1720, 1740 and 1760 Maple Road in the Town of Amherst. Construction will consist of two, four story mixed-use buildings totaling 7,000 sf of commercial space, 102 units, 11 townhouse units with attached garages, and detached garage buildings to include associated utility, lighting and landscaping improvements.

An existing 18" public sanitary sewer main is located along the north side of Maple Road and will be utilized for this project. A new 6" PVC private sanitary sewer lateral will be installed and connected to this existing sewer.

Wastewater from the proposed project will flow west along Maple Road via an 18" sanitary sewer, and then north along Hopkins Road via a 21" sanitary sewer. Flows then continue north and are conveyed north through the 54" Peanut Line sewer, and then ultimately north to the Town of Amherst Wastewater Treatment Facility. Refer to the sewer routing map located in the TECSmith monitoring section of this downstream sewer capacity analysis report. Two routing options were presented from the Town of Amherst, Option 1 is the desired routing utilizing Nodes 1 and 2 as summarized below.

Node 1 – Hopkins (21"):

Existing Peak Flow measured (wet weather event)	= 6.545 cfs (4.231 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.706 cfs

Theoretical capacity of existing 21" PVC pipe @ 0.083% = 5.929 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 21" PVC pipe. 1 time during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 1.

Node 2 – Maple (18"):

Existing Peak Flow measured (wet weather event)	= 5.903 cfs (3.816 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.064 cfs

Theoretical capacity of existing 18" RCP pipe @ 0.12% = 3.939 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 18" RCP pipe. 5 times during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 2.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Node 3 - Peanut Line (54"):

Existing Peak Flow measured (wet weather event)	= 28.620 cfs (18.50 mgd)*
Proposed Multi-Family Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 28.781 cfs

Capacity of existing 66" Peanut Line sewer = 55.692 cfs (36.0 mgd)

Conclusion: The proposed total peak flow is less than the capacity of the 54" Peanut Line sewer, therefore there is sufficient capacity.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Foot Notes:

Downstream capacity node information provided by Town of Amherst Engineering Department

*Converted from measurements in TECSmith report dated 10/18/22

**See Sanitary Sewage Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Downstream Manhole Analysis - 1720, 1740, 1760 Maple Roac

Manhole	RIM	INV	MH Depth (ft)	Observed depth (ft)*	Remaining depth in manhole (ft)	Rainfall Event Depth (in)
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.724	6.086	1.73
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.008	6.802	1.93
Maple 18" (Node 2)	607.83	589.03	18.80	4.270	14.531	1.73
Maple 18" (Node 2)	607.83	589.03	18.80	2.316	16.484	1.93

*Observed depth is the peak depth measured at Node 1 & 2 from the previoulsy performed downstream sewer monitering performec by TECSmith, report dated 10/18/22, based on the observed peak levels from the two largest storms events of the monitering period

Note: RIM and INV depths provided by Town of Amherst Engineering Department

Location Map

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.07 0.1 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: 4,514

Sanitary Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.060 Date: 2/23/2023

1.a

Project Name: Mixed-Use Development
Project Address: 1720, 1740, 1760 Maple Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

	110	gal/d/unit	x	18	units	=	1,980	gpd	*use 110 gallons per unit per day (1-bdrm)
	220	gal/d/unit	x	80	units	=	17,600	gpd	*use 220 gallons per unit per day (2-bdrm)
	330	gal/d/unit	x	15	units	=	4,950	gpd	*use 330 gallons per unit per day (3-bdrm)
retail	0.1	gal/d/sf	x	3,500	sf	=	350	gpd	*use 0.1 gallons per square foot per day
office	15	gal/d/emp	x	35	emp	=	525	gpd	*use 0.1 gallons per square foot per day

Total Site Sanitary Demand: = 25,405 gpd

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 25,405 gpd / 100 gpcd = 254 per capita

Population (P) = 254 people

Peaking Factor : (18 +/P) / (4 + /P) where P is in thousands

Peaking Factor = 4.11

Peak Sanitary Demand = 25,405 x 4.11 = 104,372 gpd
= 0.104 MGD
= 0.161 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow = 104,372 gpd = 72.48 gpm

4:1 offset flow per NYSDEC requirements = 72.48 x 4 = 289.92 gpm req'd

Mitigation Credit = $250 / gpm

Mitigation Agreement Amount = $72,480.55

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECSmith Monitoring Report

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Date: October 18, 2022

SANITARY SEWER FLOW CAPACITY STUDY – Summary Review

Prepared For: 1760 Maple Rd Capacity Analysis

Christopher Wood, PE Partner
487 Main Street, Suite 500
Buffalo, New York 14203

Project Name: 1760 Maple Rd Capacity Analysis

Flow Monitoring Period: September 19, 2022 to October 17, 2022

Rain Events (> 0.5-inches) Monitored: September 19 (1.93”), September 25 (0.63”), September 26 (0.62”), September 27 (1.01”), and October 13 (1.73”)

Number of Monitoring Nodes: Four (4) downstream manholes

Node Locations and Descriptions:

- Node 1 Hopkins 21" (20.5")
- Node 2 Maple 18" (18")
- Node 3 Youngs & Renaissance (17.5")
- Node 4 Youngs 18" (17.5")

Summary Conclusion:

Based on the data presented in this report, specifically the flow depth measurements recorded (see graphs below)

- At no time did the flow depth exceed pipe diameter at Node 3 and Node 4 of the downstream monitoring points during the wet weather events monitored.
- Five times the flow depth exceed pipe diameter at Node 2 of the downstream monitoring points during the wet weather events monitored.
- One time the flow depth exceed pipe diameter at Node 1 of the downstream monitoring points during the wet weather events monitored.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

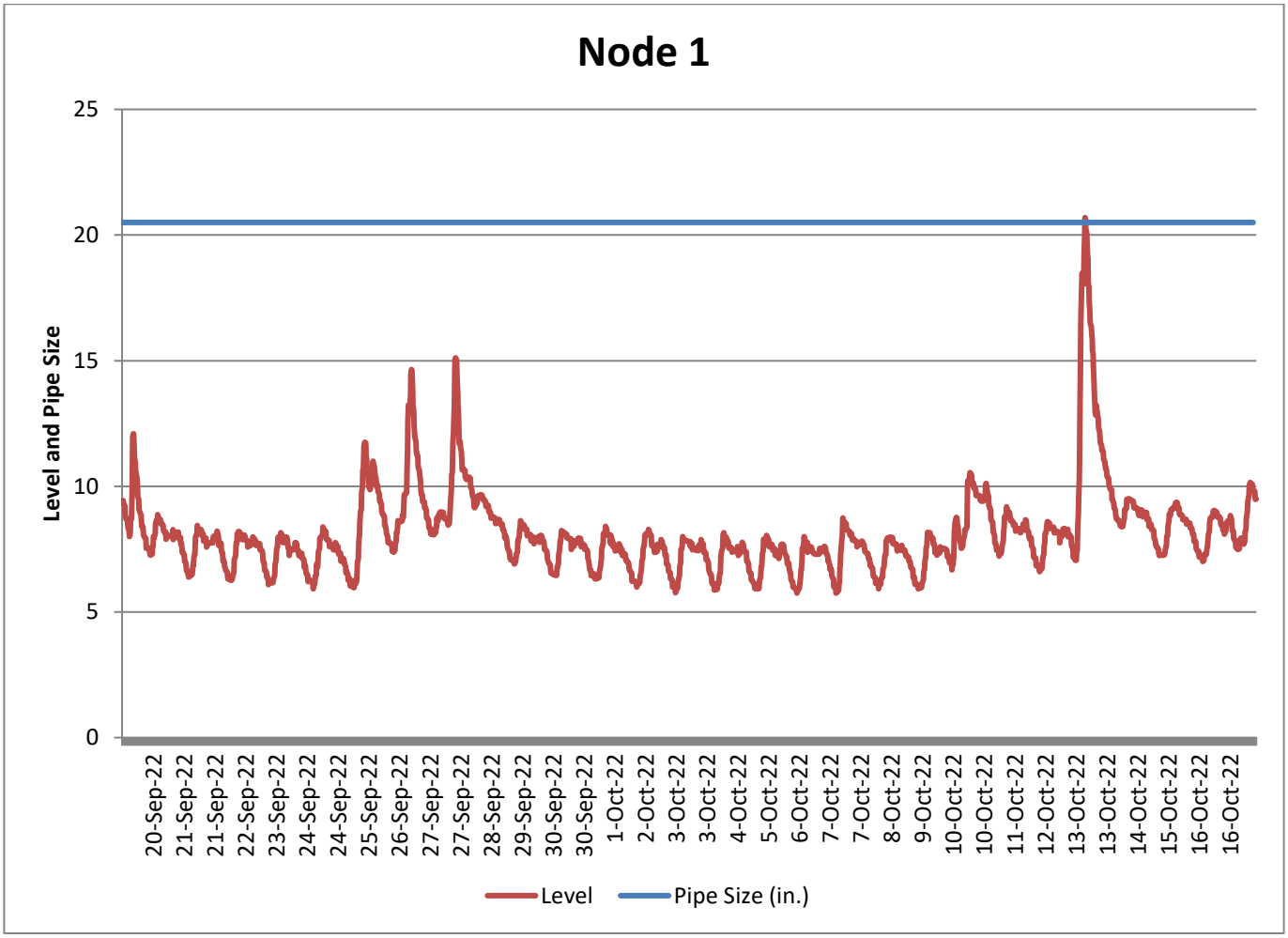
TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Depth of Flow Capacity Summary:

Depth of flow capacity is based on diameter of pipe. See graphs below.

- One time during the monitoring period did depth of flow exceed pipe diameter at Node 1.

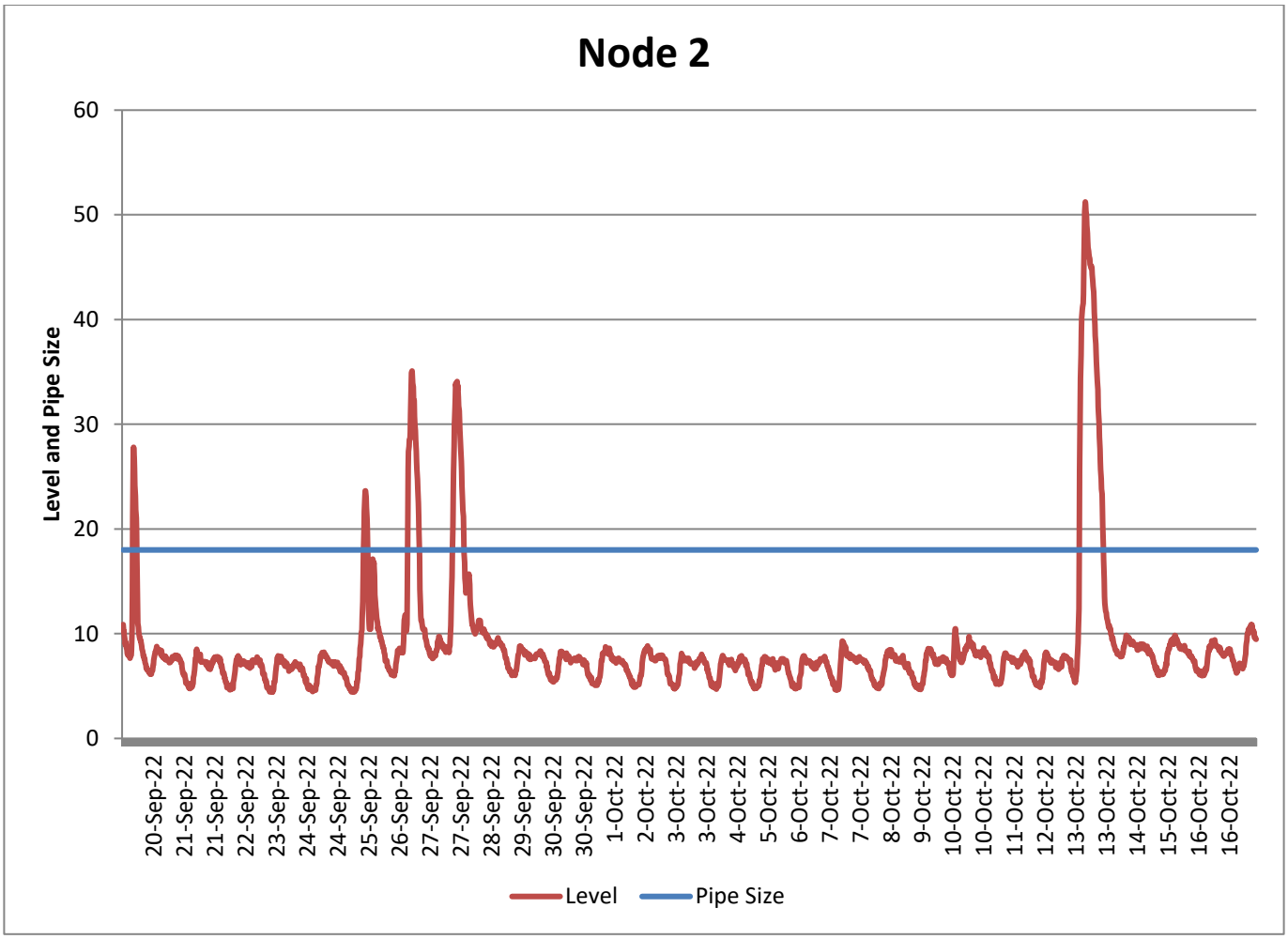


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- Five times during the monitoring period did depth of flow exceed pipe diameter at Node 2.

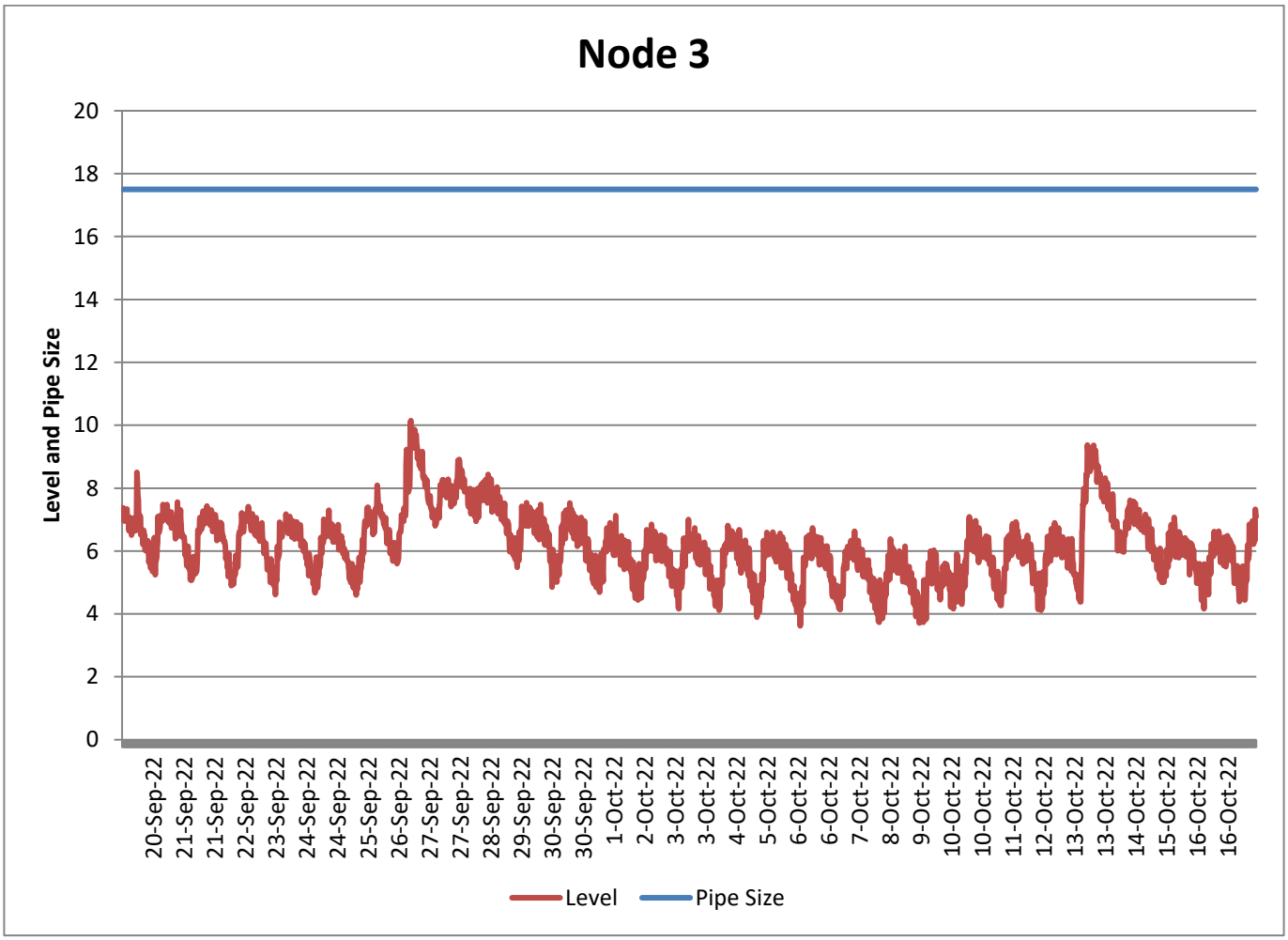


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 3.

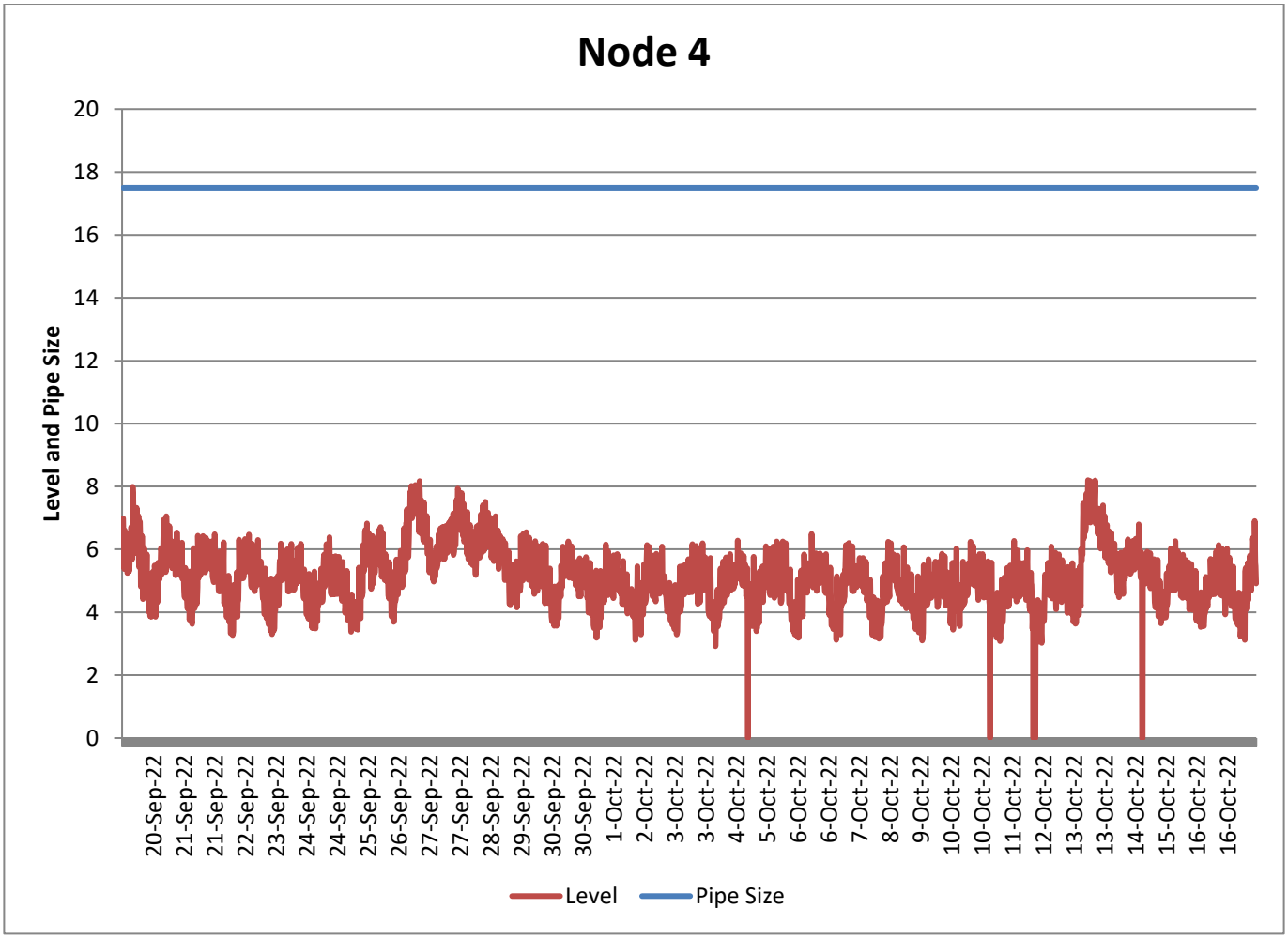


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 4.



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Town of Amherst Sanitary Sewer Downstream Routing Maps

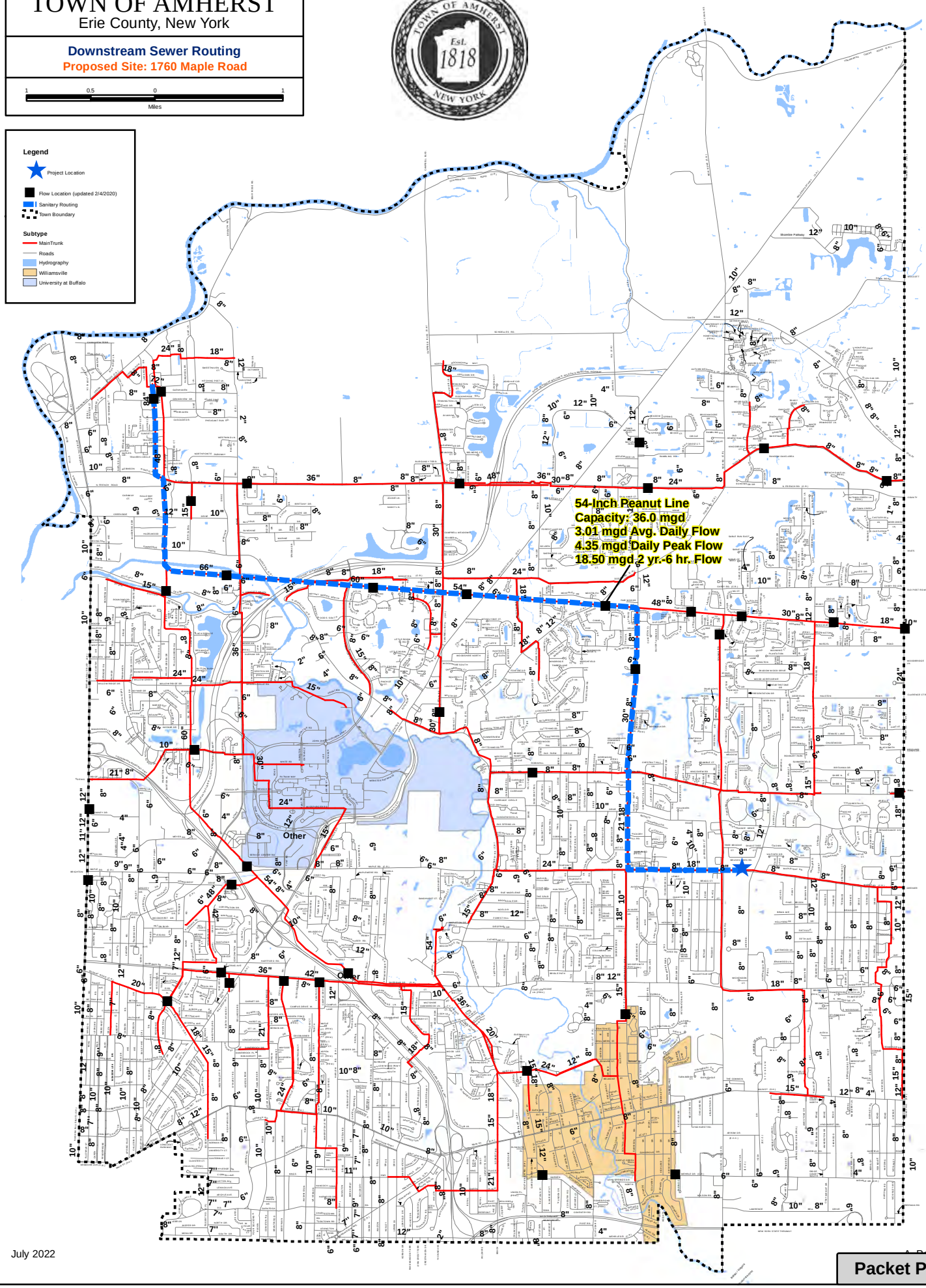
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
Erie County, New York

Downstream Sewer Routing
Proposed Site: 1760 Maple Road

1 0.5 0 1
Miles

N



July 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

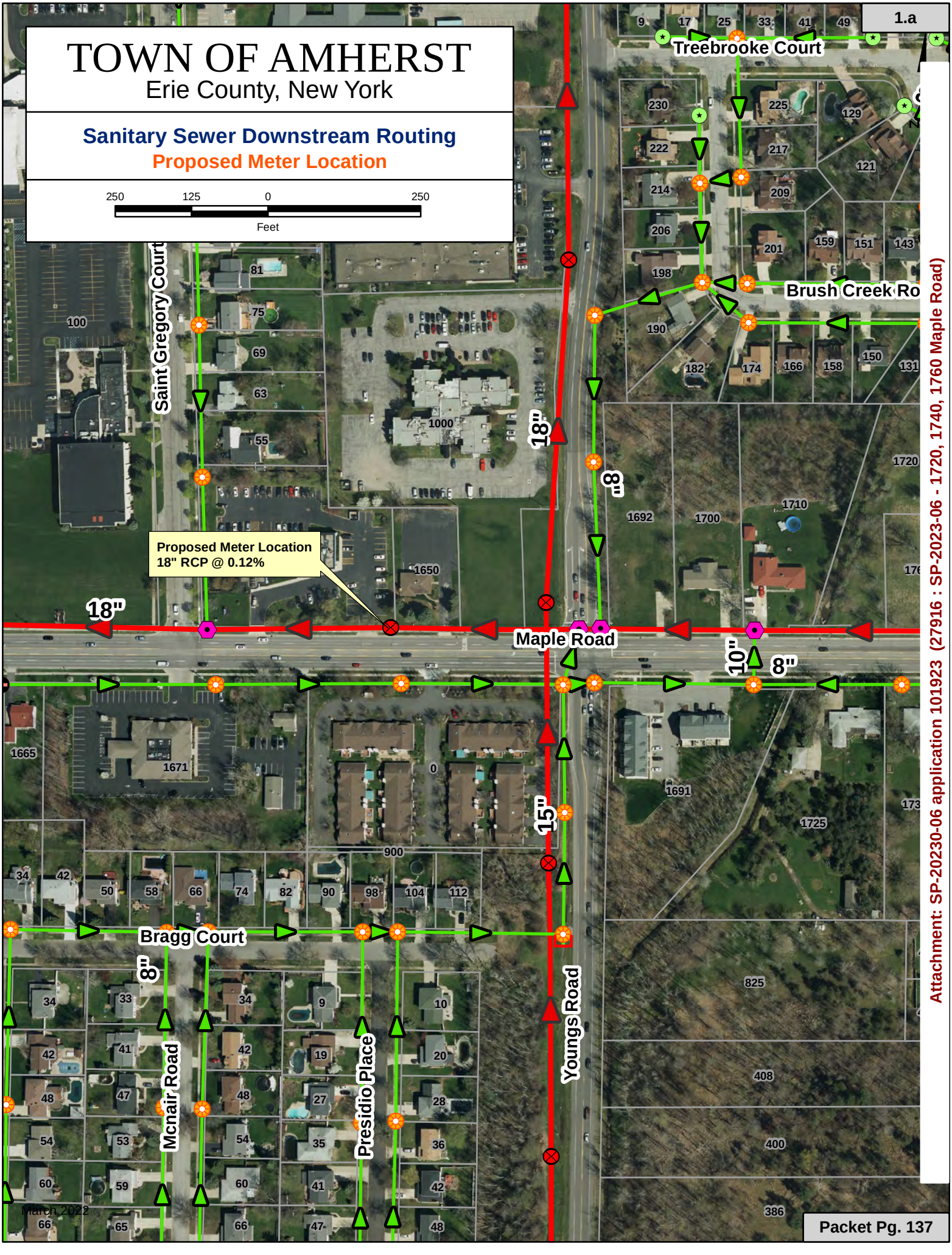
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

250 125 0 250

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

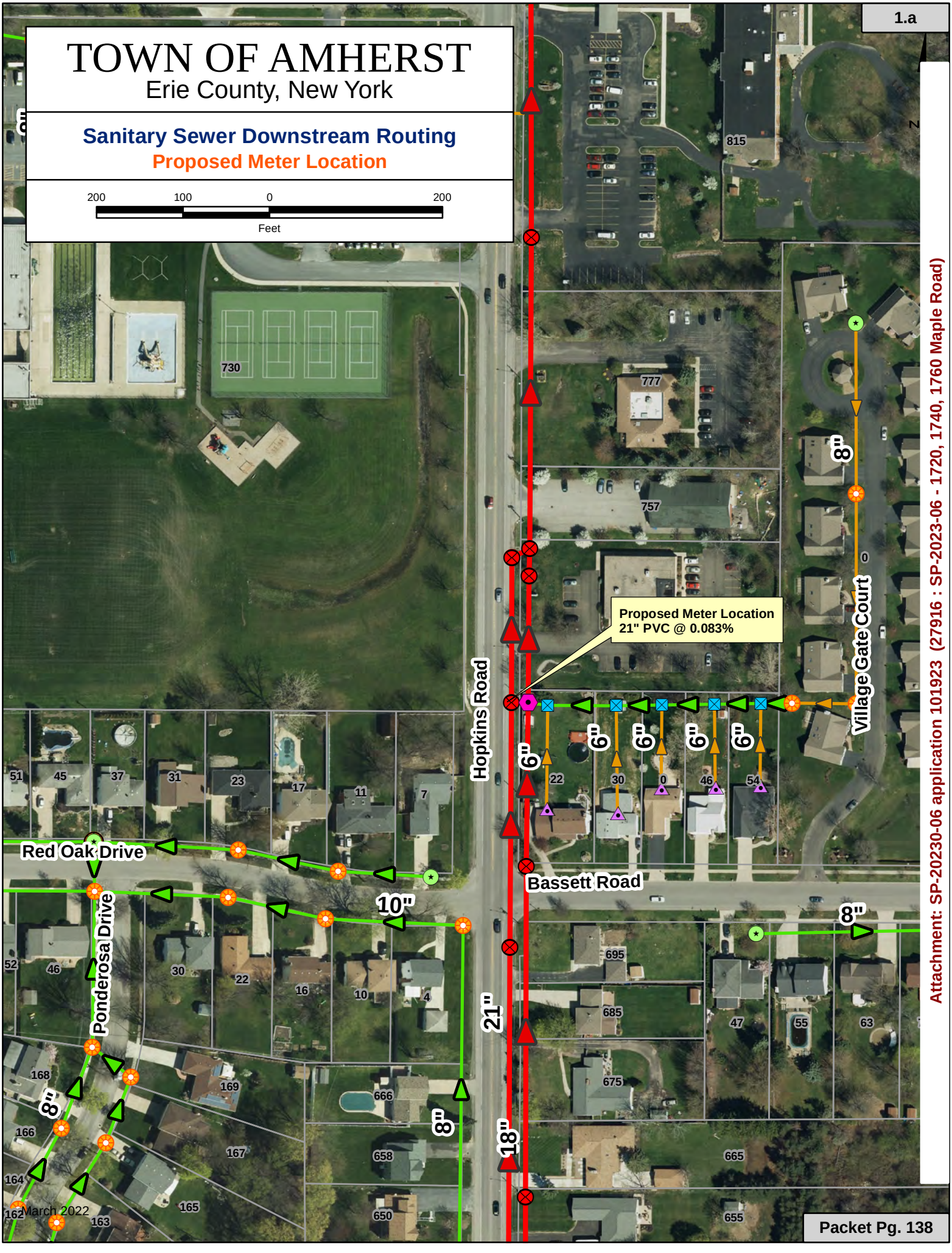
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

200 100 0 200

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

March 2022

Appendix B

Storm Sewer System Drainage Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Existing Runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 1S: West

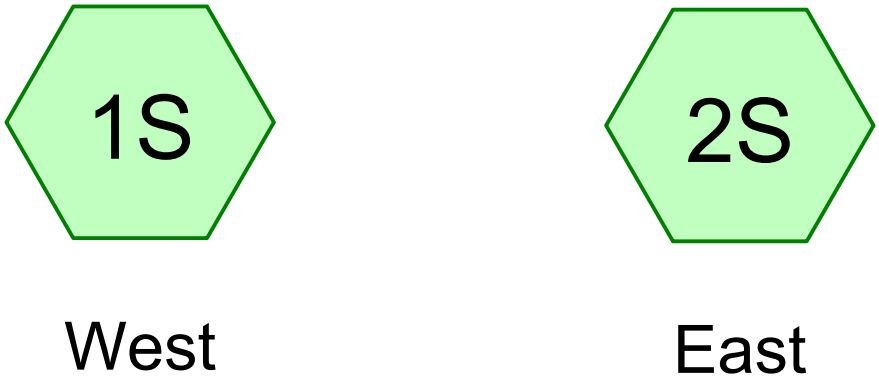
Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	1.37	6,866	0.48
2-Year	2.20	2.05	9,741	0.69
5-Year	2.69	3.18	14,477	1.02
10-Year	3.14	4.31	19,196	1.36
25-Year	3.84	6.16	27,043	1.91
50-Year	4.48	7.93	34,607	2.44
100-Year	**5.23**	**10.06**	**43,808**	**3.09**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 2S: East

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	2.21	4,779	1.65
2-Year	2.20	2.62	5,729	1.97
5-Year	2.69	3.23	7,143	2.46
10-Year	3.14	3.78	8,444	2.91
25-Year	3.84	4.64	10,470	3.61
50-Year	4.48	5.42	12,325	4.24
100-Year	**5.23**	**6.34**	**14,499**	**4.99**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



Subcat Reach Pond Link

Routing Diagram for 22.060 existing
Prepared by Carmina Wood Morris, PC, Printed 8/20/2023
HydroCAD® 10.20-2g s/n 05019 © 2022 HydroCAD Software Solutions LLC

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
169,884	80	>75% Grass cover, Good, HSG D (1S)
34,848	98	Paved parking, HSG D (2S)
204,732	**83**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
204,732	HSG D	1S, 2S
0	Other	
204,732		**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	0	169,884	0	169,884	>75% Grass cover, Good	
0	0	0	34,848	0	34,848	Paved parking	
0	**0**	**0**	**204,732**	**0**	**204,732**	**TOTAL AREA**	

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	2S	0.00	0.00	350.0	0.0050	0.013	0.0	8.0	0.0

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=0.48"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=1.37 cfs 6,866 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=1.65"
Flow Length=435' Tc=4.0 min CN=98 Runoff=2.21 cfs 4,779 cf

Total Runoff Area = 204,732 sf Runoff Volume = 11,645 cf Average Runoff Depth = 0.68"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

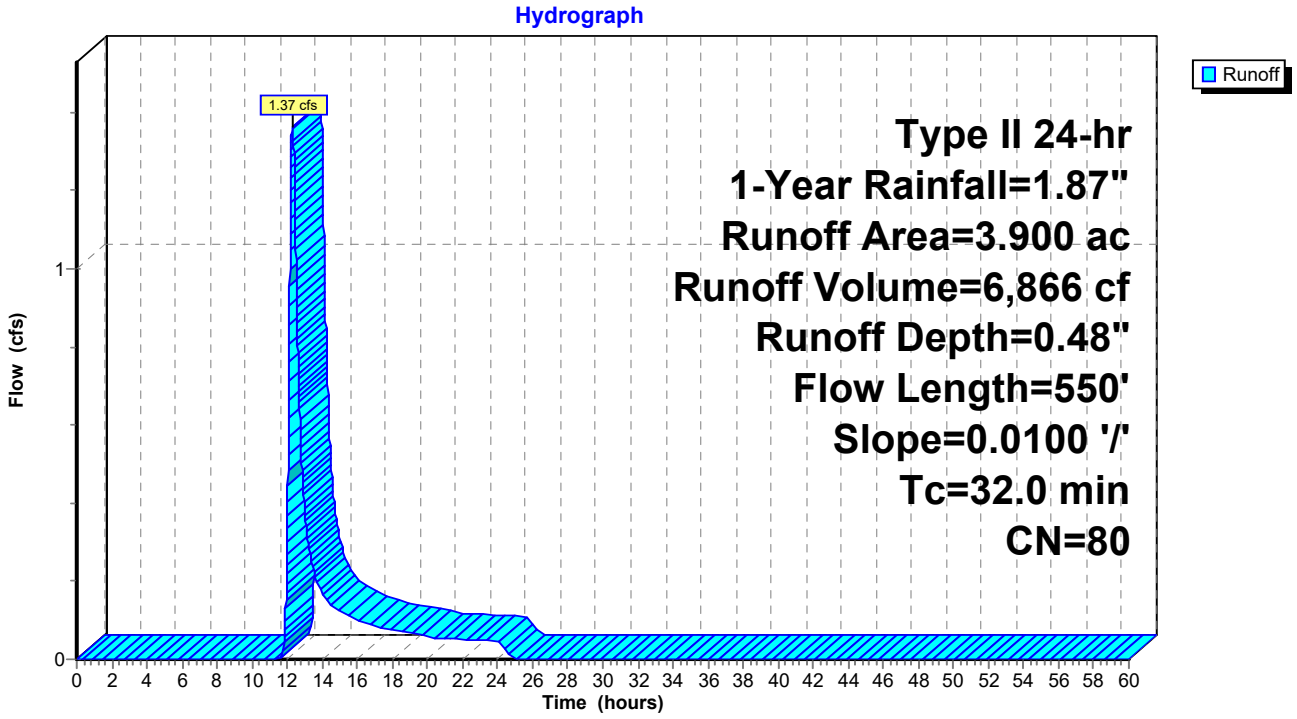
Runoff = 1.37 cfs @ 12.30 hrs, Volume= 6,866 cf, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 259% of capacity of segment #2

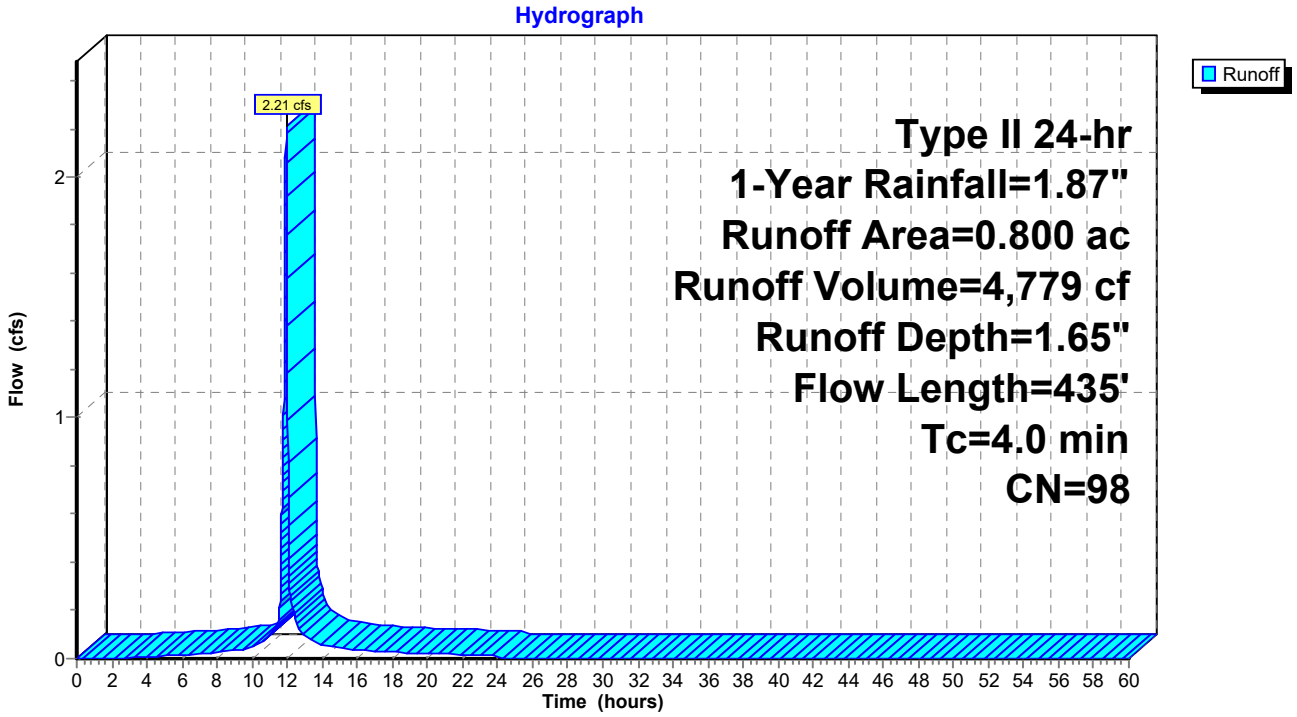
Runoff = 2.21 cfs @ 11.95 hrs, Volume= 4,779 cf, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=1.36"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=4.31 cfs 19,196 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=2.91"
Flow Length=435' Tc=4.0 min CN=98 Runoff=3.78 cfs 8,444 cf

Total Runoff Area = 204,732 sf Runoff Volume = 27,640 cf Average Runoff Depth = 1.62"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

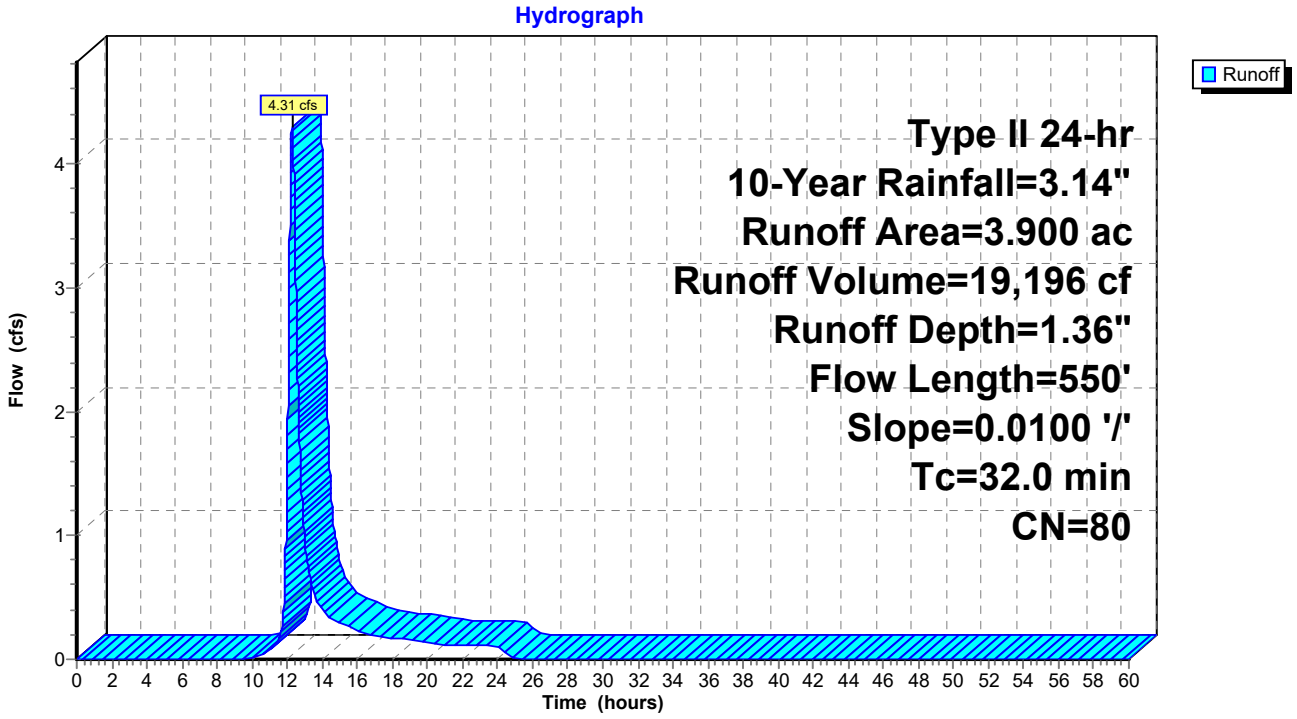
Runoff = 4.31 cfs @ 12.27 hrs, Volume= 19,196 cf, Depth= 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 442% of capacity of segment #2

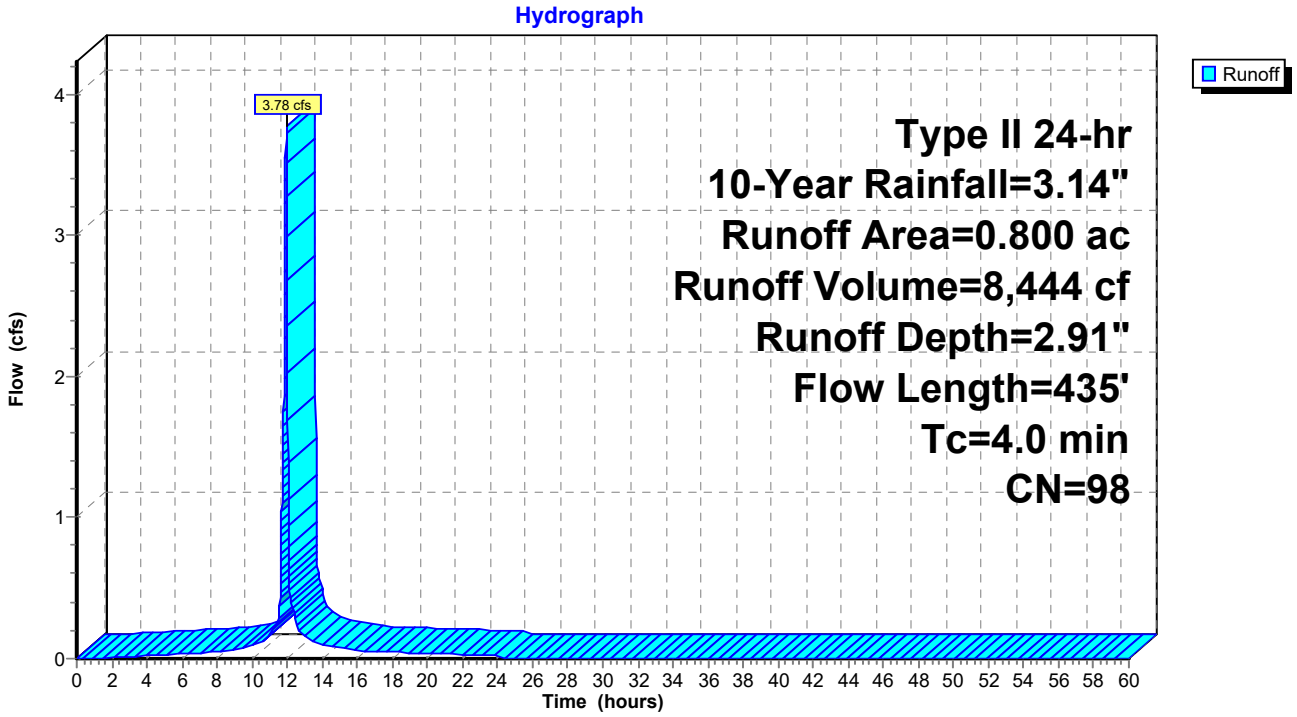
Runoff = 3.78 cfs @ 11.94 hrs, Volume= 8,444 cf, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=1.91"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=6.16 cfs 27,043 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=3.61"
Flow Length=435' Tc=4.0 min CN=98 Runoff=4.64 cfs 10,470 cf

Total Runoff Area = 204,732 sf Runoff Volume = 37,513 cf Average Runoff Depth = 2.20"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

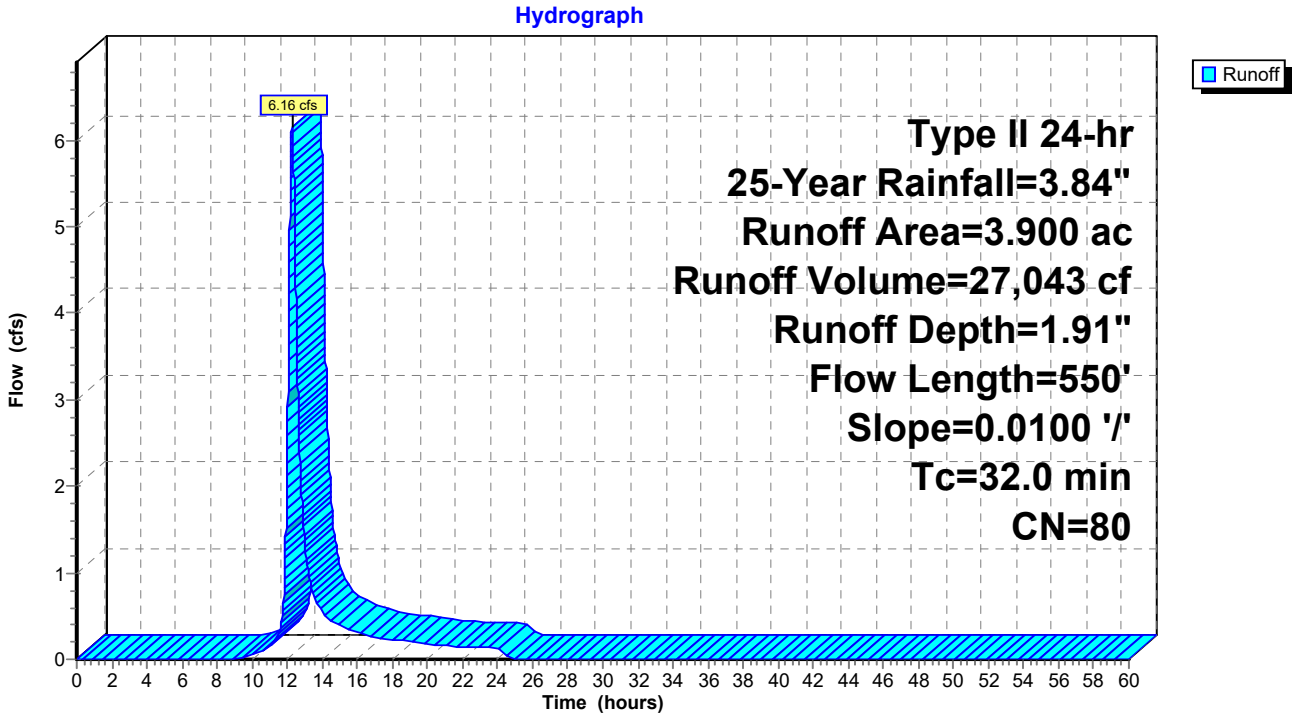
Runoff = 6.16 cfs @ 12.27 hrs, Volume= 27,043 cf, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 543% of capacity of segment #2

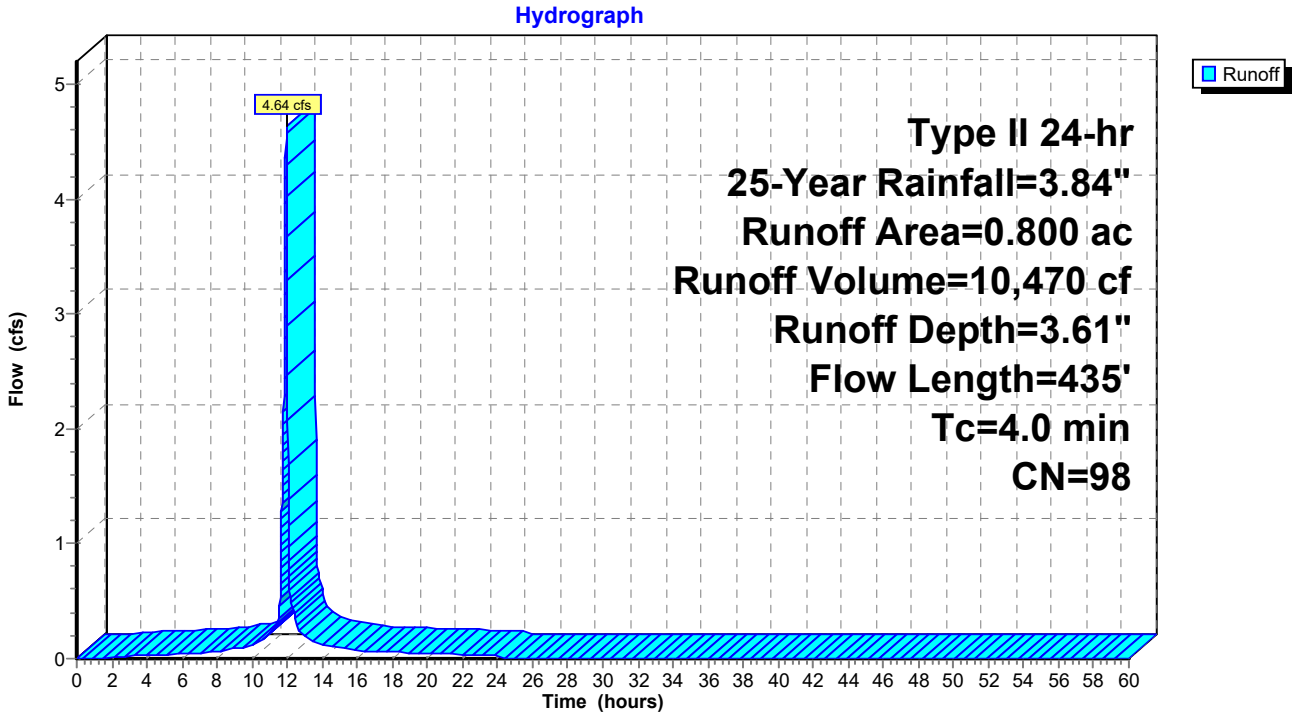
Runoff = 4.64 cfs @ 11.94 hrs, Volume= 10,470 cf, Depth= 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=3.09"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=10.06 cfs 43,808 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=4.99"
Flow Length=435' Tc=4.0 min CN=98 Runoff=6.34 cfs 14,499 cf

Total Runoff Area = 204,732 sf Runoff Volume = 58,307 cf Average Runoff Depth = 3.42"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

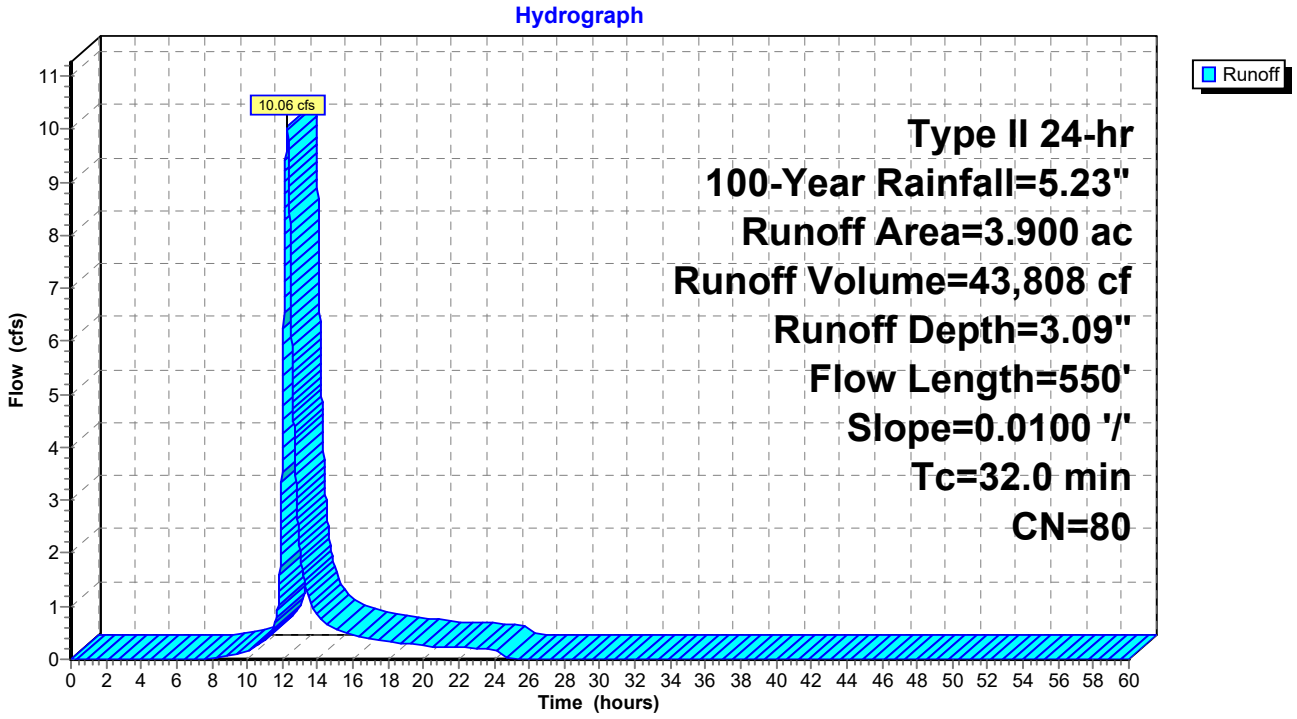
Runoff = 10.06 cfs @ 12.27 hrs, Volume= 43,808 cf, Depth= 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 742% of capacity of segment #2

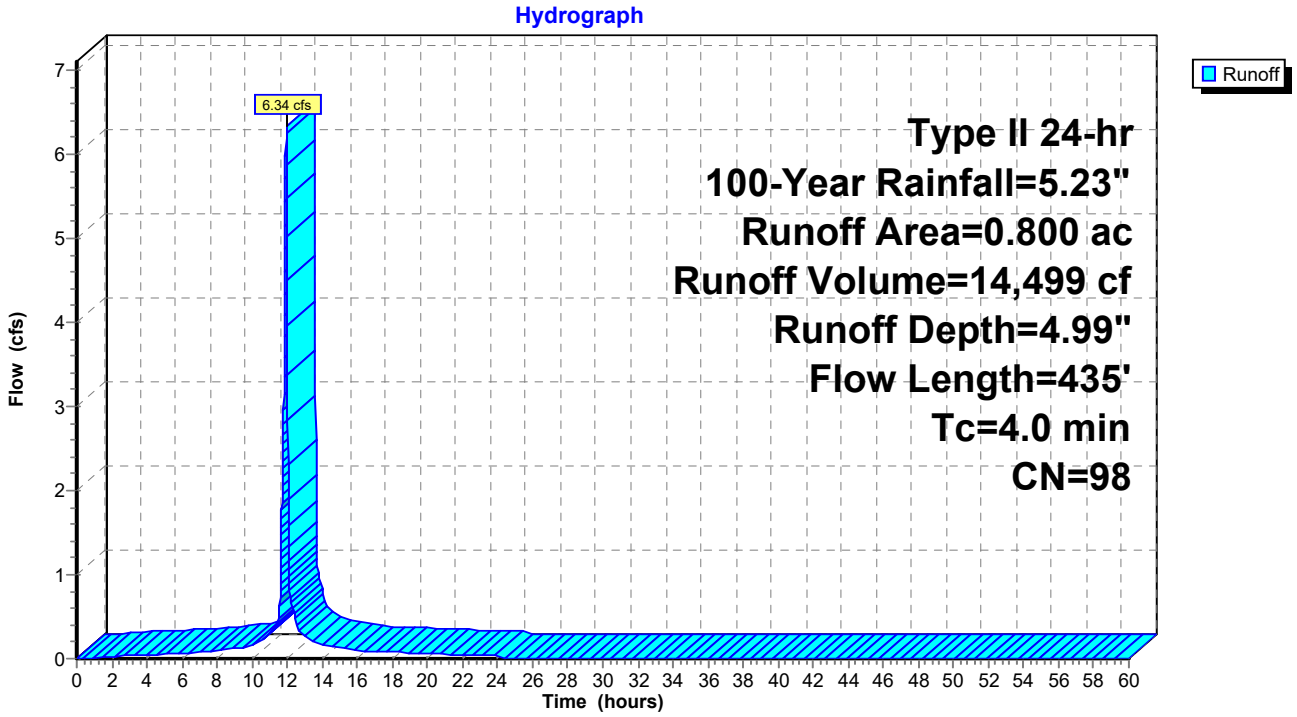
Runoff = 6.34 cfs @ 11.94 hrs, Volume= 14,499 cf, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Proposed Runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 4S: East

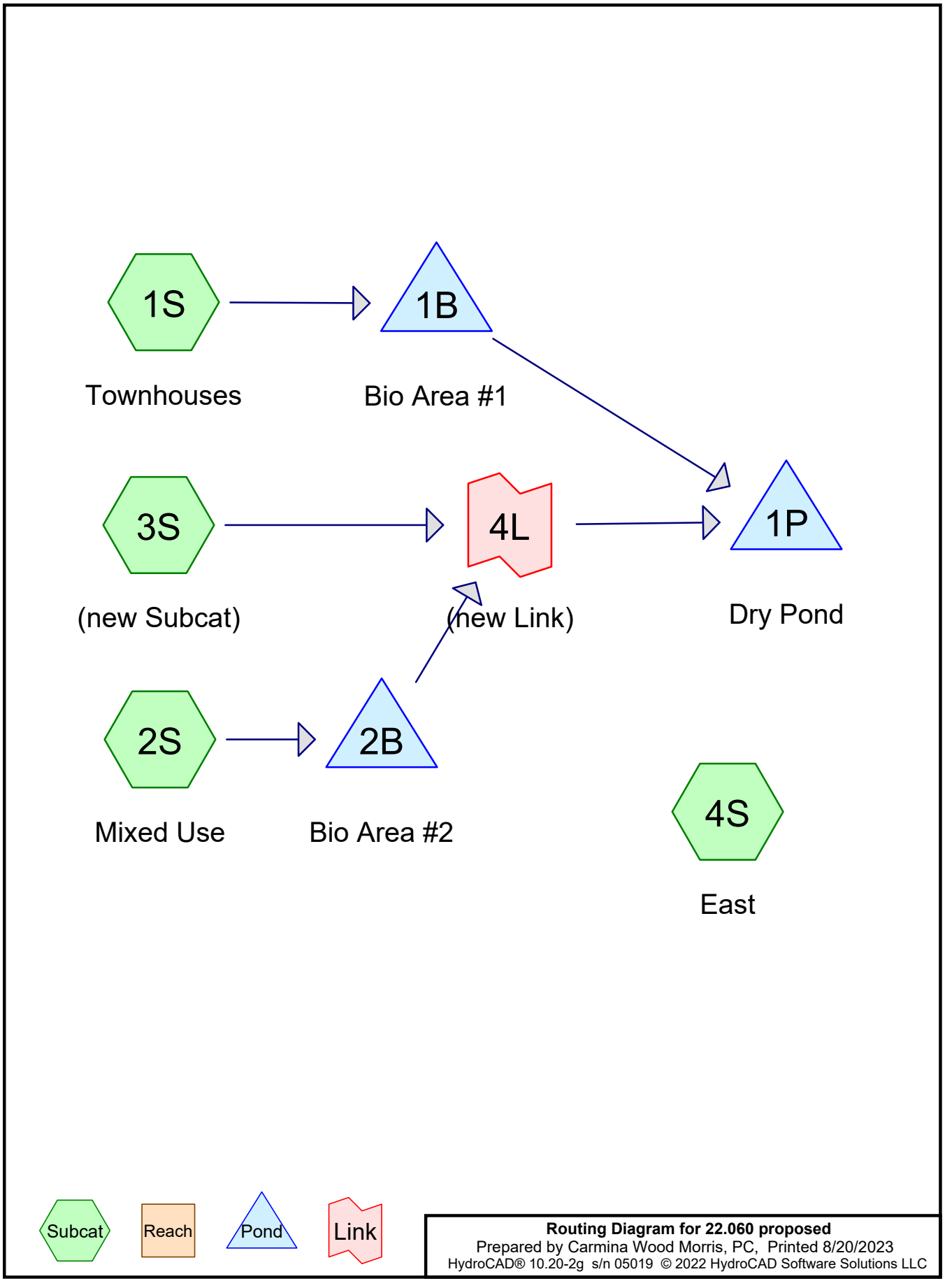
Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	1.48	2,909	1.20
2-Year	2.20	1.83	3,646	1.50
5-Year	2.69	2.36	4,764	1.96
10-Year	3.14	2.84	5,808	2.39
25-Year	3.84	3.58	7,453	3.06
50-Year	4.48	4.25	8,970	3.69
100-Year	**5.23**	**5.03**	**10,759**	**4.42**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Pond 1P: Dry Pond

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-Year	4.94	2.04	2.04	**0.00**	600.10	2,484
2-Year	6.39	2.48	2.48	0.00	600.39	3,281
5-Year	8.51	3.06	3.06	0.00	600.80	4,543
10-Year	10.47	3.48	3.48	0.00	601.18	5,780
25-Year	13.53	4.02	4.02	0.00	601.76	7,898
50-Year	16.40	4.50	4.50	0.00	602.35	10,479
100-Year	**21.92**	**4.85**	**4.85**	0.00	**602.82**	**13,382**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



Routing Diagram for 22.060 proposed
Prepared by Carmina Wood Morris, PC, Printed 8/20/2023
HydroCAD® 10.20-2g s/n 05019 © 2022 HydroCAD Software Solutions LLC

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
78,408	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S)
98,010	98	Paved parking, HSG D (1S, 3S, 4S)
28,314	98	Paved roads w/curbs & sewers, HSG D (2S)
204,732	**91**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
204,732	HSG D	1S, 2S, 3S, 4S
0	Other	
204,732		**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	0	78,408	0	78,408	>75% Grass cover, Good
0	0	0	98,010	0	98,010	Paved parking
0	0	0	28,314	0	28,314	Paved roads w/curbs & sewers
0	**0**	**0**	**204,732**	**0**	**204,732**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	1S	0.00	0.00	385.0	0.0050	0.013	0.0	12.0	0.0
2	3S	0.00	0.00	230.0	0.0050	0.013	0.0	12.0	0.0
3	4S	0.00	0.00	350.0	0.0040	0.013	0.0	8.0	0.0
4	1B	600.25	600.15	20.0	0.0050	0.013	0.0	6.0	0.0
5	1P	599.00	598.75	25.0	0.0100	0.013	0.0	10.0	0.0
6	2B	601.50	601.25	50.0	0.0050	0.013	0.0	8.0	0.0

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=1.45"
Flow Length=410' Tc=2.6 min CN=96 Runoff=1.89 cfs 3,681 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=1.20"
Flow Length=60' Tc=4.1 min CN=93 Runoff=2.00 cfs 3,907 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=0.92"
Flow Length=275' Tc=1.9 min CN=89 Runoff=4.64 cfs 8,126 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=1.20"
Flow Length=435' Tc=4.3 min CN=93 Runoff=1.48 cfs 2,909 cf

Pond 1B: Bio Area #1 Peak Elev=603.33' Storage=1,316 cf Inflow=1.89 cfs 3,681 cf
Primary=0.33 cfs 2,323 cf Secondary=1.34 cfs 1,358 cf Outflow=1.68 cfs 3,681 cf

Pond 1P: Dry Pond Peak Elev=600.10' Storage=2,484 cf Inflow=4.94 cfs 14,356 cf
Primary=2.04 cfs 14,342 cf Secondary=0.00 cfs 0 cf Outflow=2.04 cfs 14,342 cf

Pond 2B: Bio Area #2 Peak Elev=604.62' Storage=2,621 cf Inflow=2.00 cfs 3,907 cf
Outflow=0.03 cfs 3,907 cf

Link 4L: (new Link) Inflow=4.67 cfs 12,033 cf
Primary=4.67 cfs 12,033 cf

Total Runoff Area = 204,732 sf Runoff Volume = 18,623 cf Average Runoff Depth = 1.09"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

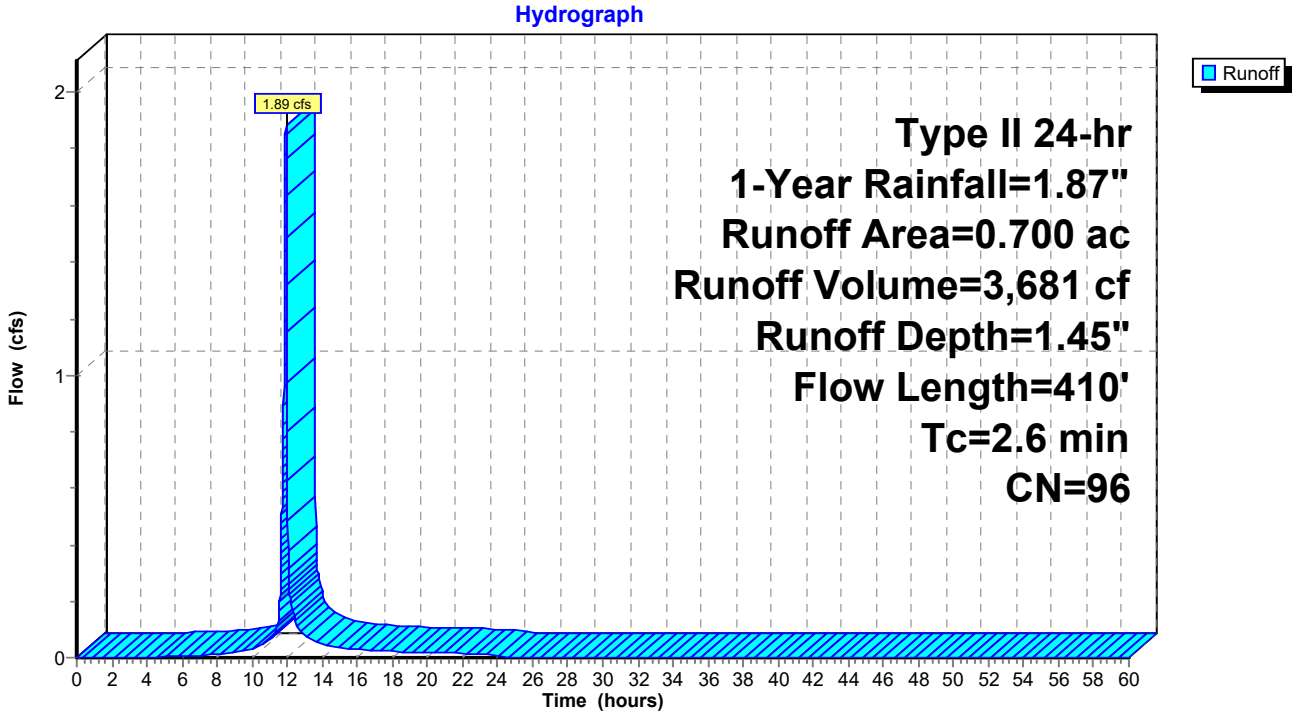
Runoff = 1.89 cfs @ 11.93 hrs, Volume= 3,681 cf, Depth= 1.45"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

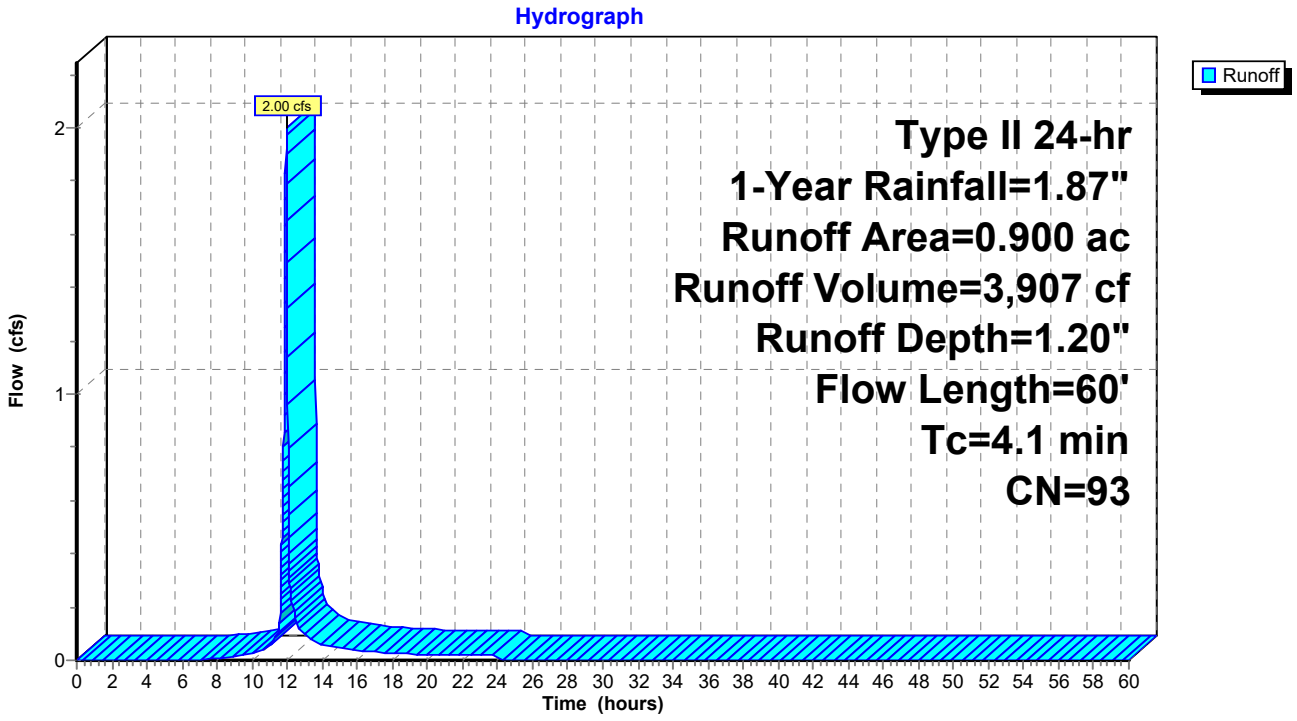
Runoff = 2.00 cfs @ 11.95 hrs, Volume= 3,907 cf, Depth= 1.20"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 184% of capacity of segment #2

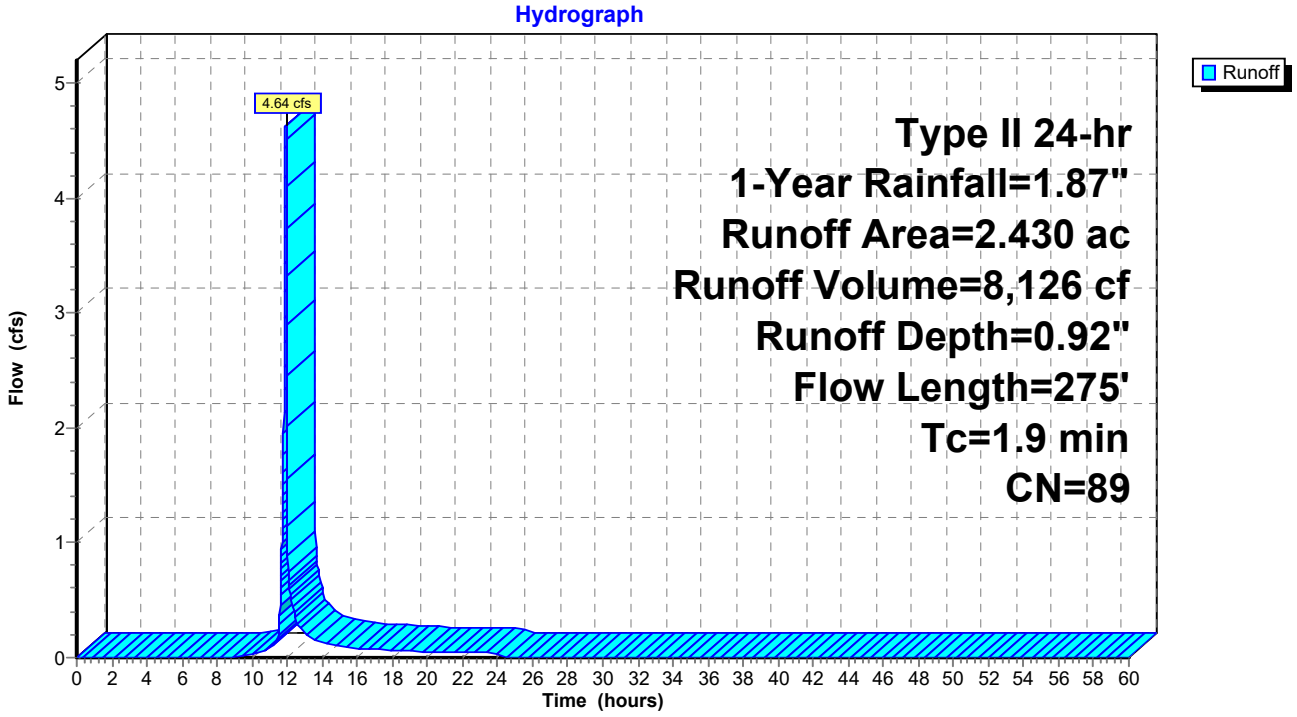
Runoff = 4.64 cfs @ 11.92 hrs, Volume= 8,126 cf, Depth= 0.92"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 194% of capacity of segment #2

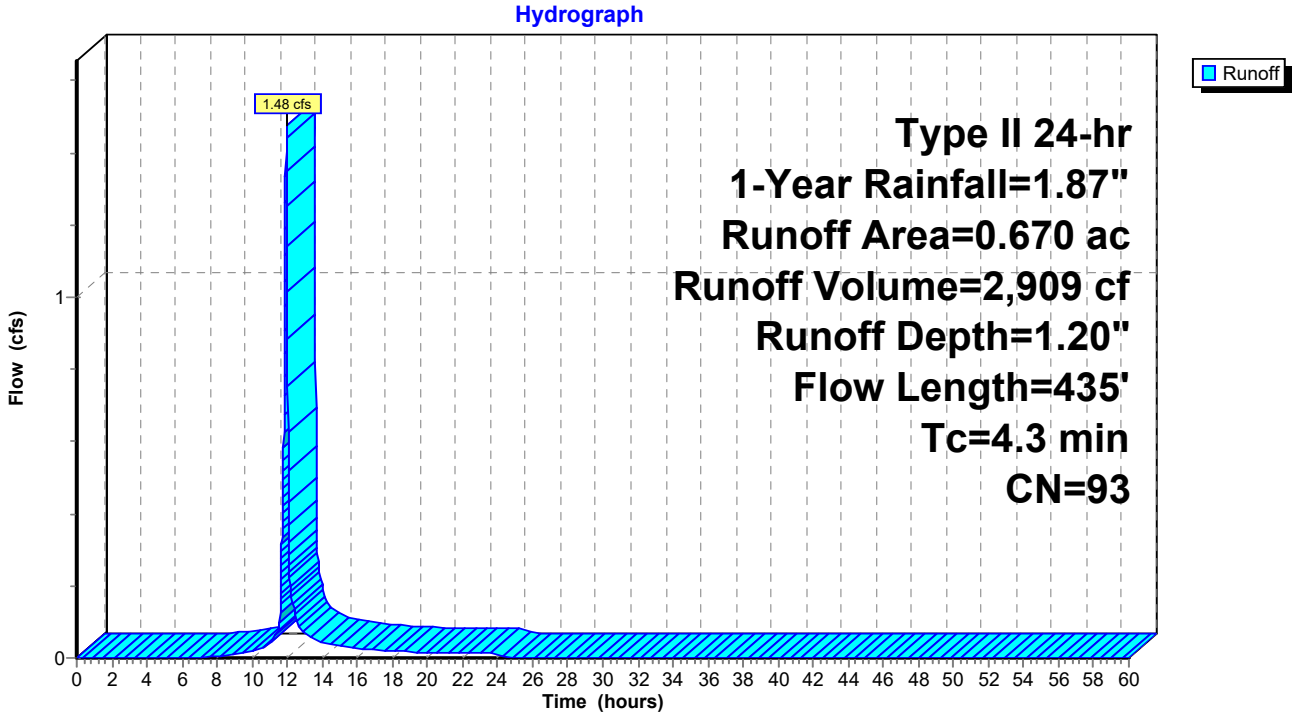
Runoff = 1.48 cfs @ 11.95 hrs, Volume= 2,909 cf, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 1.45" for 1-Year event
Inflow = 1.89 cfs @ 11.93 hrs, Volume= 3,681 cf
Outflow = 1.68 cfs @ 11.96 hrs, Volume= 3,681 cf, Atten= 11%, Lag= 1.7 min
Primary = 0.33 cfs @ 11.96 hrs, Volume= 2,323 cf
Routed to Pond 1P : Dry Pond
Secondary = 1.34 cfs @ 11.96 hrs, Volume= 1,358 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.33' @ 11.96 hrs Surf.Area= 2,755 sf Storage= 1,316 cf

Plug-Flow detention time= 422.6 min calculated for 3,681 cf (100% of inflow)
Center-of-Mass det. time= 422.8 min (1,207.2 - 784.4)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

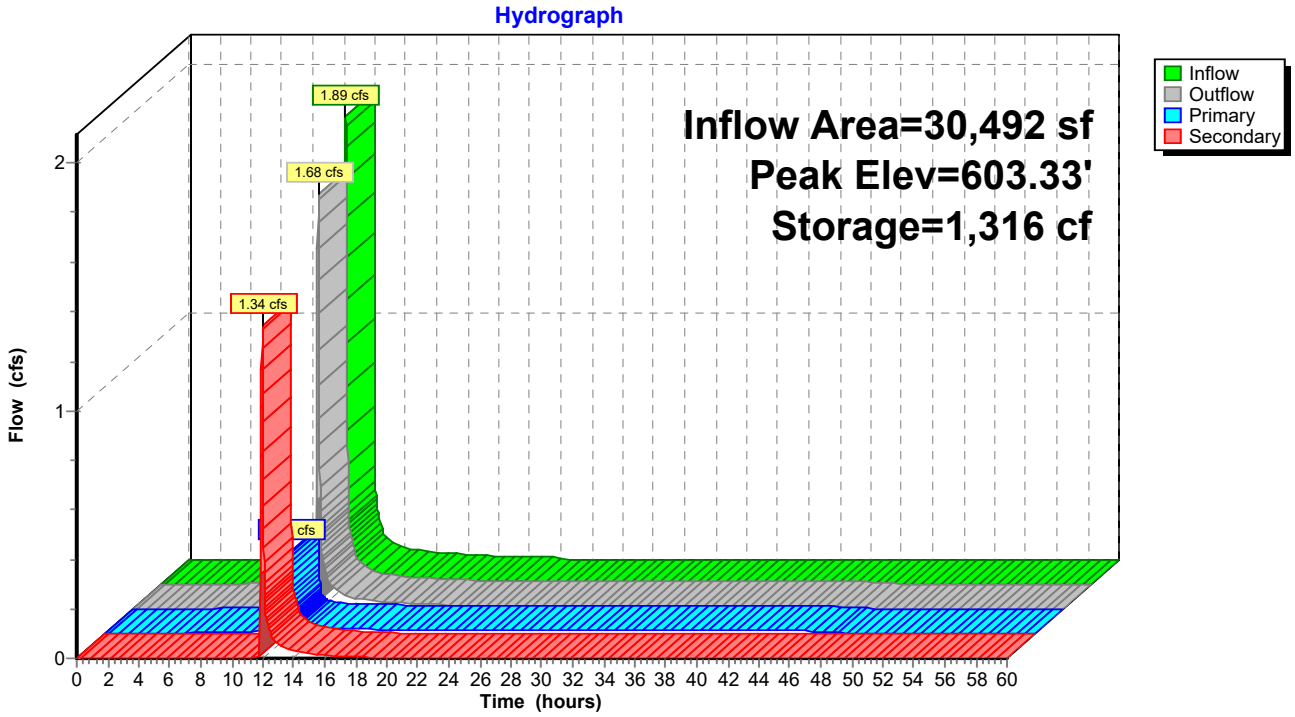
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.33 cfs @ 11.96 hrs HW=603.33' (Free Discharge)
└**1=Culvert** (Passes 0.33 cfs of 1.47 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.31 cfs @ 0.93 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=1.34 cfs @ 11.96 hrs HW=603.33' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 1.34 cfs @ 0.83 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth = 0.98" for 1-Year event
Inflow = 4.94 cfs @ 11.93 hrs, Volume= 14,356 cf
Outflow = 2.04 cfs @ 11.98 hrs, Volume= 14,342 cf, Atten= 59%, Lag= 3.4 min
Primary = 2.04 cfs @ 11.98 hrs, Volume= 14,342 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 600.10' @ 12.01 hrs Surf.Area= 2,689 sf Storage= 2,484 cf

Plug-Flow detention time= 49.6 min calculated for 14,342 cf (100% of inflow)
Center-of-Mass det. time= 47.7 min (1,232.6 - 1,184.9)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

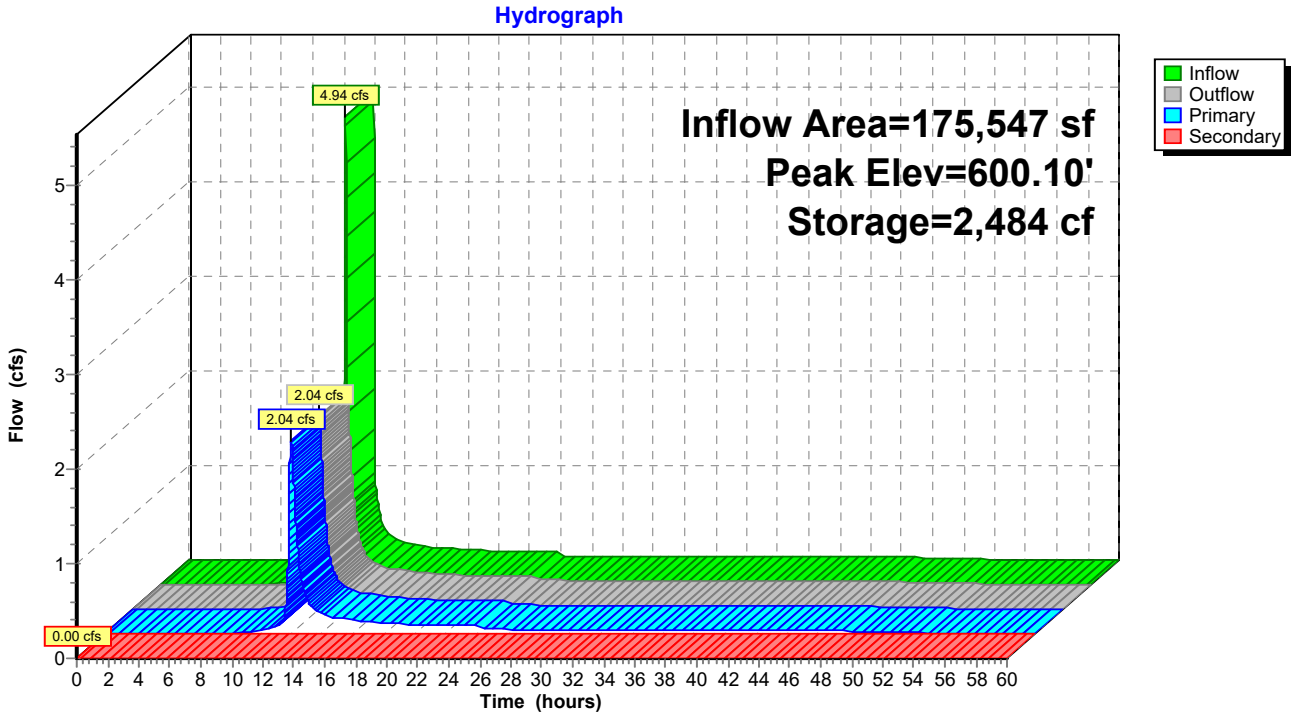
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=2.04 cfs @ 11.98 hrs HW=600.09' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.04 cfs @ 3.76 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 1.20" for 1-Year event
Inflow = 2.00 cfs @ 11.95 hrs, Volume= 3,907 cf
Outflow = 0.03 cfs @ 17.65 hrs, Volume= 3,907 cf, Atten= 99%, Lag= 341.9 min
Primary = 0.03 cfs @ 17.65 hrs, Volume= 3,907 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 604.62' @ 17.65 hrs Surf.Area= 4,804 sf Storage= 2,621 cf

Plug-Flow detention time= 956.4 min calculated for 3,907 cf (100% of inflow)
Center-of-Mass det. time= 956.4 min (1,764.3 - 807.9)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

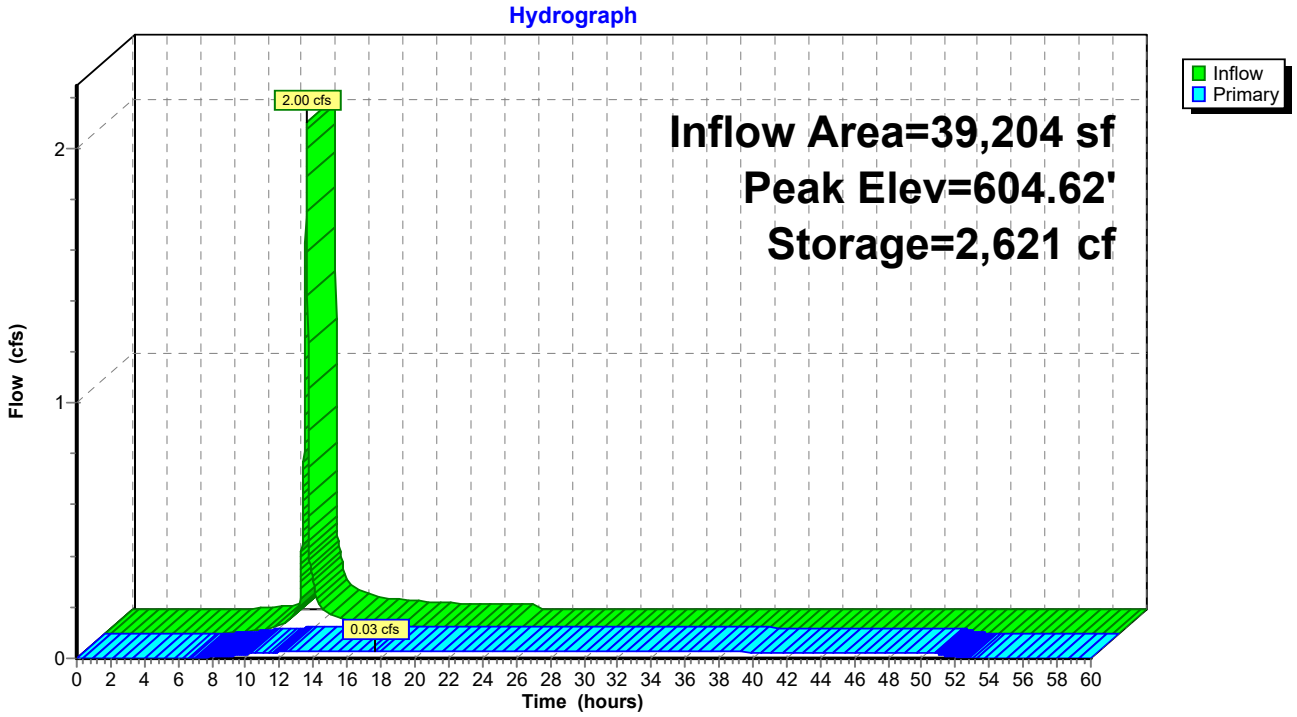
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=0.03 cfs @ 17.65 hrs HW=604.62' (Free Discharge)
└**1=Culvert** (Passes 0.03 cfs of 2.25 cfs potential flow)
├**2=Orifice/Grate** (Controls 0.00 cfs)
└**3=Exfiltration** (Controls 0.03 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



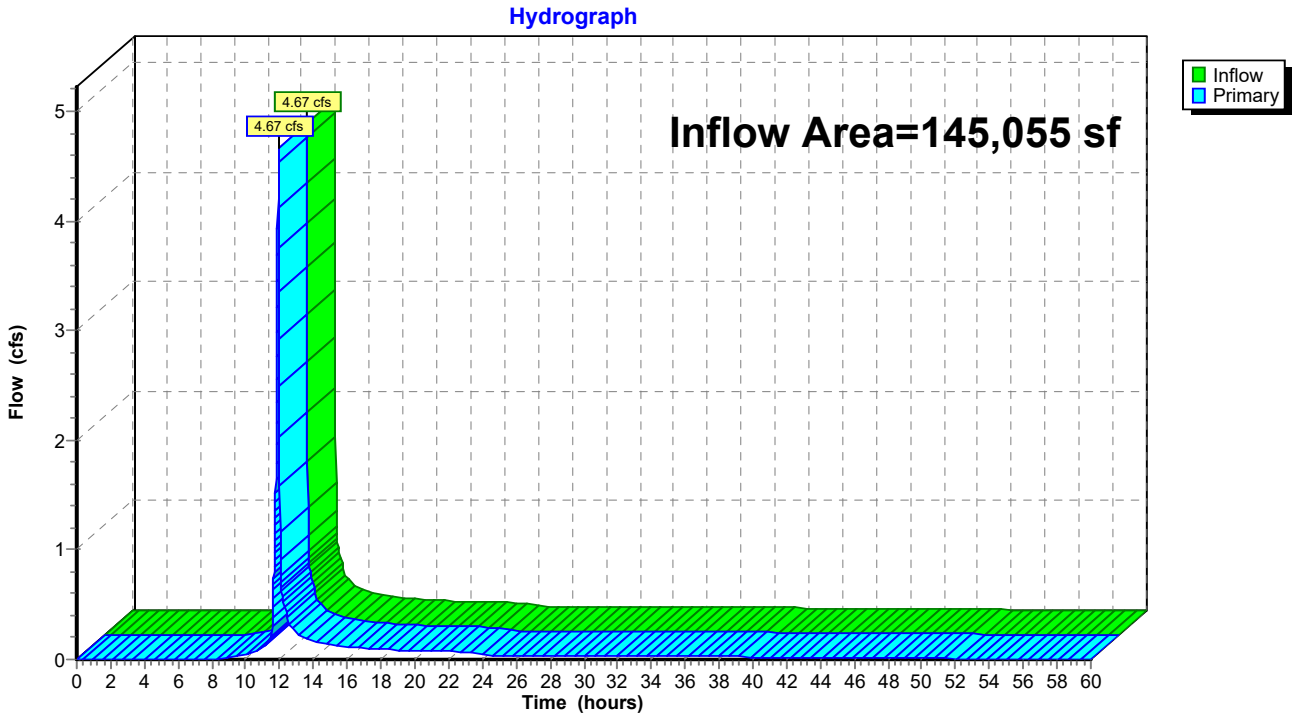
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth = 1.00" for 1-Year event
Inflow = 4.67 cfs @ 11.92 hrs, Volume= 12,033 cf
Primary = 4.67 cfs @ 11.92 hrs, Volume= 12,033 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=2.69"
Flow Length=410' Tc=2.6 min CN=96 Runoff=3.35 cfs 6,835 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=2.39"
Flow Length=60' Tc=4.1 min CN=93 Runoff=3.83 cfs 7,802 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=2.03"
Flow Length=275' Tc=1.9 min CN=89 Runoff=9.85 cfs 17,879 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=2.39"
Flow Length=435' Tc=4.3 min CN=93 Runoff=2.84 cfs 5,808 cf

Pond 1B: Bio Area #1 Peak Elev=603.38' Storage=1,439 cf Inflow=3.35 cfs 6,835 cf
Primary=0.62 cfs 3,023 cf Secondary=2.59 cfs 3,812 cf Outflow=3.22 cfs 6,835 cf

Pond 1P: Dry Pond Peak Elev=601.18' Storage=5,780 cf Inflow=10.47 cfs 27,870 cf
Primary=3.48 cfs 27,717 cf Secondary=0.00 cfs 0 cf Outflow=3.48 cfs 27,717 cf

Pond 2B: Bio Area #2 Peak Elev=605.03' Storage=4,669 cf Inflow=3.83 cfs 7,802 cf
Outflow=0.21 cfs 6,968 cf

Link 4L: (new Link) Inflow=9.88 cfs 24,846 cf
Primary=9.88 cfs 24,846 cf

Total Runoff Area = 204,732 sf Runoff Volume = 38,324 cf Average Runoff Depth = 2.25"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 133% of capacity of segment #2

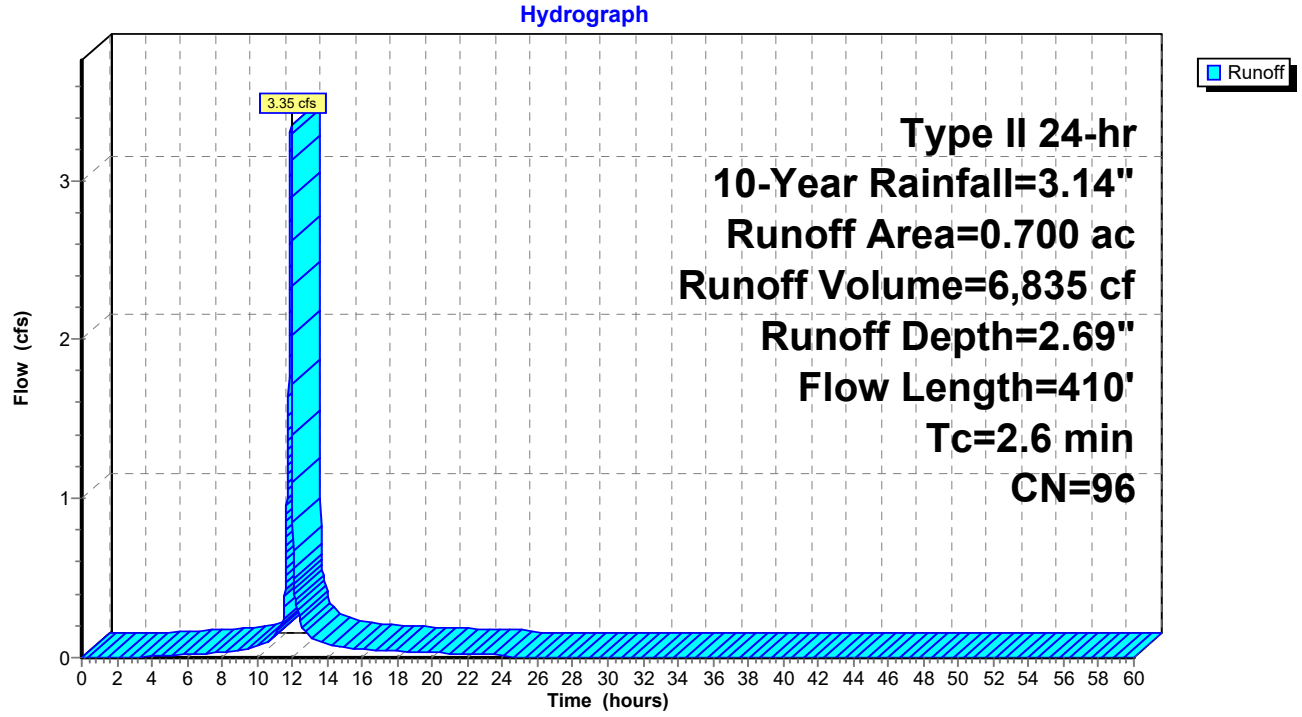
Runoff = 3.35 cfs @ 11.93 hrs, Volume= 6,835 cf, Depth= 2.69"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

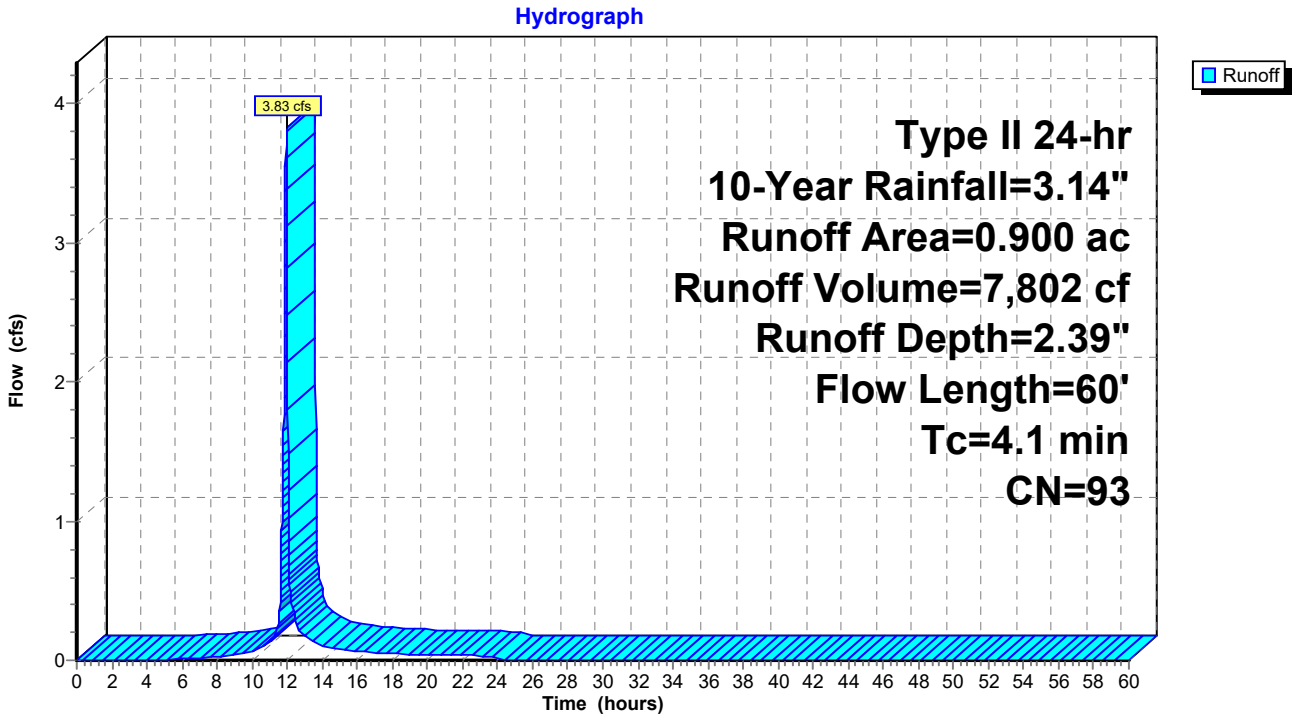
Runoff = 3.83 cfs @ 11.95 hrs, Volume= 7,802 cf, Depth= 2.39"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 391% of capacity of segment #2

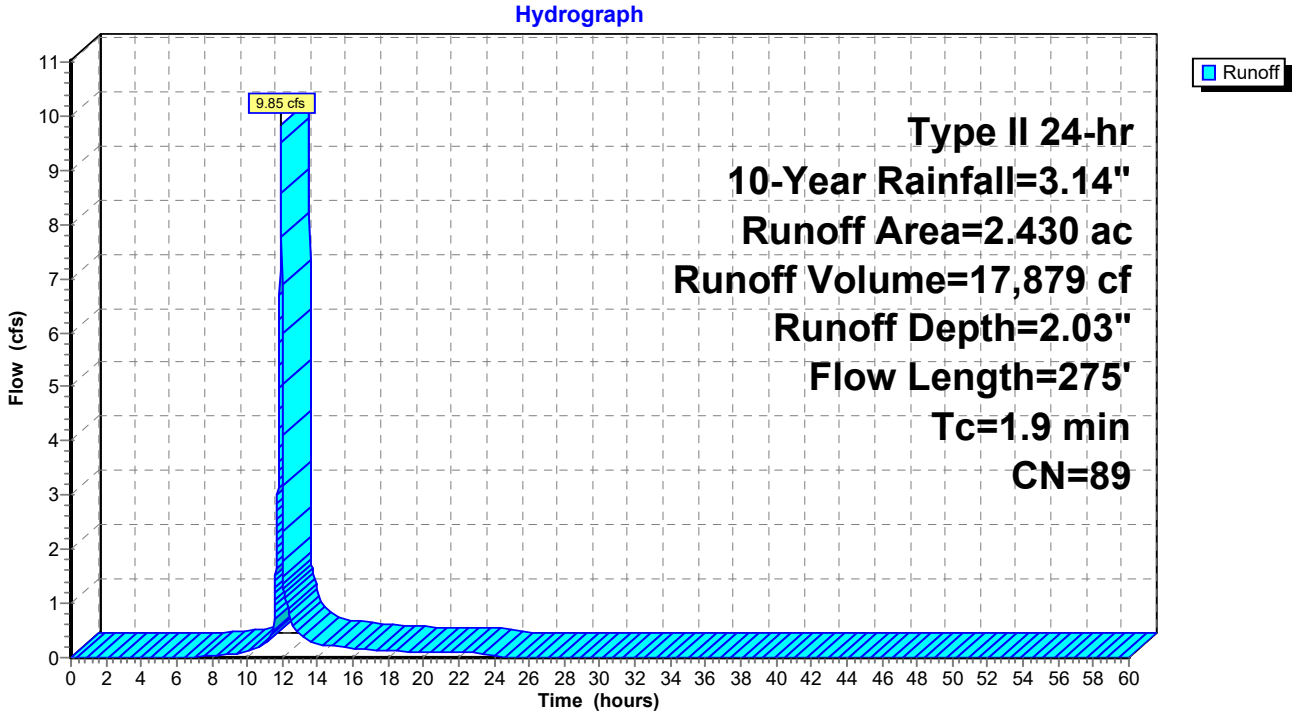
Runoff = 9.85 cfs @ 11.92 hrs, Volume= 17,879 cf, Depth= 2.03"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 371% of capacity of segment #2

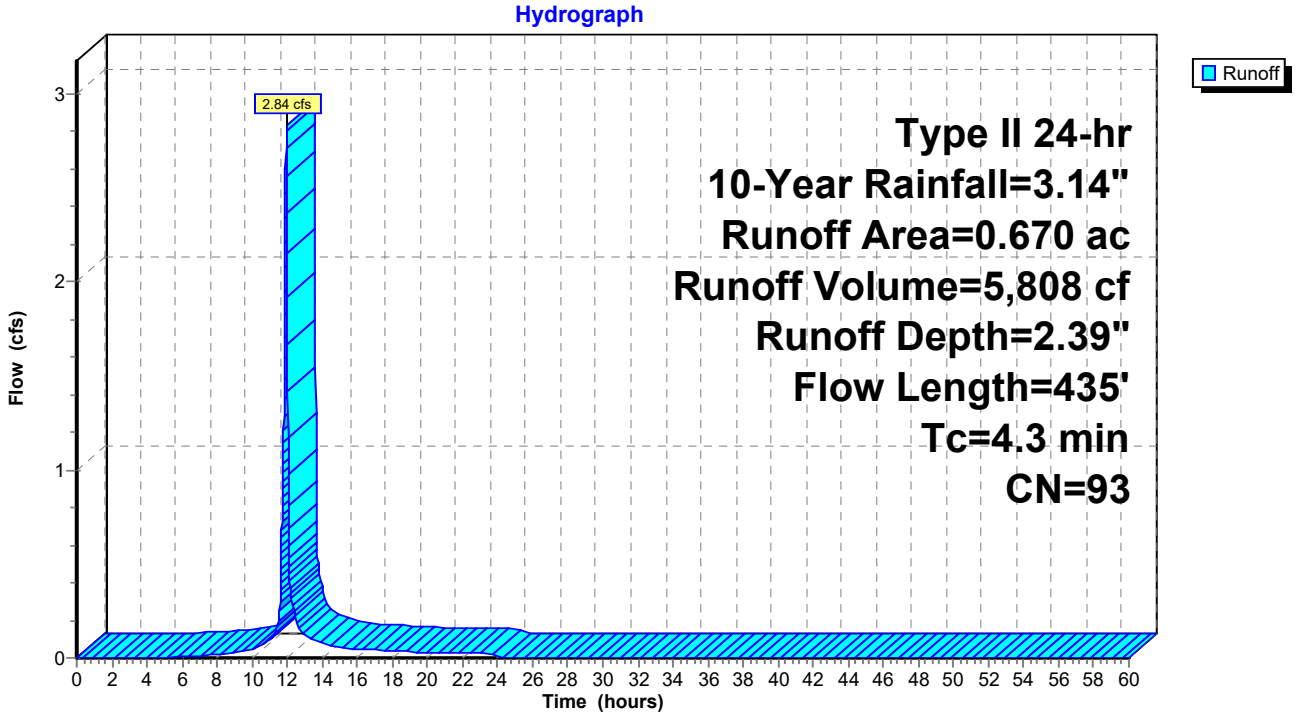
Runoff = 2.84 cfs @ 11.95 hrs, Volume= 5,808 cf, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 2.69" for 10-Year event
Inflow = 3.35 cfs @ 11.93 hrs, Volume= 6,835 cf
Outflow = 3.22 cfs @ 11.95 hrs, Volume= 6,835 cf, Atten= 4%, Lag= 0.9 min
Primary = 0.62 cfs @ 11.95 hrs, Volume= 3,023 cf
Routed to Pond 1P : Dry Pond
Secondary = 2.59 cfs @ 11.95 hrs, Volume= 3,812 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.38' @ 11.95 hrs Surf.Area= 2,818 sf Storage= 1,439 cf

Plug-Flow detention time= 243.8 min calculated for 6,834 cf (100% of inflow)
Center-of-Mass det. time= 244.0 min (1,011.9 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

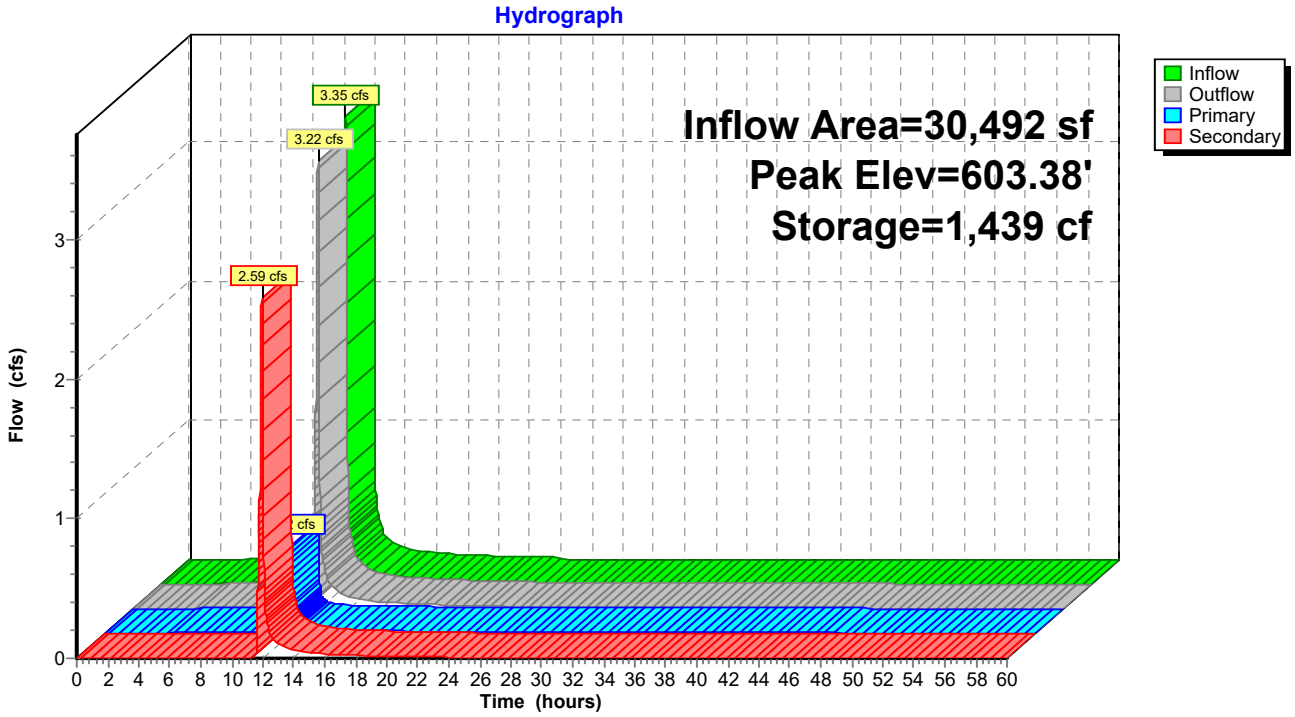
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.62 cfs @ 11.95 hrs HW=603.38' (Free Discharge)
└**1=Culvert** (Passes 0.62 cfs of 1.48 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.61 cfs @ 1.16 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=2.58 cfs @ 11.95 hrs HW=603.38' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 2.58 cfs @ 1.03 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 0.93'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 1.91" for 10-Year event
Inflow = 10.47 cfs @ 11.92 hrs, Volume= 27,870 cf
Outflow = 3.48 cfs @ 12.01 hrs, Volume= 27,717 cf, Atten= 67%, Lag= 5.3 min
Primary = 3.48 cfs @ 12.01 hrs, Volume= 27,717 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 601.18' @ 12.01 hrs Surf.Area= 3,447 sf Storage= 5,780 cf

Plug-Flow detention time= 39.3 min calculated for 27,713 cf (99% of inflow)
Center-of-Mass det. time= 25.8 min (1,117.6 - 1,091.8)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

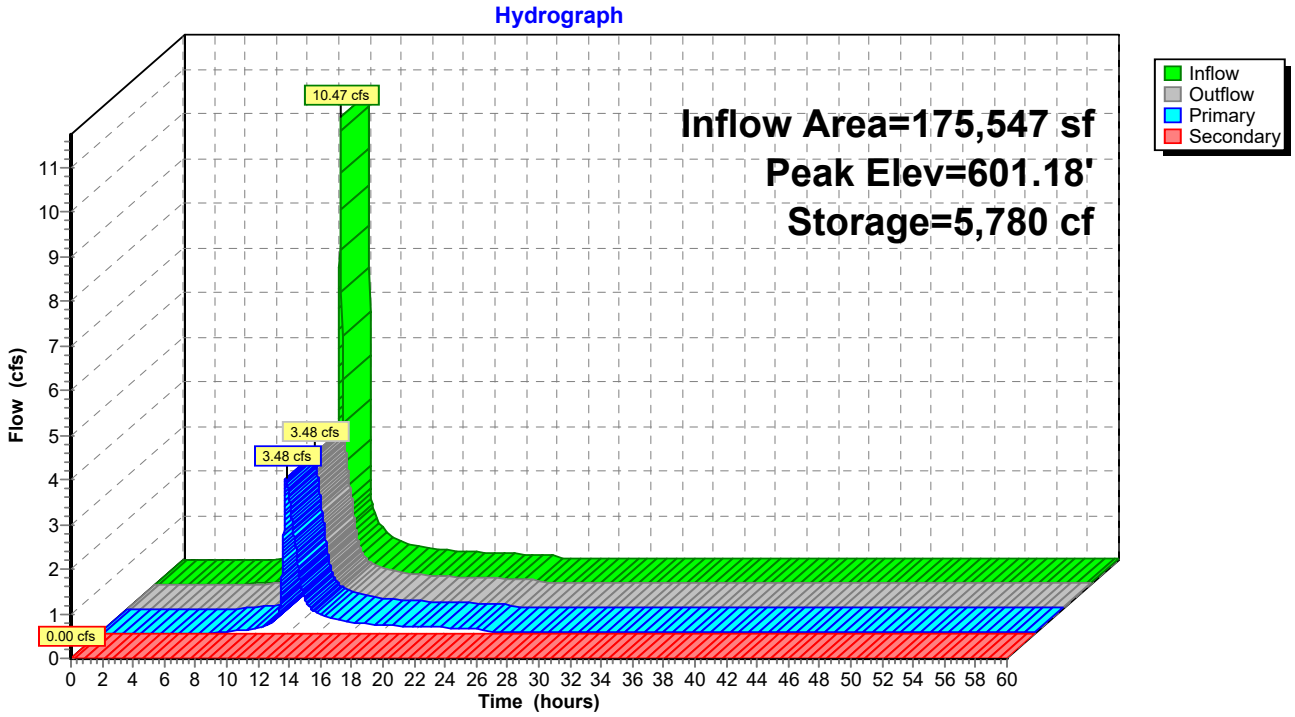
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=3.48 cfs @ 12.01 hrs HW=601.18' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.48 cfs @ 6.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 2.39" for 10-Year event
Inflow = 3.83 cfs @ 11.95 hrs, Volume= 7,802 cf
Outflow = 0.21 cfs @ 12.74 hrs, Volume= 6,968 cf, Atten= 95%, Lag= 47.4 min
Primary = 0.21 cfs @ 12.74 hrs, Volume= 6,968 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.03' @ 12.74 hrs Surf.Area= 5,350 sf Storage= 4,669 cf

Plug-Flow detention time= 1,004.1 min calculated for 6,968 cf (89% of inflow)
Center-of-Mass det. time= 950.3 min (1,738.7 - 788.4)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

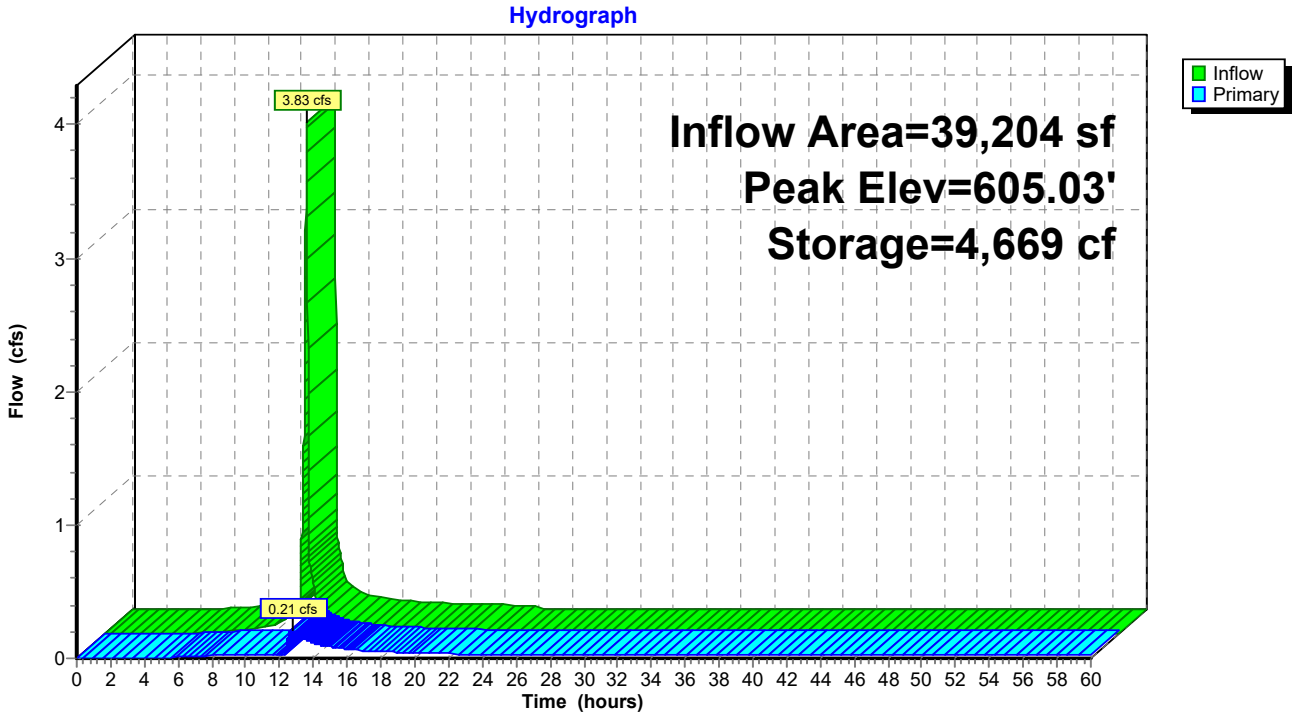
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=0.20 cfs @ 12.74 hrs HW=605.03' (Free Discharge)
└─**1=Culvert** (Passes 0.20 cfs of 2.41 cfs potential flow)
  ├─**2=Orifice/Grate** (Weir Controls 0.17 cfs @ 0.56 fps)
  └─**3=Exfiltration** (Controls 0.03 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



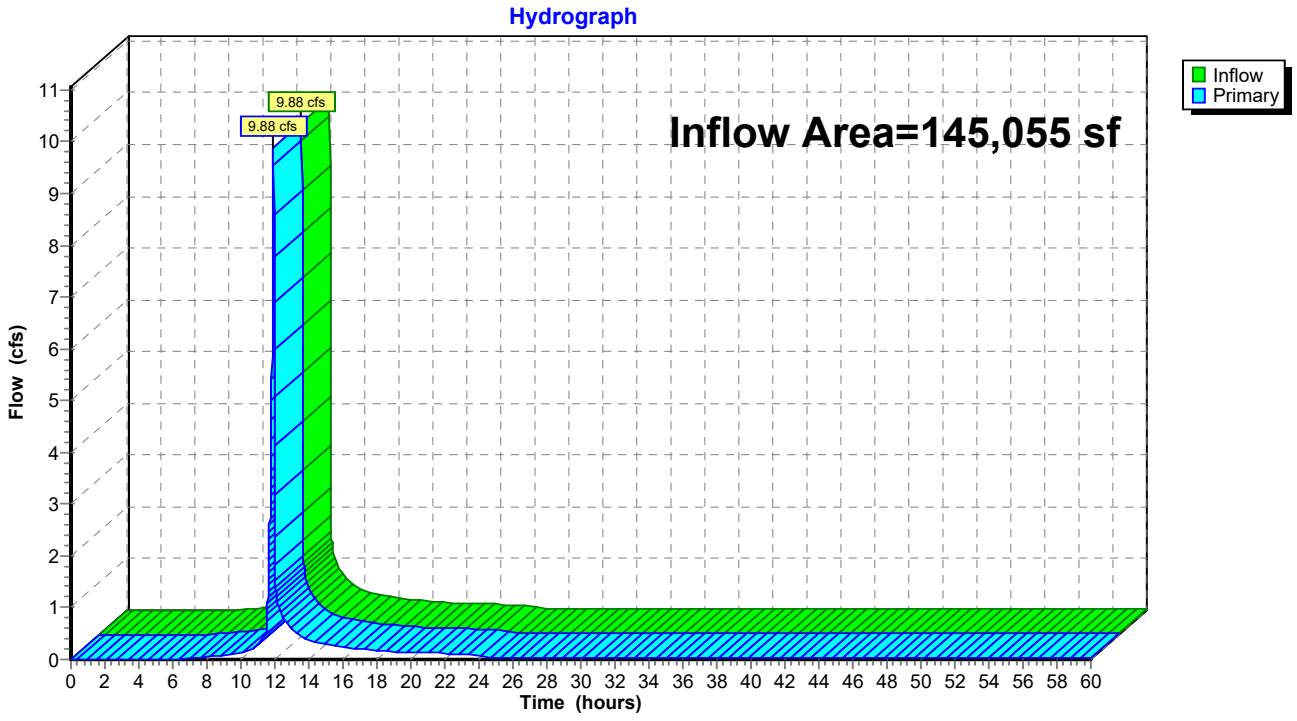
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 2.06" for 10-Year event
Inflow = 9.88 cfs @ 11.92 hrs, Volume= 24,846 cf
Primary = 9.88 cfs @ 11.92 hrs, Volume= 24,846 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=3.38"
Flow Length=410' Tc=2.6 min CN=96 Runoff=4.15 cfs 8,593 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=3.06"
Flow Length=60' Tc=4.1 min CN=93 Runoff=4.84 cfs 10,011 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=2.67"
Flow Length=275' Tc=1.9 min CN=89 Runoff=12.77 cfs 23,580 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=3.06"
Flow Length=435' Tc=4.3 min CN=93 Runoff=3.58 cfs 7,453 cf

Pond 1B: Bio Area #1 Peak Elev=603.39' Storage=1,495 cf Inflow=4.15 cfs 8,593 cf
Primary=0.77 cfs 3,394 cf Secondary=3.22 cfs 5,199 cf Outflow=4.00 cfs 8,593 cf

Pond 1P: Dry Pond Peak Elev=601.76' Storage=7,898 cf Inflow=13.53 cfs 36,140 cf
Primary=4.02 cfs 35,988 cf Secondary=0.00 cfs 0 cf Outflow=4.02 cfs 35,988 cf

Pond 2B: Bio Area #2 Peak Elev=605.11' Storage=5,119 cf Inflow=4.84 cfs 10,011 cf
Outflow=1.29 cfs 9,166 cf

Link 4L: (new Link) Inflow=12.80 cfs 32,746 cf
Primary=12.80 cfs 32,746 cf

Total Runoff Area = 204,732 sf Runoff Volume = 49,637 cf Average Runoff Depth = 2.91"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 165% of capacity of segment #2

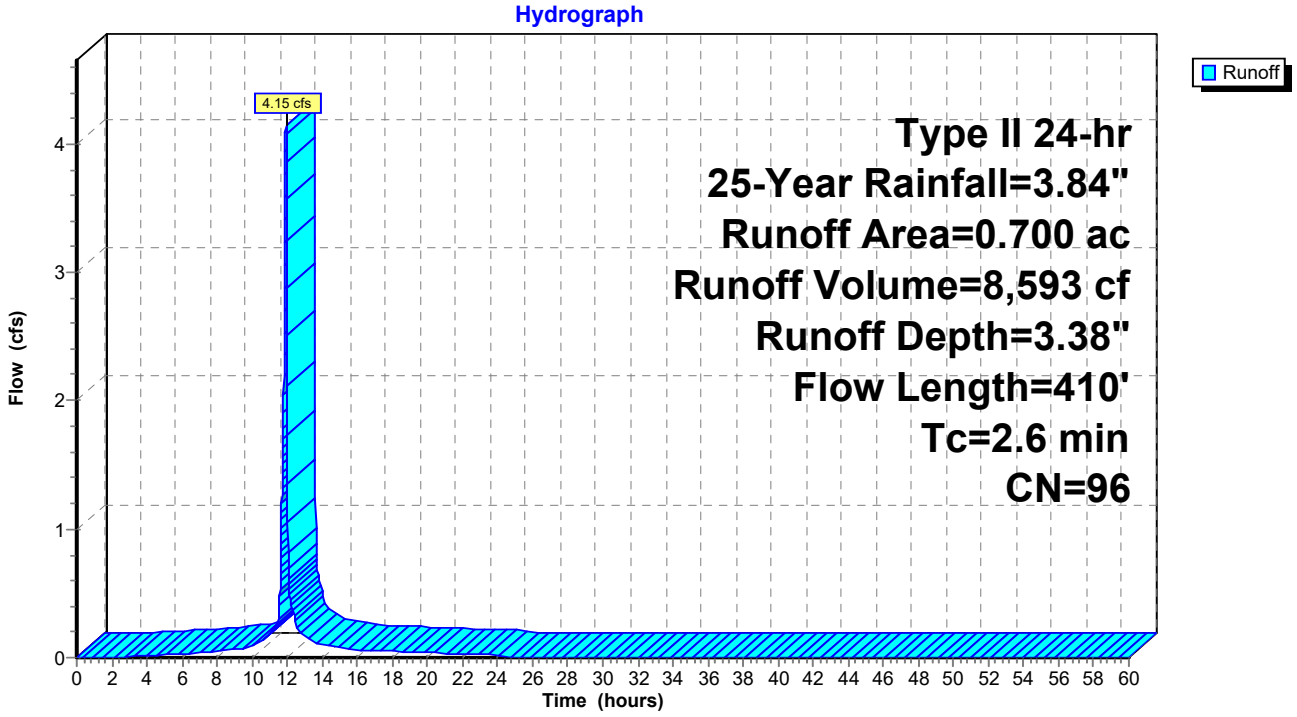
Runoff = 4.15 cfs @ 11.93 hrs, Volume= 8,593 cf, Depth= 3.38"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

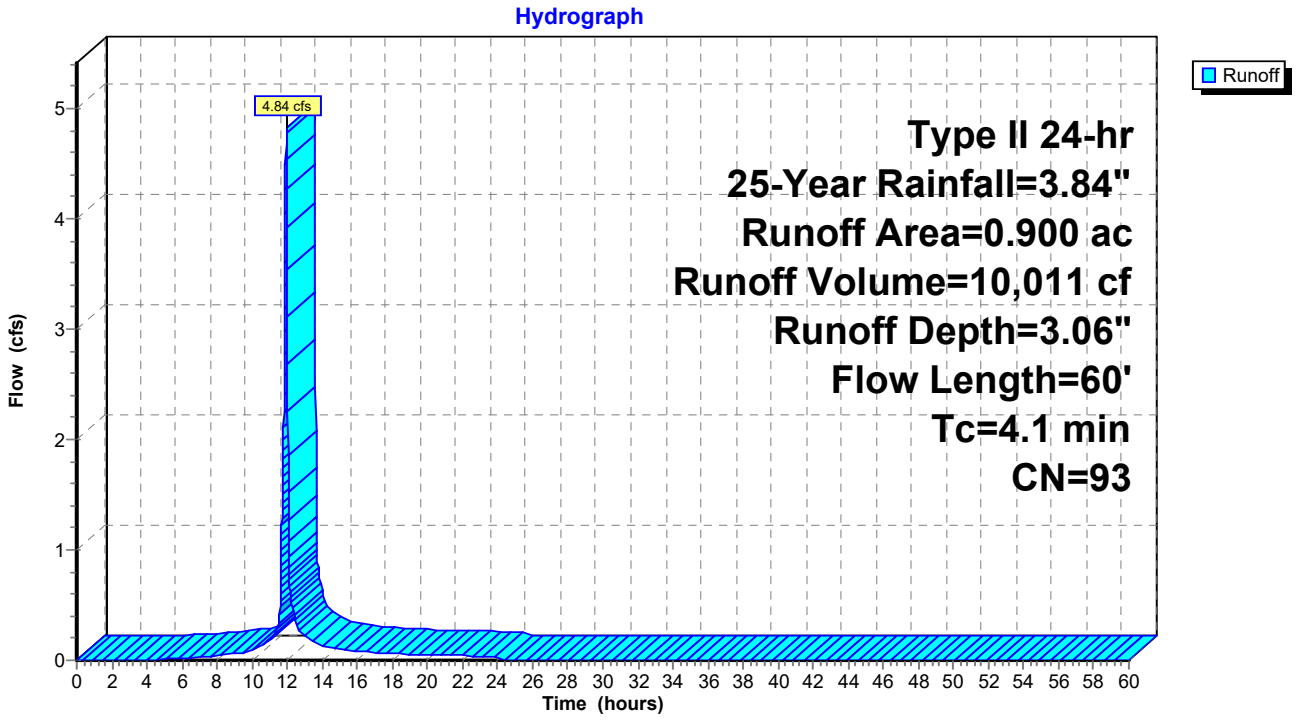
Runoff = 4.84 cfs @ 11.95 hrs, Volume= 10,011 cf, Depth= 3.06"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 507% of capacity of segment #2

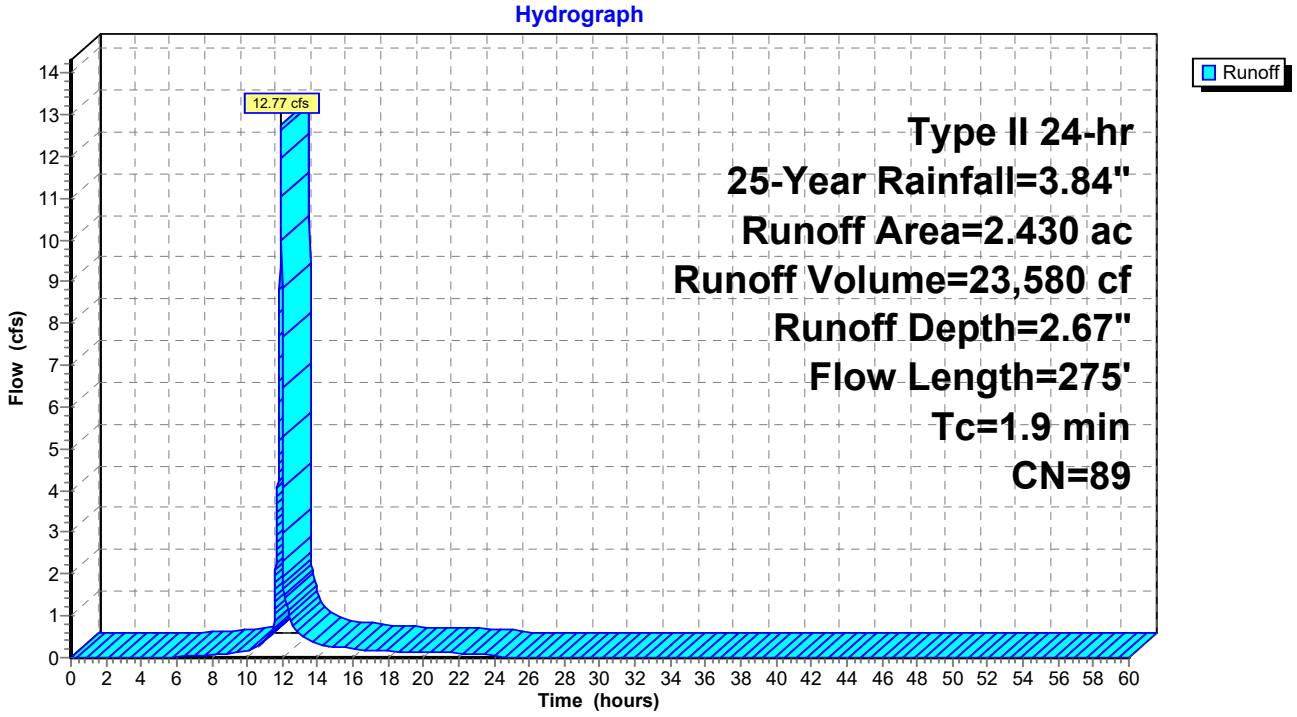
Runoff = 12.77 cfs @ 11.92 hrs, Volume= 23,580 cf, Depth= 2.67"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 468% of capacity of segment #2

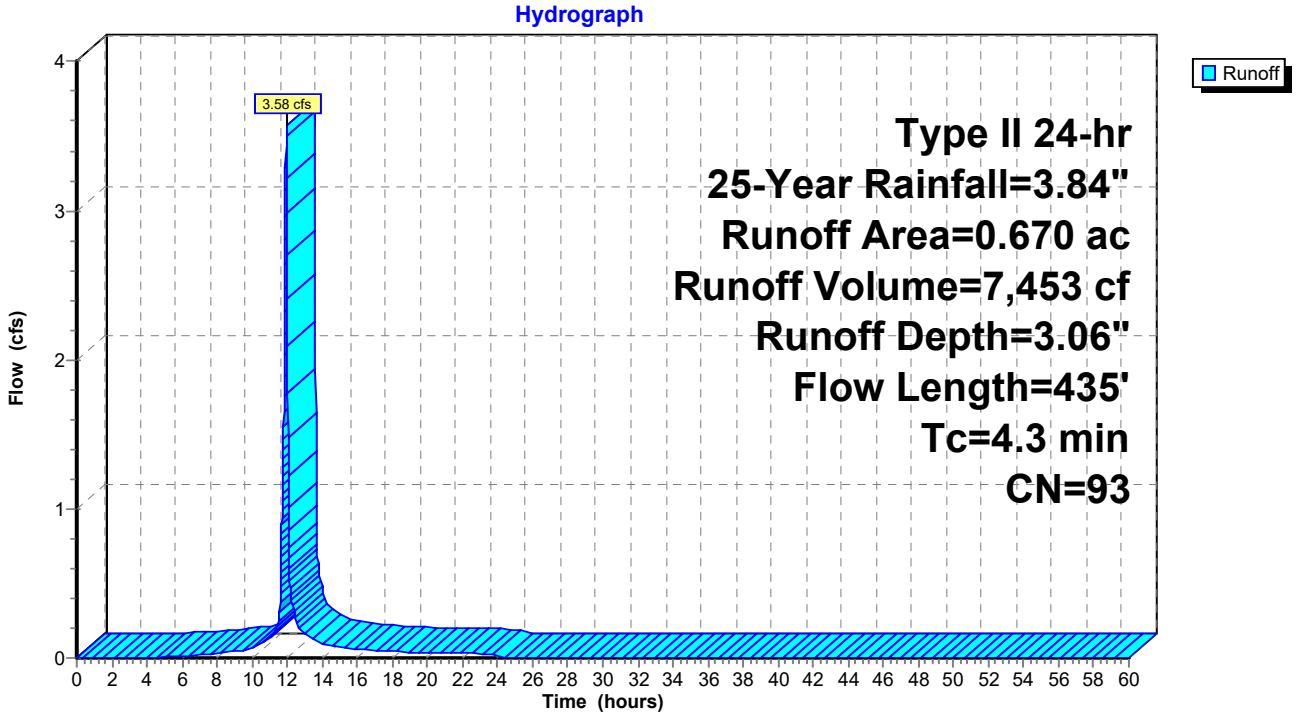
Runoff = 3.58 cfs @ 11.95 hrs, Volume= 7,453 cf, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 3.38" for 25-Year event
Inflow = 4.15 cfs @ 11.93 hrs, Volume= 8,593 cf
Outflow = 4.00 cfs @ 11.94 hrs, Volume= 8,593 cf, Atten= 4%, Lag= 0.9 min
Primary = 0.77 cfs @ 11.94 hrs, Volume= 3,394 cf
Routed to Pond 1P : Dry Pond
Secondary = 3.22 cfs @ 11.94 hrs, Volume= 5,199 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.39' @ 11.94 hrs Surf.Area= 2,846 sf Storage= 1,495 cf

Plug-Flow detention time= 201.2 min calculated for 8,591 cf (100% of inflow)
Center-of-Mass det. time= 201.5 min (963.7 - 762.3)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

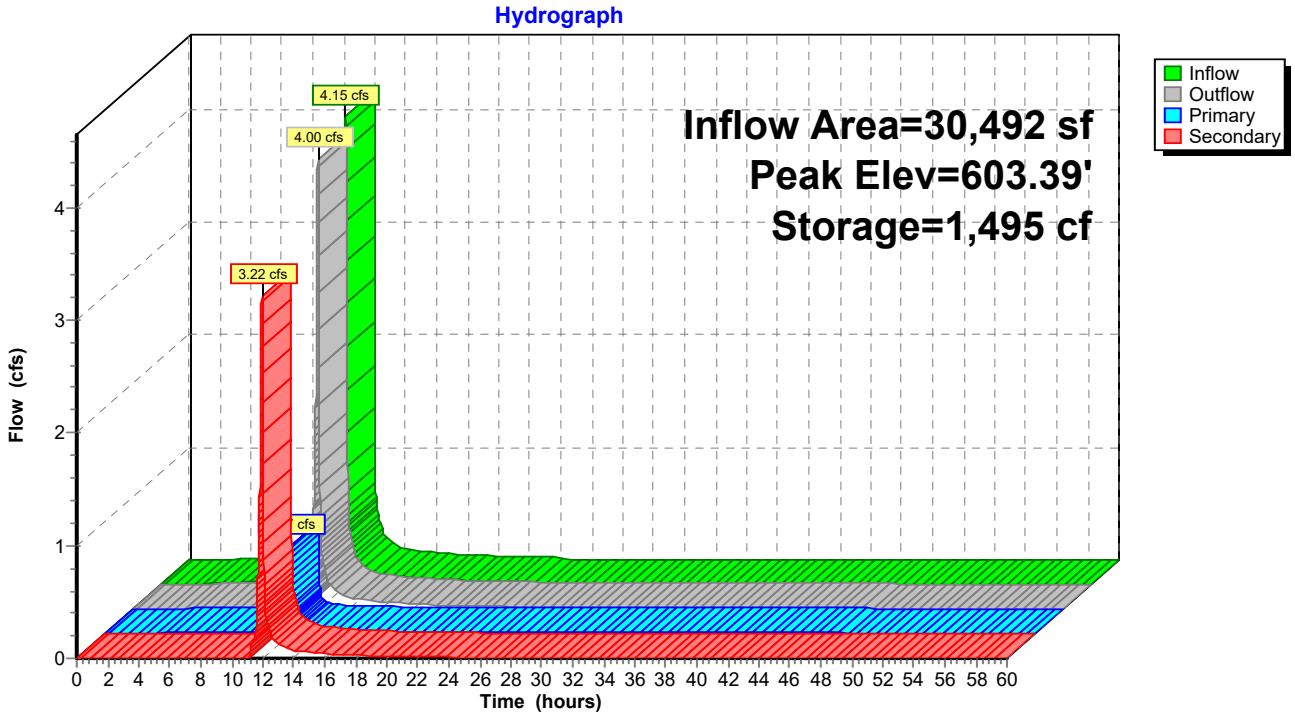
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.77 cfs @ 11.94 hrs HW=603.39' (Free Discharge)
└**1=Culvert** (Passes 0.77 cfs of 1.49 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.75 cfs @ 1.24 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=3.21 cfs @ 11.94 hrs HW=603.39' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 3.21 cfs @ 1.11 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 1.51'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 2.47" for 25-Year event
Inflow = 13.53 cfs @ 11.92 hrs, Volume= 36,140 cf
Outflow = 4.02 cfs @ 12.03 hrs, Volume= 35,988 cf, Atten= 70%, Lag= 6.2 min
Primary = 4.02 cfs @ 12.03 hrs, Volume= 35,988 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 601.76' @ 12.03 hrs Surf.Area= 3,864 sf Storage= 7,898 cf

Plug-Flow detention time= 36.9 min calculated for 35,982 cf (100% of inflow)
Center-of-Mass det. time= 26.2 min (1,046.2 - 1,019.9)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

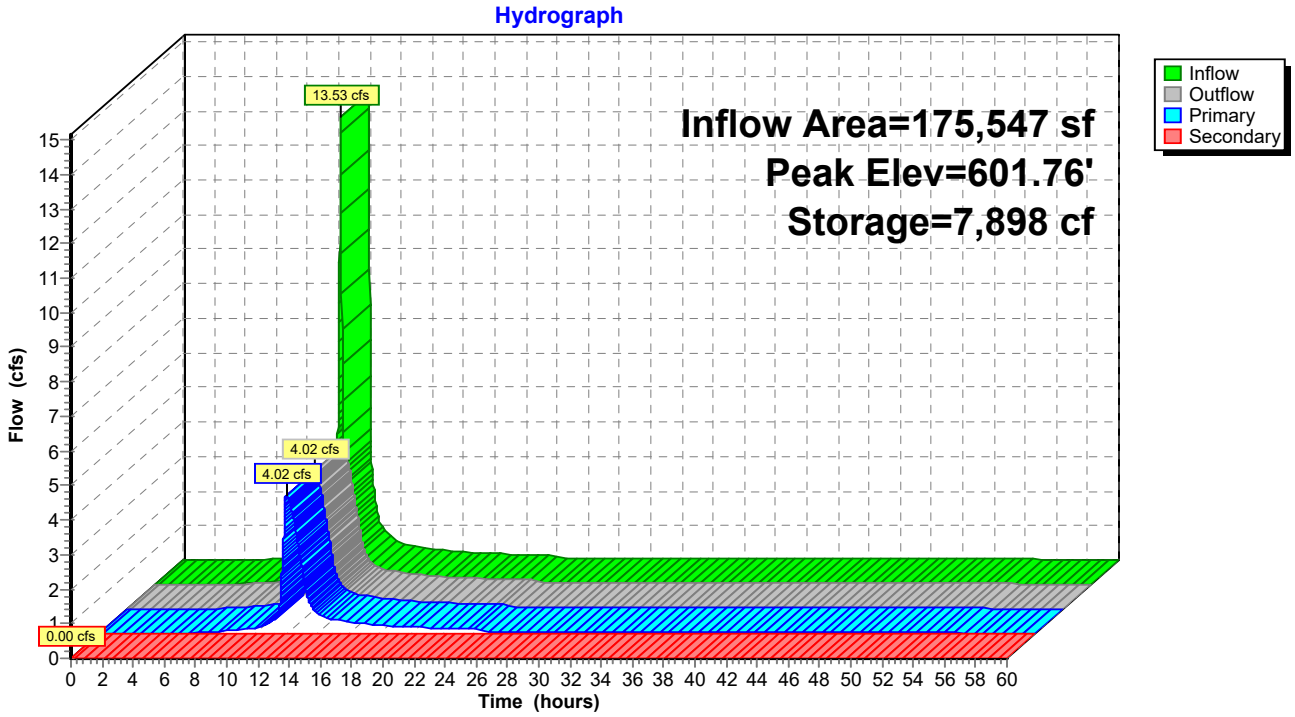
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=4.02 cfs @ 12.03 hrs HW=601.76' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.02 cfs @ 7.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 3.06" for 25-Year event
Inflow = 4.84 cfs @ 11.95 hrs, Volume= 10,011 cf
Outflow = 1.29 cfs @ 12.06 hrs, Volume= 9,166 cf, Atten= 73%, Lag= 6.8 min
Primary = 1.29 cfs @ 12.06 hrs, Volume= 9,166 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.11' @ 12.06 hrs Surf.Area= 5,711 sf Storage= 5,119 cf

Plug-Flow detention time= 776.2 min calculated for 9,165 cf (92% of inflow)
Center-of-Mass det. time= 731.4 min (1,512.9 - 781.5)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

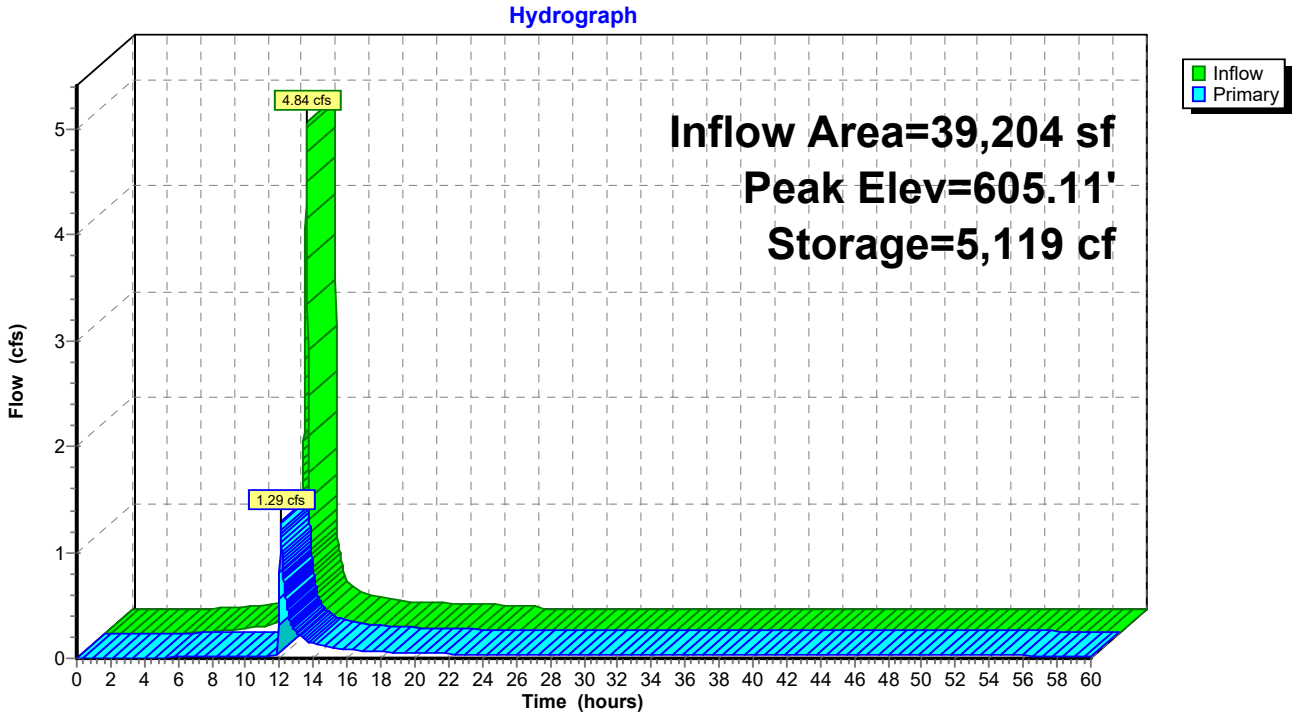
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=1.29 cfs @ 12.06 hrs HW=605.11' (Free Discharge)
└**1=Culvert** (Passes 1.29 cfs of 2.44 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 1.26 cfs @ 1.09 fps)
└**3=Exfiltration** (Controls 0.04 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



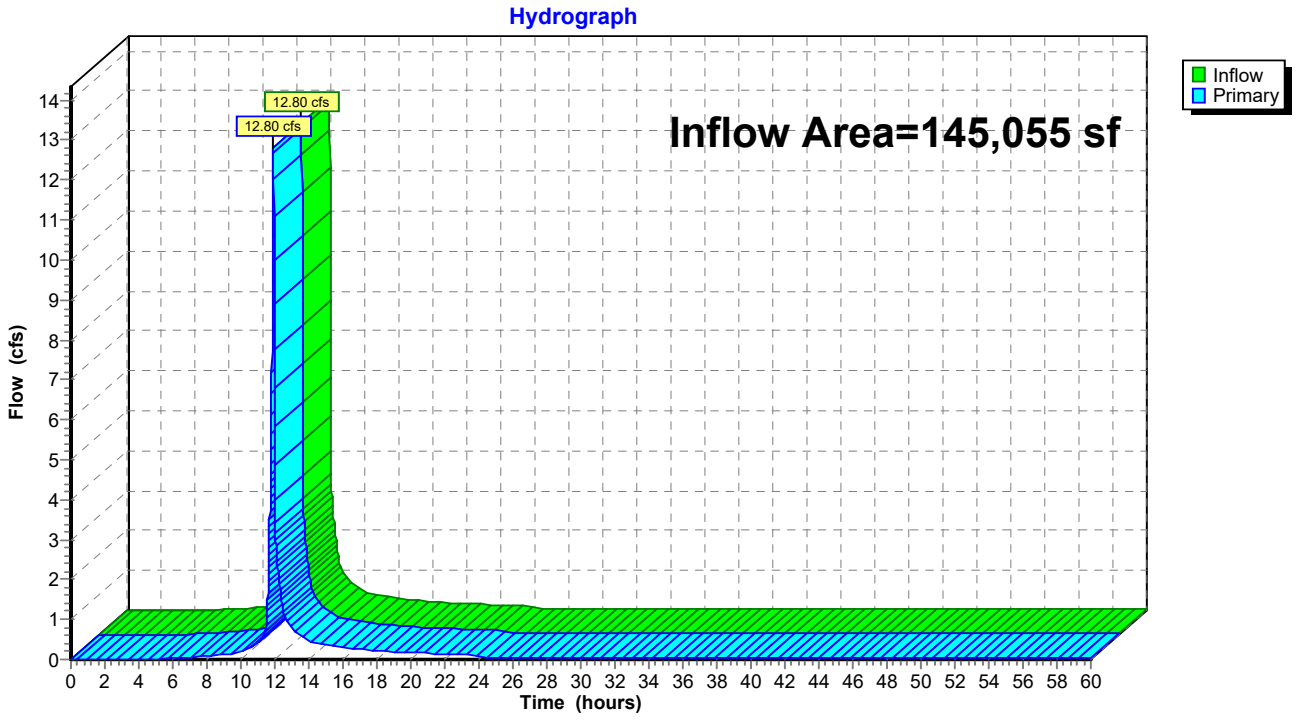
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 2.71" for 25-Year event
Inflow = 12.80 cfs @ 11.92 hrs, Volume= 32,746 cf
Primary = 12.80 cfs @ 11.92 hrs, Volume= 32,746 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=4.76"
Flow Length=410' Tc=2.6 min CN=96 Runoff=5.72 cfs 12,098 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=4.42"
Flow Length=60' Tc=4.1 min CN=93 Runoff=6.80 cfs 14,453 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=3.99"
Flow Length=275' Tc=1.9 min CN=89 Runoff=18.54 cfs 35,217 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=4.42"
Flow Length=435' Tc=4.3 min CN=93 Runoff=5.03 cfs 10,759 cf

Pond 1B: Bio Area #1 Peak Elev=603.43' Storage=1,597 cf Inflow=5.72 cfs 12,098 cf
Primary=1.07 cfs 4,113 cf Secondary=4.47 cfs 7,985 cf Outflow=5.54 cfs 12,098 cf

Pond 1P: Dry Pond Peak Elev=602.82' Storage=13,382 cf Inflow=21.92 cfs 52,926 cf
Primary=4.85 cfs 52,773 cf Secondary=0.00 cfs 0 cf Outflow=4.85 cfs 52,773 cf

Pond 2B: Bio Area #2 Peak Elev=605.36' Storage=6,683 cf Inflow=6.80 cfs 14,453 cf
Outflow=2.54 cfs 13,595 cf

Link 4L: (new Link) Inflow=20.89 cfs 48,813 cf
Primary=20.89 cfs 48,813 cf

Total Runoff Area = 204,732 sf Runoff Volume = 72,528 cf Average Runoff Depth = 4.25"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 227% of capacity of segment #2

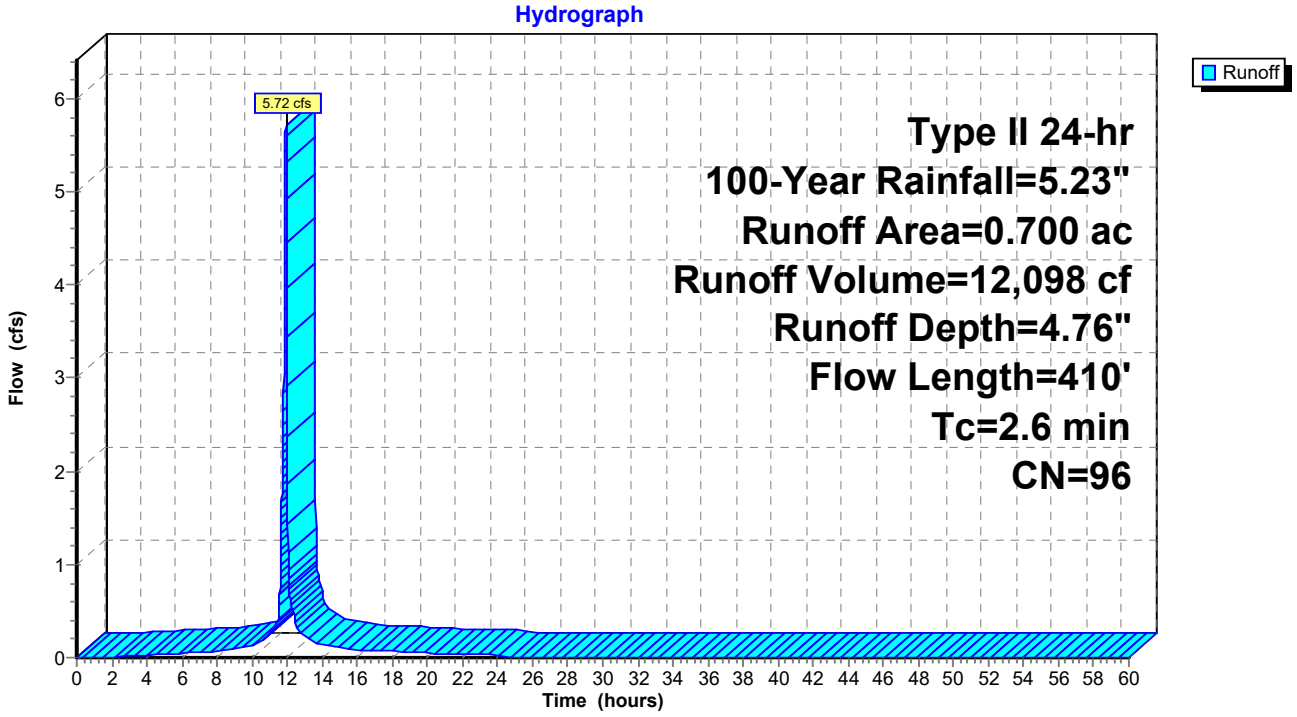
Runoff = 5.72 cfs @ 11.93 hrs, Volume= 12,098 cf, Depth= 4.76"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

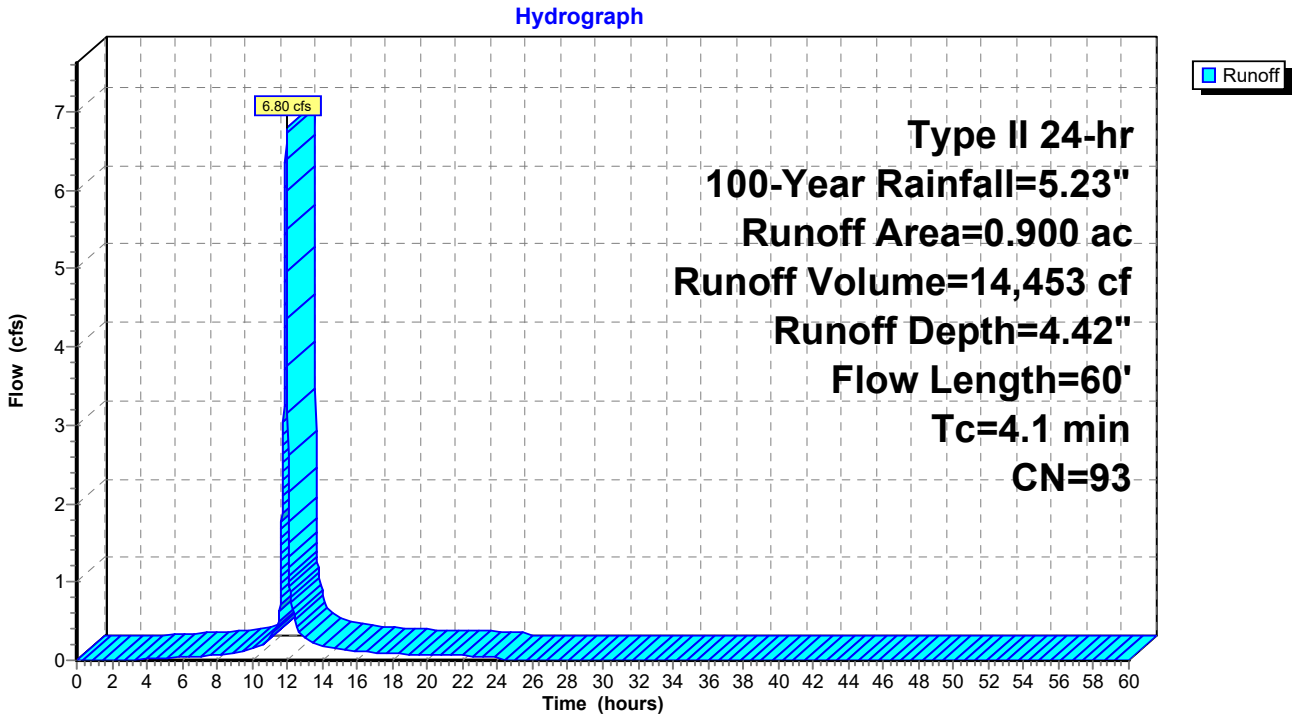
Runoff = 6.80 cfs @ 11.95 hrs, Volume= 14,453 cf, Depth= 4.42"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 736% of capacity of segment #2

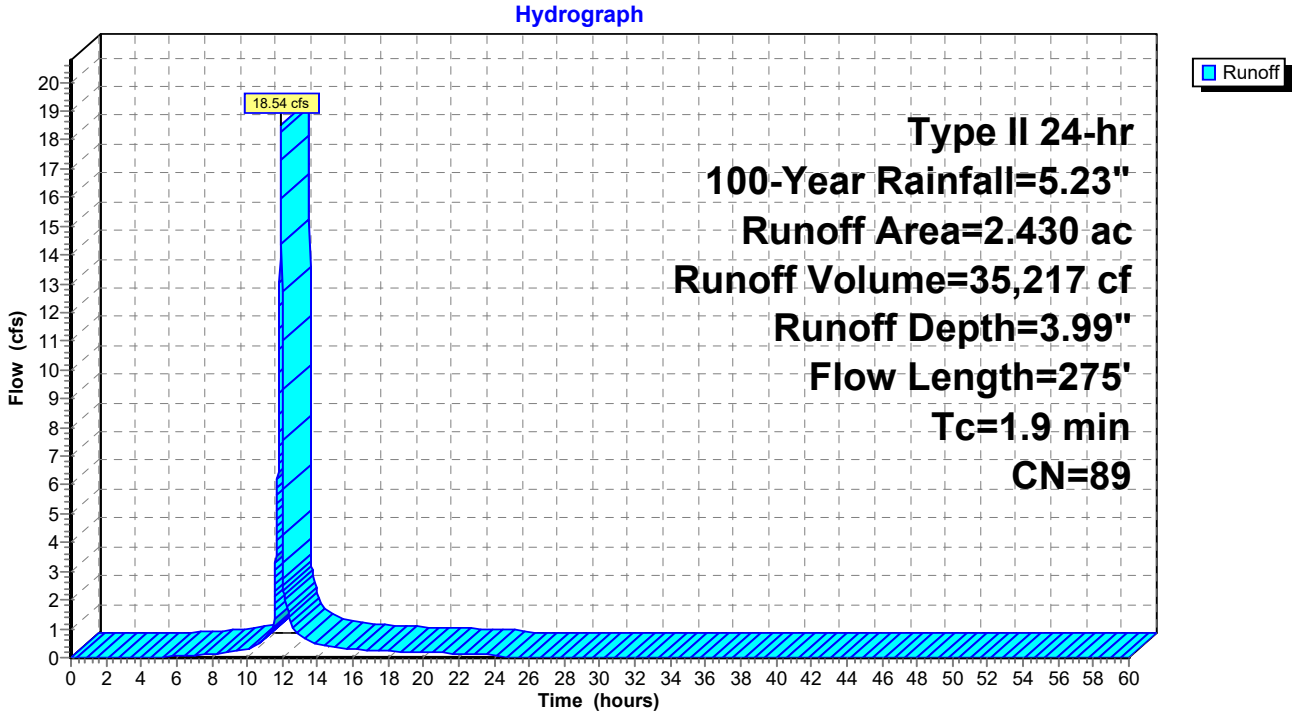
Runoff = 18.54 cfs @ 11.92 hrs, Volume= 35,217 cf, Depth= 3.99"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 659% of capacity of segment #2

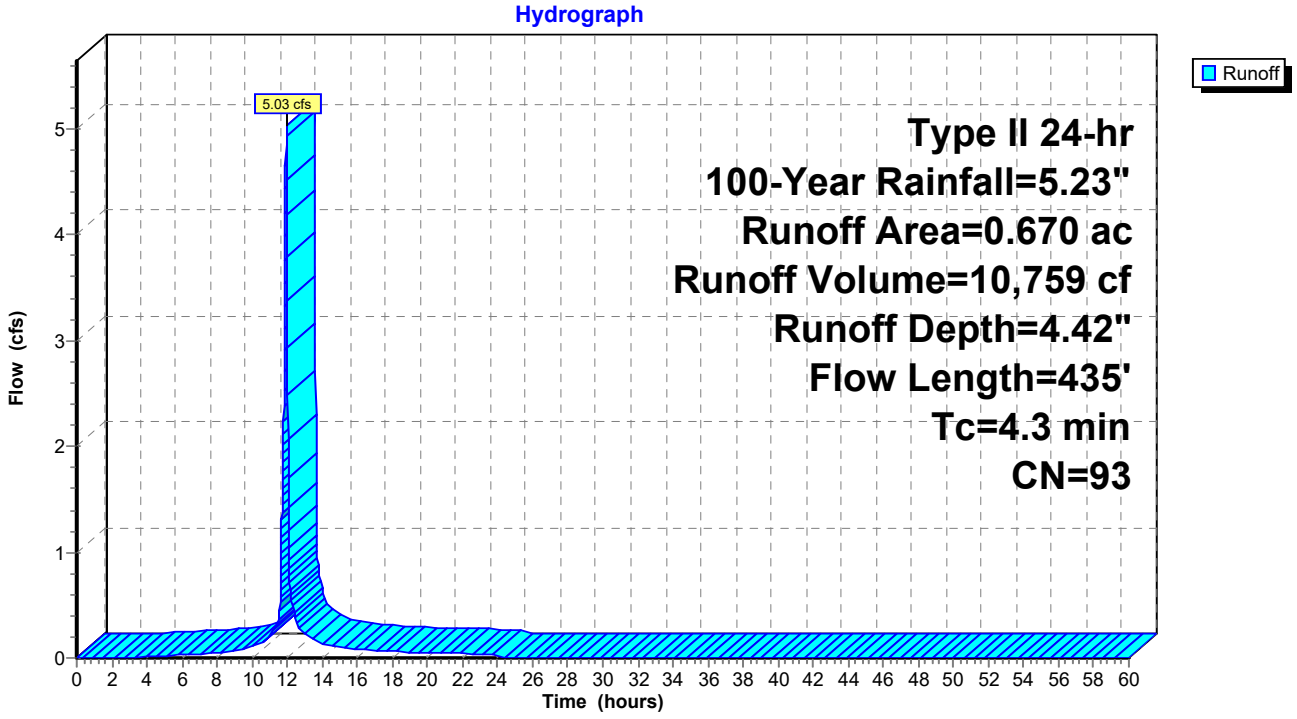
Runoff = 5.03 cfs @ 11.95 hrs, Volume= 10,759 cf, Depth= 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 4.76" for 100-Year event
Inflow = 5.72 cfs @ 11.93 hrs, Volume= 12,098 cf
Outflow = 5.54 cfs @ 11.94 hrs, Volume= 12,098 cf, Atten= 3%, Lag= 0.8 min
Primary = 1.07 cfs @ 11.94 hrs, Volume= 4,113 cf
Routed to Pond 1P : Dry Pond
Secondary = 4.47 cfs @ 11.94 hrs, Volume= 7,985 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.43' @ 11.94 hrs Surf.Area= 2,896 sf Storage= 1,597 cf

Plug-Flow detention time= 152.2 min calculated for 12,096 cf (100% of inflow)
Center-of-Mass det. time= 152.4 min (906.8 - 754.4)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

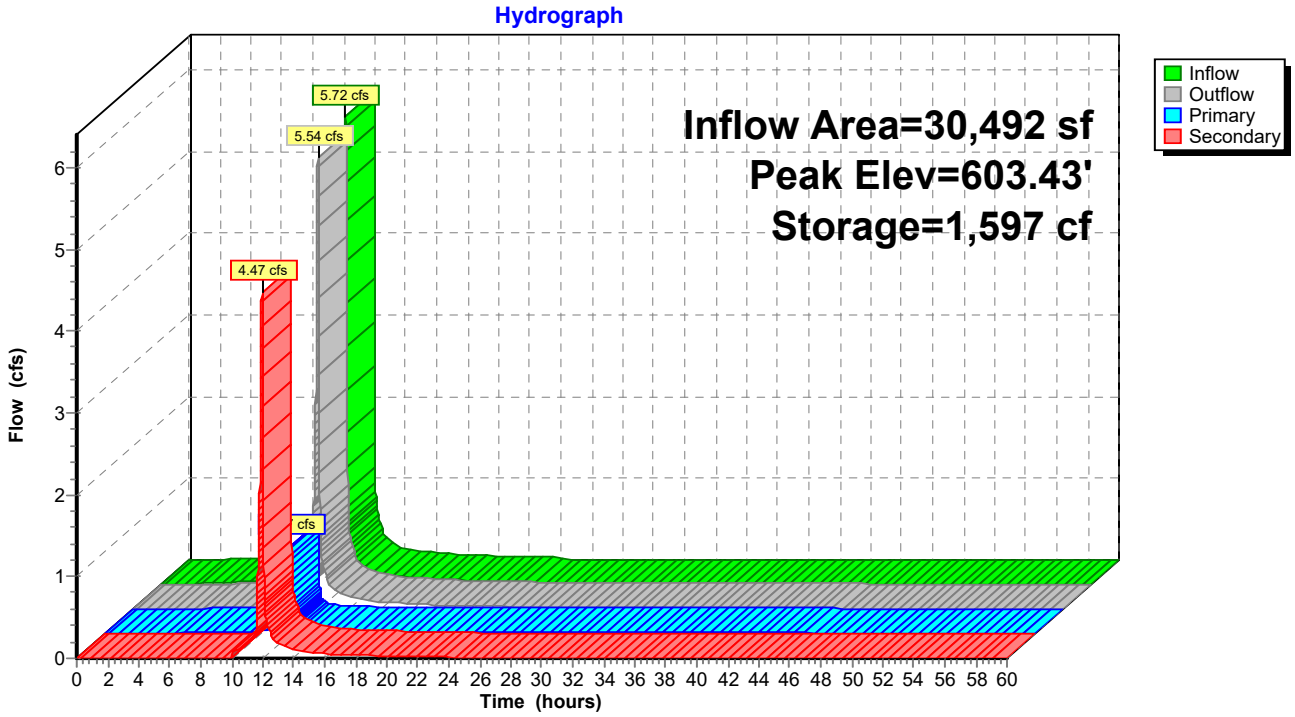
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=1.06 cfs @ 11.94 hrs HW=603.43' (Free Discharge)
└**1=Culvert** (Passes 1.06 cfs of 1.50 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 1.05 cfs @ 1.39 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=4.46 cfs @ 11.94 hrs HW=603.43' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 4.46 cfs @ 1.24 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 2.57'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 3.62" for 100-Year event
Inflow = 21.92 cfs @ 11.93 hrs, Volume= 52,926 cf
Outflow = 4.85 cfs @ 12.11 hrs, Volume= 52,773 cf, Atten= 78%, Lag= 11.3 min
Primary = 4.85 cfs @ 12.11 hrs, Volume= 52,773 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 602.82' @ 12.11 hrs Surf.Area= 6,951 sf Storage= 13,382 cf

Plug-Flow detention time= 37.4 min calculated for 52,764 cf (100% of inflow)
Center-of-Mass det. time= 29.9 min (970.7 - 940.7)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

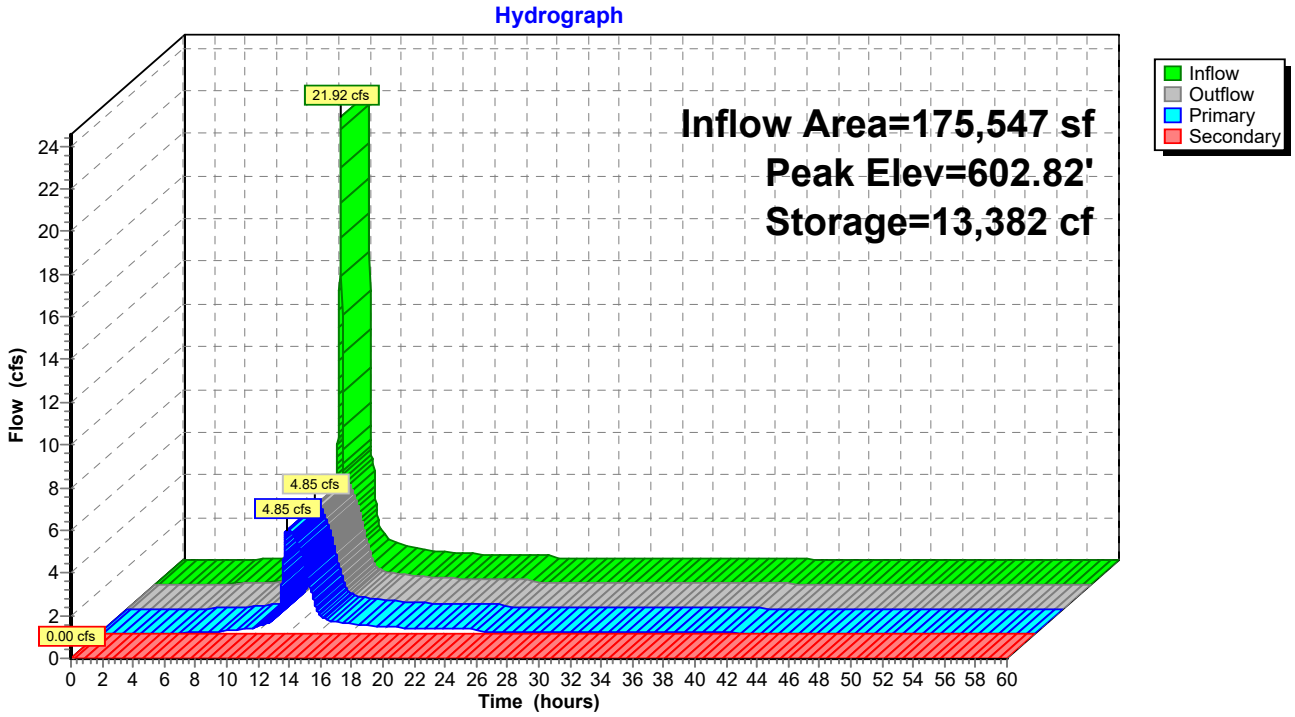
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=4.85 cfs @ 12.11 hrs HW=602.82' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.85 cfs @ 8.89 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 4.42" for 100-Year event
Inflow = 6.80 cfs @ 11.95 hrs, Volume= 14,453 cf
Outflow = 2.54 cfs @ 12.04 hrs, Volume= 13,595 cf, Atten= 63%, Lag= 5.7 min
Primary = 2.54 cfs @ 12.04 hrs, Volume= 13,595 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.36' @ 12.04 hrs Surf.Area= 6,823 sf Storage= 6,683 cf

Plug-Flow detention time= 540.8 min calculated for 13,593 cf (94% of inflow)
Center-of-Mass det. time= 507.0 min (1,278.7 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

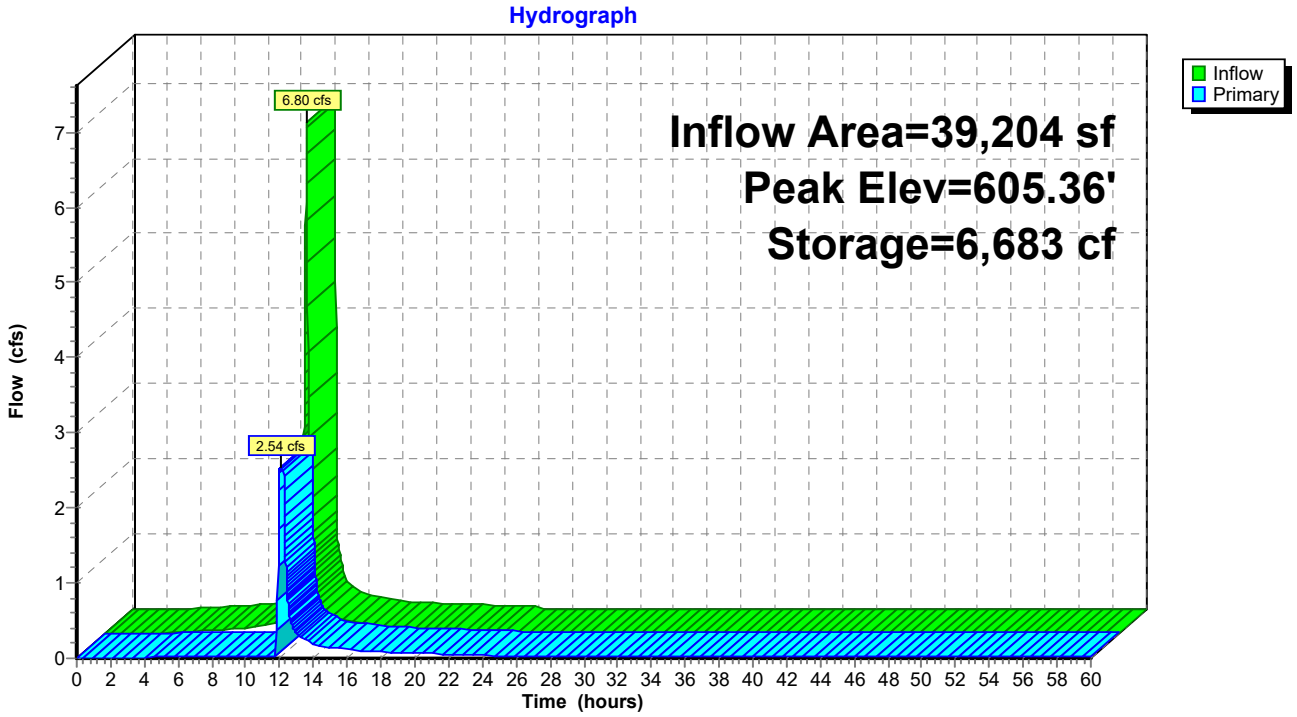
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=2.54 cfs @ 12.04 hrs HW=605.36' (Free Discharge)
└─**1=Culvert** (Barrel Controls 2.54 cfs @ 7.27 fps)
├─**2=Orifice/Grate** (Passes < 5.04 cfs potential flow)
└─**3=Exfiltration** (Passes < 0.04 cfs potential flow)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



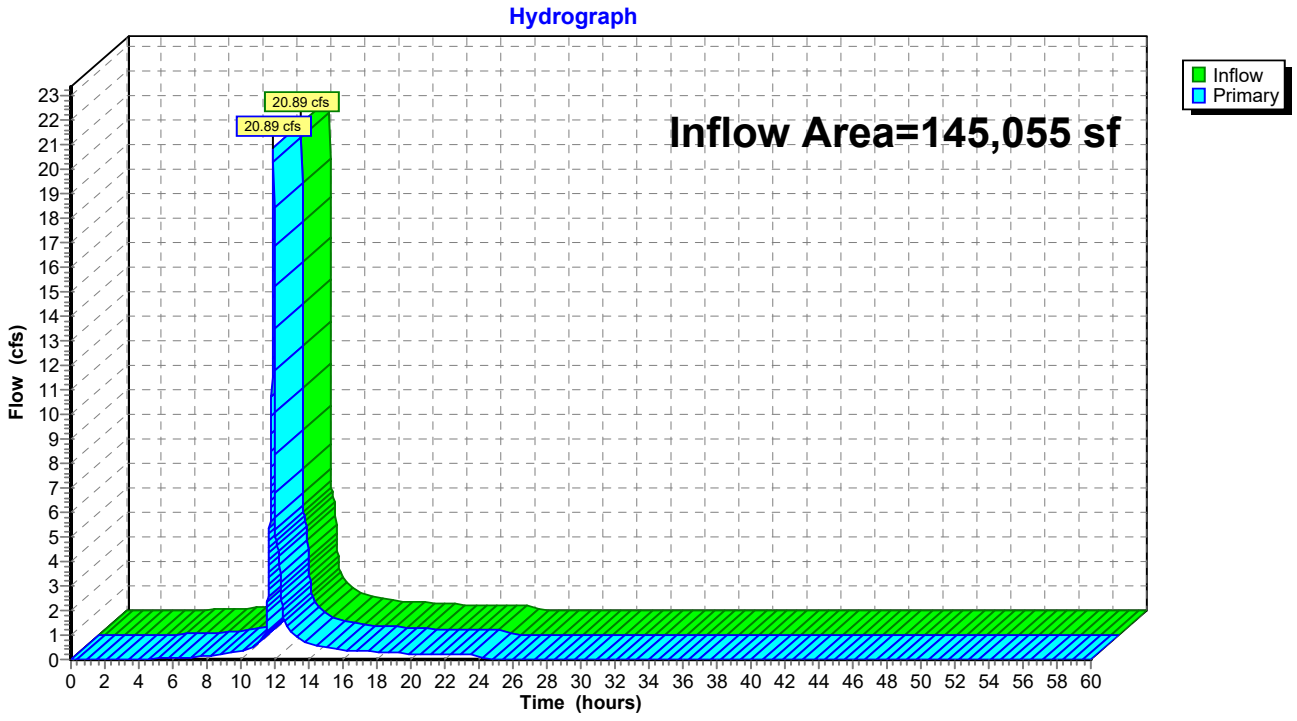
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 4.04" for 100-Year event
Inflow = 20.89 cfs @ 11.93 hrs, Volume= 48,813 cf
Primary = 20.89 cfs @ 11.93 hrs, Volume= 48,813 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Green Infrastructure & Water Quality Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Version 1.7
Last Updated: 10/02/2015

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)?.....	

Design Point:	1	
P=	1.00	*inch*

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	5.10	2.70	53%	0.53	9,747	
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	5.10	2.70	53%	0.53	**9,747**	**Subtotal 1**
Total	5.10	2.70	53%	0.53	**9,747**	**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	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	5.10	2.70	53%	0.53	9,747
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**5.10**	**2.70**	53%	0.53	9,747
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	5.10	2.70	53%	0.53	**9,747**
WQv reduced by Area Reduction techniques					0

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**5.10**	20%
Total Area	5.1	

Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	2.70	*acre*
Precipitation	1	*in*
Rv	0.95	
Minimum RRv	**1,862**	***ft3***
	0.04	af

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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:	1

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	5.10	2.70	0.53	0.53	9746.55	1.00	
Enter Impervious Area Reduced by Disconnection of Rooftops			53%	0.53	9,747	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.00	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		9,747	*ft^3*	
Enter Depth of Soil Media	*df*	1.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**7310**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	100	*ft*	
Filter Length	73.1	*ft*	
Filter Area	7310	*ft^2*	
Actual Volume Provided	9747	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?			Select Practice	
RRv	3,899			
RRv applied	**3,899**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	5,848	*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 √	OK		*Check to be sure Area provided ≥ Af*	

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Mixed Use Development - 1720-1760 Maple Rd
Town of Amherst, Erie County, New York

WATER QUALITY REQUIRED FOR PROPOSED DEVELOPMENT AREA Area, Acres = 5.1
(Note: Reference Chap. 9 NYSDEC Stormwater Design Manual)

"Redevelopment Activity", Acres = 0.4 "New development", Acres = 4.7
(existing, disturbed impervious area)

Total proposed impervious, Acres = 3.0 Adjusted impervious, Acres = 2.70
"New" impervious, Acres = 2.60 (25% redevelopment, 100% new development)

Water Quality Volume (WQv) WQv=(P*Rv*A)/12

Where: P=90% Rainfall Event Number P= 1
Rv= 0.05+0.009*(I) Rv= 0.52
IC=Impervious Cover, Acres IC= 2.70
I=Impervious Cover (%) I= 53
A=Runoff Area, Acres A= 5.1

WQv (ac-ft)= 0.221
WQv (cf)= 9,627

RRv PROVIDED FOR PROPOSED DEVELOPMENT AREA (See NYSDEC worksheets)

		WQv, cf	RRv, cf
Min. RRv Req'd, cf = 1,862	RRv, Bioretention Areas	0	0
Min. RRv Req'd, ac-ft = 0.043	WQv, Detention Pond	0	0
	TOTAL, cf	0	0
	TOTAL, ac-ft	0.000	0.000

WQ & RR SUMMARY (ac-ft):

TOTAL WATER QUALITY PROVIDED FOR PROPOSED DEVELOPMENT AREA 0.000

IS WATER QUALITY VOLUME REQUIREMENT MET? No
(WQv provided equal to or greater than WQv required)

IS RUNOFF REDUCTION VOLUME REQUIREMENT MET? No
(RRv provided equal to or greater than Min. RRv required)

Revised 08/09/2016

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CARMINAWOOD
DESIGN

STORMWATER POLLUTION PREVENTION PLAN
for
CONSTRUCTION ACTIVITIES

At

Mixed Use Development
1720, 1740, 1760 North Forest Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, NY 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

August 2023



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101 SCOPE

A. **PURPOSE:** PB Investors, LLC (PB) 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 PB; and/or liquidated damages. This section provides a descriptive explanation of PB's Storm Water Pollution Prevention Program and required Contractor participation.

The Engineer of record for this project certifies that this SWPPP meets the requirements and is in compliance with the New York State Stormwater Management Design Manual and latest NYSDEC Phase II stormwater regulation requirements.

B. **SPDES General Permit for Stormwater Discharges from Construction Activity:** Regulations promulgated by the NYSDEC to regulate the discharge of storm water from construction activities on sites where more than one (1) acre of soil is disturbed. One of the ways to comply with these regulations for affected sites is to request coverage under the General Permit for Construction Activities for New York State. In order to use the General Permit, a Notice of Intent (NOI) form must be completed and electronically submitted to the NYSDEC at least 5 business days prior to any earth-disturbing activities (this time frame may increase to 60 business days if a full review of the SWPPP is determined necessary by the NYSDEC) and a Storm Water Pollution Prevention Plan (SWPPP) for the site must be prepared and followed during the construction activities. Once a copy of the SPDES permit is received from NYSDEC, a copy will be included in Appendix 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

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conducting the storm water management practices in accordance with the permit. The Contractor shall be responsible for providing **qualified inspector**s to conduct the inspections required by the SWPPP. The Contractor shall be responsible for any enforcement action taken or imposed by federal, state, or local agencies, including the cost of fines, construction delays, and remedial actions resulting from the Contractor's failure to comply with the permit provisions. It shall be the responsibility of the Contractor to make any changes to the SWPPP necessary when the Contractor or any of his subcontractors elects to use borrow or fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction site. Such sites are considered to be part of the construction site covered by the permit and this SWPPP. Off-site borrow, fill, or material storage sites which are used for multiple construction projects are not subject to this requirement, unless specifically required by state or local jurisdictional entity regulations. The Contractor should consider this requirement in negotiating with earthwork subcontractors, since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections required by the SWPPP for the site.

D. **NOTICE OF INTENT:** The Operator has petitioned the NYSDEC for coverage under the storm water discharges during construction at this site to be covered by the SPDES General Permit for Construction Activity for the State of New York. A Notice of Intent (NOI) for coverage under this permit has been filed by the Operator. The SWPPP must be prepared prior to submittal of the NOI form. The Operator will require the Contractor to be a co-permittee with the Operator. The Contractor will be required to post the NOI at the construction site along with any building permits.

E. **CONTRACTOR CERTIFICATION & TRAINING:** Proof of Training/Certification of the Contractor's designated individual shall be kept on site at all times.

F. **REQUIREMENTS FOR THE GENERAL CONTRACTOR AND SUBCONTRACTOR(S):** The General Contractor and Subcontractor(s) shall sign the "Contractor's Certification Statement" (located in the Appendix of this report) verifying they have been instructed on how to comply with and fully understand the requirements of the SPDES General Permit for Construction Activity for the State of New York and the SWPPP. These certifications must be signed, by a responsible corporate officer or other party meeting the "Signatory Requirements" of the SPDES General Permit, on behalf of each entity, prior to the beginning of any construction activities.

G. **STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS:** The SWPPP is meant to be a working document that shall be maintained at the site of the Construction Activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or NYSDEC or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the Final Stabilization section of this document. A sign or other notice must be posted near the main entrance of the construction site which contains a completed NOI, the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other state specific requirements.

H. **INSPECTIONS AND RECORD-KEEPING:**

A. **<u>General Construction Site Inspection and Maintenance Requirements</u>**

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1. The **owner or operator** must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. **Owner or operator Maintenance Inspection Requirements**

1. The **owner or operator** shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the **owner or operator** can stop conducting the maintenance inspections. The **owner or operator** shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of the General Permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the **owner or operator** can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. **Qualified inspector Inspection Requirements**

The **owner or operator** shall have a **qualified inspector** conduct site inspections in conformance with the following requirements:

Note: The **trained contractor** identified in Part III.A.6 of the General Permit **cannot** conduct the **qualified inspector** site inspections unless they meet the **qualified inspector** qualifications included in Appendix A of the General Permit. In order to perform these inspections, the trained contractor would have to be a:

- Licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or

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- Someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity.

1. A **qualified inspector** shall conduct site inspections for all construction activities identified in Tables 1 and 2 of Appendix B of the General Permit, with the exception of:

   a. The construction of a single family residential subdivision with 25% or less impervious cover at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C of the General Permit and not directly discharging to one of the 303(d) segments listed in Appendix E of the General Permit;

   b. The construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E of the General Permit;

   c. Construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

   d. Construction activities located in the watersheds identified in Appendix D of the General Permit that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the **qualified inspector** shall conduct site inspections in accordance with the following timetable:

   a. For construction sites where soil disturbance activities are on-going, the **qualified inspector** shall conduct a site inspection at least once every seven (7) calendar days.

   b. For construction sites where soil disturbance activities are on-going and the **owner or operator** has received authorization in accordance with Part II.C.3 of the General Permit to **disturb greater than five (5) acres** of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

   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

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under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the **owner or operator** of the construction activity) in writing prior to reducing the frequency of inspections.

d. For construction sites where **soil disturbance activities have been shut down with partial project completion**, the **qualified inspector** can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The **owner or operator** shall notify the Regional Office stormwater contact person or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the **owner or operator** of the construction activity). in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the **owner or operator** shall have the **qualified inspector** perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The **owner or operator** shall then submit the completed NOT form to the address in Part II.A.1 of the General Permit.

3. At a minimum, the **qualified inspector** shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

4. The **qualified inspector** shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

   a. Date and time of inspection;

   b. Name and title of person(s) performing inspection;

   c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

   d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

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e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices that need repair or maintenance;

g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The **qualified inspector** shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The **qualified inspector** shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The **qualified inspector** shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the **qualified inspector** shall notify the **owner or operator** and appropriate contractor or subcontractor identified in Part III.A.6. of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the **qualified inspector**. Pursuant to Part II.C.2 of the General Permit, the inspection reports shall be maintained on site with the SWPPP.

Record Retention - The **owner or operator** shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that

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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 level 1 inspection and document all site conditions to be signed off on by a licensed professional engineer ensuring all installed catch basins are free of any debris or accumulation of sediment. This inspection report shall be submitted along with the NOT to the Department. This inspection shall be Final payment and/or the release of retainage will be withheld until all provisions of the SWPPP have been submitted, completed and accepted by the Operator.

102 PROJECT NAME AND LOCATION

Mixed Use Development

1720, 1740, 1760 Maple Road

Town of Amherst, County of Erie, New York

Easting: 196602

Northing: 4766592

Estimated Area of Site ≈ 5.1 acres

Estimated Area to be disturbed by Construction Activities ≈ 4.7 acres

A general location map is included as Appendix A.

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103 OPERATOR'S NAME AND ADDRESS

PB Investors, LLC

6790 Main Street, Suite 100

Williamsville, NY 14221

Contact Person: Paul Bliss

Telephone: 716-204-2910

104 PROJECT DESCRIPTION

This project is a development of a 5.1 acre site located on Maple Road in the Town of Amherst. Construction will consist of a four story multi-family building, a four-story mixed use building, townhouses with attached garages and three detached garage buildings, along with associated utility, lighting and landscaping improvements. Currently the site is mainly undeveloped consisting of mostly open grass areas, a portion of the east side of the site is developed as a parking lot used for the neighboring medical facility. An existing ditch (Amherst Ditch #4) borders the west boundary of the project site. The proposed site development area to be disturbed for this project is approximately 4.7 acres when construction is completed.

Soil disturbing activities will include:

A. Construction of temporary construction exit points

B. Clearing & grubbing of the site within disturbance limits

C. Installation of the detention basin & bioretention area including topsoil & seed

D. Installation of storm sewer pipes and inlets

E. Construction of utilities

F. Construction of curb and parking lot

G. Final grading & landscaping

H. Construction of buildings

This project is owned by PB Investors, LLC and will be developed by the same. The work area consists of approximately 4.7 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.

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105 RUNOFF COEFFICIENT, SOILS, AND RAINFALL INFORMATION

The initial runoff curve number for the pre-construction site is "CN" = 83. The post-construction runoff curve number for the site will be "CN" = 91. The site is 5.1 acres of which approximately 4.7 acres 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 existing Town of Amherst Ditch 4.

107 INDIAN COUNTRY LANDS

This project is not located on Indian Lands.

108 ENDANGERED AND THREATENED SPECIES

No endangered or threatened species have been determined to be on the site.

109 CRITICAL HABITAT

See section 108 above.

110 HISTORIC PLACES

The assessed property is shown on the NYSHPO map as an archeologically sensitive area, however the project site had been previously developed.

111 WETLANDS AND/OR OTHER SURFACE WATERS

No wetlands are delineated on 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.

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.

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E. Vegetation preservation in undisturbed areas.

F. Frequent watering to minimize wind erosion during construction.

a. **For sites where 5 acres or more are disturbed at any one time**: In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the New York Standards and Specifications for Erosion and Sediment Control.

b. The **owner or operator** shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

c. The **owner or operator** shall install any additional measures needed to protect water quality.

112.2 STRUCTURAL PRACTICES

Structural practices for this site include:

A. Inlet protection using a method detailed in the Construction Documents.

B. Perimeter protection using temporary silt fence/silt sock or silt sock.

C. Outlet protection using rip-rap stone and end sections.

D. Stabilized Construction Entrance.

E. Temporary stone wash off areas.

F. Storm sewer, curb/gutter.

G. Sediment traps and basins.

112.3 SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

A. Construct temporary construction exits at locations shown on the Demolition & Erosion Control Plan Sheet

B. Install perimeter silt fence/silt socks/silt sock in the locations shown on the Demolition & Erosion Control Plan Sheet

C. Clear & Grub site

D. Installation of detention basin

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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

The existing site currently sheet drains west to the existing ditch (Town of Amherst Ditch 4) along the west side of the property.

Stormwater runoff collected onsite as a result of the proposed development will be routed through the proposed storm sewer system consisting of bioretention areas and dry detention basin connected by a series of catch basins, yard drains and smooth interior HDPE pipe. The bioretention areas on site are designed to provide 100% of the required runoff reduction volume (RRv) and water quality volume treatment (WQv) for the 4.7 acre tributary area. The soils in the vicinity of the bioretention areas are mainly USDA hydrologic group 'C' and therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention areas will consist of 6" perforated HDPE underdrains in 12" of drainage gravel, followed by filter fabric and then finally 18" minimum of planting soil. Overflow yard drains will be installed to allow 6" maximum ponding for RRv treatment. A 12" outlet control pipe will be provided within the dry detention pond. Discharge from the outlet pipe will outlet to the existing Town of Amherst Ditch 4 along the west side of the property.

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Runoff reduction volume (RRv), water quality volume (WQv) and stormwater volume attenuation for the site are designed in accordance with Chapter 4 of the NYSDEC Stormwater design manual. The bioretention area is provided as a "green infrastructure" practice to provide runoff reduction and water quality treatment to meet the Chapter 4 requirements for the currently undeveloped areas. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The existing site has a pre-development total of 0.8 acres of impervious cover. The amount of impervious cover post-development is 3.0 acres, an increase of 2.2 acres. The proposed dry detention field is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates, as well as the below stated Town stormwater runoff requirements.

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.
    - 0.4 acres of existing vegetation within the existing vegetation along the west side of the project site will remain and be protected.
2. Calculation of Water Quality Volume (WQv=RRv) for site.
    - See Stormwater Drainage Calculations.
3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity.
    - Bioretention areas were incorporated into the site design to provide required RRv for the development. See Stormwater 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.
    - Since the provided RRv is greater than the WQv required, use of standard SMPs to treat the remaining WQv is not applicable.
5. Design of volume and peak rate control practices where required.
    - See Stormwater Drainage Calculations.

The NYSDEC Stormwater Management Design Manual requires (5) five different criteria be considered when designing a stormwater management system. Those criteria are Water Quality, Runoff Reduction Volume, Channel Protection, Overbank Flooding and Extreme Storm Protection. Below is a summary of each item and how it is incorporated into this project.

<u>Water Quality & Runoff Reduction Volume:</u>

The NYSDEC requires reduction of the total water quality volume by green infrastructure techniques and SMP's to replicate pre-development hydrology. A bioretention area was incorporated into the site layout to provide the required RRv for contributing WQv runoff area

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for the development. The bioretention areas will provide 3,899 cf RRv. The minimum RRv required is 1,862 cf. The bioretention areas will treat the remaining 5,848 cf of WQv. The required WQv = 9,747 cf. The sum of the WQv treated and the RRv is equal to the required WQv, therefore the practice is acceptable.

Channel Protection:

The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 2,484 cf is accommodated in the detention basin at elevation 600.10.

Overbank Flooding:

The NYSDEC requires that the 10-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event. A volume of 5,780 cf is accommodated in the detention basin at elevation 601.18.

Extreme Storm Protection:

The NYSDEC requires that the 100-year proposed storm event be attenuated with detention and that the outlet be restricted to the 100-year existing storm event. A volume of 13,382 cf is accommodated in the detention basin at elevation 602.82.

Refer to the engineer's report for storm sewer design criteria, runoff summary tables and stormwater drainage calculations.

113 OTHER CONTROLS

113.1 OFF-SITE VEHICLE TRACKING

A stabilized construction exit will be provided to help reduce vehicle tracking of sediments. Existing paved areas will remain as long as possible and will be used for vehicle wash areas and to further aid in the reduction of vehicle tracking of sediments. The paved streets adjacent to the site entrance shall be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material to/from the construction site will be covered with a tarpaulin. The job site superintendent will be responsible for seeing that these procedures are followed.

113.2 EXCAVATION SPOIL MATERIALS

Excavation spoil materials are generated during the excavation of the development's building and utilities installation. These materials must be properly managed to prevent them from contributing to storm water discharges. The materials generated from the development of this project will be hauled off-site or stockpiled for re-use in designated areas which will have temporary erosion & sediment control measures installed. Any removal from site will be done under the necessary permits required by the local governing agencies.

113.3 DUST CONTROL

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Minimizing wind erosion and controlling dust will be accomplished by one or more of the following methods:

A. Frequent watering of excavation and fill areas.

B. Providing gravel or paving at entrance/exit drives, parking areas and transit paths.

113.4 WASTE DISPOSAL

If needed, all waste materials will be collected and stored in securely lidded metal dumpsters rented from an approved waste management company. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpsters. The dumpsters will be emptied when full and then hauled to a NYSDEC approved landfill for proper disposal. No construction waste will be buried on-site. All personnel will be instructed regarding the correct procedures for waste disposal.

113.5 SANITARY WASTE

If needed, portable toilet units or field offices with toilet facilities connected to the municipal sanitary sewer will be used for sanitary purposes. All portable toilet units will be emptied a minimum of once per week by a licensed portable facility provided in compliance with local and state regulations.

113.6 CONCRETE WASTE FROM CONCRETE TRUCKS

A. Emptying of excess unhardened concrete and/or washout from concrete delivery trucks will be allowed on the job site, but in either (1) specifically designated diked areas which have been prepared to prevent contact between concrete and/or washout and storm water which will be discharged from the site or (2) in locations where waste concrete will be poured into forms to make rip-rap or other useful concrete products.

B. Hardened waste concrete from the designated diked areas described above will be disposed of in accordance with applicable local and state regulations with regards to disposal of construction debris.

113.7 HAZARDOUS SUBSTANCES & HAZARDOUS WASTE

A. All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job superintendent, who will also be responsible for seeing these practices are followed. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such products are stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction office. Each

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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.

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113.8 CONTAMINATED SOILS

A. Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

B. The job site superintendent will be responsible for seeing that these procedures are followed.

114 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The Contractor will obtain copies of any and all local and state regulations which are applicable to storm water management, erosion control, and pollution minimization at this job site and will comply fully with such regulations. The Contractor will submit written evidence of such compliance if requested by the Operator or any agent of a regulatory body. The Contractor will comply with all conditions of the SPDES General Permit for Construction Activity for the State of New York, including the conditions related to maintaining the SWPPP and evidence of compliance with the SWPPP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance.

The SWPPP for this site development project requires regulated MS4 approval from the Town of 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.

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6. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.

7. A maintenance inspection report will be made after each inspection. Copies of the report forms to be completed by the inspector are included in this SWPPP.

8. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities, and filling out inspection and maintenance reports.

9. Personnel selected for the inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order. They will also be trained in the completion of, initiation of actions required by, and the filing of the inspection forms. Documentation of this personnel training will be kept on site with the SWPPP.

10. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering stormwater systems.

11. Report to the NYSDEC within 24 hours any noncompliance with the SWPPP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the NYSDEC in the permit to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

12. Releases of hazardous substances or oil in excess of reportable quantities (as established under 40 CFR 110, 40 CFR 117 or 40 CFR 302) must be reported.

Upon completion of construction, the property owner is responsible for ensuring that the stormwater facilities are regularly inspected and maintained. Maintenance and inspection procedures are as follows.

1. On a quarterly basis and following significant rainfall events or snow-melts, perform the following:

   - Inspect catch basins, storm manholes, treatment structures, storm piping and stormwater pond for debris and accumulation of sediment.
   - Remove and properly dispose of any collected debris and sediment in accordance with applicable state, federal and local regulations.
   - Flush piping with water if necessary to remove accumulated sediment.

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- Bioretention areas shall be maintained per the NYSDEC Maintenance and Management Checklist included in this SWPPP.
- Check all stone outfall structures for erosion and re-stone if necessary to prevent further erosion.
- Inspect grassed/landscaped areas for un-vegetated areas or areas with less than 85% healthy stand of grass and reseed and mulch as necessary. Water daily if reseeded in July and August.
- A record of all inspections should be kept.

2. Maintain all lawn areas by regular mowing, including the grassed slopes of the stormwater pond and any grass swales. Any eroded areas shall be regarded, seeded and mulched immediately.

116 INSPECTION AND MAINTENANCE REPORT FORMS

Once installation of any required or optional erosion control device or measure has been implemented, inspections shall be performed by a Qualified Professional at least once every seven (7) calendar days. For construction sites where soil disturbance activities are on-going and the **owner or operator** has received authorization in accordance with Part II.C.3 of the General Permit to disturb greater than five (5) acres of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days. The owner and contractor shall obtain from the MS4 an approval for disturbing more than five-acres at any given time. For construction sites where active construction has been suspended, inspection frequency under the general permit can be reduced to once every 30 days, provided temporary stabilization measures have been applied to all disturbed areas. The forms found in this SWPPP shall be used by the inspectors to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.

These report forms shall become an integral part of the SWPPP and shall be made readily accessible to governmental inspection officials, the Operator's Engineer, and the Operator for review upon request during visits to the project site. In addition, copies of the reports shall be provided to any of these persons, upon request, via mail or facsimile transmission. Inspection and maintenance report forms are to be maintained by the permittee for five years following the final stabilization of the site.

117 OTHER RECORD-KEEPING REQUIREMENTS

The Contractor shall keep the following records related to construction activities at the site:

- Dates when major grading activities occur and the areas which were graded
- Dates and details concerning the installation of structural controls
- Dates when construction activities cease in an area
- Dates when an areas is stabilized, either temporarily or permanently

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- Dates of rainfall and the amount of rainfall
- Dates and descriptions of the character and amount of any spills of hazardous materials
- Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled

118 SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN

118.1 MATERIALS COVERED

The following materials or substances are expected to be present onsite during construction:

- Concrete/Additives/Wastes
- Cleaning solvents
- Sanitary wastes
- Detergents
- Petroleum based products
- Paints/Solvents
- Pesticides
- Solid and construction wastes
- Acids
- Fertilizers
- Soil stabilization additives

118.2 MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. The job site superintendent will be responsible for ensuring that these procedures are followed.

A. Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project.

1. An effort will be made to store only enough products required to do the job.
2. All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or in a containment area. At a minimum, all containers will be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.
3. Products will be kept in their original containers with the original manufacturer's label in legible condition.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. Whenever possible, all of a product will be used up before disposing of the container.

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6. Manufacturer's recommendations for proper use and disposal will be followed.

7. The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

B. Hazardous Products

These practices will be used to reduce the risks associated with hazardous materials. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

1. Products will be kept in original containers with the original labels in legible condition.

2. Original labels and material safety data sheets (MSDS's) will be procured and used for each material.

3. If surplus product must be disposed of, manufacturer's or local/state/federal recommended methods for proper disposal will be followed.

4. A spill control and containment kit (containing for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

5. All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.

C. Hazardous Waste

All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job site superintendent, who will also be responsible for seeing that these practices are followed.

D. Product Specific Practices

The following product specific practices will be followed on the job site.

1. Petroleum Products

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All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any petroleum storage tanks stored onsite will be located within a containment area that is designed with an impervious surface between the tank and the ground. The secondary containment must be designed to provide a containment volume that is equal to 110% of the volume of the largest tank. Drip pans shall be provided for all dispensers. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations. The location of any fuel tanks and/or equipment storage areas must be identified on a plan by the contractor once the locations have been determined.

2. Fertilizers

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to stormwater. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

3. Paints, Paint Solvents, and Cleaning Solvents

All containers will be tightly sealed and stored when not in use. Excess paint and solvents will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

4. Concrete Wastes

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site, but only in either (1) specifically designated diked areas which have been prepared to prevent contact between the concrete and/or wash out and storm water which will be discharged from the site or (2) in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.

The hardened residue from the concrete wash out diked areas will be disposed of in the same manner as other non-hazardous construction waste materials or may be broken up and used on site as deemed appropriate by the Contractor. The job site superintendent will be responsible for seeing that these procedures are followed.

All concrete wash out areas will be located in an area where the likelihood of the area contributing to storm water discharges is negligible. If required, additional BMPs must be implemented to prevent concrete wastes from contributing to storm water discharges. The location of concrete wash out area(s) must be identified on a plan by the contractor once the locations have

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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.

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

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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.

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C. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the office trailer onsite.

119 CONTROL OF NON-STORM WATER DISCHARGES

Certain types of discharges are allowable under the NYSDEC SPDES General Permit for Construction Activity for the State of New York, and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this SWPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. The following allowable non-storm water discharges which may occur at the job site include:

A. Discharges from firefighting activities.

B. Fire hydrant flushings (see note below)

C. Waters used to wash vehicles or control dust in order to minimize offsite sediment tracking.

D. Routine external building washdown which does not use detergents.

E. Pavement wash waters where spills or leaks of hazardous materials have not occurred or detergents have not been used.

F. Air conditioning condensate.

G. Springs or other uncontaminated groundwater, including dewatering ground water infiltration.

H. Foundation or footing drains where no contamination with process materials such as solvents is present.

Note: The Contractor shall discharge any super-chlorinated water from water distribution pipe disinfection activities into sanitary sewer system

120 STORM WATER CONTROL FACILITY MAINTENANCE

The frequency of inspections for the bioretention area shall match the frequencies listed on the “Bioretention Operation, Maintenance and Management Inspection Checklist” in Appendix K 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 Map

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Erie County On-Line Mapping Application





Legend

- Parcels

0 0.07 0.1 Miles

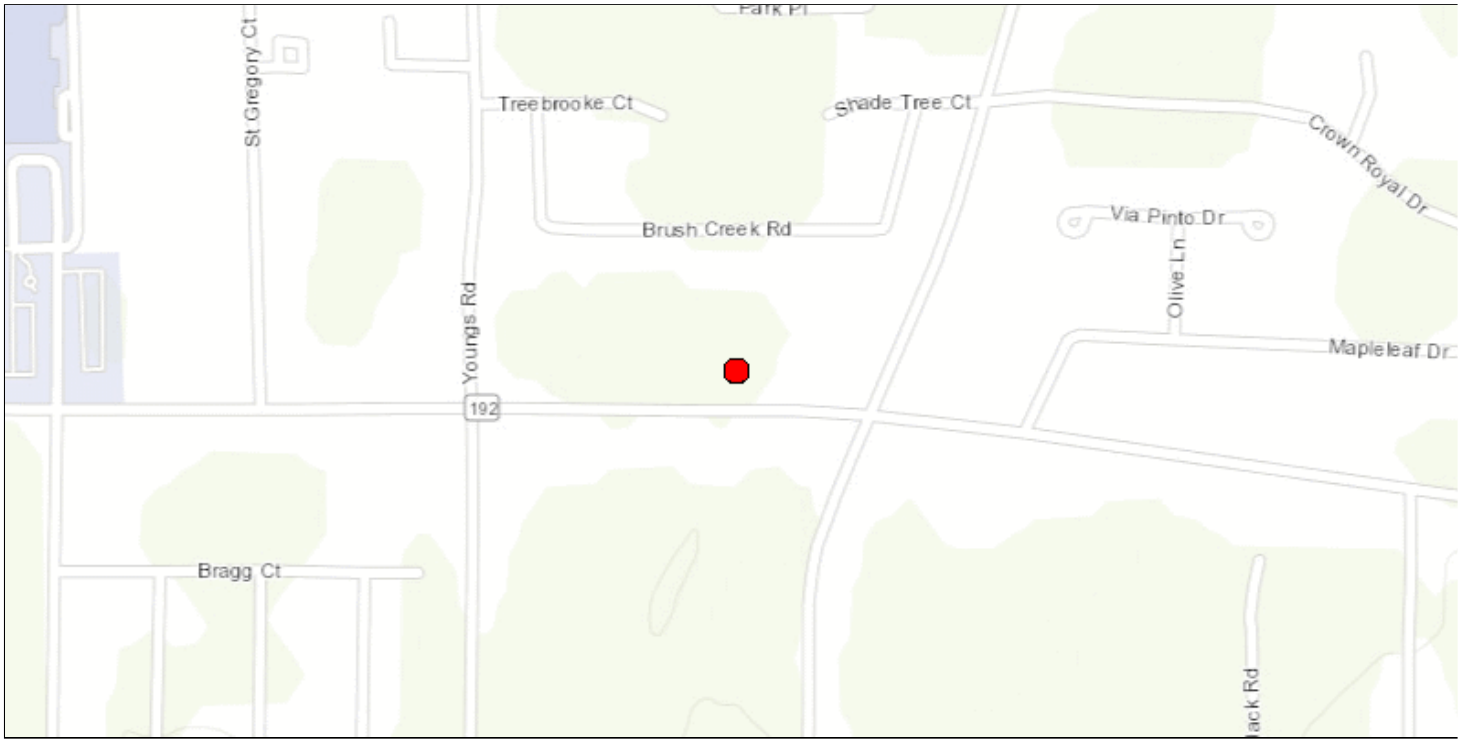
WGS_1984_Web_Mercator_Auxiliary_Sphere
THIS MAP IS NOT TO BE USED FOR NAVIGATION

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: 4,514

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	196602.75699659943	**Northing:**	4766592.236175068
Longitude/Latitude	**Longitude:**	-78.72158611288978	**Latitude:**	42.99148584509403

The approximate address of the point you clicked on is:
1770 Maple Rd, Buffalo, New York, 14221

County: Erie
Town: Amherst
USGS Quad: LANCASTER

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix B

NYSDEC Notice of Intent (NOI)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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)
PB Investors, LLC

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

Owner/Operator Contact Person First Name
Paul

Owner/Operator Mailing Address
6790 Main Street, Suite 100

City
Amherst

State: NY Zip: 14221-____

Phone (Owner/Operator): 716-204-2910 Fax (Owner/Operator): ___-___-____

Email (Owner/Operator)
pbliss@blissco.net

FED TAX ID
__-_____ (not required for individuals)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Project Site Information

Project/Site Name

Mixed Use Development

Street Address (NOT P.O. BOX)

1720 Maple Road

Side of Street

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

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Amherst

State: NY

Zip: 14221 -

County: Erie

DEC Region: 9

Name of Nearest Cross Street

Ayer Road

Distance to Nearest Cross Street (Feet)

0

Project In Relation to Cross Street

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

Tax Map Numbers
Section-Block-Parcel

56.19-1-4.1

Tax Map Numbers

56.19-4.5.11

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)

-78.721

Ex. -73.749

Y Coordinates (Northing)

42.991

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

Pre-Development Existing Land Use

- ○ FOREST
- ● PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME — Number of Lots
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ● MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ 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
5.1	4.7	0.4	3.0

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	End Date
05/01/2024	05/01/2026

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

Name

Town of Amherst Ditch

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 500

City

Buffalo

State NY Zip 14203 -

Phone 716 - 842 - 3165

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



Date 08 / 20 / 2023

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

0.224 **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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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)			3	0
○ 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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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** _____	

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

Name

Manufacturer

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

0.090 **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

0.043 **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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

0.134 **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).

0.224

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

0.057 **acre-feet**

CPv Provided

0.057 **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

8.09 **CFS**

Post-development

6.32 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

16.40 **CFS**

Post-development

9.88 **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

PB Investors, LLC

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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: Paul

MI:

Print Last Name: Bliss

Owner/Operator Signature:

Date: 08/20/2023

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix C

MS4 SWPPP Acceptance Form

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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:	PB Investors, LLC
2. Contact Person:	Paul Bliss
3. Street Address:	6790 Main Street, Suite 100
4. City/State/Zip:	Williamsville, NY 14221
II. Project Site Information	
5. Project/Site Name:	Mixed Use Development
6. Street Address:	1720-1760 Maple Road
7. City/State/Zip:	Amherst, NY 14221
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:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix D

Engineer's Report

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD
DESIGN

ENGINEER'S REPORT

for

Mixed Use Development
1720, 1740, 1760 Maple Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, NY 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

August 2023



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Table of Contents

Written Engineer's Report

Section 1 - Location & Description
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Section 4 - Storm Sewer Service

Appendices

Appendix A Sanitary Sewer and Water Demand Calculations

- Downstream Sewer Capacity Analysis

Appendix B Storm Sewer System Drainage Calculations

- Existing Runoff
- Proposed Runoff
    - Green Infrastructure & Water Quality Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Section 1 - Location & Description

This project is a development of an 5.18 acre site located on Maple Road in the Town of Amherst. Construction will consist of a two, four story multi-family & mixed-use buildings and townhouse buildings with detached garage buildings, totaling 118 units to include associated utility, lighting and landscaping improvements. Currently the site is mainly undeveloped consisting of mostly open grass areas. There is an existing asphalt parking area that is shared by the neighboring medical use property to the east. An existing ditch (Amherst Ditch #4) borders the west boundary of the project site. The proposed site development area to be disturbed for this project is approximately 4.7 acres when construction is completed.

Section 2 - Water Service

Water service for the buildings will be tapped off the existing 8" ECWA water main on the south side of Maple Road. The service will be a 6" Class 52 DI combined water service, then split into a 6" PVC fire service and a 4" polyethylene domestic service at the ROW line. Both services will continue into an internal mechanical room where the 4" domestic service will have a meter and RPZ and the 6" fire service will have a RPDA. Proper heat and lighting will be provided to the enclosure, drainage due to testing or failure of the RPZ will be to the outside grade. The owner will be responsible for keeping the drainage ports clear of snow and debris. Water inside the buildings will be used for typical domestic uses.

The multi-family and mixed use buildings are to be sprinklered, interior fire protection system to be designed by others. One private hydrant will be installed on site and two existing public hydrants along Maple Road will ensure fire hose coverage not exceeding 600' for the multi-family and mixed use buildings and 400' for the townhouse buildings.

Domestic Summary:	
Peak Operating Demand:	64.42 gpm
Water Main:	8" on Maple Road
Static Pressure:	82 psi (ECWA)
Friction Loss:	0.0 psi
Loss through meter/RPZ:	13.2 psi
Elevation Loss:	0.0 psi
Pressure after RPZ:	68.8 psi

Repairs to all devices will be made during off hours, dual backflow preventers are not required. The site is 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 buildings will each have a 6" SDR-35 PVC sanitary lateral at 1.0% minimum slope. Each of these laterals will connect and ultimate connect to the existing public sanitary sewer along the north side of Maple Road.

Design Parameters

Commercial Space:	0.1 gal/day/sf x 3,500 sf = 350 gpd
Office Space:	15 gal/day/emp x 35 emp = 525
1-bedroom unit:	110 gal/day/units x 44 units = 4,840 gpd
2-bedroom unit:	220 gal/day/units x 61 units = 13,420 gpd
3-bedroom unit:	330 gal/day/units x 13 units = 4,290 gpd
	Total = 23,425 gpd

23,425 gpd * 4.12 = 96,563 gpd *use peaking factor of 4.12

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC.

Downstream sewer capacity analysis report is included in Appendix A of this report.

Section 4 - Storm Sewer Service

The existing site currently sheet drains west to the existing ditch (Town of Amherst Ditch 4) along the west side of the property.

Stormwater runoff collected onsite as a result of the proposed development will be routed through the proposed storm sewer system consisting of bioretention areas and dry detention basin connected by a series of catch basins, yard drains and smooth interior HDPE pipe. The bioretention areas on site are designed to provide 100% of the required runoff reduction volume (RRv) and water quality volume treatment (WQv) for the 4.7 acre tributary area. The soils in the vicinity of the bioretention areas are mainly USDA hydrologic group 'C' and therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention areas will consist of 6" perforated HDPE underdrains in 12" of drainage gravel, followed by filter fabric and then finally 18" minimum of planting soil. Overflow yard drains will be installed to allow 6" maximum ponding for RRv treatment. A 12" outlet control pipe will be provided within the dry detention pond. Discharge from the outlet pipe will outlet to the existing Town of Amherst Ditch 4 along the west side of the property.

Runoff reduction volume (RRv), water quality volume (WQv) and stormwater volume attenuation for the site are designed in accordance with Chapter 4 of the NYSDEC Stormwater design manual. The bioretention area is provided as a "green infrastructure" practice to provide runoff reduction and water quality treatment to meet the Chapter 4 requirements for the currently undeveloped areas. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The existing site has a pre-development total of 0.8 acres of impervious cover. The amount of impervious cover post-development is 3.0 acres, an increase of 2.2 acres. The proposed dry detention field is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates, as well as the below stated Town stormwater runoff requirements.

Town of Amherst Requirement:
The Town of Amherst requires that the 25-year proposed storm event be attenuated with detention and that the outlet flowrate be restricted to the 10-year existing storm event. This volume of 7,898 cf is accommodated in the dry detention basin at elevation 601.76. At this elevation, the outlet discharge will be restricted to 4.02 cfs, which is less than the existing 10-year peak runoff outflow of 4.31 cfs of the western subcatchment that discharges to the existing Town Ditch 4.

Water Quality Summary:
WQv req'd = 9,747 cf (0.224 ac-ft)
RRv min. req'd = 1,862 cf (0.043 ac-ft)
RRv provided - bioretention areas = 3,899 cf (0.090 ac-ft)
WQv provided – bioretention areas = 5,848 cf (0.134 ac-ft)
Total RRv + WQv provided = 3,899 cf + 5,848 cf = 9,747 cf (0.224 ac-ft)

Bioretention: 100% of minimum post-development Runoff Reduction volume (RRv) & Water Quality Volume Treatment (WQv)
Area: 7,310 sf (total)
Bottom Elevation: 605.00 & 603.25

Detention: Comparison of the existing 1-year vs. the proposed 1-year runoff
Comparison of the existing 10-year vs. the proposed 10-year runoff
Comparison of the existing 10-year vs. the proposed 25-year runoff
Comparison of the existing 100-year vs. the proposed 100-year runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Runoff Summary:

Event	Ex. Runoff (cfs)*	Pro. Runoff (cfs)**	Result (cfs)
1-year	3.58	3.52	-0.08
10-year	8.09	6.32	-1.77
25-year	10.80	7.60	-3.20
100-year	16.40	9.88	-6.52

* Existing runoff is the summation of the runoff flowrate from multiple subcatchments shown Appendix B of this report.

** Proposed runoff flowrate is the rate controlled by the 10" outlet pipe from the dry detention basin which ultimately discharges to the existing Town of Amherst Ditch 4 as shown Appendix B of this report.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix A

Sanitary Sewer and Water Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.060 Date: 8/21/2023

1.a

Project Name: Mixed-Use Development
Project Address: 1720, 1740, 1760 Maple Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

	110 gal/d/unit	x	44 units	=	4,840	gpd		*use 110 gallons per unit per day (1-bdrm)
	220 gal/d/unit	x	61 units	=	13,420	gpd		*use 220 gallons per unit per day (2-bdrm)
	330 gal/d/unit	x	13 units	=	4,290	gpd		*use 330 gallons per unit per day (3-bdrm)
retail	0.1 gal/d/sf	x	3,500 sf	=	350	gpd		*use 0.1 gallons per square foot per day
office	15 gal/d/emp	x	35 emp	=	525	gpd		*use 0.1 gallons per square foot per day
Total Site Sanitary Demand:				=	23,425	gpd		

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 23,425 gpd / 100 gpcd = 234 per capita

Population (P) = 234 people

Peaking Factor : (18 +/P) / (4 + /P) where P is in thousands

Peaking Factor = 4.12

Peak Sanitary Demand = 23,425 x 4.12 = 96,563 gpd
= 0.097 MGD
= 0.149 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow	=	96,563 gpd	=	67.06 gpm	
4:1 offset flow per NYSDEC requirements	=	67.06 x 4	=	268.23 gpm req'd	
Mitigation Credit	=	$250 / gpm			
Mitigation Agreement Amount	=	**$67,057.59**			

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.085 Date: 8/21/2023
Project Name: Multi-Family Development
Project Address: 2635 North Forest Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 2 of 2

Water Demand Calculations (domestic):

Proposed mixed Use

23,425 gpd x 1.1 = 25,768 gpd *use 110% of sewage demand

*use 1.8 peaking factor and assume a 12 hour day

25,768 gpm x 1day/12hr x 1hr/60min = 35.79 gpm

35.79 gpm x 1.8 = 64.42 gpm Q_{peak}

Headlosses:

Q_{peak} = 64.42 gpm
Pipe = 4 inch PVC C = 140
Length = 150 LF (approx. distance from tap to RPZ in hot box)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(150)(64.42)^{1.85}}{(140)^{1.85}\ (4)^{4.866}} = 0.44 \text{ ft} = 0.19 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss through meter = 1 psi
Loss through RPZ = 12 psi
Total Losses = 13.2 psi
Static Pressure = 82 psi (per ECWA)
Residual Pressure Following RPZ = 82 - 13.2 = 68.8 psi (available after rpz & meter)

Residual Pressure 30" above 4th Floor
Δ elev = 39 ft = 16.67 psi
Residual Pressure 30" above 4th Floor = 52.1 psi

Water Demand Calculations (fire):

Proposed Mixed Use

Q = 1,000 gpd

Headlosses:

Q_{peak} = 1000 gpm
Pipe = 6 inch Ductile Iron C = 140
Length = 150 LF (approx. distance from tap to RPDA in hot box)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(90)(1000)^{1.85}}{(140)^{1.85}\ (6)^{4.866}} = 9.73 \text{ ft} = 4.21 \text{ psi}$$

Δ elev = 0 ft = 0.00 psi
Loss Through RPZ = 12.0 psi
Total Losses = 16.2 psi
Static Pressure = 82.0 psi (per ECWA)
Residual Pressure after RPDA = 82 - 16.2 = 65.8 psi

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Downstream Sewer Capacity Analysis

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINAWOOD
DESIGN

DOWNSTREAM SANITARY SEWER CAPACITY ANALYSIS REPORT

for

Mixed-Use Development

1720, 1740, 1760 Maple Road
Town of Amherst, Erie County, New York

Prepared for

PB Investors, LLC

6790 Main Street, Suite 100
Williamsville, New York 14221

Prepared by

Carmina Wood Design

487 Main Street, Suite 500
Buffalo, NY 14203

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

February 2023



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Project Description

This project is a development of an 5.1 acre site located at 1720, 1740 and 1760 Maple Road in the Town of Amherst. Construction will consist of two, four story mixed-use buildings totaling 7,000 sf of commercial space, 102 units, 11 townhouse units with attached garages, and detached garage buildings to include associated utility, lighting and landscaping improvements.

An existing 18" public sanitary sewer main is located along the north side of Maple Road and will be utilized for this project. A new 6" PVC private sanitary sewer lateral will be installed and connected to this existing sewer.

Wastewater from the proposed project will flow west along Maple Road via an 18" sanitary sewer, and then north along Hopkins Road via a 21" sanitary sewer. Flows then continue north and are conveyed north through the 54" Peanut Line sewer, and then ultimately north to the Town of Amherst Wastewater Treatment Facility. Refer to the sewer routing map located in the TECSmith monitoring section of this downstream sewer capacity analysis report. Two routing options were presented from the Town of Amherst, Option 1 is the desired routing utilizing Nodes 1 and 2 as summarized below.

Node 1 – Hopkins (21"):

Existing Peak Flow measured (wet weather event)	= 6.545 cfs (4.231 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.706 cfs

Theoretical capacity of existing 21" PVC pipe @ 0.083% = 5.929 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 21" PVC pipe. 1 time during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 1.

Node 2 – Maple (18"):

Existing Peak Flow measured (wet weather event)	= 5.903 cfs (3.816 mgd)*
Proposed Mixed-Use Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 6.064 cfs

Theoretical capacity of existing 18" RCP pipe @ 0.12% = 3.939 cfs

Conclusion: The proposed total peak flow is greater than the capacity of the 18" RCP pipe. 5 times during the monitoring period did the flow depth exceed the pipe diameter at Node 1 from high rainfall events. However, at no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole. In addition, Sanitary Sewer Overflow (SSO) did not occur. I/I mitigation shall be required for the contribution of this proposed project, and should occur prior to and/or simultaneously as the project implementation in order to ensure adequate capacity exists, and the risk for SSO is limited. Refer to separate manhole depth analysis sheet included in this report detailing remaining freeboard within this Node 2.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Node 3 - Peanut Line (54"):

Existing Peak Flow measured (wet weather event)	= 28.620 cfs (18.50 mgd)*
Proposed Multi-Family Peak Flow	= 0.161 cfs**
Proposed Total Peak Flow	= 28.781 cfs

Capacity of existing 66" Peanut Line sewer = 55.692 cfs (36.0 mgd)

Conclusion: The proposed total peak flow is less than the capacity of the 54" Peanut Line sewer, therefore there is sufficient capacity.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Foot Notes:

Downstream capacity node information provided by Town of Amherst Engineering Department

*Converted from measurements in TECSmith report dated 10/18/22

**See Sanitary Sewage Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Downstream Manhole Analysis - 1720, 1740, 1760 Maple Roac

Manhole	RIM	INV	MH Depth (ft)	Observed depth (ft)*	Remaining depth in manhole (ft)	Rainfall Event Depth (in)
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.724	6.086	1.73
Hopkins 21" (Node 1)	588.41	580.60	7.81	1.008	6.802	1.93
Maple 18" (Node 2)	607.83	589.03	18.80	4.270	14.531	1.73
Maple 18" (Node 2)	607.83	589.03	18.80	2.316	16.484	1.93

*Observed depth is the peak depth measured at Node 1 & 2 from the previoulsy performed downstream sewer monitering performec by TECSmith, report dated 10/18/22, based on the observed peak levels from the two largest storms events of the monitering period

Note: RIM and INV depths provided by Town of Amherst Engineering Department

Location Map

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.07 0.1 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: 4,514

Sanitary Demand Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

CARMINA WOOD DESIGN
487 MAIN STREET, SUITE 500
BUFFALO, NEW YORK, 14203
(716) 842-3165
FAX (716) 842-0263

Project No.: 22.060 Date: 2/23/2023

1.a

Project Name: Mixed-Use Development
Project Address: 1720, 1740, 1760 Maple Road Amherst, NY
Subject: Sanitary Sewer & Water Demand Calcs
Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

	110	gal/d/unit	x	18	units	=	1,980	gpd	*use 110 gallons per unit per day (1-bdrm)
	220	gal/d/unit	x	80	units	=	17,600	gpd	*use 220 gallons per unit per day (2-bdrm)
	330	gal/d/unit	x	15	units	=	4,950	gpd	*use 330 gallons per unit per day (3-bdrm)
retail	0.1	gal/d/sf	x	3,500	sf	=	350	gpd	*use 0.1 gallons per square foot per day
office	15	gal/d/emp	x	35	emp	=	525	gpd	*use 0.1 gallons per square foot per day

Total Site Sanitary Demand: = 25,405 gpd

Find Peak Sanitary Demand:

Peaking Factor based on Population:

Total demand: 25,405 gpd / 100 gpcd = 254 per capita

Population (P) = 254 people

Peaking Factor : (18 +/P) / (4 + /P) where P is in thousands

Peaking Factor = 4.11

Peak Sanitary Demand = 25,405 x 4.11 = 104,372 gpd
= 0.104 MGD
= 0.161 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow = 104,372 gpd = 72.48 gpm

4:1 offset flow per NYSDEC requirements = 72.48 x 4 = 289.92 gpm req'd

Mitigation Credit = $250 / gpm

Mitigation Agreement Amount = $72,480.55

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECSmith Monitoring Report

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Date: October 18, 2022

SANITARY SEWER FLOW CAPACITY STUDY – Summary Review

Prepared For: 1760 Maple Rd Capacity Analysis

Christopher Wood, PE Partner
487 Main Street, Suite 500
Buffalo, New York 14203

Project Name: 1760 Maple Rd Capacity Analysis

Flow Monitoring Period: September 19, 2022 to October 17, 2022

Rain Events (> 0.5-inches) Monitored: September 19 (1.93”), September 25 (0.63”), September 26 (0.62”), September 27 (1.01”), and October 13 (1.73”)

Number of Monitoring Nodes: Four (4) downstream manholes

Node Locations and Descriptions:

- Node 1 Hopkins 21" (20.5")
- Node 2 Maple 18" (18")
- Node 3 Youngs & Renaissance (17.5")
- Node 4 Youngs 18" (17.5")

Summary Conclusion:

Based on the data presented in this report, specifically the flow depth measurements recorded (see graphs below)

- At no time did the flow depth exceed pipe diameter at Node 3 and Node 4 of the downstream monitoring points during the wet weather events monitored.
- Five times the flow depth exceed pipe diameter at Node 2 of the downstream monitoring points during the wet weather events monitored.
- One time the flow depth exceed pipe diameter at Node 1 of the downstream monitoring points during the wet weather events monitored.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

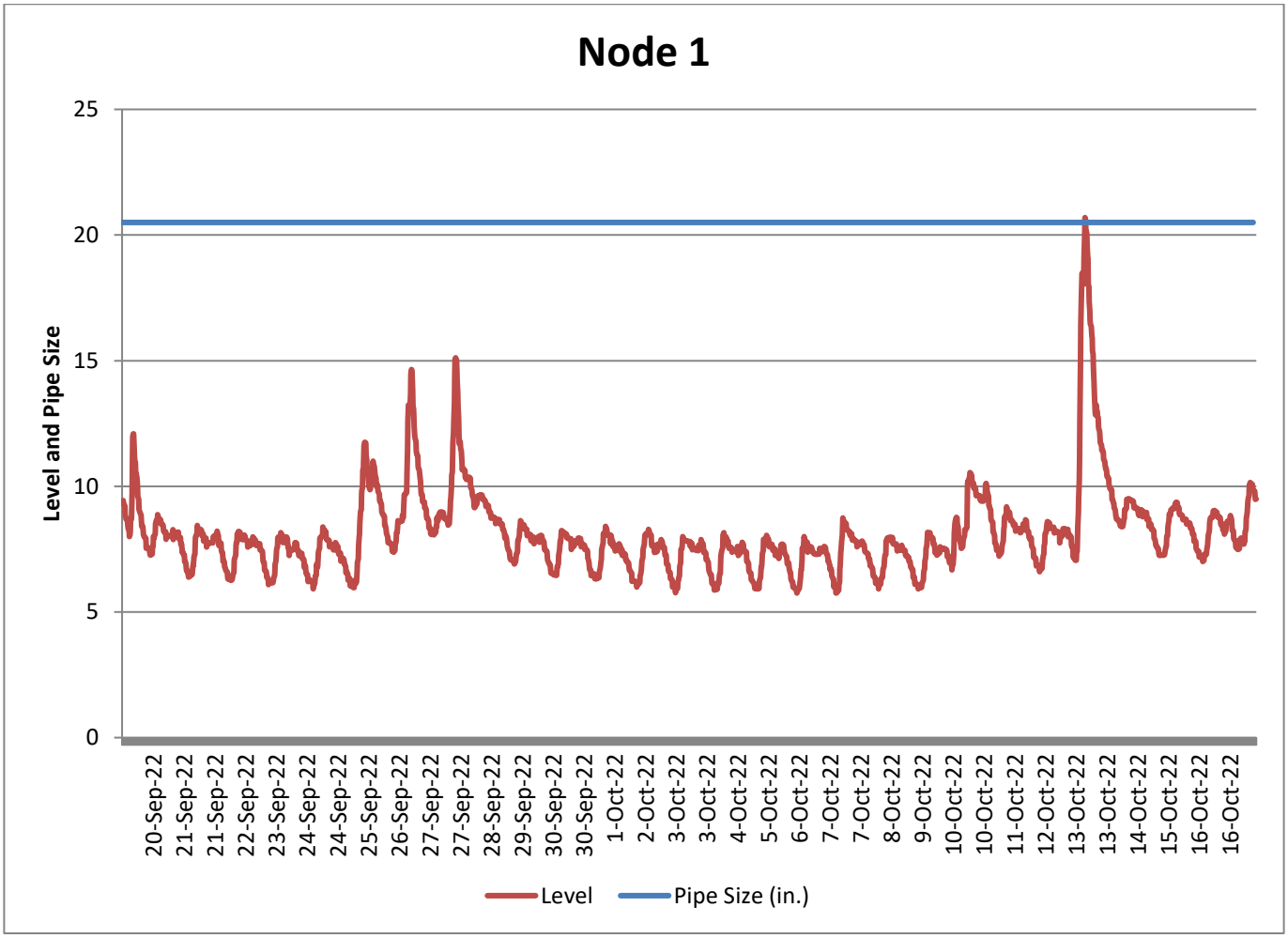
TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

Depth of Flow Capacity Summary:

Depth of flow capacity is based on diameter of pipe. See graphs below.

- One time during the monitoring period did depth of flow exceed pipe diameter at Node 1.

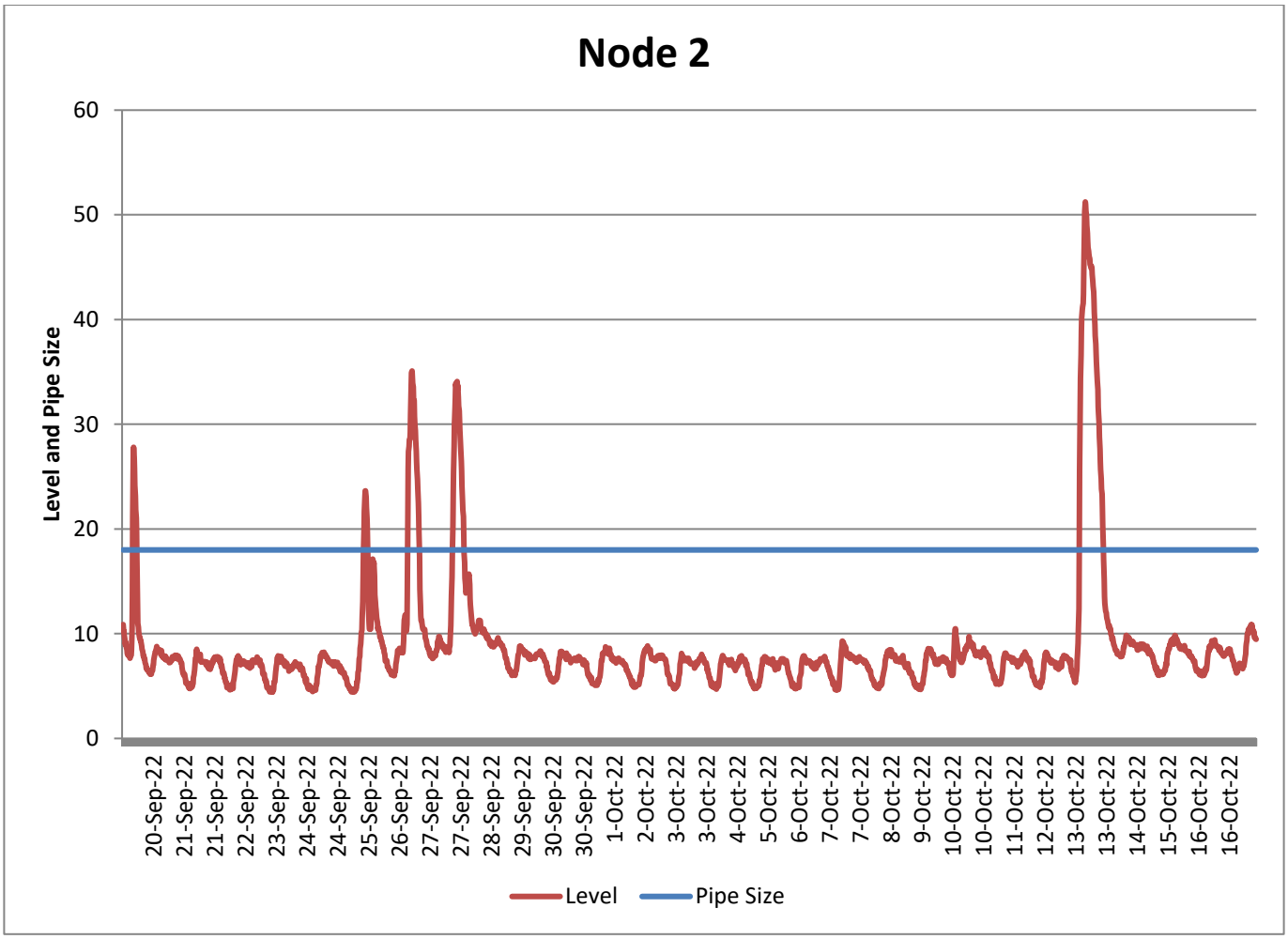


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- Five times during the monitoring period did depth of flow exceed pipe diameter at Node 2.

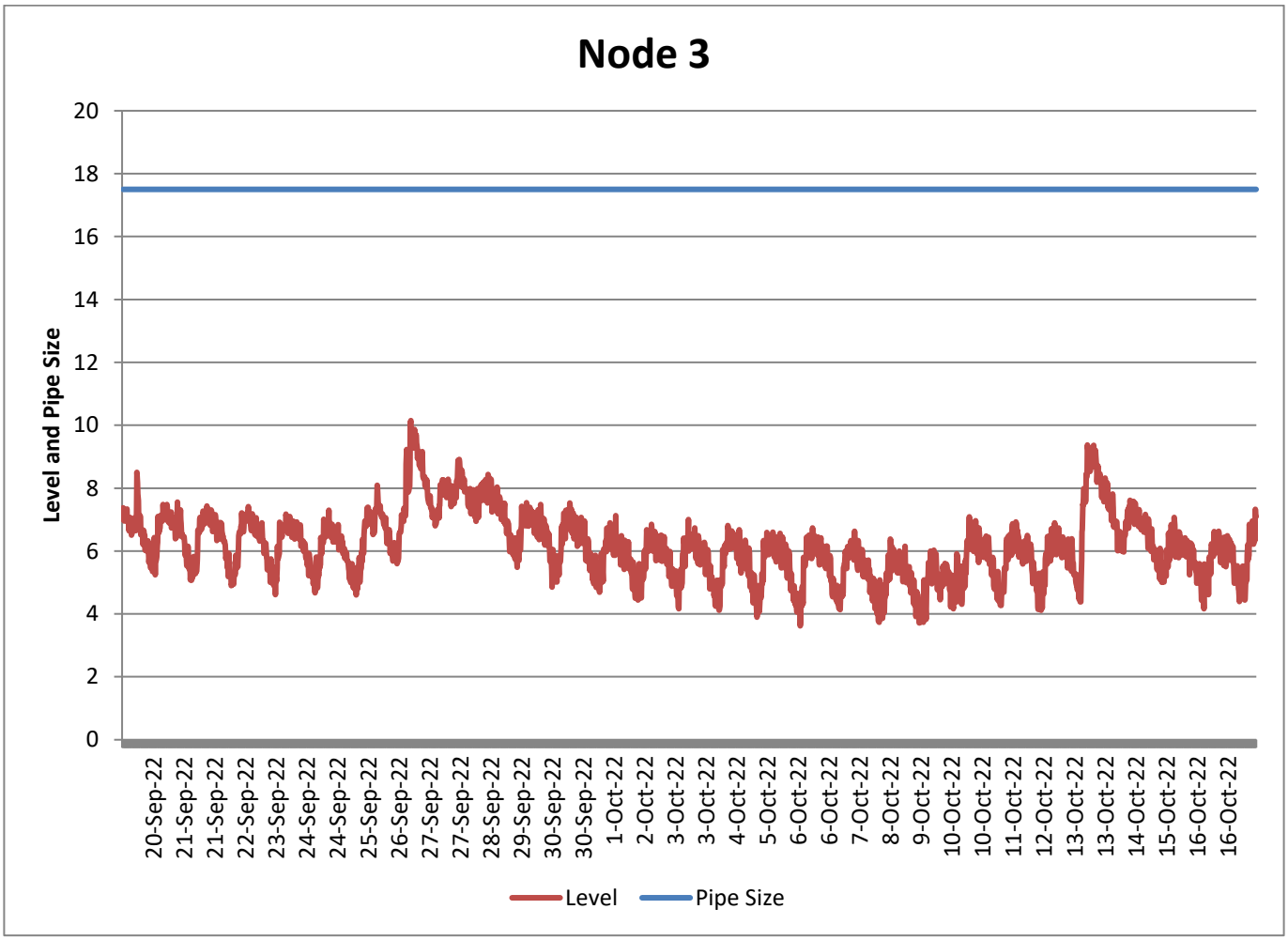


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 3.

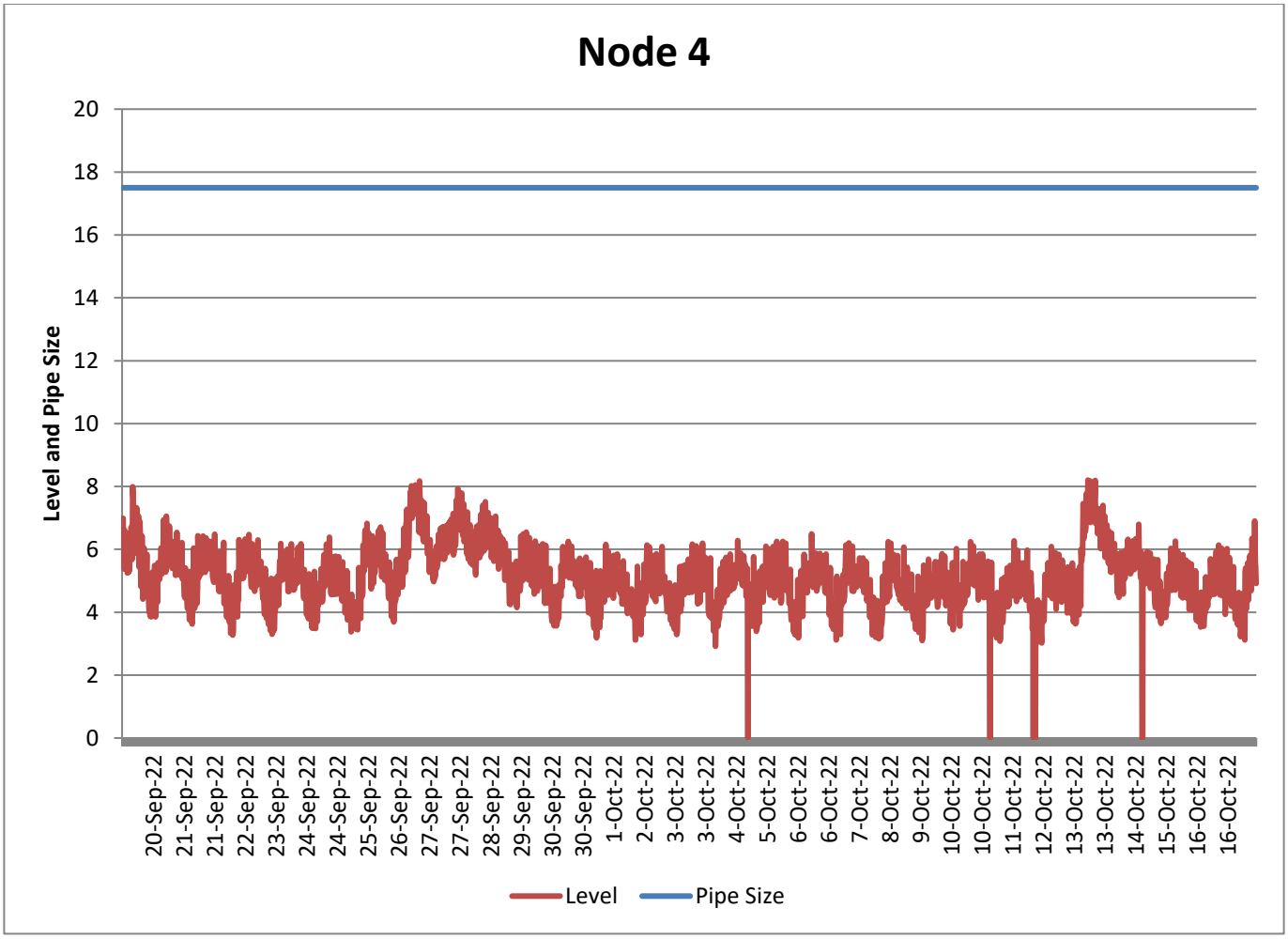


Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TECsmith

TECSMITH, Inc.
PO Box 95
Clarence, NY 14031
716-462-0382

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 4.



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Town of Amherst Sanitary Sewer Downstream Routing Maps

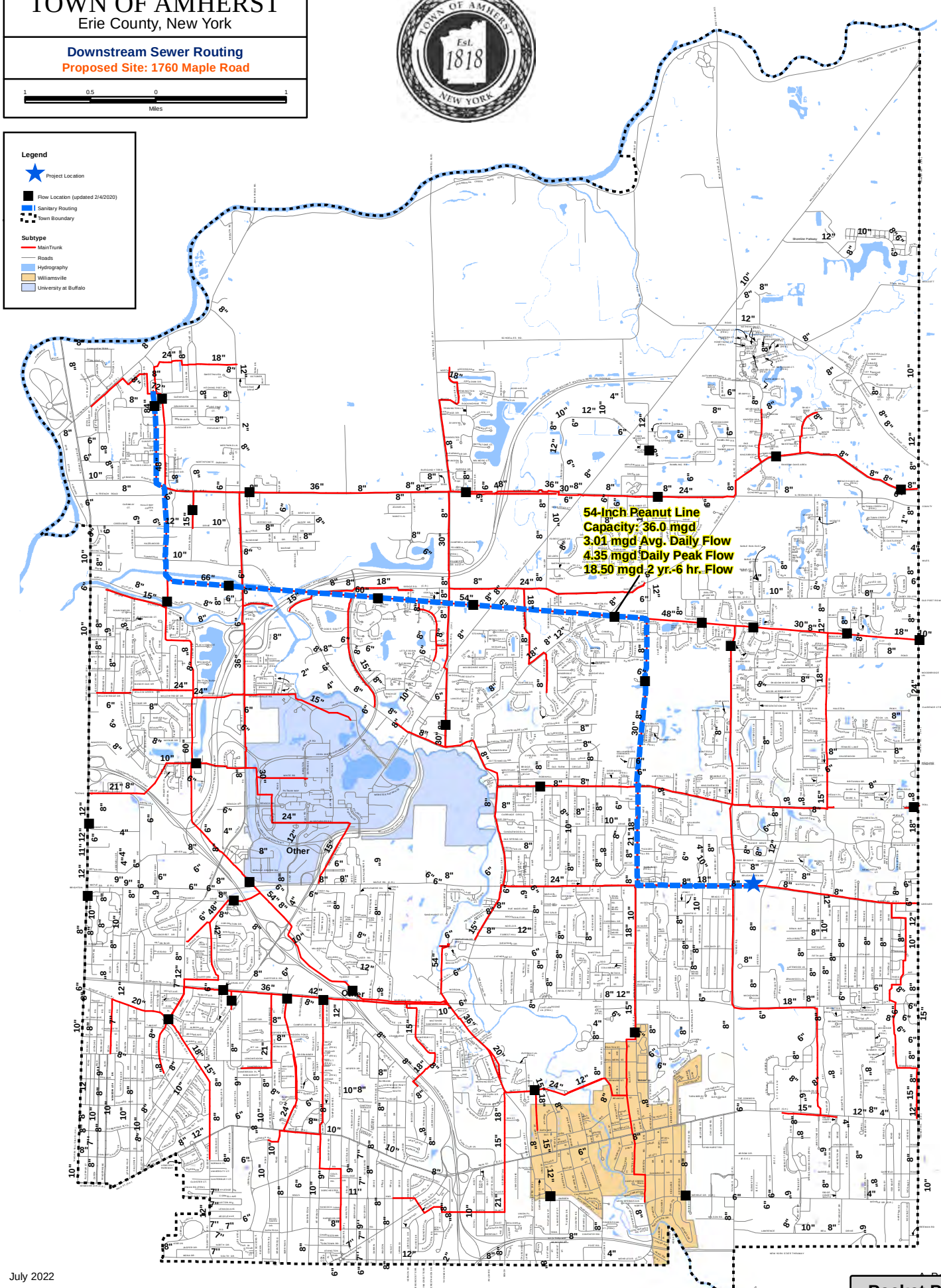
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
Erie County, New York

Downstream Sewer Routing
Proposed Site: 1760 Maple Road

1 0.5 0 1
Miles

N



July 2022

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

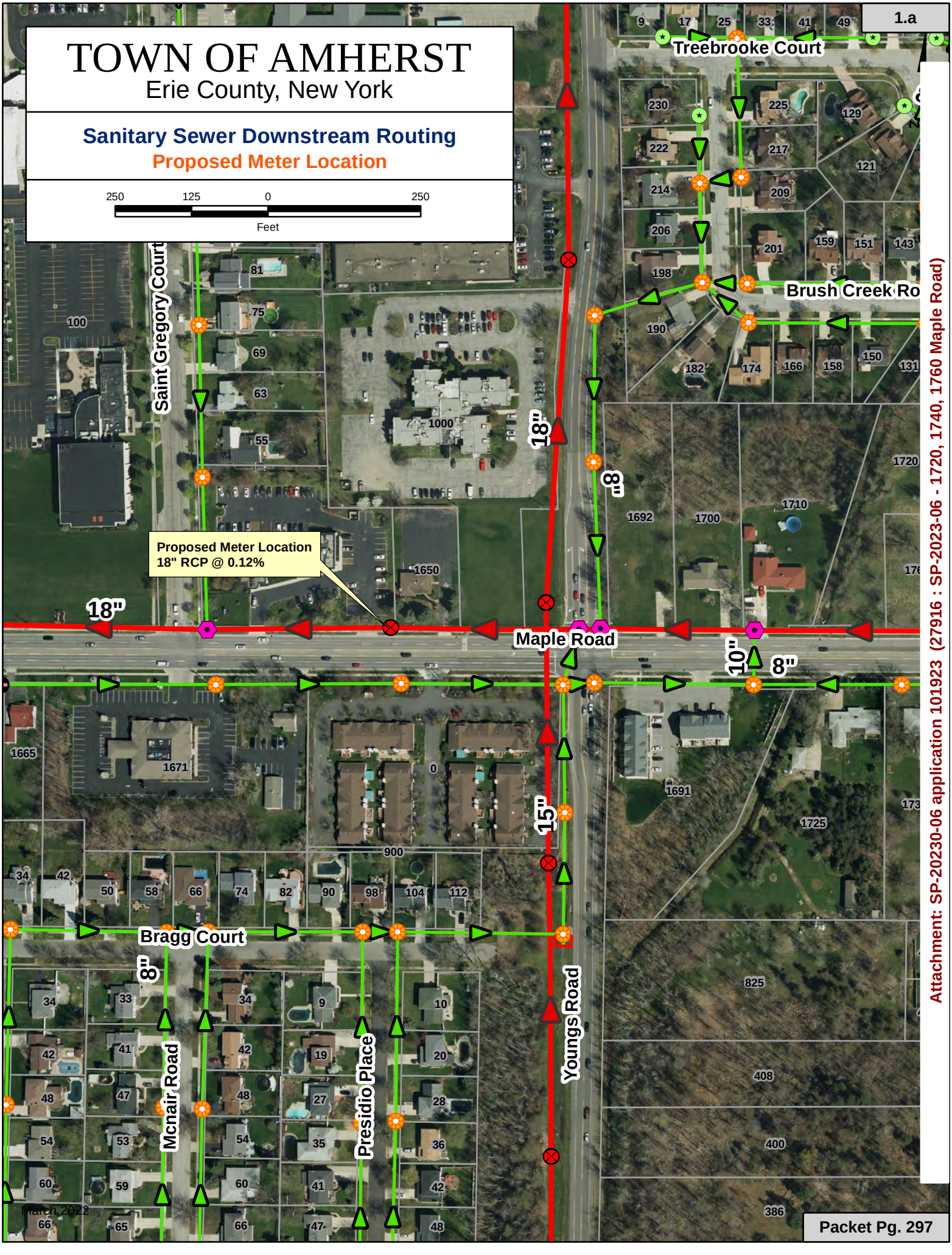
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

250 125 0 250

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST

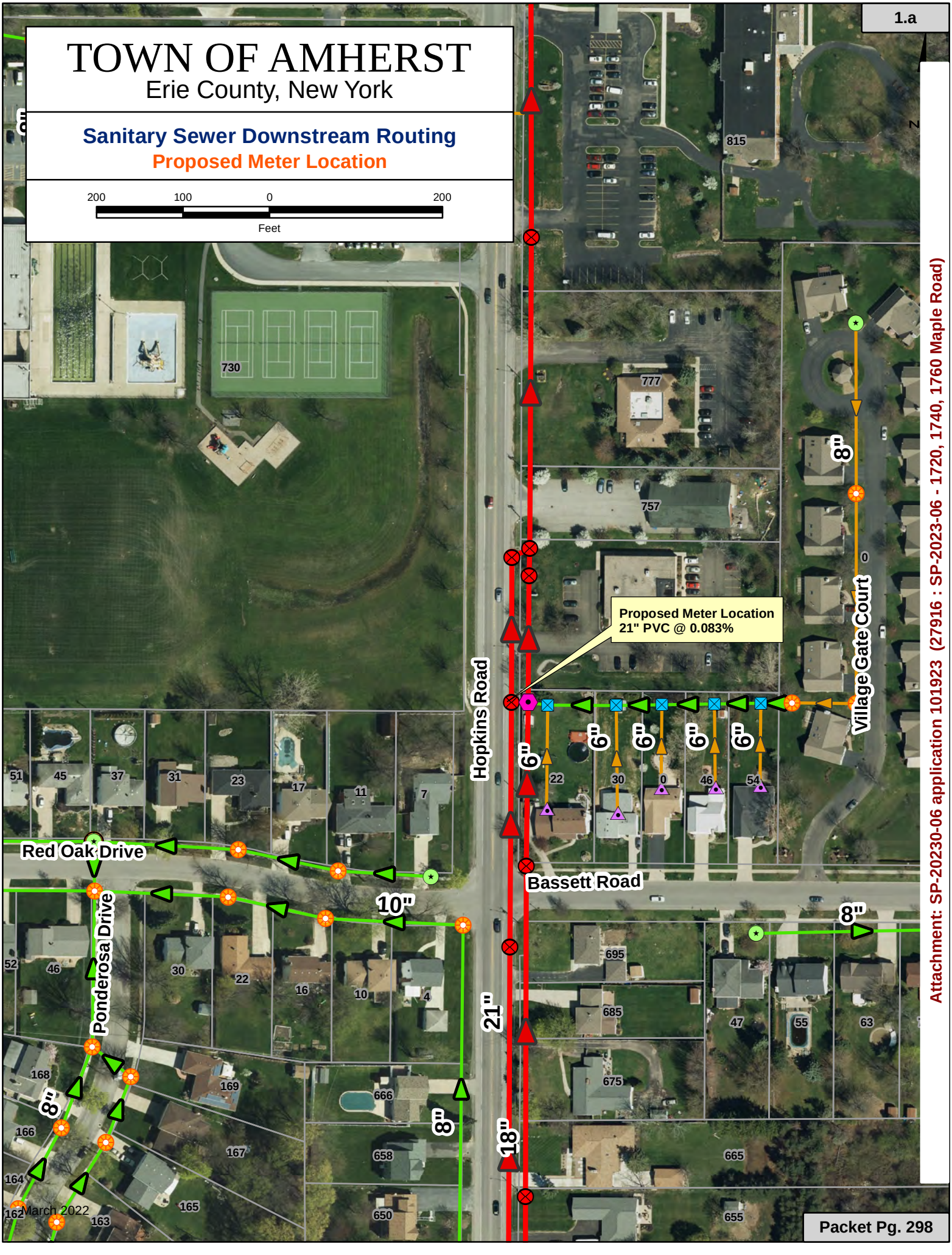
Erie County, New York

Sanitary Sewer Downstream Routing

Proposed Meter Location

200 100 0 200

Feet



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

March 2022

Appendix B

Storm Sewer System Drainage Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Existing Runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 1S: West

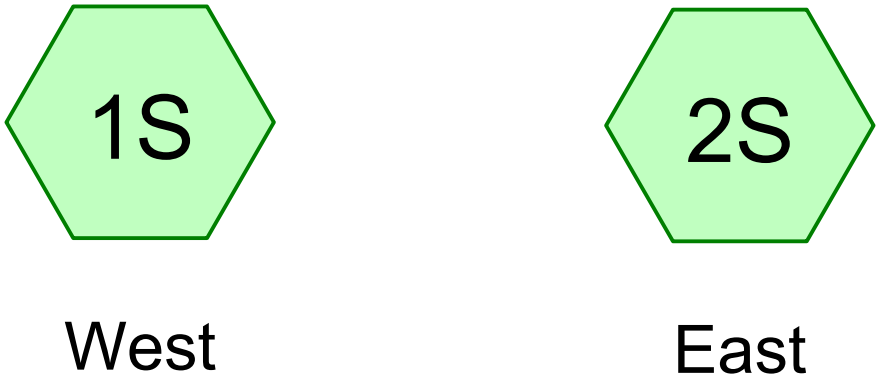
Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	1.37	6,866	0.48
2-Year	2.20	2.05	9,741	0.69
5-Year	2.69	3.18	14,477	1.02
10-Year	3.14	4.31	19,196	1.36
25-Year	3.84	6.16	27,043	1.91
50-Year	4.48	7.93	34,607	2.44
100-Year	**5.23**	**10.06**	**43,808**	**3.09**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 2S: East

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	2.21	4,779	1.65
2-Year	2.20	2.62	5,729	1.97
5-Year	2.69	3.23	7,143	2.46
10-Year	3.14	3.78	8,444	2.91
25-Year	3.84	4.64	10,470	3.61
50-Year	4.48	5.42	12,325	4.24
100-Year	**5.23**	**6.34**	**14,499**	**4.99**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



Subcat Reach Pond Link

Routing Diagram for 22.060 existing
Prepared by Carmina Wood Morris, PC, Printed 8/20/2023
HydroCAD® 10.20-2g s/n 05019 © 2022 HydroCAD Software Solutions LLC

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
169,884	80	>75% Grass cover, Good, HSG D (1S)
34,848	98	Paved parking, HSG D (2S)
204,732	**83**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
204,732	HSG D	1S, 2S
0	Other	
204,732		**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	0	169,884	0	169,884	>75% Grass cover, Good	
0	0	0	34,848	0	34,848	Paved parking	
0	**0**	**0**	**204,732**	**0**	**204,732**	**TOTAL AREA**	

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	2S	0.00	0.00	350.0	0.0050	0.013	0.0	8.0	0.0

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=0.48"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=1.37 cfs 6,866 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=1.65"
Flow Length=435' Tc=4.0 min CN=98 Runoff=2.21 cfs 4,779 cf

Total Runoff Area = 204,732 sf Runoff Volume = 11,645 cf Average Runoff Depth = 0.68"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

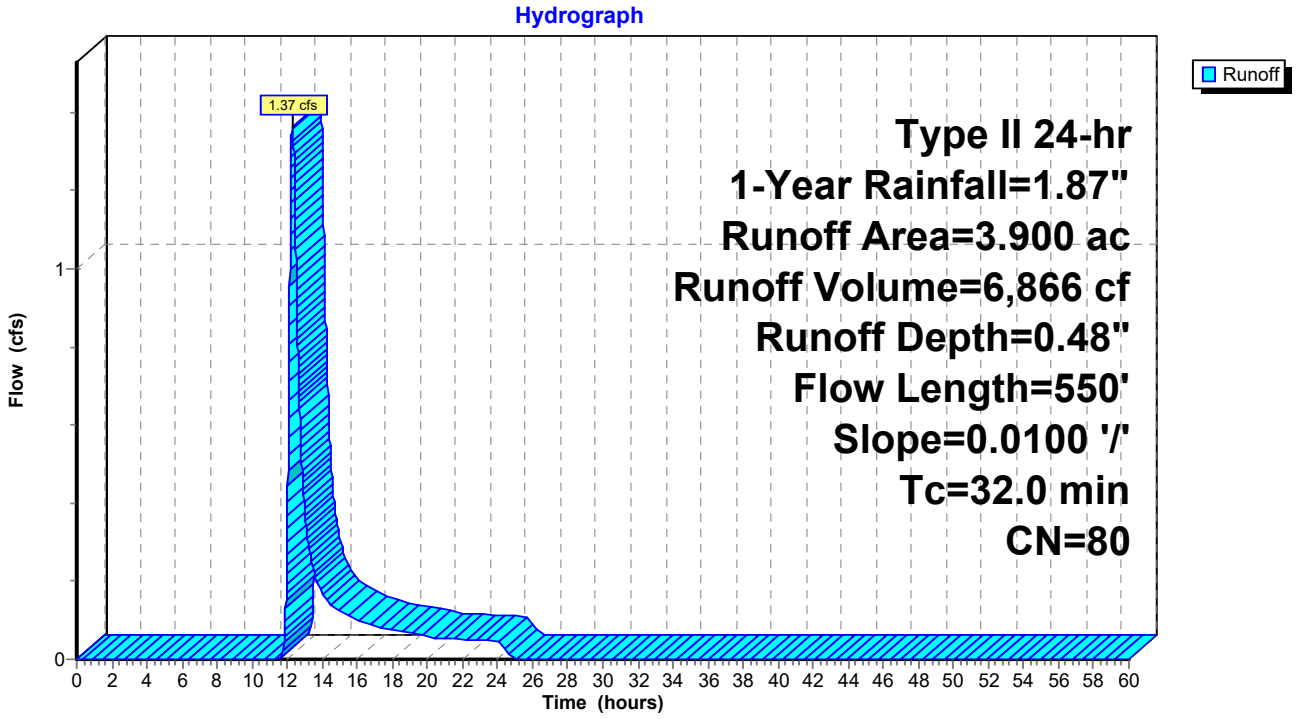
Runoff = 1.37 cfs @ 12.30 hrs, Volume= 6,866 cf, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 259% of capacity of segment #2

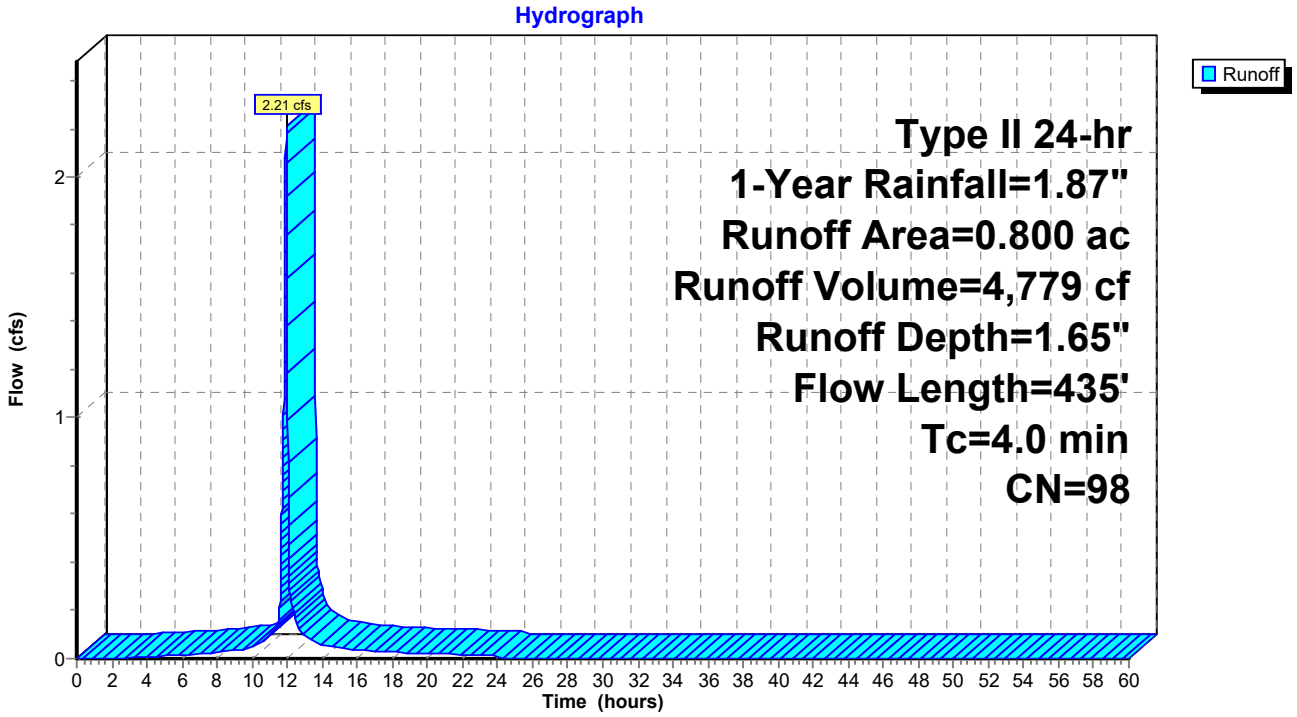
Runoff = 2.21 cfs @ 11.95 hrs, Volume= 4,779 cf, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=1.36"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=4.31 cfs 19,196 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=2.91"
Flow Length=435' Tc=4.0 min CN=98 Runoff=3.78 cfs 8,444 cf

Total Runoff Area = 204,732 sf Runoff Volume = 27,640 cf Average Runoff Depth = 1.62"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

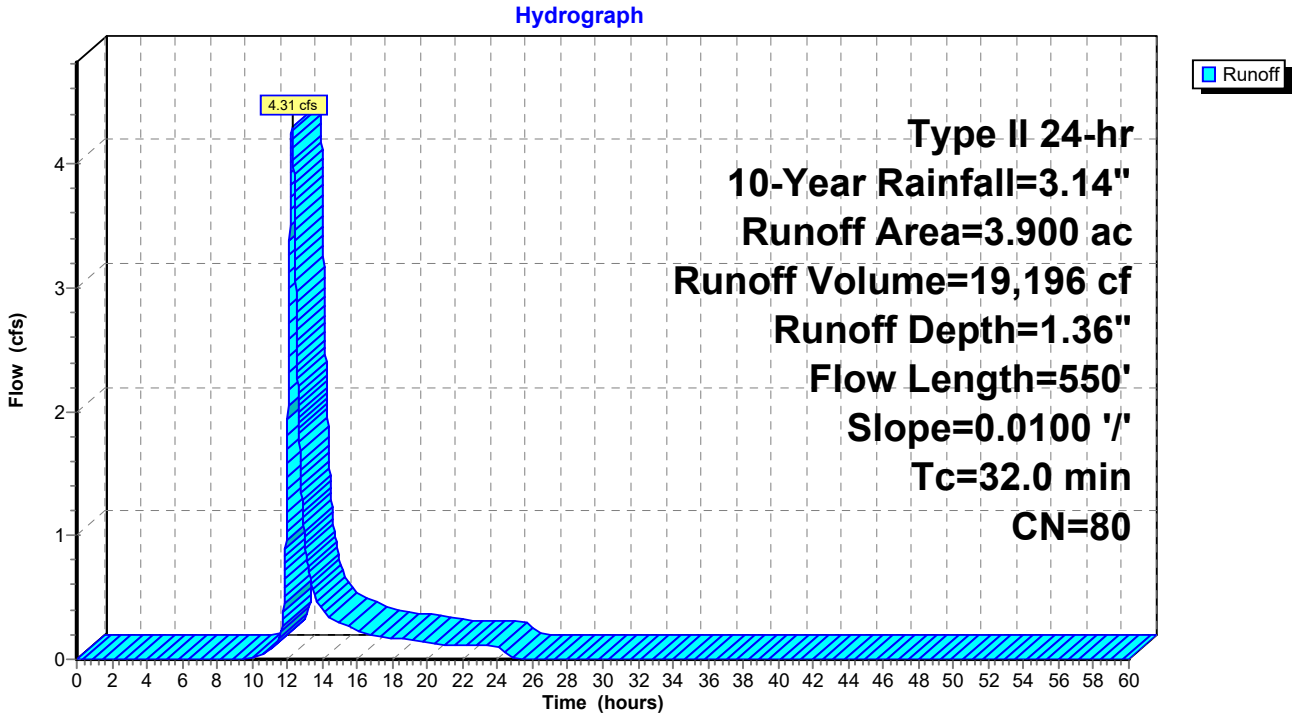
Runoff = 4.31 cfs @ 12.27 hrs, Volume= 19,196 cf, Depth= 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 442% of capacity of segment #2

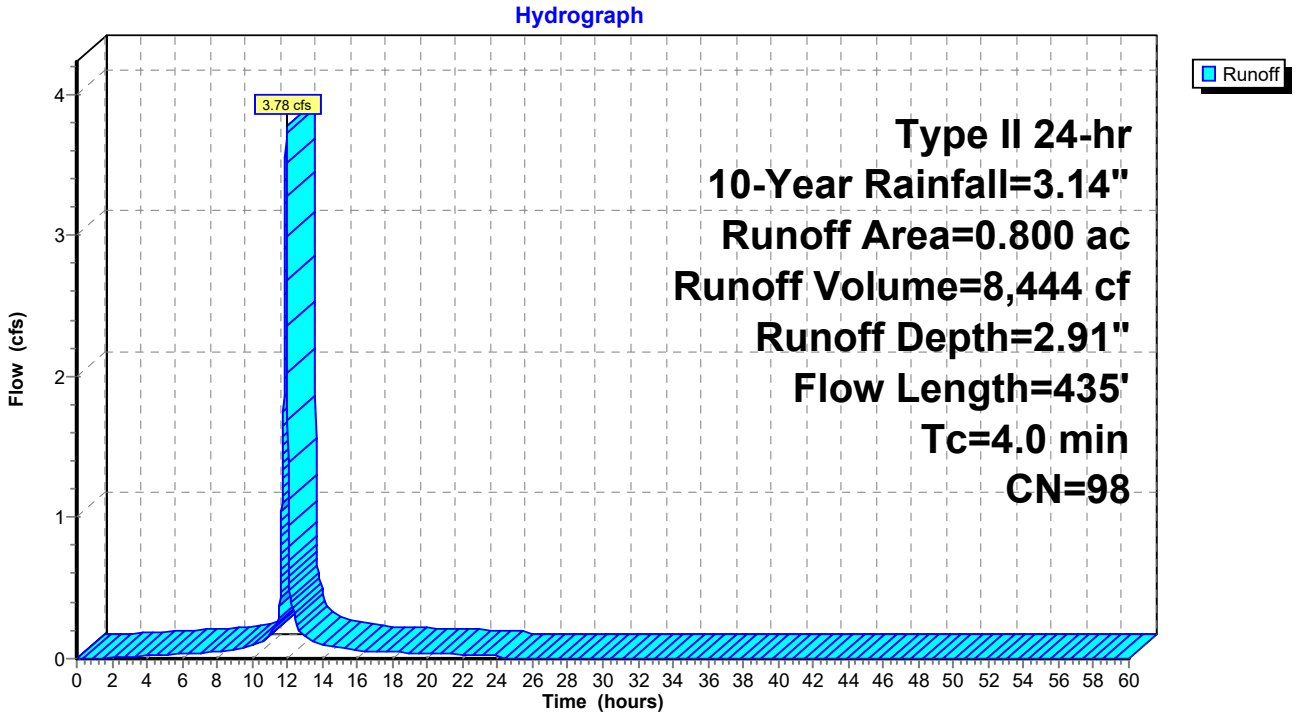
Runoff = 3.78 cfs @ 11.94 hrs, Volume= 8,444 cf, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=1.91"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=6.16 cfs 27,043 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=3.61"
Flow Length=435' Tc=4.0 min CN=98 Runoff=4.64 cfs 10,470 cf

Total Runoff Area = 204,732 sf Runoff Volume = 37,513 cf Average Runoff Depth = 2.20"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

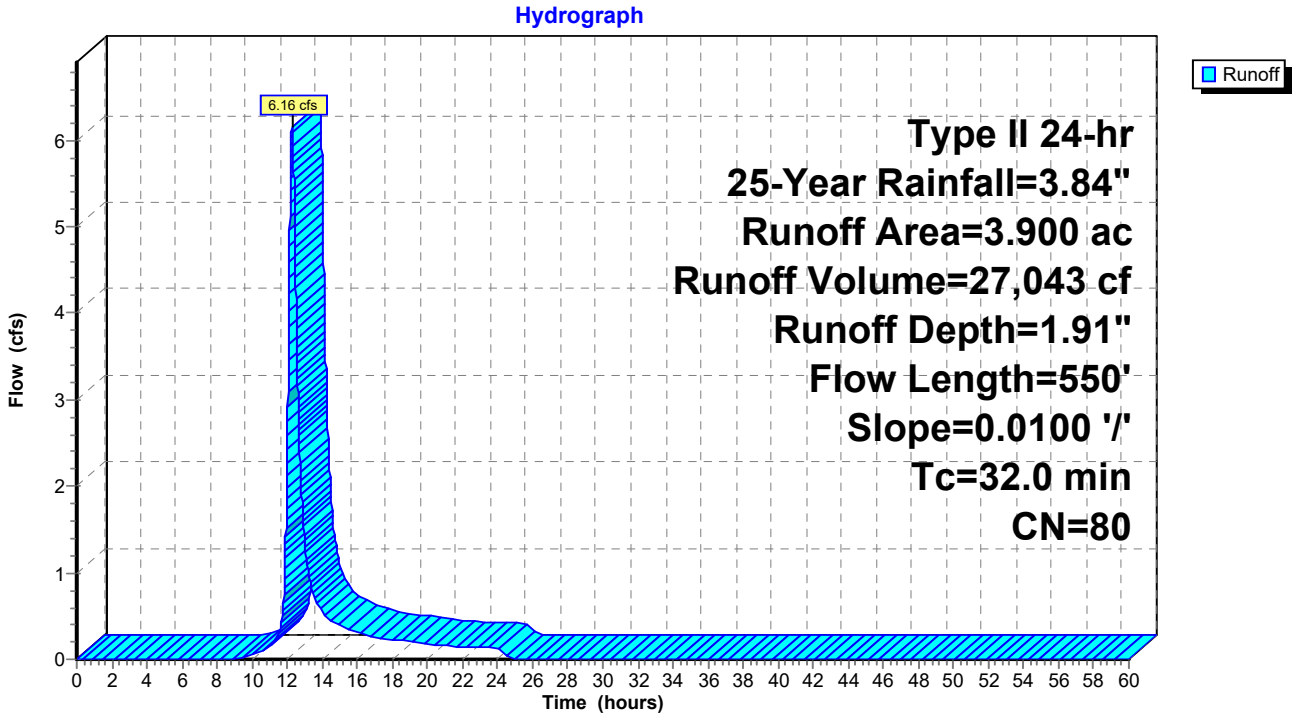
Runoff = 6.16 cfs @ 12.27 hrs, Volume= 27,043 cf, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 543% of capacity of segment #2

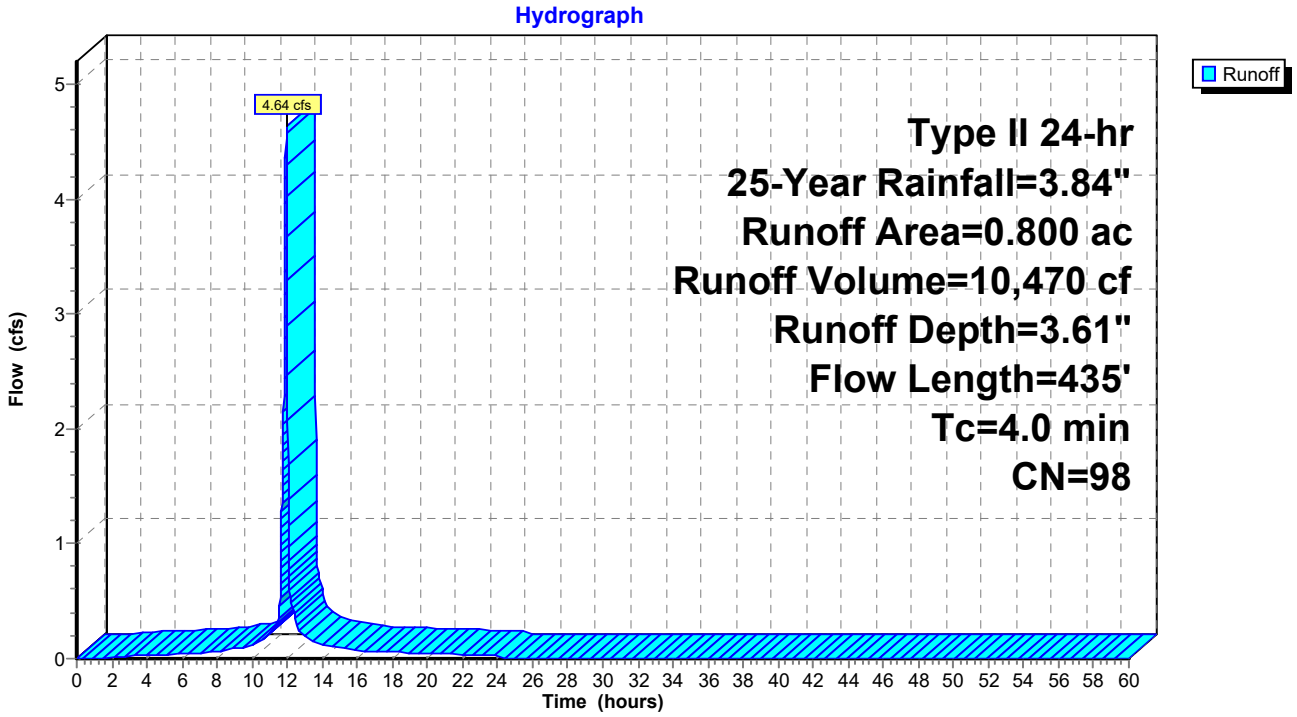
Runoff = 4.64 cfs @ 11.94 hrs, Volume= 10,470 cf, Depth= 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: West Runoff Area=3.900 ac 0.00% Impervious Runoff Depth=3.09"
Flow Length=550' Slope=0.0100 '/' Tc=32.0 min CN=80 Runoff=10.06 cfs 43,808 cf

Subcatchment2S: East Runoff Area=0.800 ac 100.00% Impervious Runoff Depth=4.99"
Flow Length=435' Tc=4.0 min CN=98 Runoff=6.34 cfs 14,499 cf

Total Runoff Area = 204,732 sf Runoff Volume = 58,307 cf Average Runoff Depth = 3.42"
82.98% Pervious = 169,884 sf 17.02% Impervious = 34,848 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: West

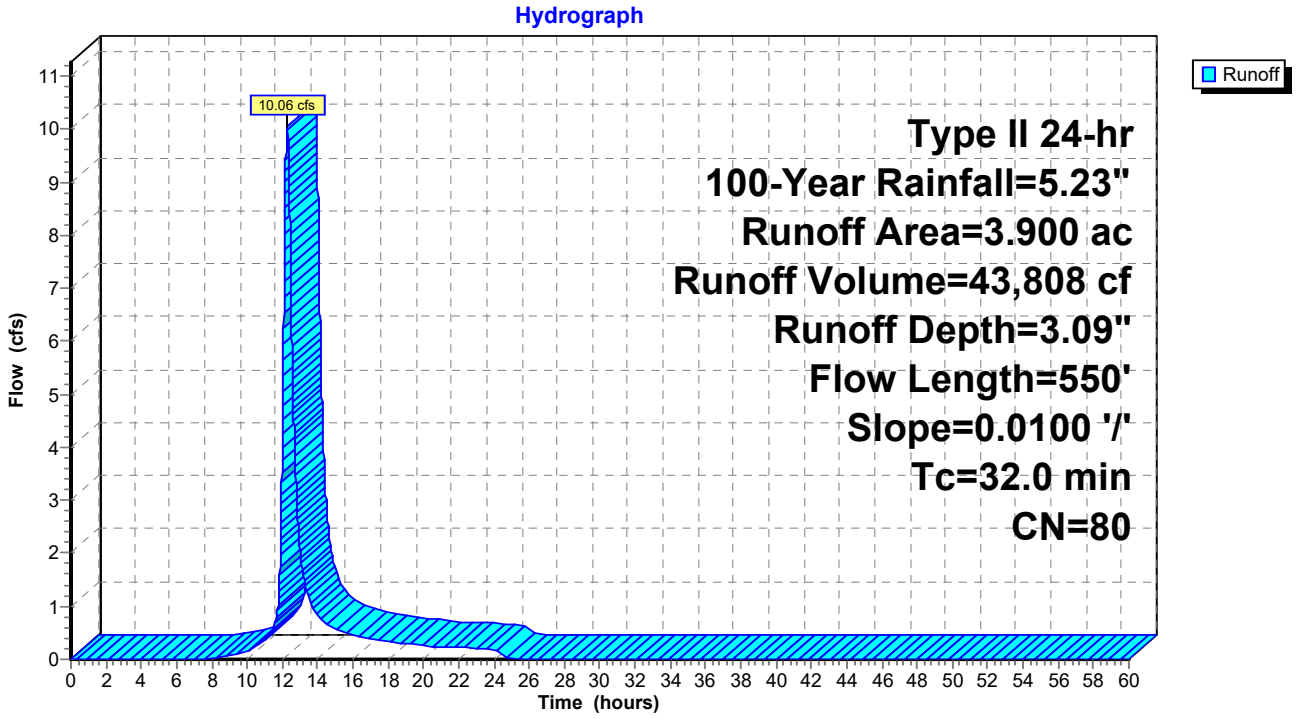
Runoff = 10.06 cfs @ 12.27 hrs, Volume= 43,808 cf, Depth= 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
3.900	80	>75% Grass cover, Good, HSG D
3.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.50"
10.7	450	0.0100	0.70		**Shallow Concentrated Flow, grass** Short Grass Pasture Kv= 7.0 fps
32.0	550	Total			

Subcatchment 1S: West



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: East

[47] Hint: Peak is 742% of capacity of segment #2

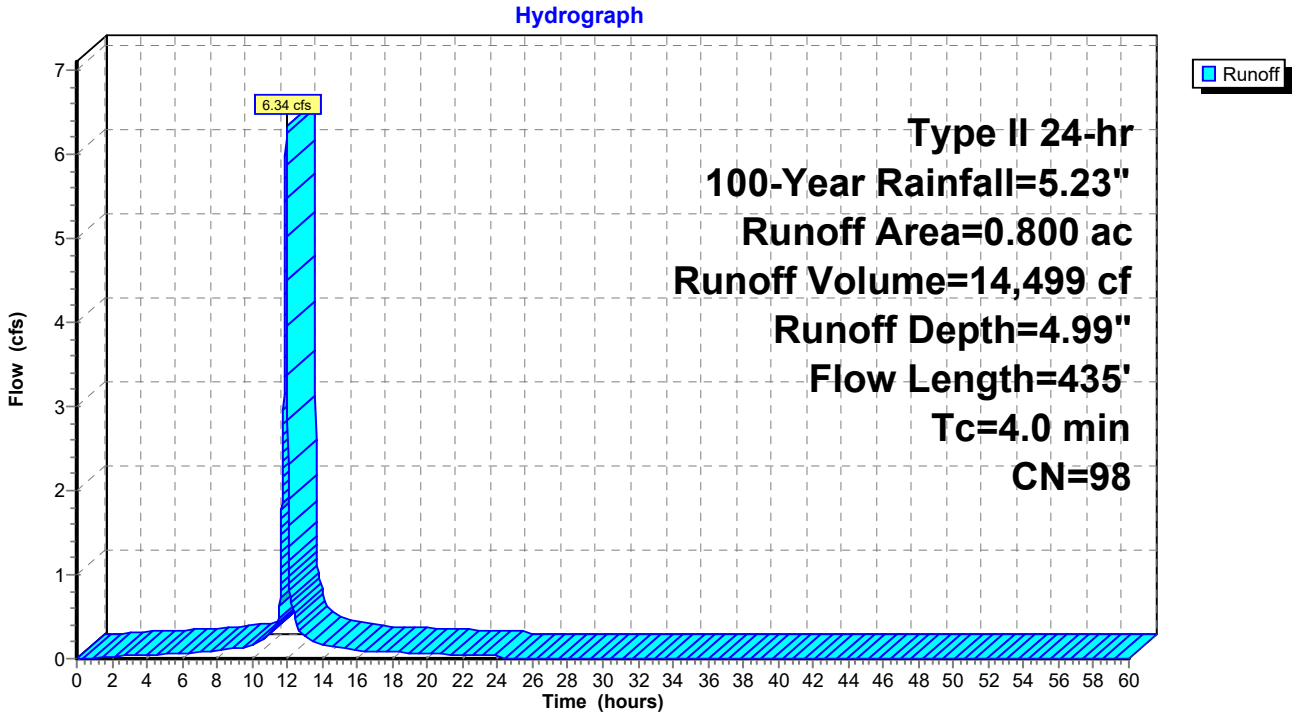
Runoff = 6.34 cfs @ 11.94 hrs, Volume= 14,499 cf, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.4	350	0.0050	2.45	0.85	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.0	435	Total			

Subcatchment 2S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Proposed Runoff

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Subcatchment 4S: East

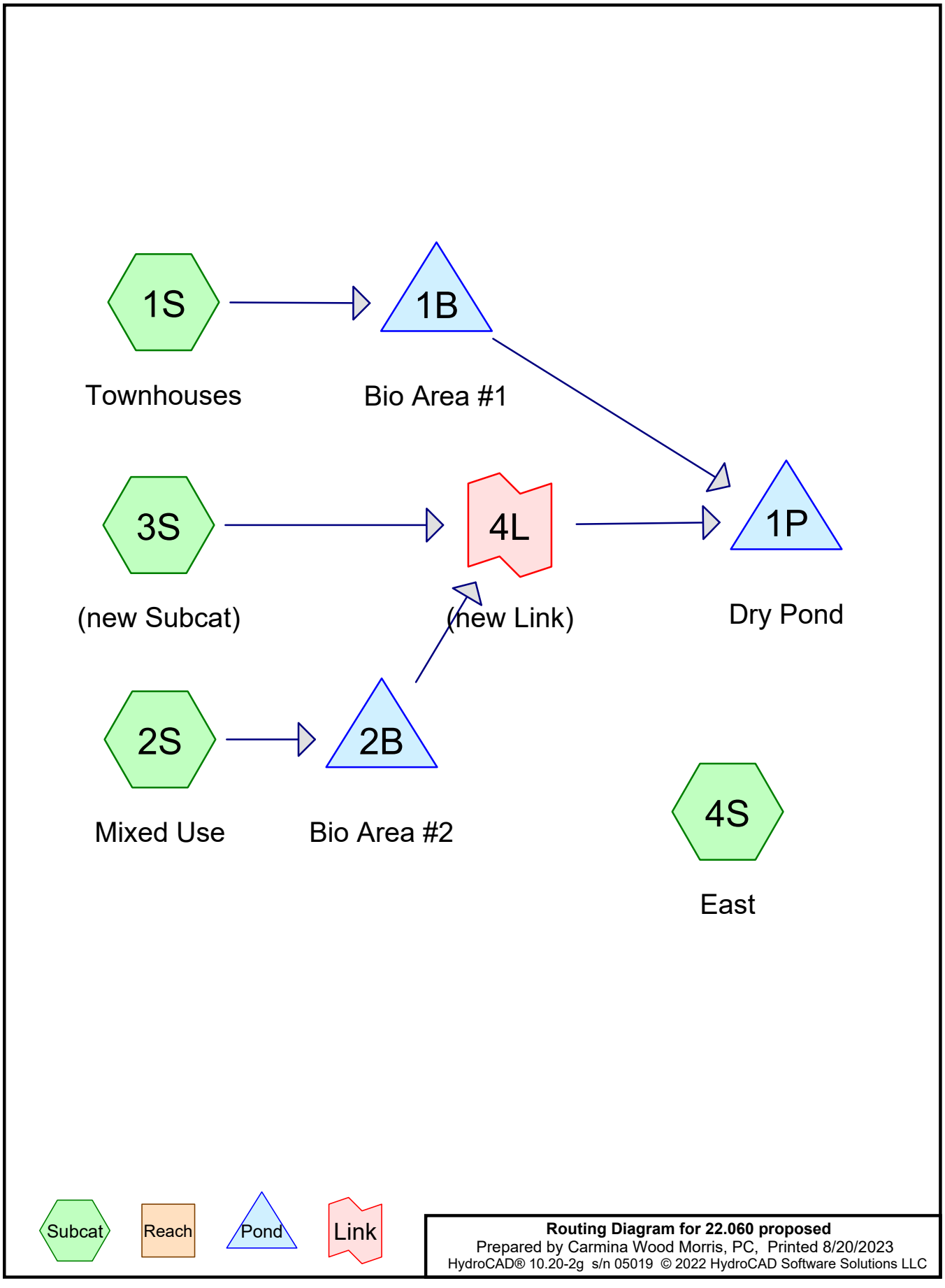
Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	1.87	1.48	2,909	1.20
2-Year	2.20	1.83	3,646	1.50
5-Year	2.69	2.36	4,764	1.96
10-Year	3.14	2.84	5,808	2.39
25-Year	3.84	3.58	7,453	3.06
50-Year	4.48	4.25	8,970	3.69
100-Year	**5.23**	**5.03**	**10,759**	**4.42**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Events for Pond 1P: Dry Pond

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-Year	4.94	2.04	2.04	**0.00**	600.10	2,484
2-Year	6.39	2.48	2.48	0.00	600.39	3,281
5-Year	8.51	3.06	3.06	0.00	600.80	4,543
10-Year	10.47	3.48	3.48	0.00	601.18	5,780
25-Year	13.53	4.02	4.02	0.00	601.76	7,898
50-Year	16.40	4.50	4.50	0.00	602.35	10,479
100-Year	**21.92**	**4.85**	**4.85**	0.00	**602.82**	**13,382**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
78,408	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S)
98,010	98	Paved parking, HSG D (1S, 3S, 4S)
28,314	98	Paved roads w/curbs & sewers, HSG D (2S)
204,732	**91**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
204,732	HSG D	1S, 2S, 3S, 4S
0	Other	
204,732		**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	0	78,408	0	78,408	>75% Grass cover, Good
0	0	0	98,010	0	98,010	Paved parking
0	0	0	28,314	0	28,314	Paved roads w/curbs & sewers
0	**0**	**0**	**204,732**	**0**	**204,732**	**TOTAL AREA**

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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	1S	0.00	0.00	385.0	0.0050	0.013	0.0	12.0	0.0
2	3S	0.00	0.00	230.0	0.0050	0.013	0.0	12.0	0.0
3	4S	0.00	0.00	350.0	0.0040	0.013	0.0	8.0	0.0
4	1B	600.25	600.15	20.0	0.0050	0.013	0.0	6.0	0.0
5	1P	599.00	598.75	25.0	0.0100	0.013	0.0	10.0	0.0
6	2B	601.50	601.25	50.0	0.0050	0.013	0.0	8.0	0.0

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=1.45"
Flow Length=410' Tc=2.6 min CN=96 Runoff=1.89 cfs 3,681 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=1.20"
Flow Length=60' Tc=4.1 min CN=93 Runoff=2.00 cfs 3,907 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=0.92"
Flow Length=275' Tc=1.9 min CN=89 Runoff=4.64 cfs 8,126 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=1.20"
Flow Length=435' Tc=4.3 min CN=93 Runoff=1.48 cfs 2,909 cf

Pond 1B: Bio Area #1 Peak Elev=603.33' Storage=1,316 cf Inflow=1.89 cfs 3,681 cf
Primary=0.33 cfs 2,323 cf Secondary=1.34 cfs 1,358 cf Outflow=1.68 cfs 3,681 cf

Pond 1P: Dry Pond Peak Elev=600.10' Storage=2,484 cf Inflow=4.94 cfs 14,356 cf
Primary=2.04 cfs 14,342 cf Secondary=0.00 cfs 0 cf Outflow=2.04 cfs 14,342 cf

Pond 2B: Bio Area #2 Peak Elev=604.62' Storage=2,621 cf Inflow=2.00 cfs 3,907 cf
Outflow=0.03 cfs 3,907 cf

Link 4L: (new Link) Inflow=4.67 cfs 12,033 cf
Primary=4.67 cfs 12,033 cf

Total Runoff Area = 204,732 sf Runoff Volume = 18,623 cf Average Runoff Depth = 1.09"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

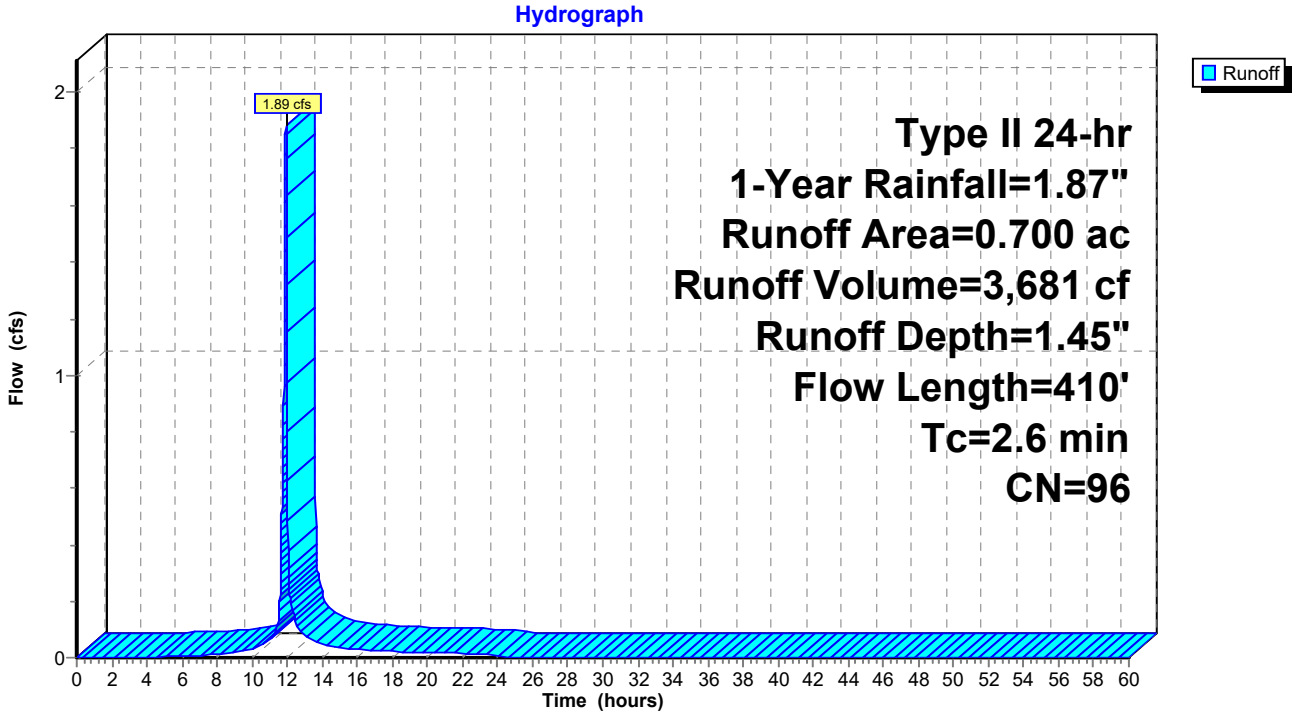
Runoff = 1.89 cfs @ 11.93 hrs, Volume= 3,681 cf, Depth= 1.45"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

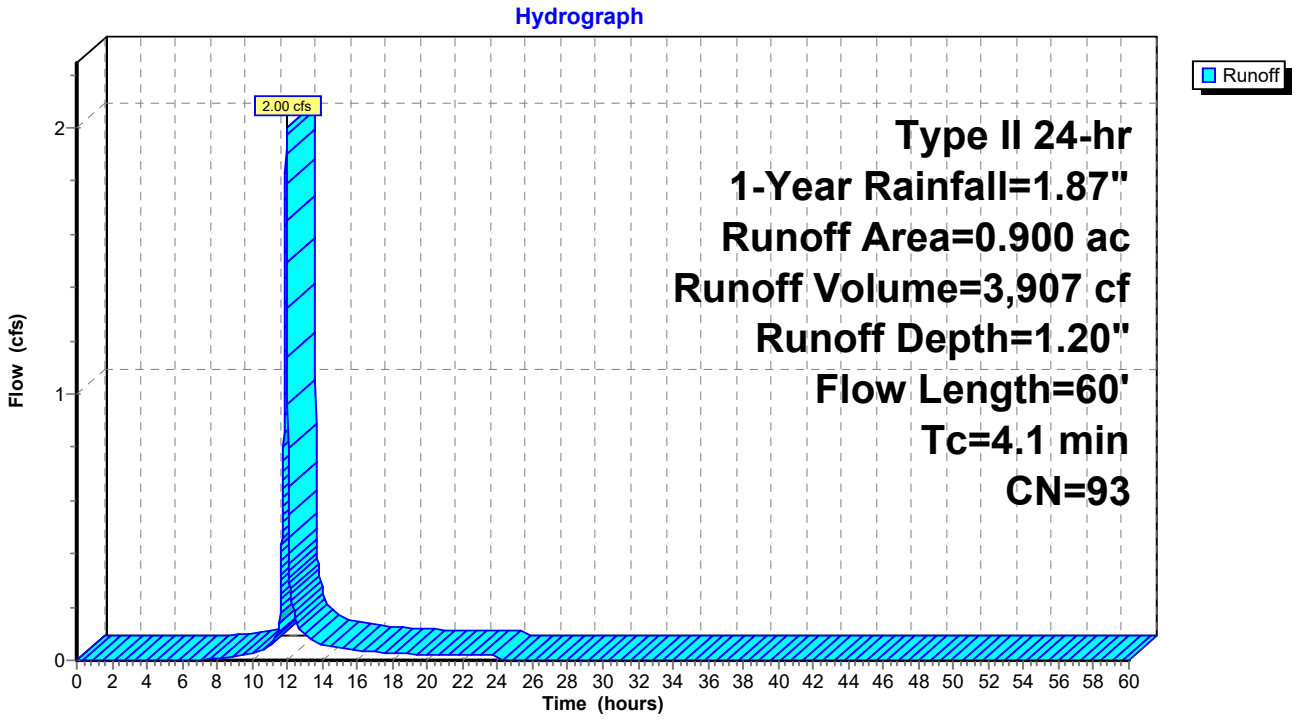
Runoff = 2.00 cfs @ 11.95 hrs, Volume= 3,907 cf, Depth= 1.20"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 184% of capacity of segment #2

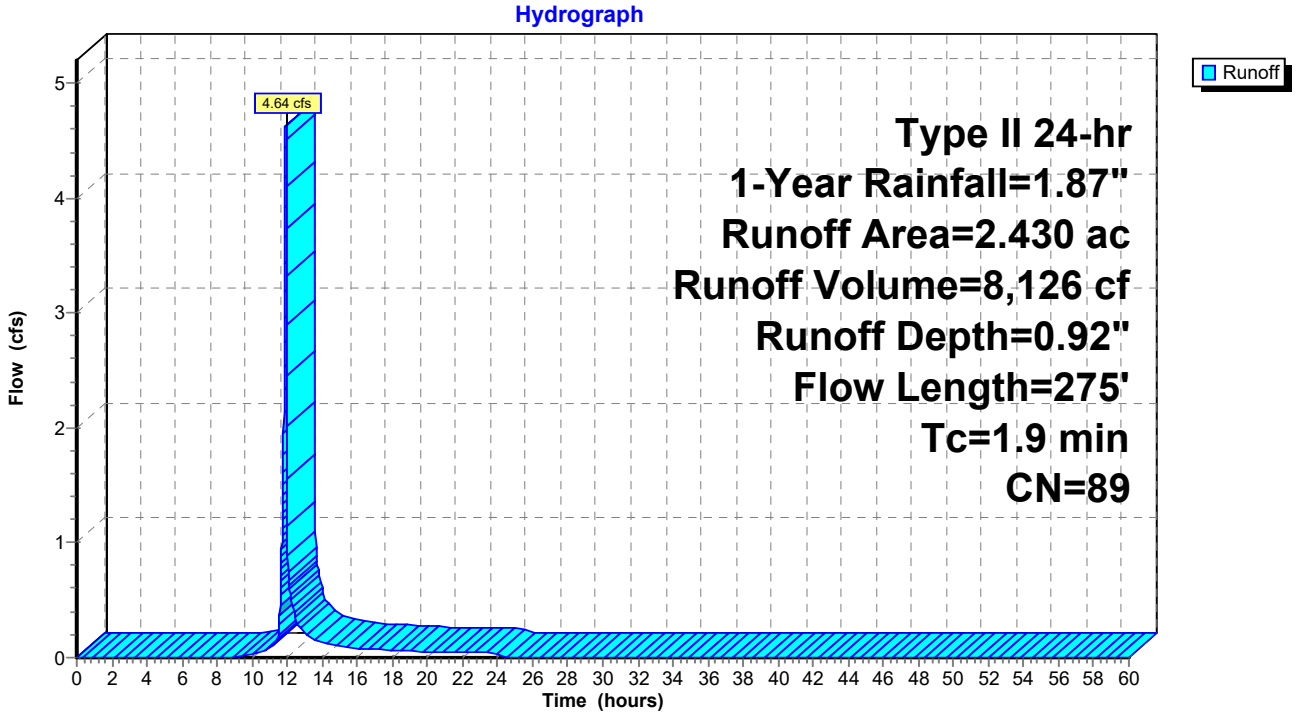
Runoff = 4.64 cfs @ 11.92 hrs, Volume= 8,126 cf, Depth= 0.92"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 194% of capacity of segment #2

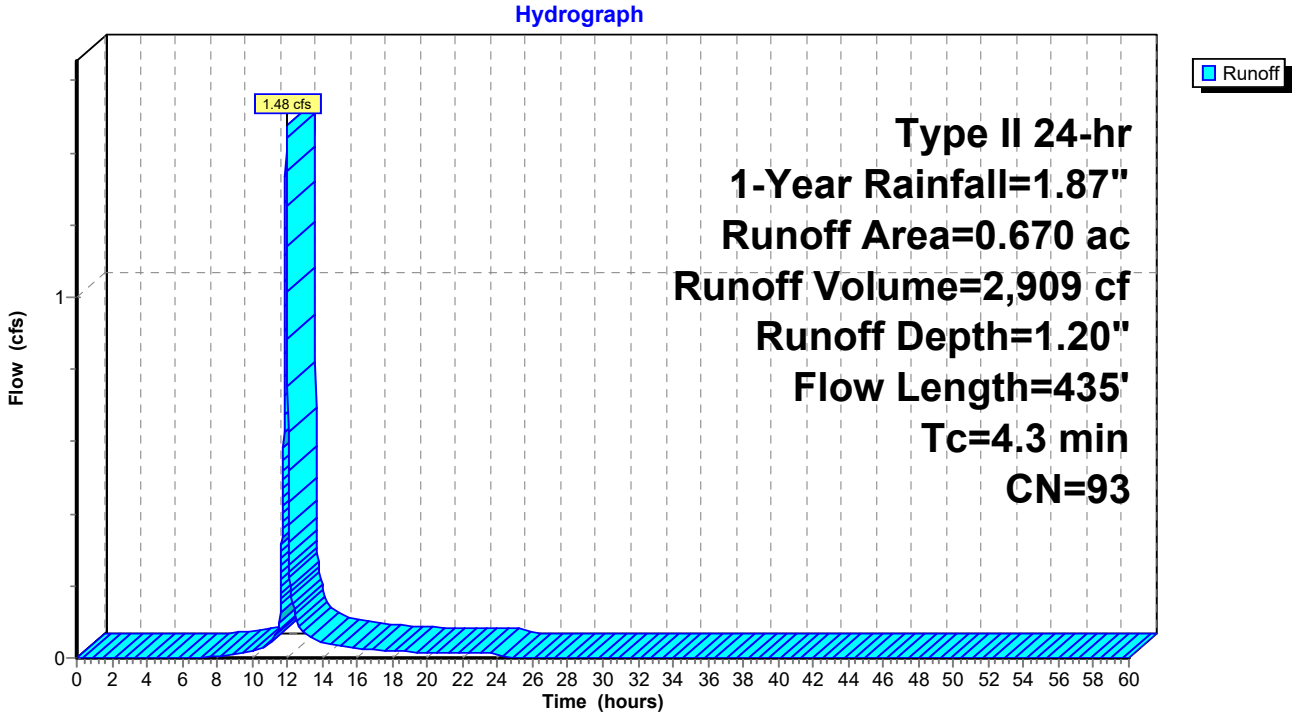
Runoff = 1.48 cfs @ 11.95 hrs, Volume= 2,909 cf, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 1.45" for 1-Year event
Inflow = 1.89 cfs @ 11.93 hrs, Volume= 3,681 cf
Outflow = 1.68 cfs @ 11.96 hrs, Volume= 3,681 cf, Atten= 11%, Lag= 1.7 min
Primary = 0.33 cfs @ 11.96 hrs, Volume= 2,323 cf
Routed to Pond 1P : Dry Pond
Secondary = 1.34 cfs @ 11.96 hrs, Volume= 1,358 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.33' @ 11.96 hrs Surf.Area= 2,755 sf Storage= 1,316 cf

Plug-Flow detention time= 422.6 min calculated for 3,681 cf (100% of inflow)
Center-of-Mass det. time= 422.8 min (1,207.2 - 784.4)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

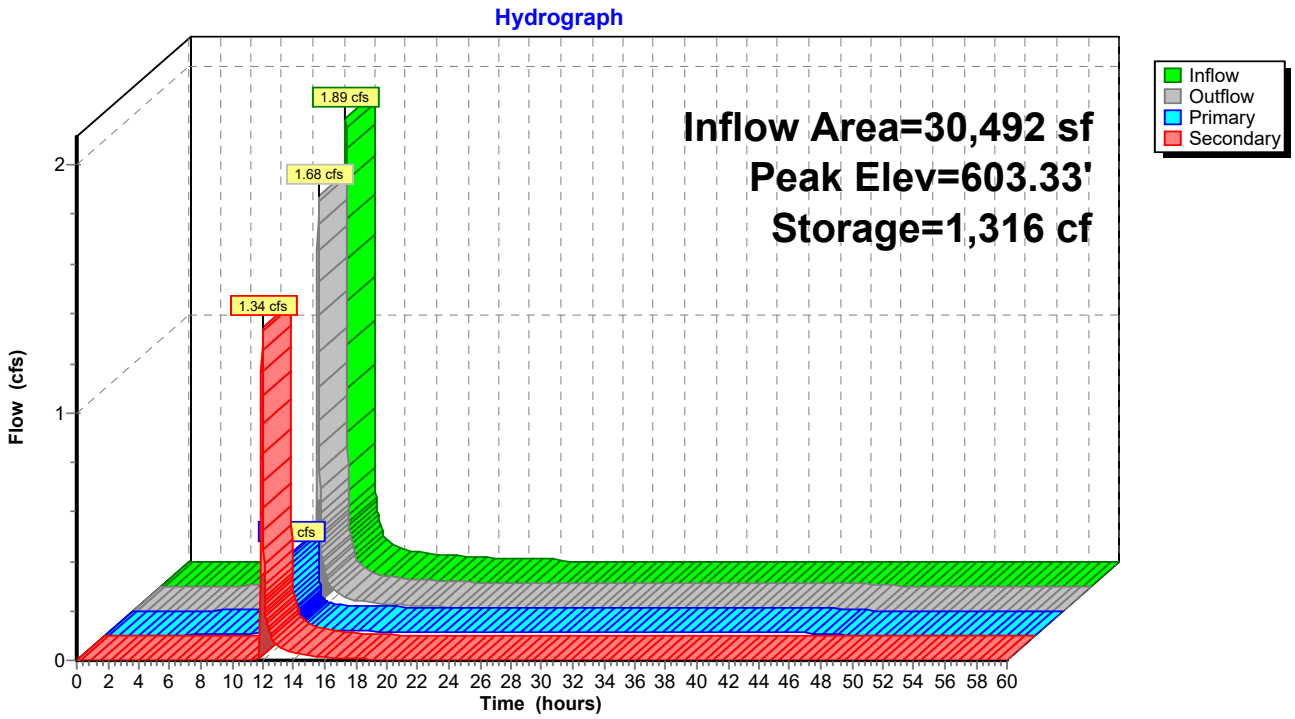
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.33 cfs @ 11.96 hrs HW=603.33' (Free Discharge)
└**1=Culvert** (Passes 0.33 cfs of 1.47 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.31 cfs @ 0.93 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=1.34 cfs @ 11.96 hrs HW=603.33' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 1.34 cfs @ 0.83 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth = 0.98" for 1-Year event
Inflow = 4.94 cfs @ 11.93 hrs, Volume= 14,356 cf
Outflow = 2.04 cfs @ 11.98 hrs, Volume= 14,342 cf, Atten= 59%, Lag= 3.4 min
Primary = 2.04 cfs @ 11.98 hrs, Volume= 14,342 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 600.10' @ 12.01 hrs Surf.Area= 2,689 sf Storage= 2,484 cf

Plug-Flow detention time= 49.6 min calculated for 14,342 cf (100% of inflow)
Center-of-Mass det. time= 47.7 min (1,232.6 - 1,184.9)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

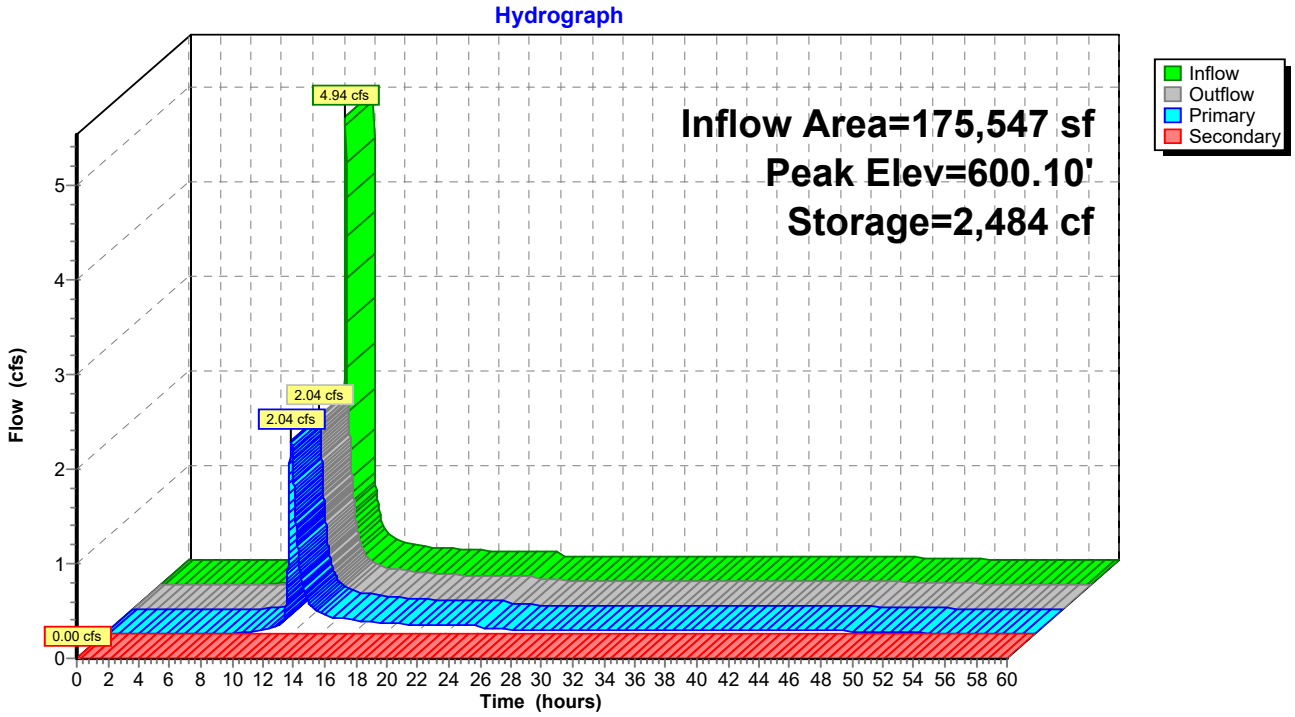
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=2.04 cfs @ 11.98 hrs HW=600.09' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.04 cfs @ 3.76 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 1.20" for 1-Year event
Inflow = 2.00 cfs @ 11.95 hrs, Volume= 3,907 cf
Outflow = 0.03 cfs @ 17.65 hrs, Volume= 3,907 cf, Atten= 99%, Lag= 341.9 min
Primary = 0.03 cfs @ 17.65 hrs, Volume= 3,907 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 604.62' @ 17.65 hrs Surf.Area= 4,804 sf Storage= 2,621 cf

Plug-Flow detention time= 956.4 min calculated for 3,907 cf (100% of inflow)
Center-of-Mass det. time= 956.4 min (1,764.3 - 807.9)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

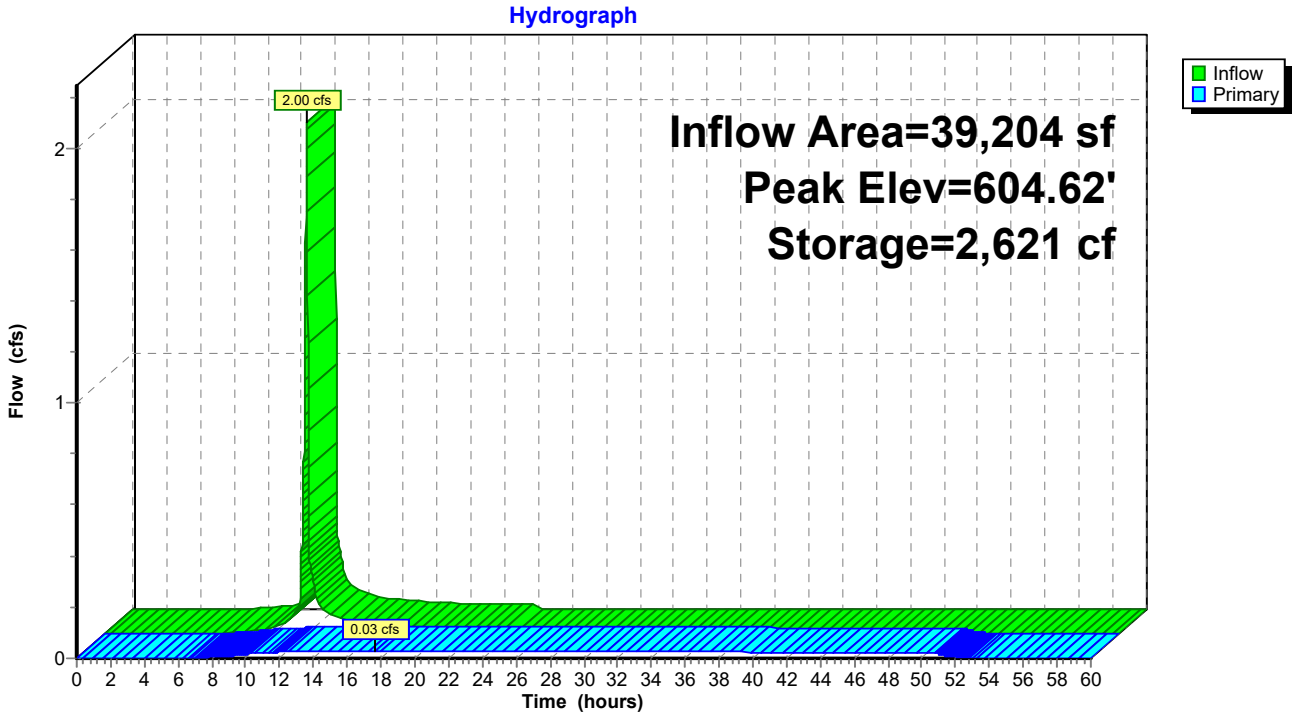
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=0.03 cfs @ 17.65 hrs HW=604.62' (Free Discharge)
└**1=Culvert** (Passes 0.03 cfs of 2.25 cfs potential flow)
├**2=Orifice/Grate** (Controls 0.00 cfs)
└**3=Exfiltration** (Controls 0.03 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



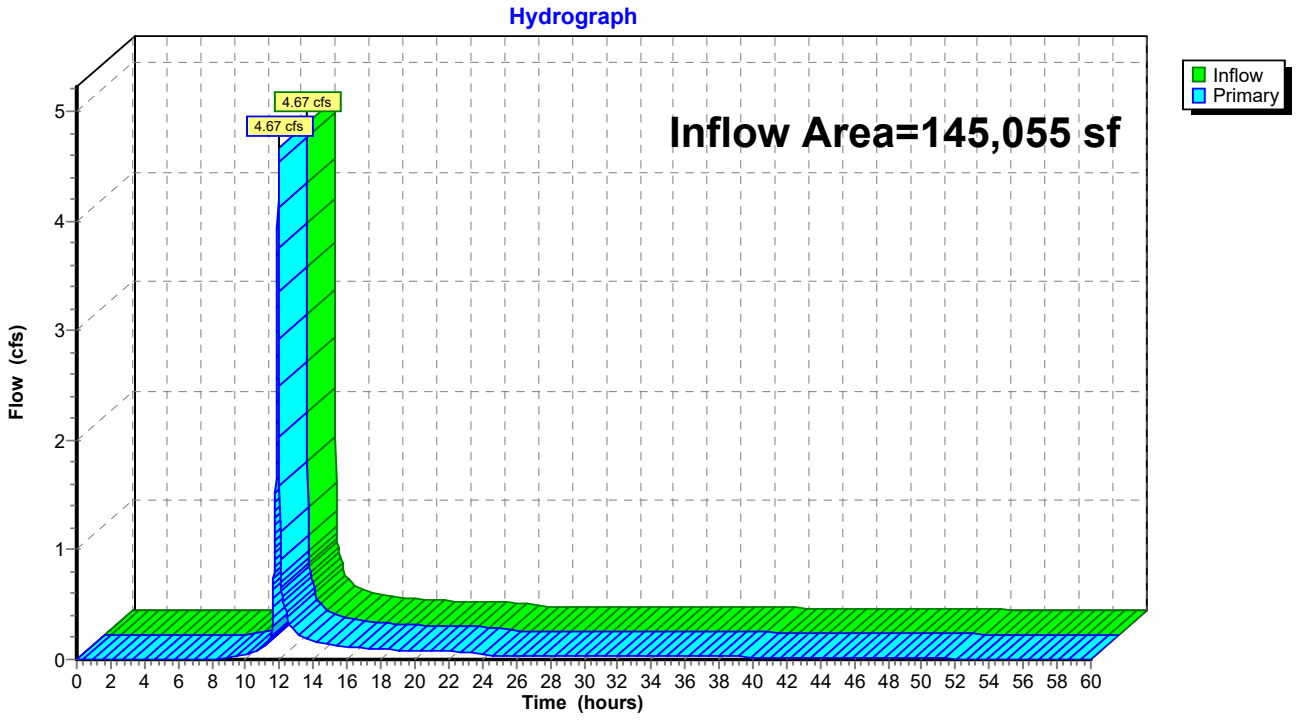
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth = 1.00" for 1-Year event
Inflow = 4.67 cfs @ 11.92 hrs, Volume= 12,033 cf
Primary = 4.67 cfs @ 11.92 hrs, Volume= 12,033 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=2.69"
Flow Length=410' Tc=2.6 min CN=96 Runoff=3.35 cfs 6,835 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=2.39"
Flow Length=60' Tc=4.1 min CN=93 Runoff=3.83 cfs 7,802 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=2.03"
Flow Length=275' Tc=1.9 min CN=89 Runoff=9.85 cfs 17,879 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=2.39"
Flow Length=435' Tc=4.3 min CN=93 Runoff=2.84 cfs 5,808 cf

Pond 1B: Bio Area #1 Peak Elev=603.38' Storage=1,439 cf Inflow=3.35 cfs 6,835 cf
Primary=0.62 cfs 3,023 cf Secondary=2.59 cfs 3,812 cf Outflow=3.22 cfs 6,835 cf

Pond 1P: Dry Pond Peak Elev=601.18' Storage=5,780 cf Inflow=10.47 cfs 27,870 cf
Primary=3.48 cfs 27,717 cf Secondary=0.00 cfs 0 cf Outflow=3.48 cfs 27,717 cf

Pond 2B: Bio Area #2 Peak Elev=605.03' Storage=4,669 cf Inflow=3.83 cfs 7,802 cf
Outflow=0.21 cfs 6,968 cf

Link 4L: (new Link) Inflow=9.88 cfs 24,846 cf
Primary=9.88 cfs 24,846 cf

Total Runoff Area = 204,732 sf Runoff Volume = 38,324 cf Average Runoff Depth = 2.25"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 133% of capacity of segment #2

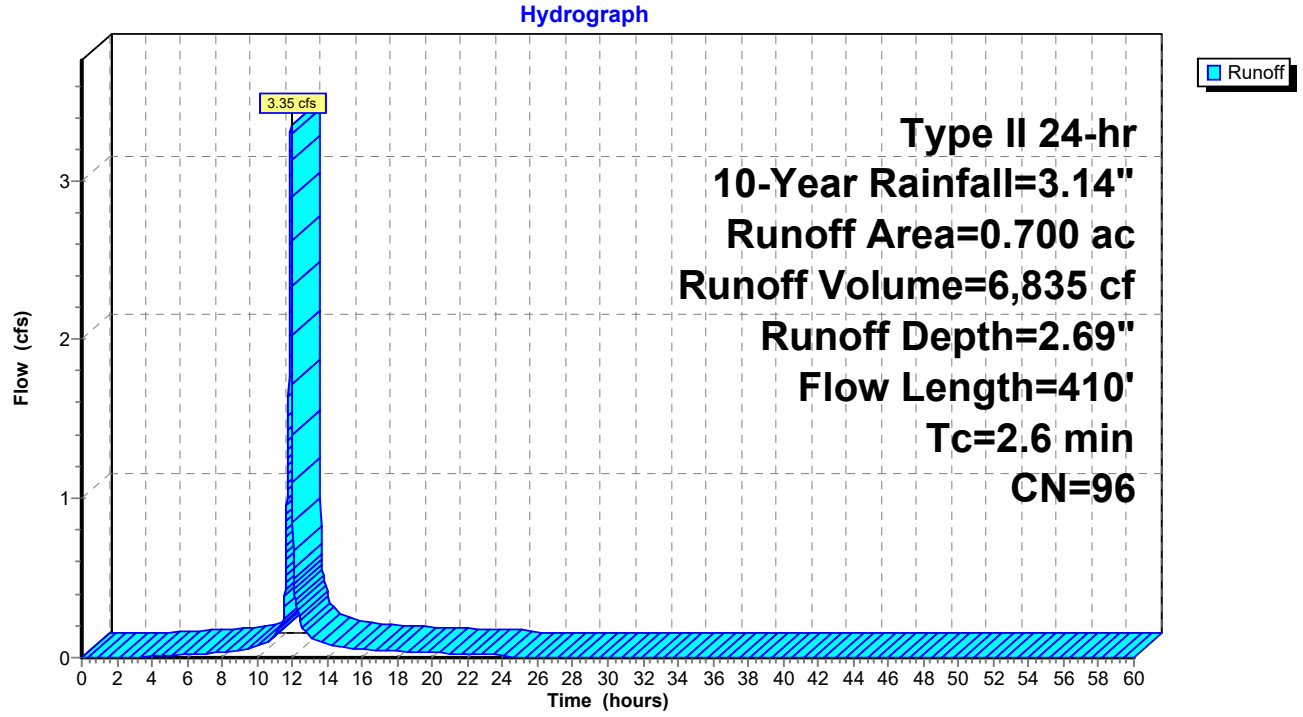
Runoff = 3.35 cfs @ 11.93 hrs, Volume= 6,835 cf, Depth= 2.69"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

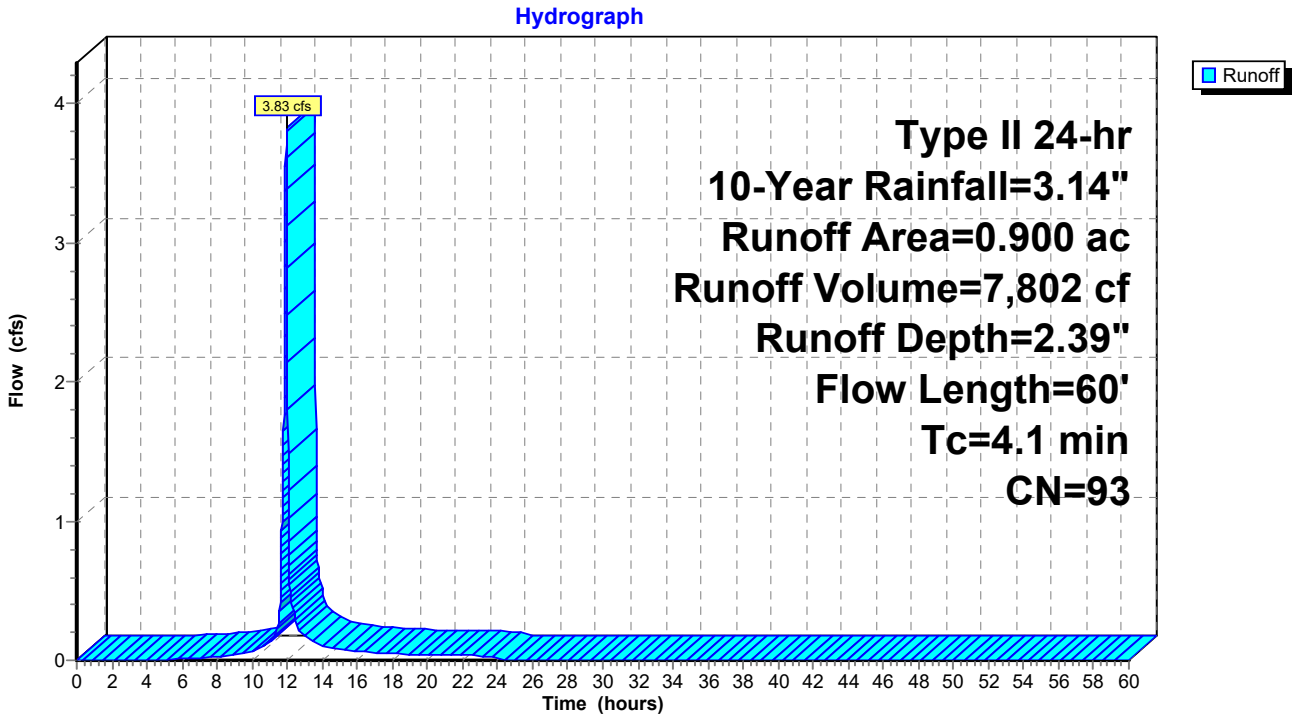
Runoff = 3.83 cfs @ 11.95 hrs, Volume= 7,802 cf, Depth= 2.39"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 391% of capacity of segment #2

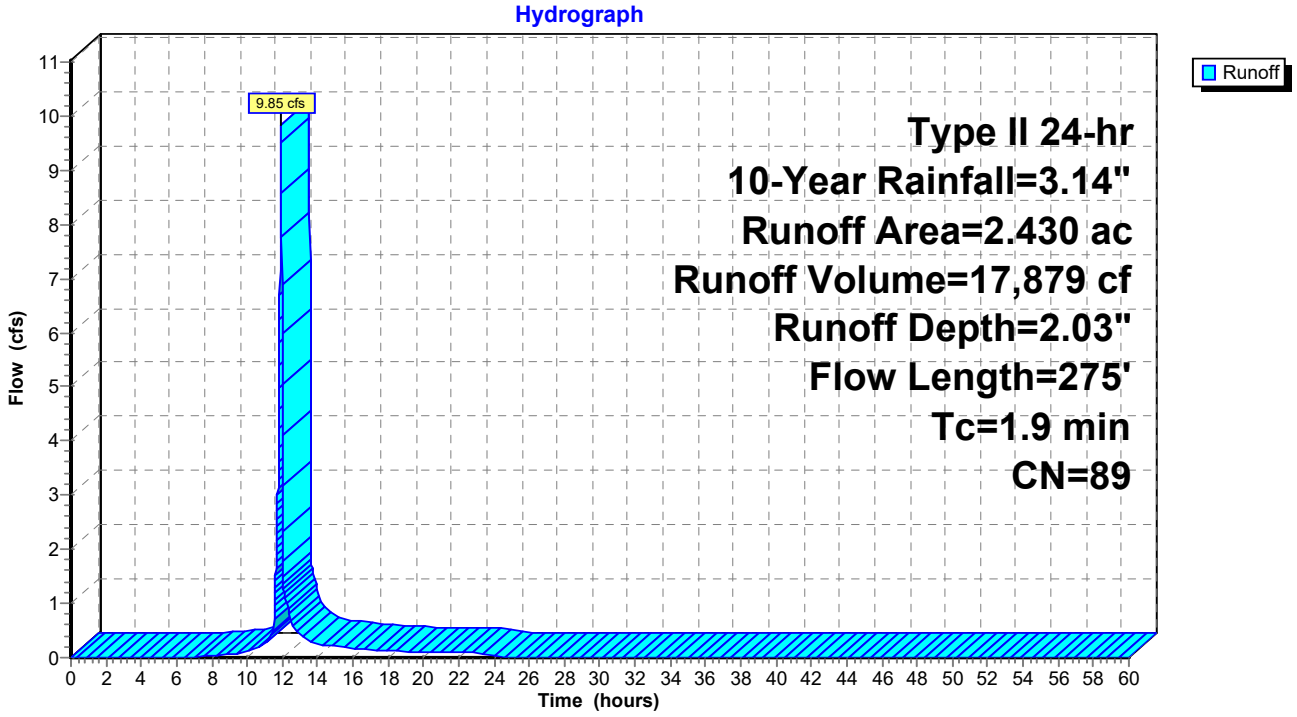
Runoff = 9.85 cfs @ 11.92 hrs, Volume= 17,879 cf, Depth= 2.03"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 371% of capacity of segment #2

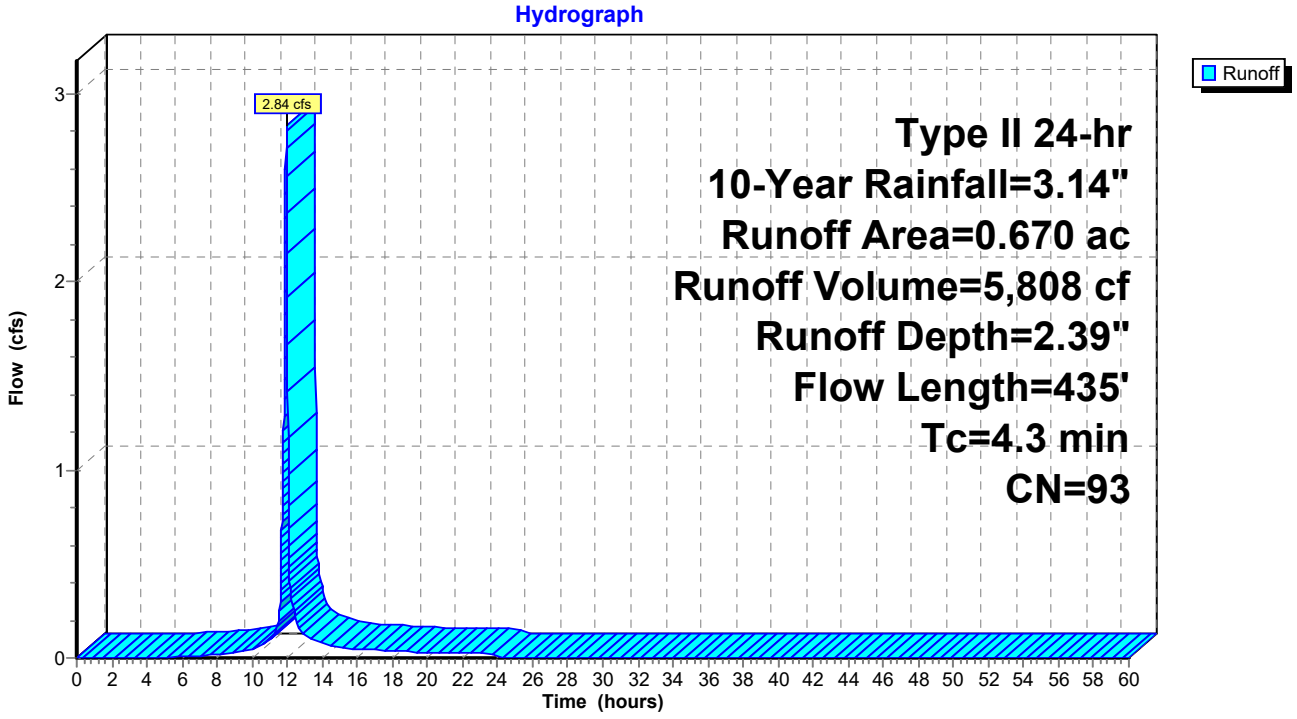
Runoff = 2.84 cfs @ 11.95 hrs, Volume= 5,808 cf, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 2.69" for 10-Year event
Inflow = 3.35 cfs @ 11.93 hrs, Volume= 6,835 cf
Outflow = 3.22 cfs @ 11.95 hrs, Volume= 6,835 cf, Atten= 4%, Lag= 0.9 min
Primary = 0.62 cfs @ 11.95 hrs, Volume= 3,023 cf
Routed to Pond 1P : Dry Pond
Secondary = 2.59 cfs @ 11.95 hrs, Volume= 3,812 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.38' @ 11.95 hrs Surf.Area= 2,818 sf Storage= 1,439 cf

Plug-Flow detention time= 243.8 min calculated for 6,834 cf (100% of inflow)
Center-of-Mass det. time= 244.0 min (1,011.9 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

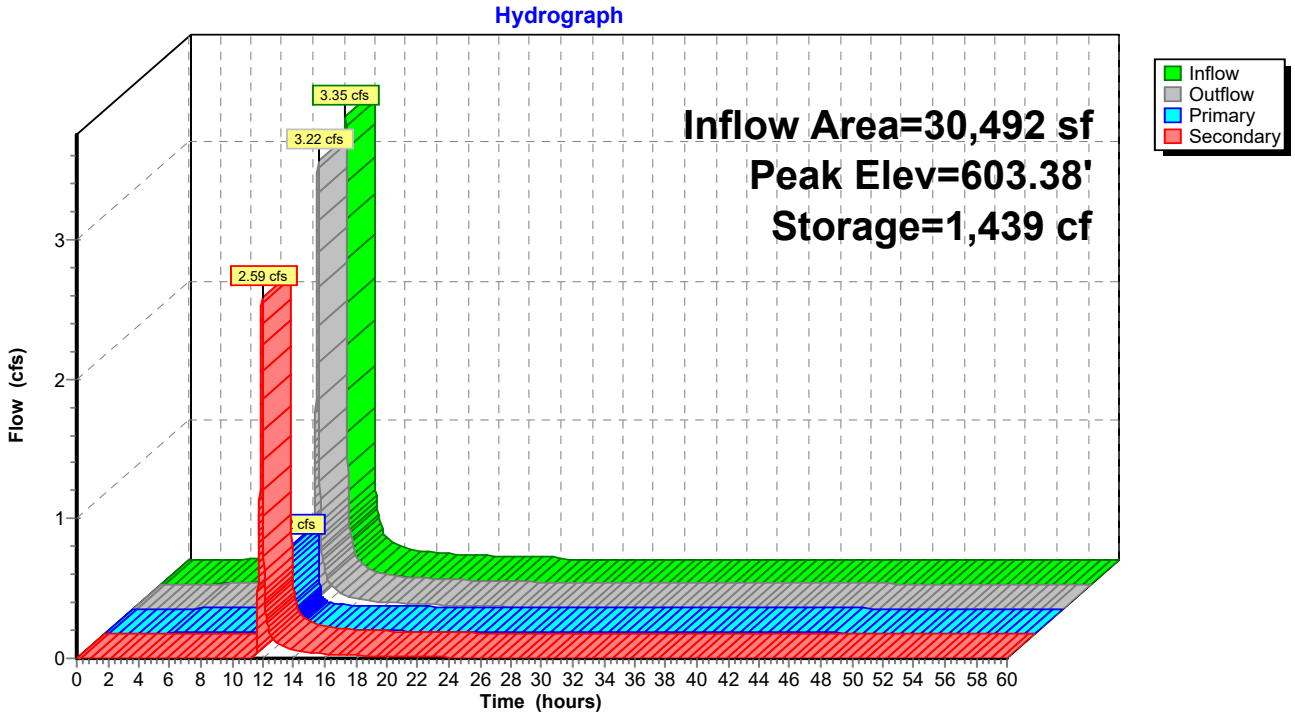
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.62 cfs @ 11.95 hrs HW=603.38' (Free Discharge)
└**1=Culvert** (Passes 0.62 cfs of 1.48 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.61 cfs @ 1.16 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=2.58 cfs @ 11.95 hrs HW=603.38' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 2.58 cfs @ 1.03 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 0.93'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 1.91" for 10-Year event
Inflow = 10.47 cfs @ 11.92 hrs, Volume= 27,870 cf
Outflow = 3.48 cfs @ 12.01 hrs, Volume= 27,717 cf, Atten= 67%, Lag= 5.3 min
Primary = 3.48 cfs @ 12.01 hrs, Volume= 27,717 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 601.18' @ 12.01 hrs Surf.Area= 3,447 sf Storage= 5,780 cf

Plug-Flow detention time= 39.3 min calculated for 27,713 cf (99% of inflow)
Center-of-Mass det. time= 25.8 min (1,117.6 - 1,091.8)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

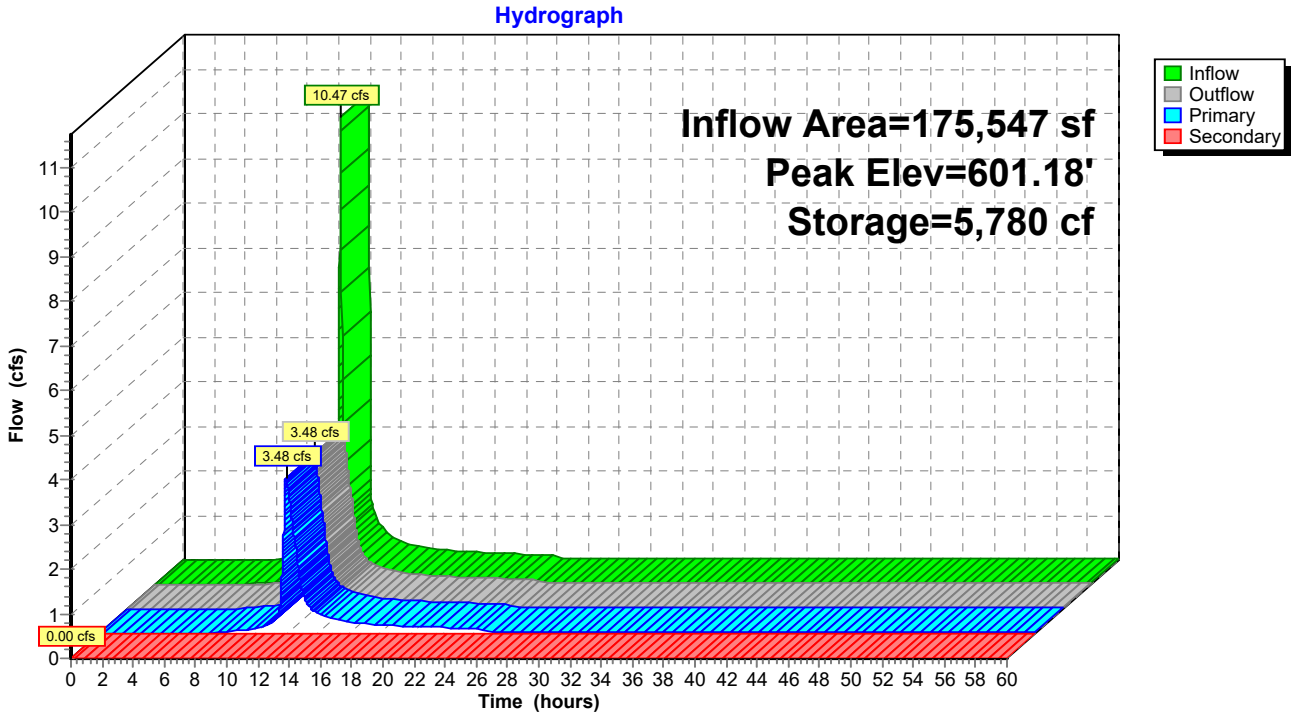
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=3.48 cfs @ 12.01 hrs HW=601.18' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.48 cfs @ 6.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 2.39" for 10-Year event
Inflow = 3.83 cfs @ 11.95 hrs, Volume= 7,802 cf
Outflow = 0.21 cfs @ 12.74 hrs, Volume= 6,968 cf, Atten= 95%, Lag= 47.4 min
Primary = 0.21 cfs @ 12.74 hrs, Volume= 6,968 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.03' @ 12.74 hrs Surf.Area= 5,350 sf Storage= 4,669 cf

Plug-Flow detention time= 1,004.1 min calculated for 6,968 cf (89% of inflow)
Center-of-Mass det. time= 950.3 min (1,738.7 - 788.4)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

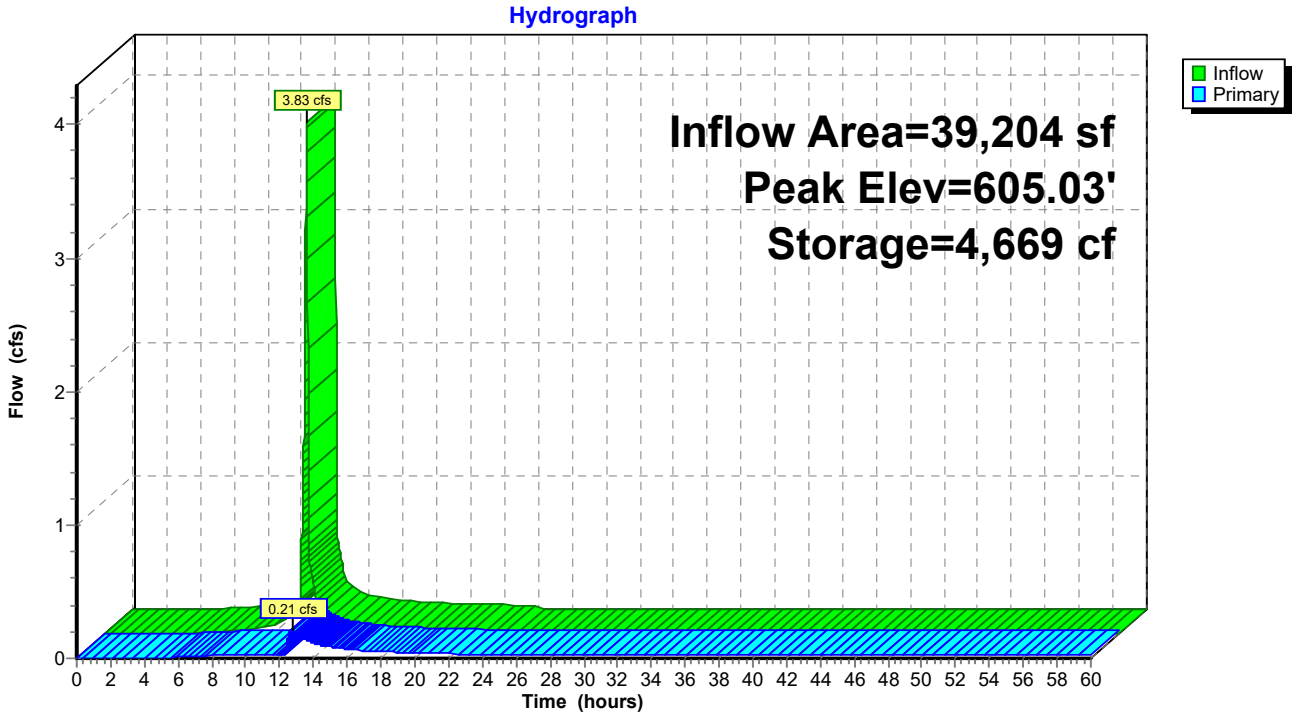
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=0.20 cfs @ 12.74 hrs HW=605.03' (Free Discharge)
└**1=Culvert** (Passes 0.20 cfs of 2.41 cfs potential flow)
├**2=Orifice/Grate** (Weir Controls 0.17 cfs @ 0.56 fps)
└**3=Exfiltration** (Controls 0.03 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



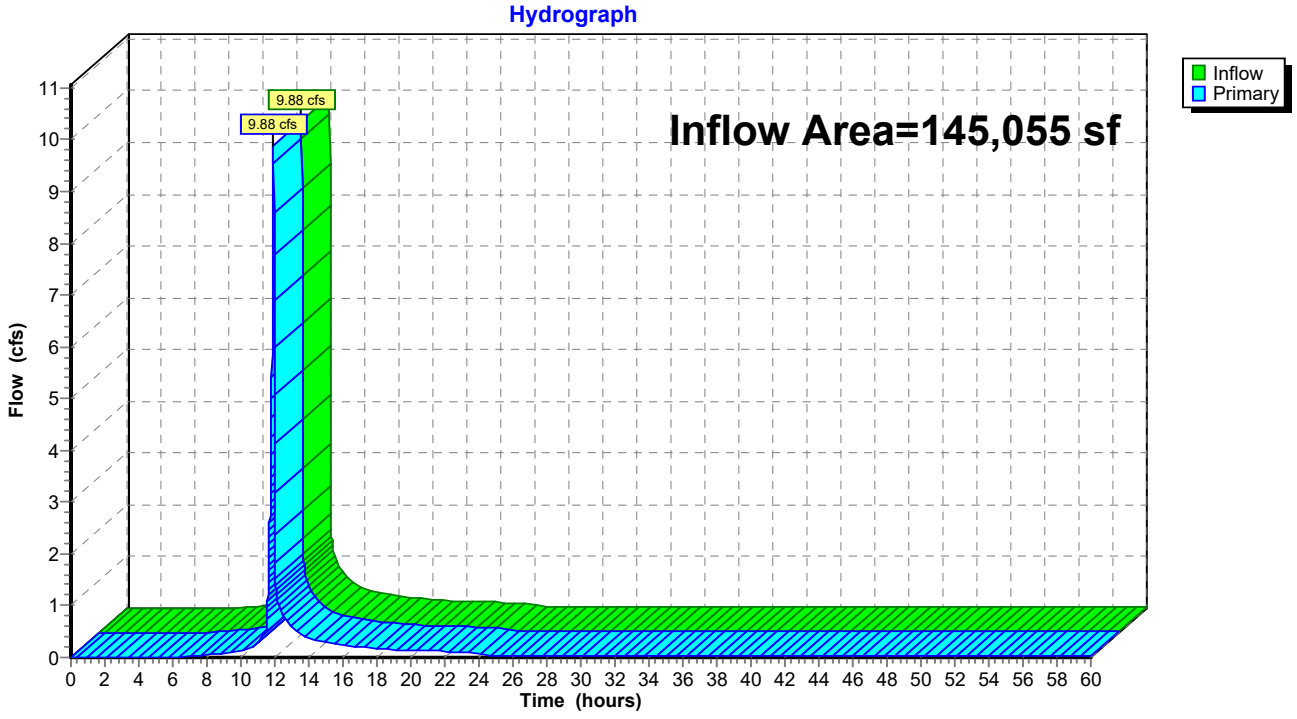
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 2.06" for 10-Year event
Inflow = 9.88 cfs @ 11.92 hrs, Volume= 24,846 cf
Primary = 9.88 cfs @ 11.92 hrs, Volume= 24,846 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=3.38"
Flow Length=410' Tc=2.6 min CN=96 Runoff=4.15 cfs 8,593 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=3.06"
Flow Length=60' Tc=4.1 min CN=93 Runoff=4.84 cfs 10,011 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=2.67"
Flow Length=275' Tc=1.9 min CN=89 Runoff=12.77 cfs 23,580 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=3.06"
Flow Length=435' Tc=4.3 min CN=93 Runoff=3.58 cfs 7,453 cf

Pond 1B: Bio Area #1 Peak Elev=603.39' Storage=1,495 cf Inflow=4.15 cfs 8,593 cf
Primary=0.77 cfs 3,394 cf Secondary=3.22 cfs 5,199 cf Outflow=4.00 cfs 8,593 cf

Pond 1P: Dry Pond Peak Elev=601.76' Storage=7,898 cf Inflow=13.53 cfs 36,140 cf
Primary=4.02 cfs 35,988 cf Secondary=0.00 cfs 0 cf Outflow=4.02 cfs 35,988 cf

Pond 2B: Bio Area #2 Peak Elev=605.11' Storage=5,119 cf Inflow=4.84 cfs 10,011 cf
Outflow=1.29 cfs 9,166 cf

Link 4L: (new Link) Inflow=12.80 cfs 32,746 cf
Primary=12.80 cfs 32,746 cf

Total Runoff Area = 204,732 sf Runoff Volume = 49,637 cf Average Runoff Depth = 2.91"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 165% of capacity of segment #2

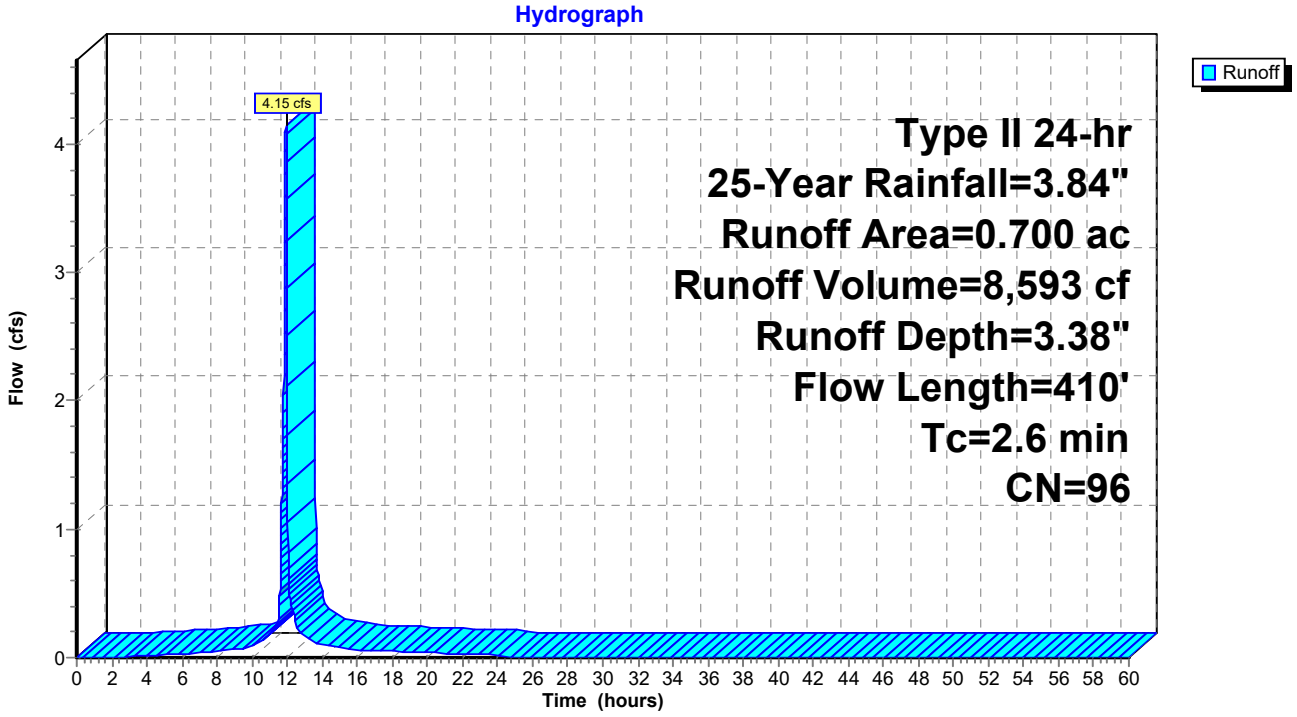
Runoff = 4.15 cfs @ 11.93 hrs, Volume= 8,593 cf, Depth= 3.38"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

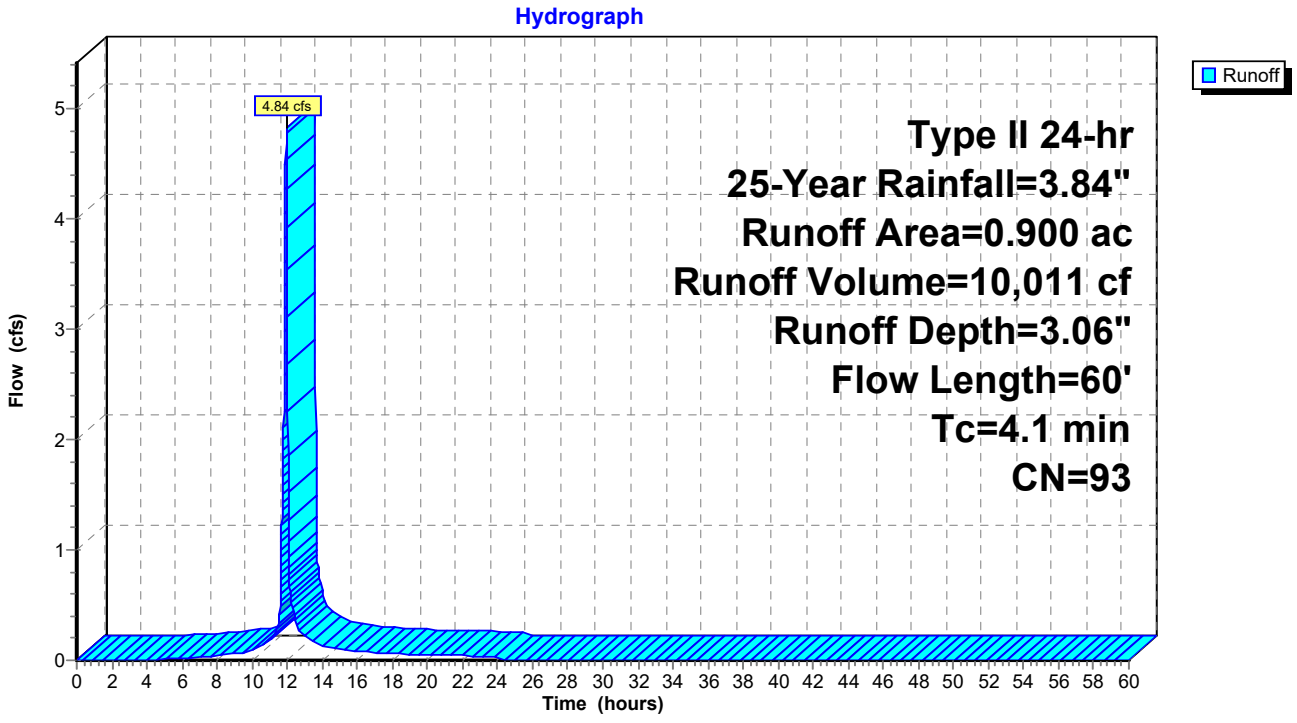
Runoff = 4.84 cfs @ 11.95 hrs, Volume= 10,011 cf, Depth= 3.06"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 507% of capacity of segment #2

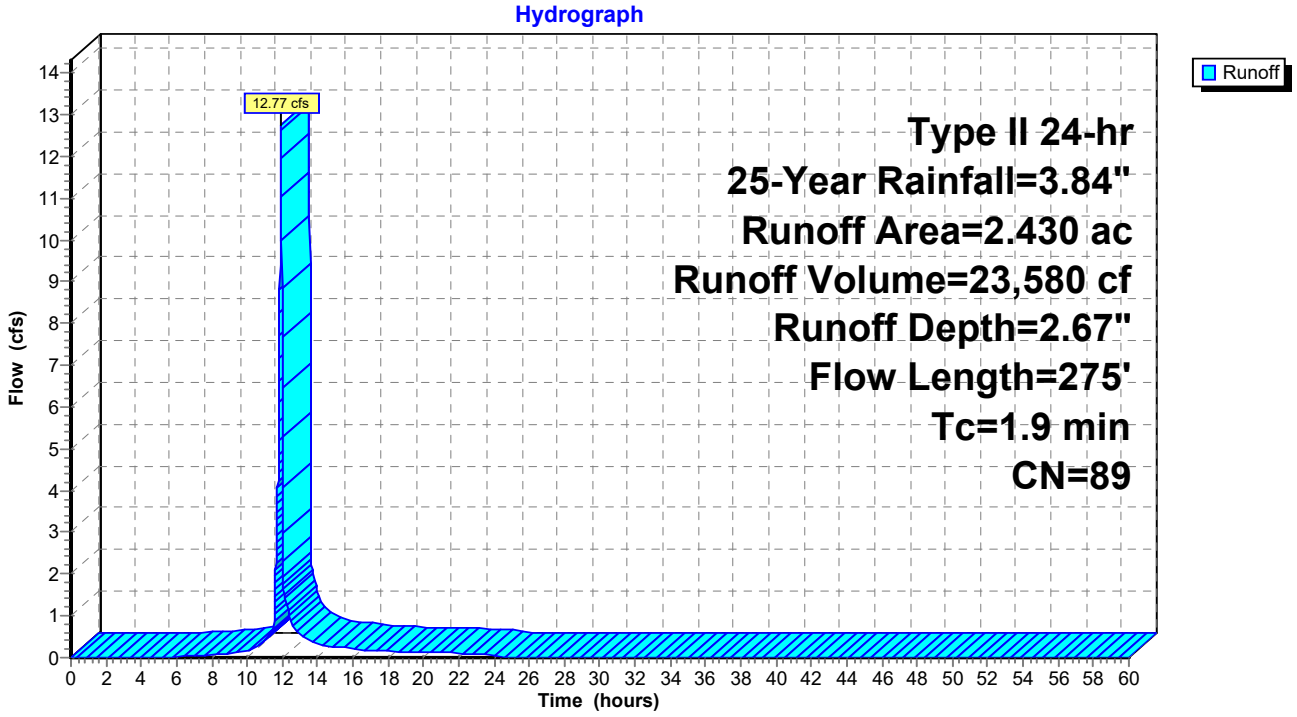
Runoff = 12.77 cfs @ 11.92 hrs, Volume= 23,580 cf, Depth= 2.67"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 468% of capacity of segment #2

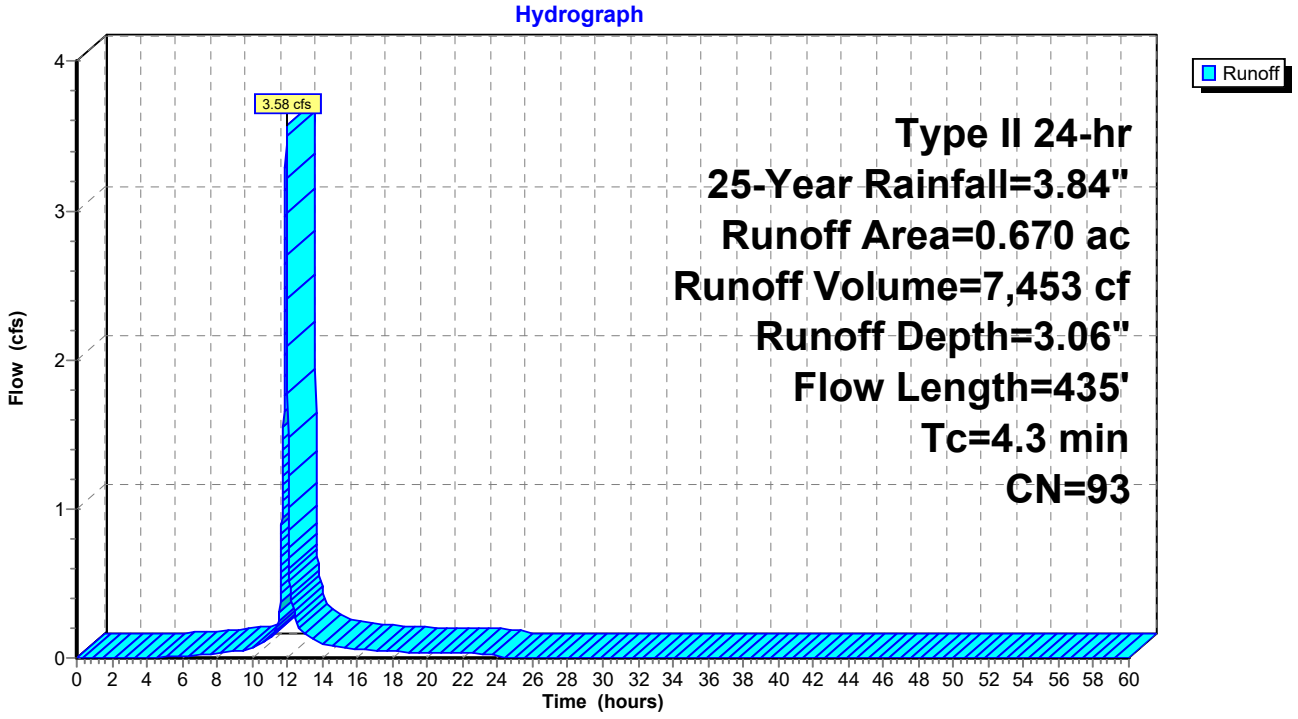
Runoff = 3.58 cfs @ 11.95 hrs, Volume= 7,453 cf, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 3.38" for 25-Year event
Inflow = 4.15 cfs @ 11.93 hrs, Volume= 8,593 cf
Outflow = 4.00 cfs @ 11.94 hrs, Volume= 8,593 cf, Atten= 4%, Lag= 0.9 min
Primary = 0.77 cfs @ 11.94 hrs, Volume= 3,394 cf
Routed to Pond 1P : Dry Pond
Secondary = 3.22 cfs @ 11.94 hrs, Volume= 5,199 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.39' @ 11.94 hrs Surf.Area= 2,846 sf Storage= 1,495 cf

Plug-Flow detention time= 201.2 min calculated for 8,591 cf (100% of inflow)
Center-of-Mass det. time= 201.5 min (963.7 - 762.3)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

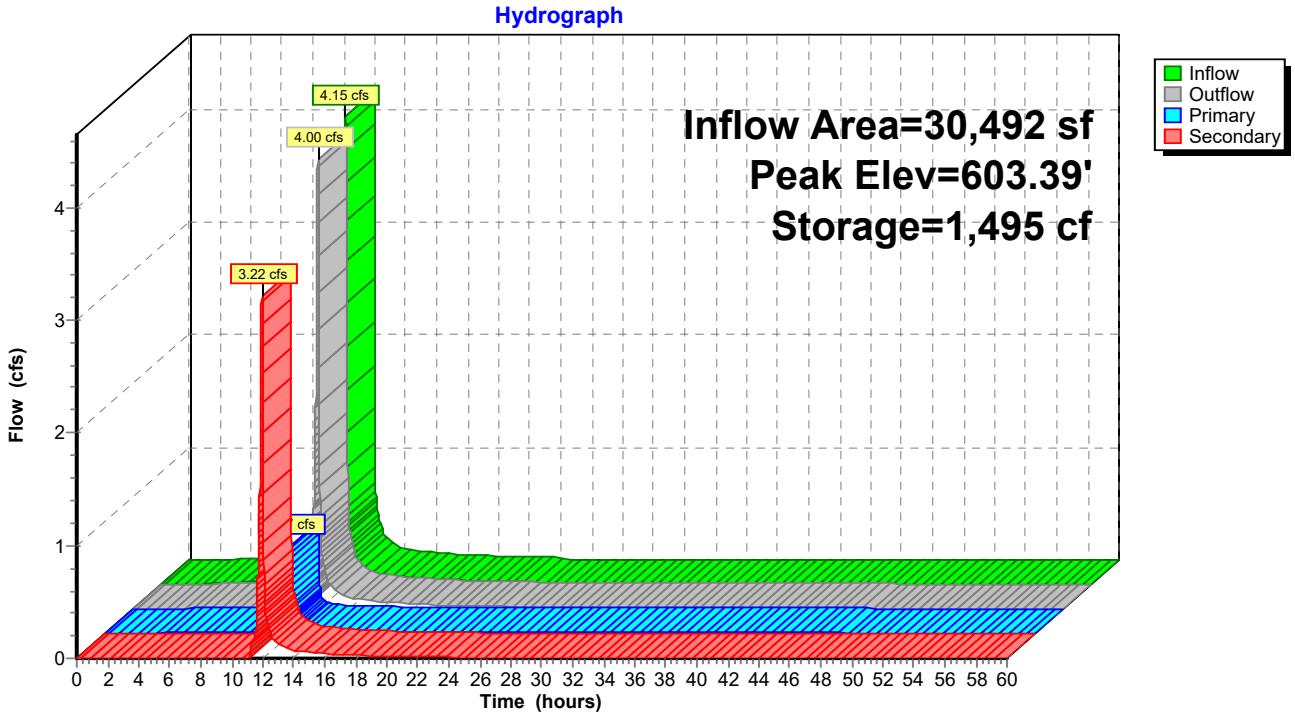
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.77 cfs @ 11.94 hrs HW=603.39' (Free Discharge)
└**1=Culvert** (Passes 0.77 cfs of 1.49 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.75 cfs @ 1.24 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=3.21 cfs @ 11.94 hrs HW=603.39' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 3.21 cfs @ 1.11 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 1.51'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 2.47" for 25-Year event
Inflow = 13.53 cfs @ 11.92 hrs, Volume= 36,140 cf
Outflow = 4.02 cfs @ 12.03 hrs, Volume= 35,988 cf, Atten= 70%, Lag= 6.2 min
Primary = 4.02 cfs @ 12.03 hrs, Volume= 35,988 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 601.76' @ 12.03 hrs Surf.Area= 3,864 sf Storage= 7,898 cf

Plug-Flow detention time= 36.9 min calculated for 35,982 cf (100% of inflow)
Center-of-Mass det. time= 26.2 min (1,046.2 - 1,019.9)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

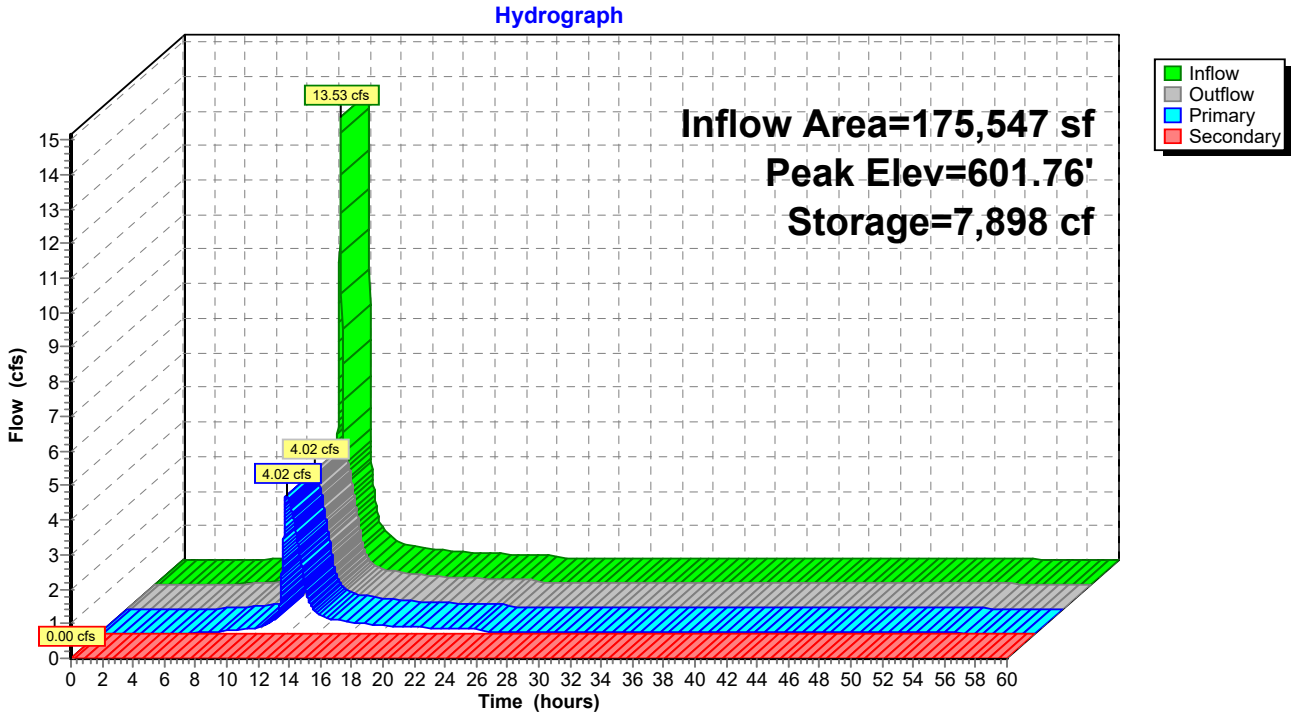
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=4.02 cfs @ 12.03 hrs HW=601.76' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.02 cfs @ 7.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 3.06" for 25-Year event
Inflow = 4.84 cfs @ 11.95 hrs, Volume= 10,011 cf
Outflow = 1.29 cfs @ 12.06 hrs, Volume= 9,166 cf, Atten= 73%, Lag= 6.8 min
Primary = 1.29 cfs @ 12.06 hrs, Volume= 9,166 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.11' @ 12.06 hrs Surf.Area= 5,711 sf Storage= 5,119 cf

Plug-Flow detention time= 776.2 min calculated for 9,165 cf (92% of inflow)
Center-of-Mass det. time= 731.4 min (1,512.9 - 781.5)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

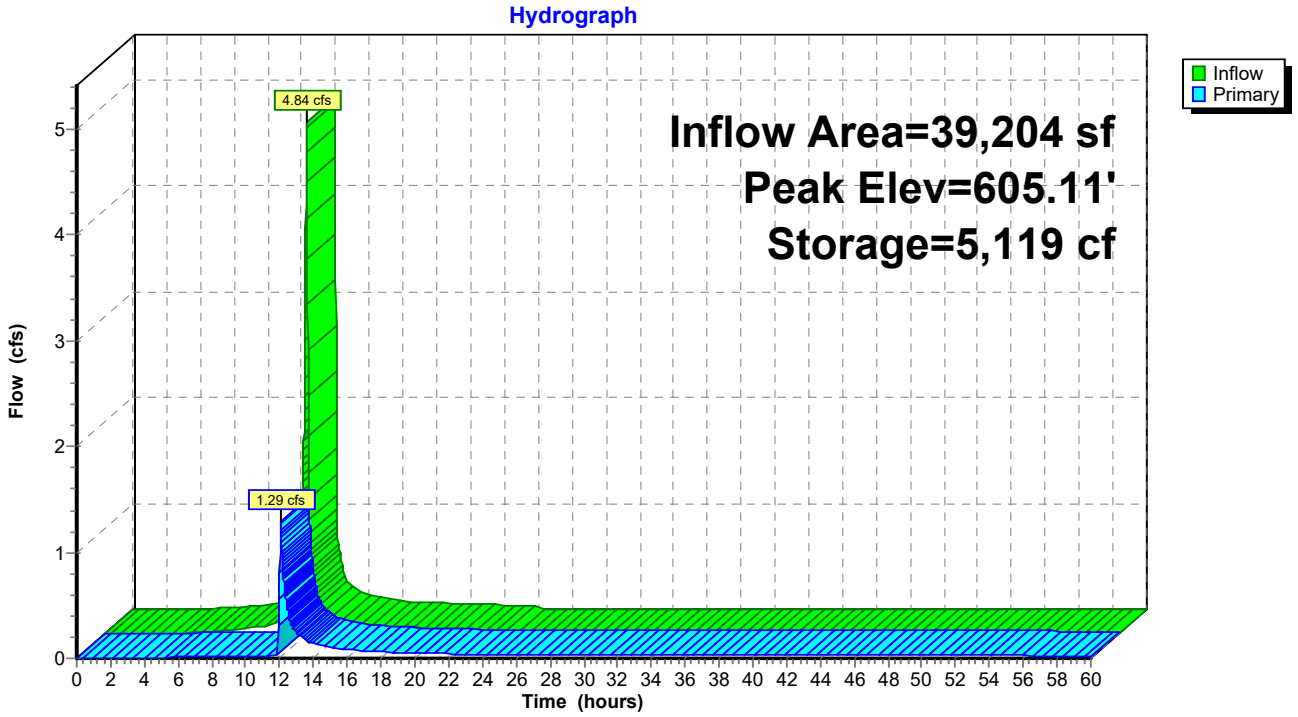
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=1.29 cfs @ 12.06 hrs HW=605.11' (Free Discharge)
└**1=Culvert** (Passes 1.29 cfs of 2.44 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 1.26 cfs @ 1.09 fps)
└**3=Exfiltration** (Controls 0.04 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



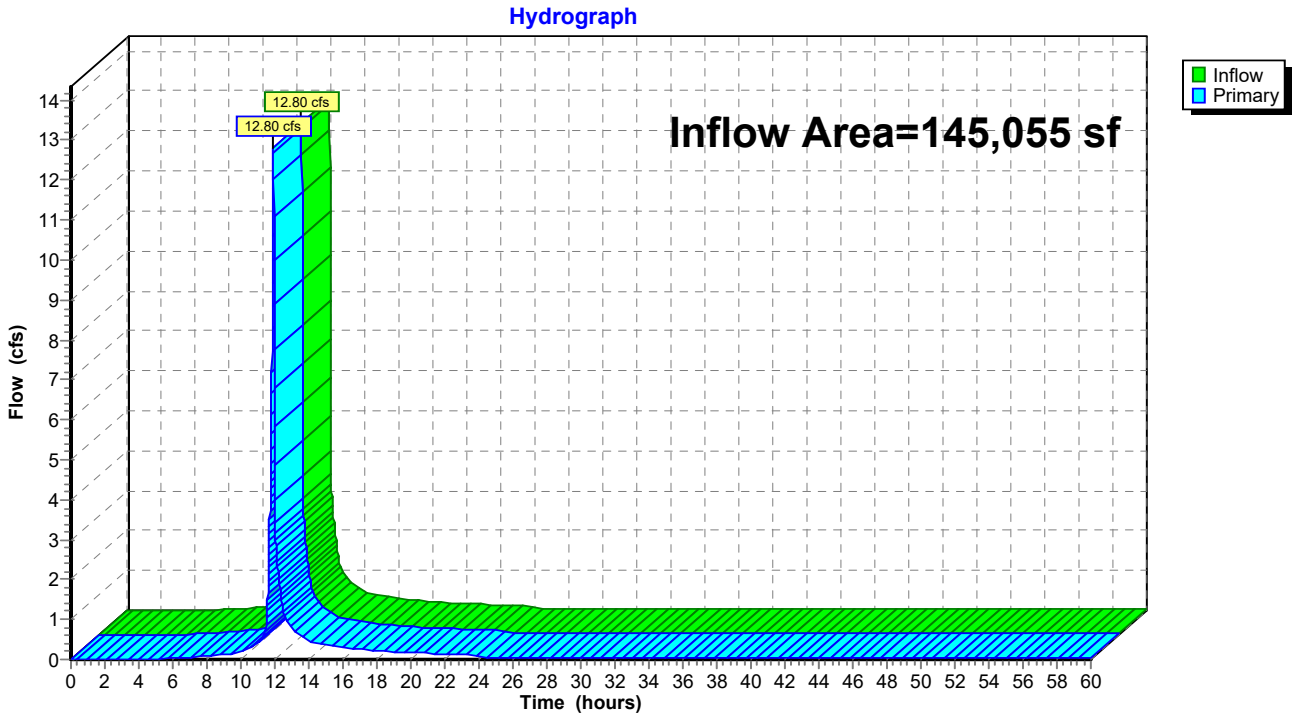
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 2.71" for 25-Year event
Inflow = 12.80 cfs @ 11.92 hrs, Volume= 32,746 cf
Primary = 12.80 cfs @ 11.92 hrs, Volume= 32,746 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Townhouses Runoff Area=0.700 ac 90.00% Impervious Runoff Depth=4.76"
Flow Length=410' Tc=2.6 min CN=96 Runoff=5.72 cfs 12,098 cf

Subcatchment2S: Mixed Use Runoff Area=0.900 ac 72.22% Impervious Runoff Depth=4.42"
Flow Length=60' Tc=4.1 min CN=93 Runoff=6.80 cfs 14,453 cf

Subcatchment3S: (new Subcat) Runoff Area=2.430 ac 47.33% Impervious Runoff Depth=3.99"
Flow Length=275' Tc=1.9 min CN=89 Runoff=18.54 cfs 35,217 cf

Subcatchment4S: East Runoff Area=0.670 ac 70.15% Impervious Runoff Depth=4.42"
Flow Length=435' Tc=4.3 min CN=93 Runoff=5.03 cfs 10,759 cf

Pond 1B: Bio Area #1 Peak Elev=603.43' Storage=1,597 cf Inflow=5.72 cfs 12,098 cf
Primary=1.07 cfs 4,113 cf Secondary=4.47 cfs 7,985 cf Outflow=5.54 cfs 12,098 cf

Pond 1P: Dry Pond Peak Elev=602.82' Storage=13,382 cf Inflow=21.92 cfs 52,926 cf
Primary=4.85 cfs 52,773 cf Secondary=0.00 cfs 0 cf Outflow=4.85 cfs 52,773 cf

Pond 2B: Bio Area #2 Peak Elev=605.36' Storage=6,683 cf Inflow=6.80 cfs 14,453 cf
Outflow=2.54 cfs 13,595 cf

Link 4L: (new Link) Inflow=20.89 cfs 48,813 cf
Primary=20.89 cfs 48,813 cf

Total Runoff Area = 204,732 sf Runoff Volume = 72,528 cf Average Runoff Depth = 4.25"
38.30% Pervious = 78,408 sf 61.70% Impervious = 126,324 sf

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 1S: Townhouses

[47] Hint: Peak is 227% of capacity of segment #2

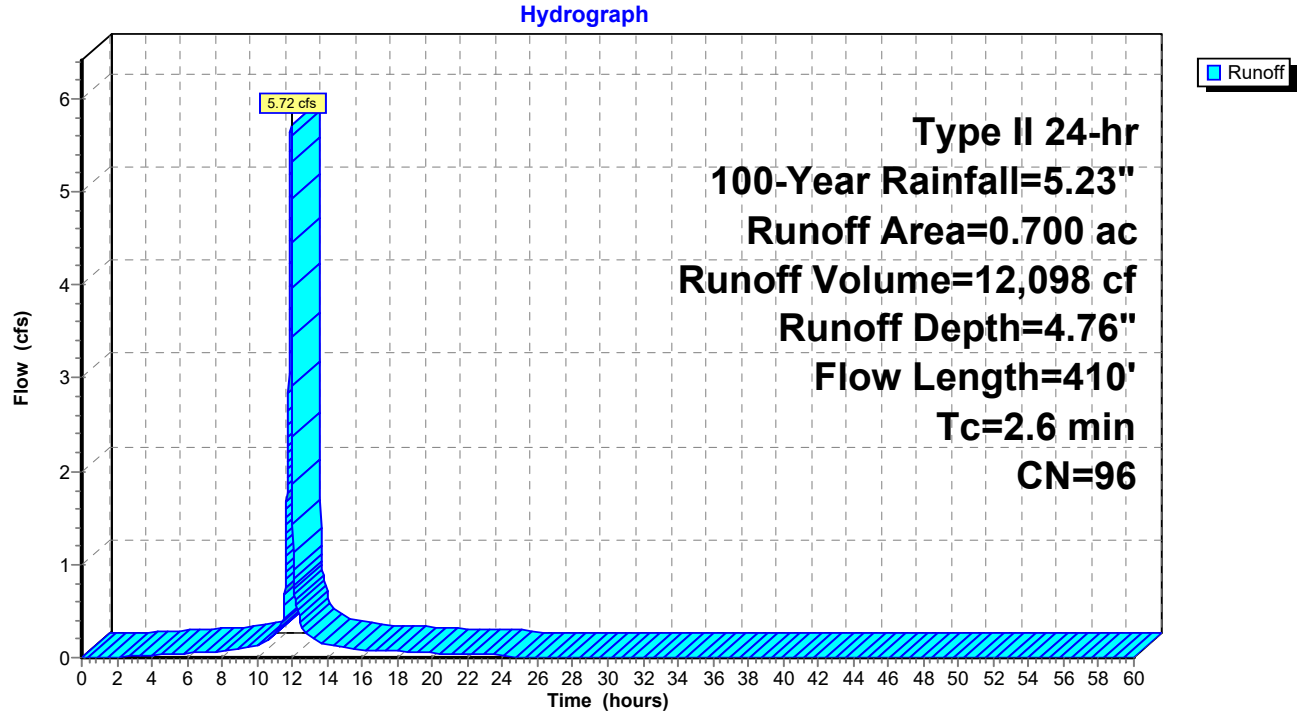
Runoff = 5.72 cfs @ 11.93 hrs, Volume= 12,098 cf, Depth= 4.76"
Routed to Pond 1B : Bio Area #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.070	80	>75% Grass cover, Good, HSG D
0.630	98	Paved parking, HSG D
0.700	96	Weighted Average
0.070		10.00% Pervious Area
0.630		90.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	25	0.0120	0.75		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.0	385	0.0050	3.21	2.52	**Pipe Channel, Pipe Flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.6	410	Total			

Subcatchment 1S: Townhouses



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 2S: Mixed Use

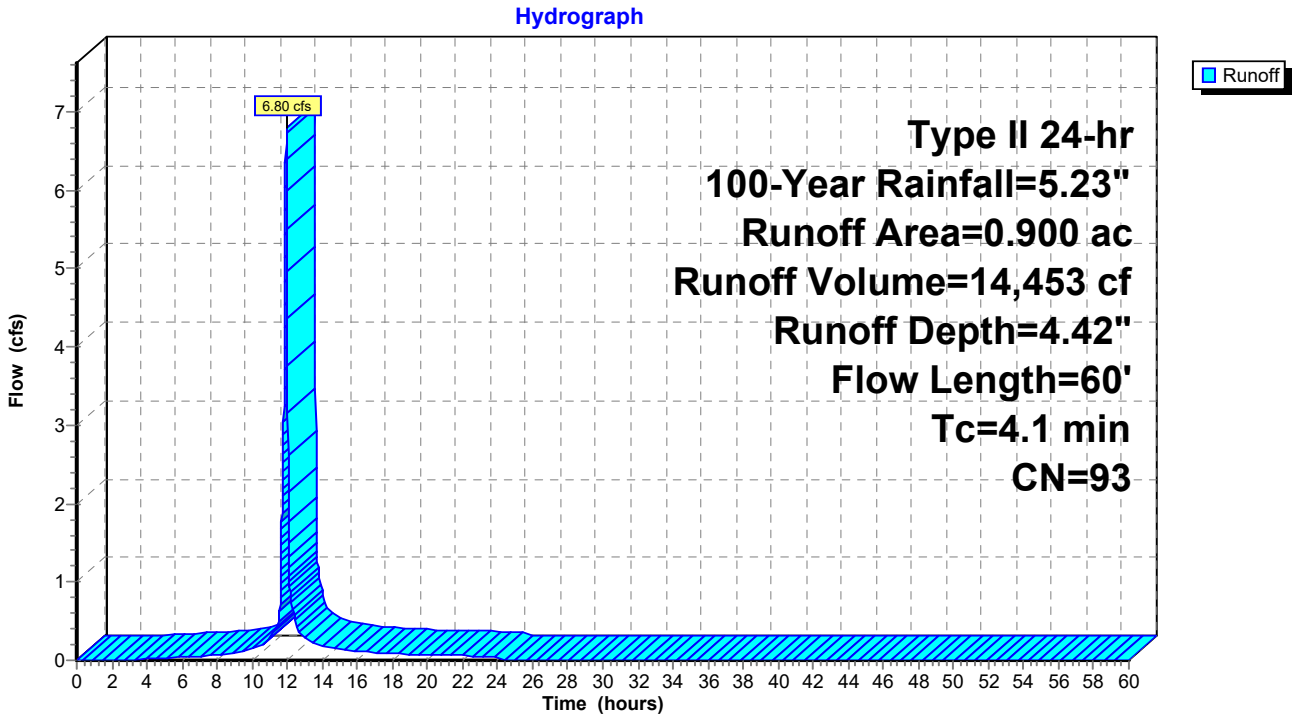
Runoff = 6.80 cfs @ 11.95 hrs, Volume= 14,453 cf, Depth= 4.42"
Routed to Pond 2B : Bio Area #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.250	80	>75% Grass cover, Good, HSG D
0.650	98	Paved roads w/curbs & sewers, HSG D
0.900	93	Weighted Average
0.250		27.78% Pervious Area
0.650		72.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	15	0.0100	0.08		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.50"
0.9	45	0.0120	0.84		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
4.1	60	Total			

Subcatchment 2S: Mixed Use



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 3S: (new Subcat)

[47] Hint: Peak is 736% of capacity of segment #2

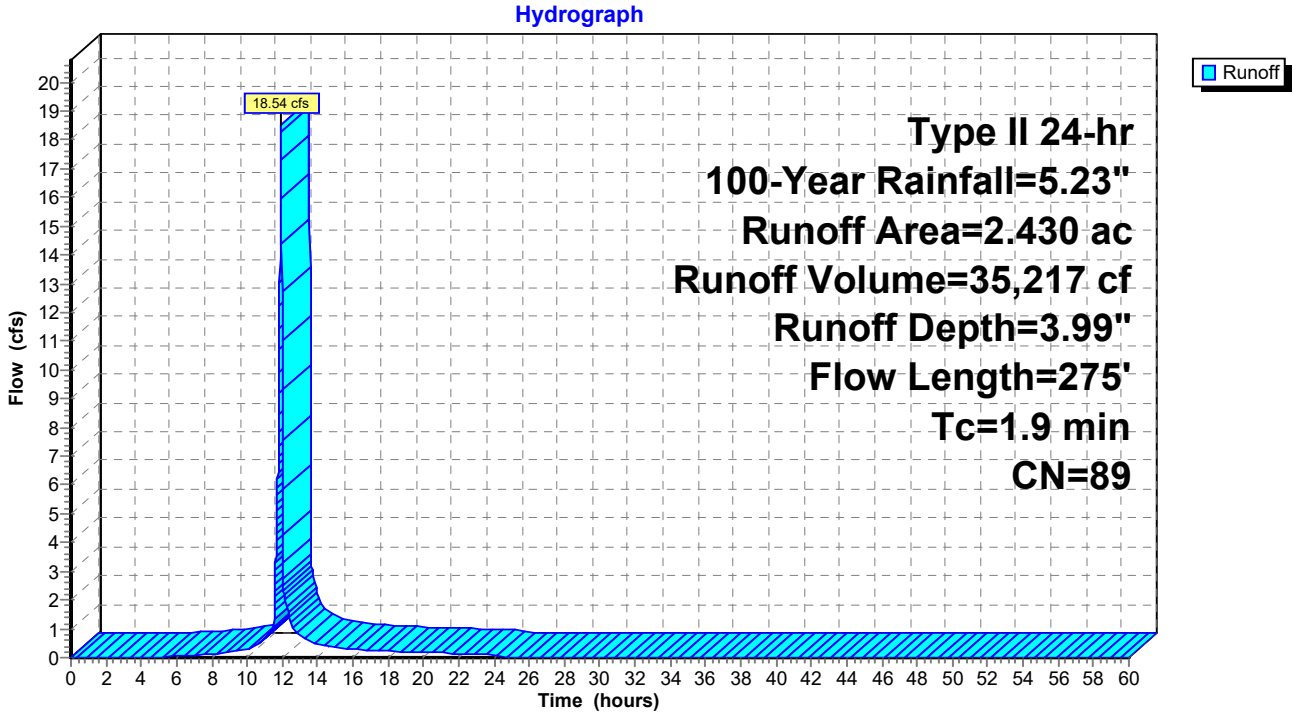
Runoff = 18.54 cfs @ 11.92 hrs, Volume= 35,217 cf, Depth= 3.99"
Routed to Link 4L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
1.150	98	Paved parking, HSG D
1.280	80	>75% Grass cover, Good, HSG D
2.430	89	Weighted Average
1.280		52.67% Pervious Area
1.150		47.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0190	1.02		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
1.2	230	0.0050	3.21	2.52	**Pipe Channel, Pipe flow** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.9	275	Total			

Subcatchment 3S: (new Subcat)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Subcatchment 4S: East

[47] Hint: Peak is 659% of capacity of segment #2

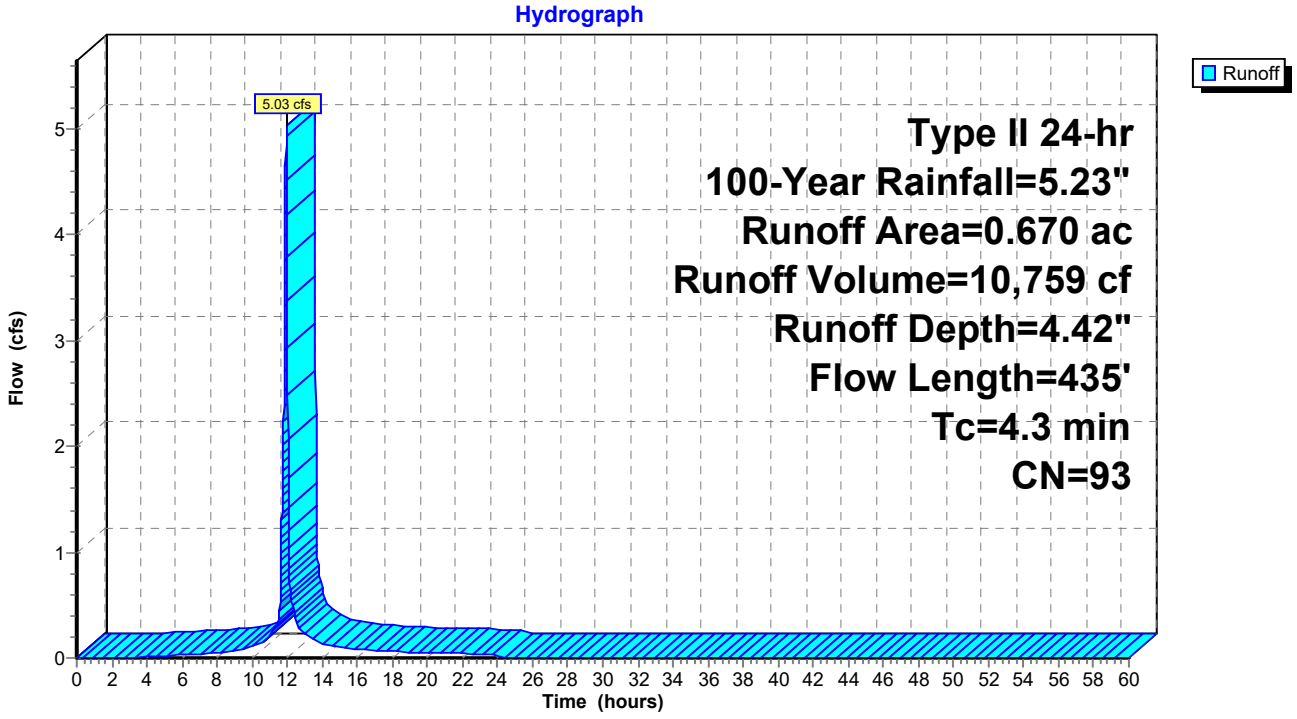
Runoff = 5.03 cfs @ 11.95 hrs, Volume= 10,759 cf, Depth= 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.470	98	Paved parking, HSG D
0.200	80	>75% Grass cover, Good, HSG D
0.670	93	Weighted Average
0.200		29.85% Pervious Area
0.470		70.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	85	0.0100	0.89		**Sheet Flow, pavement** Smooth surfaces n= 0.011 P2= 2.50"
2.7	350	0.0040	2.19	0.76	**Pipe Channel, Pipe flow** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
4.3	435	Total			

Subcatchment 4S: East



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1B: Bio Area #1

Inflow Area = 30,492 sf, 90.00% Impervious, Inflow Depth = 4.76" for 100-Year event
Inflow = 5.72 cfs @ 11.93 hrs, Volume= 12,098 cf
Outflow = 5.54 cfs @ 11.94 hrs, Volume= 12,098 cf, Atten= 3%, Lag= 0.8 min
Primary = 1.07 cfs @ 11.94 hrs, Volume= 4,113 cf
Routed to Pond 1P : Dry Pond
Secondary = 4.47 cfs @ 11.94 hrs, Volume= 7,985 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 603.43' @ 11.94 hrs Surf.Area= 2,896 sf Storage= 1,597 cf

Plug-Flow detention time= 152.2 min calculated for 12,096 cf (100% of inflow)
Center-of-Mass det. time= 152.4 min (906.8 - 754.4)

Volume	Invert	Avail.Storage	Storage Description
#1	602.75'	2,595 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
602.75	1,750	0	0
603.25	2,640	1,098	1,098
603.75	3,350	1,498	2,595

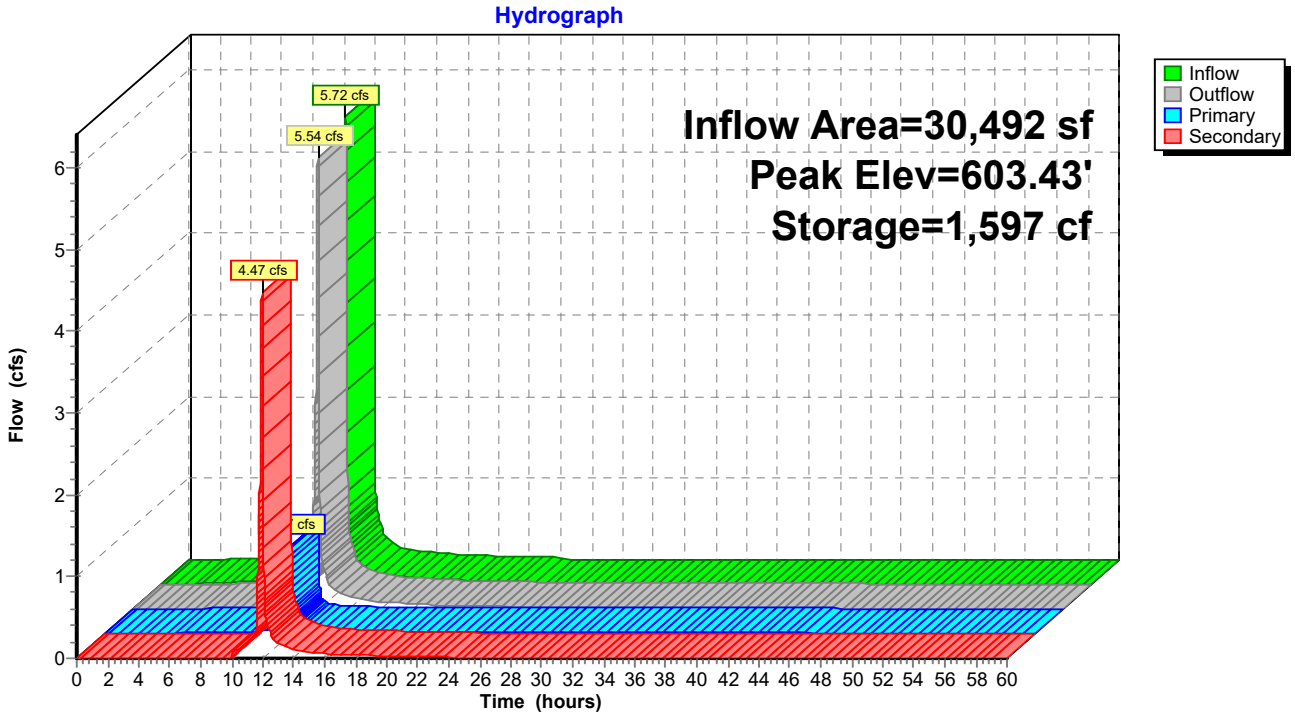
Device	Routing	Invert	Outlet Devices
#1	Primary	600.25'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 600.25' / 600.15' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	603.25'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	602.75'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'
#4	Secondary	603.25'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=1.06 cfs @ 11.94 hrs HW=603.43' (Free Discharge)
└**1=Culvert** (Passes 1.06 cfs of 1.50 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 1.05 cfs @ 1.39 fps)
└**3=Exfiltration** (Controls 0.02 cfs)

Secondary OutFlow Max=4.46 cfs @ 11.94 hrs HW=603.43' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 4.46 cfs @ 1.24 fps)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1B: Bio Area #1



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 1P: Dry Pond

[79] Warning: Submerged Pond 1B Primary device # 1 INLET by 2.57'

Inflow Area = 175,547 sf, 60.30% Impervious, Inflow Depth > 3.62" for 100-Year event
Inflow = 21.92 cfs @ 11.93 hrs, Volume= 52,926 cf
Outflow = 4.85 cfs @ 12.11 hrs, Volume= 52,773 cf, Atten= 78%, Lag= 11.3 min
Primary = 4.85 cfs @ 12.11 hrs, Volume= 52,773 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 602.82' @ 12.11 hrs Surf.Area= 6,951 sf Storage= 13,382 cf

Plug-Flow detention time= 37.4 min calculated for 52,764 cf (100% of inflow)
Center-of-Mass det. time= 29.9 min (970.7 - 940.7)

Volume	Invert	Avail.Storage	Storage Description
#1	599.00'	14,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
599.00	1,810	0	0
600.00	2,617	2,214	2,214
601.00	3,320	2,969	5,182
602.00	4,040	3,680	8,862
603.00	7,580	5,810	14,672

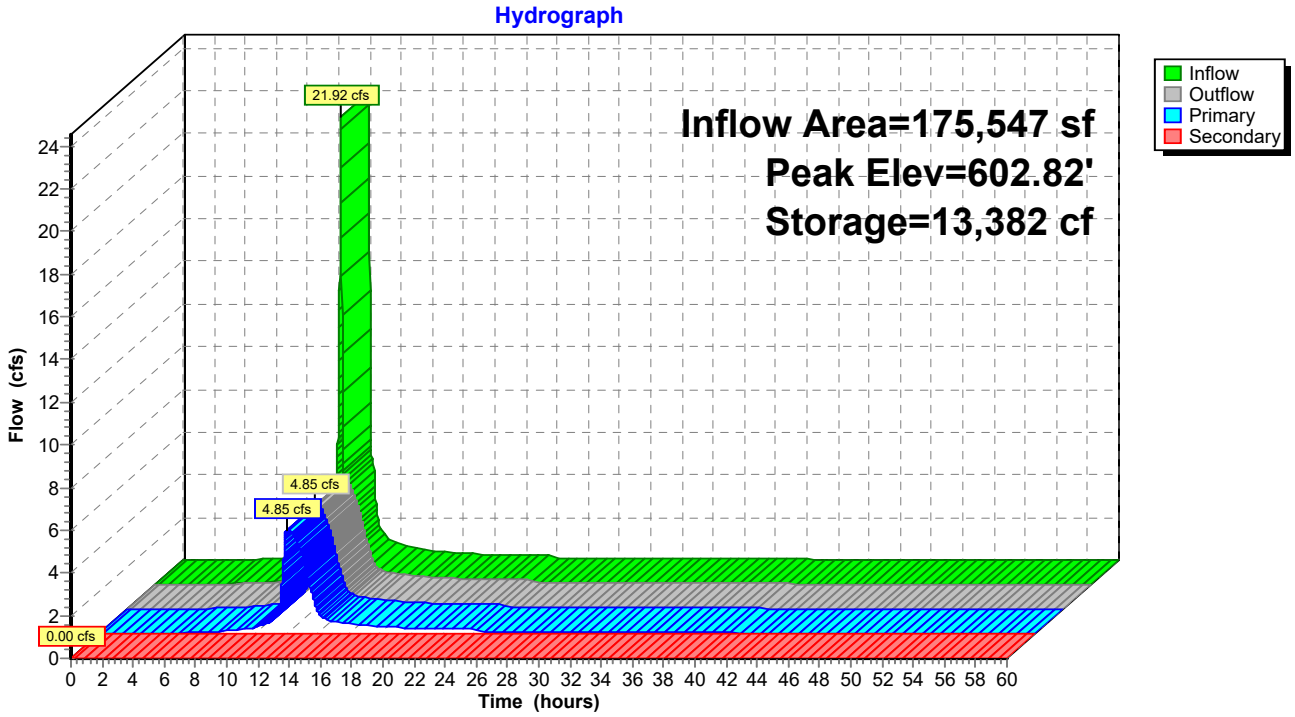
Device	Routing	Invert	Outlet Devices
#1	Primary	599.00'	**10.0" Round Culvert** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 599.00' / 598.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	602.87'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=4.85 cfs @ 12.11 hrs HW=602.82' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.85 cfs @ 8.89 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=599.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 1P: Dry Pond



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Pond 2B: Bio Area #2

Inflow Area = 39,204 sf, 72.22% Impervious, Inflow Depth = 4.42" for 100-Year event
Inflow = 6.80 cfs @ 11.95 hrs, Volume= 14,453 cf
Outflow = 2.54 cfs @ 12.04 hrs, Volume= 13,595 cf, Atten= 63%, Lag= 5.7 min
Primary = 2.54 cfs @ 12.04 hrs, Volume= 13,595 cf
Routed to Link 4L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 605.36' @ 12.04 hrs Surf.Area= 6,823 sf Storage= 6,683 cf

Plug-Flow detention time= 540.8 min calculated for 13,593 cf (94% of inflow)
Center-of-Mass det. time= 507.0 min (1,278.7 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1	604.00'	6,959 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

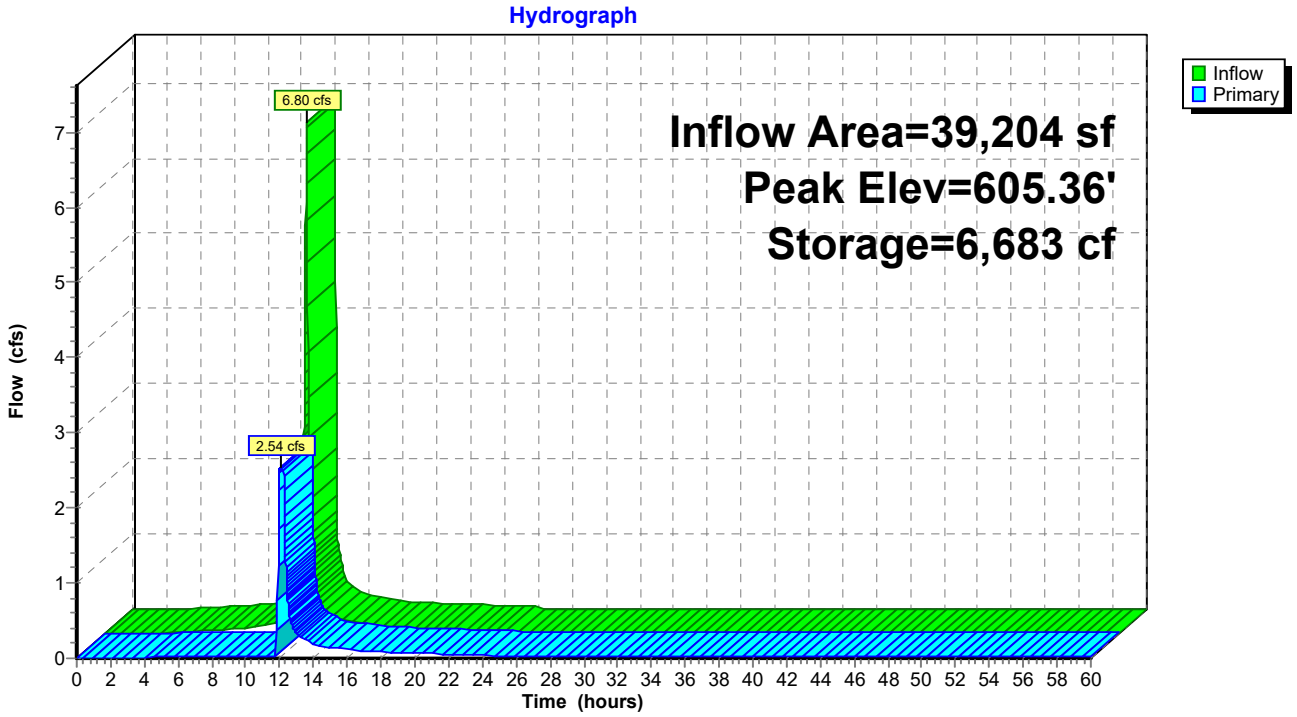
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
604.00	3,500	0	0
604.50	4,670	2,043	2,043
605.00	5,220	2,473	4,515
605.40	7,000	2,444	6,959

Device	Routing	Invert	Outlet Devices
#1	Primary	601.50'	**8.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 601.50' / 601.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	605.00'	**8.0" Horiz. Orifice/Grate X 5.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	604.00'	**0.250 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 590.00'

Primary OutFlow Max=2.54 cfs @ 12.04 hrs HW=605.36' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.54 cfs @ 7.27 fps)
├**2=Orifice/Grate** (Passes < 5.04 cfs potential flow)
└**3=Exfiltration** (Passes < 0.04 cfs potential flow)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pond 2B: Bio Area #2



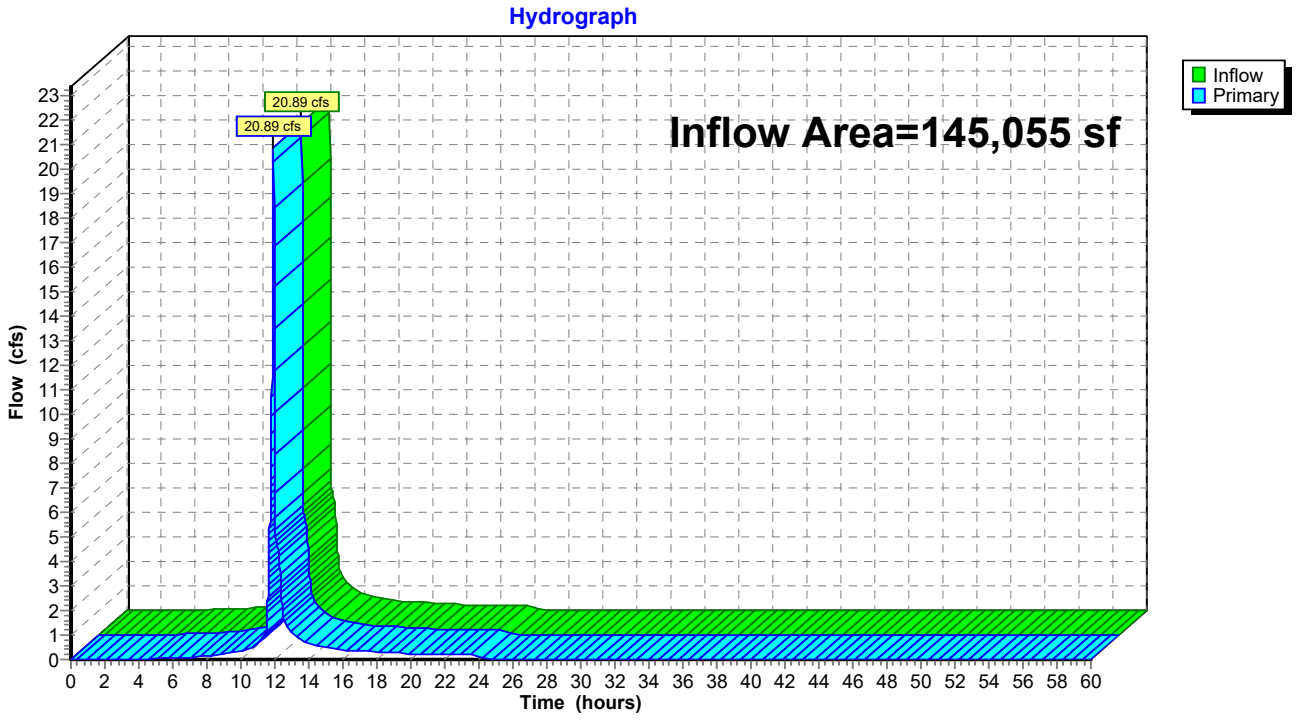
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Summary for Link 4L: (new Link)

Inflow Area = 145,055 sf, 54.05% Impervious, Inflow Depth > 4.04" for 100-Year event
Inflow = 20.89 cfs @ 11.93 hrs, Volume= 48,813 cf
Primary = 20.89 cfs @ 11.93 hrs, Volume= 48,813 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P : Dry Pond

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 4L: (new Link)



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Green Infrastructure & Water Quality Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Version 1.7
Last Updated: 10/02/2015

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)?.....	

Design Point:	1	
P=	1.00	*inch*

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	5.10	2.70	53%	0.53	9,747	
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	5.10	2.70	53%	0.53	**9,747**	**Subtotal 1**
Total	5.10	2.70	53%	0.53	**9,747**	**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	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	5.10	2.70	53%	0.53	9,747
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**5.10**	**2.70**	53%	0.53	9,747
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	5.10	2.70	53%	0.53	**9,747**
WQv reduced by Area Reduction techniques					0

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Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**5.10**	20%
Total Area	5.1	

Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	2.70	*acre*
Precipitation	1	*in*
Rv	0.95	
Minimum RRv	**1,862**	***ft3***
	0.04	af

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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:	1

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	5.10	2.70	0.53	0.53	9746.55	1.00	
Enter Impervious Area Reduced by Disconnection of Rooftops			53%	0.53	9,747	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.00	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		9,747	*ft^3*	
Enter Depth of Soil Media	*df*	1.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**7310**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	100	*ft*	
Filter Length	73.1	*ft*	
Filter Area	7310	*ft^2*	
Actual Volume Provided	9747	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?			Select Practice	
RRv	3,899			
RRv applied	**3,899**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	5,848	*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 √	OK		*Check to be sure Area provided ≥ Af*	

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Mixed Use Development - 1720-1760 Maple Rd
Town of Amherst, Erie County, New York

WATER QUALITY REQUIRED FOR PROPOSED DEVELOPMENT AREA Area, Acres = 5.1
(Note: Reference Chap. 9 NYSDEC Stormwater Design Manual)

"Redevelopment Activity", Acres = 0.4 "New development", Acres = 4.7
(existing, disturbed impervious area)

Total proposed impervious, Acres = 3.0 Adjusted impervious, Acres = 2.70
"New" impervious, Acres = 2.60 (25% redevelopment, 100% new development)

Water Quality Volume (WQv) WQv=(P*Rv*A)/12

Where: P=90% Rainfall Event Number P= 1
Rv= 0.05+0.009*(I) Rv= 0.52
IC=Impervious Cover, Acres IC= 2.70
I=Impervious Cover (%) I= 53
A=Runoff Area, Acres A= 5.1

WQv (ac-ft)= 0.221
WQv (cf)= 9,627

RRv PROVIDED FOR PROPOSED DEVELOPMENT AREA (See NYSDEC worksheets)

		WQv, cf	RRv, cf
Min. RRv Req'd, cf = 1,862	RRv, Bioretention Areas	0	0
Min. RRv Req'd, ac-ft = 0.043	WQv, Detention Pond	0	0
	TOTAL, cf	0	0
	TOTAL, ac-ft	0.000	0.000

WQ & RR SUMMARY (ac-ft):

TOTAL WATER QUALITY PROVIDED FOR PROPOSED DEVELOPMENT AREA 0.000

IS WATER QUALITY VOLUME REQUIREMENT MET? No
(WQv provided equal to or greater than WQv required)

IS RUNOFF REDUCTION VOLUME REQUIREMENT MET? No
(RRv provided equal to or greater than Min. RRv required)

Revised 08/09/2016

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Appendix E

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

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. 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 *discharge*s 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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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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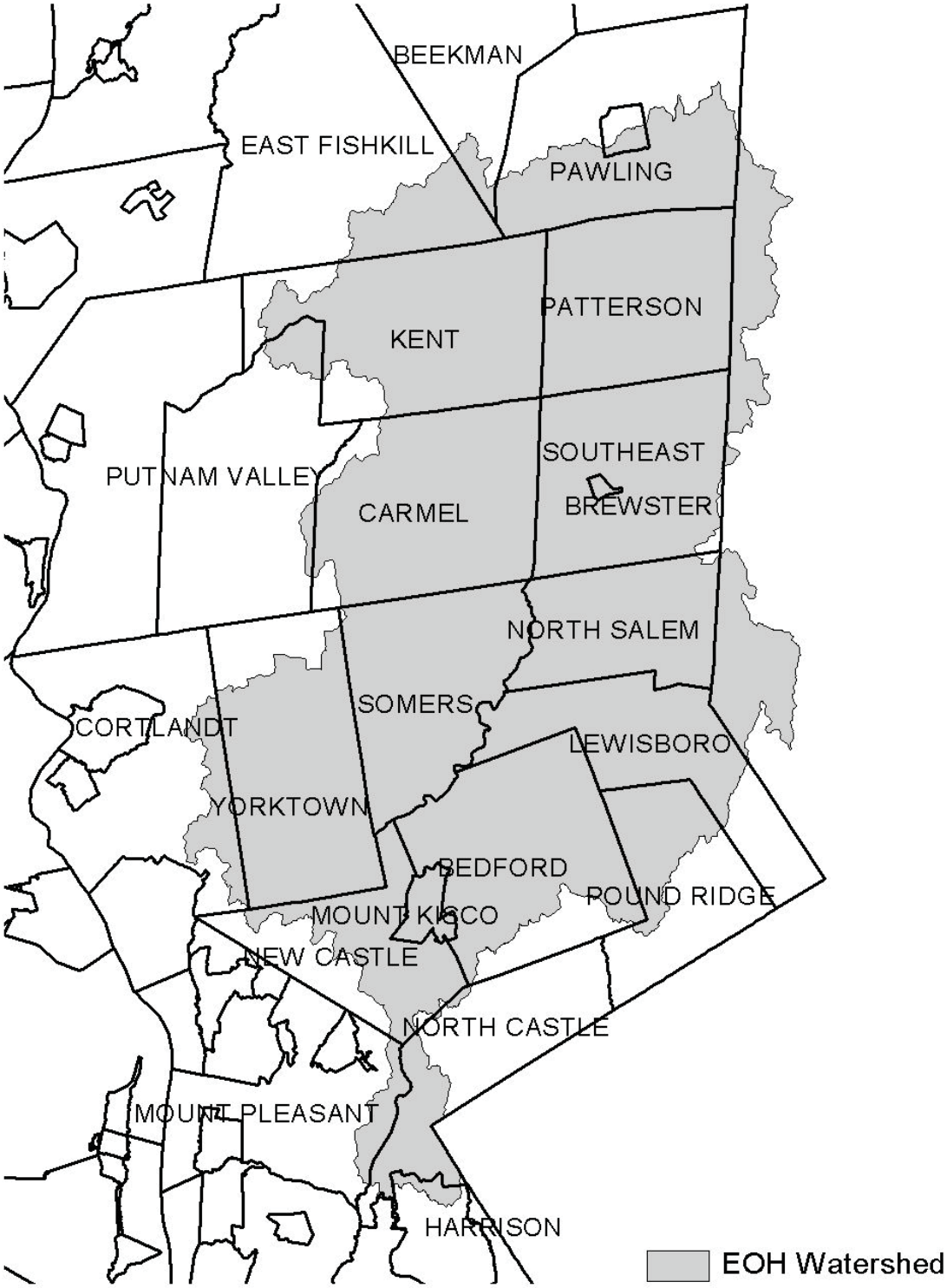
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

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

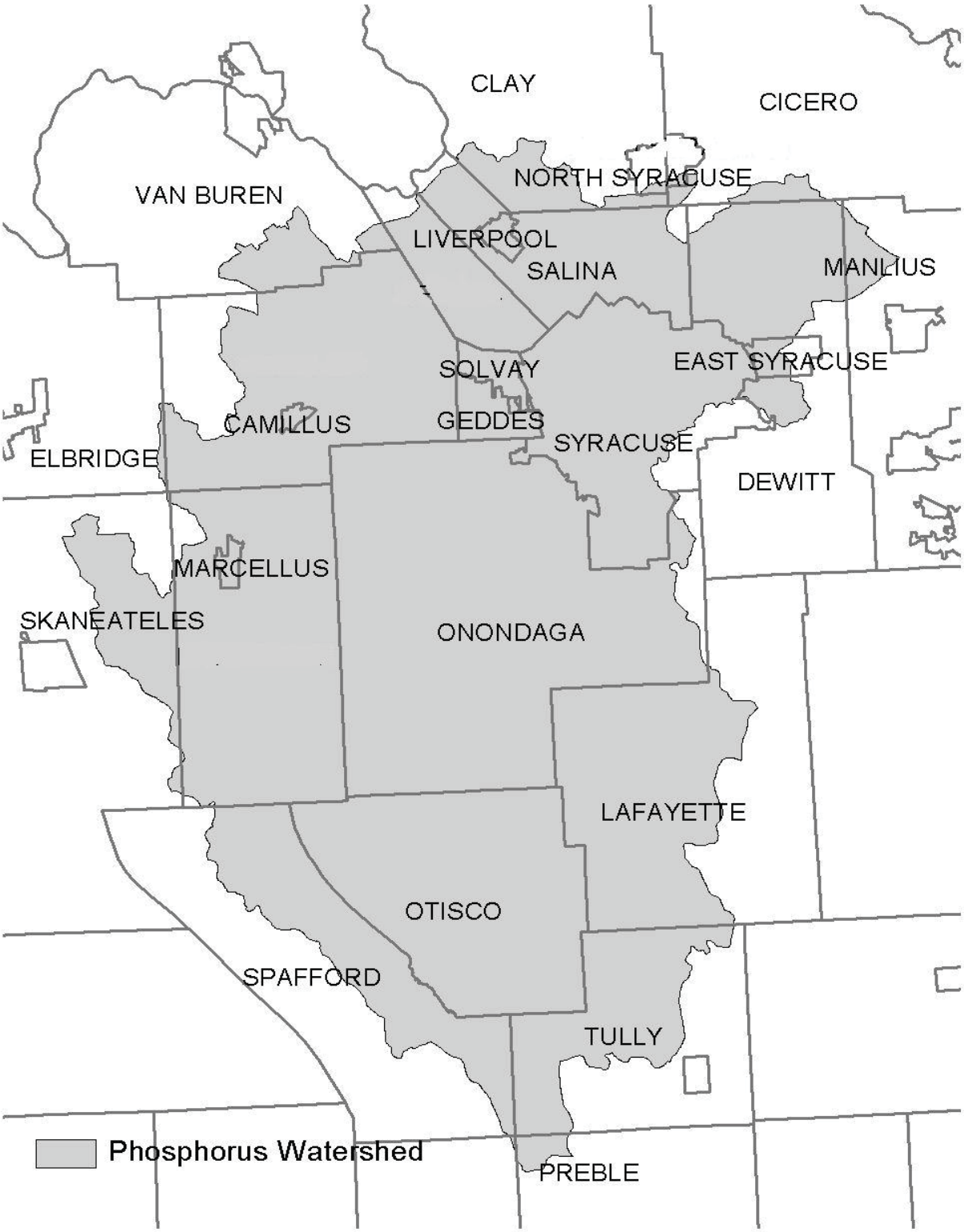
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Figure 1 - New York City Watershed East of the Hudson



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Figure 2 - Onondaga Lake Watershed



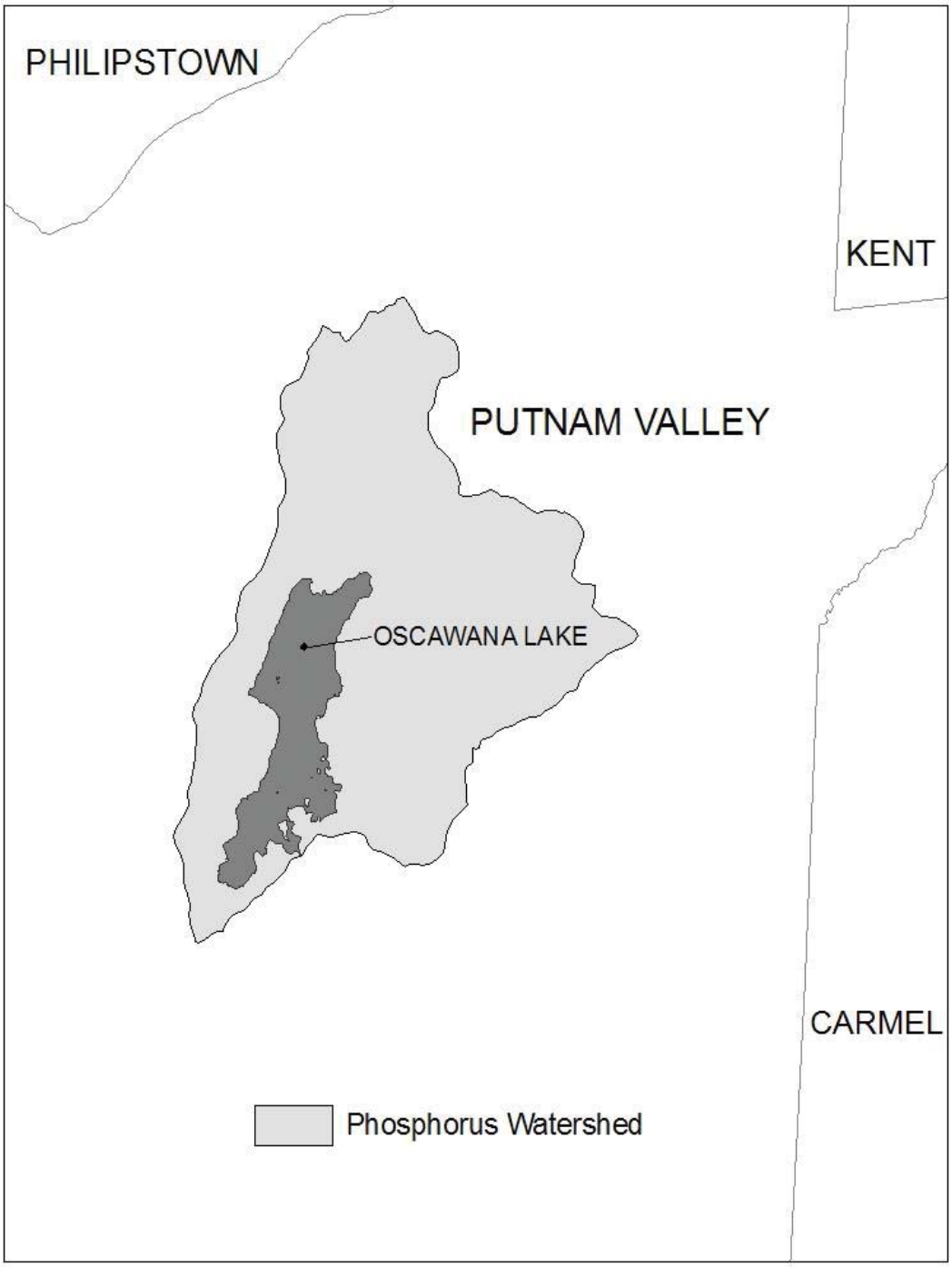
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Figure 3 - Greenwood Lake Watershed



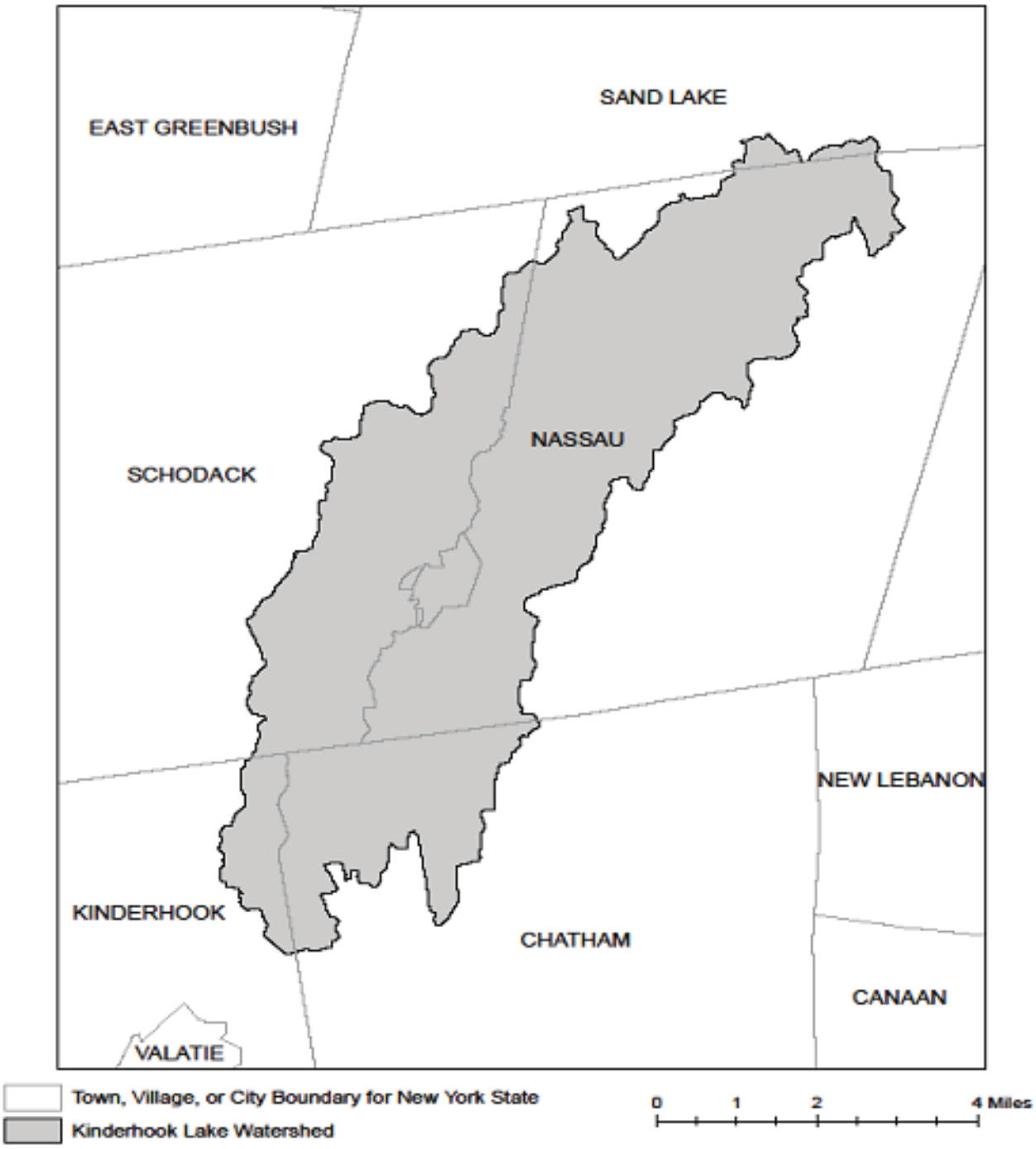
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Figure 4 - Oscawana Lake Watershed



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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

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix F

Forms

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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: Mixed Use Development

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

Mixed Use Development

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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

Mixed Use Development

Owner/Operator Information

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

PB Investors, LLC

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		Wood

Signature

8/21/23
Date

Revised: January 2020

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix G

NYSDEC Notice of Termination (NOT)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

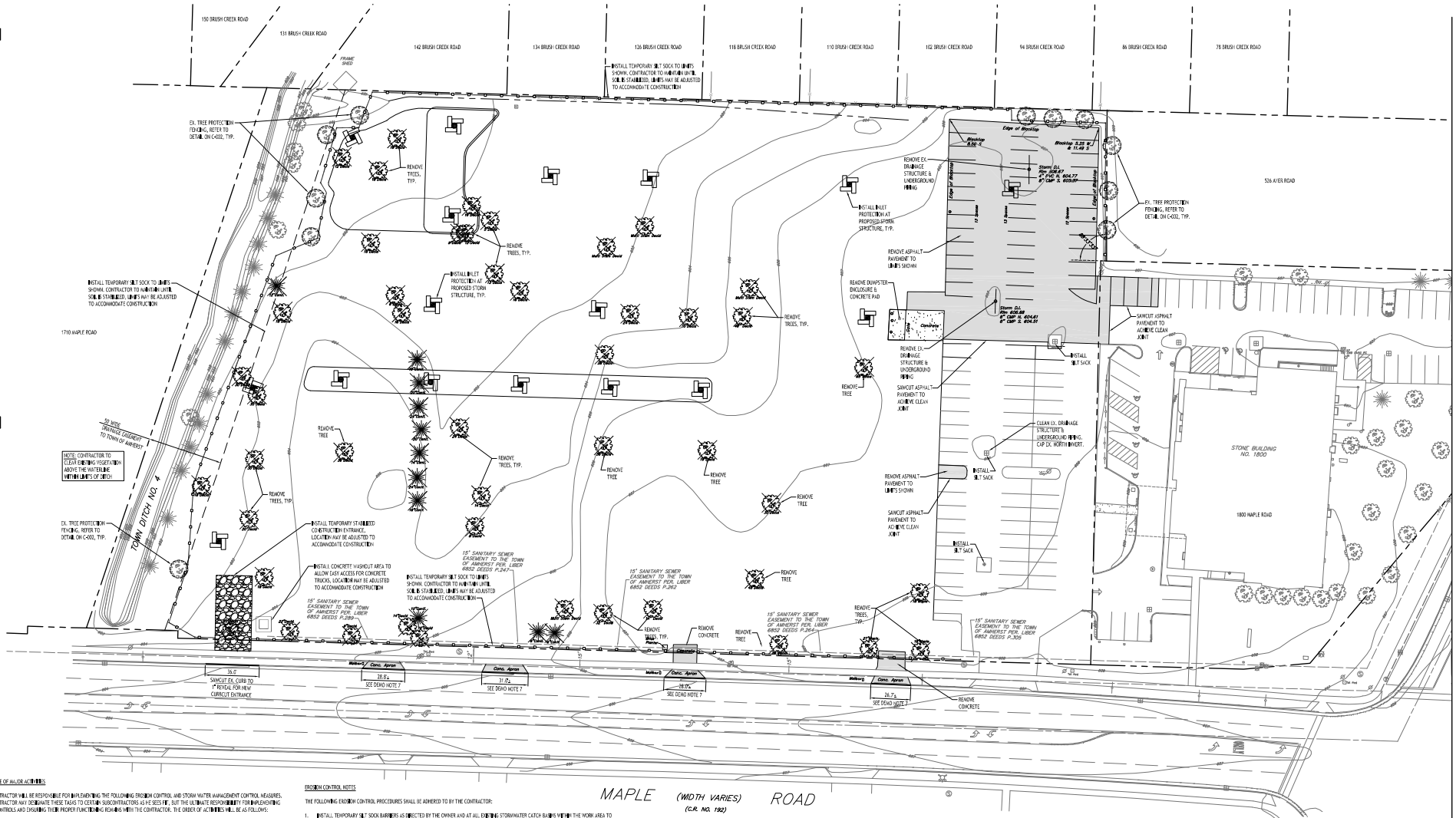
Appendix H

Construction Documents

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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Demolition & Erosion Control Plan

SCALE: 1"=30'

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. INSTALL STABILIZED CONSTRUCTION ENTRANCE

B. INSTALL PERIMETER SILT FENCES/SILT SOCK IN THE LOCATIONS SHOWN ON THE DEMOLITION AND EROSION CONTROL PLAN SHEET.

C. CLEAR & GRUB SITE.

D. INSTALLATION OF UNDERGROUND DETENTION BASIN.

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 MULCHED.

G. CONSTRUCTION OF BUILDINGS.

H. INSTALLATION OF PROPOSED UTILITIES.

I. FINALIZE PAVEMENT SUBGRADE PREPARATION.

J. CURB, DRAINAGE INLETS, STORM SEWER PIPES AND STORM SEWER MANHOLES, AS SHOWN ON PLANS. INSTALL TEMPORARY INLET PROTECTION AT THE LOCATION OF ALL INLETS.

K. [illegible] PROTECTION AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.

L. [illegible] MATERIAL AS REQUIRED FOR PAVEMENT.

M. [illegible] GRADING AND SEEDING AND PLANTINGS.

N. [illegible] FINISH FOLLOWING CONSTRUCTION, CLEAN UNDERGROUND DETENTION BASIN AS PER MANUFACTURER RECOMMENDATIONS.

O. [illegible] SILT SOCK ONLY AFTER ALL PAVING IS COMPLETE AND EXPOSED SURFACES ARE STABILIZED.

P. [illegible] SILT SOCK ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THESE AREAS.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT SOCK BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT SOCK BARRIERS SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT SOCK AROUND THE BASE OF STOCKPILES. STOCKPILES NOT BEING ACTIVELY USED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM, WEEKLY, AND WHEN DISTURBING MORE THAN 5 ACRES TWICE A WEEK, AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF AMHERST (MINIMUM).
12. THE ENGINEER OF RECORD FOR THE PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.

DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH TOWN LANDSCAPE ARCHITECT WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
7. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.

DEMOLITION & EROSION CONTROL LEGEND

EXISTING PAVEMENT TO BE SAWCUT & REMOVED

PROPOSED SILT SOCK

EXISTING TREE TO BE REMOVED

PROPOSED STORM INLET PROTECTION

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME: Demolition & Erosion Control Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

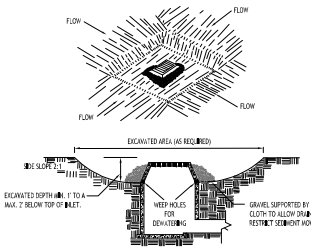
DRAWING NO. C-001

Project No:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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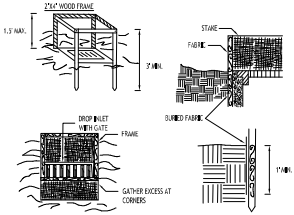
CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE



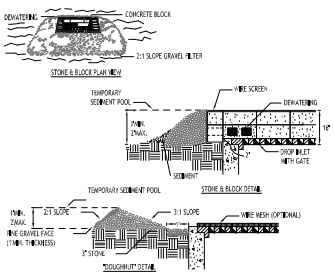
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 16 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

INLET PROTECTION DETAIL 2

NOT TO SCALE



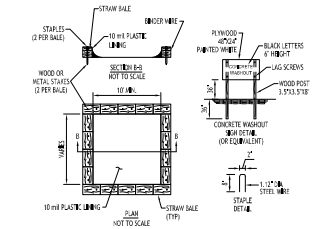
CONSTRUCTION SPECIFICATIONS

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

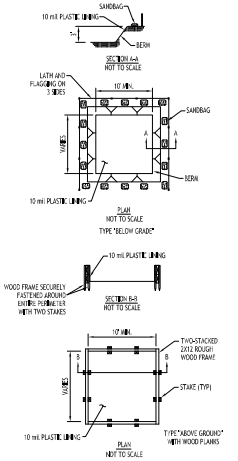
INLET PROTECTION DETAIL 3

NOT TO SCALE



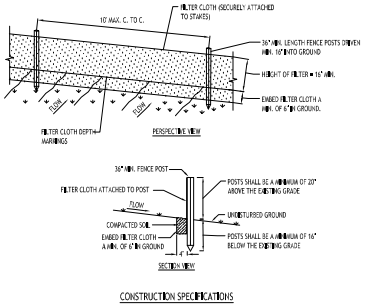
NOTES

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

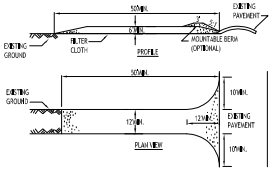


CONSTRUCTION SPECIFICATIONS

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 DETAIL

NOT TO SCALE

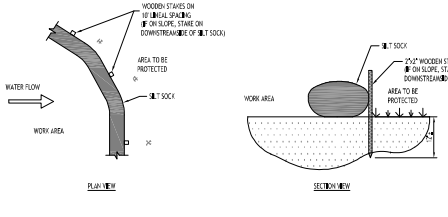


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



NOTES:

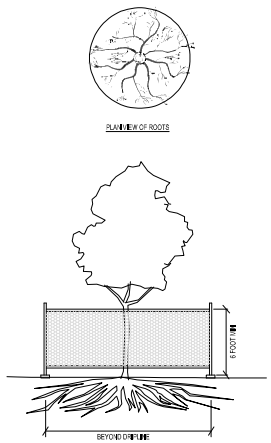
CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED ½ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

NOT TO SCALE



EXISTING TREE PROTECTION FENCE

MATERIALS

MATERIALS FOR TEMPORARY PLASTIC BARRIER FENCES SHALL MEET THE FOLLOWING REQUIREMENTS:

- FENCE: HIGH-DENSITY POLYETHYLENE MESH, ULTRAVIOLET-STABILIZED MIN. 2 YEARS; MINIMUM HEIGHT 4.0 FEET; COLOR: HIGH-VISIBILITY ORANGE OR GREEN, WHEN USED TO PROTECT TREES OR OTHER VEGETATION, COLOR SHALL BE HIGH-VISIBILITY ORANGE.
- POSTS: RIGID METAL OR WOOD POSTS, MINIMUM LENGTH 6.0 FEET.
- TIES: STEEL WIRE, #14 GAUGE OR NYLON CABLE TIES.
- WARNING SIGNS: SHEET METAL, PLASTIC OR OTHER RIGID, WATERPROOF MATERIAL, 1.5 FEET BY 2.0 FEET WITH 4 INCH BLACK LETTERS ON A WHITE BACKGROUND. TEXT SHALL BE: "PROTECTED SITE - KEEP OUT" UNLESS OTHERWISE SPECIFIED.

DETAILS

FENCES SHALL BE ERECTED PRIOR TO MOVING CONSTRUCTION EQUIPMENT ONTO ANY AREA DESIGNATED FOR PROTECTION.

THE LINE OF FENCES SHALL BE STAKED OR MARKED OUT ON THE GROUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER BEFORE ANY FENCING 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 AREAS OF WORK SPECIFICALLY SHOWN ON THE PLANS AND APPROVED BY THE ENGINEER IN WRITING.

TREE PROTECTION DETAIL

NOT TO SCALE

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:

Demolition & Erosion Control Details

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.

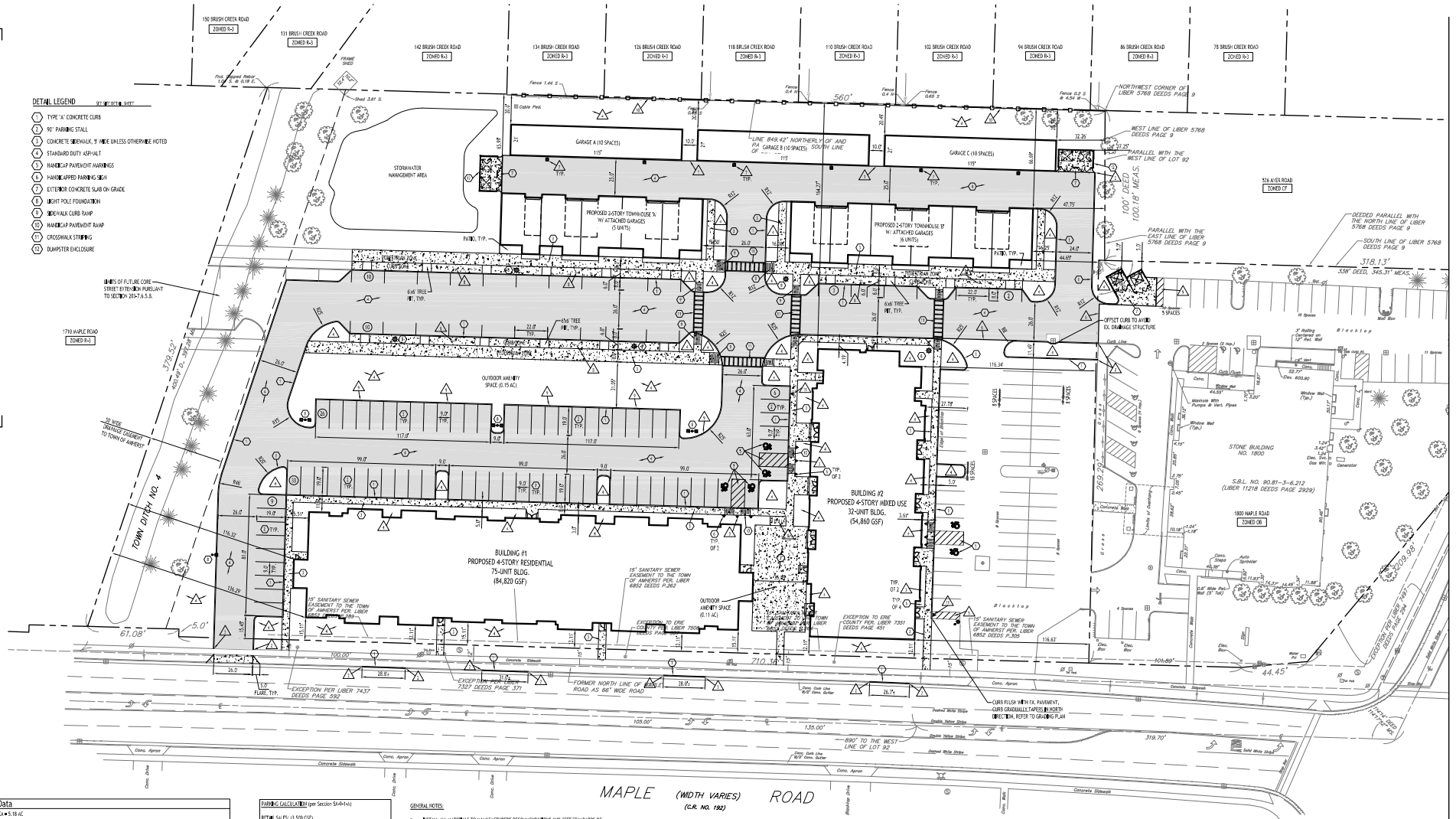
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Project No:

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Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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Site Data

SITE AREA = 5.18 AC
ZONED: DC - 5
USE: PROPOSED 4-STORY MIXED USE BUILDING, 4-STORY MULTI-FAMILY BUILDING, 5 B.& UNIT 2-STORY TOWNHOME BLDG WITH ATTACHED GARAGES

	REQUIRED	PROVIDED
SETBACKS - BUILDING		
FRONT	5 FT	12.11' MIN.
SIDE (< 3 STORIES / > 3 STORIES)	30 FT/60 FT	44.69' MIN. / 116.32' MIN.
REAR (< 3 STORIES / > 3 STORIES)	30 FT/60 FT	66.69' / 164.27' MIN.
ACCESSORY STRUCT.	20 FT	20 FT MIN.
SETBACKS - PARKING		
FRONT	10 FT	15.45 FT. MIN.
SIDE	N/A	> 30 FT.
REAR	N/A	> 90 FT.
[illegible]CES	143	149 + 41 GAR. = 190
[illegible]ATION	23	24
	2	2
GREENSPACE:	5% (0.1 AC)	12.5% (0.25 AC)
	N/A	39% (2.0 AC)
[illegible]HT	5 stories / 75'	4 stories / 50'
[illegible]SPACE	5% (0.26 AC)	5% (0.26 AC)

PARKING CALCULATION (per Section 5A-7-1-1)

RETAIL SALES: (3,500 GSF)
REQ'D: 2.5 per 1,000 sf
REQ'D = (3,500 / 1,000) x 2.5 = 9 SPACES REQ'D

OFFICE: (3,500 GSF)
REQ'D: 2.5 per 1,000 sf
REQ'D = (3,500 / 1,000) x 2.5 = 9 SPACES REQ'D

APARTMENTS/TOWNHOMES:
REQ'D: 1 space per 1-2-bdrm unit + 1 x 105 units = 105 spaces
1.5 space per 3-bdrm unit = 1.5 x 13 units = 20 spaces
REQ'D = 125 SPACES REQ'D

TOTAL PARKING SPACES REQUIRED = 143 SPACES

BICYCLE CALCULATION (per Section 5A-8-1-6.6)

RESIDENTIAL:
REQ'D: 0.5 per UNIT (20 max.)
REQ'D = 0.5 x 118 = 59 therefore 20 SPACES REQ'D.

COMMERCIAL:
REQ'D: 1 space per 3,000 sf
REQ'D = 7,000 / 3,000 = 3 SPACES REQ'D

TOTAL BICYCLE SPACES REQUIRED = 23 SPACES

ELECTRIC VEHICLE CALCULATION (per Section 5A-8-1-D)

3% OF TOTAL PARKING = 190 x 0.01 = 5 SPACES REQ'D.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNERS APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THE WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
10. SANITARY SEWER EASEMENTS SHOWN ARE APPROXIMATE BASED ON RECORD PLANS PROVIDED BY TOWN OF AMHERST ENGINEERING DEPARTMENT. SURVEYOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

Site Plan

SCALE: 1"=30'

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
6. ALL HANDICAP RAMPS (NOT WITHIN THE NYSDOT R.O.W.) AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPS WHERE ENTERING PARKING AREAS/DRIVEWAYS. SIDEWALKS FLUSH TO PAVEMENT WITHIN THE NYSDOT R.O.W. SHALL ADHERE TO THE NOTES AND DESIGN REGULATIONS AS STATED ON NYSDOT STANDARD SHEET 608-01.

NOTE LEGEND

1. EDGE OF PAVEMENT
2. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3. INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. R7-1C
4. LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
5. 4" WIDE WHITE PAINT STRIPE @ 45° & 2' O.C., INFILL AREA AS SHOWN
6. MATCH EX. PAVEMENT, SAWCUT AS REQ'D TO ACHIEVE SQUARE EDGE TO MATCH
7. WALL PACK LIGHT, REFER TO LIGHTING PLAN LP-100
8. BIKE RACK, BELSON OUTDOORS "U-RACK" OR APPROVED EQUAL
9. 2' CUT CUT-IN CURBING
10. 6' HT. WHITE VINYL FENCE
11. ELECTRIC VEHICLE CHARGING STATION

SITE LEGEND

- PROPERTY LINE
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:
Site Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-100

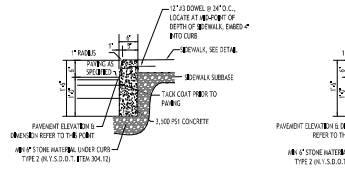
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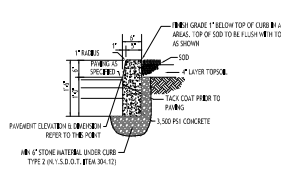
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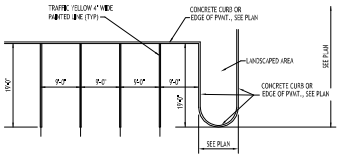
ABUTTING SIDEWALK



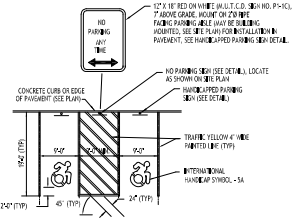
ABUTTING LANDSCAPE/GRASS

NOTES:
1. CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. WHERE THE CURB DROPS (E FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.

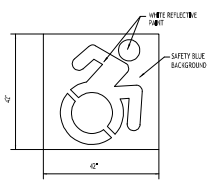
TYPE "A" CONCRETE CURB - 1
NOT TO SCALE



90° PARKING STALL LAYOUT - 2
NOT TO SCALE

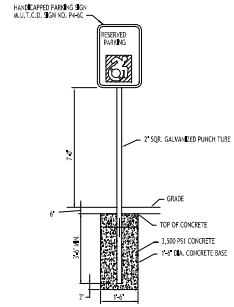


HANDICAPPED PAVEMENT MARKINGS & SIGNAGE - 5
NOT TO SCALE



SYMBOL TO BE CENTERED IN PARKING SPACE

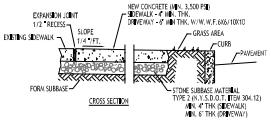
INTERNATIONAL HANDICAP SYMBOL - 5A
NOT TO SCALE



NOTES:
1. HANDICAPPED PARKING SIGN SHALL CONFORM WITH: CURRENT STATE AND LOCAL CODES AND REGULATIONS.

GRASS/LAWN AREA

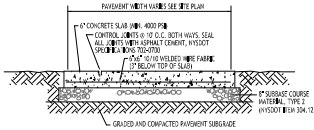
HANDICAPPED PARKING SIGN - 6
NOT TO SCALE



CROSS SECTION

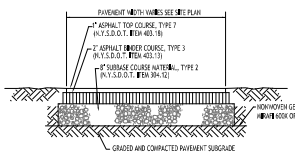
NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
5. SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB.
6. INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 9" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 9" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 10" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

CONCRETE SIDEWALK - 3
NOT TO SCALE



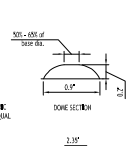
NOTE: CONCRETE PAVEMENT MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 308-3.

EXTERIOR CONCRETE SLAB-ON-GRADE SECTION - 7
NOT TO SCALE

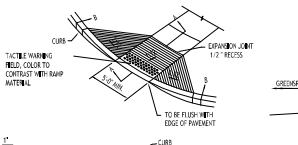


NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

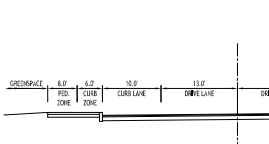
STANDARD DUTY ASPHALT SECTION - 4
NOT TO SCALE



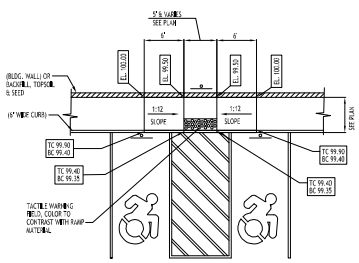
NOTE: TACTILE WARNING DEVICES SHALL BE PER ICC/ANSI A117.1-1998, SECTION 705.3.1.2 OR CURRENT UPDATE

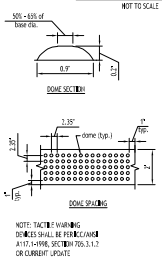


SIDEWALK CURB RAMP - 9
NOT TO SCALE



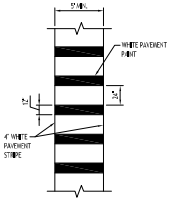
CORE STREET SECTION
NOT TO SCALE



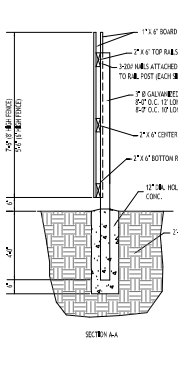


NOTE: TACTILE WARNING DEVICES SHALL BE PER ICC/ANSI A117.1-1998, SECTION 705.3.1.2 OR CURRENT UPDATE

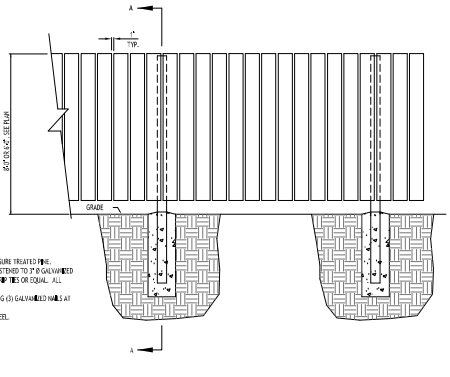
NOTE: ELEVATIONS & DIMENSIONS SHOWN ARE TO ILLUSTRATE GRADE CHANGE ONLY, SEE SITE & GRADING PLAN FOR ACTUAL DATUM & DIMENSIONS



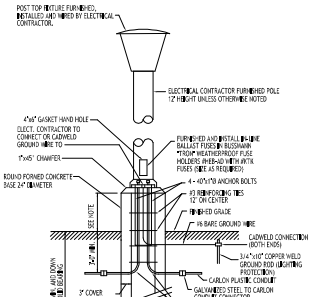
CROSSWALK STRIPING - 11
NOT TO SCALE



NOTES:
1. ALL WOODEN FENCE MATERIAL TO BE PRESSURE TREATED PINE.
2. CENTER, BOTTOM AND TOP RAILS TO BE FASTENED TO 3" Ø GALVANIZED STEEL FENCE POSTS USING SIMPSON TIPE GRIP TIES OR EQUAL. ALL HARDWARE TO BE GALVANIZED.
3. ATTACH EACH 1" X 6" BOARD TO RAILS USING (3) GALVANIZED NAILS AT EACH RAIL LOCATION.
4. WOOD POSTS CAN BE SUBSTITUTED FOR STEEL.

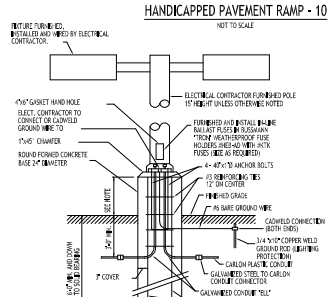


6' BOARD ON BOARD FENCE FOR DUMPSTER ENCLOSURE
NOT TO SCALE



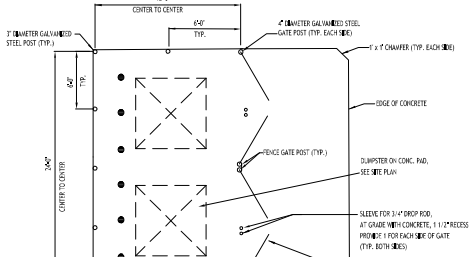
NOTES:
1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN
2. FOR LIGHT FIXTURE ORDERING INFORMATION SEE SITE LIGHTING PLAN
3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE:
   IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION
   IN PAVEMENT: 30" ABOVE GRADE
   IN NON-CURBED GRASS AREAS: 4" ABOVE GRADE
   IN CURB ZONE: FLUSH WITH SIDEWALK

LIGHT POLE FOUNDATION - 8
NOT TO SCALE

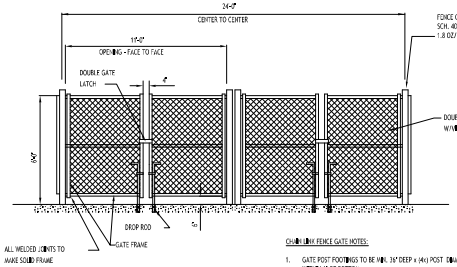


NOTES:
1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN
2. FOR LIGHT FIXTURE ORDERING INFORMATION SEE SITE LIGHTING PLAN
3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE:
   IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION
   IN PAVEMENT: 30" ABOVE GRADE
   IN NON-CURBED GRASS AREAS: 4" ABOVE GRADE

HANDICAPPED PAVEMENT RAMP - 10
NOT TO SCALE



PLAN VIEW



FRONT VIEW

DUMPSTER ENCLOSURE - 12
NOT TO SCALE

CHAIN LINK FENCE GATE NOTES:
1. GATE POST FOOTINGS TO BE MIN. 36" DEEP x (4x) POST DIAMETER, EXTEND POST TO WITHIN 6" OF BOTTOM.
2. GATE FRAMES TO BE 2" SQ. GALVANIZED STEEL, WEIGHING 2.60 LB/FT IN ACCORDANCE WITH ASTM F 900.
3. CHAIN LINK FENCE FABRIC SHALL BE 2" MESH, 9 GAUGE, ZINC COATED STEEL CORE WIRE, INSTALL MESH WITH HOOK BOLTS AND TENSION BARS ON ALL 4 SIDES, ATTACH AT 15" MAX.
4. DOUBLE GATE LATCH TO BE FORKED TYPE CAPABLE OF RETAINING GATE IN CLOSED POSITION AND HAVE PROVISION FOR PAD LOCK. LATCH SHALL BE OPERABLE FROM EITHER SIDE OF GATE.
5. ALL HARDWARE TO BE HOT DIPPED GALVANIZED STEEL TO SUIT GATE SIZE.

CARMINA WOOD DESIGN
111 Main Street, Suite 332
Geneseo, New York 14454
Phone: (336) 937-9009

407 Main Street, Suite 500
Buffalo, New York 14203
Phone: (716) 842-1165

Mixed Use Development
1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:
No. Description Date

DRAWING NAME:
Site Details

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

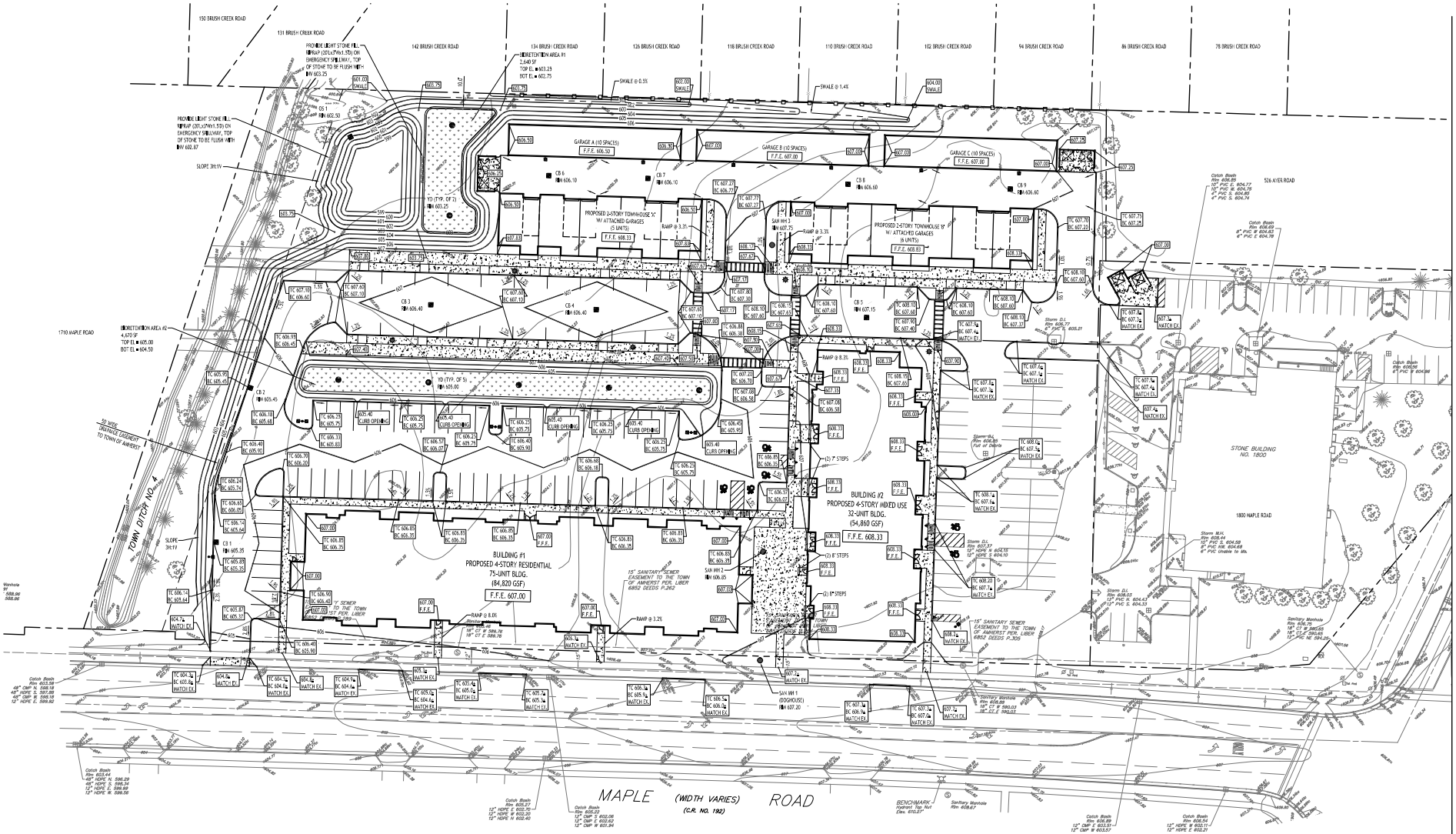
DRAWING NO.
C-101

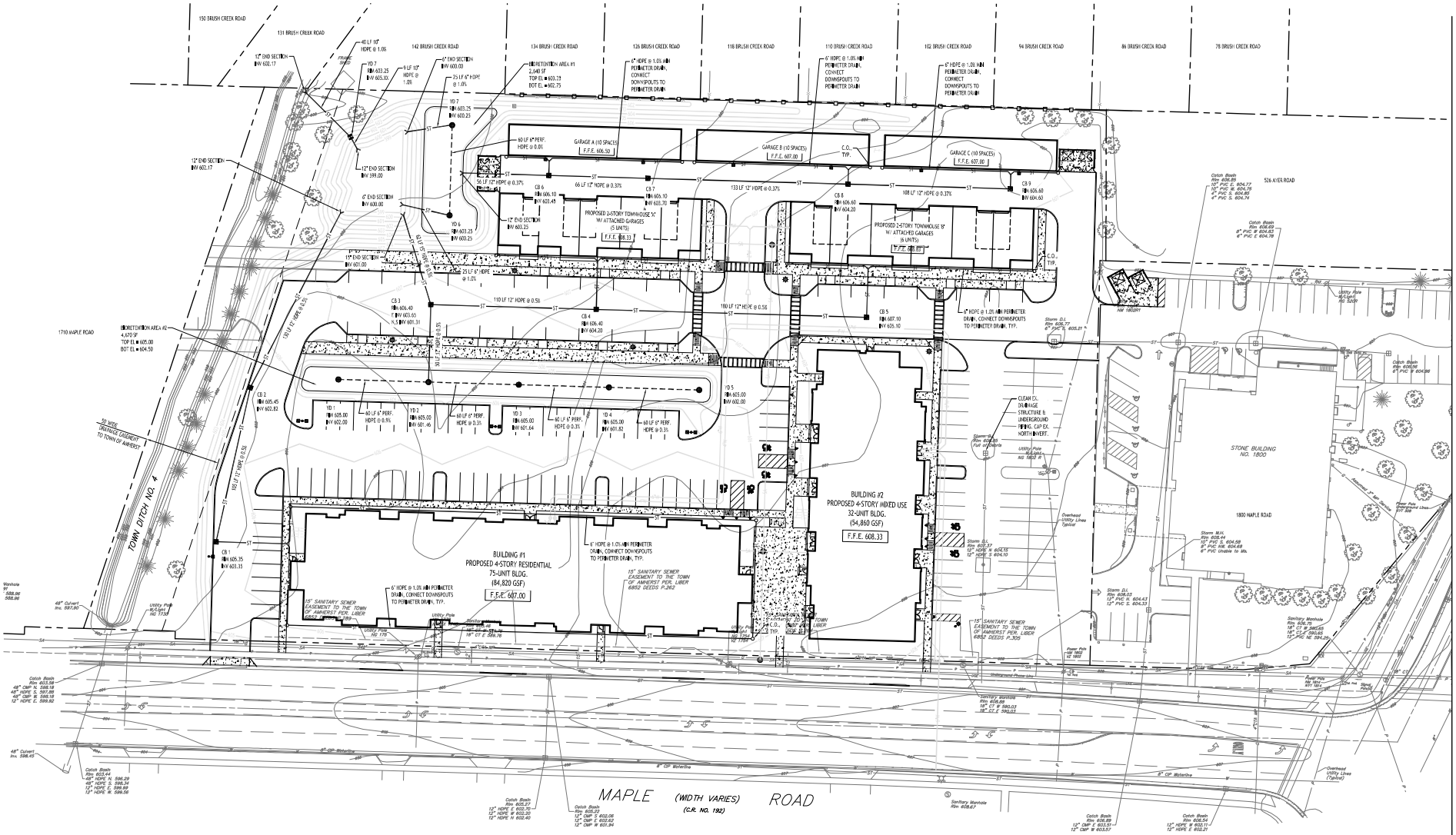
Project No:

1.a

Packet Pg. 465

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)


MAPLE (WIDTH VARIES) ROAD
(C.R. NO. 192)
150 BRUSH CREEK ROAD
131 BRUSH CREEK ROAD
142 BRUSH CREEK ROAD
134 BRUSH CREEK ROAD
126 BRUSH CREEK ROAD
118 BRUSH CREEK ROAD
110 BRUSH CREEK ROAD
102 BRUSH CREEK ROAD
94 BRUSH CREEK ROAD
86 BRUSH CREEK ROAD
78 BRUSH CREEK ROAD
1710 MAPLE ROAD
526 AYER ROAD
1800 MAPLE ROAD
TOWN DITCH NO. 4
BUILDING #1
PROPOSED 4-STORY RESIDENTIAL
75-UNIT BLDG.
(84,820 GSF)
F.F.E. 607.00
BUILDING #2
PROPOSED 4-STORY MIXED USE
32-UNIT BLDG.
(54,860 GSF)
F.F.E. 608.33
PROPOSED 2-STORY TOWNHOUSE 'A'
W/ ATTACHED GARAGES
(5 UNITS)
F.F.E. 608.33
PROPOSED 2-STORY TOWNHOUSE 'B'
W/ ATTACHED GARAGES
(6 UNITS)
F.F.E. 608.83
GARAGE A (10 SPACES)
F.F.E. 606.50
GARAGE B (10 SPACES)
F.F.E. 607.00
GARAGE C (10 SPACES)
F.F.E. 607.00
STONE BUILDING NO. 1800
BIORETENTION AREA #1
2,640 SF
TOP EL = 603.25
BOT EL = 602.75
BIORETENTION AREA #2
4,670 SF
TOP EL = 605.00
BOT EL = 604.50
PROVIDE LIGHT STONE FILL RIPRAP (20'Lx7'Wx1.5'D) ON EMERGENCY SPILLWAY, TOP OF STONE TO BE FLUSH WITH INV 603.75
PROVIDE LIGHT STONE FILL RIPRAP (20'Lx7'Wx1.5'D) ON EMERGENCY SPILLWAY, TOP OF STONE TO BE FLUSH WITH INV 600.87
30' WIDE DRAINAGE EASEMENT TO TOWN OF AMHERST
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.262
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.305
SLOPE 3H:1V
SWALE @ 0.5%
SWALE @ 1.4%
RAMP @ 8.0%
RAMP @ 3.3%
RAMP @ 3.3%
RAMP @ 3.3%
OS 1
INV 602.50
YD (TYP. OF 2)
INV 603.25
YD (TYP. OF 5)
INV 605.00
CB 1
INV 605.35
CB 2
INV 605.45
CB 3
INV 606.40
CB 4
INV 606.40
CB 5
INV 607.15
CB 6
INV 606.10
CB 7
INV 606.10
CB 8
INV 606.60
CB 9
INV 606.60
SAN MH 1
INV 607.20
SAN MH 2
INV 606.85
SAN MH 3
INV 607.75
Manhole 'A'
588.06
588.06
Catch Basin
Rim 603.58
48" CMP N. 596.18
48" HDPE S. 597.00
48" CMP W. 596.18
12" HDPE E. 599.82
Catch Basin
Rim 606.89
10" PVC E. 604.77
10" PVC W. 604.79
8" PVC S. 604.85
8" PVC S. 604.74
Catch Basin
Rim 606.69
8" PVC W. 604.83
8" PVC E. 604.78
Catch Basin
Rim 606.69
8" PVC W. 604.96
Storm D.I.
Rim 606.77
12" PVC S. 606.27
Storm D.I.
Rim 607.37
12" HDPE W. 604.75
12" HDPE S. 604.10
Storm D.I.
Rim 608.03
12" PVC N. 604.43
12" PVC S. 604.33
Storm M.H.
Rim 608.64
12" PVC E. 604.58
8" PVC W. 604.68
8" PVC Unable to Ms.
Sanitary Manhole
Rim 608.20
18" CI 'A' 590.65
18" CI 'B' 590.65
PVC W. 590.45
Sanitary Manhole
Rim 608.69
18" CI 'A' 590.60
18" CI 'B' 590.57
Catch Basin
Rim 606.54
12" HDPE W. 603.11
12" HDPE E. 603.21
Catch Basin
Rim 606.69
12" CMP E. 603.51
12" CMP W. 603.57
Catch Basin
Rim 605.27
12" HDPE E. 602.70
12" HDPE W. 602.20
12" HDPE E. 602.40
Catch Basin
Rim 605.23
12" CMP E. 602.06
12" CMP E. 602.62
12" CMP W. 601.94
BENCHMARK
Pavement Top Nut
Elev. 610.27'
Sanitary Manhole
Rim 608.67
TC 606.25
BC 605.75
TC 606.33
BC 605.83
TC 606.40
BC 605.90
TC 606.57
BC 606.07
TC 606.23
BC 605.73
TC 606.40
BC 605.90
TC 606.33
BC 605.83
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BC 605.75
TC 606.68
BC 606.18
TC 606.25
BC 605.75
TC 606.70
BC 606.20
TC 606.24
BC 605.74
TC 606.65
BC 606.05
TC 606.14
BC 605.64
TC 606.14
BC 605.64
TC 605.87
BC 605.37
TC 606.40
BC 605.90
TC 606.85
BC 606.35
TC 606.85
BC 606.35
TC 606.85
BC 606.35



Storm Drainage Plan
SCALE: 1"=30'

PROPOSED STORM DRAINAGE LEGEND
PROPOSED STORM PIPE — ST —
PROPOSED PERFORATED STORM PIPE
PROPOSED CATCH BASIN
PROPOSED MANHOLE
PROPOSED CLEANOUT
CB: CATCH BASIN
MH: MANHOLE
OS: OUTLET STRUCTURE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 0 30 60FT.

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Phone: (716) 842-1165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:
No. Description Date

DRAWING NAME:
Storm Drainage Plan

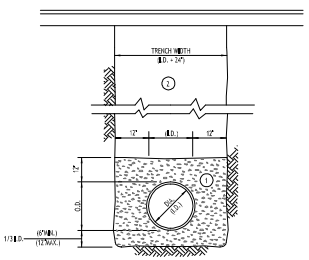
Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-300

Project No:

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

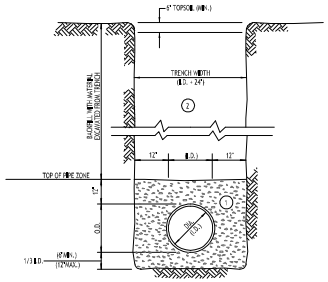
1. NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

2. TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

STORM SEWER TRENCH SECTION
IN PAVED AREAS
NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

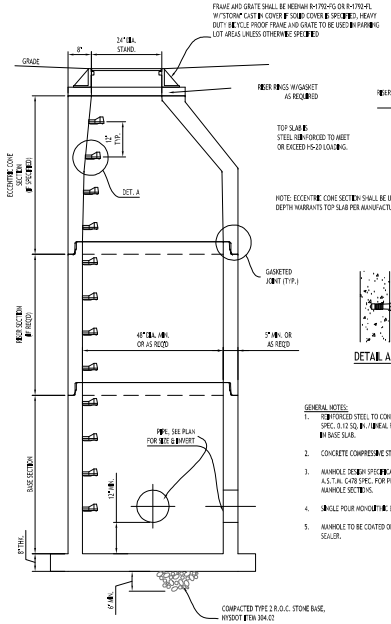
PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

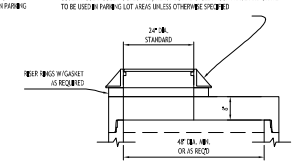
1. NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

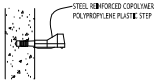
2. BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

STORM SEWER TRENCH SECTION
IN UNPAVED AREAS
NOT TO SCALE





ALTERNATE TOP SLAB

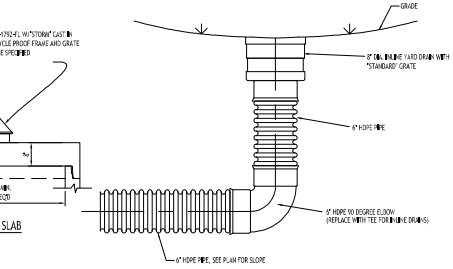


DETAIL A

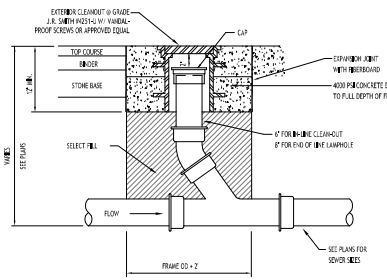
GENERAL NOTES:

1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC., 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN BASE SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C-478 SPEC. FOR PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.
5. MANHOLE TO BE COATED ON OUTSIDE WITH BITUMASTIC SEALER.

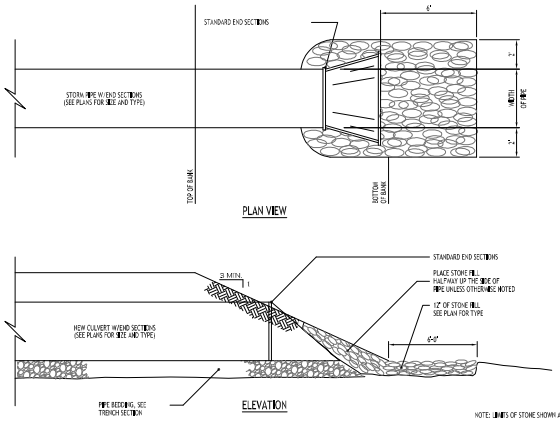
TYPICAL STORM MANHOLE DETAIL
NOT TO SCALE



TYPICAL YARD DRAIN DETAIL
NOT TO SCALE

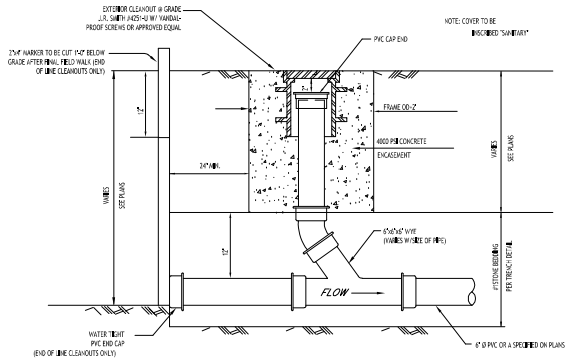


LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK
NOT TO SCALE

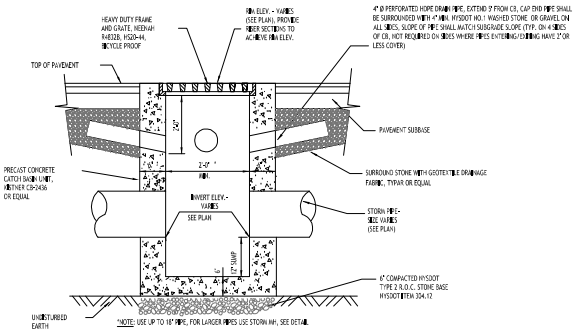


NOTE: LIMITS OF STONE SHOWN ARE MINIMUMS, PLAN MAY INDICATE GREATER LIMITS

TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP
NOT TO SCALE



LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS
NOT TO SCALE



TYPICAL PRECAST CATCH BASIN
NOT TO SCALE

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487 Main Street, Suite 500
Buffalo, New York 14203
Phone: (716) 842-1165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:
Storm Drainage Details

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-301

Project No:

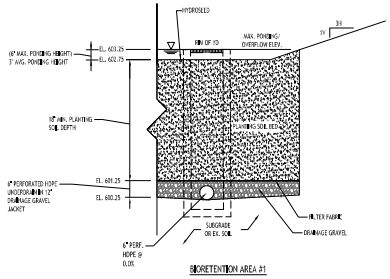
1.a

Packet Pg. 468

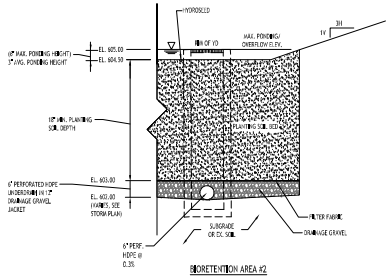
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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BIORETENTION AREA #1



BIORETENTION AREA #2

BIORETENTION AREA - TYPICAL SECTIONS

NOT TO SCALE

NOTES:
1. FILTER FABRIC TO BE NON-WOVEN CLASS 'C' AMOCO 1025 OR APPROVED EQUIVALENT
2. DRAINAGE GRAVEL TO MEET AASHTO M-43, NO.67, SIZE 0.25" TO 0.75"
3. 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 0.5 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
Beerlongue	Panicum clandestinum	4.5

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

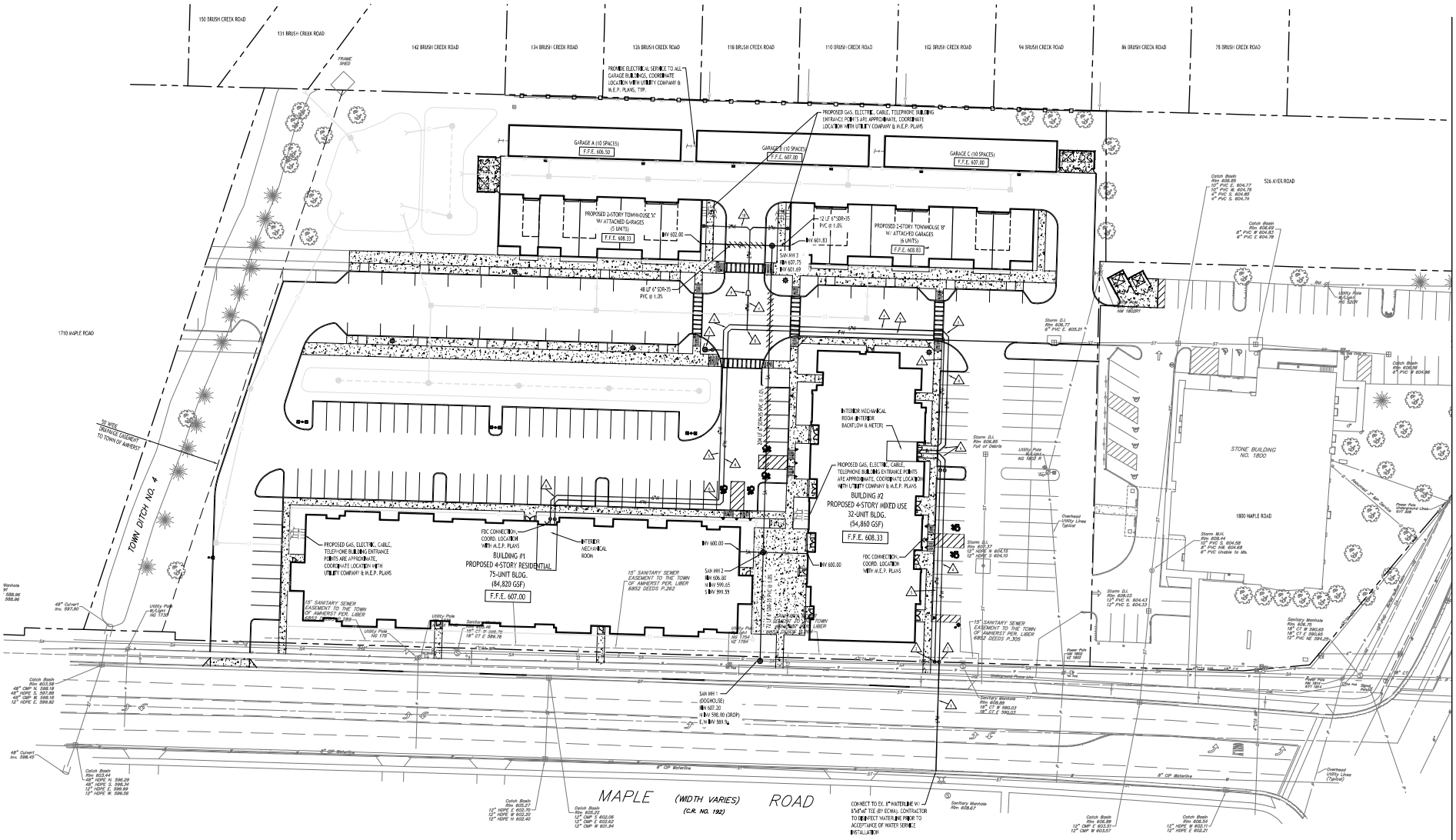
REVISIONS:
No. Description Date:

DRAWING NAME:
Storm Drainage Details

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-303

Project No:



N

Utility Plan

SCALE: 1"=30'

WATER NOTE LEGEND

1. 6" CLASS 52 DUCTILE IRON
2. 6" VALVE AND BOX
3. 4" GATE VALVE AND BOX
4. 6" AWWA C-900 PVC FIRE SERVICE
5. 4" AWWA C-900 PVC DOMESTIC SERVICE
6. PROVIDE BENDS AND BLOCKING AS NECESARY
7. HYDRANT ASSEMBLY
8. 4"x4"x6" TEE CONNECTION
9. 4"x2" REDUCER
10. 2" POLYETHYLENE DOMESTIC SERVICE

UTILITY NOTES:

1. FOR ALL SANITARY SEWERS, INSTALL SELECT FILL IN PAVED AREAS, EXTEND 5' MIN. BEYOND PAVEMENT LIMITS
2. BUILDINGS TO HAVE INVERT ELEVATION 5' MIN. BELOW F.F.E. OF THE BUILDING. PIPE TO BE 6" SDR-35 PVC @ 1.0% MIN. WITH MIN 4' OF COVER. ADD CLEANOUTS @ 90' MAX. SPACING FOR 6" LATERALS OVER 90' IN LENGTH.
3. COORDINATE GAS & ELEC. METER BANK LOCATIONS ON BUILDINGS WITH M.E.P. PLANS & UTILITY CO.'S.
4. COORDINATE LOCATION OF CTV & TELEPHONE SERVICE TO BUILDINGS WITH M.E.P. PLANS AND UTILITY CO.'S.
5. ANY EXISTING UTILITIES WHICH ARE TO BE ABANDONED AND FALL UNDER PAVEMENT OR BUILDINGS SHALL BE REMOVED VS. BEING ABANDONED UNLESS THOSE UTILITIES ARE FILLED WITH FLOWABLE FILL.
6. A MINIMUM OF 18 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
7. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH CONCRETE AND ASPHALT PAVEMENT AREAS.

NOTES:

1. ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE TOWN OF AMHERST SPECIFICATIONS AND DETAILS, AND ERIE COUNTY DEPARTMENT OF HEALTH RULES AND REGULATIONS.
2. PRIOR STARTING ANY WORK ASSOCIATED WITH OR NEAR EXISTING SANITARY MANHOLES, THE CONTRACTOR SHALL MEET WITH THE TOWN OF AMHERST TO DISCUSS AND AGREE TO THE WORK.
3. FILL SHALL BE PLACED AND SATISFACTORILY COMPACTED PRIOR TO INSTALLATION OF UTILITIES, AND MUST BE APPROVED BY THE SUPERVISING PROJECT ENGINEER.
4. ALL SANITARY SEWER IS TO CONSTRUCTION IS TO CONFORM TO TOWN OF AMHERST SEWER DISTRICT RULES AND REGULATIONS.
5. ALL OTHER REQUIRED PERMITS BY THE STATE OF NEW YORK, COUNTY OF ERIE AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER.

PROPOSED UTILITY LEGEND

- PROPOSED WATER LINE — W
- PROPOSED SANITARY SEWER — SA
- PROPOSED UTILITY CONNECTIONS (GAS, ELEC., CABLE, TEL., ETC.)
- PROPOSED GATE VALVE
- PROPOSED CLEANOUT
- INSTALL SELECT BACKFILL

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30' 10 0 30 60Ft.

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:
Utility Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-400

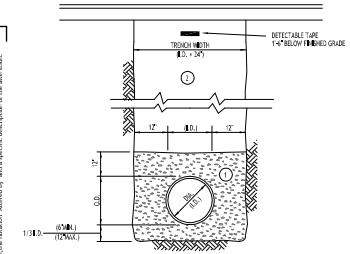
Project No:

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

1. NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

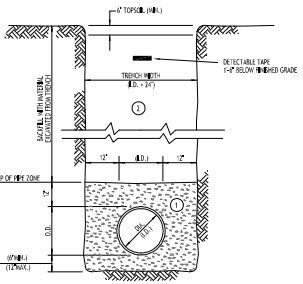
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

2. TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

SEWER/WATERLINE TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

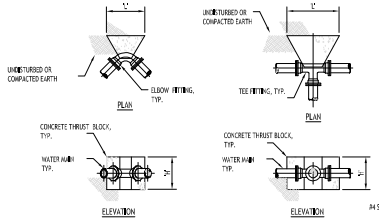
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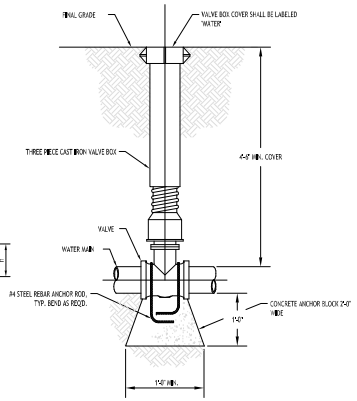
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

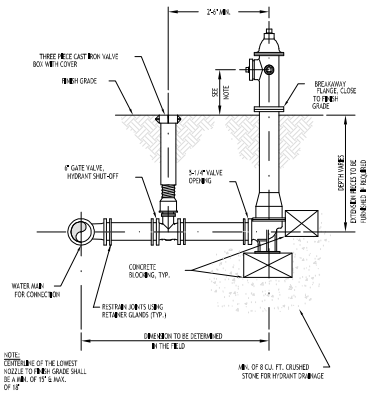
2. BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

SEWER/WATERLINE TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE

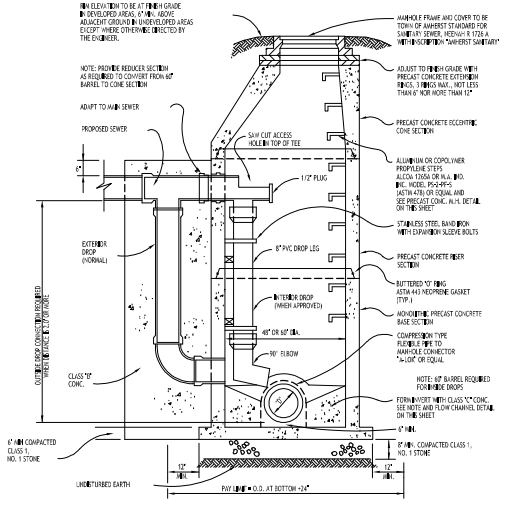






TYPICAL FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



PRECAST CONCRETE DROP CONNECTION

NOT TO SCALE

DIMENSION SCHEDULE

PIPE SIZE	90° ELBOW		45° ELBOW		22.5° ELBOW		11.25° ELBOW	
	'A'	'L'	'A'	'L'	'A'	'L'	'A'	'L'
4"	1.5'	2.0'	1.0'	2.0'	1.0'	1.0'	1.0	1.0'
6"	2.0	2.5'	1.5	2.0	1.0'	1.5'	1.0	1.5'
8"	2.5	3.5	2.0'	2.5	1.5'	1.5'	1.0	2.0
10"	3.0'	4.5'	2.5'	3.0	1.5'	3.0	1.0	2.5
12"	3.5'	5.0'	3.0'	3.5	2.5	2.5	1.5	2.5

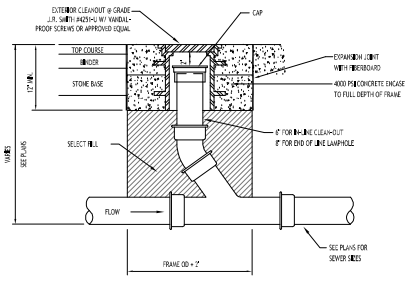
DIMENSION SCHEDULE

PIPE SIZE	TEE OR TAP SLEEVE	
—	'A'	'L'
4"	1.5	1.0'
6"	1.5	2.5
8"	1.5	3.5
10"	2.5'	3.5
12"	3.5'	3.5

THRUST BLOCK SCHEDULE

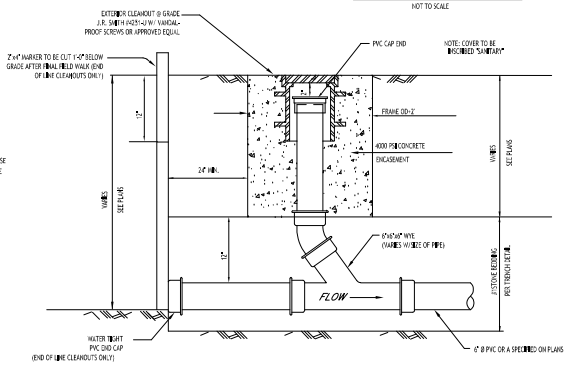
TYPICAL GATE VALVE DETAIL

NOT TO SCALE



LAMPHOLE/CLEANOUT IN PAVEMENT/SIDEWALK

NOT TO SCALE



LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS

NOT TO SCALE

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date:

DRAWING NAME:
Utility Details

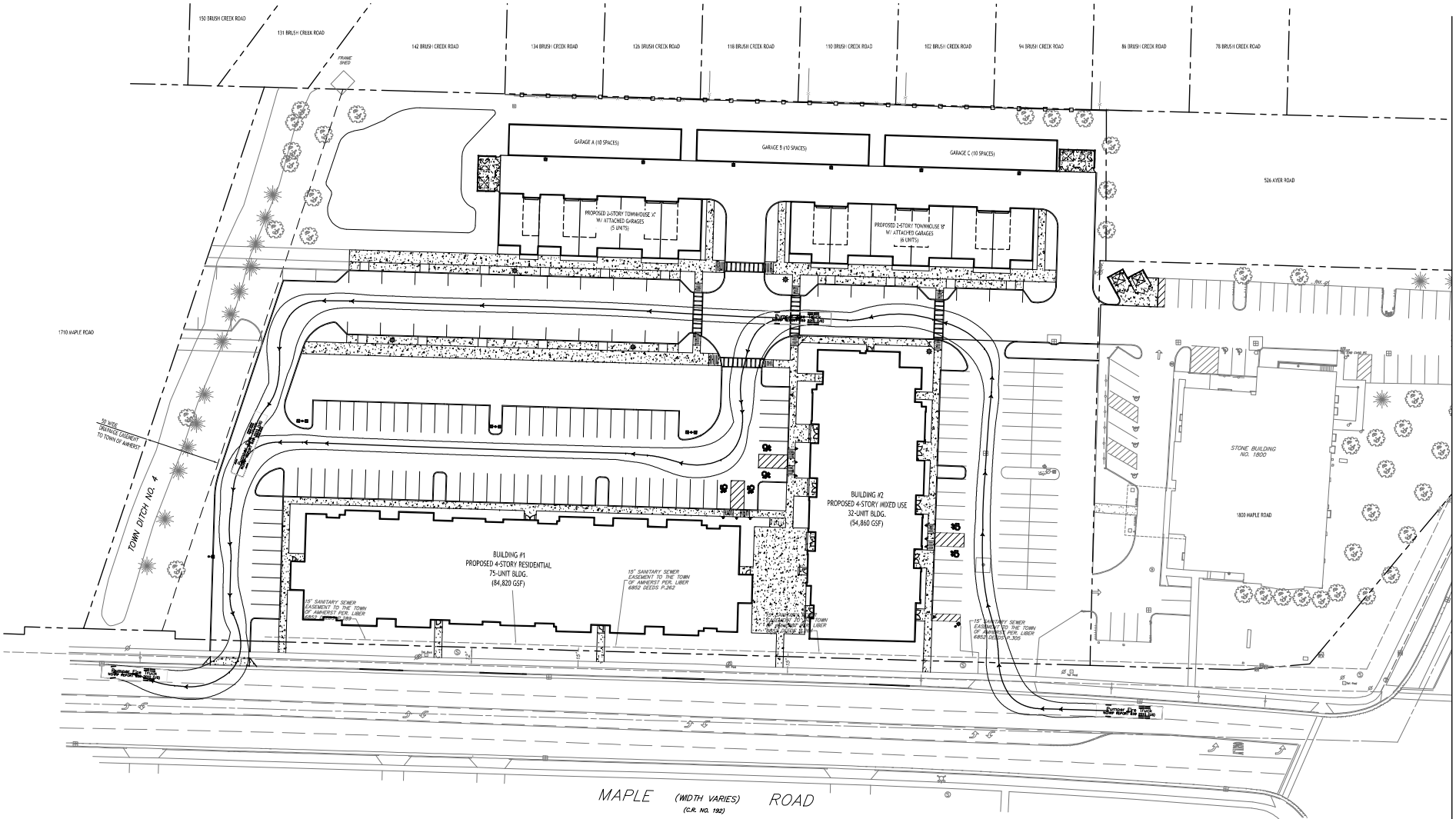
Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-401

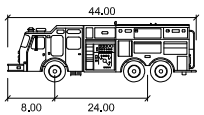
Project No:

Packet Pg. 471

1.a



Site Plan
SCALE: 1"=30'



Pumper Fire Truck

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 37.8

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 10 0 30 60FT.

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Greensboro, North Carolina 27406
Phone: (336) 937-0909

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:
Fire Truck Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
CF-100

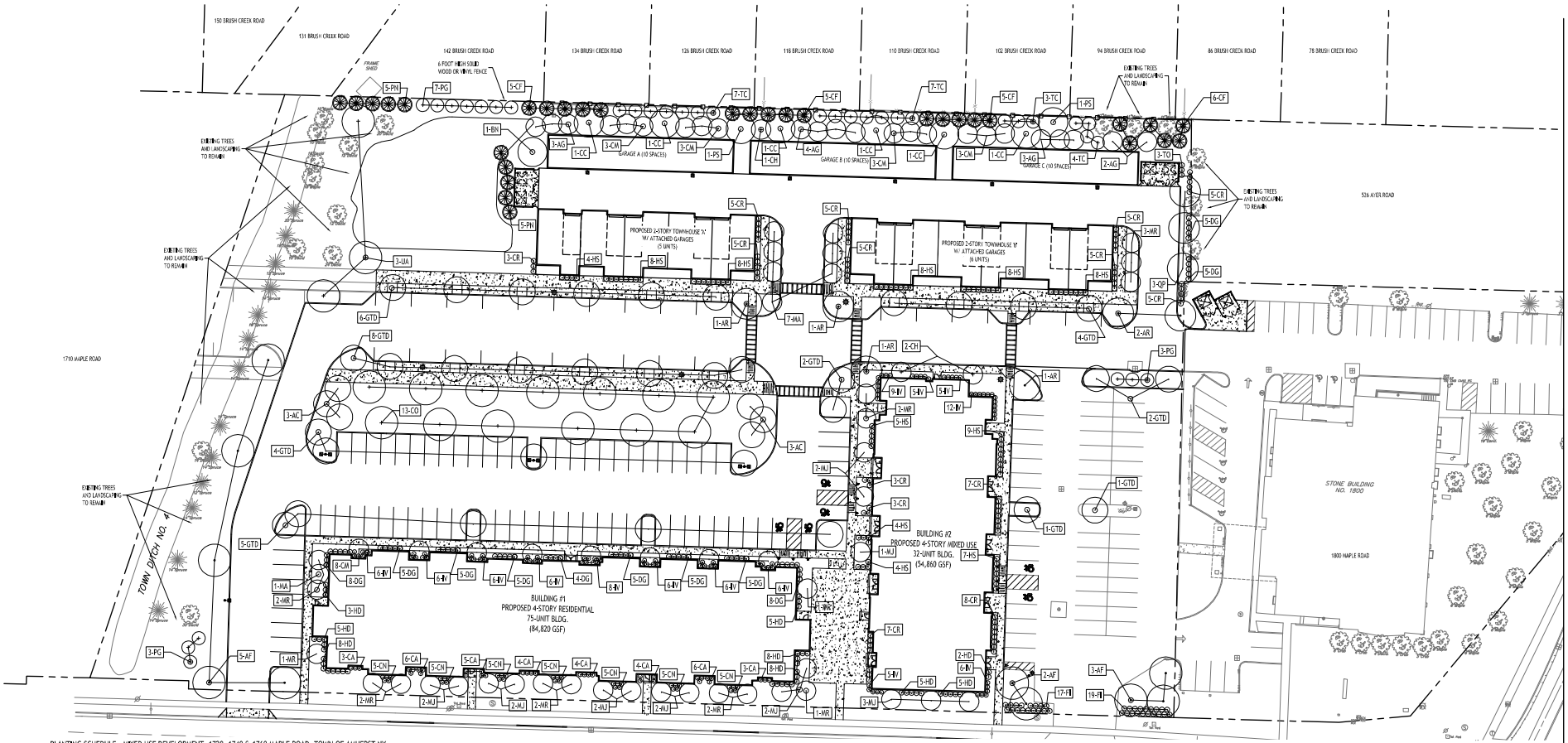
Project No:

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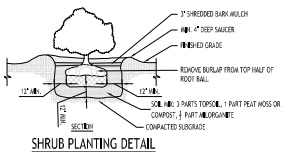
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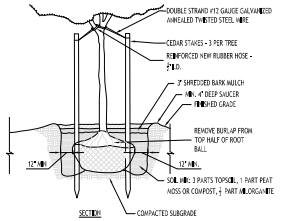
PLANTING SCHEDULE - MIXED USE DEVELOPMENT, 1720, 1740 & 1760 MAPLE ROAD, TOWN OF AMHERST NY

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
AF	10	ACER x FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	2–1/2" – 3" CAL.	B&B
AG	12	GINKGO BIOBA	GINKGO "AUTUMN GOLD"	2 1/2" – 3" CAL.	B&B
AR	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	1 1/2" – 2" CAL.	B&B
BN	1	BETULA NIGRA 'DULLY'	HERITAGE RIVER BIRCH	10'–12' HT.	MIN. MULTI-STEM (3-MIKE MIN)
CC	6	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2" – 3" CAL.	B&B
CO	13	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE'	PRAIRIE PRIDE HACKBERRY	2 1/2" – 3" CAL.	B&B
GTD	33	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	DRAVES THORNLESS HONEYLOCUST	2 1/2" – 3" CAL.	B&B, HT. OF 45' & 20' WIDE
PS	2	PRUNUS SEROTINA	BLACK CHERRY	2 1/2" – 3" CAL.	B&B
QP	3	QUERCUS PALUSTRIS	PIN OAK	2 1/2" – 3" CAL.	B&B
TC	21	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LITTLELEAF LINDEN	2 1/2" – 3" CAL.	B&B
UA	3	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON ELM	2 1/2" – 3" CAL.	B&B
		SMALL/ORNAMENTAL TREES			
AC	6	AMELANCHIER CANADENSIS	SERVICEBERRY	7' – 8' HT.	B&B, MULTI-STEM
CH	3	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1 3/4" – 2" CAL.	B&B, THORNLESS
CM	20	CERCIS CANADENSIS 'MERLOT'	MERLOT EASTERN REDBUD	1–3/4" – 2" CAL.	B&B
MA	8	MALUS 'ADIRONDACK'	ADIRONDACK FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MJ	18	MALUS 'RED JEWEL'	RED JEWEL FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MR	17	MALUS 'ROYAL RAINDROPS'	ROYAL RAINDROP CRABAPPLE	1–3/4" – 2" CAL.	B&B, 15' WIDE
		EVERGREEN TREES			
CF	21	ABIES CONCOLOR	CONCOLOR FIR	5' – 6' MIN. HT.	B&B, FULL TO GROUND
PG	13	PICEA GLAUCA	WHITE SPRUCE	5 ' –6' MIN. HT.	B&B, FULL TO GROUND
PN	10	PINUS RESINOSA	RED PINE	5' – 6' MIN. HT.	B&B, FULL TO GROUND
TC	11	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LITTLELEAF LINDEN	2–1/2" – 3" CAL.	B&B
		SHRUBS			
CN	35	CALLICARPA X 'NCCX2'	PEARL GLAM BEAUTYBERRY	24" HIGH MIN.	NO. 3 CONT
CR	76	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1–3/4" – 2" CAL.	B&B, THORNLESS
DQ	60	DIERVILLA 'G2XBB644'	KODIAK ORANGE DIERVILLA	24" HT MIN., NO. 3 CONT.	
FI	36	FORSYTHIA X INTERMEDIA 'KOLGOLD'	MAGICAL GOLD FORSYTHIA	24" HIGH MIN.	NO. 3 CONT.
HD	47	HYPERICUM X 'DEPPE'	SUNNY BOULEVARD HYPERICUM	24" HIGH MIN.	NO. 5 CONT.
HS	78	HYDRANGEA SERRATA 'SWMAKTSR'	TUFF STUFF RED HYDRANGEA	24" HIGH MIN.	B&B
IV	92	ITEA VIRGINICA 'SMNVOFC'	SCENTLANDIA SWEETSPIRE	18" HIGH MIN.	NO. 3 CONT.
TO	3	THUJA OCCIDENTALIS 'ART BOE'	NORTH POLE ARBORVITAE	4' HIGH, NO. 3 CONT.	B&B, FULL TO GROUND
		ORNAMENTAL GRASS			
CA	35	CALAMAGROSTIS X ACUTIFOLA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 3 CONT.	

NOTES:
1. EVERGREEN TREE HEIGHT SHALL BE MEASURED FROM THE BOTTOM OF LEADER.
2. ORNAMENTAL GRASSES SHOULD BE PRUNED BACK IN LATE FALL OR EARLY SPRING, TO ALLOW FOR NEW FOLIAGE TO GROW IN SPRING.
3. ALL PLANTING BEDS & TREE PITS SHALL RECEIVE A MIN. 3" DEPTH OF DARK SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE CALLED OUT ON PLANS.



SHRUB PLANTING DETAIL



TREE PLANTING DETAIL

N Landscape Plan
SCALE: 1"=30'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30' 10 0 30 60FT.

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Phone: (716) 842-1165

Mixed Use Development
1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:
No. Description Date

Robert C. Walter, RLA
Registered Landscape Architect
American Society of Landscape Architects
3765 Dodge Road, East Amherst, NY 14051-2113
Phone: 716-634-4704
RCWLandscapeArchitect@gmail.com

DRAWING NAME:
Landscape Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
L-100

Project No:

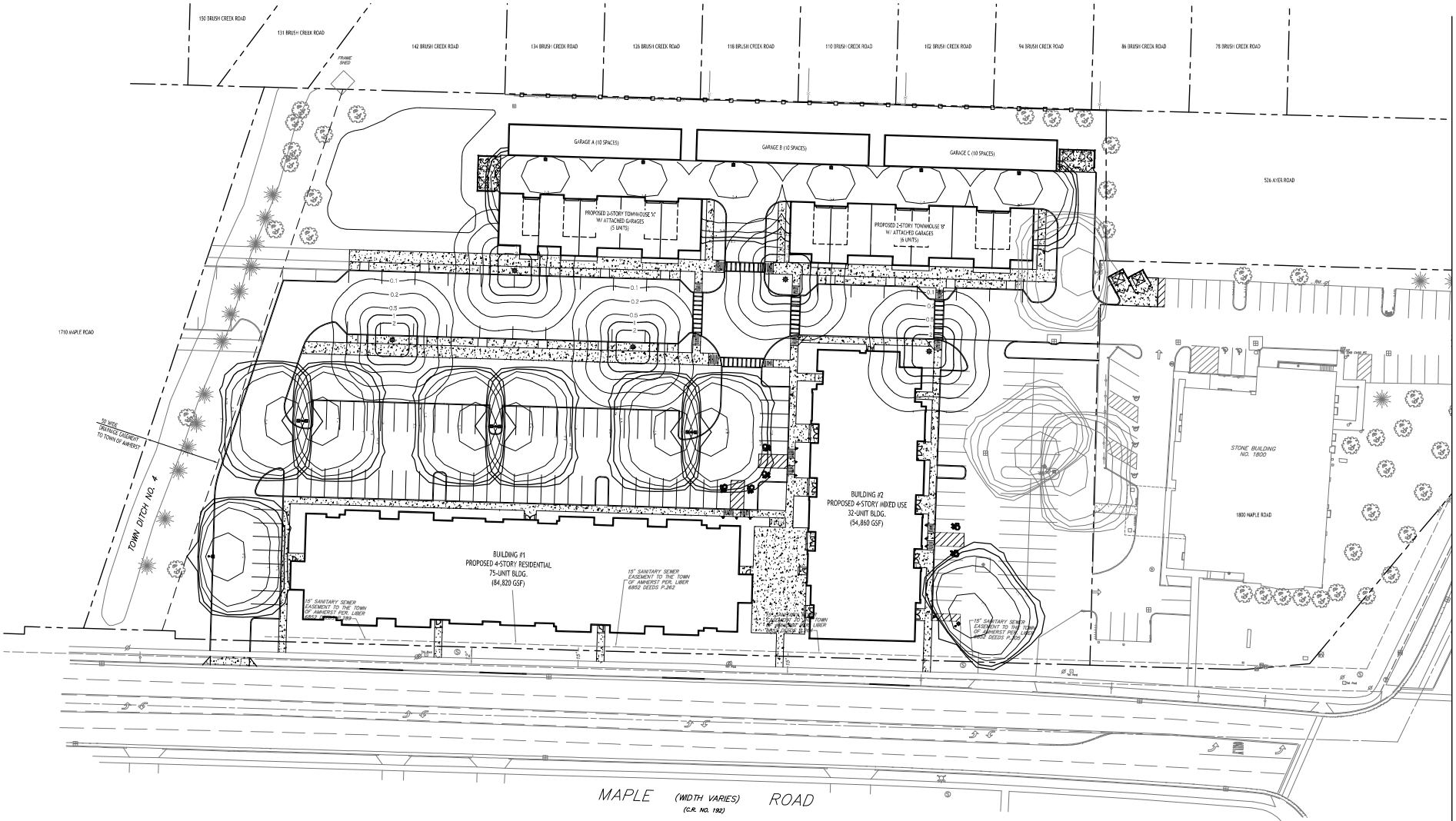
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Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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Lighting Plan

SCALE: 1"=30'

Luminaire Schedule			
Symbol	Qty	Label	Description
●■	39	S1	EAL503_D4AF740

NOTE:
1. ALL SITE LIGHTING TO BE DARK SKY COMPLIANT AND AIMED AT 90 DEGREES. LIGHT POLES TO BE MOUNTED AT 15 FT.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 10 0 30 60FT.

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Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date

DRAWING NAME:
Lighting Plan

Date: 8/21/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
LP-100

Project No:

Appendix I

Geotechnical Report by: Barron & Associates

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment 'A'

BARRON & ASSOCIATES, P.C.
10440 Main Street
Clarence, New York 14031

Tel: (716) 759-7821 www.barronandassociatespc.com Fax: (716) 759-782

January 9, 2009

Job No: 09-510

McGuire Development Company
560 Delaware Avenue
Buffalo, New York 14202

RECEIVED
JAN 19 2010
TOWN OF AMHERST
PLANNING DEPT.

ATTN: Mr. James F. Dentinger

RE: Geotechnical Engineering Report
Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie Co., New York

Gentlemen:

This report presents the findings of the subsurface investigation program and geotechnical engineering recommendations for the above referenced project. The geographic orientation of the project site is illustrated on the U.S. Geologic Survey (USGS) site location map in Figure No. 1. The project site is illustrated in Figure No. 2, entitled "Test Boring Location Plan", which includes: the approximate location of 14 test borings that were drilled by Buffalo Drilling Company, Inc. (BDC); relative ground surface elevations; and additional site details. The locations of the test borings were selected by the client's design representative. Borings B-5, B-9, and B-13 were moved slightly from their original locations.

EXPLORATION METHODS

Sampling Method: A track-mounted Diedrich D-50 rotary drill rig was used to drill 14 test borings to depths of approximately ten to 34 feet below the ground surface by using 2-1/4 inch inside diameter (ID), continuous flight hollow stem augers. Samples were recovered by driving a standard split-spoon sampler (2-foot long by 1-3/8 inch inside diameter) 24 inches with a 140-pound hammer falling 30 inches per blow per the American Society of Testing and Materials (ASTM) Standard D1586. The number of blows from six to 18 inches of penetration is defined as the Standard Penetration Test (SPT) N-value. An N-value of greater than 100 and auger refusal, which may infer the top of bedrock, were encountered at the deepest boring B-8. Spoon refusal and/or auger refusal may also reflect a boulder and/or cobble-laden formation.

Any encountered groundwater conditions are documented in the field on the driller's logs for each test boring. If indicators of groundwater are observed on the sampling equipment, the depth to groundwater is also checked and measured through the hollow stem augers at the completion of the sampling efforts.

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SP-2-10 1750+1800 MAPLE RD

Classification: The retrieved soil and fill samples were initially logged in the field by the driller, and a portion of each sample was placed and sealed in a glass jar. Boring logs, which are included in Appendix A, were based upon the field logs and a second visual classification of recovered samples in the laboratory by a geologist. Classification/identification of samples, as noted on the boring logs, is based on the Unified Soil Classification System (USCS) in the ASTM D2487/D2488. Refer to Appendix B entitled, "Geotechnical Reference Standards", for an explanation of the terminology that is used for soil and rock descriptions.

Laboratory Testing: Laboratory testing was undertaken on several retrieved split spoon samples. The overall laboratory testing program consisted of the following test methods:

- Water (Moisture) Content of Soil — ASTM D2216
- Liquid Limit, Plastic Limit, and Plasticity Index of Soils — ASTM D4318

Table No. 1 presents the tabulated results of the physical/soil index properties. The associated graphical illustration of the data is included in Appendix C.

SITE AND SUBSURFACE CONDITIONS

General: The proposed site for development is addressed as 1730 to 1800 (even) Maple Road in the Town of Amherst, Erie County, New York. As shown in Figure No. 2, the project site for development is located in the central to western sections of approximately 5.6 acres of land. Three residential structures, gravel-covered and paved driveways, and a garage exist in the southern part of the site. The eastern section of the site is asphalt paved, while an earthen sports court exists in the north central part of the site. The development area is predominately occupied by landscaped grass and trees/brush. The site topography is relatively level, but slopes slightly downward from the east to the west.

Subsurface Soil Conditions: In general, subsurface conditions were noted to consist of a topsoil veneer over isolated pockets of granular and cohesive fills that overly a naturally deposited silty clay soil atop a clayey glacial till on a silty sand glacial till unit over an apparent shale bedrock. The topsoil ranged from two to eight inches thick, with four to five inches being the mid-range thicknesses. The topsoil thickness may be expected to vary across the site for development and was noted to be absent at boring B-14. At the existing driveways on the southern side and paved parking lot in the eastern part of the development, the asphalt pavement and subbase gravel thicknesses were not determined in this investigation.

Beneath the topsoil veneer at borings B-2, B-12 and B-14 (to the west of the existing asphalt parking lot), an isolated pocket of an upper cohesive fill and pockets of granular fill were present and extended to approximately two feet (at boring B-12) to six feet (at boring B-2) below the ground surface. At test boring B-2, the approximate two foot thick pocket of a moist cohesive fill consisted of a stiff/very stiff, moderately plastic silty clay with lesser amounts of gravel and slag and trace amounts of fine-sized to

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coarse-sized sand. The granular fills consisted of a non-plastic, fine-sized to coarse-sized sand with varying amounts of gravel, lesser amounts of concrete and slag, and trace amounts of silt, glass, and wood. The granular fills were in the low-level medium dense state to a very dense state (at boring B-2). The very dense state may also reflect a subsurface obstruction (e.g., concrete slab/fragments). The moisture content of the sand fills was in a moist state, except for a wet condition at boring B-12.

Granular and cohesive fills are generally placed in uncontrolled and uncompacted conditions; which are questionable to unsuitable for direct foundation bearing purposes. The characteristics of the granular fills can be improved with proper sorting of deleterious materials and oversized fractions (if present), proper preparation (i.e., drying and blending), and compaction. The cohesive fill may be difficult to compact. If encountered beneath the fill, buried woody vegetation and all organic laden materials (e.g., buried topsoil layer) are unsuitable for load bearing footing conditions.

Beneath the topsoil at boring B-7 (in the central part of the proposed western building wall line), an apparently isolated pocket of an approximate two and one-half foot thick naturally deposited granular soil was encountered and extended to a depth of three feet below the ground surface. This granular soil consisted of a moist, non-plastic, silty fine-sized sand. The loose relative density state of this soil type may be improved with proper preparation (i.e., drying and blending) and thorough compaction. Due to the high silt content, it may be very difficult to achieve a desired compaction state for this soil type; thereby, making it unsuitable as a direct footing supporting media. Note that the granular fills and natural soil types have been differentiated to the extent possible in this investigation.

Beneath the topsoil, granular fill and natural silty sand soil, a variably thick naturally deposited cohesive soil was encountered and extended to six to 17 feet below the ground surface. This unit was the full depth of drilling at most of the shallower boring locations. The cohesive soil generally consisted of a moderately plastic silty clay with trace amounts of fine-sized to coarse-sized sand and gravel. The consistency of this silty clay ranged from the soft to the very stiff states at the zero to two foot depth below the ground surface and graded to the generally very stiff and hard states with increasing depth. The mid-level stiff and poorer states at the zero to two foot depth and at the proposed footing bearing grade (e.g., boring B-4 at the proposed northeastern building corner) are considered unsuitable to questionable in providing a reliable direct supporting media for the shallow foundations. The moisture content was in a moist state and grade to a wet state at approximately eight to ten feet below the ground surface. This natural silty clay soil is considered to have a low expansion potential.

Beneath the silty clay, a naturally deposited cohesive glacial till unit was encountered and extended the full depth of drilling at all deeper (greater than 15 feet) boring locations, except the deepest boring B-8. The cohesive till consist of a hard and moderately plastic silty clay with lesser amounts of gravel and fine-sized to coarse-sized sand. The sand and gravel content increased with increasing depth within the

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clayey till. At the deepest boring B-8, a very dense silty fine-sized sand was present and extended the full depth of drilling. Within the glacial till, spoon refusal (i.e., N-values of 50+ to 100+) conditions were encountered and may reflect a boulder/cobble condition (such as that suspected at boring B-10). The ability to auger, with the drill rig, to these levels would suggest that the upper cobbles-boulders can be removed with conventional excavating equipment (e.g., backhoes, excavators, caisson/drilled pier drill rigs). The moisture content of the glacial tills was in the moist to predominately wet states.

Bedrock: N-values of greater than 100 and/or auger refusal, which are generally inferred to be top of bedrock, were encountered at the deepest test boring B-8. The top of apparent bedrock surface is believed to be approximately 34 feet or more below the ground surface (relative elevation of 63 feet or lower). Based upon the regional geology, the bedrock is expected to be the Camillus Shale.

Groundwater: No appreciable amounts of groundwater were encountered at the test borings during or at the completion of drilling operations, except borings B-4 and B-8. The groundwater depth at boring B-4 was nine feet below the ground surface (relative elevation of 85.1 feet), while a depth of seven feet (relative elevation of 89.8 feet) was present at boring B-8. Boring B-8 was advanced to the top of the apparent bedrock surface and most likely represents the artesian (i.e., pressurized) groundwater condition within the bedrock. Based upon the wet soil moisture conditions, the static groundwater level is believed to be approximately ten feet or more below the ground surface (relative elevation of 87 feet or lower). Due to the site topography, the regional groundwater flow direction is expected to be to the north. Note also that the surficial granular natural soils/fills, which overly the cohesive soils/fills, are conducive to the creation of seasonally localized perched groundwater table conditions.

Note that the groundwater readings were taken at completion of drilling efforts and, therefore, an adequate amount of time for the groundwater level to recharge to static conditions was probably not allowed. Fluctuations in the groundwater level may occur due to other factors than those present during field operations.

EARTHQUAKE/SEISMIC CONSIDERATIONS

Site Class Definition: For the given site conditions, the most applicable site definition is Site Class C, as listed in Table 1615.1.1 and Table 1615.1.5 of the Building Code of New York State, © 2007.

Liquefaction Potential: For the project site, the design spectral response acceleration parameters S_{DS}, at 0.2 seconds, and S_{D1}, at one second, are 0.23g and 0.067g (g = 32.2 feet/sec^2), respectively, for this part of Erie County, New York. These values have a two percent probability of being exceeded in 50 years. Based upon the above conditions and an approximate magnitude 6.0 earthquake on the Richter Scale, the potential for liquefaction or settlement of the Site Class C soils is considered extremely low.

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FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

General: This section will present and discuss recommendations on foundation design and construction, placement of controlled fills, and subgrade and base layer requirements for concrete floor slabs. As shown in Figure No. 2, the proposed two-story slab-on-grade building, with approximately 23,400 square feet in first floor building footprint area, is located in the central section of the overall site. Two storm water detention basins are proposed to the north of the building. The ground surface is relatively level, but slopes slightly downward from the eastern to the western parts of the site for development.

For the purposes of this report, top of building finish first floor for the proposed building is taken at a relative elevation of 97.5 feet ±. The maximum design bearing wall and column loads are not expected to exceed six kips per lineal foot and 150 kips, respectively. The maximum live floor loads are taken as 100 pounds per square foot (psf).

Site Preparation and Earthwork: General site preparation will include the demolition and complete removal of any encountered foundations and floor slabs, and removing all unsuitable surficial material (i.e., asphalt pavement, concrete, brick, expansive slag, organic or topsoil layer, and construction and demolition-like fill) to a depth where firm, granular or cohesive fills or naturally occurring soils are encountered. It is recommended, particularly in the location of the proposed structure, that any slag and/or cinder/ash containing material, if encountered, should be tested to determine the expansion and corrosion characteristics prior to use on-site. Any rubble-like and brick fill, boulders, or wood fill in particular, if encountered, will require undercutting. The proposed building and paved areas are to be proofrolled with a fully loaded ten-wheel dump truck. All encountered soft and disturbed zones should be undercut and stabilized with granular fill that is placed in compacted lifts prior to placement of additional fill materials above. Refer to Appendix E entitled "General Earthwork Specification" for definition of fill types and gradation, recommended minimum compaction requirements for various site developments, and placement and compaction methods. The NYS Department of Transportation (NYSDOT) specification numbers for typical aggregate subbase/base course components are Item No. 304.12 (Metric) Subbase Course, Type 2 (< 2 inch maximum size), which is preferred, or Item No. 304.14 (Metric) Subbase Course, Type 4 (< 2 inch maximum size).

As shown in Figure No. 2, the proposed site for development is currently occupied by three residential structures and one detached slab-on-grade garage. Residential gravel-covered and paved driveways, a earthen sports/recreation court, and an asphalt paved parking area also exist on the proposed site for development. The residential structures presumably have basement areas. One of the residential structures and the garage are located along the southern building wall line of the proposed building. Since cavities (from the footings, foundation walls, basements, and tanks, as encountered) would remain, backfilling in compacted lifts with several feet of controlled select granular fill, such as a number two crusher run stone or with suitable stripped and approved on-site fill material, would be required.

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It is unknown if any former residential/commercial structures existed on the project site. It is also unknown if any former footings and foundation walls may be buried at the proposed site. Septic tank locations and the abandonment conditions or practices are normally unknown. If encountered during site development, it is recommended that any tanks should be properly removed under the applicable local and state regulations. The remaining cavities from the preceding conditions should be backfilled with select/approved granular fill that is placed in compacted lifts.

Shallow Foundation: The recommended foundation type is shallow footings. Continuous strip and spread exterior footings would bear at a relative elevation of three and one-half feet or lower below final grade. A three and one-half foot minimum footing depth (as required by local or New York State code) is required to provide adequate protection from frost for exterior footings. Interior footings are recommended to bear at the same elevation as the exterior footings.

The presence of the fill materials and of the mid-level stiff/low-level medium dense or poorer natural soils at the zero to two foot depth and at footing bearing grade are factors that create unsuitable direct footing bearing conditions for the proposed building. The exterior and interior footings are recommended to bear on the approved upper level stiff or better/thoroughly compacted natural silty clay soil or, as needed (e.g., at borings B-4 and B-7), on a variable thickness of layers of thoroughly compacted (minimum of 95 percent of ASTM D 1557) select/approved granular fill that is placed on the approved upper level stiff or better/thoroughly compacted natural silty clay soil. Alternatively, the interior footings are recommended to bear at a two and one-half foot minimum depth below finish first floor slab and, potentially as needed (e.g., at boring B-5), on a variable thickness of layers of thoroughly compacted (minimum of 95 percent of ASTM D 1557) select/approved granular fill that is placed on the approved upper level stiff or better/thoroughly compacted natural silty clay soil. Undercut areas beneath proposed foundations must extend laterally beyond each vertically projected edge of the foundation by a minimum distance equal to one-half the total depth of the undercut or equating to a slope of two vertical to one horizontal from the bottom foundation corner. The undercuts and placement of compacted select/approved granular fill are required, because the upper fills and natural silty clay soil from the zero to two foot depth, at a minimum, would result in unacceptable differential settlements.

Wall footings should have a minimum two-foot width and column footings should have a minimum three-foot width. Based on the above described conditions, the recommended maximum net allowable foundation bearing pressure is 2,500 pounds per square foot (psf) of bearing area. All footings for the proposed building are recommended to be designed near the same contact pressure. The recommended maximum net allowable foundation bearing pressure is based on generally accepted design methods for cohesionless and cohesive soil conditions. Based on the provisions of the above recommendations, estimated design requirements, utilization of proper construction procedures, and

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experienced field supervision and testing personnel, total and differential settlements are estimated to be less than one inch and 3/4's inch, respectively. Refer to the engineering computations, which are included as Appendix D, for additional foundation design and construction details.

Additional Foundation Considerations: In addition to the above, the following recommendations will provide additional assurances with regard to proper foundation construction.

a) All fill placed beneath, adjacent, or above foundations must comply with the "General Earthwork Specification", included as Appendix E.

b) Backfill of foundations with approved select granular fill must be completed prior to placement of substantial superstructure loads, except for basement walls or substructure areas that may additionally require superstructure loads and possibly internal bracing.

c) The upper silty materials may rut and "pump" if exposed to excessive surface water and repeated construction traffic. Proper site management and fill placement operations are needed to minimize costly undercuts and subgrade repairs prior to placement of concrete slabs and asphalt pavement. It is noted that construction during wet/rainy and/or Fall and Spring conditions may require added precautions and possibly a thicker base layer to maintain a stable subgrade condition.

d) Step footings, if utilized, should have a rise to run ratio of 1:2, with a two-foot maximum rise and a four-foot minimum run between steps or as recommended by the design structural engineer.

e) The recommended at rest (rigid wall), active, and passive earth pressure coefficients for select granular sandy gravel fill against an earth retaining structure/wall are 0.76, 0.24, and 2.8, respectively. The respective equivalent lateral fluid pressures are recommended to be 90, 30 and 330 psf per foot depth (as included in Appendix D), which are based upon a moist, compacted unit backfill weight of 120 pcf. The at rest value would account for the average expected compaction induced stresses and/or the potential influences of hydrostatic pressure. If a moist, compacted granular sandy silt or silty sand fill is used, the recommended active earth pressure coefficient is 0.33 and equivalent lateral fluid pressure is 45 psf per foot depth, which is based upon a unit backfill weight of 135 pounds per cubic foot (pcf). The lateral fluid pressures can be directly proportioned for other unit weights.

Stabilization of Excavations: The trench/excavation sidewall stability concerns can be addressed with the Occupational Safety and Health Act (OSHA) requirements as set forth in Subpart P of 29 CFR Part 1926, Sections 1926.650 to 1926.652. In lieu of a properly designed shoring system, side slopes of the trench excavation should be one on one (vertical to horizontal distance) or flatter in cohesive soils or one on one and one-half or flatter in the granular materials, as required by OSHA.

Water must not be allowed to accumulate or pond on exposed foundation bearing grades. Surface water and groundwater from within the excavations must be either pumped, diverted or channelized by gravity flow to effectuate the construction of the proposed foundation. As previously discussed, localized perched groundwater table conditions may seasonally be expected to be encountered in the granular fill and/or the natural granular soils that are atop cohesive fills/natural soils.

First Floor Slab: For the most part and based on test results for similar soils/fills, the moderately plastic silty clay natural soil may be difficult to compact in a controlled manner considering the natural moisture

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

contents that are estimated to be at to at to wet of optimum, at the time of this investigation. The excavated and approvable soil/fill types are not expected to be available in any reasonable quantity, except possibly at the proposed storm water detention basins. These soil/fill types may be expected to be suitable for re-use as general fill with the implementation of uniformly applied soil conditioning methods (i.e., drying and blending) and compacted, if additional volume of soil for wall backfill or for raising site grades is needed.

Excavated and approvable granular (i.e., sand or gravel) natural soil/fill is not expected to be available in any reasonable quantity, except for the subbase gravel beneath the existing asphalt pavement in the eastern part of the project site for development. For the most part, granular (i.e., sand or gravel) soil/fill is expected to be acceptable for on-site re-use, as general/ordinary fill without substantial reworking and/or modification. If additional volume of soil for wall backfill or for raising site grades is needed, the implementation of uniformly applied soil conditioning methods (i.e., drying and blending) and compaction is required.

These previously discussed soils or dissimilar excavated materials should not be commingled prior to their use on-site, unless designated for a green area. General fill material is recommended to be placed on prepared and approved subgrade and in accordance with previous recommendations.

A geotextile fabric (such as, Mirafi 500X or 600X, Amoco 2002 or 2006, or equal) that separates the subgrade and the select granular base layer is recommended for sensitive cohesive/fine-grained/silt subgrade soils. This approach will stabilize and provide a workable building pad condition with minimal required repairs.

The approved subgrade will most likely consist of the existing natural silty clay soil and/or a thoroughly compacted and approved granular fill for the proposed building. Above the approved subgrade, a minimum eight-inch select granular fill (i.e., number two crusher run stone or equal) layer is recommended as the base course for the concrete floor slab. The NYS Department of Transportation (NYSDOT) specification numbers for typical aggregate subbase/base course components are Item No. 304.12 (Metric) Subbase Course, Type 2 (< 2 inch maximum size), which is preferred, or Item No. 304.14 (Metric) Subbase Course, Type 4 (< 2 inch maximum size). The floor slab for the proposed building is recommended to have a minimum four-inch thickness or as determined by the design structural engineer. The floor slab reinforcement should be provided through placement of wire mesh or plastic fibers and is also as determined by the design structural engineer.

At the discretion of the design architect, a vapor barrier may be considered for use in the proposed structure. The use of a thin gravel cushion, as a capillary break, or a thin sand cushion over a vapor barrier that is placed beneath the concrete slab are at the discretion of the design architect/engineer or

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

as required by local code. Gradations of gravels that are satisfactory capillary breaks include 1 ¼-inch or ¾-inch crushed stone or aggregates per the ASTM D2321 Types IA, IB and II with less than 5 % fines. A number two crusher run stone may also be applicable, but the gradation and material properties specifications must qualify.

At the assumed final site grades and based upon the presence of the underlying natural soils, the recommended subgrade modulus at the top of the base layer for a concrete first floor slab bearing on an eight inch thick compacted (i.e., minimum 95 percent of ASTM D1557) base layer and prepared soil/fill subgrade (i.e., minimum 92 percent compaction of ASTM D1557) is recommended not to exceed 150 pounds per cubic inch (pci) for design purposes for the proposed building, with a Poisson Ratio of 0.40. Isolation of the floor slabs from the footings-piers-columns and walls do appear to be warranted.

Limitations, Field Inspections and Monitoring: This report is based on the preliminary information that is provided by project representatives and the subsurface conditions that were encountered at the test boring locations. Due to the nature of the investigation method, test pit excavation will provide a greater level of delineation of the subsurface soil/fill/rock conditions than can be defined by the test boring data alone. As detailed in Appendix F "Limitations", modification regarding proposed building/structure locations and other site developments can result in changes to provided recommendations. It is recommended that the geotechnical engineer be provided the opportunity to generally review the final detailed design and contract specifications. Required earthwork and foundation construction should be done under the supervision of experienced construction personnel and in a manner consistent with proven methods. All site work should be carefully monitored and tested by experienced geotechnical personnel to assure compliance with earthwork and foundation construction specifications.

Thank you for the opportunity to assist on this project. If questions should arise, please call the undersigned at your earliest convenience.

Very truly yours,
BARRON & ASSOCIATES, INC.
and
BUFFALO DRILLING COMPANY, INC.

James S. Barron, P.E.
President/Geotechnical Engineer

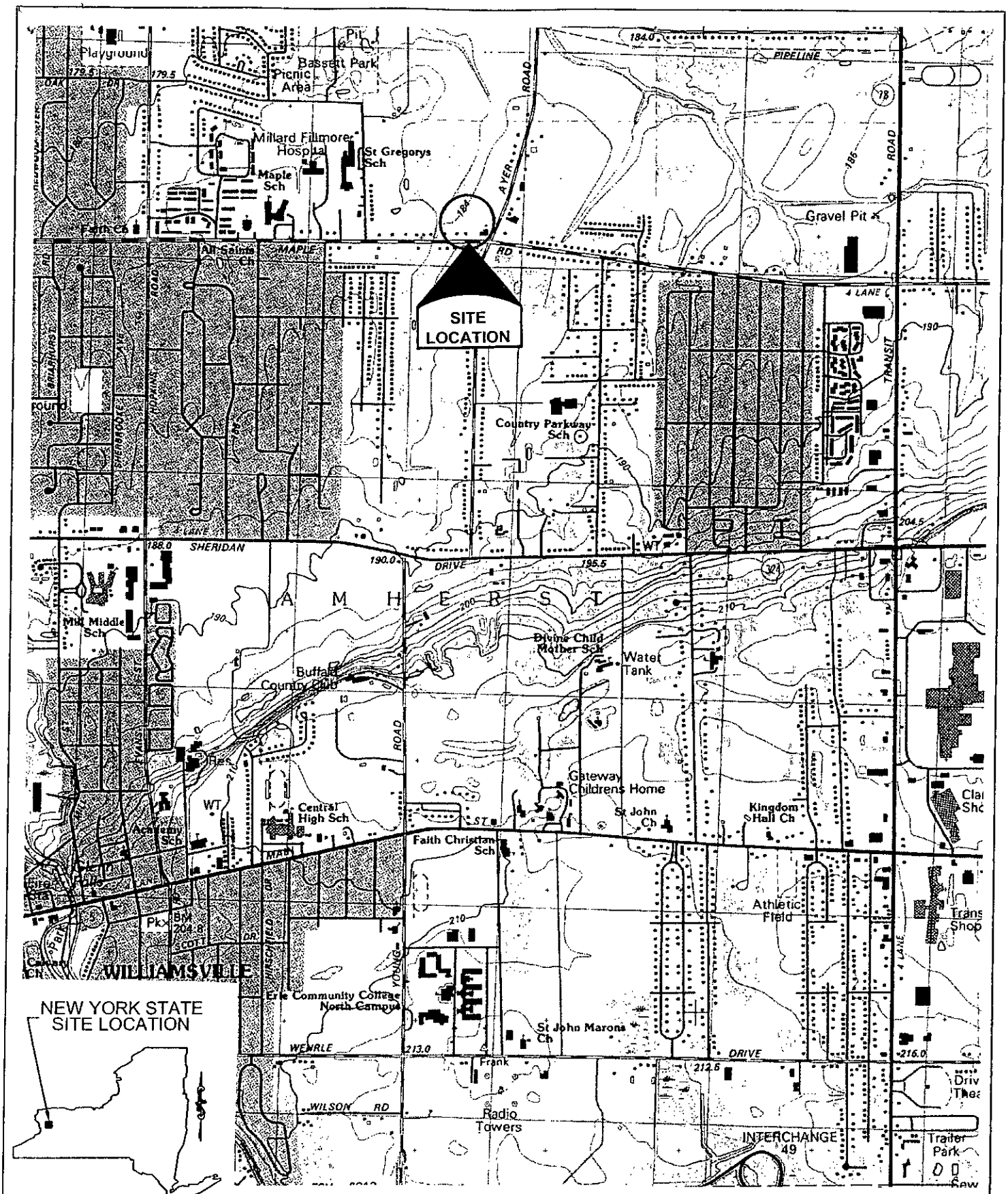
STATE OF NEW YORK
JAMES S. BARRON
58612
LICENSED PROFESSIONAL ENGINEER

1.12.09

Carmen M. Panuccio
Geotechnical Engineer

cc: Mr. Chris Wood – Carmina Wood Morris, P.C. (1 copy)
N:\Reports\Wpp09\09-510.doc

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



NOTE: ELEVATIONS ARE IN METERS

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DRAWN: DAN KASPROWICZ

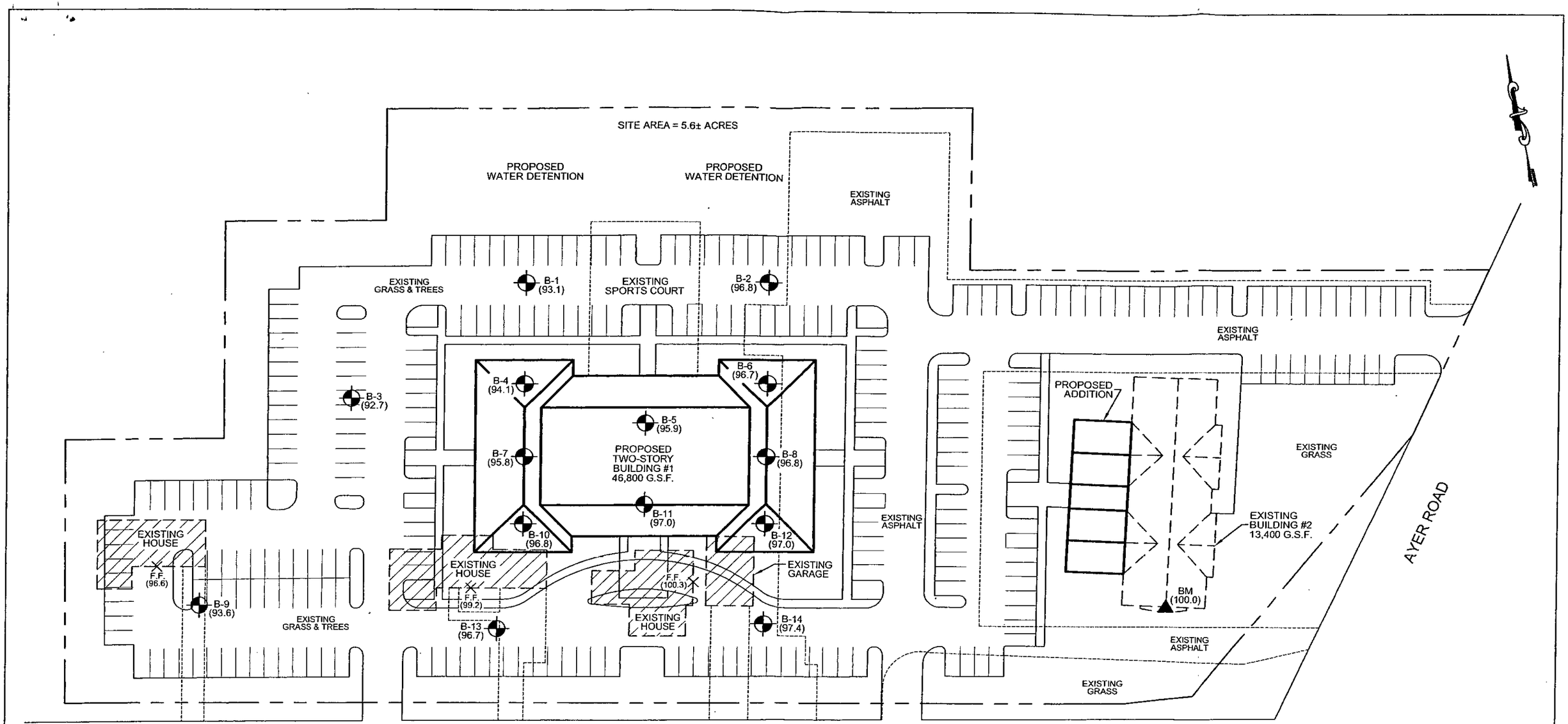
CLIENT: McGUIRE DEVELOPMENT COMPANY
560 DELAWARE AVENUE
BUFFALO, NEW YORK 14202

PROJECT: PROPOSED MAPLE AYER CORPORATE CENTER
1730 - 1800 MAPLE ROAD
AMHERST, ERIE CO., NEW YORK 14221

USGS SITE LOCATION PLAN
LANCASTER, N.Y. QUAD
1982

JOB NO.: 09-510	SCALE: 1" = 2083' ±
DATE: 1/7/2009	FIGURE NO. 1

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



LEGEND

⊕	B-2	= TEST BORING & NO.
	(96.8)	= RELATIVE GROUND SURFACE ELEVATION (FT.)
×		= SPOT ELEVATION
▲	BM	= BENCH MARK (FINISH FLOOR OF EXISTING BUILDING)

NOTES:

1. BORINGS, BUILDINGS, SITE FEATURES, PROPERTY LINE LOCATIONS, AND SCALE OF DRAWING ARE APPROXIMATE.
2. BASE MAP REFERENCE AND BORING LOCATIONS PROVIDED BY CARMINA WOOD MORRIS, P.C., TITLED "SITE PLAN - MAPLE AYER CORPORATE CENTER", PROJECT NO. 08.079, DWG. NO. C-100, DATED 12/5/2008.
3. EXISTING STRUCTURES AND FEATURES PROVIDED BY ERIE COUNTY GIS, WWW.ERIE.GOV.

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DRAWN: DAN KASPROWICZ

CLIENT: McGUIRE DEVELOPMENT COMPANY
560 DELAWARE AVENUE
BUFFALO, NEW YORK 14202

PROJECT: PROPOSED MAPLE AYER CORPORATE CENTER
1730 - 1800 MAPLE ROAD
AMHERST, ERIE CO., NEW YORK 14221

TEST BORING LOCATION PLAN

0 30 60 120

JOB NO.: 09-510	SCALE: 1" = 60' ±
DATE: 1/9/2009	FIGURE NO. 2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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B&A JOB NO: 09-510
CLIENT: McGuire Development Company
PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

TABLE NO. 1
LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth	Moisture Content ASTM D2216	Organic Matter Content ASTM D2974	Unconfined Compressive Strength ASTM D2166	Wet Density ASTM D2166	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classification ASTM D2487 / ASTM D2488 *
							Gravel	Sand	Silt	Clay	LL	PL	PI	
		(ft.)	(%)	(%)	(psf)	(pcf)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(-)
B-10	S-1	0-2	23.7	-	-	-	-	-	-	-	-	-	-	CL
	S-2	2-4	26.4	-	-	-	-	-	-	-	38	24	14	CL
	S-3	4-6	23.8	-	-	-	-	-	-	-	-	-	-	CL
	S-4	6-8	26.3	-	-	-	-	-	-	-	-	-	-	CL
	S-5	8-10	28.6	-	-	-	-	-	-	-	-	-	-	CL
	S-6	10-12	30.1	-	-	-	-	-	-	-	-	-	-	CL
	S-7	14-14.8	10.7	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-8	18-18.4	5.7	-	-	-	-	-	-	-	-	-	-	CL-Till

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX A

TEST BORING LOGS

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

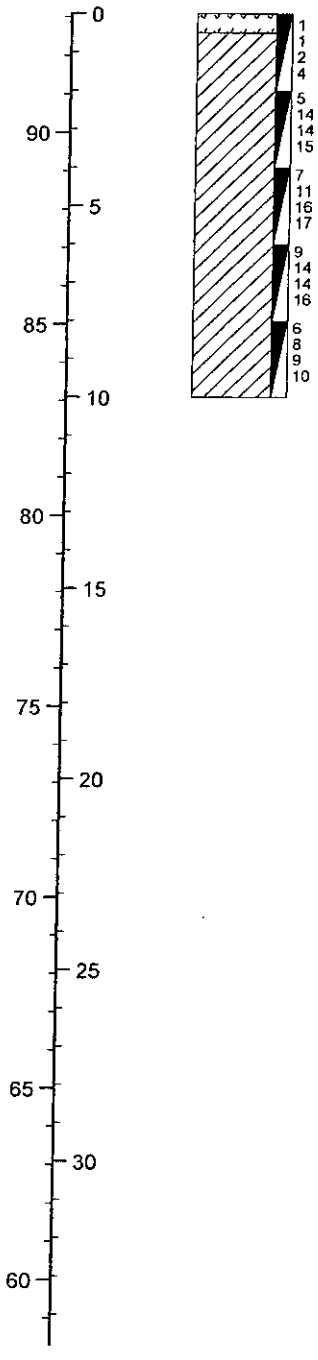
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-1

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/5/09	**SURFACE ELEVATION (ft.):**	93.1
DATE COMPLETED:	1/5/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0'- 2.0'	3	40	Topsoil (6") Dk. brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL) ...grade: Brown, v. stiff
		S-2 : 2.0'- 4.0'	28	60	Same as S-2
		S-3 : 4.0'- 6.0'	27	55	Same as S-2
		S-4 : 6.0'- 8.0'	28	50	Same as S-2
		S-5 : 8.0'- 10.0'	17	90	Depth to Bottom of Hole: 10.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

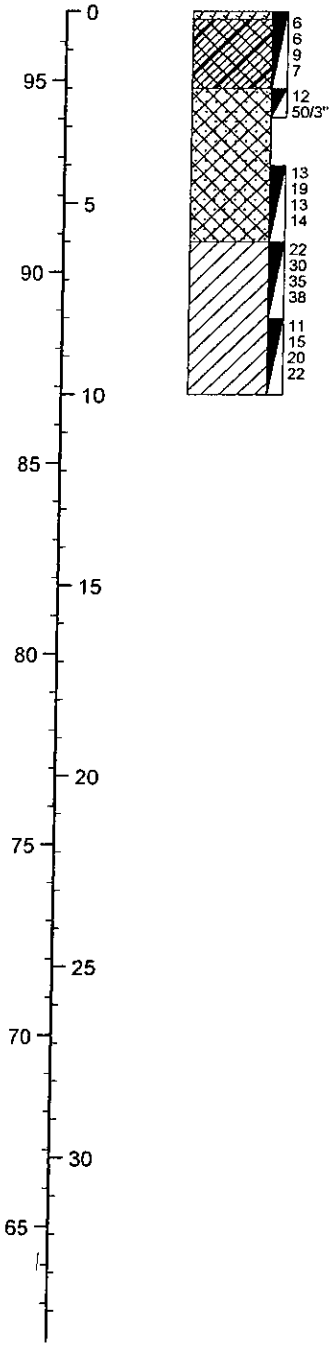
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-2

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	96.8
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
					Topsoil (2")
		S-1 : 0.0'- 2.0'	15	30	Brown, v. stiff Clay, some Silt, little Gravel, little Slag, tr. f/c Sand, mod. plastic, moist (CL-Fill)
		S-2 : 2.0'- 2.8'	50+	10	Dk. gray, v. dense f/c Sand, some Gravel, little Concrete, tr. Silt, moist (SW-Fill)
		S-3 : 4.0'- 6.0'	32	5	...grade: dense, some Concrete
		S-4 : 6.0'- 8.0'	65	10	Brown, hard CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL)
		S-5 : 8.0'- 10.0'	35	60	Same as S-4
					Depth to Bottom of Hole: 10.0 feet

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

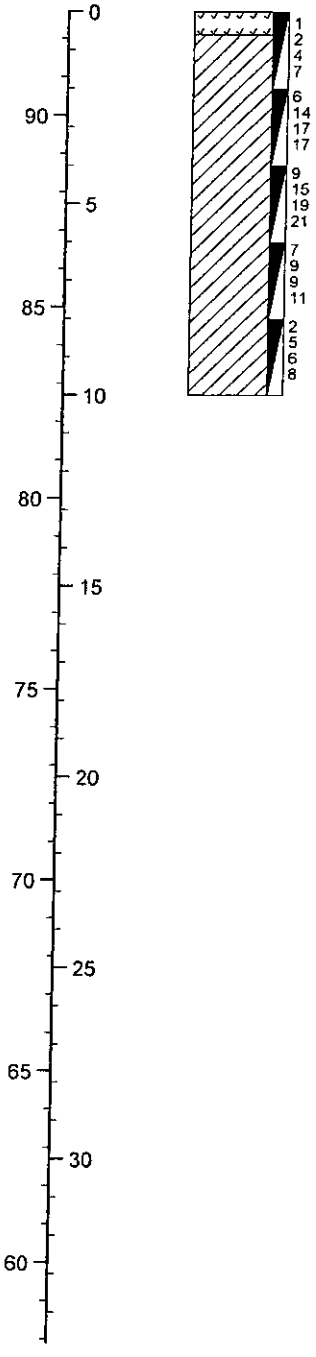
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-3

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/31/08	**SURFACE ELEVATION (ft.):**	92.7
DATE COMPLETED:	12/31/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
					Topsoil (7")
		S-1 : 0.0'- 2.0'	6	70	Brown, m. stiff CLAY, some Silt, tr. f. Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0'- 4.0'	31	45	...grade: hard
		S-3 : 4.0'- 6.0'	34	50	Same as S-2
		S-4 : 6.0'- 8.0'	18	70	...grade: v. stiff
		S-5 : 8.0'- 10.0'	11	80	...grade: stiff
					Depth to Bottom of Hole: 10.0 feet

Logged by: R. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

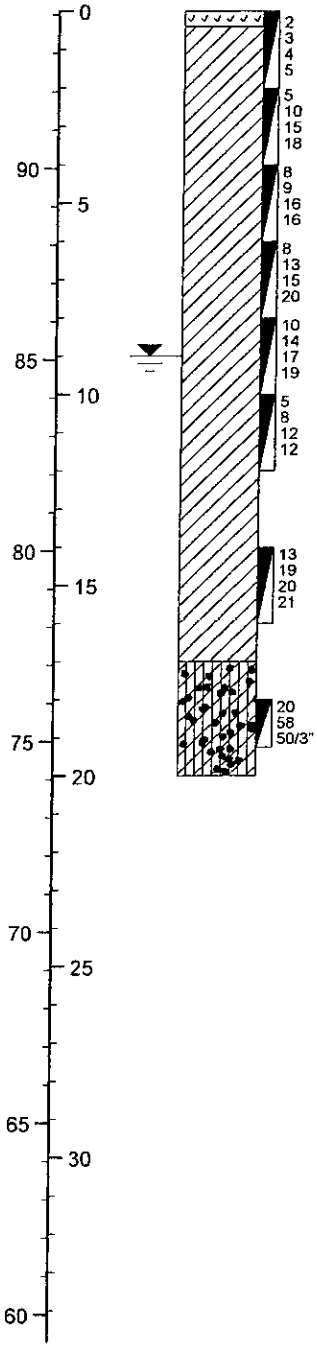
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-4

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	94.1
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	9.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	7	40	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	25	45	...grade: v. stiff
S-3 : 4.0'- 6.0'	25	60	Same as S-2
S-4 : 6.0'- 8.0'	28	70	Same as S-2
S-5 : 8.0'- 10.0'	31	55	...grade: hard
S-6 : 10.0'- 12.0'	20	60	...grade: v. stiff, wet
S-7 : 14.0'- 16.0'	39	0	...grade: hard (No Sample)
S-8 : 18.0'- 19.3'	108+	60	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

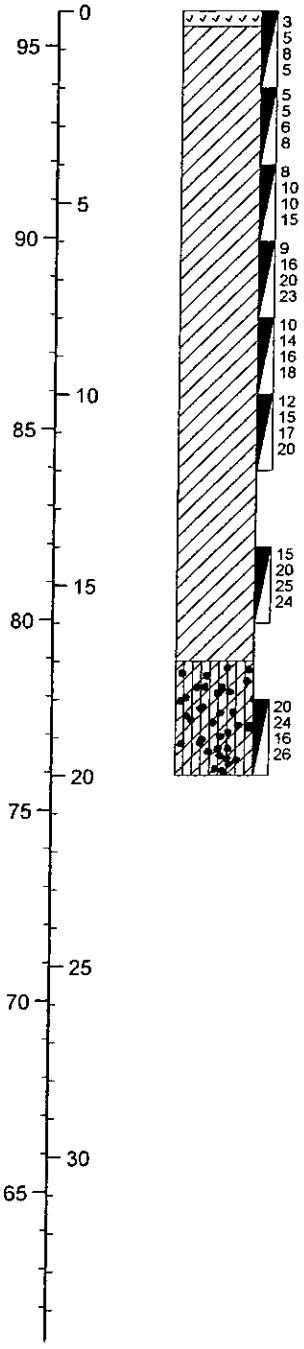
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-5

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	95.9
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	13	45	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	11	5	Same as S-1
S-3 : 4.0'- 6.0'	20	65	...grade: v. stiff
S-4 : 6.0'- 8.0'	36	45	...grade: hard
S-5 : 8.0'- 10.0'	30	50	Same as S-4
S-6 : 10.0'- 12.0'	32	60	Same as S-4
S-7 : 14.0'- 16.0'	45	0	...grade: hard (No Sample)
S-8 : 18.0'- 20.0'	40	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

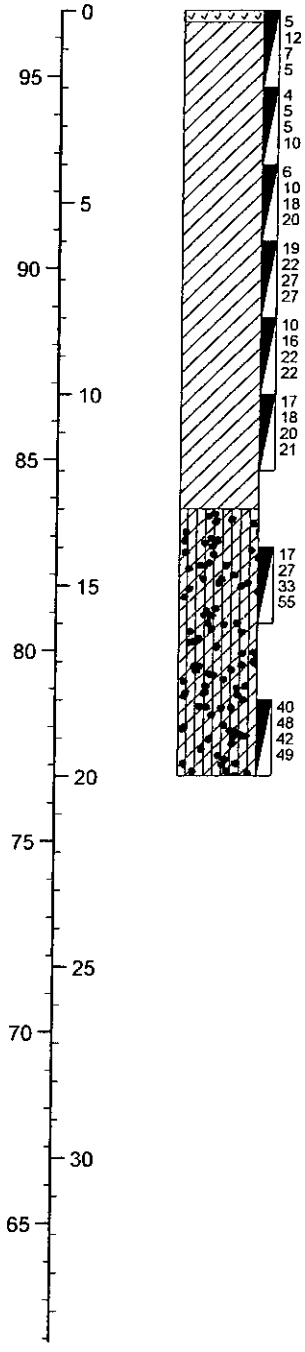
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-6

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	96.7
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0'- 2.0'	19	30	Topsoil (3") Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0'- 4.0'	10	40	...grade: stiff
		S-3 : 4.0'- 6.0'	28	50	...grade: v. stiff
		S-4 : 6.0'- 8.0'	49	20	...grade: hard
		S-5 : 8.0'- 10.0'	38	70	Same as S-4
		S-6 : 10.0'- 12.0'	38	80	...grade: wet
		S-7 : 14.0'- 16.0'	60	55	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
		S-8 : 18.0'- 20.0'	90	60	...grade: Gray, some f/c Gravel
					Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

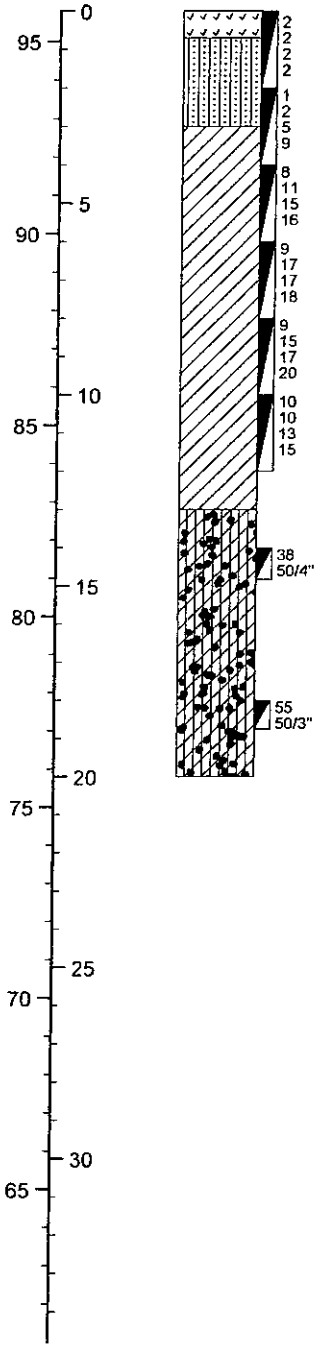
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-7

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	95.8
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (8")
S-1 : 0.0'- 2.0'	4	80	Brown, loose f. SAND, some Silt, tr. Roots, moist (SM)
S-2 : 2.0'- 4.0'	7	50	Same as S-1
S-3 : 4.0'- 6.0'	26	65	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL) ...grade: v. stiff
S-4 : 6.0'- 8.0'	34	40	...grade: hard
S-5 : 8.0'- 10.0'	32	50	Same as S-4
S-6 : 10.0'- 12.0'	23	60	...grade: v. stiff
S-7 : 14.0'- 14.8'	50+	75	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 18.8'	50+	60	...grade: Gray, some f/c Sand
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

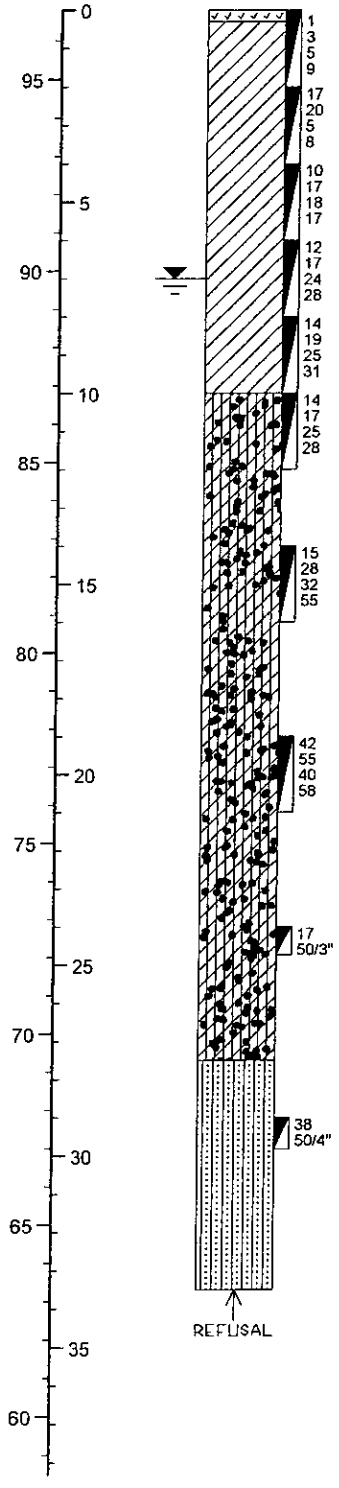
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-8

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (FT):**	96.8
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (FT):** (measured at completion unless indicated below)	7.0



Elevation/ Depth	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0' - 2.0'	8	40	Topsoil (3") Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0' - 4.0'	25	20	...grade: v. stiff, wet
		S-3 : 4.0' - 6.0'	35	0	...grade: hard (No Sample)
		S-4 : 6.0' - 8.0'	41	55	...grade: moist
		S-5 : 8.0' - 10.0'	44	60	...grade: wet
		S-6 : 10.0' - 12.0'	42	65	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
		S-7 : 14.0' - 16.0'	60	35	Same as S-6
		S-8 : 19.0' - 21.0'	95	80	...grade: Gray, some f/c Sand
		S-9 : 24.0' - 24.8'	50+	80	...grade: and Gravel
		S-10 : 29.0' - 29.8'	50+	80	Gray, v. dense f. SAND, some Silt, wet (SM-Till)
					Depth to Bottom of Hole: 33.5 feet

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

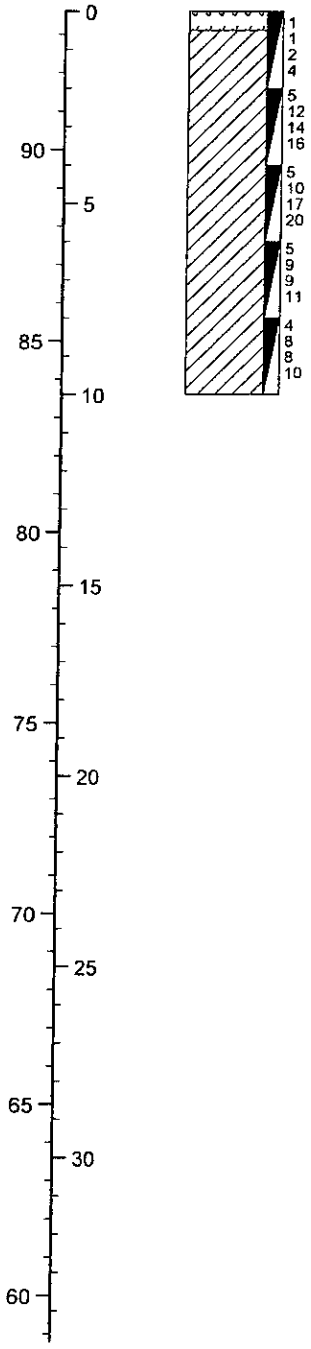
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-9

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/31/08	**SURFACE ELEVATION (ft.):**	93.6
DATE COMPLETED:	12/31/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (6")
S-1 : 0.0'- 2.0'	3	40	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	26	60	...grade: v. stiff
S-3 : 4.0'- 6.0'	27	70	Same as S-2
S-4 : 6.0'- 8.0'	18	75	Same as S-2
S-5 : 8.0'- 10.0'	16	75	...grade: wet
			Depth to Bottom of Hole: 10.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

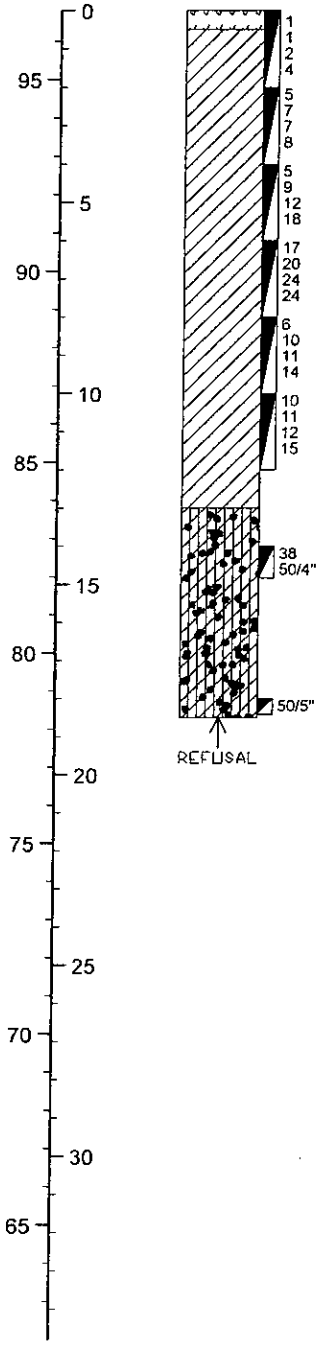
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-10

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/5/09	**SURFACE ELEVATION (ft.):**	96.8
DATE COMPLETED:	1/5/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (6")
S-1 : 0.0'- 2.0'	3	60	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	14	50	...grade: stiff
S-3 : 4.0'- 6.0'	21	60	...grade: v. stiff
S-4 : 6.0'- 8.0'	44	40	...grade: hard
S-5 : 8.0'- 10.0'	21	70	...grade: v. stiff
S-6 : 10.0'- 12.0'	23	75	Same as S-5
S-7 : 14.0'- 14.8'	50+	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 18.4'	50+	90	...grade: Gray, and Gravel *(Auger refusal suspected to be boulder within till.)*

Depth to Bottom of Hole: 18.5 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

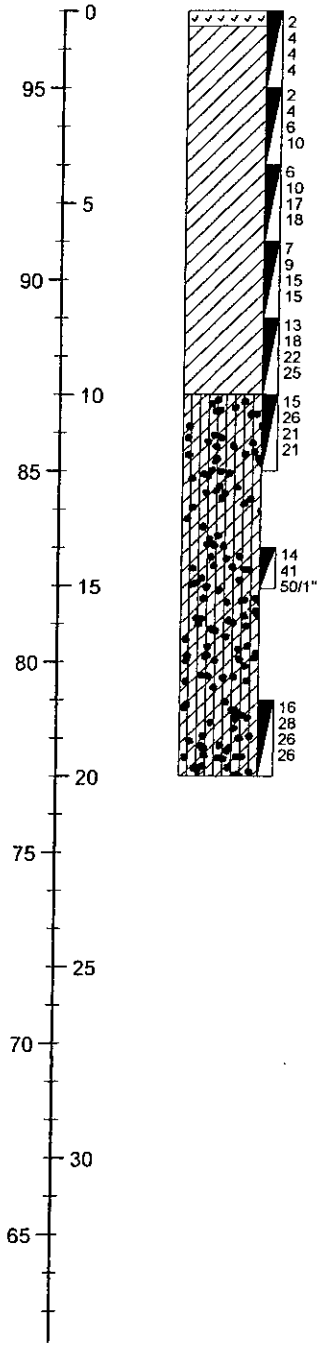
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-11

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	97.0
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	8	30	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	10	30	Same as S-1
S-3 : 4.0'- 6.0'	27	65	...grade: v. stiff
S-4 : 6.0'- 8.0'	24	60	Same as S-3
S-5 : 8.0'- 10.0'	40	50	...grade: hard, wet
S-6 : 10.0'- 12.0'	47	60	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
S-7 : 14.0'- 15.1'	50+	0	Same as S-6 (No Sample)
S-8 : 18.0'- 20.0'	54	50	...grade: Gray, some f/c Sand
			Depth to Bottom of Hole: 20.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

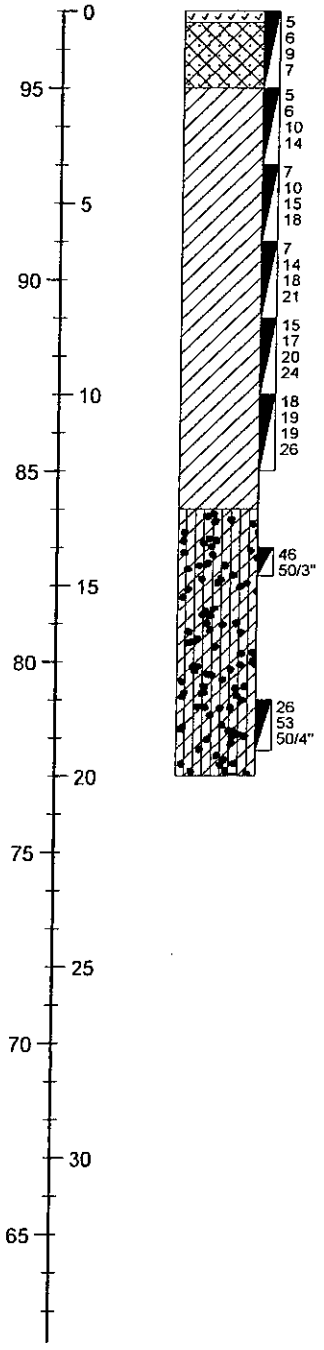
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-12

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	97.0
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (3")
S-1 : 0.0'- 2.0'	15	15	Dk. gray, m. dense f/c Sand, some Gravel, little Slag, tr. Silt, wet (SW- Fill)
S-2 : 2.0'- 4.0'	16	40	Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-3 : 4.0'- 6.0'	25	70	Same as S-2
S-4 : 6.0'- 8.0'	32	50	...grade: hard
S-5 : 8.0'- 10.0'	37	60	Same as S-4
S-6 : 10.0'- 12.0'	38	45	Same as S-4
S-7 : 14.0'- 14.8'	50+	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 19.3'	103+	45	...grade: Gray, some Gravel
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

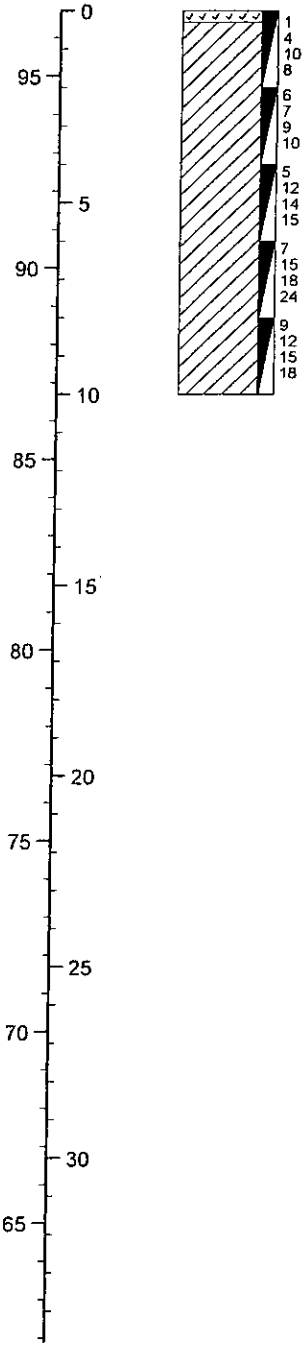
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-13

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/6/09	**SURFACE ELEVATION (ft.):**	96.7
DATE COMPLETED:	1/6/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (4")
S-1 : 0.0'- 2.0'	14	40	Dk. brown, stiff CLAY, some Silt, little Gravel, little f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	16	40	...grade: Brown, v. stiff, tr. Gravel, tr. f/c Sand
S-3 : 4.0'- 6.0'	26	50	Same as S-2
S-4 : 6.0'- 8.0'	33	60	...grade: hard
S-5 : 8.0'- 10.0'	27	20	...grade: v. stiff, wet
			Depth to Bottom of Hole: 10.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

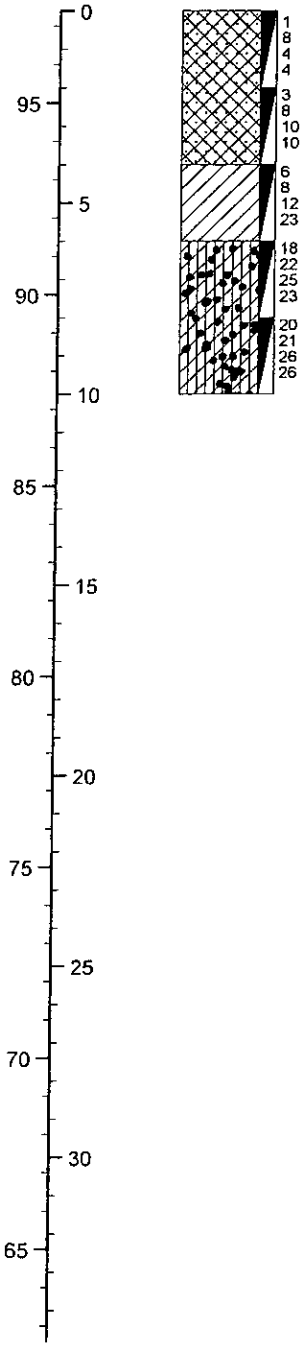
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-14

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/6/09	**SURFACE ELEVATION (ft.):**	97.4
DATE COMPLETED:	1/6/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	12	0	Dk. gray, m. dense f/c Sand, some Gravel, tr. Silt, tr. Slag, tr. Glass, tr. Construction lumber, moist (SW-Fill) *Rock in shoe S-1 is auger cuttings.*
S-2 : 2.0'- 4.0'	18	10	Same as S-1
S-3 : 4.0'- 6.0'	20	50	Brown, v. stiff CLAY, some Silt, tr. f. Sand, mod. plastic, moist (CL)
S-4 : 6.0'- 8.0'	47	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
S-5 : 8.0'- 10.0'	47	40	Same as S-4
			Depth to Bottom of Hole: 10.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX B

GEOTECHNICAL REFERENCE STANDARDS

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

GEOTECHNICAL REFERENCE STANDARDS
SUMMARY OF LOGGING TECHNIQUES

Depth (feet)	Blows per 0.5 foot	Sample No.	N	% REC (RQD)	SOIL AND ROCK DESCRIPTION	Remarks

DEPTH: This column provides the verticle scale of the boring log in feet below ground surface.

BLOWS: The number of blows obtained from each of the 0.5-foot intervals of sampler penetration.

Note:
WR = static weight of drill rods.
WH = static weight of rods and hammer.

SAMPLE IDENTIFICATION NUMBER: An "S" preceding the sample number identifies a Disturbed Sample.
A "U" preceding the [illegible] number [illegible] an [illegible]bed Sample (tube). [illegible]receding the [illegible]number [illegible]s a Rock Core

% RECOVERY: The length of sample recovered divided by the total length sampled. The result is a numerically-expressed percentage.

(RQD): "Rock Quality Designation" The total length of pieces > 4 inches divided by the total length of core run.

N-VALUE: The Standard Penetration Test N-Value, as specified by ASTM D1586 is defined as the number of blows required by a 140-pound hammer falling 30 inches per blow to drive a 2-inch outside diameter split spoon sampler 12 inches.

TERMINOLOGY USED FOR SOIL DESCRIPTION

Density Description of Granular Soil

Number of Blows per foot, N	Relative Density
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium
30 - 50	Dense
Over 50	Very Dense

Consistency Description of Cohesive Soil

Number of Blows per foot, N	Consistency
Below 2	Very soft
2 - 4	Soft
4 - 8	Medium
8 - 15	Stiff
15 - 30	Very Stiff
Over 30	Hard

Grain Size

Boulder	-	greater than 12-inch diameter
Cobble	-	passing 12-inch, retained on 3-inch.
Gravel	-	passing 3-inch, retained on No. 4 sieve
Sand	- Coarse	passing No. 4 sieve, retained on No. 10 sieve
	- Medium	passing No. 10 sieve, retained on No. 40 sieve
	- Fine	passing No. 40 sieve, retained on No. 200 sieve
Silt	-	0.074 mm to 0.005 mm
Clay	-	smaller than 0.005 mm

Description of Percentage or Proportions Used in Soil Sample Classification

Trace	0 - 10 %
Little	10 - 20 %
Some	20 - 35 %
And	35 - 50 %

Abbreviations Used In Soil Sample Classification

f	- fine	v	- very
m	- medium	gr	- gray
c	- coarse	bn	- brown
f/m	- fine to medium	yel	- yellow
f/c	- fine to coarse	sl	- slight
tr	- trace		

Moisture

Dry	- Absence of moisture, dusty, dry to the touch.
Moist	- Small quantity of moisture. Soil usually above groundwater level.
Wet	- Moisture noticeable to the touch. Soil may be below groundwater level.
Saturated	- Visible free water. Usually soil is below groundwater level.

Plasticity

Non-plastic	- A 1/8-inch thread cannot be rolled at any water content.
Slight Plasticity	- The thread can barely be rolled.
Moderate Plasticity	- Thread is easy to roll and little time is required to reach plastic limit.
Plastic	- Considerable time is required to reach plastic limit. Thread can be re-rolled several times after reaching the plastic limit.

TERMINOLOGY USED FOR ROCK DESCRIPTION

Bedding

Parting	Less than 0.02 ft.
Band	0.02 to 0.2 ft.
Thin Bed	0.2 to 0.5 ft.
Medium Bed	0.5 to 1.0 ft.
Thick Bed	1.0 to 2.0 ft.
Massive	Over 2.0 ft.

Hardness

Very Soft or Plastic	- Can be indented with thumb.
Soft	- Can be scratched with fingernail.
Moderately Hard	- Can be scratched easily with knife. Cannot be scratched with fingernail.
Hard	- Difficult to scratch with knife.
Very Hard	- Cannot be scratched with knife.

Crystallinity or Texture

Dense	- Crystals are so small they cannot be distinguished with the naked eye.
Very Fine Crystalline	- Crystals barely discernible with the naked eye.
Crystalline	- Crystals are medium size; up to 1/8-inch diameter.
Very Coarsely Crystalline	- Crystals larger than 1/8-inch

Voids

Pourous	- Smaller than a pinhead. Their presence is indicated by the degree of absorbancy.
Pitted	- Pinhead size to 1/4-inch. If only thin walls separate the individual pits, the core may be described as honeycombed.
Vug	- 1/4-inch to the diameter of the core. [illegible]

REMARKS: Denotes exact depth of recovery and general documentation of drilling efforts.

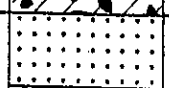
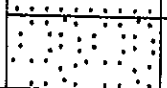
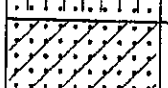
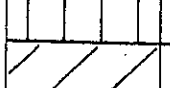
Notes: Description and classification are based on visual inspection of samples and boring operations.

The stratum lines shown on the boring logs are based upon interpretation and may not represent precise subsurface conditions.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the water level may occur due to other factors than those present at the time

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SOIL CLASSIFICATION CHART
(Unified Soil Classification System)

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material larger than No. 200 sieve	GRAVELS More than 50% of coarse fraction larger than No. 4 sieve	Clean Gravels (little or no fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with appreciable amounts of fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS Less than 50% of coarse fraction larger than No. 4 sieve	Clean sands (little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		Sands with appreciable amounts of fines		SM	Silty sands, silt-sand mixture
				SC	Clayey sands, sand-clay mixture
FINE-GRAINED SOILS Less than 50% of material larger than No. 200 sieve	SILTS AND CLAYS Low plasticity Liquid Limit less than 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS High plasticity Liquid Limit greater than 50%			MH	Inorganic silts, micaceous or diatomaceous fine sand or silt soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
	Highly Organic Soils			Pt	Peat, humus, swamp soils with organic contents
	Miscellaneous Fill			FILL	Miscellaneous fill may belong in any division but is identified as FILL

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APPENDIX C

LABORATORY SOIL TEST RESULTS

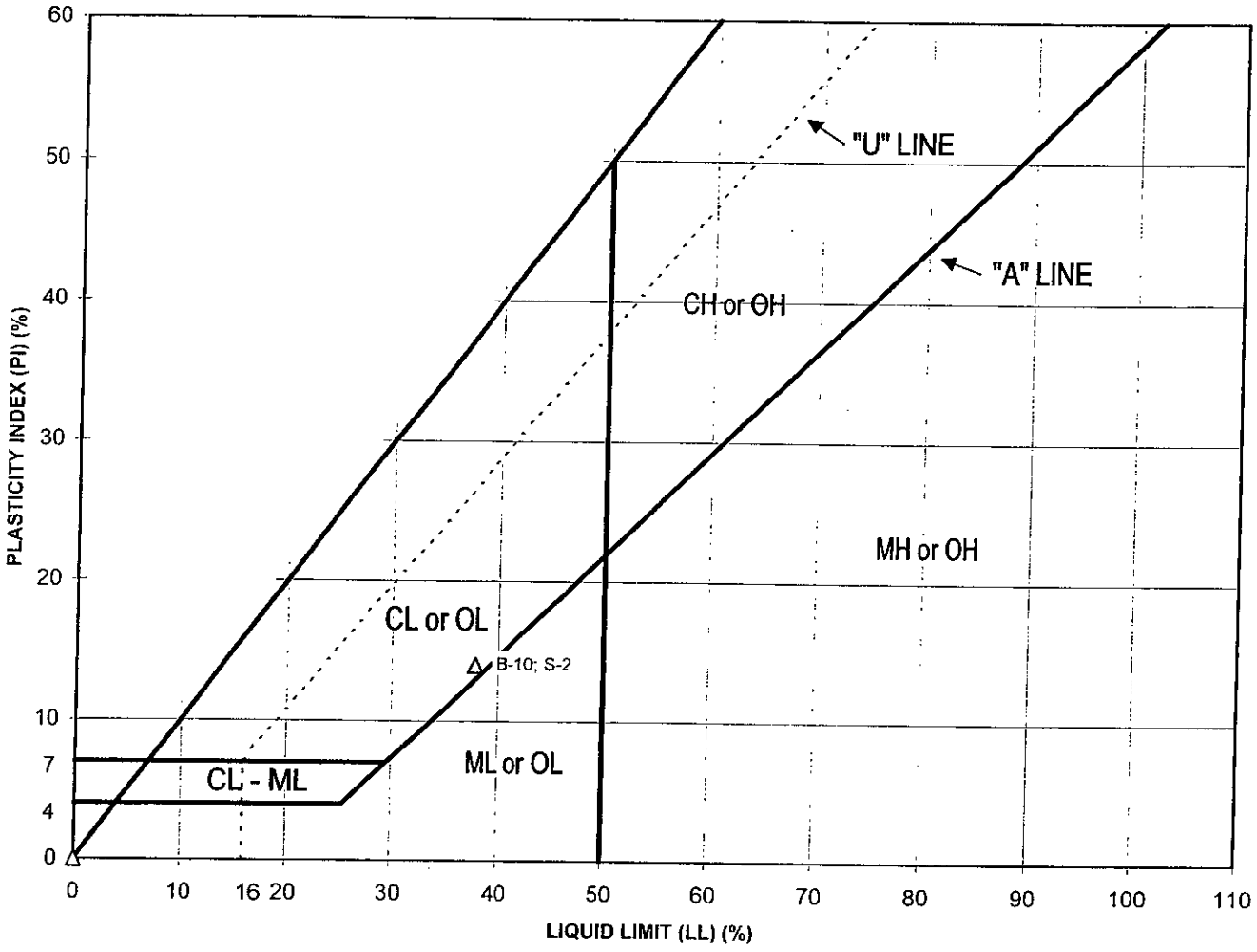
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Job No: 09-510
Project: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

Plasticity Chart

ASTM D4318 & D2487



Boring No.	Sample No.	Depth (ft.)	LL (%)	PL (%)	PI (%)
B-10	S-2	2-4	38	24	14

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APPENDIX D

ENGINEERING COMPUTATIONS AND SCHEMATICS

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"PROFILE OF BORINGS"

NOTE: FILL MATERIALS + 0'TO2' DEPTH OF NATURAL SOILS ARE NOT ACCEPTABLE FOR DIRECT FOUNDATION BEARING PURPOSES.

UNDERCUT REQUIRED

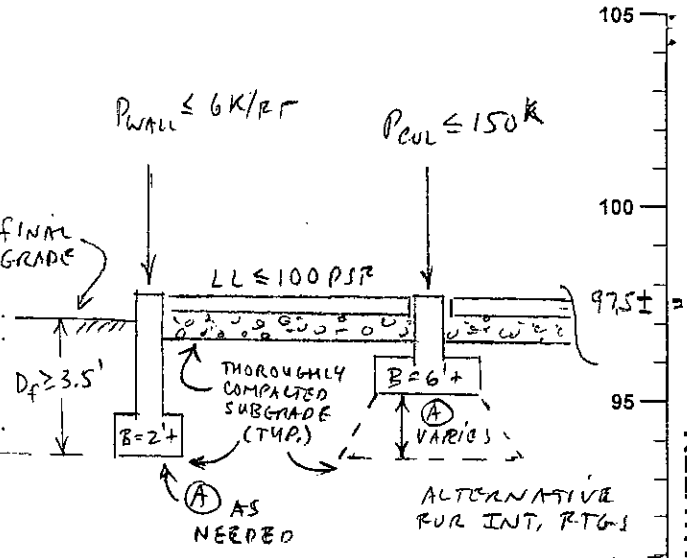
RELATIVE ELEVATION (feet)

105 / 100 / 95 / 90 / 85 / 80 / 75

	B-7 N (95.8)		B-10 N (96.8)		B-11 N (97.0)		B-12 N (97.0)	
		WN (%)						
	Topsoil (8")		Topsoil (6")		Topsoil (5")		Topsoil (3")	
4	Brown, loose f. SAND, some Silt, tr. Roots, moist (SM)	24	3	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)	8	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)	15	Dk. gray, m. dense f/c Sand, some Gravel, little Slag, tr. Silt, wet (SW- Fill)
7	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL)	26 *	14	Same as S-1	10	Same as S-1	16	Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
26	...grade: v. stiff	24	21	...grade: stiff ...grade: v. stiff	27	...grade: v. stiff	25	Same as S-2
	...grade: hard	26	44	...grade: hard	24	Same as S-3	32	...grade: hard
34			21	...grade: v. stiff	40	...grade: hard, wet	37	Same as S-4
	Same as S-4	29	23	Same as S-5	47	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)	38	Same as S-4
32					50+	Same as S-6 (No Sample)	50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
23	...grade: v. stiff	30	50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)	54	...grade: Gray, some f/c Sand	103+	...grade: Gray, some Gravel
50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)	11	6	REFUSAL				
50+	...grade: Gray, some f/c Sand		50+	...grade: Gray, and Gravel *(Auger refusal suspected to be boulder within till.)*				
	Depth: 20.00'			Depth: 18.50'		Depth: 20.00'		Depth: 20.00'

* LL = 38
PL = 24
PI = 14

DESIGN PROFILE



NAT'L. SILTY CLAY (CL)
N ≥ 13 δ_m = 120 PCF $C_{UC} \geq 1{,}300$ PSF

GWT

USE: $Q_{ALLOW\ NET} \leq 2{,}500$ PSF

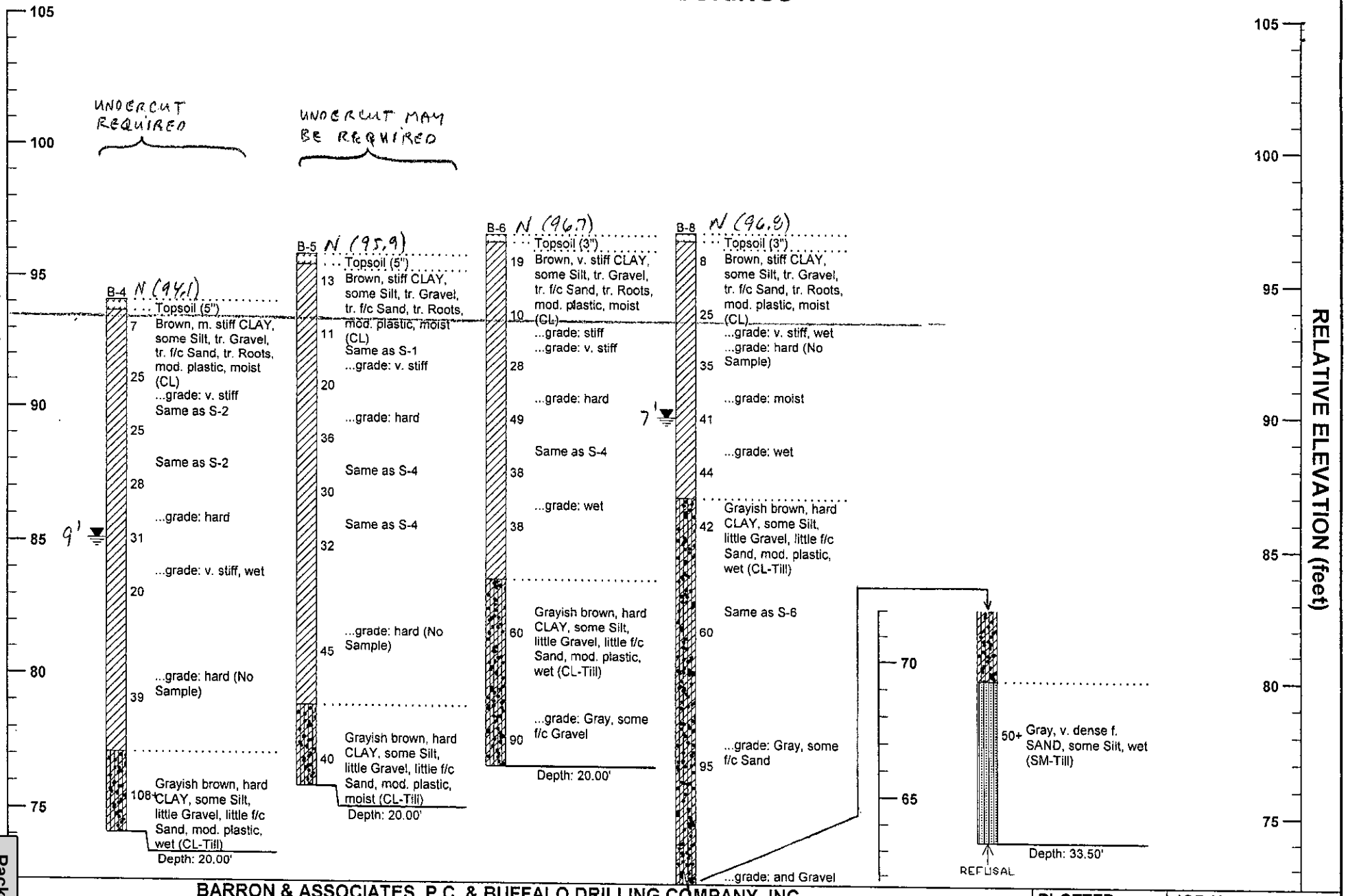
(A) VARIABLE THICKNESS OF THIN LIFTS OF THOROUGHLY COMPACTED (MIN. 95% OF MAX. DRY DENSITY VIA ASTM D 1557) SELECT/APPROVED GRANULAR FILL THAT EXTENDS TO UPPER LEVEL (N ≥ 13) STIFF OR BETTER NAT'L SILTY CLAY SOIL

RELATIVE ELEVATION (feet)

BARRON & ASSOCIATES, P.C. & BUFFALO DRILLING COMPANY, INC. 10440 MAIN STREET, CLARENCE, NEW YORK 14031		PLOTTED: 1/8/2009	JOB No.: 09-510
UECT: Proposed Maple Ayer Corporate Center 1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221	Pg. 1 of 11	By: A. Camping	FIGURE No.: P-1

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"



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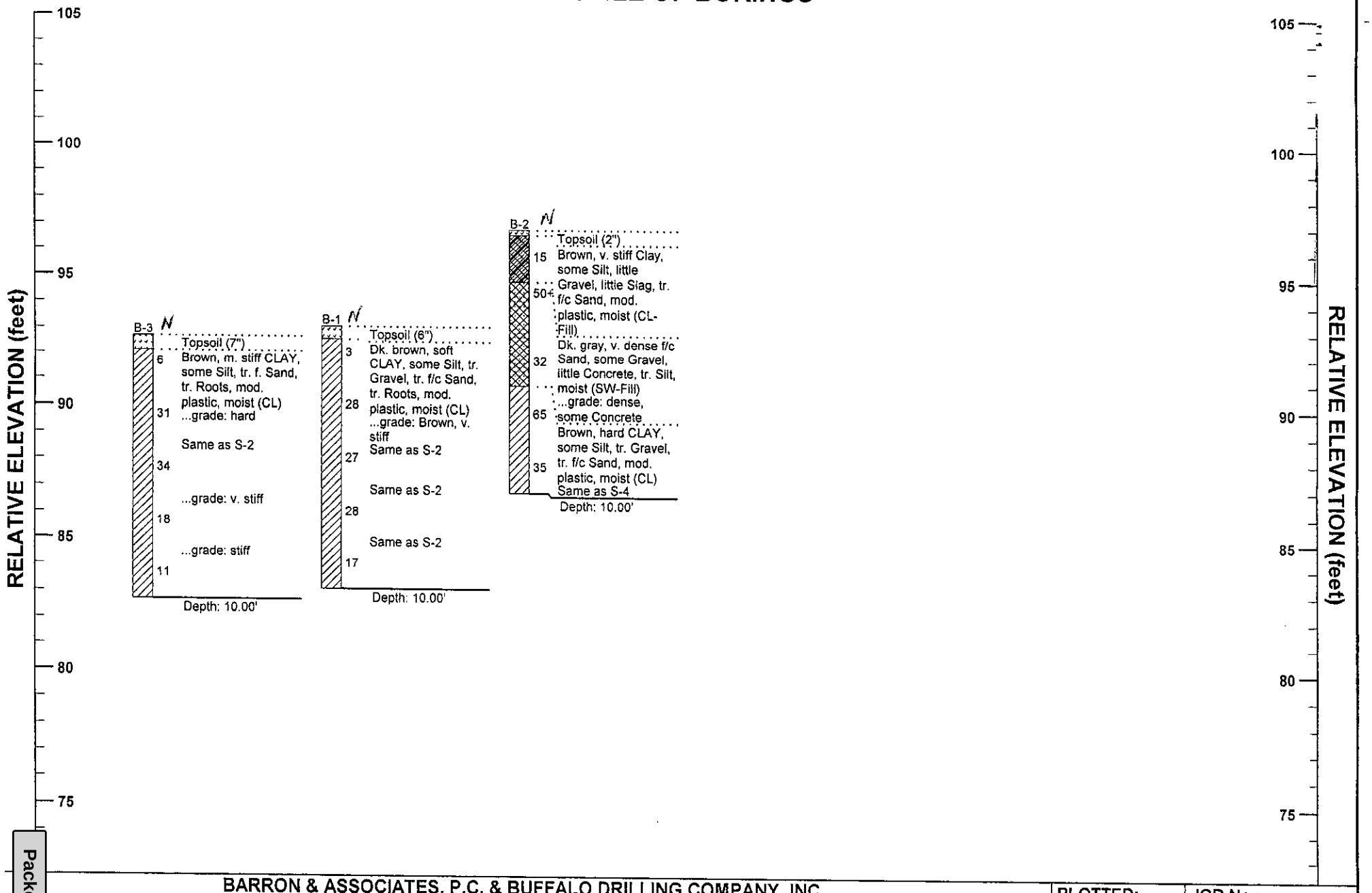
UJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

PG 2 OF 11

By: A. Camping | FIGURE No.: P-2

Packet Pg. 510
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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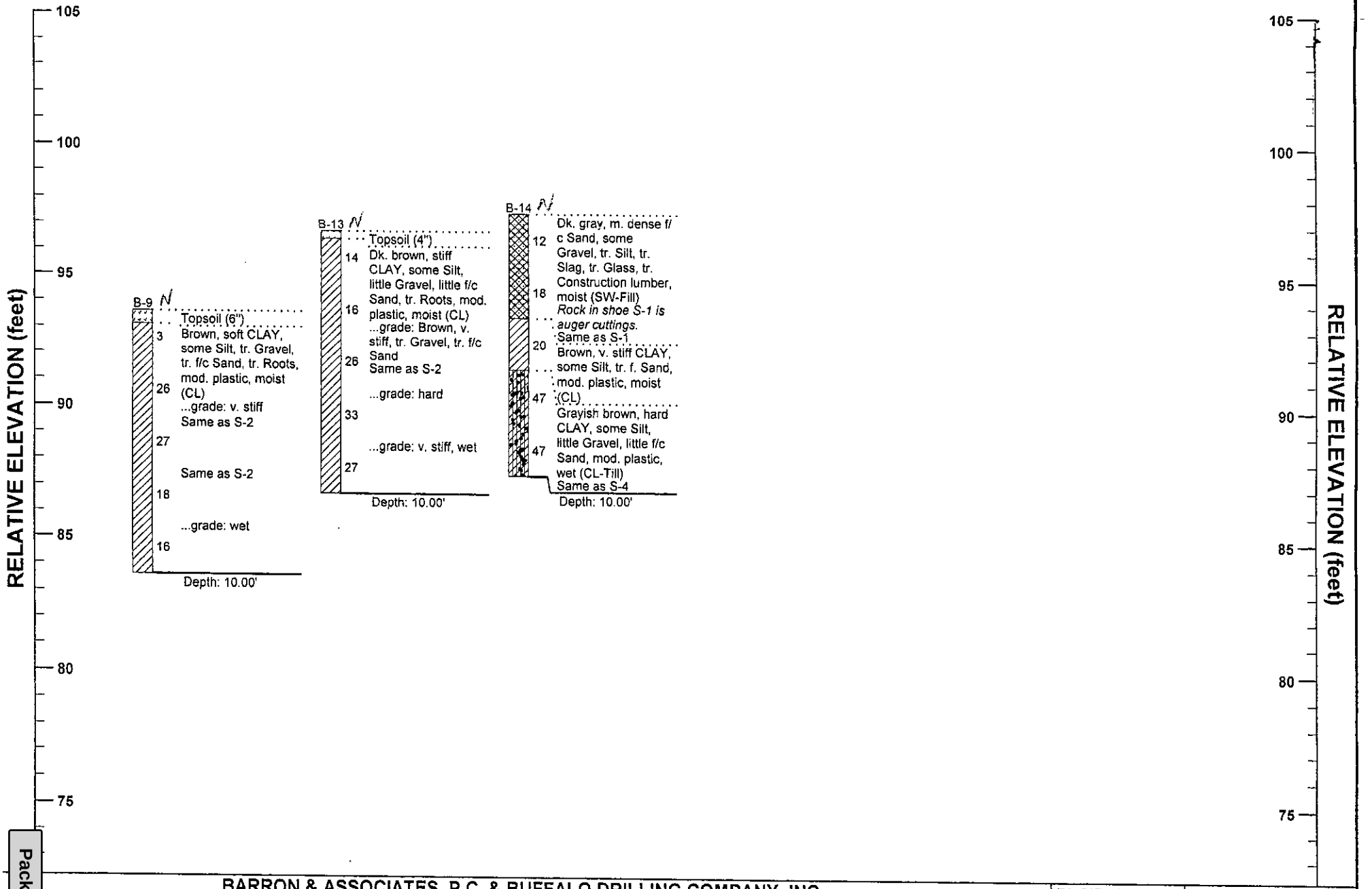
UECT: Proposed Maple Ayer Corporate Center
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PG 3 of 11

By: A. Camping | FIGURE No.: P-3

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"



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JECT: Proposed Maple Ayer Corporate Center
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Pg. 4 of 11

By: A. Campino | FIGURE No.: P-4

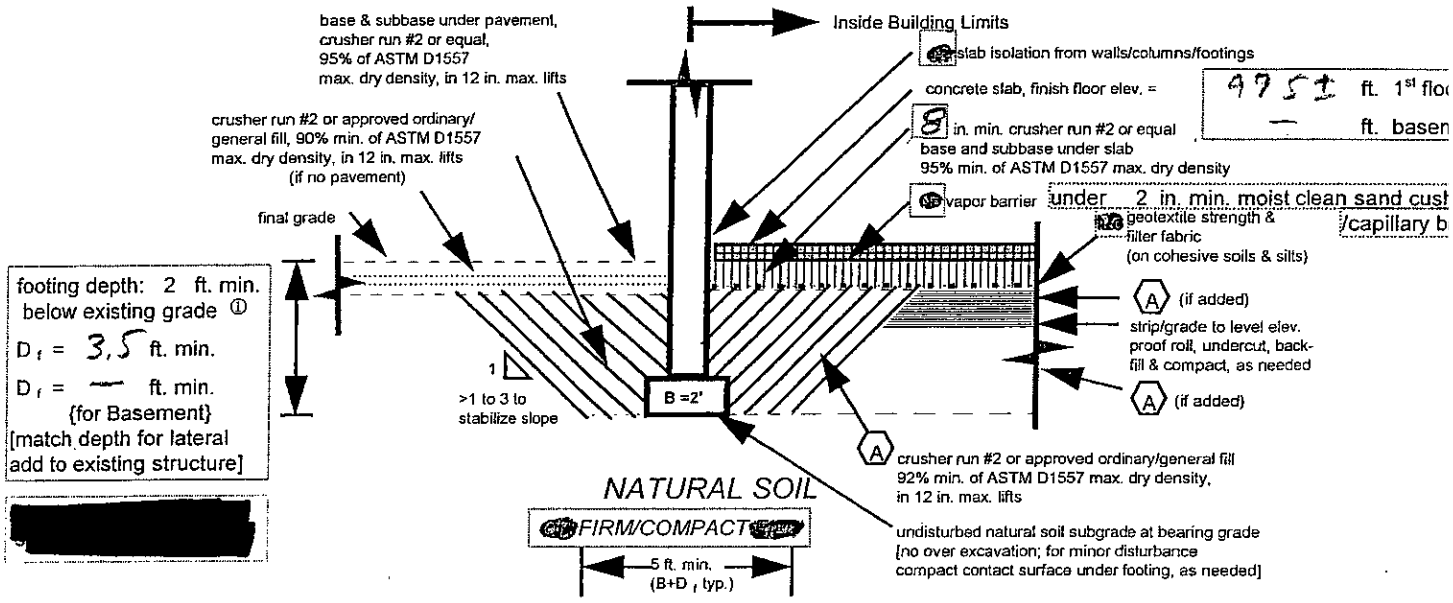
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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
Page: 5 of 11

TYPICAL SCHEMATICS OF RECOMMENDED SHALLOW FOUNDATION SYSTEM ON SOIL

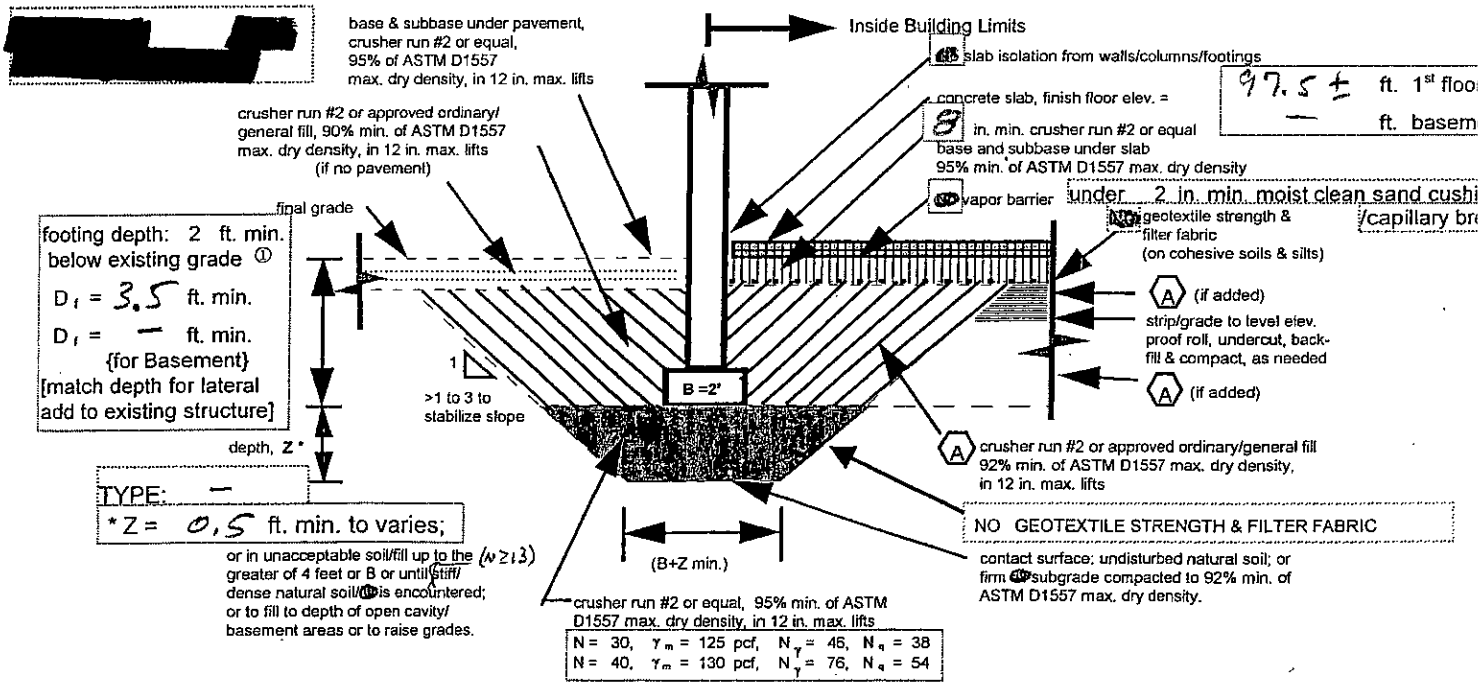
INSTALL PERIMETER GRAVEL AND SLOTTED/PERFORATED DRAIN PIPE SYSTEM LEADING TO A SUMP PIT FOR BASEMENT/SUBSTRUCTURE CONDITIONS AND, IF INDICATED IN REPORT, DUE TO POTENTIAL SEASONALLY HIGH GROUNDWATER TABLE



EXTERIOR WALL/STRIP/CONTINUOUS FOOTING ON UNDISTURBED NATURAL SOIL [SPREAD/SQUARE FOOTING IS SIMILAR]

- APPLICABLE TO BUILDING WALLS: NORTH, SOUTH, EAST, WEST [SCALE: 1 IN. = 5 FT. +/-]

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry density, and approved



EXTERIOR WALL/STRIP/CONTINUOUS FOOTING ON COMPACTED SELECT GRANULAR FILL [SPREAD/SQUARE FOOTING IS SIMILAR]

- APPLICABLE TO BUILDING WALLS: NORTH, SOUTH, EAST, WEST [SCALE: 1 IN. = 5 FT. + /-]

{AS NEEDED}

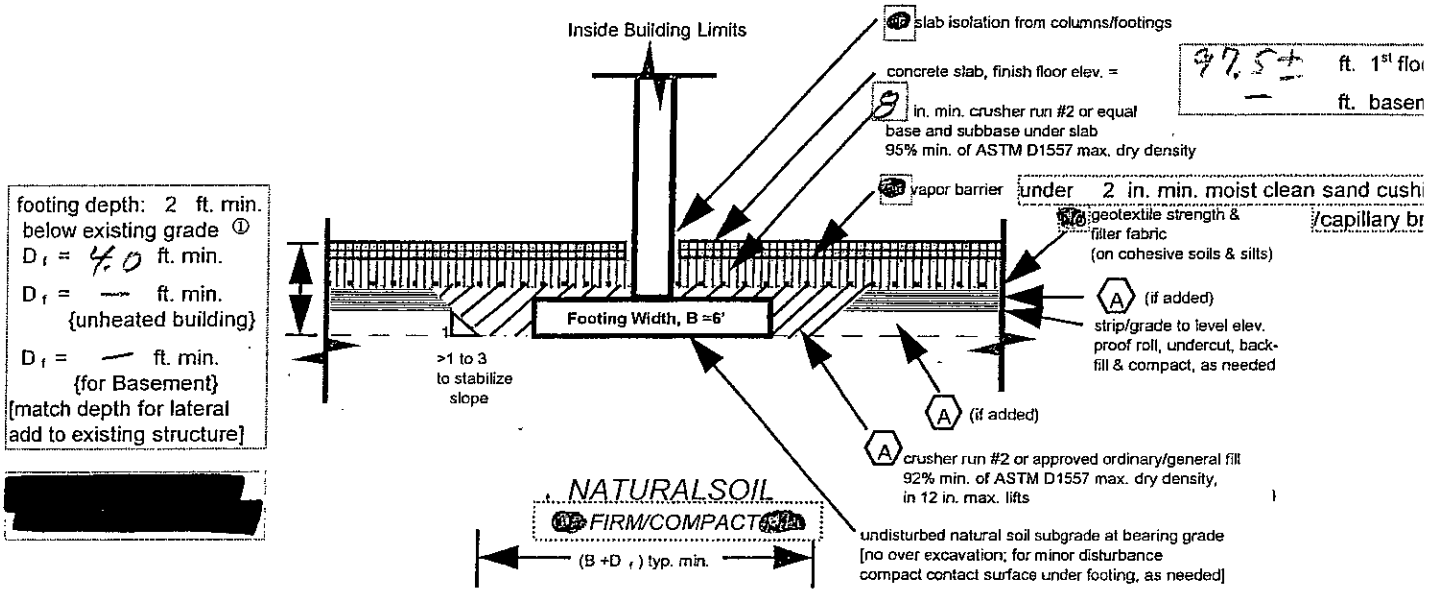
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Date: 1-7-09
By: C. M. Panuccio
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TYPICAL SCHEMATICS OF RECOMMENDED SHALLOW FOUNDATION SYSTEM ON SOIL

[redacted]

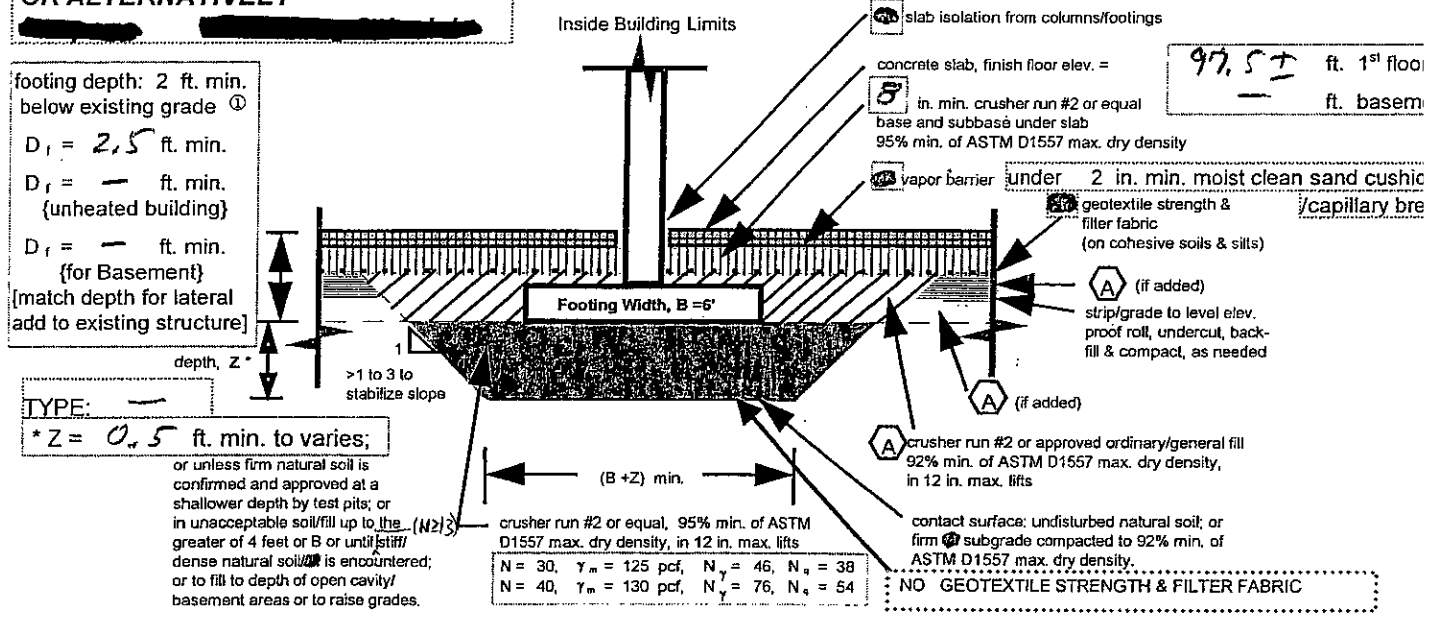


INTERIOR SQUARE/SPREAD FOOTING ON UNDISTURBED NATURAL SOIL [WALL/STRIP/CONTINUOUS FOOTING IS SIMILAR] - APPLICABLE TO BUILDING SIDES: [redacted] NORTH, SOUTH, EAST, WEST, CENTRAL [SCALE: 1 IN. = 5 FT. +/-]

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry density, and approved

OR ALTERNATIVELY

[redacted]



INTERIOR SQUARE/SPREAD FOOTING ON COMPACTED SELECT GRANULAR FILL [WALL/STRIP/CONTINUOUS FOOTING IS SIMILAR] - APPLICABLE TO BUILDING SIDES: [redacted] NORTH, SOUTH, EAST, WEST, CENTRAL [SCALE: 1 IN. = 5 FT. +/-]

{AS NEEDED e.g. B-5}

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Date: 1-7-09
By: C. M. Panuccio
Page: 7 of 11

GENERAL NOTES:

a) Bottom of exterior foundations are to bear at a minimum depth below the final exterior grade that is greater than the frost depth defined by local or State building codes.

b) Bottom of foundation trench excavation is to be inspected by experienced geotechnical personnel and, especially, prior to placement and compaction of crusher run stone, select granular fill, or approved general granular fill.

c) All areas of the foundation trench bottom which are concluded to be unacceptable must be over excavated from the bottom footing/foundation elevation or, if recommended, from the bottom of the minimum depth of the undercut for the compacted se granular fill layer, upon which the bottom of footing/foundation will bear, to:
- the top of the dense/stiff fill or natural soil, for less than a four foot depth or the footing width (whichever is greater), backfilled with compacted granular fill.

d) Over-excavated/undercut areas must extend laterally beyond each vertically projected edge of the foundation by a minimum distai equal to one-half the total depth of the undercut or equating to a slope of two vertical to one horizontal. Side slopes of the tre excavation should be one on one (vertical to horizontal distance) or flatter in cohesive soils or one on one and one-half or flatter in granular materials, as required by OSHA.

e) All foundations shall bear on dense/stiff natural soil, if supported by the calculations, or thoroughly compacted select granular or site approved granular fill, with a minimum thickness as determined by the calculations (see Note c also).

f) Water must not be allowed to accumulate or pond in foundation trench bottom. Adequate drainage is to be provided.

g) During winter construction, foundations are to be protected from freezing during the curing period and, thereafter, properly backfil to the required compaction specifications, as specified by the architect/design engineer.

h) In the event that any shallow drilled piers, tanks, foundation walls, strip or spread footings, and/or concrete slabs-on-grade from existing or previous unknown on-site structures are encountered during excavation, the following demolition conditions will ap unless indicated otherwise in the schematics of the foundation system:
- complete removal in and near the proposed building/structure foundation area (except if the foundations and slab-on-grade to be tied into any existing buildings/structures which are to remain),
- removal down to three feet below final grade in the parking lot & driveways, {unless the slab-on-grade is in structurally sou condition & is approved for use as a part of the pavement system}, (Note that complete removal is optional.) and
- removal down to three feet below final grade in green/grassed areas. (Note: complete removal is optional.)

i) In the event that tree, shrub, or other vegetative root systems or other organic deposits are encountered during excavation, removal conditions in h) above will apply.

j) Any slag, cinder and/or ash fill shall be tested to have very low potential for expansion and/or corrosion characteristics, wh applicable for direct or potential (via leachate) contact with foundation elements and buried utilities or as directed by the des structural engineer/architect..

k) In the event that boulders and/or bedrock are encountered during excavation, the following conditions will apply:
- remove boulders that are one-quarter (1/3 in drumlins) or greater of the min. footing width, at the exposed footing subgrade.
- remove boulders that are one foot or greater in size/max. dimension, at the exposed pad subgrade.
- as/if indicated/directed by engineer in schematics of the foundation system:
  - apparent top of bedrock and/or boulders that are one-half or greater of the min. footing width will not be located within depth equal to the footing width, at a min., from the bottom of the footing.
  - apparent top of bedrock and/or boulders that are two feet or greater in size/max. dimension will not be located within depth of four feet, at a min., from the bottom of the building/tank/other structure pad.
  - subgrade is to be adequately probed/tested, at spaced intervals, along the footing line or building/tank/other structure p in order to confirm the absence of boulders and/or bedrock within these depths.
  - remove any suspected subsurface boulder and/or bedrock obstructions, that meet the preceding depth criteria.

l) At the locations of the demolished structures in h), vegetative/organic deposits in i), slag, cinder and/or ash fill in j) or bedrock and boulders in k) above, place and compact the select fill, if needed, to the elevation of the bottom of the pavement subbase stone lay or as required in c) above for the proposed building/structure foundation.

m) To the extent practical, the entire site is to be proof rolled and stabilized, as needed, prior to placement of base/subbase stone lay beneath the floor slab and asphalt paved parking areas.

n) Geotextile filter fabric is recommended beneath the base/subbase layer and atop the subgrade under the building/structure floor sl and in the heavily traveled asphalt paved areas at a minimum, if cohesive/silty soils & during wet weather/seasons.

o) The top and/or walls/sides of shallow depth subsurface structures (such as, basement, tank, vault, basin, pool, pipe, culvert, condu etc.), which would contain air voids at times, or a trench/excavation, or retaining structure, is considered to be subject to loads from shallow foundation system, if it is within a horizontal distance of two times the narrowest dimension/width of the foundation, and mu be properly evaluated and designed.

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Date: 1-7-09
By: C. M. Panuccio
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Net Allowable Bearing Capacity for Continuous Wall Footings on Compacted Select Granular Fill, N = 30 Min. with Groundwater Effects at Footing Level, $D_F = D_W = 3.5$ ft.: No Basement, Exterior

a) Net allowable bearing capacity in select granular fill.

- Assume 2 x B thick layer for computational purposes.
- Shallow footing (P, H & T, page 311) — B = 2.0 ft.
- Assume footing thickness = 1.0 ft.
- Assume bottom of footing min. depth below final grade — D_F = 3.5 ft.
- Assume bottom of footing min. depth below finish floor = 2.5 ft.
- Design groundwater depth — D_W = 3.5 ft.
- At bottom of the excavation, thoroughly compact natural and fill soils to ensure compaction of the subgrade prior to placement and compaction of the select granular fill subbase beneath the footing.
- Assume min. thick layer/undercut for select fill — Z = 0.5 ft. (Footing Type: —)

$q_{all\ NP} = \{(\gamma_m \times N_\gamma / 2) + (\gamma_m \times \{N_q - 1\} \times D_F / B)\} \times B / F.S.$

$q_{all\ NP} = \{[125\ pcf - 62.4\ pcf] \times 46 / 2 + 125\ pcf \times \{38 - 1\} \times 3.5' / 2'\} \times 2' / 3$

$q_{all\ NP} = \{1{,}440\ pcf + 8{,}094\ pcf\} \times 2' / 3 = 6{,}356\ psf$

- Note for B = 3 feet, $q_{all\ NP}$ = 6,836 psf.

b) Net allowable soil pressure based on 1 inch total settlement in granular soil (P,H&T, pg. 309). {Refer to assumptions in a) above.}

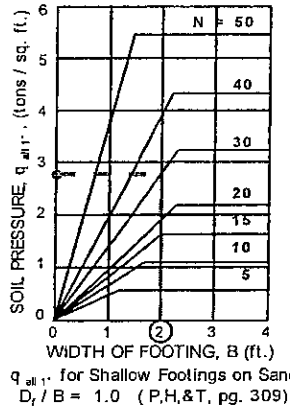
- Wall footing groundwater correction factor: $C_w = 0.5 + 0.5\{D_w / (D_F + B)\}$

$C_w = 0.5 + 0.5\{3.5' / (3.5' + 2')\} = 0.818$

$q_{all\ 1"} = C_w \times$ [Value from Chart] x 2,000 lb./ 1 ton

$q_{all\ 1"} = 0.818 \times 2.8\ tsf \times 2{,}000\ lb. / 1\ ton = 4{,}581\ psf$

- For B = 3 ft. & C_w = 0.769, $q_{all\ 1"}$ = 4,922 psf
- For B = 4 ft. & C_w = 0.733, $q_{all\ 1"}$ = 4,691 psf
- For B = 6 ft. & C_w = 0.684, $q_{all\ 1"}$ = 4,378 psf



$q_{all\ 1"}$ for Shallow Footings on Sand
D_f / B = 1.0 (P,H,&T, pg. 309)

Net Allowable Bearing Capacity, Square Footings: No Basement, Exterior

a) Follow the same design considerations as for the exterior wall footings.
b) All footings should be designed with the same design contact pressure.

Net Allowable Bearing Capacity for Square Footings, B = 6.0 ft, on Compacted Select Granular Fill N = 30 Mi with Groundwater Effects, D_F = 2.5 ft. & D_W = 4.0 ft.: No Basement, Interior; Non-Winter Construction Option

a) Net allowable bearing capacity in select granular fill. (NOTE: See wall footings above.)

- Shallow footing (P, H & T, page 311) — B = 6.0 ft.
- Assume bottom of footing min. depth below finish floor — D_F = 2.5 ft.
- Assume min. thick layer/undercut for select fill — Z = 0.5 ft. (Footing Type: —)

$q_{all\ NP} = \{(\gamma_m \times N_\gamma \times 0.4) + (\gamma_m \times \{N_q - 1\} \times D_F / B)\} \times B / F.S.$

$q_{all\ NP} = 1/6.0' \times \{[125\ pcf - 62.4\ pcf] \times 4.5' + [125\ pcf] \times 1.5'\} \times 46 \times 0.4 + 125\ pcf \times \{38 - 1\} \times 2.5' / 6.0'\} \times 6.0' / 3$

$q_{all\ NP} = \{1{,}439\ pcf + 1{,}927\ pcf\} \times 6.0' / 3 = 6{,}732\ psf$

b) Net allowable soil pressure based upon 1 inch total settlement in granular soil for B = 4+ ft. (NOTE: See wall footings above.)

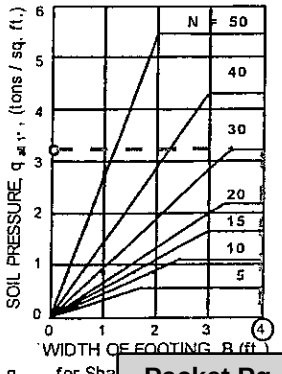
- Interior footing groundwater correction factor:

$C_w = 0.5 + 0.5\{4.0' / (2.5' + 6.0')\} = 0.735$

$q_{all\ 1"} = C_w \times$ [Value from Chart] x 2,000 lb. / 1 ton

$q_{all\ 1"} = 0.735 \times 3.2\ tsf \times 2{,}000\ lb. / 1\ ton = 4{,}704\ psf$

NOTE: For the winter construction option (that is, interior footings are constructed at the same depth/elevation as the exterior footings), refer to the $q_{all\ 1"}$ value for B = 4 to 6 feet in the above Section for the **Continuous Wall Footings on Compacted Select Granular Fill**.



$q_{all\ 1"}$ for Sha
D_f / B = 0.5

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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
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FOOTING SETTLEMENT

a) If a compacted select granular fill layer is placed in an undercut area (under wall footings and/or interior footings), t settlement occurs immediately and is proportioned by the thickness of the layer (if < 2 x B for wall footings and if < B square/rectangular footings) and the $q_{all\ 1}$ of settlement. The magnitude of this settlement is less than 0.5 in.

b) The existing on-site granular (non-plastic silt, silty sand and sandy gravel) soils that are beneath a recommend undercut depth, where applicable, below the footings should be properly compacted and inspected prior to placeme and compaction of the select granular fill or approved on-site granular fill subbase and the footing construction. Most the settlement will occur immediately and the magnitude of the settlement, which is evaluated in concert with the s conditions in a) above, is estimated to be less than approximately 1.0 inches.

c) The existing on-site cohesive natural soil/fill that is beneath the undercut depth, where applicable, below the footin should be properly compacted, as needed, and inspected prior to placement and compaction of the select granular subbase and footing construction. The magnitude of settlement is evaluated in concert with the conditions in d) below.

d) For the upper cohesive fills/natural soils and lower natural cohesive soil layers that exist, the N values of these soil laye indicate a slightly to highly overconsolidated state or a high effective preconsolidation pressure (p'_c).

- (Also refer to ASCE/USACE No. 9, Design Guide "Settlement Analysis," pg. 5 for p'_c estimation.)

The deeper hard glacial till and bedrock layers are assumed to be incompressible relative to applied loads. Consolidati settlement of the underlying cohesive soil/fill and natural soil layers are also not considered to be a concern for t foundation loads due to the slightly to highly over-consolidated state of these soils. Based upon the allowable load p footing width, total and differential settlements are expected to be within acceptable limits and are not likely to exceed 1 and [redacted] 0.75 inches, respectively, per P,H&T, page 309, if all compacted granular fills and/or natural plastic cohesi soils, per P,H&T, page 273.

USE: $Q_{allow\ net}$ = 2,500 psf For First Floor / from 2 ① ft. below exiting grade

USE: $Q_{allow\ net}$ = — psf For Basement / greater than — ① ft. below exiting grade

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry

BEARING ON VERY STIFF/DENSE/FIRM STATE NATURAL SOILS/FILLS/WEATHERED ROCK *(EXCEPT AS NOTED BELOW)* or

- *FOR EXTERIOR FOOTINGS* ✓
- *ALTERNATIVELY FOR THE INTERIOR FOOTINGS* ✓ *AS NEEDED TO RAISE GRADES*

BEARING ON THOROUGHLY COMPACTED LAYERS OF SELECT OR ON-SITE APPROVED GRANULAR [redacted] FILL THA IS PLACED ON [redacted] APPROVED NATURAL SOILS/[redacted]

[redacted]

FOOTING [redacted] /FIRST FLOOR FILL THICKNESS **

[redacted]

at Rel. Elev. = — / 935 ft. or Lower/Higher FOR EXTERIOR FOOTINGS * ∝ on — / 0 TO VARIES ft. min.
{ALTERNATIVE / - } {ALTERNATIVE / - }

at Rel. Elev. = 950 / 93.5 ft. or Lower/Higher FOR INTERIOR FOOTINGS ∝ on 0 TO VARIES / 0 TO VARIES ft. min.
{ALTERNATIVE / - } {ALTERNATIVE / - }

* Footing is to bear at [redacted] 3.5 [redacted] foot min. below exterior final grade.

∝ Footing is to bear at [redacted] 2.5 [redacted] 4.0 [redacted] foot min. below finish floor slab. [redacted]

** Unless very stiff-hard/dense-very dense natural soil [redacted] conditions are encountered & approved at a shallower depth.

Ω For raised grades at the proposed building, bears on layers of thoroughly compacted select or on-site approved granular fill that extend to natural soils.

Ψ For basement areas beneath proposed building, bears on layers of thoroughly compacted select or on-site approved granular fill that extends to approved natural soils/[redacted]

∇ If bearing capacity differences exist for soils at the building center/core and the wings, add control joints, at a min., between the building center/core and the start of each building wing.

\# Due to the potentially high bedrock condition, limit total settlement ≈ differential settlement < 3/4 inch.

^ For shallow bedrock, footing may bear at less than above design depths by using #4 hooked rebars that are grouted to a 12 inch minimum depth, up to the frost depth/elevation plus one foot, into sound rock at a four foot center to center spacing or within each massive block of fractured rock. Design shall be as directed/specified by structural e

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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BY: Carmen M. Panuccio
B&A JOB NO.: 09-510
CLIENT: McGuire Development Company
PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

BUILDING CODE OF NEW YORK STATE © - 2007: USGS 2002 ACCELERATIONS at 2% IN 50 YEARS CALCULATED BY LATITUDE AND LONGITUDE

Site Latitude (o) = +42.9916

Site Longitude (o) = -78.7210

Seismic Site Class = C

Building/Structure with Shallow Foundation

S_s = 0.2 sec acceleration value for Class B (in g's)

Acceleration Values Below are S_s * 100

LAT. =	LONG. = -78.7500	-78.7210	-78.7000
42.9500	28.3594		28.3677
+42.9916	28.7526	28.7500	28.7482
43.0000	28.8320		28.8250

S_1 = 1.0 sec acceleration value for Class B (in g's)

Acceleration Values Below are S_1 * 100

LAT. =	LONG. = -78.7500	-78.7210	-78.7000
42.9500	5.88539		5.90132
+42.9916	5.91874	5.92768	5.93415
43.0000	5.92547		5.94078

SEISMIC SITE CLASS	Site Coefficient and Design Spectral Response Acceleration Values			
	0.2 Second		1.0 Second	
	F_a	$S_{ds} = 0.6667 * F_a * S_s$	F_v	$S_{d1} = 0.6667 * F_v * S_1$
A	0.8000	0.1533 g	0.8000	0.0316 g
B	1.0000	0.1917 g	1.0000	0.0395 g
C	1.2000	0.2300 g	1.7000	0.0672 g
D	1.5700	0.3009 g	2.4000	0.0948 g
E	2.3800	0.4562 g	3.5000	0.1383 g
F	2.3800	0.4562 g	3.5000	0.1383 g

<<------- USE THESE VALUES FOR SHALLOW FOUNDATIONS

NOTE: F_a and F_v values are linearly interpolated, for the above S_s and S_s values, respectively, within the appropriate range of the mapped spectral response accelerations.

10/11

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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
Page: 11 of 11

LATERAL EARTH PRESSURE ON GENERIC BLOCK FOUNDATIONS FOR SIGNS, FREE-STANDING RETAINI WALLS, OR BELOW GRADE/BASEMENT/TANK/POOL RETAINING WALLS (Less Than 20 Feet High):

a) Porous filter media, in contact with the basement/below grade foundation wall or retaining walls, protects and is contact with a minimum 4 inch diameter perforated drainage pipes at the footing/base of the foundation/structu wall (exterior backfill side and interior basement side) and/or weep pipes through the wall, as needed and applicable. Waterproof earth side of wall, as customarily provided in practice.

b) Drainage pipes are connected to an appropriately designed collector pipe, conveyance, and/or sump pump syst as is applicable for the intended purpose of the wall and as customarily provided/installed in practice.

c) For potential groundwater table conditions above the top of the basement slab-on-grade condition, install continuc waterstops (with no joints in stop) at construction joints as is customarily provided in practice. Interior intermedi drainage pipes, that are spaced on-center and in both directions, do appear to be needed.

d) Assume a uniformly graded coarse sand or sandy gravel backfill: dense state
- equivalent blow count value: N = 40 blows/foot
- friction angle: ϕ = 38 degrees {Teng, pg. 12}
- average in-place density: moist bulk γ_m = 120 pcf, saturated γ_s = 132 pcf ; submerged γ' = 70 pc

e) Assume base of wall/footing is bearing on a minimum 6 inch thick layer of thoroughly compacted select granular fil
- Coefficient of Friction Against Sliding (f_s) at base of wall (Refer to Teng, pg. 320-1):
  $f_s = \tan (0.5 \times \phi) = 0.35$ (O.K. compares to AREA value for silty soils.)
  $f_s = 0.60$ (for concrete on clean, rough, and sound bedrock)

f) Use equivalent fluid pressure design approach {Hough, pg. 249 and NAVFAC pg. 7-10-9}:
- at rest pressure coefficient; $K_o = 1 - \sin(\phi) = 1 - 0.62 = 0.38$
- effective lateral pressure of soil; $\gamma'_i = K_o \times \gamma' = 0.38 \times 70$ pcf = 26.6 pcf
- hydrostatic pressure with water level at the top of the grade at the wall; γ_w = 62.4 pcf
- equivalent fluid pressure; $\gamma_{eo} = \gamma'_i + \gamma_w = 26.6$ pcf + 62.4 pcf = 89 pcf (say 90 pcf)
- equivalent fluid pressure without groundwater effect and with an estimate of the induced lateral stress increas that is caused by the compaction (W&F, page 409);
  $\gamma_{eo} = 2 \times K_o \times \gamma_m = 2 \times 0.38 \times 120$ pcf = 91 pcf (say 90 pcf)
- active pressure case; $K_a = [1 - \sin(\phi)] / [1 + \sin(\phi)] = 0.24$
  $\gamma_{ea} = K_a \times \gamma_m = 0.24 \times 120$ pcf = 29.1 pcf (say 30 pcf)
- passive pressure case; $K_p = [1 + \sin(\phi)] / [1 - \sin(\phi)] = 4.2$
  $\gamma_{ep} = K_p \times \gamma_m = 4.2 \times 120$ pcf = 504 pcf (with a F.S. = 1.5, say 330 pcf)

		Thoroughly Compacted Uniformly Graded & Clean Coarse Sand or Sandy Gravel Fill	Non-Plastic Silty Sand or Sandy Silt Fill	
USE : Earth Pressure Coefficient	Active	= 0.24	0.33	
	At-Rest	= 0.76	1.0	
	Passive	= 2.8	2.0	(with a F.S. = 1.5
	Passive	= 4.2	3.0	(with a F.S. = 1.0
USE : Equivalent Fluid Pressure	Static At Rest	= 90 pcf (for rigid walls)		
	Static Active	= 30 pcf		
	Static Passive	= 330 pcf (with a F.S. = 1.5)	{= 500 pcf (F.S. = 1.0)	

[For earthquake condition, structural engineer may elect to use the above Static Passive case, instead of the below Uniform Lateral Pressure, for Non-Yielding Wall movement into the soil backfill]
Saturated Soil During Earthquake = 132 pcf

USE: Uniform Lateral Pressure = (12.0 psf / foot) x Foot Height of Wall (NYS, $S_{MS} \leq 0.25$ g)
(add to Static At Rest/Active = (16.0 psf / foot) x Foot Height of Wall (NYS, 0.25 g < S_{MS} < 0.5 g)
for unsaturated backfill case) = (17.5 psf / foot) x Foot Height of Wall (Northeastern NYS, 0.5 g < S_{MS} < 0.75 g
[for underlying Loose to Medium Dense Cohesionless and/or Soft to Medium Stiff, Low to Moderate Plasticity Cohesive Soils (Site Class E); NYS Building Code c-2007/FEMA NEHRP Guidelines]

{For looser/denser backfills, increase above pressures by the ratio = new density / 120 pcf or / 132 pcf for saturated case,

USE: Coefficient of Friction Against Sliding (f_s) = 0.35 (on compacted granular soil & non-plastic silt)
= 0.20 (slab-on-grade on polyethylene on granular fill)
[with a F.S. = 1.0] = 0.60/0.50 (on clean, rough, & sound bedrock/smooth bedrock)
Min. Factor of Safety Against Sliding = 1.5

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APPENDIX E

GENERAL EARTHWORK SPECIFICATION

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Barron & Associates, P.C.
GENERAL EARTHWORK SPECIFICATION

PART 1 GENERAL

1.1 SITE AND SUBSURFACE CONDITIONS

1.1.1 Overview

This specification is included as a courtesy to the clients of Barron & Associates, P.C, and addresses earthwork site preparation. Additions and modifications are necessary to create a job-specific specification. This specification may serve as a basis for the development for a technical specification under Division 2, *Site Work.*

1.1.2 Site Conditions

The site-specific conditions are described under separate cover or may be available from the OWNER.

1.1.3 Subsurface Conditions

The site-specific subsurface conditions are described under separate cover or may be available from the OWNER.

1.2 REFERENCES

American Standard for Testing and Measurement (ASTM):

ASTM C136	Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C2922	Density for Soil and Soil-Aggregate in Place by Nuclear Methods
ASTM D422	Test Method for Particle-Size Analysis of Soils
ASTM D1140	Amount of Material in Soils Finer Than the No. 200 Sieve
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft^3)
ASTM D2216	Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D2487	1990 Classification of Soils for Engineering Purposes
ASTM D4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.3 DEFINITIONS

1.3.1 Unacceptable Material

Soil material containing debris, wood, scrap material, vegetation, refuse, soft unsound particles, and other organic, frozen, deleterious, or objectionable materials. Contaminated soils shall be properly documented and removed or remediated on site. If necessary, remediation procedure will be defined by the OWNER.

1.3.2 Unsuitable Material

Brown, organic topsoil and underlying soft pockets of organic silt or wet, reworked silty clay.

1.3.3 Ordinary Fill

Friable soil containing no stone greater than two-thirds loose lift thickness and no unacceptable or unsuitable materials. In general, existing random fill is expected to be acceptable for reuse as ordinary fill given proper sorting, blending, drying, and controlled placement methods.

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1.3.4 Granular Fill

Ordinary fill meeting the designation of ASTM D2487 classification of GW with a maximum of 10 percent by weight passing ASTM D1140, No. 200 sieve.

1.3.5 Select Granular Fill

Clean, uncoated soil which contains no unacceptable materials and conforms to the gradation requirements defined in Table A: Select Granular Fill.

Table A: Select Granular Fill

Sieve Size	Percent Finer by Weight
2/3 of the loose lift thickness	100
No. 10	30 - 95
No. 40	10 - 70
No. 200	0 - 15

1.3.6 Sand and Gravel

Clean, hard, durable, uncoated particle of sand and gravel, free from lumps of clay, containing no unacceptable matter, and conforming to gradation requirements of *Table B : Sand and Gravel*

Table B: Sand and Gravel

Sieve	Percent Finer by Weight
*	100
No. 4	50 - 85
No. 10	--
No. 40	10 - 35
No. 100	--
No. 200	0 - 8

* Job-Specific. To be determined by the ENGINEER

1.3.7 Crushed Stone

Clean, durable, sharp-angled fragments of rock or crushed gravel stone of uniform quality, containing no unacceptable matter, free from coatings, and conforming to gradation requirements of *Table C: Crushed Stone*

Table C: Crushed Stone

	Percent Passing	
Sieve Size	¾-inch Stone	1 ¼-inch Stone
1 ½-inch	—	100
1 ¼-inch	—	85-100
1- inch	100	—
¾-inch	90-100	10-40
5/8-inch	—	—
½-inch	10-50	0-8
3/8-inch	0-20	—
#4	0-5	—

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1.3.8 Flowable Fill

Also known as Controlled Low Strength Material – Controlled Density Fill (CLSM-CDF), this material is available under a variety of producer names (e.g., K-Krete©, M-Crete, Flash Fill©, Flowable Mortar, Unshrinkable Fill, etc.). This non-settling backfill mixture is most commonly used for its flowable characteristics, its support strength under traffic loads, and its removability at a later date. The material may be produced on-site or off-site. In either case, the producer of such materials and the product must meet certain certification criteria. Such information is beyond the scope of this specification and will be considered on a site-specific basis.

Flowable fill may be acceptable for use as a backfill for utility trenches of other low-lying areas which require a compacted granular fill. Its use and warranty of performance is left to the CONTRACTOR in such applications.

The use of flowable fill under load-bearing structural components in place of properly placed and compacted granular fill is NOT common and is questionable. The localized use of such material may have profound affects on the performance of a foundation system. Site-specific conditions and the extent of anticipated use of flowable fill must be examined by geotechnical engineer. Cost of such consultation shall be borne by the CONTRACTOR unless specifically directed by the OWNER to seek such consultation. Without such consultation, warranty of performance for such use is left to the CONTRACTOR.

1.4 SUBMITTALS

The following submittals shall be provided in accordance with approved submittals procedures.

1. Fill Source: Provide name and source locations of fill material.

2. Field Test Reports: Field tests will be performed by OWNER's Representative as needed. CONTRACTOR may be required to perform such tests on proposed off-site fill materials.
a. Fill material grain size analyses per ASTM C136, D422, D1140, D2487
b. Moisture/Density test results per ASTM D2216
c. Liquid limit, plastic limit, and plasticity index per ASTM D4318
d. Compaction/Density test results per ASTM C2922 and D1557

3. Sample: Geotextile fabric

PART 2 PRODUCTS

Geotextile Fabric: Mirafi 600X or equal. (Also referred to as synthetic fabric).

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 General

Manner of excavation shall minimize disturbance of underlying natural ground. If deemed necessary by the Engineer, alter construction procedures to reduce subgrade disturbance. Excavate areas which have been excessively disturbed to firm ground and backfill with properly compacted granular fill.

3.1.2 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

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3.1.3 Trees, Shrubs, and Existing Facilities

Protect from any damage all vegetation and facilities identified to remain.

3.1.4 Utility Lines

Locate all utilities within the area of disturbance prior to the start of work. Show locations on initial plans. Protect utility lines from damage. Notify the ENGINEER immediately of damage to or an encounter with an unknown utility. Damage to utility lines are to be repaired by the CONTRACTOR at no additional cost. The CONTRACTOR shall have underground utility owners stake out utility locations prior to the start of clearing and excavation operations.

3.2 VERIFICATION OF CONDITIONS/PROOF-ROLLING

Prior to placement of the initial layer of fill over the natural ground, proof-roll the exposed natural ground above the groundwater table elevation by making two passes with a fully-loaded ten-wheel truck. Excavate unstable areas detected by this process and replace with compacted granular fill.

3.3 PREPARATION

3.3.1 Surface Preparation

Within the site limits indicated on the drawings, excavate all unsuitable material to firm natural ground in the manner specified herein. Follow a construction procedure which permits visual identification of firm natural ground. In the even that groundwater is encountered, the ENGINEER may require that the size of the open excavation be limited to that which can be handled by open pumping to allow visual inspection of the excavation bottom and the performance of backfill operations to be conducted in a dry state.

Excavation of unsuitable material shall be limited to the greater of the following:

- A distance of 5 feet beyond building lines or
- The area defined by a one-horizontal to one-vertical line sloping down from the outside bottom edge of exterior footings to firm natural ground.

3.4 PLACEMENT AND COMPACTION

3.4.1 General

Place fill in accordance with *Table D: Compaction Alternatives*. These alternatives are provided as minimum compaction
standards only and in no way relieve the CONTRACTOR of his obligation to achieve any specified degree of compaction by whatever means may be necessary.

Grade to provide positive drainage and a smooth surface which will readily shed water. To the extent practicable, compact each layer to the specified density on the same day placed. Place fill in horizontal layers. Where horizontal layers meet a natural slope, key layer into slope by cutting a bench.

Fill that is too wet for proper compaction: Disc, harrow, or otherwise dry to proper moisture content for compaction to the required density.

Fill that is too dry for proper compaction: Uniformly apply water over the surface of the loose layer in sufficient quantity to allow compaction to the required density.

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Table D: Compaction Alternatives					
Compaction Method	Max. Stone Size	Maximum Loose Lift Thickness (inches)		Maximum Number of Passes	
		Below Structure and Pavements	Less Critical Areas	Below Structure and Pavements	Less Critical Areas
Hand operated vibratory plate of light roller in confined areas	3	4	4	4	4
Hand operated vibratory drum rollers weighing at least 1,000 pounds in confined areas	4	6	8	4	4
Loaded 10-wheel truck or D-8 crawler	6	10	12	4	2
Light vibratory drum roller; Min. weight at drum 8,000lbs; Min. dynamic force 10,000lbs.	8	12	12	6	2
Minimum vibratory drum; Min. weight at drum 10,000lbs; Min. dynamic force 20,000lbs.	8	18	18	6	4

3.4.2 Dewatering

Provide adequate pumping and drainage facilities to keep excavated areas sufficiently dry of groundwater and surface run-off. Dewatering shall avoid adversely affection construction procedures or causing excessive disturbance of underlying natural ground. Drain all pumped water in such a manner as to avoid damage to adjacent property.

If requested by the ENGINEER, place a 6-inch to 12-inch layer of sand and gravel or crushed stone over the natural underlying soil to stabilize area which have been disturbed due to groundwater seepage pressures and to expedite dewatering operations. Particular attention shall be given areas under proposed foundations.

3.5 FIELD QUALITY CONTROL

3.5.1 Compaction Requirements

Allow the ENGINEER sufficient time to make necessary observations and tests. Base the degree of compaction on maximum dry density as determined by ASTM D1557. The minimum degree of compaction for placed fill shall be as indicated *in Table E: Compaction Requirements.*

Table E: Compaction Requirements	
Area	Minimum Degree of Compaction (%)
Below foundation	95
Pavement and building subbase and base courses	95
Below building slab base course and above bottom of foundation	92
Below pavement subbase and base courses	90
Trench backfill outside of building	90
Trench backfill inside of building	Refer to one of the above-listed categories
Ordinary fill within 5 feet of grade	90
Vegetated areas below 5 feet of grade	85

3.5.2 Testing

Site work should be monitored and tested by geotechnical ENGINEER or his representative and in accordance with requirements of the design team to assure compliance with earthwork and foundation construction specifications.

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APPENDIX F

LIMITATIONS

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LIMITATIONS

1. This report is based on the data that was obtained from the subsurface explorations and on the design of the proposed structure as submitted to the geotechnical engineer. A geotechnical engineer, who is experienced in foundation construction and earthwork, should be engaged to review the final design and specifications in order to determine whether any change in concept may have any effect on the validity of the conclusions presented herein, and whether these conclusions have, in fact, been implemented in the design and specifications.

2. The subsurface conditions, including thicknesses, between the exploration locations are approximate and simplified representations of the strata and transitions. There is the possibility that variations in soil and rock conditions and boundaries will be encountered during construction. In order to permit correlation between the exploratory soil data and the actual soil conditions encountered during construction and so as to assess conformance with the plans and specifications as originally contemplated, it is recommended that a geotechnical engineer, who is experienced in foundation construction and earthwork monitoring, should be retained to perform continuous construction review during the site preparation and foundation construction operations.

3. The subsurface exploration logs and subsurface conditions may aid in estimating material quality and quantities, such as topsoil/organic matter, fills, natural soils, and rock, but are not to be relied upon as the exclusive means for bid preparation purposes. It is the responsibility of the contractor to perform any additional site examinations and explorations and to prepare an accurate bid.

4. Disclaimers:

   a. In the event that any changes in the nature, design or location of the proposed structure is planned, the conclusions that are contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing.

   b. The geotechnical engineering report has been prepared for this project by Barron & Associates, P.C. This report is for assistance in design only and is not a sufficient basis on which to prepare an accurate bid.

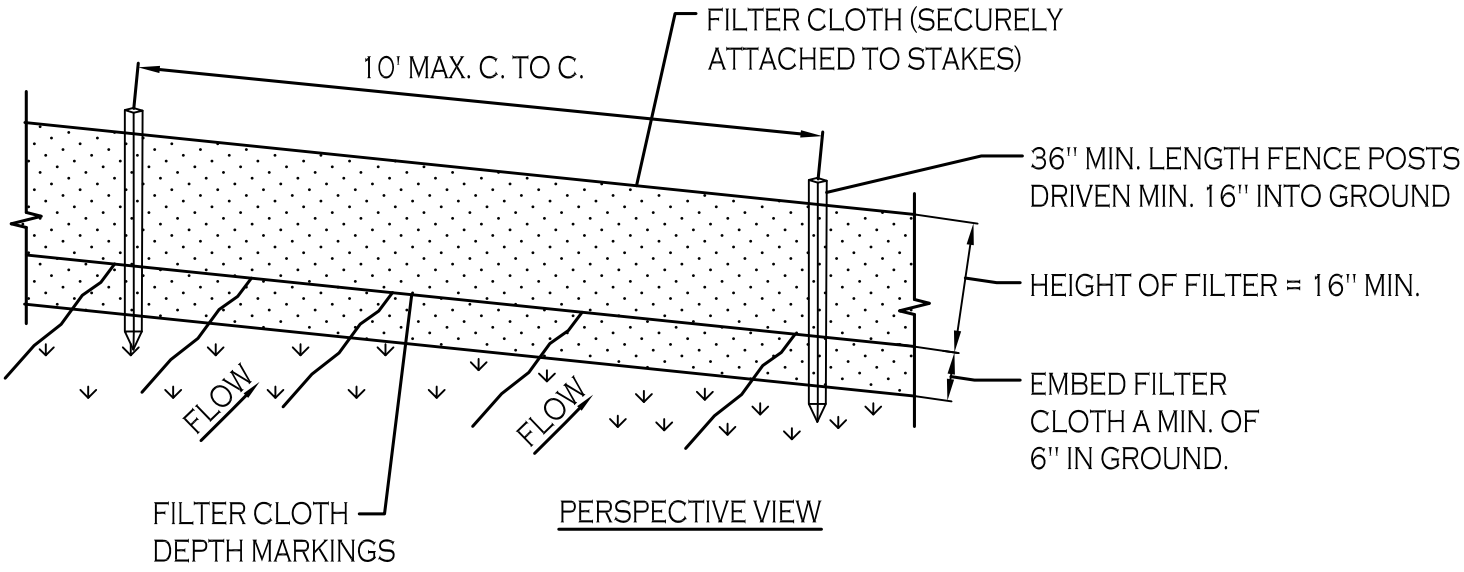
   c. This report has been prepared for the exclusive use of McGuire Development Company of Buffalo, New York, their client, and their designated design representatives for specific application to the development of the proposed two-story slab-on-grade Maple Ayer Corporate Center building, with approximately 23,400 square feet in total building footprint area, on approximately 5.6 acres of land that is addressed as 1730 to 1800 Maple Road in the Town of Amherst, Erie County, New York and in accordance with generally accepted geotechnical engineering practice. No other warranty, expressed or implied, is made.

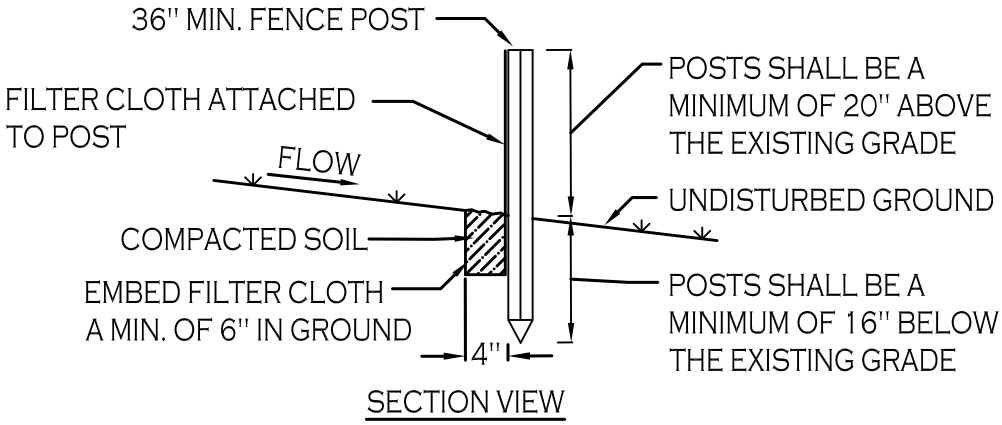
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Appendix J

Standard Erosion Control Details

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CONSTRUCTION SPECIFICATIONS

1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.

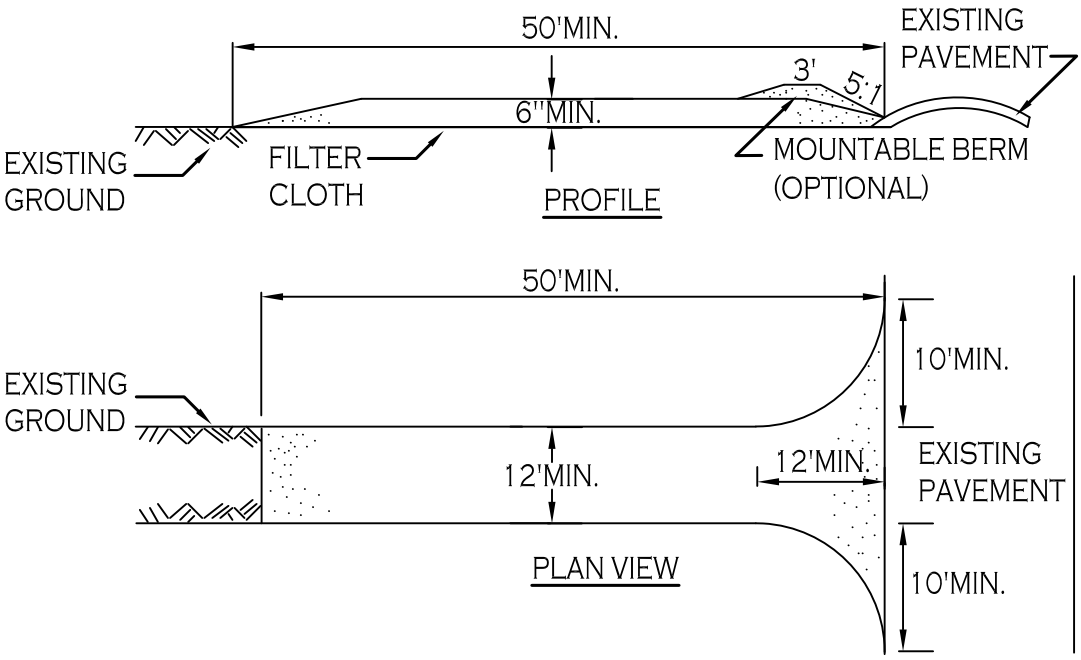
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.

3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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.

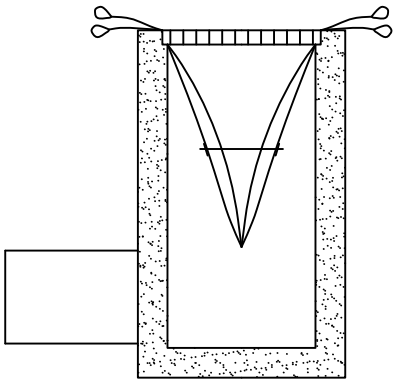
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

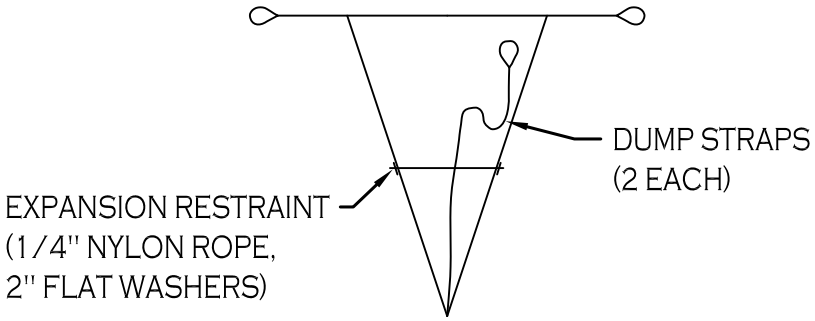
STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

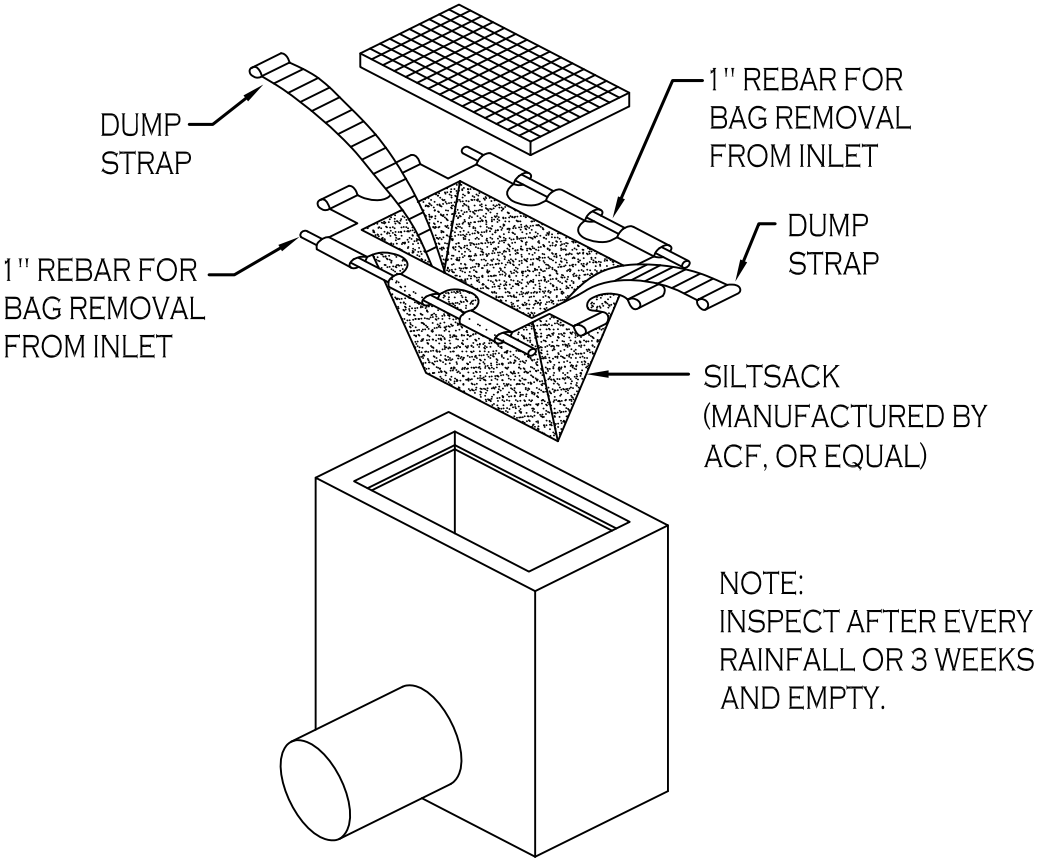
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



INSTALLATION DETAIL



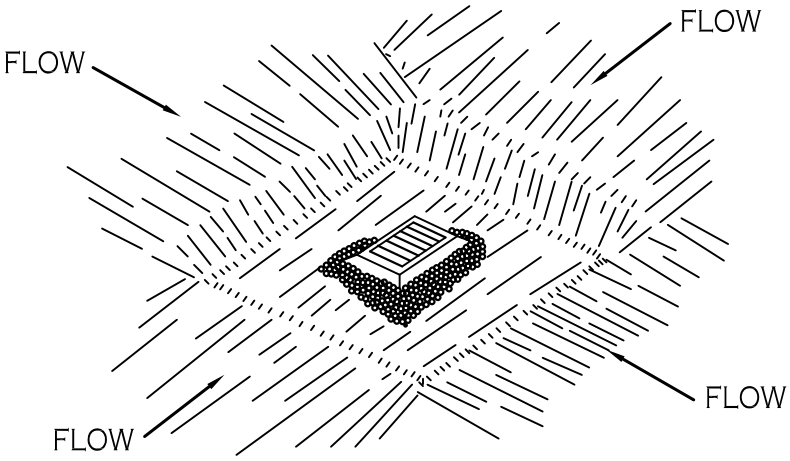
BAG DETAIL

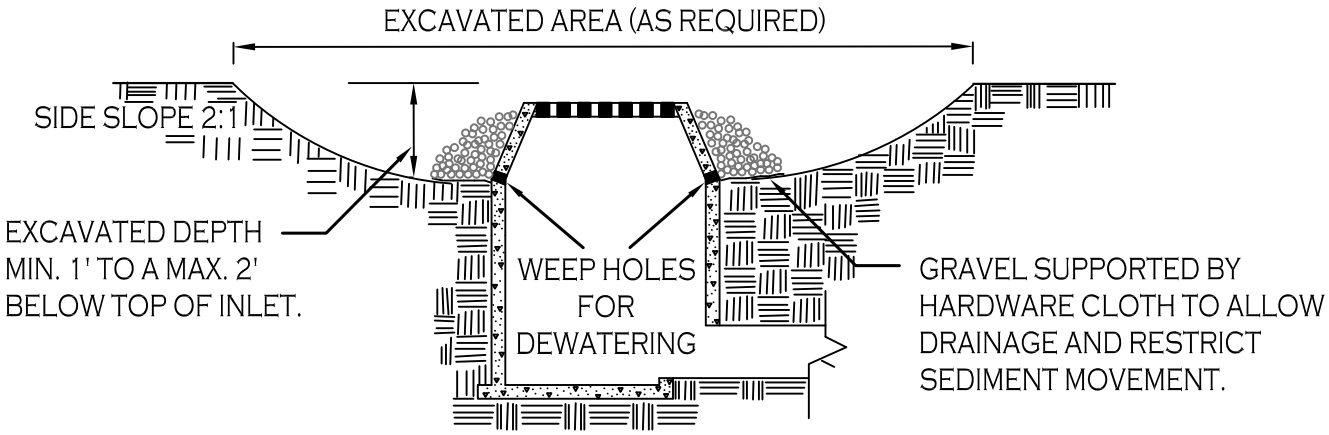


SILT SACK DETAIL

NOT TO SCALE

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)





CONSTRUCTION SPECIFICATIONS

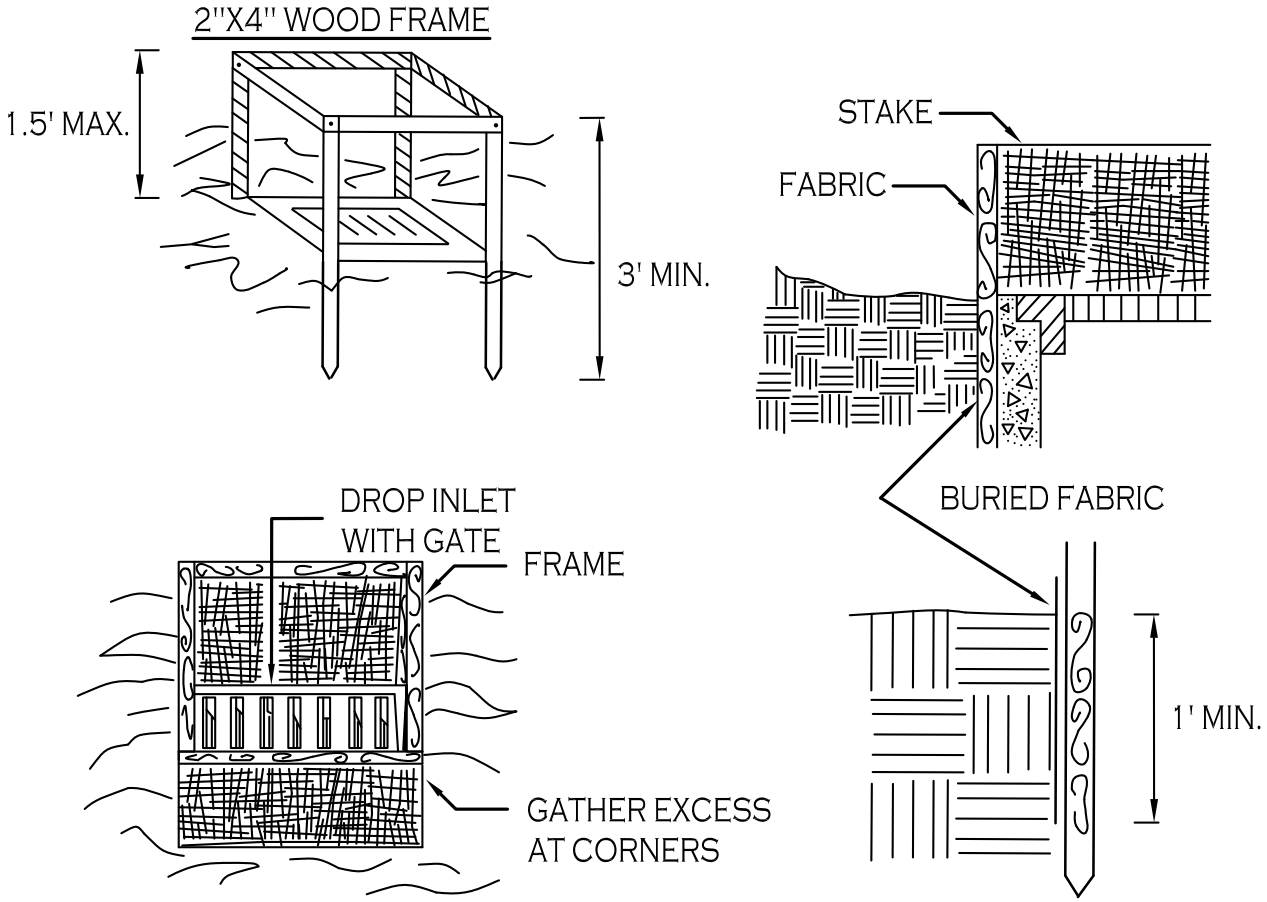
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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.

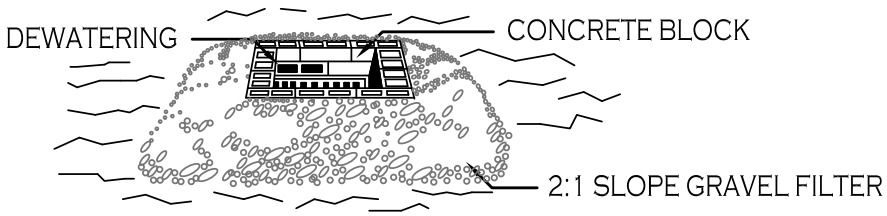
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

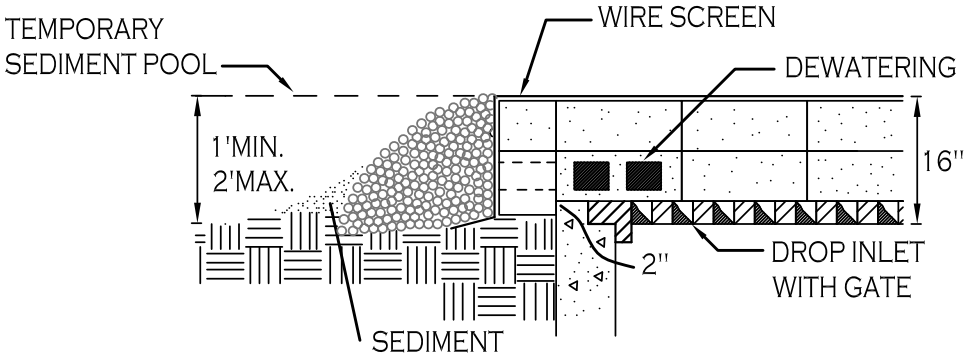
INLET PROTECTION DETAIL 2

NOT TO SCALE

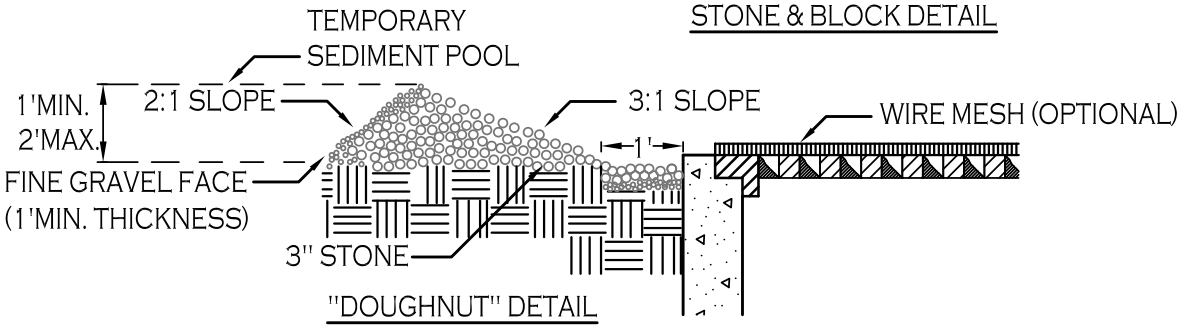
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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.

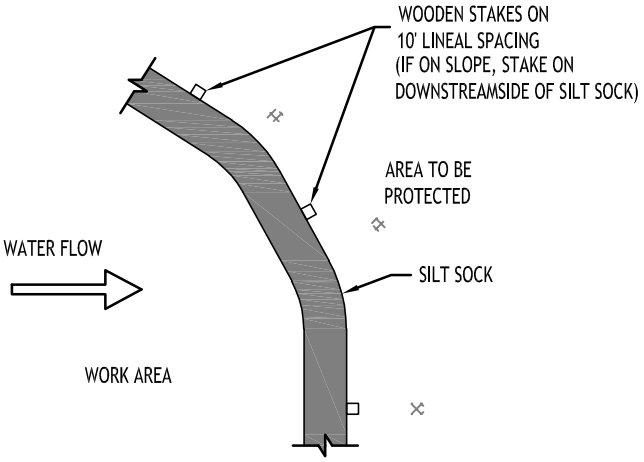
FENCING SHALL BE SECURED TO POSTS WITH WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF POST. FASTENER SHALL BE TIGHT ENOUGH TO PREVENT THE FENCING FROM SLIPPING DOWN. OVERLAPS SHALL ALSO BE SECURELY FASTENED.

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.

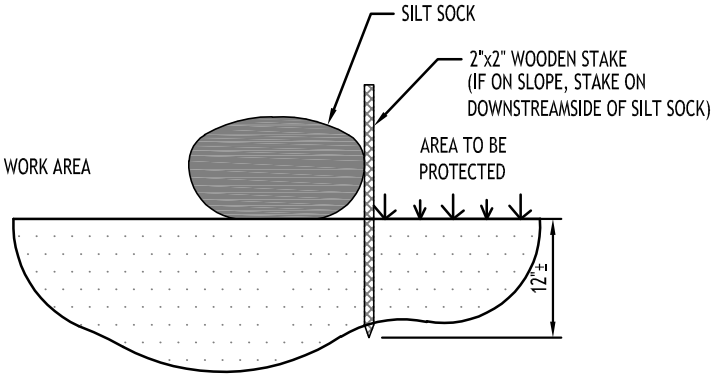
MAINTENANCE SHALL COMMENCE IMMEDIATELY AFTER ERECTION OF THE FENCE AND CONTINUE UNTIL ONE WEEK PRIOR TO ACCEPTANCE OF THE CONTRACT, AND SHALL CONSIST OF: REPLACING DAMAGED POST(S) AND FENCING; RE-FASTENING AND TIGHTENING FENCING; AND RESTORING FENCE TO ITS INTENDED HEIGHT.

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.

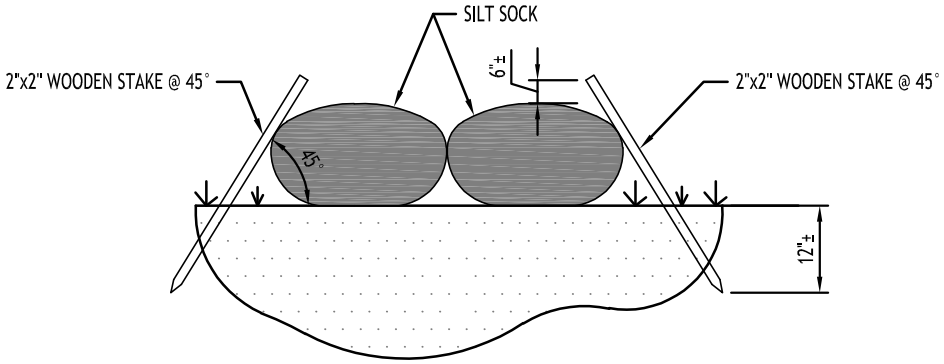
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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

NOT TO SCALE

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Appendix K

NYSDEC Stormwater Management Inspection Lists

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Bioretetion Areas (F-5)



Description: Shallow stormwater basin or landscaped area which utilizes engineered soils and vegetation to capture and treat runoff. The practice is often located in parking lot islands, and can also be used to treat residential areas.

KEY CONSIDERATIONS

CONVEYANCE

- Provide overflow for the 10-year storm to the conveyance system.
- Conveyance to the system is typically overland flow delivered to the surface of the system, typically through curb cuts or over a concrete lip.

PRETREATMENT

- Pretreatment consists of a grass channel or grass filter strip, a gravel diaphragm, and a mulch layer, sized based on the methodologies described in Section 6.4.2.

TREATMENT

- Treatment area should have a four foot deep planting soil bed, a surface mulch layer, and a 6" ponding layer.
- Size the treatment area using equations provided in Chapter 6.

LANDSCAPING

- Detailed landscaping plan required.

MAINTENANCE

- Inspect and repair/replace treatment area components
- Stone drop (at least 6") provided at the inlet
- Remulch annually

STORMWATER MANAGEMENT SUITABILITY

- [X] Water Quality
- [ ] Channel Protection
- [ ] Overbank Flood Protection
- [ ] Extreme Flood Protection

Accepts Hotspot Runoff: *Yes*
(requires impermeable liner)

IMPLEMENTATION CONSIDERATIONS

- [M] Capital Cost
- [M] Maintenance Burden

Residential
Subdivision Use: *Yes*

High Density/Ultra-Urban: *Yes*

Drainage Area: *5 acres max.*

Soils: *Planting soils must meet specified criteria; No restrictions on surrounding soils*

Other Considerations:

- *Use of native plants is recommended*

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

	Key: L=Low **M**=Medium **H**=High **POLLUTANT REMOVAL** **G** Phosphorus **G** Nitrogen **G** Metals - Cadmium, Copper, Lead, and Zinc removal **F** Pathogens – Coliform, Streptococci, E.Coli removal **Key**: **G**=Good **F**=Fair **P**=Poor

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Comments:

Actions to be Taken:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Comments:

Actions to be Taken:

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Attachment 'A'

BARRON & ASSOCIATES, P.C.
10440 Main Street
Clarence, New York 14031

Tel: (716) 759-7821 www.barronandassociatespc.com Fax: (716) 759-782

January 9, 2009

Job No: 09-510

McGuire Development Company
560 Delaware Avenue
Buffalo, New York 14202

RECEIVED
JAN 19 2010
TOWN OF AMHERST
PLANNING DEPT.

ATTN: Mr. James F. Dentinger

RE: Geotechnical Engineering Report
Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie Co., New York

Gentlemen:

This report presents the findings of the subsurface investigation program and geotechnical engineering recommendations for the above referenced project. The geographic orientation of the project site is illustrated on the U.S. Geologic Survey (USGS) site location map in Figure No. 1. The project site is illustrated in Figure No. 2, entitled "Test Boring Location Plan", which includes: the approximate location of 14 test borings that were drilled by Buffalo Drilling Company, Inc. (BDC); relative ground surface elevations; and additional site details. The locations of the test borings were selected by the client's design representative. Borings B-5, B-9, and B-13 were moved slightly from their original locations.

EXPLORATION METHODS

Sampling Method: A track-mounted Diedrich D-50 rotary drill rig was used to drill 14 test borings to depths of approximately ten to 34 feet below the ground surface by using 2-1/4 inch inside diameter (ID), continuous flight hollow stem augers. Samples were recovered by driving a standard split-spoon sampler (2-foot long by 1-3/8 inch inside diameter) 24 inches with a 140-pound hammer falling 30 inches per blow per the American Society of Testing and Materials (ASTM) Standard D1586. The number of blows from six to 18 inches of penetration is defined as the Standard Penetration Test (SPT) N-value. An N-value of greater than 100 and auger refusal, which may infer the top of bedrock, were encountered at the deepest boring B-8. Spoon refusal and/or auger refusal may also reflect a boulder and/or cobble-laden formation.

Any encountered groundwater conditions are documented in the field on the driller's logs for each test boring. If indicators of groundwater are observed on the sampling equipment, the depth to groundwater is also checked and measured through the hollow stem augers at the completion of the sampling efforts.

SP-2-10 1750+1800 MAPLE RD

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Classification: The retrieved soil and fill samples were initially logged in the field by the driller, and a portion of each sample was placed and sealed in a glass jar. Boring logs, which are included in Appendix A, were based upon the field logs and a second visual classification of recovered samples in the laboratory by a geologist. Classification/identification of samples, as noted on the boring logs, is based on the Unified Soil Classification System (USCS) in the ASTM D2487/D2488. Refer to Appendix B entitled, "Geotechnical Reference Standards", for an explanation of the terminology that is used for soil and rock descriptions.

Laboratory Testing: Laboratory testing was undertaken on several retrieved split spoon samples. The overall laboratory testing program consisted of the following test methods:

- Water (Moisture) Content of Soil — ASTM D2216
- Liquid Limit, Plastic Limit, and Plasticity Index of Soils — ASTM D4318

Table No. 1 presents the tabulated results of the physical/soil index properties. The associated graphical illustration of the data is included in Appendix C.

SITE AND SUBSURFACE CONDITIONS

General: The proposed site for development is addressed as 1730 to 1800 (even) Maple Road in the Town of Amherst, Erie County, New York. As shown in Figure No. 2, the project site for development is located in the central to western sections of approximately 5.6 acres of land. Three residential structures, gravel-covered and paved driveways, and a garage exist in the southern part of the site. The eastern section of the site is asphalt paved, while an earthen sports court exists in the north central part of the site. The development area is predominately occupied by landscaped grass and trees/brush. The site topography is relatively level, but slopes slightly downward from the east to the west.

Subsurface Soil Conditions: In general, subsurface conditions were noted to consist of a topsoil veneer over isolated pockets of granular and cohesive fills that overly a naturally deposited silty clay soil atop a clayey glacial till on a silty sand glacial till unit over an apparent shale bedrock. The topsoil ranged from two to eight inches thick, with four to five inches being the mid-range thicknesses. The topsoil thickness may be expected to vary across the site for development and was noted to be absent at boring B-14. At the existing driveways on the southern side and paved parking lot in the eastern part of the development, the asphalt pavement and subbase gravel thicknesses were not determined in this investigation.

Beneath the topsoil veneer at borings B-2, B-12 and B-14 (to the west of the existing asphalt parking lot), an isolated pocket of an upper cohesive fill and pockets of granular fill were present and extended to approximately two feet (at boring B-12) to six feet (at boring B-2) below the ground surface. At test boring B-2, the approximate two foot thick pocket of a moist cohesive fill consisted of a stiff/very stiff, moderately plastic silty clay with lesser amounts of gravel and slag and trace amounts of fine-sized to

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

coarse-sized sand. The granular fills consisted of a non-plastic, fine-sized to coarse-sized sand with varying amounts of gravel, lesser amounts of concrete and slag, and trace amounts of silt, glass, and wood. The granular fills were in the low-level medium dense state to a very dense state (at boring B-2). The very dense state may also reflect a subsurface obstruction (e.g., concrete slab/fragments). The moisture content of the sand fills was in a moist state, except for a wet condition at boring B-12.

Granular and cohesive fills are generally placed in uncontrolled and uncompacted conditions; which are questionable to unsuitable for direct foundation bearing purposes. The characteristics of the granular fills can be improved with proper sorting of deleterious materials and oversized fractions (if present), proper preparation (i.e., drying and blending), and compaction. The cohesive fill may be difficult to compact. If encountered beneath the fill, buried woody vegetation and all organic laden materials (e.g., buried topsoil layer) are unsuitable for load bearing footing conditions.

Beneath the topsoil at boring B-7 (in the central part of the proposed western building wall line), an apparently isolated pocket of an approximate two and one-half foot thick naturally deposited granular soil was encountered and extended to a depth of three feet below the ground surface. This granular soil consisted of a moist, non-plastic, silty fine-sized sand. The loose relative density state of this soil type may be improved with proper preparation (i.e., drying and blending) and thorough compaction. Due to the high silt content, it may be very difficult to achieve a desired compaction state for this soil type; thereby, making it unsuitable as a direct footing supporting media. Note that the granular fills and natural soil types have been differentiated to the extent possible in this investigation.

Beneath the topsoil, granular fill and natural silty sand soil, a variably thick naturally deposited cohesive soil was encountered and extended to six to 17 feet below the ground surface. This unit was the full depth of drilling at most of the shallower boring locations. The cohesive soil generally consisted of a moderately plastic silty clay with trace amounts of fine-sized to coarse-sized sand and gravel. The consistency of this silty clay ranged from the soft to the very stiff states at the zero to two foot depth below the ground surface and graded to the generally very stiff and hard states with increasing depth. The mid-level stiff and poorer states at the zero to two foot depth and at the proposed footing bearing grade (e.g., boring B-4 at the proposed northeastern building corner) are considered unsuitable to questionable in providing a reliable direct supporting media for the shallow foundations. The moisture content was in a moist state and grade to a wet state at approximately eight to ten feet below the ground surface. This natural silty clay soil is considered to have a low expansion potential.

Beneath the silty clay, a naturally deposited cohesive glacial till unit was encountered and extended the full depth of drilling at all deeper (greater than 15 feet) boring locations, except the deepest boring B-8. The cohesive till consist of a hard and moderately plastic silty clay with lesser amounts of gravel and fine-sized to coarse-sized sand. The sand and gravel content increased with increasing depth within the

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clayey till. At the deepest boring B-8, a very dense silty fine-sized sand was present and extended the full depth of drilling. Within the glacial till, spoon refusal (i.e., N-values of 50+ to 100+) conditions were encountered and may reflect a boulder/cobble condition (such as that suspected at boring B-10). The ability to auger, with the drill rig, to these levels would suggest that the upper cobbles-boulders can be removed with conventional excavating equipment (e.g., backhoes, excavators, caisson/drilled pier drill rigs). The moisture content of the glacial tills was in the moist to predominately wet states.

Bedrock: N-values of greater than 100 and/or auger refusal, which are generally inferred to be top of bedrock, were encountered at the deepest test boring B-8. The top of apparent bedrock surface is believed to be approximately 34 feet or more below the ground surface (relative elevation of 63 feet or lower). Based upon the regional geology, the bedrock is expected to be the Camillus Shale.

Groundwater: No appreciable amounts of groundwater were encountered at the test borings during or at the completion of drilling operations, except borings B-4 and B-8. The groundwater depth at boring B-4 was nine feet below the ground surface (relative elevation of 85.1 feet), while a depth of seven feet (relative elevation of 89.8 feet) was present at boring B-8. Boring B-8 was advanced to the top of the apparent bedrock surface and most likely represents the artesian (i.e., pressurized) groundwater condition within the bedrock. Based upon the wet soil moisture conditions, the static groundwater level is believed to be approximately ten feet or more below the ground surface (relative elevation of 87 feet or lower). Due to the site topography, the regional groundwater flow direction is expected to be to the north. Note also that the surficial granular natural soils/fills, which overly the cohesive soils/fills, are conducive to the creation of seasonally localized perched groundwater table conditions.

Note that the groundwater readings were taken at completion of drilling efforts and, therefore, an adequate amount of time for the groundwater level to recharge to static conditions was probably not allowed. Fluctuations in the groundwater level may occur due to other factors than those present during field operations.

EARTHQUAKE/SEISMIC CONSIDERATIONS

Site Class Definition: For the given site conditions, the most applicable site definition is Site Class C, as listed in Table 1615.1.1 and Table 1615.1.5 of the Building Code of New York State, © 2007.

Liquefaction Potential: For the project site, the design spectral response acceleration parameters S_{DS}, at 0.2 seconds, and S_{D1}, at one second, are 0.23g and 0.067g (g = 32.2 feet/sec^2), respectively, for this part of Erie County, New York. These values have a two percent probability of being exceeded in 50 years. Based upon the above conditions and an approximate magnitude 6.0 earthquake on the Richter Scale, the potential for liquefaction or settlement of the Site Class C soils is considered extremely low.

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FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

General: This section will present and discuss recommendations on foundation design and construction, placement of controlled fills, and subgrade and base layer requirements for concrete floor slabs. As shown in Figure No. 2, the proposed two-story slab-on-grade building, with approximately 23,400 square feet in first floor building footprint area, is located in the central section of the overall site. Two storm water detention basins are proposed to the north of the building. The ground surface is relatively level, but slopes slightly downward from the eastern to the western parts of the site for development.

For the purposes of this report, top of building finish first floor for the proposed building is taken at a relative elevation of 97.5 feet ±. The maximum design bearing wall and column loads are not expected to exceed six kips per lineal foot and 150 kips, respectively. The maximum live floor loads are taken as 100 pounds per square foot (psf).

Site Preparation and Earthwork: General site preparation will include the demolition and complete removal of any encountered foundations and floor slabs, and removing all unsuitable surficial material (i.e., asphalt pavement, concrete, brick, expansive slag, organic or topsoil layer, and construction and demolition-like fill) to a depth where firm, granular or cohesive fills or naturally occurring soils are encountered. It is recommended, particularly in the location of the proposed structure, that any slag and/or cinder/ash containing material, if encountered, should be tested to determine the expansion and corrosion characteristics prior to use on-site. Any rubble-like and brick fill, boulders, or wood fill in particular, if encountered, will require undercutting. The proposed building and paved areas are to be proofrolled with a fully loaded ten-wheel dump truck. All encountered soft and disturbed zones should be undercut and stabilized with granular fill that is placed in compacted lifts prior to placement of additional fill materials above. Refer to Appendix E entitled "General Earthwork Specification" for definition of fill types and gradation, recommended minimum compaction requirements for various site developments, and placement and compaction methods. The NYS Department of Transportation (NYSDOT) specification numbers for typical aggregate subbase/base course components are Item No. 304.12 (Metric) Subbase Course, Type 2 (< 2 inch maximum size), which is preferred, or Item No. 304.14 (Metric) Subbase Course, Type 4 (< 2 inch maximum size).

As shown in Figure No. 2, the proposed site for development is currently occupied by three residential structures and one detached slab-on-grade garage. Residential gravel-covered and paved driveways, a earthen sports/recreation court, and an asphalt paved parking area also exist on the proposed site for development. The residential structures presumably have basement areas. One of the residential structures and the garage are located along the southern building wall line of the proposed building. Since cavities (from the footings, foundation walls, basements, and tanks, as encountered) would remain, backfilling in compacted lifts with several feet of controlled select granular fill, such as a number two crusher run stone or with suitable stripped and approved on-site fill material, would be required.

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It is unknown if any former residential/commercial structures existed on the project site. It is also unknown if any former footings and foundation walls may be buried at the proposed site. Septic tank locations and the abandonment conditions or practices are normally unknown. If encountered during site development, it is recommended that any tanks should be properly removed under the applicable local and state regulations. The remaining cavities from the preceding conditions should be backfilled with select/approved granular fill that is placed in compacted lifts.

Shallow Foundation: The recommended foundation type is shallow footings. Continuous strip and spread exterior footings would bear at a relative elevation of three and one-half feet or lower below final grade. A three and one-half foot minimum footing depth (as required by local or New York State code) is required to provide adequate protection from frost for exterior footings. Interior footings are recommended to bear at the same elevation as the exterior footings.

The presence of the fill materials and of the mid-level stiff/low-level medium dense or poorer natural soils at the zero to two foot depth and at footing bearing grade are factors that create unsuitable direct footing bearing conditions for the proposed building. The exterior and interior footings are recommended to bear on the approved upper level stiff or better/thoroughly compacted natural silty clay soil or, as needed (e.g., at borings B-4 and B-7), on a variable thickness of layers of thoroughly compacted (minimum of 95 percent of ASTM D 1557) select/approved granular fill that is placed on the approved upper level stiff or better/thoroughly compacted natural silty clay soil. Alternatively, the interior footings are recommended to bear at a two and one-half foot minimum depth below finish first floor slab and, potentially as needed (e.g., at boring B-5), on a variable thickness of layers of thoroughly compacted (minimum of 95 percent of ASTM D 1557) select/approved granular fill that is placed on the approved upper level stiff or better/thoroughly compacted natural silty clay soil. Undercut areas beneath proposed foundations must extend laterally beyond each vertically projected edge of the foundation by a minimum distance equal to one-half the total depth of the undercut or equating to a slope of two vertical to one horizontal from the bottom foundation corner. The undercuts and placement of compacted select/approved granular fill are required, because the upper fills and natural silty clay soil from the zero to two foot depth, at a minimum, would result in unacceptable differential settlements.

Wall footings should have a minimum two-foot width and column footings should have a minimum three-foot width. Based on the above described conditions, the recommended maximum net allowable foundation bearing pressure is 2,500 pounds per square foot (psf) of bearing area. All footings for the proposed building are recommended to be designed near the same contact pressure. The recommended maximum net allowable foundation bearing pressure is based on generally accepted design methods for cohesionless and cohesive soil conditions. Based on the provisions of the above recommendations, estimated design requirements, utilization of proper construction procedures, and

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

experienced field supervision and testing personnel, total and differential settlements are estimated to be less than one inch and 3/4's inch, respectively. Refer to the engineering computations, which are included as Appendix D, for additional foundation design and construction details.

Additional Foundation Considerations: In addition to the above, the following recommendations will provide additional assurances with regard to proper foundation construction.

a) All fill placed beneath, adjacent, or above foundations must comply with the "General Earthwork Specification", included as Appendix E.

b) Backfill of foundations with approved select granular fill must be completed prior to placement of substantial superstructure loads, except for basement walls or substructure areas that may additionally require superstructure loads and possibly internal bracing.

c) The upper silty materials may rut and "pump" if exposed to excessive surface water and repeated construction traffic. Proper site management and fill placement operations are needed to minimize costly undercuts and subgrade repairs prior to placement of concrete slabs and asphalt pavement. It is noted that construction during wet/rainy and/or Fall and Spring conditions may require added precautions and possibly a thicker base layer to maintain a stable subgrade condition.

d) Step footings, if utilized, should have a rise to run ratio of 1:2, with a two-foot maximum rise and a four-foot minimum run between steps or as recommended by the design structural engineer.

e) The recommended at rest (rigid wall), active, and passive earth pressure coefficients for select granular sandy gravel fill against an earth retaining structure/wall are 0.76, 0.24, and 2.8, respectively. The respective equivalent lateral fluid pressures are recommended to be 90, 30 and 330 psf per foot depth (as included in Appendix D), which are based upon a moist, compacted unit backfill weight of 120 pcf. The at rest value would account for the average expected compaction induced stresses and/or the potential influences of hydrostatic pressure. If a moist, compacted granular sandy silt or silty sand fill is used, the recommended active earth pressure coefficient is 0.33 and equivalent lateral fluid pressure is 45 psf per foot depth, which is based upon a unit backfill weight of 135 pounds per cubic foot (pcf). The lateral fluid pressures can be directly proportioned for other unit weights.

Stabilization of Excavations: The trench/excavation sidewall stability concerns can be addressed with the Occupational Safety and Health Act (OSHA) requirements as set forth in Subpart P of 29 CFR Part 1926, Sections 1926.650 to 1926.652. In lieu of a properly designed shoring system, side slopes of the trench excavation should be one on one (vertical to horizontal distance) or flatter in cohesive soils or one on one and one-half or flatter in the granular materials, as required by OSHA.

Water must not be allowed to accumulate or pond on exposed foundation bearing grades. Surface water and groundwater from within the excavations must be either pumped, diverted or channelized by gravity flow to effectuate the construction of the proposed foundation. As previously discussed, localized perched groundwater table conditions may seasonally be expected to be encountered in the granular fill and/or the natural granular soils that are atop cohesive fills/natural soils.

First Floor Slab: For the most part and based on test results for similar soils/fills, the moderately plastic silty clay natural soil may be difficult to compact in a controlled manner considering the natural moisture

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contents that are estimated to be at to at to wet of optimum, at the time of this investigation. The excavated and approvable soil/fill types are not expected to be available in any reasonable quantity, except possibly at the proposed storm water detention basins. These soil/fill types may be expected to be suitable for re-use as general fill with the implementation of uniformly applied soil conditioning methods (i.e., drying and blending) and compacted, if additional volume of soil for wall backfill or for raising site grades is needed.

Excavated and approvable granular (i.e., sand or gravel) natural soil/fill is not expected to be available in any reasonable quantity, except for the subbase gravel beneath the existing asphalt pavement in the eastern part of the project site for development. For the most part, granular (i.e., sand or gravel) soil/fill is expected to be acceptable for on-site re-use, as general/ordinary fill without substantial reworking and/or modification. If additional volume of soil for wall backfill or for raising site grades is needed, the implementation of uniformly applied soil conditioning methods (i.e., drying and blending) and compaction is required.

These previously discussed soils or dissimilar excavated materials should not be commingled prior to their use on-site, unless designated for a green area. General fill material is recommended to be placed on prepared and approved subgrade and in accordance with previous recommendations.

A geotextile fabric (such as, Mirafi 500X or 600X, Amoco 2002 or 2006, or equal) that separates the subgrade and the select granular base layer is recommended for sensitive cohesive/fine-grained/silt subgrade soils. This approach will stabilize and provide a workable building pad condition with minimal required repairs.

The approved subgrade will most likely consist of the existing natural silty clay soil and/or a thoroughly compacted and approved granular fill for the proposed building. Above the approved subgrade, a minimum eight-inch select granular fill (i.e., number two crusher run stone or equal) layer is recommended as the base course for the concrete floor slab. The NYS Department of Transportation (NYSDOT) specification numbers for typical aggregate subbase/base course components are Item No. 304.12 (Metric) Subbase Course, Type 2 (< 2 inch maximum size), which is preferred, or Item No. 304.14 (Metric) Subbase Course, Type 4 (< 2 inch maximum size). The floor slab for the proposed building is recommended to have a minimum four-inch thickness or as determined by the design structural engineer. The floor slab reinforcement should be provided through placement of wire mesh or plastic fibers and is also as determined by the design structural engineer.

At the discretion of the design architect, a vapor barrier may be considered for use in the proposed structure. The use of a thin gravel cushion, as a capillary break, or a thin sand cushion over a vapor barrier that is placed beneath the concrete slab are at the discretion of the design architect/engineer or

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as required by local code. Gradations of gravels that are satisfactory capillary breaks include 1 ¼-inch or ¾-inch crushed stone or aggregates per the ASTM D2321 Types IA, IB and II with less than 5 % fines. A number two crusher run stone may also be applicable, but the gradation and material properties specifications must qualify.

At the assumed final site grades and based upon the presence of the underlying natural soils, the recommended subgrade modulus at the top of the base layer for a concrete first floor slab bearing on an eight inch thick compacted (i.e., minimum 95 percent of ASTM D1557) base layer and prepared soil/fill subgrade (i.e., minimum 92 percent compaction of ASTM D1557) is recommended not to exceed 150 pounds per cubic inch (pci) for design purposes for the proposed building, with a Poisson Ratio of 0.40. Isolation of the floor slabs from the footings-piers-columns and walls do appear to be warranted.

Limitations, Field Inspections and Monitoring: This report is based on the preliminary information that is provided by project representatives and the subsurface conditions that were encountered at the test boring locations. Due to the nature of the investigation method, test pit excavation will provide a greater level of delineation of the subsurface soil/fill/rock conditions than can be defined by the test boring data alone. As detailed in Appendix F "Limitations", modification regarding proposed building/structure locations and other site developments can result in changes to provided recommendations. It is recommended that the geotechnical engineer be provided the opportunity to generally review the final detailed design and contract specifications. Required earthwork and foundation construction should be done under the supervision of experienced construction personnel and in a manner consistent with proven methods. All site work should be carefully monitored and tested by experienced geotechnical personnel to assure compliance with earthwork and foundation construction specifications.

Thank you for the opportunity to assist on this project. If questions should arise, please call the undersigned at your earliest convenience.

Very truly yours,
BARRON & ASSOCIATES, INC.
and
BUFFALO DRILLING COMPANY, INC.

James S. Barron, P.E.
President/Geotechnical Engineer

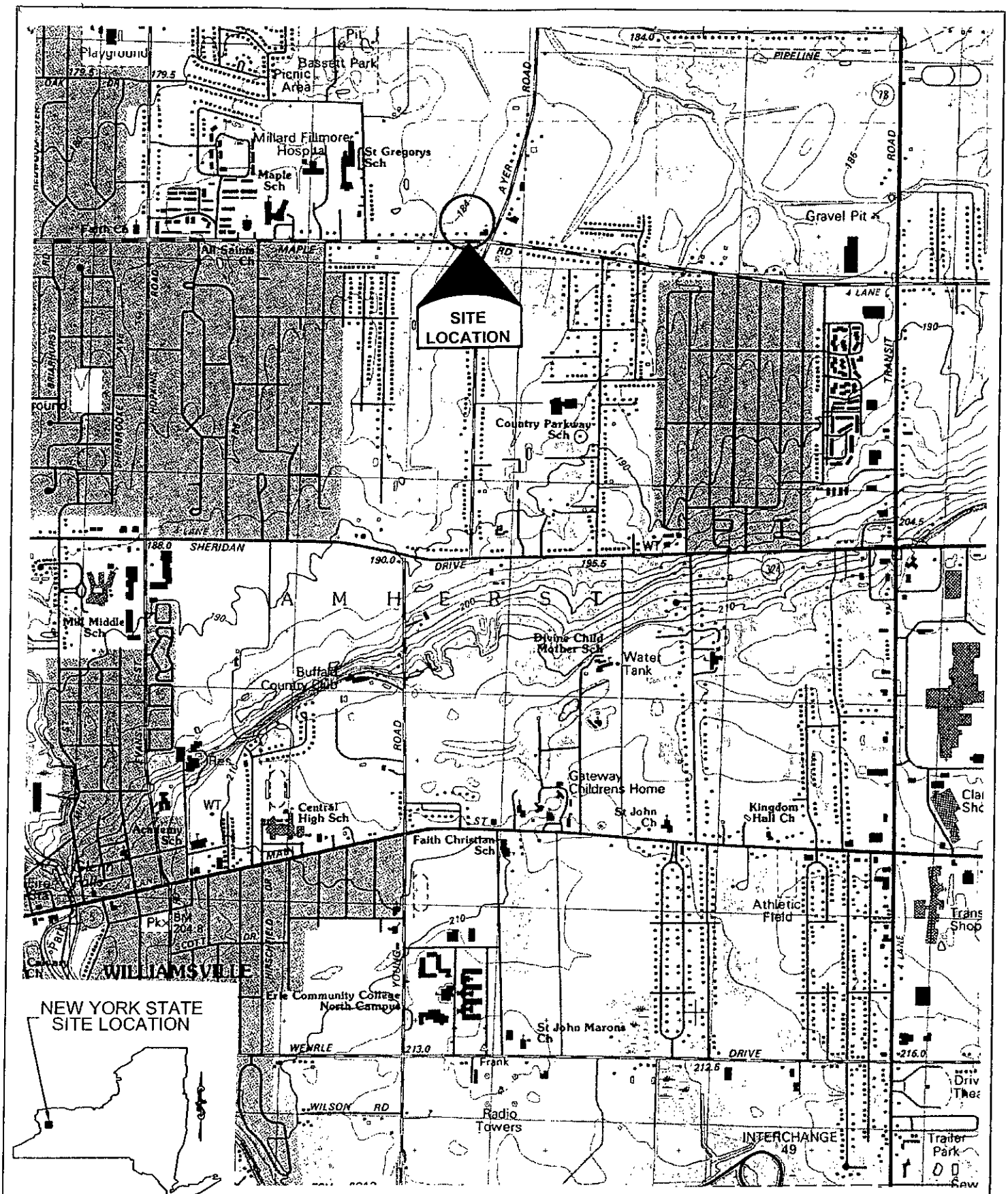
STATE OF NEW YORK
JAMES S. BARRON
58612
LICENSED PROFESSIONAL ENGINEER

1.12.09

Carmen M. Panuccio
Geotechnical Engineer

cc: Mr. Chris Wood – Carmina Wood Morris, P.C. (1 copy)
N:\Reports\Wpp09\09-510.doc

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



NOTE: ELEVATIONS ARE IN METERS

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DRAWN: DAN KASPROWICZ

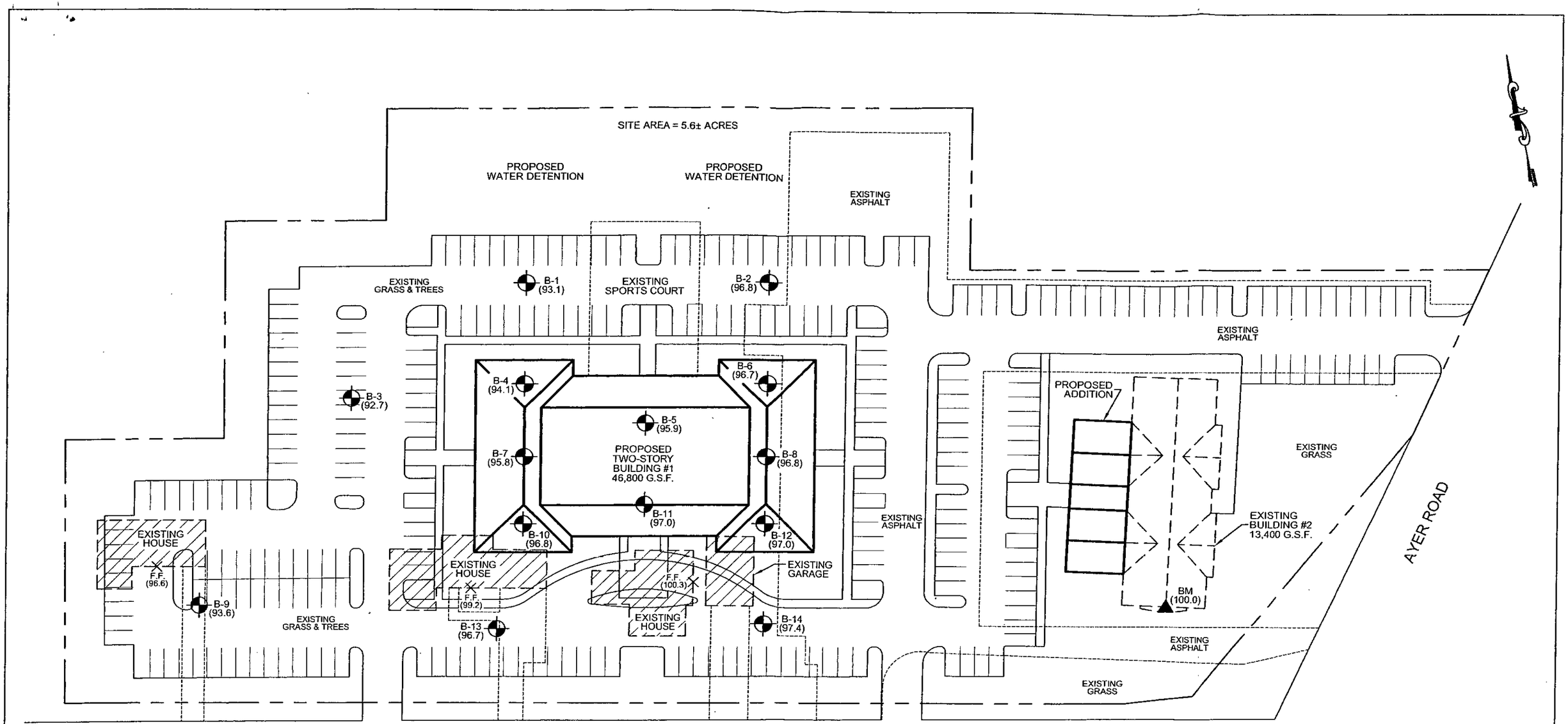
CLIENT: McGUIRE DEVELOPMENT COMPANY
560 DELAWARE AVENUE
BUFFALO, NEW YORK 14202

PROJECT: PROPOSED MAPLE AYER CORPORATE CENTER
1730 - 1800 MAPLE ROAD
AMHERST, ERIE CO., NEW YORK 14221

USGS SITE LOCATION PLAN
LANCASTER, N.Y. QUAD
1982

JOB NO.: 09-510	SCALE: 1" = 2083' ±
DATE: 1/7/2009	FIGURE NO. 1

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



LEGEND		
⊕	B-2	= TEST BORING & NO.
	(96.8)	= RELATIVE GROUND SURFACE ELEVATION (FT.)
×		= SPOT ELEVATION
▲	BM	= BENCH MARK (FINISH FLOOR OF EXISTING BUILDING)

NOTES:

1. BORINGS, BUILDINGS, SITE FEATURES, PROPERTY LINE LOCATIONS, AND SCALE OF DRAWING ARE APPROXIMATE.
2. BASE MAP REFERENCE AND BORING LOCATIONS PROVIDED BY CARMINA WOOD MORRIS, P.C., TITLED "SITE PLAN - MAPLE AYER CORPORATE CENTER", PROJECT NO. 08.079, DWG. NO. C-100, DATED 12/5/2008.
3. EXISTING STRUCTURES AND FEATURES PROVIDED BY ERIE COUNTY GIS, WWW.ERIE.GOV.

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CLIENT: McGUIRE DEVELOPMENT COMPANY
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PROJECT: PROPOSED MAPLE AYER CORPORATE CENTER
1730 - 1800 MAPLE ROAD
AMHERST, ERIE CO., NEW YORK 14221

TEST BORING LOCATION PLAN

0 30 60 120

JOB NO.: 09-510	SCALE: 1" = 60' ±
DATE: 1/9/2009	FIGURE NO. 2

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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B&A JOB NO: 09-510
CLIENT: McGuire Development Company
PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

TABLE NO. 1
LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth	Moisture Content ASTM D2216	Organic Matter Content ASTM D2974	Unconfined Compressive Strength ASTM D2166	Wet Density ASTM D2166	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classification ASTM D2487 / ASTM D2488 *
							Gravel	Sand	Silt	Clay	LL	PL	PI	
		(ft.)	(%)	(%)	(psf)	(pcf)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(-)
B-10	S-1	0-2	23.7	-	-	-	-	-	-	-	-	-	-	CL
	S-2	2-4	26.4	-	-	-	-	-	-	-	38	24	14	CL
	S-3	4-6	23.8	-	-	-	-	-	-	-	-	-	-	CL
	S-4	6-8	26.3	-	-	-	-	-	-	-	-	-	-	CL
	S-5	8-10	28.6	-	-	-	-	-	-	-	-	-	-	CL
	S-6	10-12	30.1	-	-	-	-	-	-	-	-	-	-	CL
	S-7	14-14.8	10.7	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-8	18-18.4	5.7	-	-	-	-	-	-	-	-	-	-	CL-Till

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX A

TEST BORING LOGS

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

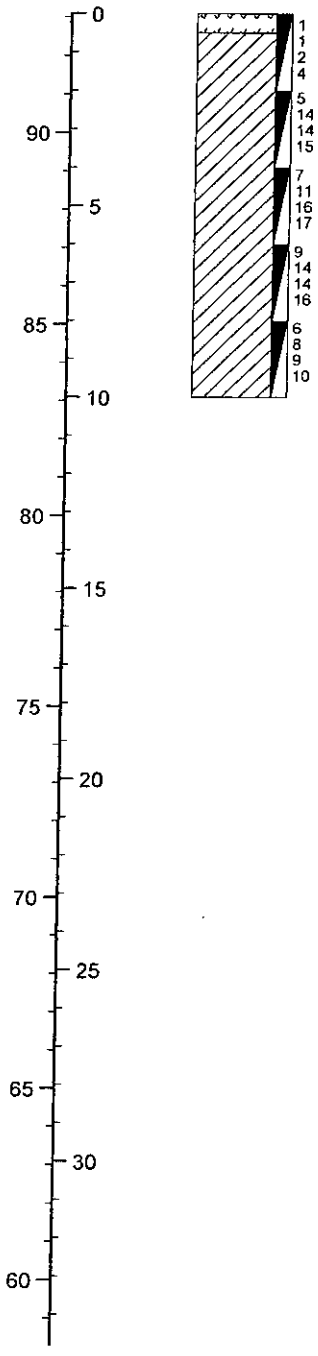
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CLARENCE, NEW YORK 14031
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-1

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/5/09	**SURFACE ELEVATION (ft.):**	93.1
DATE COMPLETED:	1/5/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0'- 2.0'	3	40	Topsoil (6") Dk. brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL) ...grade: Brown, v. stiff
		S-2 : 2.0'- 4.0'	28	60	Same as S-2
		S-3 : 4.0'- 6.0'	27	55	Same as S-2
		S-4 : 6.0'- 8.0'	28	50	Same as S-2
		S-5 : 8.0'- 10.0'	17	90	Depth to Bottom of Hole: 10.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

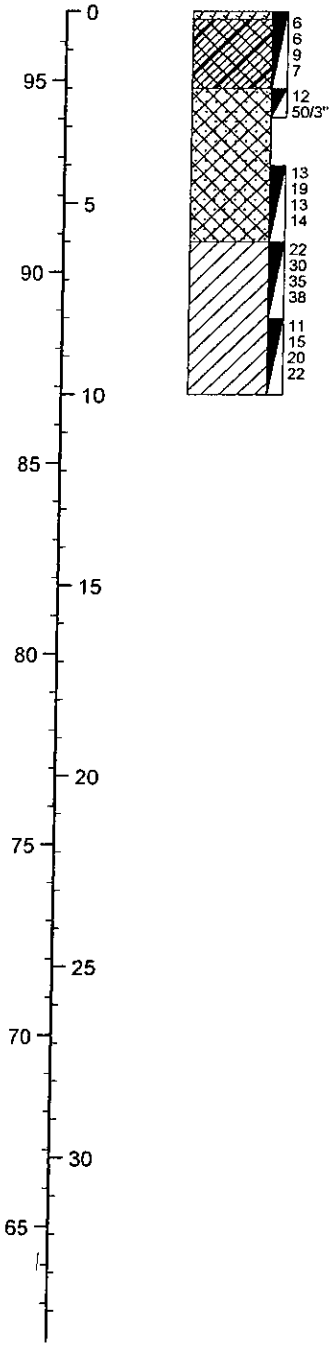
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CLARENCE, NEW YORK 14031
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-2

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	96.8
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
					Topsoil (2")
		S-1 : 0.0'- 2.0'	15	30	Brown, v. stiff Clay, some Silt, little Gravel, little Slag, tr. f/c Sand, mod. plastic, moist (CL-Fill)
		S-2 : 2.0'- 2.8'	50+	10	Dk. gray, v. dense f/c Sand, some Gravel, little Concrete, tr. Silt, moist (SW-Fill)
		S-3 : 4.0'- 6.0'	32	5	...grade: dense, some Concrete
		S-4 : 6.0'- 8.0'	65	10	Brown, hard CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL)
		S-5 : 8.0'- 10.0'	35	60	Same as S-4
					Depth to Bottom of Hole: 10.0 feet

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

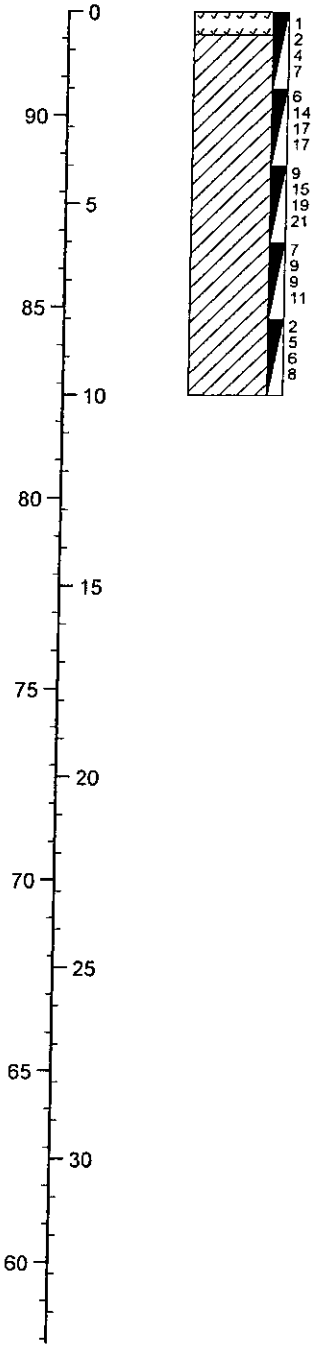
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-3

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/31/08	**SURFACE ELEVATION (ft.):**	92.7
DATE COMPLETED:	12/31/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
					Topsoil (7")
		S-1 : 0.0'- 2.0'	6	70	Brown, m. stiff CLAY, some Silt, tr. f. Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0'- 4.0'	31	45	...grade: hard
		S-3 : 4.0'- 6.0'	34	50	Same as S-2
		S-4 : 6.0'- 8.0'	18	70	...grade: v. stiff
		S-5 : 8.0'- 10.0'	11	80	...grade: stiff
					Depth to Bottom of Hole: 10.0 feet

Logged by: R. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

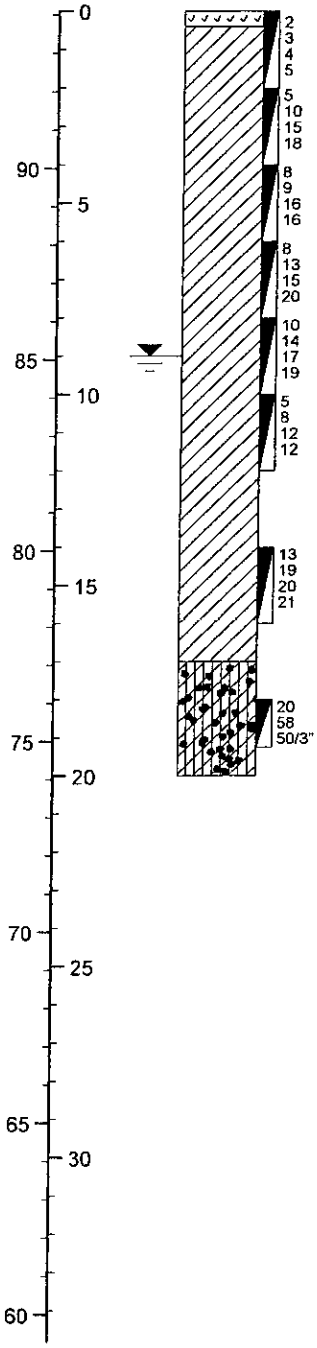
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-4

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	94.1
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	9.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	7	40	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	25	45	...grade: v. stiff
S-3 : 4.0'- 6.0'	25	60	Same as S-2
S-4 : 6.0'- 8.0'	28	70	Same as S-2
S-5 : 8.0'- 10.0'	31	55	...grade: hard
S-6 : 10.0'- 12.0'	20	60	...grade: v. stiff, wet
S-7 : 14.0'- 16.0'	39	0	...grade: hard (No Sample)
S-8 : 18.0'- 19.3'	108+	60	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

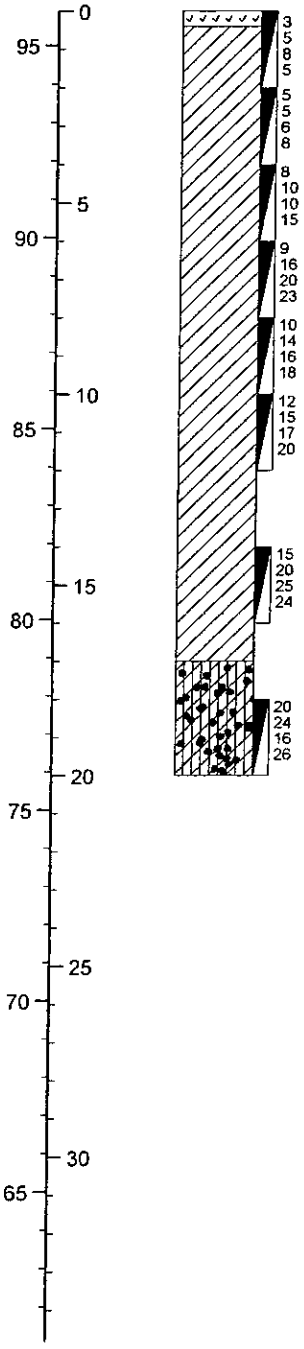
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-5

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	95.9
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	13	45	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	11	5	Same as S-1
S-3 : 4.0'- 6.0'	20	65	...grade: v. stiff
S-4 : 6.0'- 8.0'	36	45	...grade: hard
S-5 : 8.0'- 10.0'	30	50	Same as S-4
S-6 : 10.0'- 12.0'	32	60	Same as S-4
S-7 : 14.0'- 16.0'	45	0	...grade: hard (No Sample)
S-8 : 18.0'- 20.0'	40	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

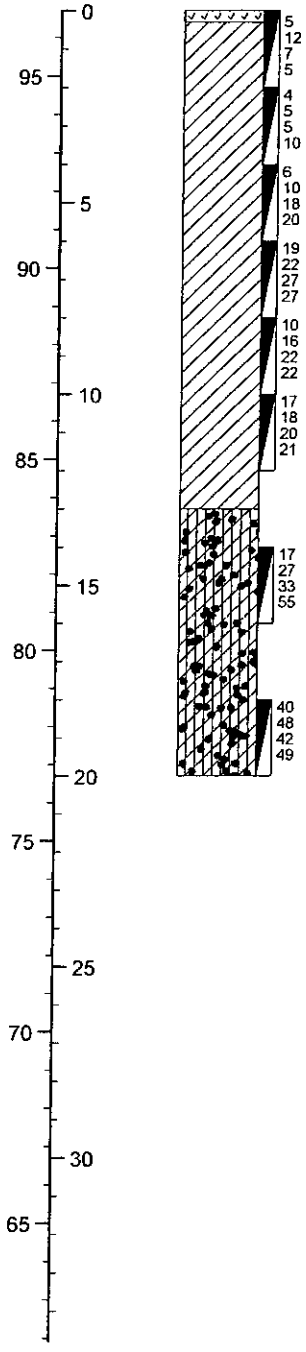
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-6

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	96.7
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
					Topsoil (3")
		S-1 : 0.0'- 2.0'	19	30	Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0'- 4.0'	10	40	...grade: stiff
		S-3 : 4.0'- 6.0'	28	50	...grade: v. stiff
		S-4 : 6.0'- 8.0'	49	20	...grade: hard
		S-5 : 8.0'- 10.0'	38	70	Same as S-4
		S-6 : 10.0'- 12.0'	38	80	...grade: wet
		S-7 : 14.0'- 16.0'	60	55	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
		S-8 : 18.0'- 20.0'	90	60	...grade: Gray, some f/c Gravel
					Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

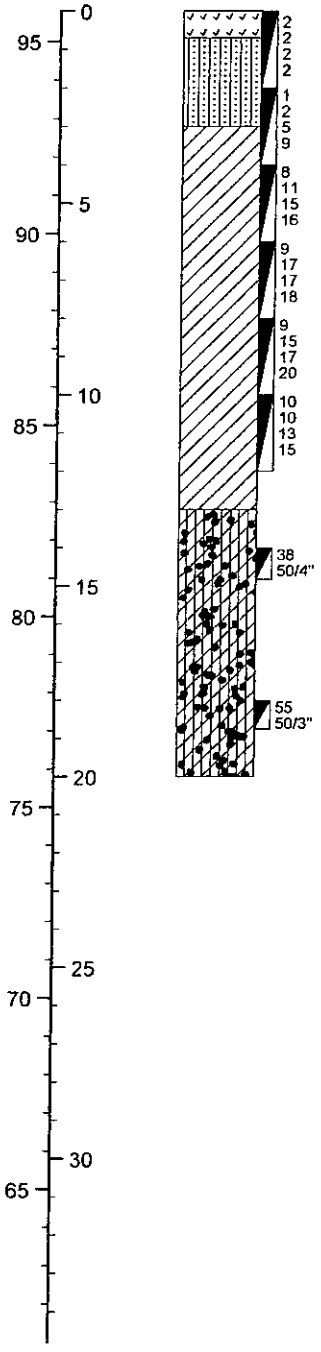
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-7

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	95.8
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (8")
S-1 : 0.0'- 2.0'	4	80	Brown, loose f. SAND, some Silt, tr. Roots, moist (SM)
S-2 : 2.0'- 4.0'	7	50	Same as S-1
S-3 : 4.0'- 6.0'	26	65	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL) ...grade: v. stiff
S-4 : 6.0'- 8.0'	34	40	...grade: hard
S-5 : 8.0'- 10.0'	32	50	Same as S-4
S-6 : 10.0'- 12.0'	23	60	...grade: v. stiff
S-7 : 14.0'- 14.8'	50+	75	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 18.8'	50+	60	...grade: Gray, some f/c Sand
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

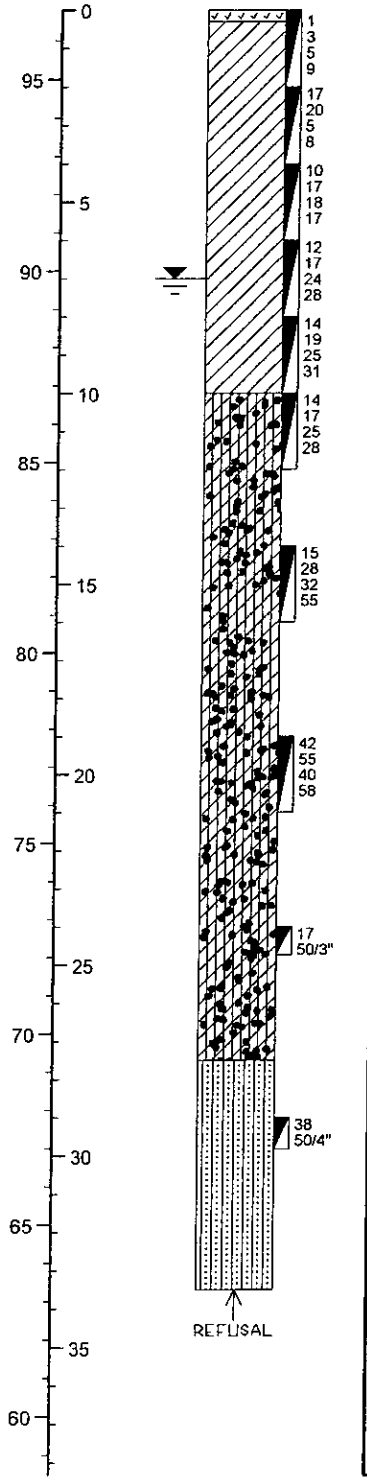
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-8

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (FT):**	96.8
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (FT):** (measured at completion unless indicated below)	7.0



Elevation/ Depth	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0' - 2.0'	8	40	Topsoil (3") Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0' - 4.0'	25	20	...grade: v. stiff, wet
		S-3 : 4.0' - 6.0'	35	0	...grade: hard (No Sample)
		S-4 : 6.0' - 8.0'	41	55	...grade: moist
		S-5 : 8.0' - 10.0'	44	60	...grade: wet
		S-6 : 10.0' - 12.0'	42	65	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
		S-7 : 14.0' - 16.0'	60	35	Same as S-6
		S-8 : 19.0' - 21.0'	95	80	...grade: Gray, some f/c Sand
		S-9 : 24.0' - 24.8'	50+	80	...grade: and Gravel
		S-10 : 29.0' - 29.8'	50+	80	Gray, v. dense f. SAND, some Silt, wet (SM-Till)
					Depth to Bottom of Hole: 33.5 feet

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

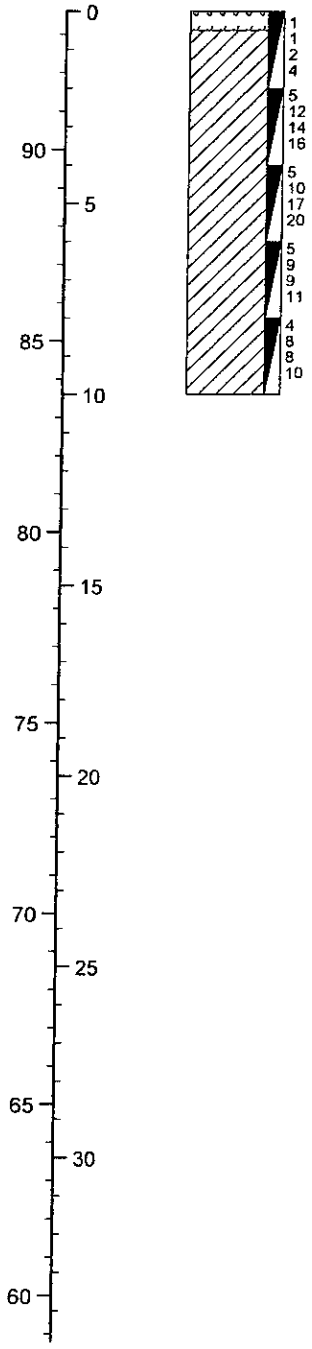
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-9

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/31/08	**SURFACE ELEVATION (ft.):**	93.6
DATE COMPLETED:	12/31/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (6")
S-1 : 0.0'- 2.0'	3	40	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	26	60	...grade: v. stiff
S-3 : 4.0'- 6.0'	27	70	Same as S-2
S-4 : 6.0'- 8.0'	18	75	Same as S-2
S-5 : 8.0'- 10.0'	16	75	...grade: wet
			Depth to Bottom of Hole: 10.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

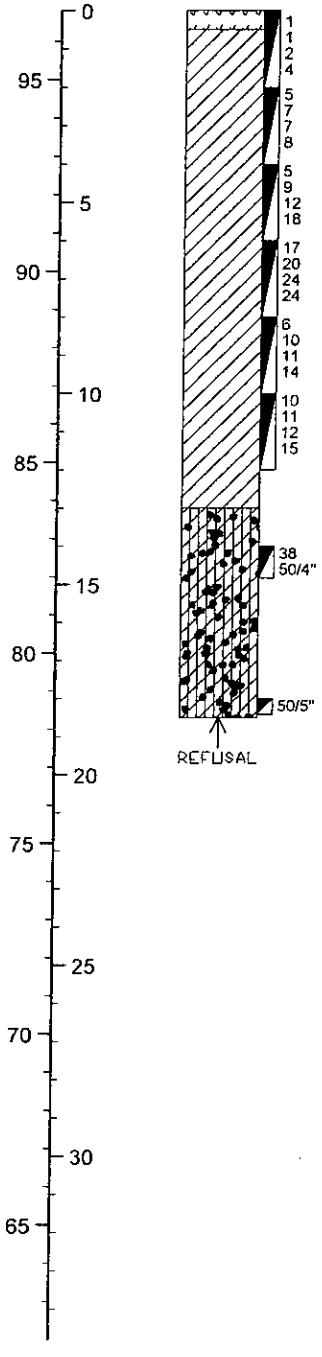
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-10

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/5/09	**SURFACE ELEVATION (ft.):**	96.8
DATE COMPLETED:	1/5/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (6")
S-1 : 0.0'- 2.0'	3	60	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	14	50	...grade: stiff
S-3 : 4.0'- 6.0'	21	60	...grade: v. stiff
S-4 : 6.0'- 8.0'	44	40	...grade: hard
S-5 : 8.0'- 10.0'	21	70	...grade: v. stiff
S-6 : 10.0'- 12.0'	23	75	Same as S-5
S-7 : 14.0'- 14.8'	50+	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 18.4'	50+	90	...grade: Gray, and Gravel *(Auger refusal suspected to be boulder within till.)*

Depth to Bottom of Hole: 18.5 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

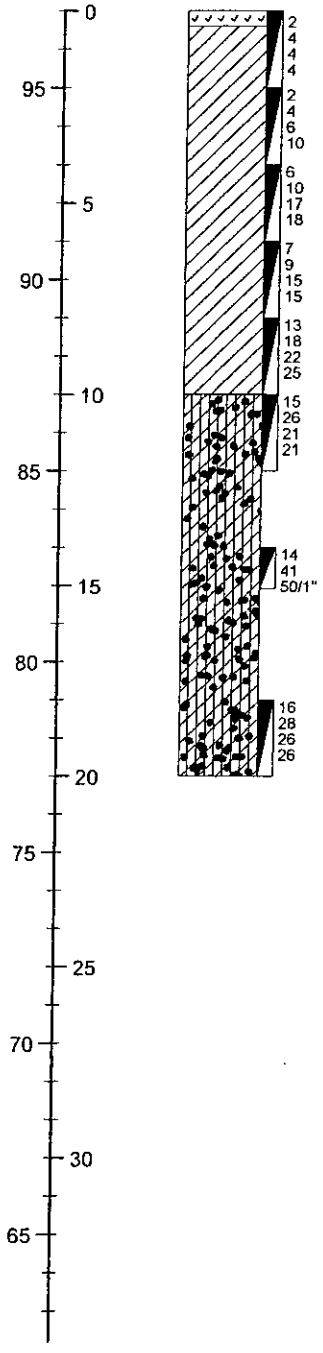
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-11

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/30/08	**SURFACE ELEVATION (ft.):**	97.0
DATE COMPLETED:	12/30/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (5")
S-1 : 0.0'- 2.0'	8	30	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	10	30	Same as S-1
S-3 : 4.0'- 6.0'	27	65	...grade: v. stiff
S-4 : 6.0'- 8.0'	24	60	Same as S-3
S-5 : 8.0'- 10.0'	40	50	...grade: hard, wet
S-6 : 10.0'- 12.0'	47	60	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
S-7 : 14.0'- 15.1'	50+	0	Same as S-6 (No Sample)
S-8 : 18.0'- 20.0'	54	50	...grade: Gray, some f/c Sand
			Depth to Bottom of Hole: 20.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

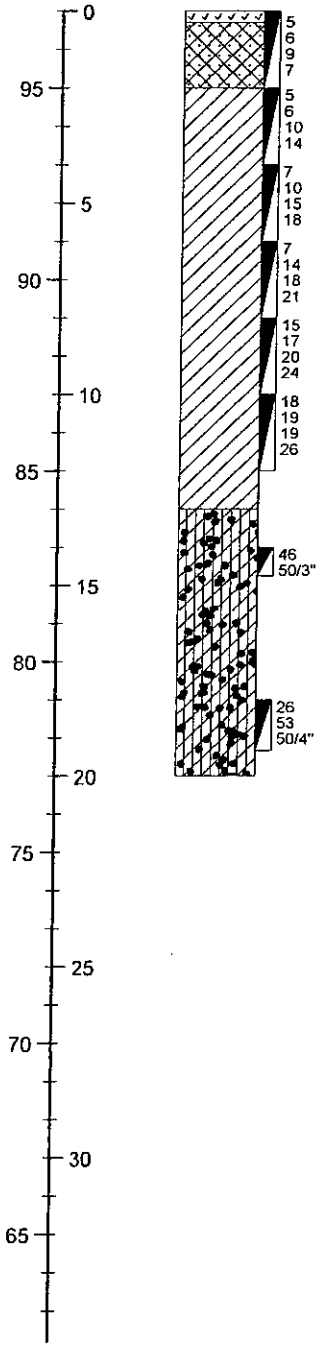
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-12

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	12/29/08	**SURFACE ELEVATION (ft.):**	97.0
DATE COMPLETED:	12/29/08	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (3")
S-1 : 0.0'- 2.0'	15	15	Dk. gray, m. dense f/c Sand, some Gravel, little Slag, tr. Silt, wet (SW- Fill)
S-2 : 2.0'- 4.0'	16	40	Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-3 : 4.0'- 6.0'	25	70	Same as S-2
S-4 : 6.0'- 8.0'	32	50	...grade: hard
S-5 : 8.0'- 10.0'	37	60	Same as S-4
S-6 : 10.0'- 12.0'	38	45	Same as S-4
S-7 : 14.0'- 14.8'	50+	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-8 : 18.0'- 19.3'	103+	45	...grade: Gray, some Gravel
			Depth to Bottom of Hole: 20.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

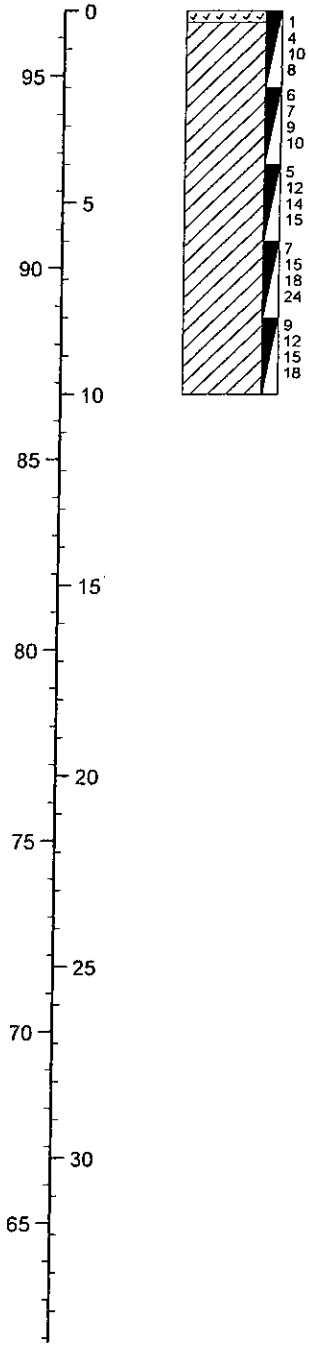
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-13

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/6/09	**SURFACE ELEVATION (ft.):**	96.7
DATE COMPLETED:	1/6/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (4")
S-1 : 0.0'- 2.0'	14	40	Dk. brown, stiff CLAY, some Silt, little Gravel, little f/c Sand, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	16	40	...grade: Brown, v. stiff, tr. Gravel, tr. f/c Sand
S-3 : 4.0'- 6.0'	26	50	Same as S-2
S-4 : 6.0'- 8.0'	33	60	...grade: hard
S-5 : 8.0'- 10.0'	27	20	...grade: v. stiff, wet
			Depth to Bottom of Hole: 10.0 feet

Logged by: B. Smith

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

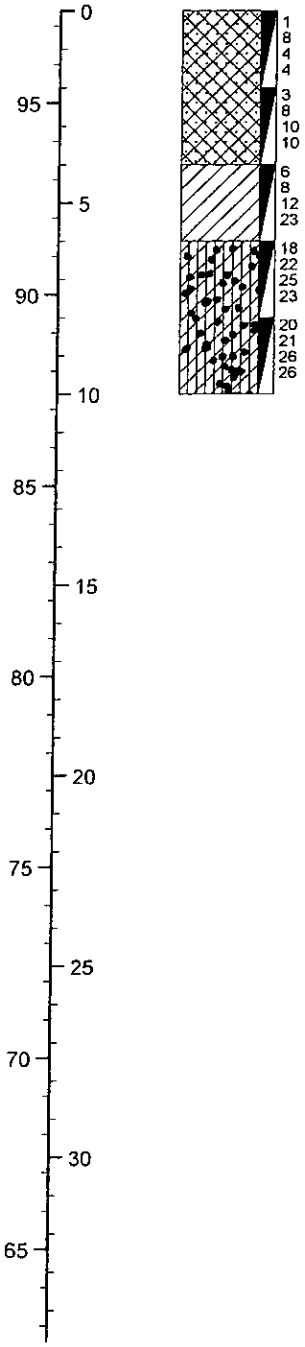
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CLARENCE, NEW YORK 14031
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TEST BORING LOG

JOB No.: 09-510 **BORING No.:** B-14

PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50 (Track)
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	1/6/09	**SURFACE ELEVATION (ft.):**	97.4
DATE COMPLETED:	1/6/09	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	12	0	Dk. gray, m. dense f/c Sand, some Gravel, tr. Silt, tr. Slag, tr. Glass, tr. Construction lumber, moist (SW-Fill) *Rock in shoe S-1 is auger cuttings.*
S-2 : 2.0'- 4.0'	18	10	Same as S-1
S-3 : 4.0'- 6.0'	20	50	Brown, v. stiff CLAY, some Silt, tr. f. Sand, mod. plastic, moist (CL)
S-4 : 6.0'- 8.0'	47	50	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)
S-5 : 8.0'- 10.0'	47	40	Same as S-4
			Depth to Bottom of Hole: 10.0 feet

Logged by: B.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX B

GEOTECHNICAL REFERENCE STANDARDS

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

GEOTECHNICAL REFERENCE STANDARDS
SUMMARY OF LOGGING TECHNIQUES

Depth (feet)	Blows per 0.5 foot	Sample No.	N	% REC (RQD)	SOIL AND ROCK DESCRIPTION	Remarks

DEPTH: This column provides the verticle scale of the boring log in feet below ground surface.

BLOWS: The number of blows obtained from each of the 0.5-foot intervals of sampler penetration.

Note:
WR = static weight of drill rods.
WH = static weight of rods and hammer.

SAMPLE IDENTIFICATION NUMBER: An "S" preceding the sample number identifies a Disturbed Sample. A "U" preceding the number is an Undisturbed Sample (tube). "C" preceding the number is a Rock Core

% RECOVERY: The length of sample recovered divided by the total length sampled. The result is a numerically-expressed percentage.

(RQD): "Rock Quality Designation" The total length of pieces > 4 inches divided by the total length of core run.

N-VALUE: The Standard Penetration Test N-Value, as specified by ASTM D1586 is defined as the number of blows required by a 140-pound hammer falling 30 inches per blow to drive a 2-inch outside diameter split spoon sampler 12 inches.

TERMINOLOGY USED FOR SOIL DESCRIPTION

Density Description of Granular Soil

Number of Blows per foot, N	Relative Density
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium
30 - 50	Dense
Over 50	Very Dense

Consistency Description of Cohesive Soil

Number of Blows per foot, N	Consistency
Below 2	Very soft
2 - 4	Soft
4 - 8	Medium
8 - 15	Stiff
15 - 30	Very Stiff
Over 30	Hard

Grain Size

Boulder	-	greater than 12-inch diameter
Cobble	-	passing 12-inch, retained on 3-inch.
Gravel	-	passing 3-inch, retained on No. 4 sieve
Sand	- Coarse	passing No. 4 sieve, retained on No. 10 sieve
	- Medium	passing No. 10 sieve, retained on No. 40 sieve
	- Fine	passing No. 40 sieve, retained on No. 200 sieve
Silt	-	0.074 mm to 0.005 mm
Clay	-	smaller than 0.005 mm

Description of Percentage or Proportions Used in Soil Sample Classification

Trace	0 - 10 %
Little	10 - 20 %
Some	20 - 35 %
And	35 - 50 %

Abbreviations Used In Soil Sample Classification

f	- fine	v	- very
m	- medium	gr	- gray
c	- coarse	bn	- brown
f/m	- fine to medium	yel	- yellow
f/c	- fine to coarse	sl	- slight
tr	- trace		

Moisture

Dry	- Absence of moisture, dusty, dry to the touch.
Moist	- Small quantity of moisture. Soil usually above groundwater level.
Wet	- Moisture noticeable to the touch. Soil may be below groundwater level.
Saturated	- Visible free water. Usually soil is below groundwater level.

Plasticity

Non-plastic	- A 1/8-inch thread cannot be rolled at any water content.
Slight Plasticity	- The thread can barely be rolled.
Moderate Plasticity	- Thread is easy to roll and little time is required to reach plastic limit.
Plastic	- Considerable time is required to reach plastic limit. Thread can be re-rolled several times after reaching the plastic limit.

TERMINOLOGY USED FOR ROCK DESCRIPTION

Bedding

Parting	Less than 0.02 ft.
Band	0.02 to 0.2 ft.
Thin Bed	0.2 to 0.5 ft.
Medium Bed	0.5 to 1.0 ft.
Thick Bed	1.0 to 2.0 ft.
Massive	Over 2.0 ft.

Hardness

Very Soft or Plastic	- Can be indented with thumb.
Soft	- Can be scratched with fingernail.
Moderately Hard	- Can be scratched easily with knife. Cannot be scratched with fingernail.
Hard	- Difficult to scratch with knife.
Very Hard	- Cannot be scratched with knife.

Crystallinity or Texture

Dense	- Crystals are so small they cannot be distinguished with the naked eye.
Very Fine Crystalline	- Crystals barely discernible with the naked eye.
Crystalline	- Crystals are medium size; up to 1/8-inch diameter.
Very Coarsely Crystalline	- Crystals larger than 1/8-inch

Voids

Pourous	- Smaller than a pinhead. Their presence is indicated by the degree of absorbancy.
Pitted	- Pinhead size to 1/4-inch. If only thin walls separate the individual pits, the core may be described as honeycombed.
Vug	- 1/4-inch to the diameter of the core.

REMARKS: Denotes exact depth of recovery and general documentation of drilling efforts.

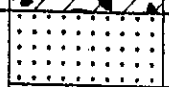
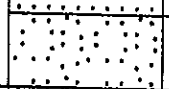
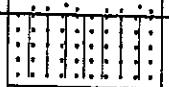
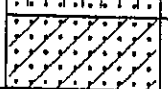
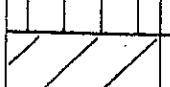
Notes: Description and classification are based on visual inspection of samples and boring operations.

The stratum lines shown on the boring logs are based upon interpretation and may not represent precise subsurface conditions.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the water level may occur due to other factors than those present at the time

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SOIL CLASSIFICATION CHART
(Unified Soil Classification System)

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material larger than No. 200 sieve	GRAVELS More than 50% of coarse fraction larger than No. 4 sieve	Clean Gravels (little or no fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with appreciable amounts of fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS Less than 50% of coarse fraction larger than No. 4 sieve	Clean sands (little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		Sands with appreciable amounts of fines		SM	Silty sands, silt-sand mixture
				SC	Clayey sands, sand-clay mixture
FINE-GRAINED SOILS Less than 50% of material larger than No. 200 sieve	SILTS AND CLAYS Low plasticity Liquid Limit less than 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS High plasticity Liquid Limit greater than 50%			MH	Inorganic silts, micaceous or diatomaceous fine sand or silt soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
	Highly Organic Soils			Pt	Peat, humus, swamp soils with organic contents
	Miscellaneous Fill			FILL	Miscellaneous fill may belong in any division but is identified as FILL

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APPENDIX C

LABORATORY SOIL TEST RESULTS

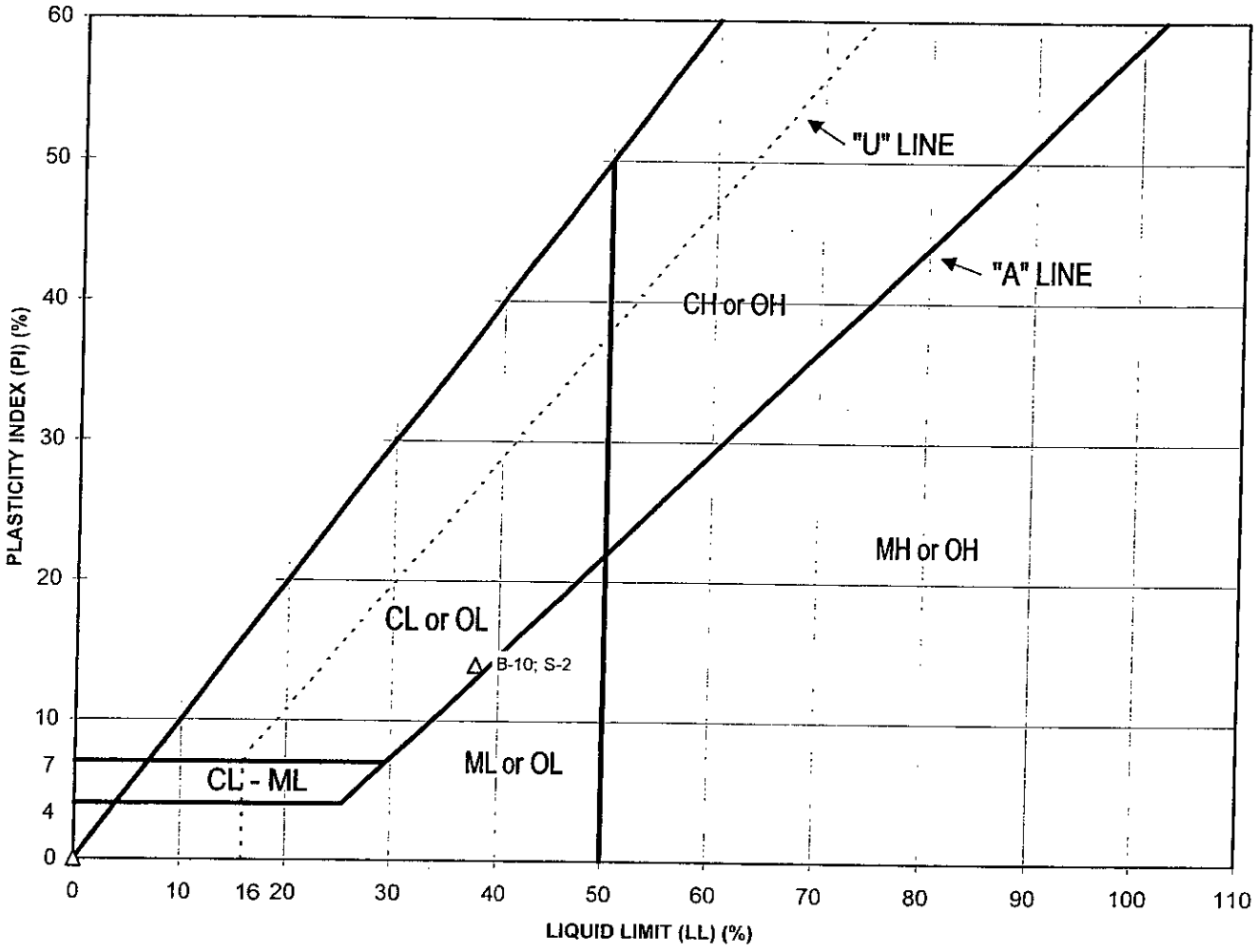
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Job No: 09-510
Project: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

Plasticity Chart

ASTM D4318 & D2487



Boring No.	Sample No.	Depth (ft.)	LL (%)	PL (%)	PI (%)
B-10	S-2	2-4	38	24	14

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX D

ENGINEERING COMPUTATIONS AND SCHEMATICS

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"

NOTE: FILL MATERIALS + 0'TO2' DEPTH OF NATURAL SOILS ARE NOT ACCEPTABLE FOR DIRECT FOUNDATION BEARING PURPOSES.

UNDERCUT REQUIRED

RELATIVE ELEVATION (feet)

105 / 100 / 95 / 90 / 85 / 80 / 75

	B-7 N (95.8)		B-10 N (96.8)		B-11 N (97.0)		B-12 N (97.0)	
		WN (%)						
	Topsoil (8")		Topsoil (6")		Topsoil (5")		Topsoil (3")	
4	Brown, loose f. SAND, some Silt, tr. Roots, moist (SM)	24	3	Brown, soft CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)	8	Brown, stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)	15	Dk. gray, m. dense f/c Sand, some Gravel, little Slag, tr. Silt, wet (SW- Fill)
7	Brown, m. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, mod. plastic, moist (CL)	26 *	14	Same as S-1	10	Same as S-1	16	Brown, v. stiff CLAY, some Silt, tr. Gravel, tr. f/c Sand, tr. Roots, mod. plastic, moist (CL)
26	...grade: v. stiff	24	21	...grade: stiff ...grade: v. stiff	27	...grade: v. stiff	25	Same as S-2
	...grade: hard	26	44	...grade: hard	24	Same as S-3	32	...grade: hard
34			21	...grade: v. stiff	40	...grade: hard, wet	37	Same as S-4
	Same as S-4	29	23	Same as S-5	47	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, wet (CL-Till)	38	Same as S-4
32					50+	Same as S-6 (No Sample)	50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
23	...grade: v. stiff	30	50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)	54	...grade: Gray, some f/c Sand	103+	...grade: Gray, some Gravel
50+	Grayish brown, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)	11	6	REFUSAL				
50+	...grade: Gray, some f/c Sand		50+	...grade: Gray, and Gravel *(Auger refusal suspected to be boulder within till.)*				
	Depth: 20.00'			Depth: 18.50'		Depth: 20.00'		Depth: 20.00'

* LL = 38
PL = 24
PI = 14

DESIGN PROFILE

$P_{WALL} \leq 6$ K/FT

$P_{COL} \leq 150^{K}$

FINAL GRADE

$D_f \geq 3.5'$

LL ≤ 100 PSF

97.5± = fff

THOROUGHLY COMPACTED SUBGRADE (TYP.)

B = 2'+

B = 6'+

(A) VARIES

(A) AS NEEDED

ALTERNATIVE FOR INT. FTGS

NAT'L. SILTY CLAY (CL)
N ≥ 13 δ_m = 120 PCF $C_{UC} \geq$ 1,300 PSF

GWT

USE: $Q_{ALLOW\ NET} \leq 2{,}500$ PSF

(A) VARIABLE THICKNESS OF THIN LIFTS OF THOROUGHLY COMPACTED (MIN. 95% OF MAX. DRY DENSITY VIA ASTM D 1557) SELECT/APPROVED GRANULAR FILL THAT EXTENDS TO UPPER LEVEL (N ≥ 13) STIFF OR BETTER NAT'L SILTY CLAY SOIL

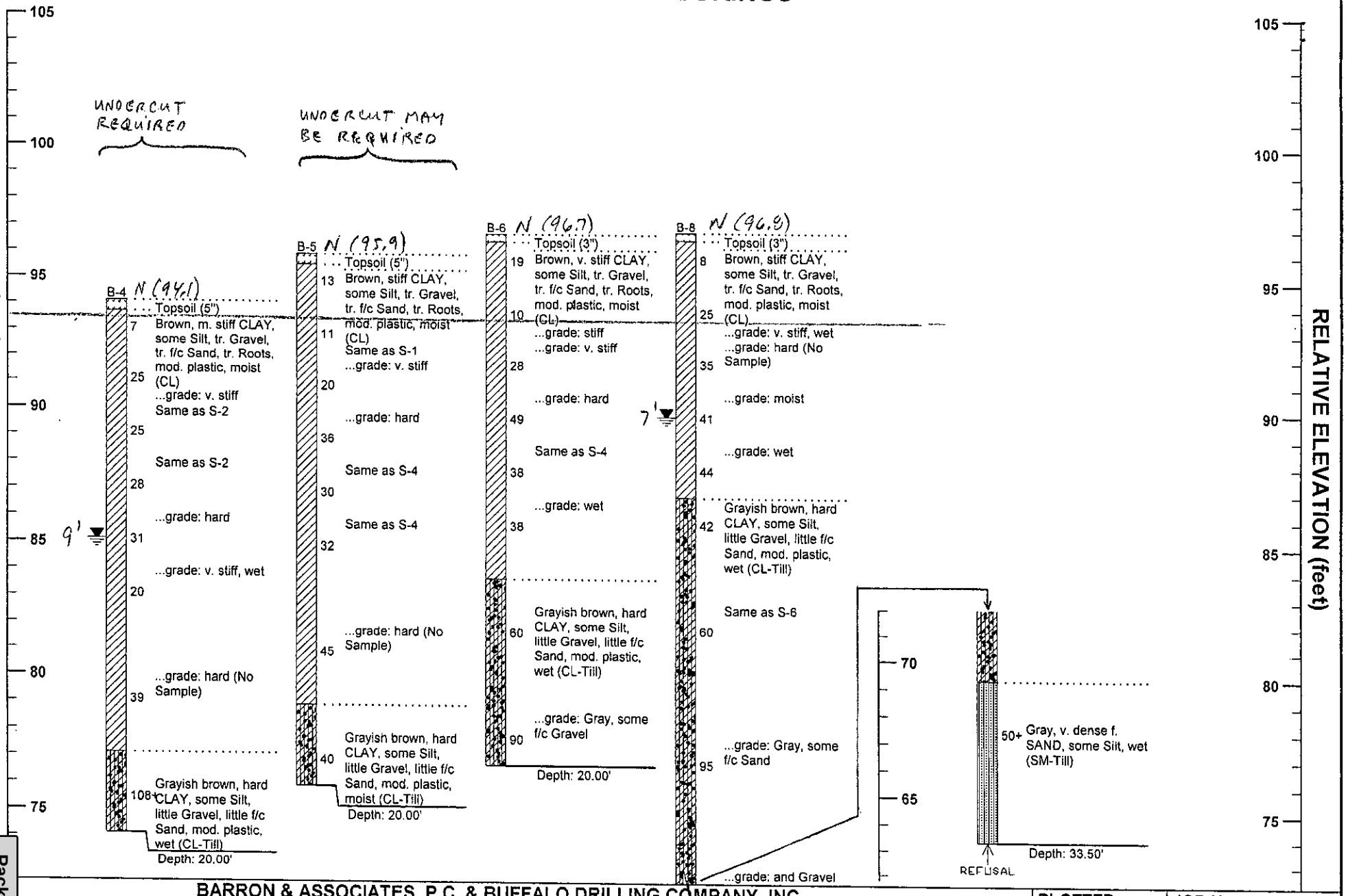
RELATIVE ELEVATION (feet)

105 / 100 / 95 / 90 / 85 / 80 / 75

BARRON & ASSOCIATES, P.C. & BUFFALO DRILLING COMPANY, INC. 10440 MAIN STREET, CLARENCE, NEW YORK 14031		PLOTTED: 1/8/2009	JOB No.: 09-510
UECT: Proposed Maple Ayer Corporate Center 1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221	Pg. 1 of 11	By: A. Camping	FIGURE No.: P-1

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"



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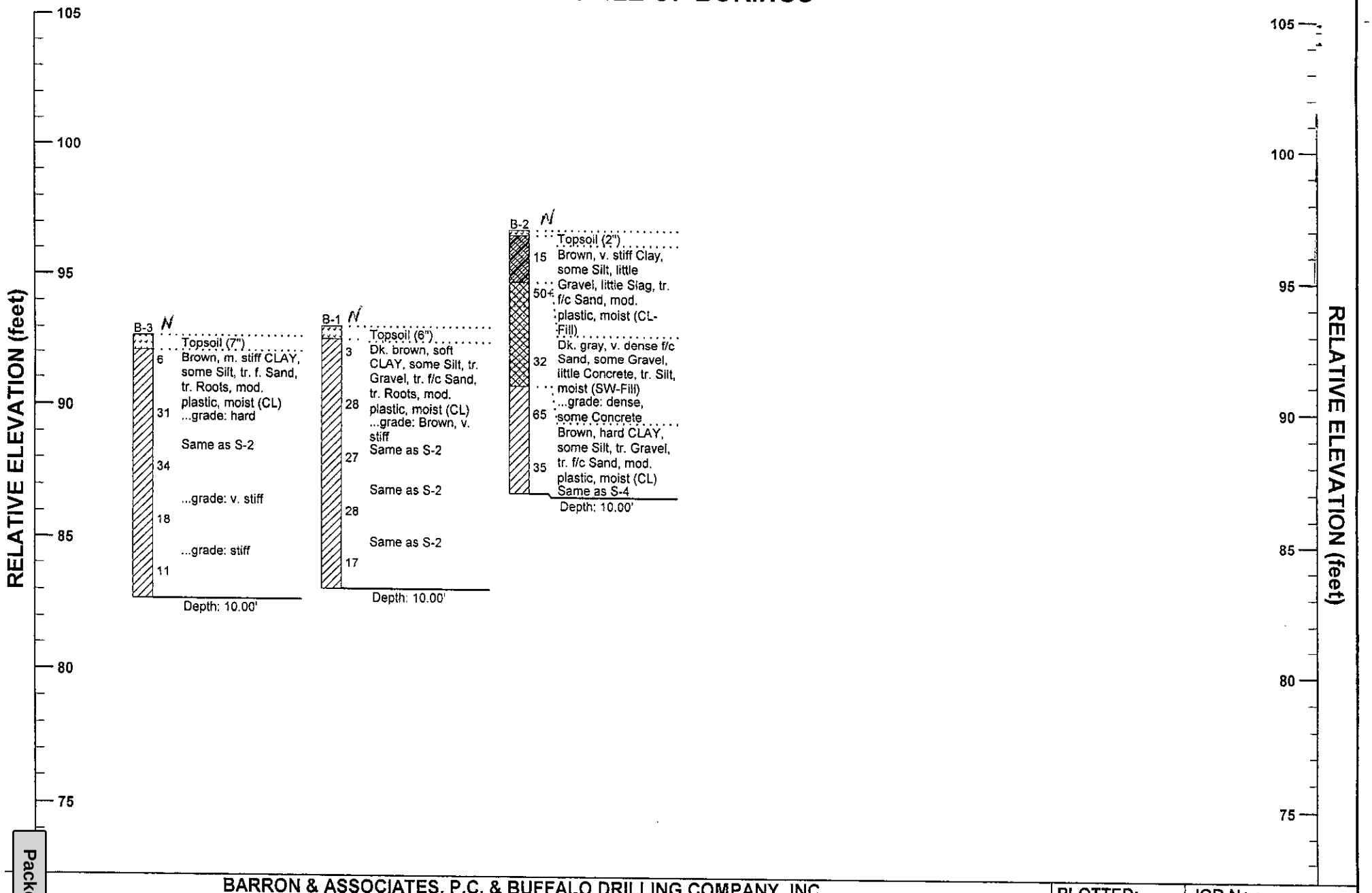
UJECT: Proposed Maple Ayer Corporate Center
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PG 2 OF 11

By: A. Camping | FIGURE No.: P-2

Packet Pg. 580
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"



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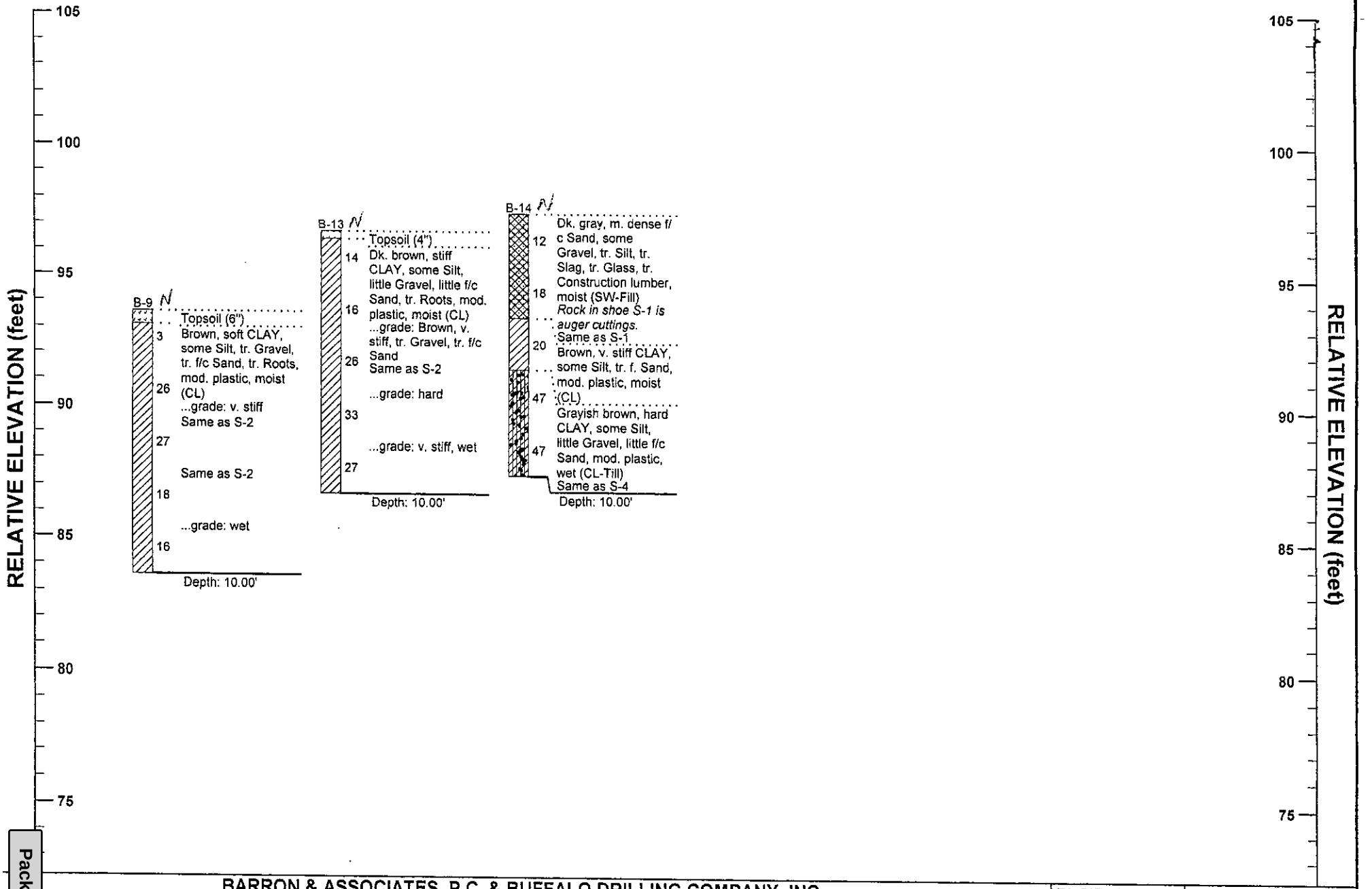
UECT: Proposed Maple Ayer Corporate Center
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PG 3 of 11

By: A. Camping | FIGURE No.: P-3

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

"PROFILE OF BORINGS"



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PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road, Town of Amherst, Erie Co., New York 14221

Pg. 4 of 11

By: A. Campina | FIGURE No.: P-4

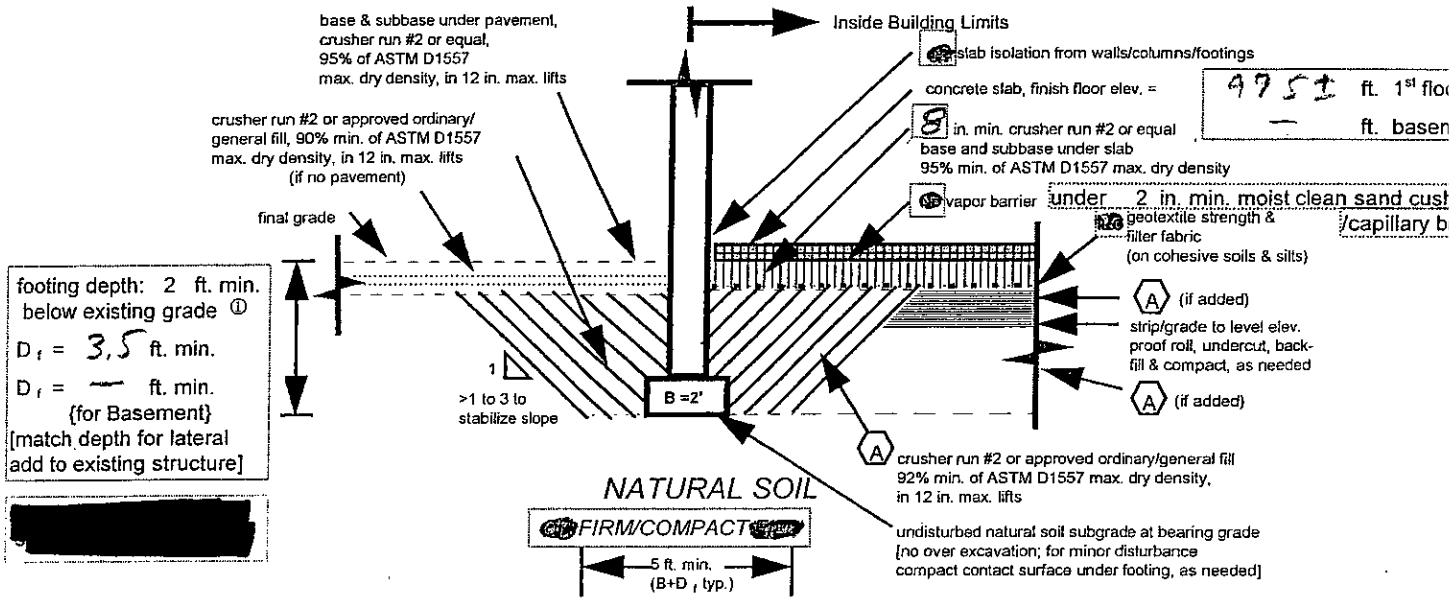
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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
Page: 5 of 11

TYPICAL SCHEMATICS OF RECOMMENDED SHALLOW FOUNDATION SYSTEM ON SOIL

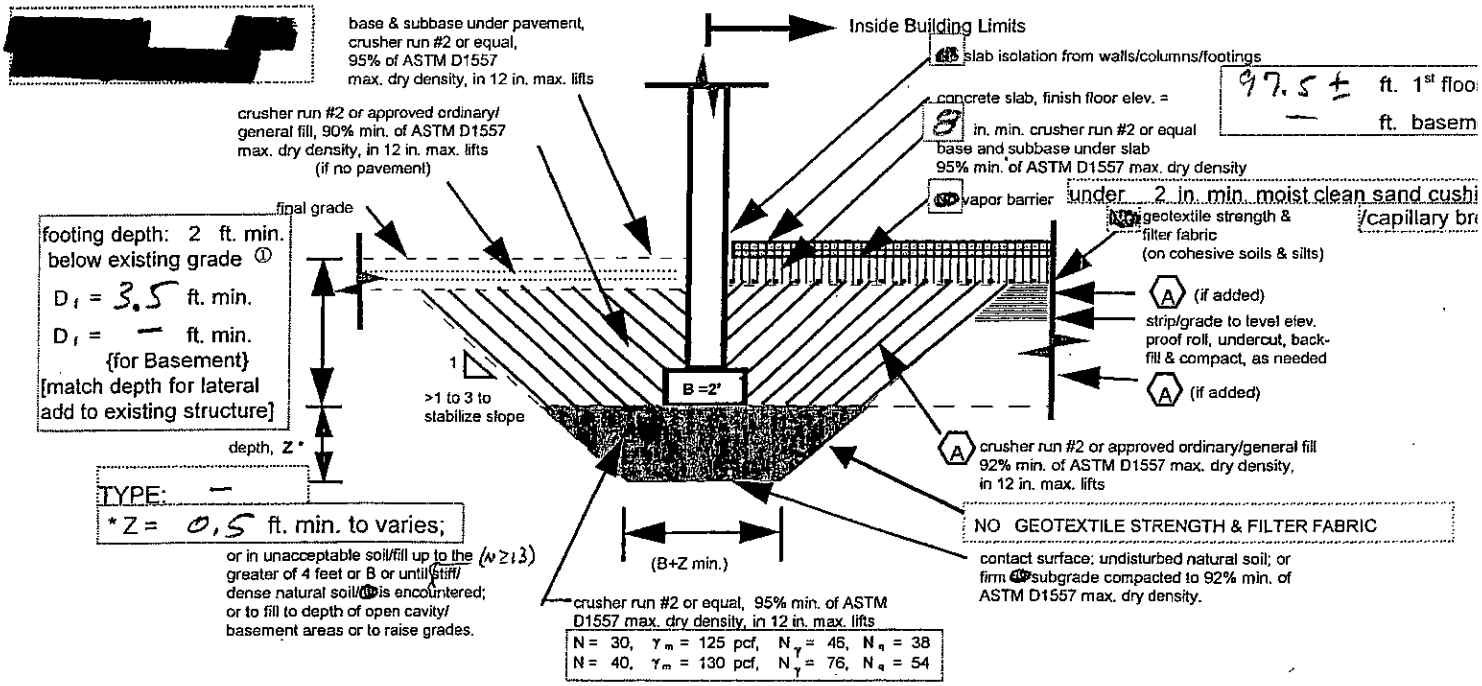
INSTALL PERIMETER GRAVEL AND SLOTTED/PERFORATED DRAIN PIPE SYSTEM LEADING TO A SUMP PIT FOR BASEMENT/SUBSTRUCTURE CONDITIONS AND, IF INDICATED IN REPORT, DUE TO POTENTIAL SEASONALLY HIGH GROUNDWATER TABLE



EXTERIOR WALL/STRIP/CONTINUOUS FOOTING ON UNDISTURBED NATURAL SOIL [SPREAD/SQUARE FOOTING IS SIMILAR]

- APPLICABLE TO BUILDING WALLS: NORTH, SOUTH, EAST, WEST [SCALE: 1 IN. = 5 FT. +/-]

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry density, and approved



EXTERIOR WALL/STRIP/CONTINUOUS FOOTING ON COMPACTED SELECT GRANULAR FILL [SPREAD/SQUARE FOOTING IS SIMILAR]

- APPLICABLE TO BUILDING WALLS: NORTH, SOUTH, EAST, WEST [SCALE: 1 IN. = 5 FT. + /-]

{AS NEEDED}

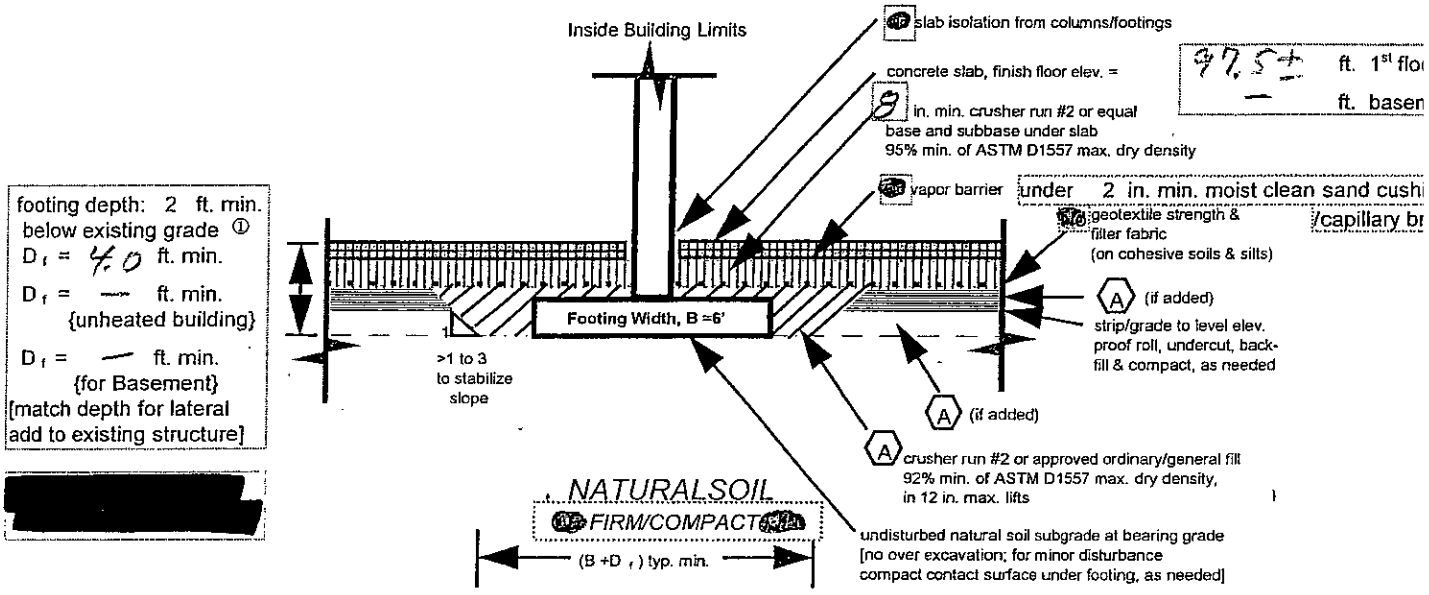
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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
Page: 6 of 11

TYPICAL SCHEMATICS OF RECOMMENDED SHALLOW FOUNDATION SYSTEM ON SOIL

[redacted]

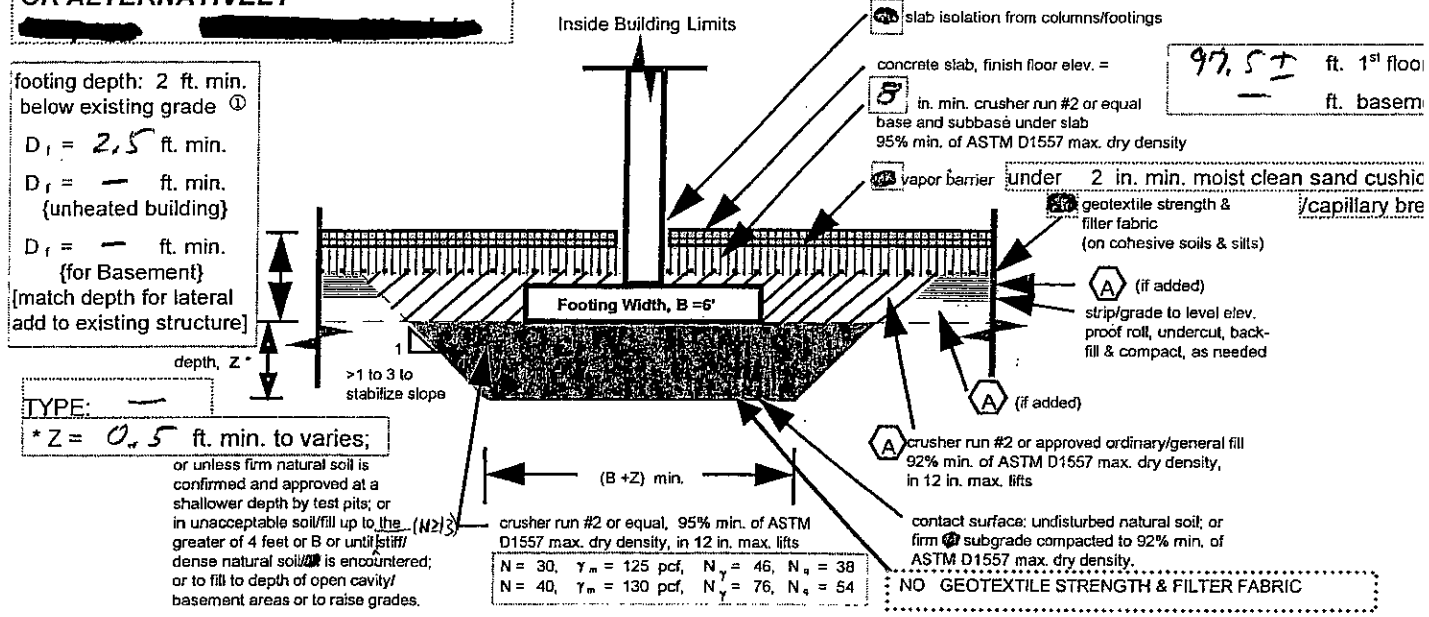


INTERIOR SQUARE/SPREAD FOOTING ON UNDISTURBED NATURAL SOIL [WALL/STRIP/CONTINUOUS FOOTING IS SIMILAR] - APPLICABLE TO BUILDING SIDES: [redacted] NORTH, SOUTH, EAST, WEST, CENTRAL [SCALE: 1 IN. = 5 FT. +/-]

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry density, and approved

OR ALTERNATIVELY

[redacted]



INTERIOR SQUARE/SPREAD FOOTING ON COMPACTED SELECT GRANULAR FILL [WALL/STRIP/CONTINUOUS FOOTING IS SIMILAR] - APPLICABLE TO BUILDING SIDES: [redacted] NORTH, SOUTH, EAST, WEST, CENTRAL [SCALE: 1 IN. = 5 FT. +/-]

{AS NEEDED e.g. B-5}

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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B&A Job No.: 09-510
Date: 1-7-09
By: C. M. Panuccio
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GENERAL NOTES:

a) Bottom of exterior foundations are to bear at a minimum depth below the final exterior grade that is greater than the frost depth defined by local or State building codes.

b) Bottom of foundation trench excavation is to be inspected by experienced geotechnical personnel and, especially, prior to placement and compaction of crusher run stone, select granular fill, or approved general granular fill.

c) All areas of the foundation trench bottom which are concluded to be unacceptable must be over excavated from the bottom footing/foundation elevation or, if recommended, from the bottom of the minimum depth of the undercut for the compacted se granular fill layer, upon which the bottom of footing/foundation will bear, to:
- the top of the dense/stiff fill or natural soil, for less than a four foot depth or the footing width (whichever is greater), backfilled with compacted granular fill.

d) Over-excavated/undercut areas must extend laterally beyond each vertically projected edge of the foundation by a minimum dista equal to one-half the total depth of the undercut or equating to a slope of two vertical to one horizontal. Side slopes of the tre excavation should be one on one (vertical to horizontal distance) or flatter in cohesive soils or one on one and one-half or flatter in granular materials, as required by OSHA.

e) All foundations shall bear on dense/stiff natural soil, if supported by the calculations, or thoroughly compacted select granular or site approved granular fill, with a minimum thickness as determined by the calculations (see Note c also).

f) Water must not be allowed to accumulate or pond in foundation trench bottom. Adequate drainage is to be provided.

g) During winter construction, foundations are to be protected from freezing during the curing period and, thereafter, properly backfil to the required compaction specifications, as specified by the architect/design engineer.

h) In the event that any shallow drilled piers, tanks, foundation walls, strip or spread footings, and/or concrete slabs-on-grade from existing or previous unknown on-site structures are encountered during excavation, the following demolition conditions will ap unless indicated otherwise in the schematics of the foundation system:
- complete removal in and near the proposed building/structure foundation area (except if the foundations and slab-on-grade to be tied into any existing buildings/structures which are to remain),
- removal down to three feet below final grade in the parking lot & driveways, {unless the slab-on-grade is in structurally sou condition & is approved for use as a part of the pavement system}, (Note that complete removal is optional.) and
- removal down to three feet below final grade in green/grassed areas. (Note: complete removal is optional.)

i) In the event that tree, shrub, or other vegetative root systems or other organic deposits are encountered during excavation, removal conditions in h) above will apply.

j) Any slag, cinder and/or ash fill shall be tested to have very low potential for expansion and/or corrosion characteristics, wh applicable for direct or potential (via leachate) contact with foundation elements and buried utilities or as directed by the des structural engineer/architect..

k) In the event that boulders and/or bedrock are encountered during excavation, the following conditions will apply:
- remove boulders that are one-quarter (1/3 in drumlins) or greater of the min. footing width, at the exposed footing subgrade.
- remove boulders that are one foot or greater in size/max. dimension, at the exposed pad subgrade.
- as/if indicated/directed by engineer in schematics of the foundation system:
  - apparent top of bedrock and/or boulders that are one-half or greater of the min. footing width will not be located within depth equal to the footing width, at a min., from the bottom of the footing.
  - apparent top of bedrock and/or boulders that are two feet or greater in size/max. dimension will not be located within depth of four feet, at a min., from the bottom of the building/tank/other structure pad.
  - subgrade is to be adequately probed/tested, at spaced intervals, along the footing line or building/tank/other structure p in order to confirm the absence of boulders and/or bedrock within these depths.
  - remove any suspected subsurface boulder and/or bedrock obstructions, that meet the preceding depth criteria.

l) At the locations of the demolished structures in h), vegetative/organic deposits in i), slag, cinder and/or ash fill in j) or bedrock and boulders in k) above, place and compact the select fill, if needed, to the elevation of the bottom of the pavement subbase stone la or as required in c) above for the proposed building/structure foundation.

m) To the extent practical, the entire site is to be proof rolled and stabilized, as needed, prior to placement of base/subbase stone la beneath the floor slab and asphalt paved parking areas.

n) Geotextile filter fabric is recommended beneath the base/subbase layer and atop the subgrade under the building/structure floor sl and in the heavily traveled asphalt paved areas at a minimum, if cohesive/silty soils & during wet weather/seasons.

o) The top and/or walls/sides of shallow depth subsurface structures (such as, basement, tank, vault, basin, pool, pipe, culvert, condu etc.), which would contain air voids at times, or a trench/excavation, or retaining structure, is considered to be subject to loads from shallow foundation system, if it is within a horizontal distance of two times the narrowest dimension/width of the foundation, and mu be properly evaluated and designed.

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Net Allowable Bearing Capacity for Continuous Wall Footings on Compacted Select Granular Fill, N = 30 Min. with Groundwater Effects at Footing Level, $D_F = D_W = 3.5$ ft.: No Basement, Exterior

a) Net allowable bearing capacity in select granular fill.
- Assume 2 x B thick layer for computational purposes.
- Shallow footing (P, H & T, page 311) — B = 2.0 ft.
- Assume footing thickness = 1.0 ft.
- Assume bottom of footing min. depth below final grade — D_F = 3.5 ft.
- Assume bottom of footing min. depth below finish floor = 2.5 ft.
- Design groundwater depth — D_W = 3.5 ft.
- At bottom of the excavation, thoroughly compact natural and fill soils to ensure compaction of the subgrade prior to placement and compaction of the select granular fill subbase beneath the footing.
- Assume min. thick layer/undercut for select fill — Z = 0.5 ft. Footing Type: —

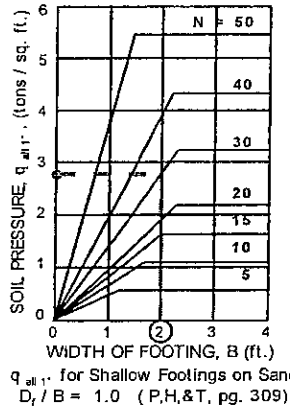
$q_{all\ NP} = \{(\gamma_m \times N_\gamma / 2) + (\gamma_m \times \{N_q - 1\} \times D_F / B)\} \times B / F.S.$
$q_{all\ NP} = \{[125\ pcf - 62.4\ pcf] \times 46 / 2 + 125\ pcf \times \{38 - 1\} \times 3.5' / 2'\} \times 2' / 3$
$q_{all\ NP} = \{1,440\ pcf + 8,094\ pcf\} \times 2' / 3 = 6,356\ psf$

- Note for B = 3 feet, $q_{all\ NP}$ = 6,836 psf.

b) Net allowable soil pressure based on 1 inch total settlement in granular soil (P,H&T, pg. 309). {Refer to assumptions in a) above.}
- Wall footing groundwater correction factor: $C_w = 0.5 + 0.5\{D_w / (D_F + B)\}$

$C_w = 0.5 + 0.5\{3.5' / (3.5' + 2')\} = 0.818$
$q_{all\ 1'} = C_w \times$ [Value from Chart] x 2,000 lb./ 1 ton
$q_{all\ 1'} = 0.818 \times 2.8\ tsf \times 2,000\ lb. / 1\ ton = 4,581\ psf$

- For B = 3 ft. & C_w = 0.769, $q_{all\ 1'}$ = 4,922 psf
- For B = 4 ft. & C_w = 0.733, $q_{all\ 1'}$ = 4,691 psf
- For B = 6 ft. & C_w = 0.684, $q_{all\ 1'}$ = 4,378 psf



$q_{all\ 1'}$ for Shallow Footings on Sand
D_f / B = 1.0 (P,H,&T, pg. 309)

Net Allowable Bearing Capacity, Square Footings: No Basement, Exterior

a) Follow the same design considerations as for the exterior wall footings.
b) All footings should be designed with the same design contact pressure.

Net Allowable Bearing Capacity for Square Footings, B = 6.0 ft, on Compacted Select Granular Fill N = 30 Min. with Groundwater Effects, D_F = 2.5 ft. & D_W = 4.0 ft.: No Basement, Interior; Non-Winter Construction Option

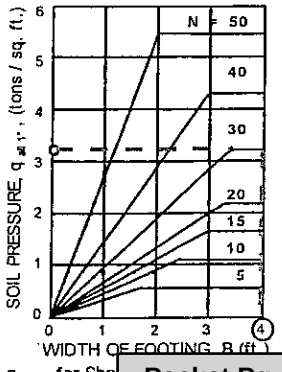
a) Net allowable bearing capacity in select granular fill. (NOTE: See wall footings above.)
- Shallow footing (P, H & T, page 311) — B = 6.0 ft.
- Assume bottom of footing min. depth below finish floor — D_F = 2.5 ft.
- Assume min. thick layer/undercut for select fill — Z = 0.5 ft. Footing Type: —

$q_{all\ NP} = \{(\gamma_m \times N_\gamma \times 0.4) + (\gamma_m \times \{N_q - 1\} \times D_F / B)\} \times B / F.S.$
$q_{all\ NP} = 1/6.0' \times \{[125\ pcf - 62.4\ pcf] \times 4.5' + [125\ pcf] \times 1.5'\} \times 46 \times 0.4 + 125\ pcf \times \{38 - 1\} \times 2.5' / 6.0'\} \times 6.0' / 3$
$q_{all\ NP} = \{1,439\ pcf + 1,927\ pcf\} \times 6.0' / 3 = 6,732\ psf$

b) Net allowable soil pressure based upon 1 inch total settlement in granular soil for B = 4+ ft. (NOTE: See wall footings above.)
- Interior footing groundwater correction factor:

$C_w = 0.5 + 0.5\{4.0' / (2.5' + 6.0')\} = 0.735$
$q_{all\ 1'} = C_w \times$ [Value from Chart] x 2,000 lb. / 1 ton
$q_{all\ 1'} = 0.735 \times 3.2\ tsf \times 2,000\ lb. / 1\ ton = 4,704\ psf$

NOTE: For the winter construction option (that is, interior footings are constructed at the same depth/elevation as the exterior footings), refer to the $q_{all\ 1'}$ value for B = 4 to 6 feet in the above Section for the **Continuous Wall Footings on Compacted Select Granular Fill**.



$q_{all\ 1'}$ for Sha
D_f / B = 0.5

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FOOTING SETTLEMENT

a) If a compacted select granular fill layer is placed in an undercut area (under wall footings and/or interior footings), t settlement occurs immediately and is proportioned by the thickness of the layer (if < 2 x B for wall footings and if < B square/rectangular footings) and the $q_{all\ 1}$ of settlement. The magnitude of this settlement is less than 0.5 in.

b) The existing on-site granular (non-plastic silt, silty sand and sandy gravel) soils that are beneath a recommend undercut depth, where applicable, below the footings should be properly compacted and inspected prior to placeme and compaction of the select granular fill or approved on-site granular fill subbase and the footing construction. Most the settlement will occur immediately and the magnitude of the settlement, which is evaluated in concert with the s conditions in a) above, is estimated to be less than approximately 1.0 inches.

c) The existing on-site cohesive natural soil/fill that is beneath the undercut depth, where applicable, below the footin should be properly compacted, as needed, and inspected prior to placement and compaction of the select granular subbase and footing construction. The magnitude of settlement is evaluated in concert with the conditions in d) below.

d) For the upper cohesive fills/natural soils and lower natural cohesive soil layers that exist, the N values of these soil laye indicate a slightly to highly overconsolidated state or a high effective preconsolidation pressure (p'_c).

- (Also refer to ASCE/USACE No. 9, Design Guide "Settlement Analysis," pg. 5 for p'_c estimation.)

The deeper hard glacial till and bedrock layers are assumed to be incompressible relative to applied loads. Consolidati settlement of the underlying cohesive soil/fill and natural soil layers are also not considered to be a concern for t foundation loads due to the slightly to highly over-consolidated state of these soils. Based upon the allowable load p footing width, total and differential settlements are expected to be within acceptable limits and are not likely to exceed 1 and [redacted] 0.75 inches, respectively, per P,H&T, page 309, if all compacted granular fills and/or natural plastic cohesi soils, per P,H&T, page 273.

USE: $Q_{allow\ net}$ = 2,500 psf For First Floor / from 2 ① ft. below exiting grade

USE: $Q_{allow\ net}$ = — psf For Basement / greater than — ① ft. below exiting grade

① - Unless existing soil is properly dried, blended, compacted to 95% min. of ASTM D1557 max. dry

BEARING ON VERY STIFF/DENSE/FIRM STATE NATURAL SOILS/FILLS/WEATHERED ROCK *(EXCEPT AS NOTED BELOW)* or

- *FOR EXTERIOR FOOTINGS* ✓
- *ALTERNATIVELY FOR THE INTERIOR FOOTINGS* ✓ *AS NEEDED TO RAISE GRADES*

BEARING ON THOROUGHLY COMPACTED LAYERS OF SELECT OR ON-SITE APPROVED GRANULAR [redacted] FILL THA IS PLACED ON [redacted] APPROVED NATURAL SOILS/[redacted]

[redacted]

FOOTING [redacted]/FIRST FLOOR FILL THICKNESS **

[redacted]

at Rel. Elev. = — / 935 ft. or Lower/Higher FOR EXTERIOR FOOTINGS * ∝ on — / 0 TO VARIES ft. min.
{ALTERNATIVE / - } {ALTERNATIVE / - }

at Rel. Elev. = 950 / 93.5 ft. or Lower/Higher FOR INTERIOR FOOTINGS ∝ on 0 TO VARIES / 0 TO VARIES ft. min.
{ALTERNATIVE / - } {ALTERNATIVE / - }

* Footing is to bear at [redacted] 3.5 [redacted] foot min. below exterior final grade.

∝ Footing is to bear at [redacted] 2.5 [redacted] 4.0 [redacted] foot min. below finish floor slab. [redacted]

** Unless very stiff-hard/dense-very dense natural soil [redacted] conditions are encountered & approved at a shallower depth.

Ω For raised grades at the proposed building, bears on layers of thoroughly compacted select or on-site approved granular fill that extend to natural soils.

Ψ For basement areas beneath proposed building, bears on layers of thoroughly compacted select or on-site approved granular fill that extends to approved natural soils/[redacted]

∇ If bearing capacity differences exist for soils at the building center/core and the wings, add control joints, at a min., between the building center/core and the start of each building wing.

\# Due to the potentially high bedrock condition, limit total settlement ≈ differential settlement < 3/4 inch.

^ For shallow bedrock, footing may bear at less than above design depths by using #4 hooked rebars that are grouted to a 12 inch minimum depth, up to the frost depth/elevation plus one foot, into sound rock at a four foot center to center spacing or within each massive block of fractured rock. Design shall be as directed/specified by structural e

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BY: Carmen M. Panuccio
B&A JOB NO.: 09-510
CLIENT: McGuire Development Company
PROJECT: Proposed Maple Ayer Corporate Center
1730 - 1800 (even) Maple Road
Town of Amherst, Erie County, N.Y. 14221

BUILDING CODE OF NEW YORK STATE © - 2007: USGS 2002 ACCELERATIONS at 2% IN 50 YEARS CALCULATED BY LATITUDE AND LONGITUDE

Site Latitude (o) = +42.9916

Site Longitude (o) = -78.7210

Seismic Site Class = C

Building/Structure with Shallow Foundation

S_s = 0.2 sec acceleration value for Class B (in g's)

Acceleration Values Below are S_s * 100

LAT. =	LONG. = -78.7500	-78.7210	-78.7000
42.9500	28.3594		28.3677
+42.9916	28.7526	28.7500	28.7482
43.0000	28.8320		28.8250

S_1 = 1.0 sec acceleration value for Class B (in g's)

Acceleration Values Below are S_1 * 100

LAT. =	LONG. = -78.7500	-78.7210	-78.7000
42.9500	5.88539		5.90132
+42.9916	5.91874	5.92768	5.93415
43.0000	5.92547		5.94078

SEISMIC SITE CLASS	Site Coefficient and Design Spectral Response Acceleration Values			
	0.2 Second		1.0 Second	
	F_a	$S_{ds} = 0.6667 * F_a * S_s$	F_v	$S_{d1} = 0.6667 * F_v * S_1$
A	0.8000	0.1533 g	0.8000	0.0316 g
B	1.0000	0.1917 g	1.0000	0.0395 g
C	1.2000	0.2300 g	1.7000	0.0672 g
D	1.5700	0.3009 g	2.4000	0.0948 g
E	2.3800	0.4562 g	3.5000	0.1383 g
F	2.3800	0.4562 g	3.5000	0.1383 g

<<------- USE THESE VALUES FOR SHALLOW FOUNDATIONS

NOTE: F_a and F_v values are linearly interpolated, for the above S_s and S_s values, respectively, within the appropriate range of the mapped spectral response accelerations.

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LATERAL EARTH PRESSURE ON GENERIC BLOCK FOUNDATIONS FOR SIGNS, FREE-STANDING RETAINI WALLS, OR BELOW GRADE/BASEMENT/TANK/POOL RETAINING WALLS (Less Than 20 Feet High):

a) Porous filter media, in contact with the basement/below grade foundation wall or retaining walls, protects and is contact with a minimum 4 inch diameter perforated drainage pipes at the footing/base of the foundation/structu wall (exterior backfill side and interior basement side) and/or weep pipes through the wall, as needed and applicable. Waterproof earth side of wall, as customarily provided in practice.

b) Drainage pipes are connected to an appropriately designed collector pipe, conveyance, and/or sump pump syst as is applicable for the intended purpose of the wall and as customarily provided/installed in practice.

c) For potential groundwater table conditions above the top of the basement slab-on-grade condition, install continuo waterstops (with no joints in stop) at construction joints as is customarily provided in practice. Interior intermedi drainage pipes, that are spaced on-center and in both directions, do appear to be needed.

d) Assume a uniformly graded coarse sand or sandy gravel backfill: dense state
- equivalent blow count value: N = 40 blows/foot
- friction angle: ϕ = 38 degrees {Teng, pg. 12}
- average in-place density: moist bulk γ_m = 120 pcf, saturated γ_s = 132 pcf ; submerged γ' = 70 pc

e) Assume base of wall/footing is bearing on a minimum 6 inch thick layer of thoroughly compacted select granular fil
- Coefficient of Friction Against Sliding (f_s) at base of wall (Refer to Teng, pg. 320-1):
  $f_s = \tan (0.5 \times \phi) = 0.35$ (O.K. compares to AREA value for silty soils.)
  $f_s = 0.60$ (for concrete on clean, rough, and sound bedrock)

f) Use equivalent fluid pressure design approach {Hough, pg. 249 and NAVFAC pg. 7-10-9}:
- at rest pressure coefficient; $K_o = 1 - \sin(\phi) = 1 - 0.62 = 0.38$
- effective lateral pressure of soil; $\gamma'_i = K_o \times \gamma' = 0.38 \times 70$ pcf = 26.6 pcf
- hydrostatic pressure with water level at the top of the grade at the wall; γ_w = 62.4 pcf
- equivalent fluid pressure; $\gamma_{eo} = \gamma'_i + \gamma_w$ = 26.6 pcf + 62.4 pcf = 89 pcf (say 90 pcf)
- equivalent fluid pressure without groundwater effect and with an estimate of the induced lateral stress increas that is caused by the compaction (W&F, page 409);
  $\gamma_{eo} = 2 \times K_o \times \gamma_m = 2 \times 0.38 \times 120$ pcf = 91 pcf (say 90 pcf)
- active pressure case; $K_a = [1 - \sin(\phi)] / [1 + \sin(\phi)] = 0.24$
  $\gamma_{ea} = K_a \times \gamma_m = 0.24 \times 120$ pcf = 29.1 pcf (say 30 pcf)
- passive pressure case; $K_p = [1 + \sin(\phi)] / [1 - \sin(\phi)] = 4.2$
  $\gamma_{ep} = K_p \times \gamma_m = 4.2 \times 120$ pcf = 504 pcf (with a F.S. = 1.5, say 330 pcf)

		Thoroughly Compacted	Uniformly Graded & Clean Coarse Sand or Sandy Gravel Fill	Non-Plastic Silty Sand or Sandy Silt Fill	
USE : Earth Pressure Coefficient	Active	=	0.24	0.33	
	At-Rest	=	0.76	1.0	
	Passive	=	2.8	2.0	(with a F.S. = 1.5
	Passive	=	4.2	3.0	(with a F.S. = 1.0
USE : Equivalent Fluid Pressure	Static At Rest	=	90 pcf (for rigid walls)		
	Static Active	=	30 pcf		
	Static Passive	=	330 pcf (with a F.S. = 1.5)	{= 500 pcf (F.S. = 1.0)	

[For earthquake condition, structural engineer may elect to use the above Static Passive case, instead of the below Uniform Lateral Pressure, for Non-Yielding Wall movement into the soil backfill]
Saturated Soil During Earthquake = 132 pcf

USE: Uniform Lateral Pressure = (12.0 psf / foot) x Foot Height of Wall (NYS, $S_{MS} \leq 0.25$ g)
(add to Static At Rest/Active = (16.0 psf / foot) x Foot Height of Wall (NYS, 0.25 g < S_{MS} < 0.5 g)
for unsaturated backfill case) = (17.5 psf / foot) x Foot Height of Wall (Northeastern NYS, 0.5 g < S_{MS} < 0.75 g
[for underlying Loose to Medium Dense Cohesionless and/or Soft to Medium Stiff, Low to Moderate Plasticity Cohesive Soils (Site Class E); NYS Building Code c-2007/FEMA NEHRP Guidelines]

{For looser/denser backfills, increase above pressures by the ratio = new density / 120 pcf or / 132 pcf for saturated case,

USE: Coefficient of Friction Against Sliding (f_s) = 0.35 (on compacted granular soil & non-plastic silt)
= 0.20 (slab-on-grade on polyethylene on granular fill)
[with a F.S. = 1.0] = 0.60/0.50 (on clean, rough, & sound bedrock/smooth bedrock)
Min. Factor of Safety Against Sliding = 1.5

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APPENDIX E

GENERAL EARTHWORK SPECIFICATION

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Barron & Associates, P.C.
GENERAL EARTHWORK SPECIFICATION

PART 1 GENERAL

1.1 SITE AND SUBSURFACE CONDITIONS

1.1.1 Overview

This specification is included as a courtesy to the clients of Barron & Associates, P.C, and addresses earthwork site preparation. Additions and modifications are necessary to create a job-specific specification. This specification may serve as a basis for the development for a technical specification under Division 2, *Site Work.*

1.1.2 Site Conditions

The site-specific conditions are described under separate cover or may be available from the OWNER.

1.1.3 Subsurface Conditions

The site-specific subsurface conditions are described under separate cover or may be available from the OWNER.

1.2 REFERENCES

American Standard for Testing and Measurement (ASTM):

ASTM C136	Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C2922	Density for Soil and Soil-Aggregate in Place by Nuclear Methods
ASTM D422	Test Method for Particle-Size Analysis of Soils
ASTM D1140	Amount of Material in Soils Finer Than the No. 200 Sieve
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft^3)
ASTM D2216	Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D2487	1990 Classification of Soils for Engineering Purposes
ASTM D4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.3 DEFINITIONS

1.3.1 Unacceptable Material

Soil material containing debris, wood, scrap material, vegetation, refuse, soft unsound particles, and other organic, frozen, deleterious, or objectionable materials. Contaminated soils shall be properly documented and removed or remediated on site. If necessary, remediation procedure will be defined by the OWNER.

1.3.2 Unsuitable Material

Brown, organic topsoil and underlying soft pockets of organic silt or wet, reworked silty clay.

1.3.3 Ordinary Fill

Friable soil containing no stone greater than two-thirds loose lift thickness and no unacceptable or unsuitable materials. In general, existing random fill is expected to be acceptable for reuse as ordinary fill given proper sorting, blending, drying, and controlled placement methods.

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1.3.4 Granular Fill

Ordinary fill meeting the designation of ASTM D2487 classification of GW with a maximum of 10 percent by weight passing ASTM D1140, No. 200 sieve.

1.3.5 Select Granular Fill

Clean, uncoated soil which contains no unacceptable materials and conforms to the gradation requirements defined in Table A: Select Granular Fill.

Table A: Select Granular Fill

Sieve Size	Percent Finer by Weight
2/3 of the loose lift thickness	100
No. 10	30 - 95
No. 40	10 - 70
No. 200	0 - 15

1.3.6 Sand and Gravel

Clean, hard, durable, uncoated particle of sand and gravel, free from lumps of clay, containing no unacceptable matter, and conforming to gradation requirements of *Table B : Sand and Gravel*

Table B: Sand and Gravel

Sieve	Percent Finer by Weight
*	100
No. 4	50 - 85
No. 10	--
No. 40	10 - 35
No. 100	--
No. 200	0 - 8

* Job-Specific. To be determined by the ENGINEER

1.3.7 Crushed Stone

Clean, durable, sharp-angled fragments of rock or crushed gravel stone of uniform quality, containing no unacceptable matter, free from coatings, and conforming to gradation requirements of *Table C: Crushed Stone*

Table C: Crushed Stone

	Percent Passing	
Sieve Size	¾-inch Stone	1 ¼-inch Stone
1 ½-inch	—	100
1 ¼-inch	—	85-100
1- inch	100	—
¾-inch	90-100	10-40
5/8-inch	—	—
½-inch	10-50	0-8
3/8-inch	0-20	—
#4	0-5	—

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1.3.8 Flowable Fill

Also known as Controlled Low Strength Material – Controlled Density Fill (CLSM-CDF), this material is available under a variety of producer names (e.g., K-Krete©, M-Crete, Flash Fill©, Flowable Mortar, Unshrinkable Fill, etc.). This non-settling backfill mixture is most commonly used for its flowable characteristics, its support strength under traffic loads, and its removability at a later date. The material may be produced on-site or off-site. In either case, the producer of such materials and the product must meet certain certification criteria. Such information is beyond the scope of this specification and will be considered on a site-specific basis.

Flowable fill may be acceptable for use as a backfill for utility trenches of other low-lying areas which require a compacted granular fill. Its use and warranty of performance is left to the CONTRACTOR in such applications.

The use of flowable fill under load-bearing structural components in place of properly placed and compacted granular fill is NOT common and is questionable. The localized use of such material may have profound affects on the performance of a foundation system. Site-specific conditions and the extent of anticipated use of flowable fill must be examined by geotechnical engineer. Cost of such consultation shall be borne by the CONTRACTOR unless specifically directed by the OWNER to seek such consultation. Without such consultation, warranty of performance for such use is left to the CONTRACTOR.

1.4 SUBMITTALS

The following submittals shall be provided in accordance with approved submittals procedures.

1. Fill Source: Provide name and source locations of fill material.

2. Field Test Reports: Field tests will be performed by OWNER's Representative as needed. CONTRACTOR may be required to perform such tests on proposed off-site fill materials.
a. Fill material grain size analyses per ASTM C136, D422, D1140, D2487
b. Moisture/Density test results per ASTM D2216
c. Liquid limit, plastic limit, and plasticity index per ASTM D4318
d. Compaction/Density test results per ASTM C2922 and D1557

3. Sample: Geotextile fabric

PART 2 PRODUCTS

Geotextile Fabric: Mirafi 600X or equal. (Also referred to as synthetic fabric).

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 General

Manner of excavation shall minimize disturbance of underlying natural ground. If deemed necessary by the Engineer, alter construction procedures to reduce subgrade disturbance. Excavate areas which have been excessively disturbed to firm ground and backfill with properly compacted granular fill.

3.1.2 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

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3.1.3 Trees, Shrubs, and Existing Facilities

Protect from any damage all vegetation and facilities identified to remain.

3.1.4 Utility Lines

Locate all utilities within the area of disturbance prior to the start of work. Show locations on initial plans. Protect utility lines from damage. Notify the ENGINEER immediately of damage to or an encounter with an unknown utility. Damage to utility lines are to be repaired by the CONTRACTOR at no additional cost. The CONTRACTOR shall have underground utility owners stake out utility locations prior to the start of clearing and excavation operations.

3.2 VERIFICATION OF CONDITIONS/PROOF-ROLLING

Prior to placement of the initial layer of fill over the natural ground, proof-roll the exposed natural ground above the groundwater table elevation by making two passes with a fully-loaded ten-wheel truck. Excavate unstable areas detected by this process and replace with compacted granular fill.

3.3 PREPARATION

3.3.1 Surface Preparation

Within the site limits indicated on the drawings, excavate all unsuitable material to firm natural ground in the manner specified herein. Follow a construction procedure which permits visual identification of firm natural ground. In the even that groundwater is encountered, the ENGINEER may require that the size of the open excavation be limited to that which can be handled by open pumping to allow visual inspection of the excavation bottom and the performance of backfill operations to be conducted in a dry state.

Excavation of unsuitable material shall be limited to the greater of the following:

- A distance of 5 feet beyond building lines or
- The area defined by a one-horizontal to one-vertical line sloping down from the outside bottom edge of exterior footings to firm natural ground.

3.4 PLACEMENT AND COMPACTION

3.4.1 General

Place fill in accordance with *Table D: Compaction Alternatives*. These alternatives are provided as minimum compaction
standards only and in no way relieve the CONTRACTOR of his obligation to achieve any specified degree of compaction by whatever means may be necessary.

Grade to provide positive drainage and a smooth surface which will readily shed water. To the extent practicable, compact each layer to the specified density on the same day placed. Place fill in horizontal layers. Where horizontal layers meet a natural slope, key layer into slope by cutting a bench.

Fill that is too wet for proper compaction: Disc, harrow, or otherwise dry to proper moisture content for compaction to the required density.

Fill that is too dry for proper compaction: Uniformly apply water over the surface of the loose layer in sufficient quantity to allow compaction to the required density.

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Table D: Compaction Alternatives					
Compaction Method	Max. Stone Size	Maximum Loose Lift Thickness (inches)		Maximum Number of Passes	
		Below Structure and Pavements	Less Critical Areas	Below Structure and Pavements	Less Critical Areas
Hand operated vibratory plate of light roller in confined areas	3	4	4	4	4
Hand operated vibratory drum rollers weighing at least 1,000 pounds in confined areas	4	6	8	4	4
Loaded 10-wheel truck or D-8 crawler	6	10	12	4	2
Light vibratory drum roller; Min. weight at drum 8,000lbs; Min. dynamic force 10,000lbs.	8	12	12	6	2
Minimum vibratory drum; Min. weight at drum 10,000lbs; Min. dynamic force 20,000lbs.	8	18	18	6	4

3.4.2 Dewatering

Provide adequate pumping and drainage facilities to keep excavated areas sufficiently dry of groundwater and surface run-off. Dewatering shall avoid adversely affection construction procedures or causing excessive disturbance of underlying natural ground. Drain all pumped water in such a manner as to avoid damage to adjacent property.

If requested by the ENGINEER, place a 6-inch to 12-inch layer of sand and gravel or crushed stone over the natural underlying soil to stabilize area which have been disturbed due to groundwater seepage pressures and to expedite dewatering operations. Particular attention shall be given areas under proposed foundations.

3.5 FIELD QUALITY CONTROL

3.5.1 Compaction Requirements

Allow the ENGINEER sufficient time to make necessary observations and tests. Base the degree of compaction on maximum dry density as determined by ASTM D1557. The minimum degree of compaction for placed fill shall be as indicated *in Table E: Compaction Requirements.*

Table E: Compaction Requirements	
Area	Minimum Degree of Compaction (%)
Below foundation	95
Pavement and building subbase and base courses	95
Below building slab base course and above bottom of foundation	92
Below pavement subbase and base courses	90
Trench backfill outside of building	90
Trench backfill inside of building	Refer to one of the above-listed categories
Ordinary fill within 5 feet of grade	90
Vegetated areas below 5 feet of grade	85

3.5.2 Testing

Site work should be monitored and tested by geotechnical ENGINEER or his representative and in accordance with requirements of the design team to assure compliance with earthwork and foundation construction specifications.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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APPENDIX F

LIMITATIONS

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LIMITATIONS

1. This report is based on the data that was obtained from the subsurface explorations and on the design of the proposed structure as submitted to the geotechnical engineer. A geotechnical engineer, who is experienced in foundation construction and earthwork, should be engaged to review the final design and specifications in order to determine whether any change in concept may have any effect on the validity of the conclusions presented herein, and whether these conclusions have, in fact, been implemented in the design and specifications.

2. The subsurface conditions, including thicknesses, between the exploration locations are approximate and simplified representations of the strata and transitions. There is the possibility that variations in soil and rock conditions and boundaries will be encountered during construction. In order to permit correlation between the exploratory soil data and the actual soil conditions encountered during construction and so as to assess conformance with the plans and specifications as originally contemplated, it is recommended that a geotechnical engineer, who is experienced in foundation construction and earthwork monitoring, should be retained to perform continuous construction review during the site preparation and foundation construction operations.

3. The subsurface exploration logs and subsurface conditions may aid in estimating material quality and quantities, such as topsoil/organic matter, fills, natural soils, and rock, but are not to be relied upon as the exclusive means for bid preparation purposes. It is the responsibility of the contractor to perform any additional site examinations and explorations and to prepare an accurate bid.

4. Disclaimers:

   a. In the event that any changes in the nature, design or location of the proposed structure is planned, the conclusions that are contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing.

   b. The geotechnical engineering report has been prepared for this project by Barron & Associates, P.C. This report is for assistance in design only and is not a sufficient basis on which to prepare an accurate bid.

   c. This report has been prepared for the exclusive use of McGuire Development Company of Buffalo, New York, their client, and their designated design representatives for specific application to the development of the proposed two-story slab-on-grade Maple Ayer Corporate Center building, with approximately 23,400 square feet in total building footprint area, on approximately 5.6 acres of land that is addressed as 1730 to 1800 Maple Road in the Town of Amherst, Erie County, New York and in accordance with generally accepted geotechnical engineering practice. No other warranty, expressed or implied, is made.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Traffic Impact Study

for the proposed

Mixed-Use Development
1720-1760 Maple Road

Town of Amherst
Erie County, New York

August 23, 2022

Project No. 42034

Prepared For:

PB Investors, LLC

c/o Mr. Paul Bliss
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Prepared By:

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Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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LIST OF REFERENCES

1. Highway Capacity Manual 6th Edition. Transportation Research Board (TRB). The National Academies, Washington, DC. 2016.
2. Trip Generation, 11th Edition. Institute of Transportation Engineers (ITE). Washington, DC. 2021.
3. New York State Department of Transportation (NYSDOT) Traffic Data Viewer. 2021. Retrieved from https://www.dot.ny.gov/tdv.

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EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to evaluate the potential traffic impacts related to the proposed mixed-use development to be located at 1720-1760 Maple Road ("project site") in the Town of Amherst, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated and mitigating measures are identified (if needed) to minimize operational concerns.

To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project.

The project site is located along Maple Rd in the Town of Amherst, Erie County, New York. The project site is bounded by single family homes and Bush Creek Rd to the north, the Pediatric & Adolescent Urgent Care of WNY and Ayer Rd to the east, Maple Rd to the south, and single family homes and Youngs Rd to the west. Land uses in the vicinity of the proposed project include residential, medical, and retail. The study area consists of the following intersections:

- Maple Rd/Youngs Rd
- Maple Rd/Existing Driveway
- Maple Rd/Ayer Rd
- Ayer Rd/Speedway Driveway/Existing Driveway

The proposed project consists of two proposed mixed-use buildings that will consist of 102 multi-family units and ±7,000 square feet (SF) of first floor commercial space, a 2-story townhome with 5 units, and a 2-story townhome with 6 units. Access to the proposed project is proposed via the two existing Pediatric & Adolescent Urgent Care of WNY driveways along Maple Rd and Ayer Rd along with a proposed full access driveway along Maple Rd, to the west of the existing Pediatric & Adolescent Urgent Care of WNY driveway. **Figure 5** illustrates the proposed Site Plan for the proposed mixed-use project as prepared by Carmina Wood Design.

Construction of the proposed project is anticipated to reach full build-out in approximately one year. Town of Amherst personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. No such projects were identified

To account for normal increases in background traffic growth, including any unforeseen developments in the project study area, a growth rate of 2.0% was applied to the existing traffic volumes in the study area based upon a review of historical traffic information obtained from the New York State Department of Transportation.

CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed mixed-use development to be located along Maple Rd in the Town of Amherst, NY. The results of this study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

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1. The proposed project is expected to generate approximately 28 entering/53 exiting vehicle trips during the AM peak hour and 74 entering/56 exiting vehicle trips during the PM peak hour based upon ITE Trip Generation Manual data.

2. The projected traffic impacts resulting from full development of the proposed project during all peak hours can be accommodated by the existing transportation network with no highway improvements.

3. All approaches at the proposed driveway intersection on Maple Rd are projected to operate at acceptable LOS "B" or better under full build conditions during both peak hours. No mitigation is required or recommended at the site driveway intersections.

4. The proposed driveway should be constructed to provide one entering lane and one exiting lane and shall be stop controlled for the southbound movement at the intersection with Maple Rd.

5. The detailed analysis contained in this Traffic Impact Study demonstrates the proposed project will not result in any potentially significant adverse environmental impacts for the purpose of the environmental review of the project pursuant to the State Environmental Quality Review Act ("SEQRA").

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I. INTRODUCTION

The purpose of this report is to evaluate the potential traffic impacts related to the proposed mixed-use development located at 1720-1760 Maple Road (project site) in the Town of Amherst, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated and mitigating measures are identified (if needed) to minimize operational concerns.

To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project.

II. LOCATION

The project site is located along Maple Rd in the Town of Amherst, Erie County, New York. The project site is bounded by single family homes and Bush Creek Rd to the north, the Pediatric & Adolescent Urgent Care of WNY and Ayer Rd to the east, Maple Rd to the south, and single family homes and Youngs Rd to the west. Land uses in the vicinity of the proposed project include residential, medical, and retail. The study area consists of the following intersections:

- Maple Rd/Youngs Rd
- Maple Rd/Existing Driveway
- Maple Rd/Ayer Rd
- Ayer Rd/Speedway Driveway/Existing Driveway

The project site location and study area are illustrated in **Figure 1** (all figures are included at the end of this report).

III. EXISTING HIGHWAY SYSTEM

A. Vehicular Network Description

The following information outlined in **Table I** provides a description of the existing roadway network within the project study area. **Figure 2** illustrates the lane geometry at each of the study intersections and the Annual Average Daily Traffic (AADT) volumes on the study roadways. The AADTs reflect the most recently collected data obtained from the New York State Department of Transportation (NYSDOT).

Functional classification of highways within the study area is determined by the NYSDOT and the Federal Highway Administration (FHWA).

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TABLE I: EXISTING HIGHWAY SYSTEM

ROADWAY	CLASS[1]	AGENCY[2]	SPEED LIMIT[3]	# OF TRAVEL LANES[4]	TRAVEL PATTERN/ DIRECTION	EST. AADT[5] & SOURCE[6]
Maple Rd (CR-192)	14	ECDPW	45	4	Two-way/ East-West	23,305 NYSDOT (2019)
Youngs Rd	17	ECDPW	45	2	Two-way/ North-South	12,920 NYSDOT (2017)
Ayer Rd	19	ECDPW	35	2	Two-way/ North-South	3,577 NYSDOT (2014)

Notes:
1. State Functional Classification of Roadway (All are Rural): 14 = Principal Arterial, 17 = Major Collector, 19 = Local
2. Jurisdictional Agency of Roadway. "ECDPW" = Erie County Department of Public Works.
3. Posted or Statewide Limit in Miles per Hour (mph).
4. Excludes turning/auxiliary lanes developed at intersections.
5. Estimated AADT in Vehicles per Day (vpd).
6. AADT Source (Year). NYSDOT = New York State Department of Transportation

B. *Multi-Modal Network Description*

This evaluation reviewed the study area's pedestrian, bicycle, and transit network via field and aerial reconnaissance. A description of the multi-modal infrastructure is described hereafter.

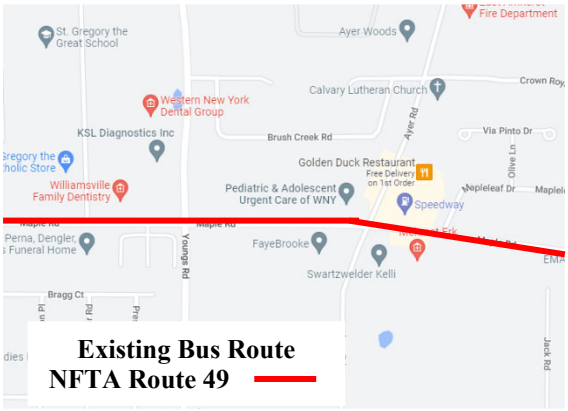
Pedestrian & Bicycle Facilities

Sidewalks currently exist along both sides of Maple Rd and Ayer Rd. There are no other sidewalks within the study area.

There are no dedicated bicycle facilities present in the study area; however, cyclists are permitted to share the road with motorists on all roadways within the study area.

Transit Facilities

Public transit service within the study area is provided by the Niagara Frontier Transportation Authority (NFTA). NFTA currently provides one bus route that services the Maple Rd corridor (Route 49). Bus stops are located along both sides of Maple Rd.



IV. EXISTING TRAFFIC CONDITIONS

A. *Peak Intervals for Analysis*

Given the functional characteristics of the corridors, adjacent land uses, and the proposed land uses for the project site (residential and small-scale commercial), the peak hours selected

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for analysis are the weekday commuter AM and PM peak periods. The combination of site traffic and adjacent through traffic produces the greatest demand during these time periods.

B. Existing Traffic Volume Data

Turning movement traffic counts were collected on Tuesday, April 19th, 2022, by SRF Associates at the study intersections. Traffic counts were conducted between 7:00-9:00 AM for the weekday AM peak period and 4:00-6:00 PM for the weekday PM peak period. The peak hour traffic periods generally occurred from 8:00-9:00 AM and 4:30-5:30 PM. The unadjusted 2022 weekday peak hour volumes for the AM and PM commuter peak hours are reflected in Figure 3A.

It is noted, however, that traffic volumes are currently lower than normal as a result of the COVID-19 pandemic. Traffic volumes were compared to traffic data obtained in various nearby locations prior to the COVID-19 pandemic by the NYSDOT and adjusted to reflect 2022 traffic conditions. This is consistent with NYSDOT and ITE methodology for adjustments related to collected traffic volumes affected by the COVID-19 pandemic. It was found that the AM peak hour volumes were equal to the historical NYSDOT volumes and were therefore not adjusted. However, the PM peak volumes were found to be approximately 15% lower than the historical NYSDOT volumes. Figure 3B illustrates the 2022 weekday AM and PM peak hour base volumes used for analysis purposes in this study.

V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH

Construction of the proposed project is anticipated to reach full build-out in approximately one year. Town of Amherst personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. No such projects were identified

To account for normal increases in background traffic growth, including any unforeseen developments in the project study area, a growth rate of 2.0% was applied to the existing traffic volumes in the study area based upon a review of historical traffic information obtained from the New York State Department of Transportation. The background traffic volumes are depicted in **Figure 4**.

VI. PROPOSED DEVELOPMENT

A. Project Description

The proposed project consists of two proposed mixed-use buildings that will consist of 102 multi-family units and ±7,000 square feet (SF) of first floor commercial space, a 2-story townhome with 5 units, and a 2-story townhome with 6 units. Access to the proposed project is proposed via the two existing Pediatric & Adolescent Urgent Care of WNY driveways along Maple Rd and Ayer Rd along with a proposed full access driveway along Maple Rd, to the west of the existing Pediatric & Adolescent Urgent Care of WNY driveway. **Figure 5** illustrates the proposed Site Plan for the proposed mixed-use project as prepared by Carmina Wood Design.

B. Site Generated Traffic

The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific

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building or land use. These trips represent the volume of traffic entering and exiting the development. Trip Generation Manual (11th Edition) published by the Institute of Transportation Engineers (ITE) is used as a reference for this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of the adjacent street traffic and proposed land use, in this case, the weekday commuter AM and PM peaks, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis.

Table II shows the total site generated trips for the weekday commuter AM and PM peak hours for the proposed project. All trip generation information has been included in the Appendices.

TABLE II: SITE GENERATED TRIPS

DESCRIPTION	ITE LUC[1]	SIZE	AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Multifamily Housing (Low-Rise)	220	113 units	14	44	30	30
Strip Retail Plaza (<40k)	822	±7,000 SF	14	9	44	26
Total Site Generated Trips			**28**	**53**	**74**	**56**

Note:
1. LUC = Land Use Code.

The proposed project is expected to generate approximately 28 entering/53 exiting vehicle trips during the AM peak hour and 74 entering/56 exiting vehicle trips during the PM peak hour based upon ITE Trip Generation Manual data.

C. Site Traffic Distribution

The cumulative effect of site-generated traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site. The proposed arrival/departure distribution of traffic generated by the proposed project is considered a function of several parameters, including:

- Existing traffic patterns at the study intersections
- Nearby commercial centers
- Nearby residential areas
- Proximity to the University at Buffalo
- Existing traffic conditions and controls

Figure 6 shows the anticipated trip distribution pattern percentages for the traffic from the proposed development traffic. **Figure 7** illustrates the peak hour project site-generated traffic based on those percentages.

VII. FULL DEVELOPMENT VOLUMES

Proposed design hour traffic volumes are developed for the AM and PM peak hours by combining the background traffic conditions (**Figure 4**) and the new site generated traffic volumes (**Figure 7**) to yield the traffic volumes under full development conditions. **Figure 8**

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illustrates the total weekday AM and PM peak hour volumes anticipated for the proposed development under full build-out conditions.

VIII. CAPACITY ANALYSIS

A. Description of Capacity Analysis

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis focuses on intersections, as opposed to highway segments.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the conditions with little to no delay, and LOS "F" conditions with very long delays. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendices. LOS “C” or better is generally desirable, but LOS “D” for signalized locations and LOS “E” for unsignalized are generally acceptable during peak periods so long as the volume to capacity ratio (v/c) is below 1.0.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the Highway Capacity Manual (HCM 2016) published by the Transportation Research Board (TRB). Traffic analysis software, Synchro 11, which is based on procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service based on the HCM as an indicator of how well intersections operate. However, it is noted that capacity analysis results were derived using the HCM 2000 methodology for unsignalized intersections within Synchro as required by NYSDOT Region 5.

B. Capacity Analysis Results

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the project were analyzed to assess the operation of the study area intersections. Capacity results for existing, background and full development conditions are listed in **Table III**. The discussion following the table summarizes capacity conditions.

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TABLE III: CAPACITY ANALYSIS RESULTS

INTERSECTION	2022 EXISTING BASE CONDITIONS				2023 BACKGROUND CONDITIONS				2023 FULL BUILD CONDITIONS			
	AM		PM		AM		PM		AM		PM	
1. Maple Rd/Youngs Rd (S)												
EB Left - Maple Rd	B	18.2	C	20.6	B	18.3	C	21.3	B	18.6	C	22.0
EB Thru/Right - Maple Rd	C	24.1	C	31.1	C	24.2	C	32.0	C	24.7	D	35.7
WB Left - Maple Rd	B	16.1	B	19.4	B	16.2	B	20.0	B	16.4	C	22.0
WB Thru/Right - Maple Rd	C	29.9	C	33.2	C	30.3	C	33.8	C	30.7	C	34.4
NB Left - Youngs Rd	C	20.4	C	22.4	C	20.8	C	22.7	C	20.8	C	22.6
NB Thru - Youngs Rd	C	27.8	D	47.9	C	28.1	D	48.9	C	28.4	D	50.8
NB Right - Youngs Rd	A	3.1	A	7.1	A	3.2	A	7.5	A	3.5	A	9.4
SB Left - Youngs Rd	B	17.2	C	22.0	B	17.3	C	22.2	B	17.5	C	23.4
SB Thru - Youngs Rd	D	46.6	D	45.5	D	48.3	D	46.3	D	48.4	D	46.3
SB Right - Youngs Rd	B	12.6	B	10.6	B	13.0	B	11.0	B	13.0	B	11.0
Overall LOS	***C***	***27.6***	***C***	***32.9***	***C***	***28.2***	***C***	***33.6***	***C***	***28.4***	***D***	***35.0***
Volume-to-Capacity (v/c) Ratio	***0.83***		***0.85***		***0.85***		***0.86***		***0.85***		***0.87***	
2. Maple Rd/Existing Dwy (U)												
EB Left - Maple Rd	A	8.6	A	9.0	A	8.6	A	9.0	A	8.7	A	9.1
SB - Existing Dwy	A	9.3	B	10.2	A	9.3	B	10.2	B	10.6	B	10.7
3. Maple Rd/Ayer Rd (S)												
EB Left - Maple Rd	A	6.8	A	8.9	A	7.0	A	9.2	A	7.0	A	9.5
EB Thru/Right - Maple Rd	A	6.3	A	7.5	A	6.4	A	7.6	A	6.5	A	7.7
WB Left - Maple Rd	A	6.2	A	7.1	A	6.3	A	7.3	A	6.3	A	7.4
WB Thru/Right - Maple Rd	A	6.3	A	7.0	A	6.5	A	7.1	A	6.5	A	7.3
NB Left - Ayer Rd	B	16.5	B	18.7	B	16.4	B	18.7	B	16.4	B	18.8
NB Thru/Right - Ayer Rd	B	12.9	C	21.2	B	12.9	C	21.4	B	13.0	C	21.5
SB Left - Ayer Rd	B	18.5	C	22.5	B	18.5	C	22.7	B	18.7	C	23.0
SB Thru/Right - Ayer Rd	B	16.0	B	10.2	B	16.3	B	10.2	B	16.4	B	10.3
Overall LOS	***A***	***8.9***	***A***	***9.6***	***A***	***9.0***	***A***	***9.8***	***A***	***9.1***	***A***	***9.9***
Volume-to-Capacity (v/c) Ratio	***0.53***		***0.50***		***0.53***		***0.51***		***0.54***		***0.51***	
4. Ayer Rd/Speedway Dwy/Existing Dwy (U)												
EB - Existing Dwy	A	9.3	B	10.6	A	9.3	B	10.9	B	10.6	B	11.4
WB - Speedway Dwy	B	12.1	B	13.1	B	12.3	B	13.4	B	12.5	B	13.8
NB - Ayer Rd	A	0.2	A	0.0	A	0.2	A	0.0	A	0.4	A	0.3
SB - Ayer Rd	A	1.6	A	1.4	A	1.6	A	1.4	A	1.6	A	1.4
5. Maple Rd/Proposed Dwy (U)												
EB Left - Maple Rd	N/A		N/A		N/A		N/A		A	8.9	A	9.5
SB - Proposed Dwy									B	10.5	B	10.3

Notes:

1. A(2.8) = Level of Service (Delay in seconds per vehicle)
2. EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound
3. (S) = Signalized; (U) = Unsignalized
4. N/A = Approach does not exist and/or was not analyzed during this condition
5. Green shaded cells indicate low delays, yellow shaded cells indicate moderate delays, red shaded cells indicate long delays.
6. The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. A v/c ratio between 0.85 and 0.95 generally indicates an intersection is nearing capacity. Intersections with a v/c ratio of 1.0 or greater generally indicate conditions at or above capacity.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

1. Maple Rd/Youngs Rd

All approaches operate at LOS "D" or better during both peak hours under all conditions. The eastbound thru/right approach and overall intersection LOS changes from LOS "C" to "D" and the westbound left approach changes from LOS "B" to "C" during the PM peak hour between background and full build conditions. These changes in LOS are caused by an increase in delay of 3.7 seconds or less and are considered borderline conditions. No other changes in levels of service are anticipated and no mitigation is warranted or recommended.

2. Maple Rd/Existing Driveway

All approaches operate at LOS "B" or better during both peak hours under all conditions. The southbound approach changes from LOS "A" to "B" during the AM peak hour between background and full build conditions. This is considered a borderline condition as the threshold between LOS "A" and "B" is 10.0 seconds per vehicle and the actual increase in delay projected is 1.3 seconds per vehicle. No other changes in levels of service are anticipated and no mitigation is warranted or recommended.

3. Maple Rd/Ayer Rd

All movements operate at LOS "C" or better under existing and projected background conditions during both peak hours. No changes in LOS are projected because of the proposed project. The intersection can accommodate the projected new traffic volumes and projected minor impacts resulting from the project; thus, no capacity improvements are warranted nor recommended.

4. Ayer Rd/Speedway Driveway/Existing Driveway

All approaches operate at LOS "B" or better during both peak hours under all conditions. The eastbound approach changes from LOS "A" to "B" during the AM peak hour between background and full build conditions. This is considered a borderline condition as the threshold between LOS "A" and "B" is 10.0 seconds per vehicle and the actual increase in delay projected is 1.3 seconds per vehicle. No other changes in levels of service are anticipated and no mitigation is warranted or recommended.

5. Maple Rd/Proposed Driveway

All approaches at the site driveway intersection are projected to operate at LOS "B" or better under full build conditions during both peak. No improvements are warranted nor recommended at this location. The proposed driveway should consist of one entering and one exiting lane and be stop controlled at its approach to Maple Rd.

IX. CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed mixed-use development to be located along Maple Rd in the Town of Amherst, NY. The results of this study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is expected to generate approximately 28 entering/53 exiting vehicle trips during the AM peak hour and 74 entering/56 exiting vehicle trips during the PM peak hour based upon ITE Trip Generation Manual data.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

2. The projected traffic impacts resulting from full development of the proposed project during all peak hours can be accommodated by the existing transportation network with no highway improvements.

3. All approaches at the proposed driveway intersection on Maple Rd are projected to operate at acceptable LOS "B" or better under full build conditions during both peak hours. No mitigation is required or recommended at the site driveway intersections.

4. The proposed driveway should be constructed to provide one entering lane and one exiting lane and shall be stop controlled for the southbound movement at the intersection with Maple Rd.

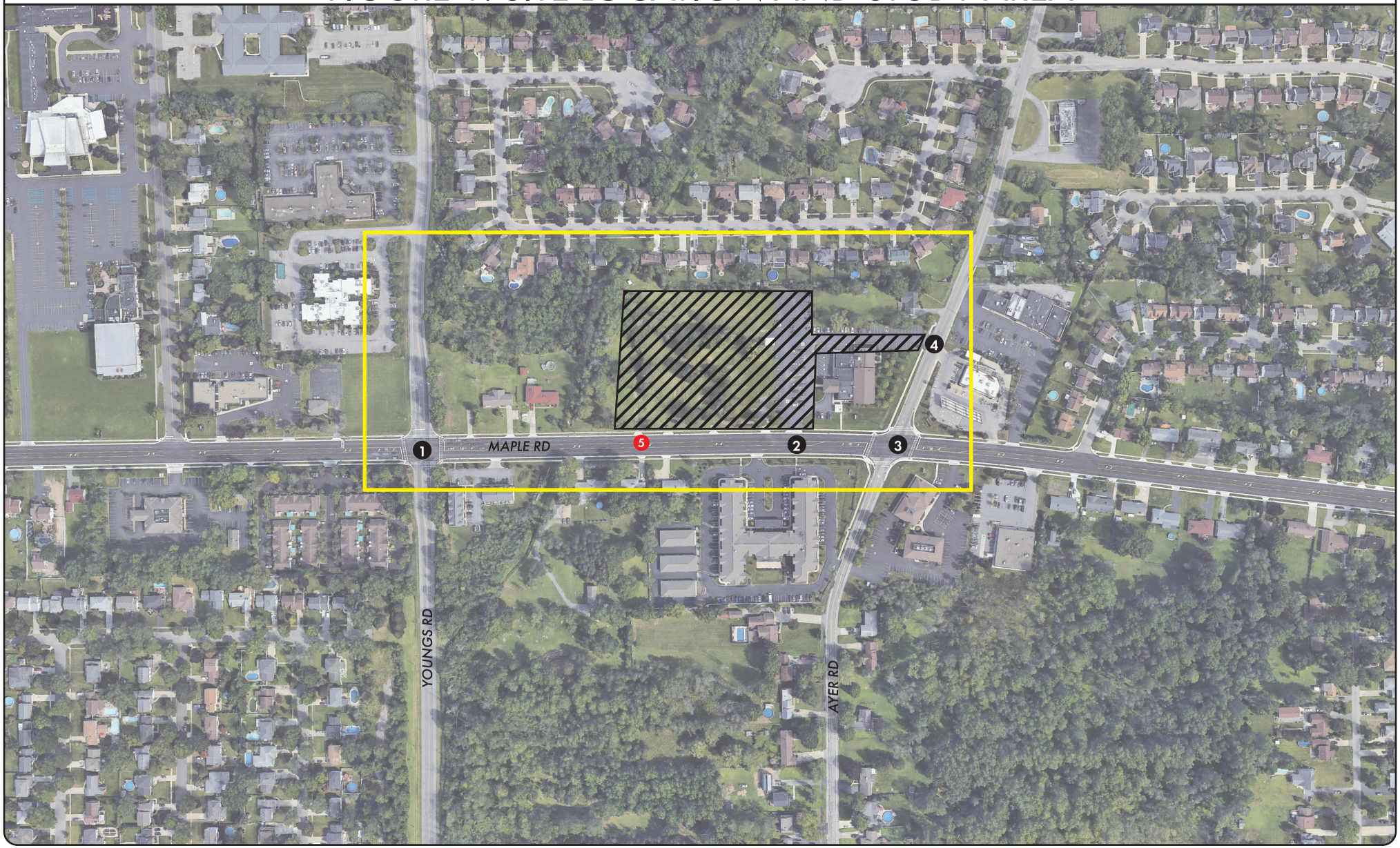
5. The detailed analysis contained in this Traffic Impact Study demonstrates the proposed project will not result in any potentially significant adverse environmental impacts for the purpose of the environmental review of the project pursuant to the State Environmental Quality Review Act ("SEQRA").

X. FIGURES

Figures 1 through 8 are included on the following pages.

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

FIGURE 1: SITE LOCATION AND STUDY AREA



Key

- Study Intersection
- Proposed Intersection
- Site Location
- Study Area

PROPOSED MIXED-USE DEVELOPMENT

N

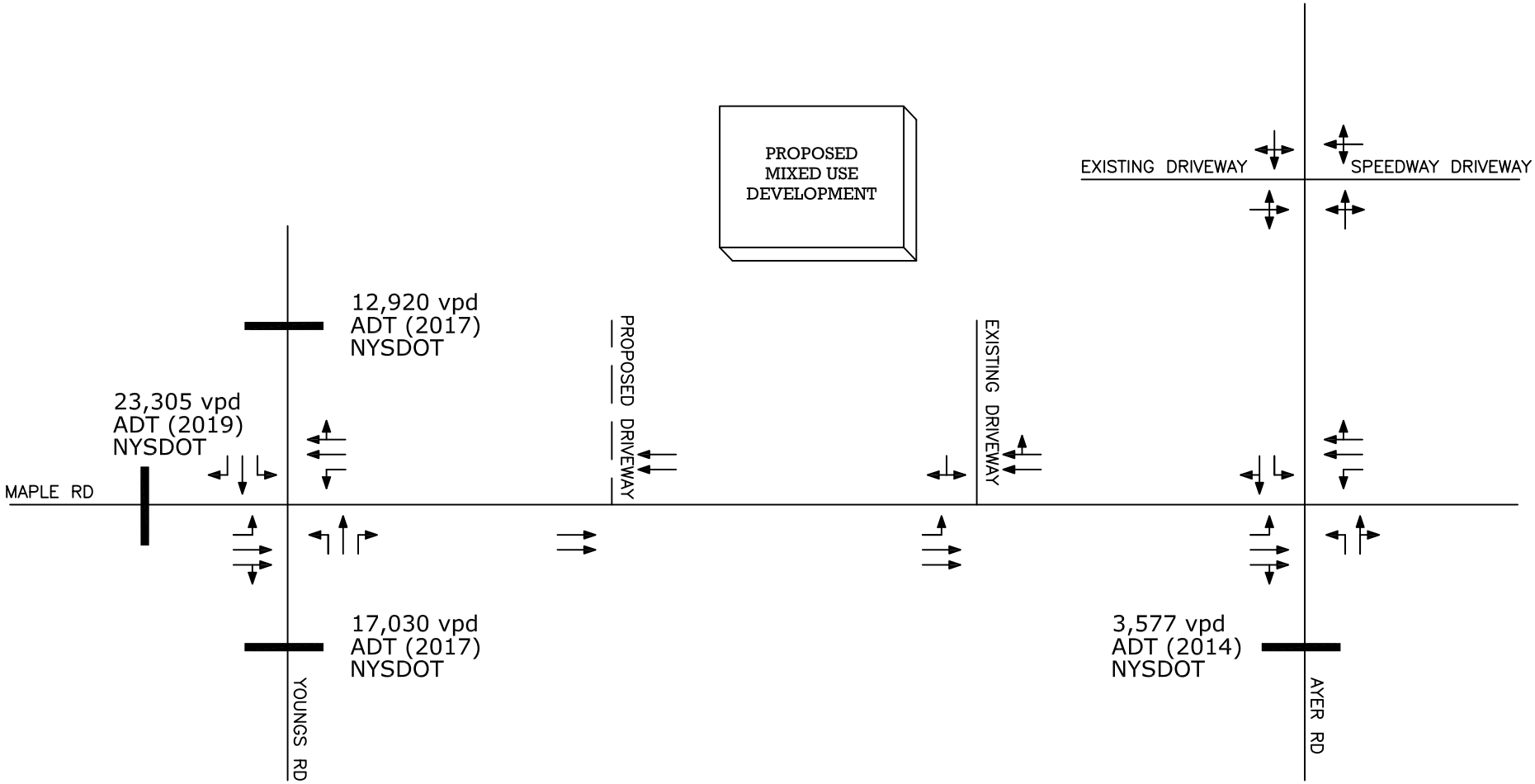
0 300
FEET

SRF ASSOCIATE

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Notes:

1. All AADT volumes by those noted:
   1.1. NYSDOT = New York State Department of Transportation.
2. V.P.D. = Vehicles per Day.



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FIGURE 2

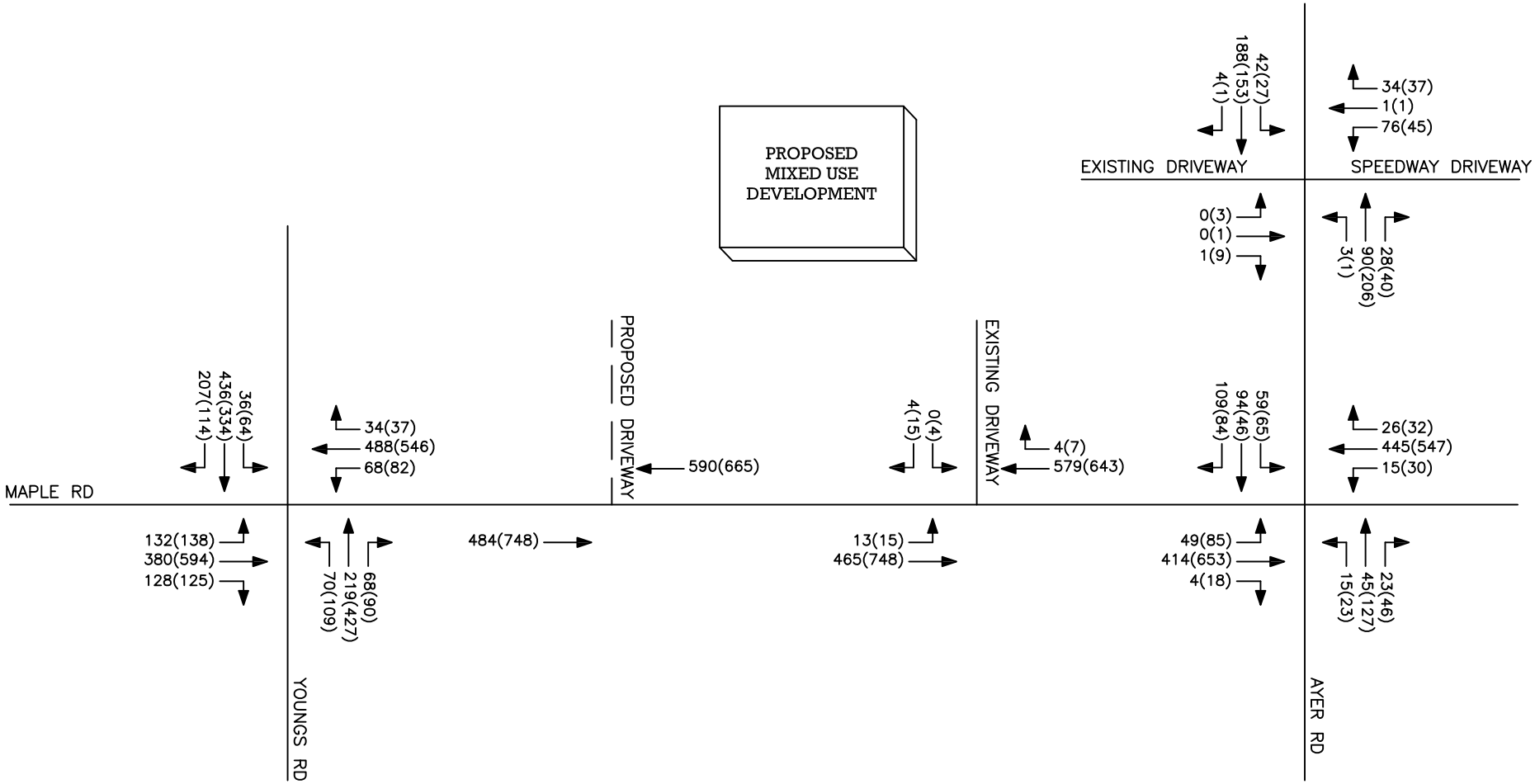
LANE GEOMETRY &
AVERAGE DAILY TRAFFIC

PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

PROJECT NO: 42034

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



AM PEAK: 7:30–8:30
PM PEAK: 4:30–5:30

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FIGURE 3A

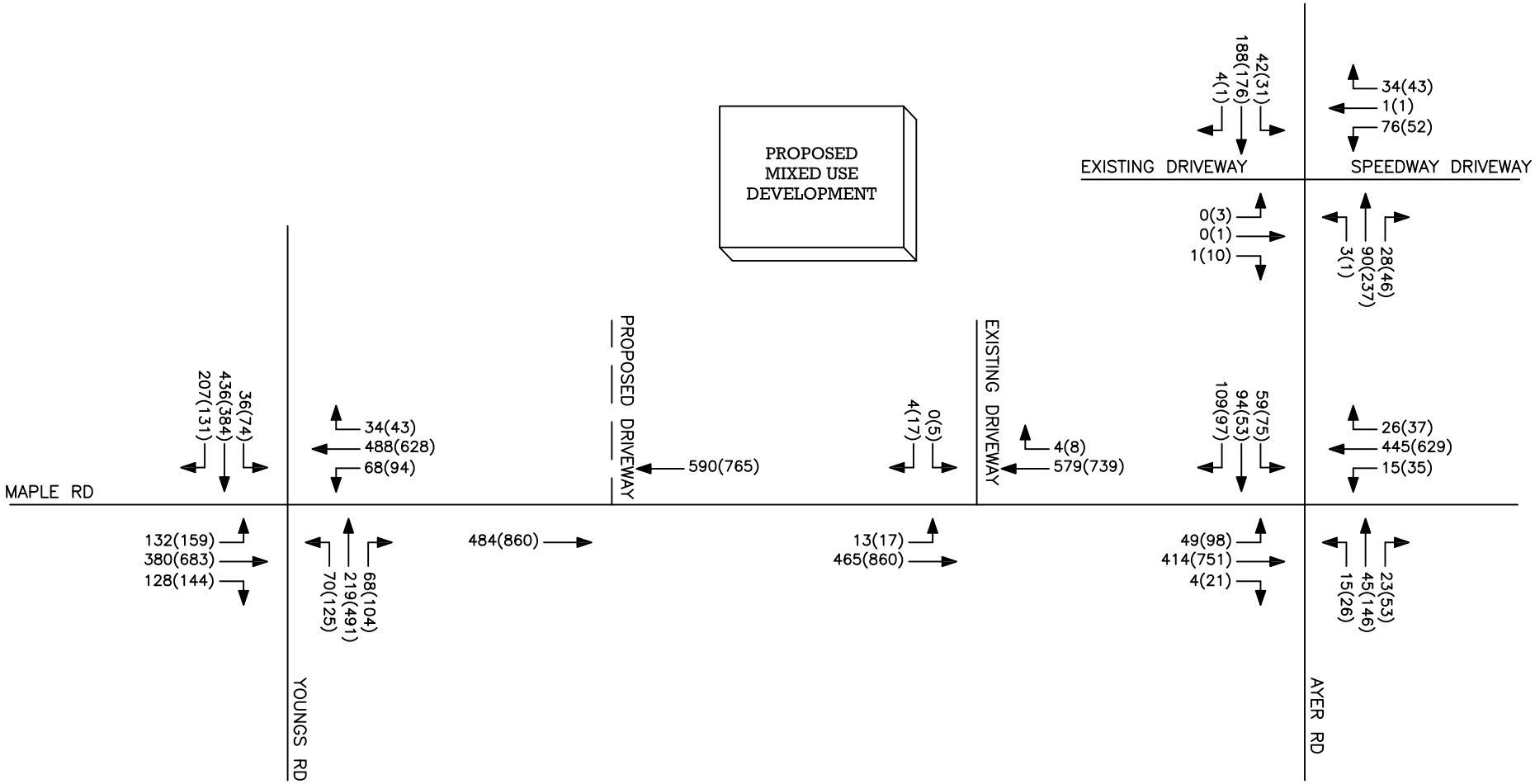
PEAK HOUR VOLUMES
2022 EXISTING BASE CONDITIONS

PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

00(00) = AM(PM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



AM PEAK: 7:30–8:30
PM PEAK: 4:30–5:30

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FIGURE 3B

PEAK HOUR VOLUMES
2022 ADJUSTED BASE CONDITIONS

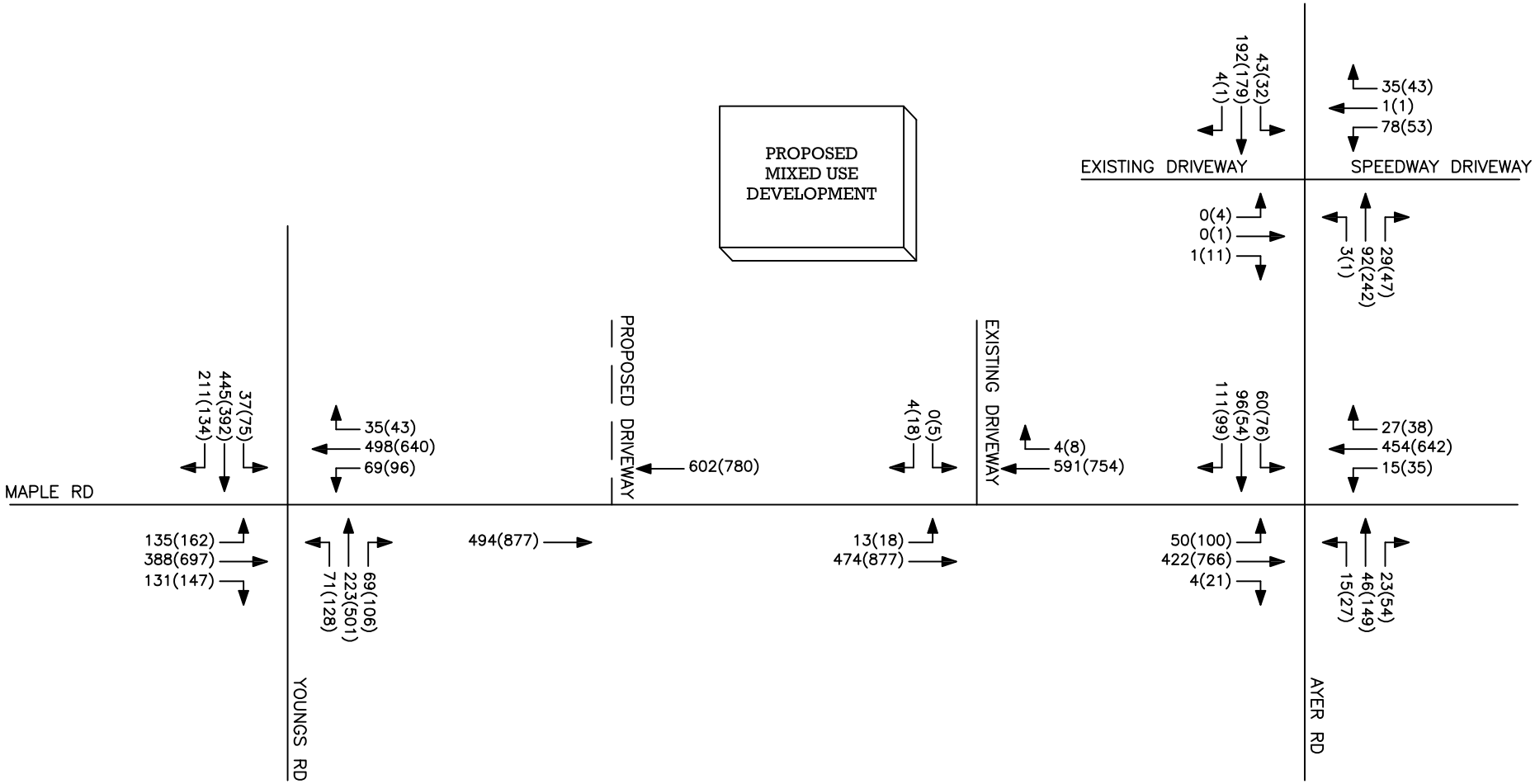
PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

00(00) = AM(PM)

PROJECT NO: 42034

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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FIGURE 4

PEAK HOUR VOLUMES
2023 BACKGROUND CONDITIONS

PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

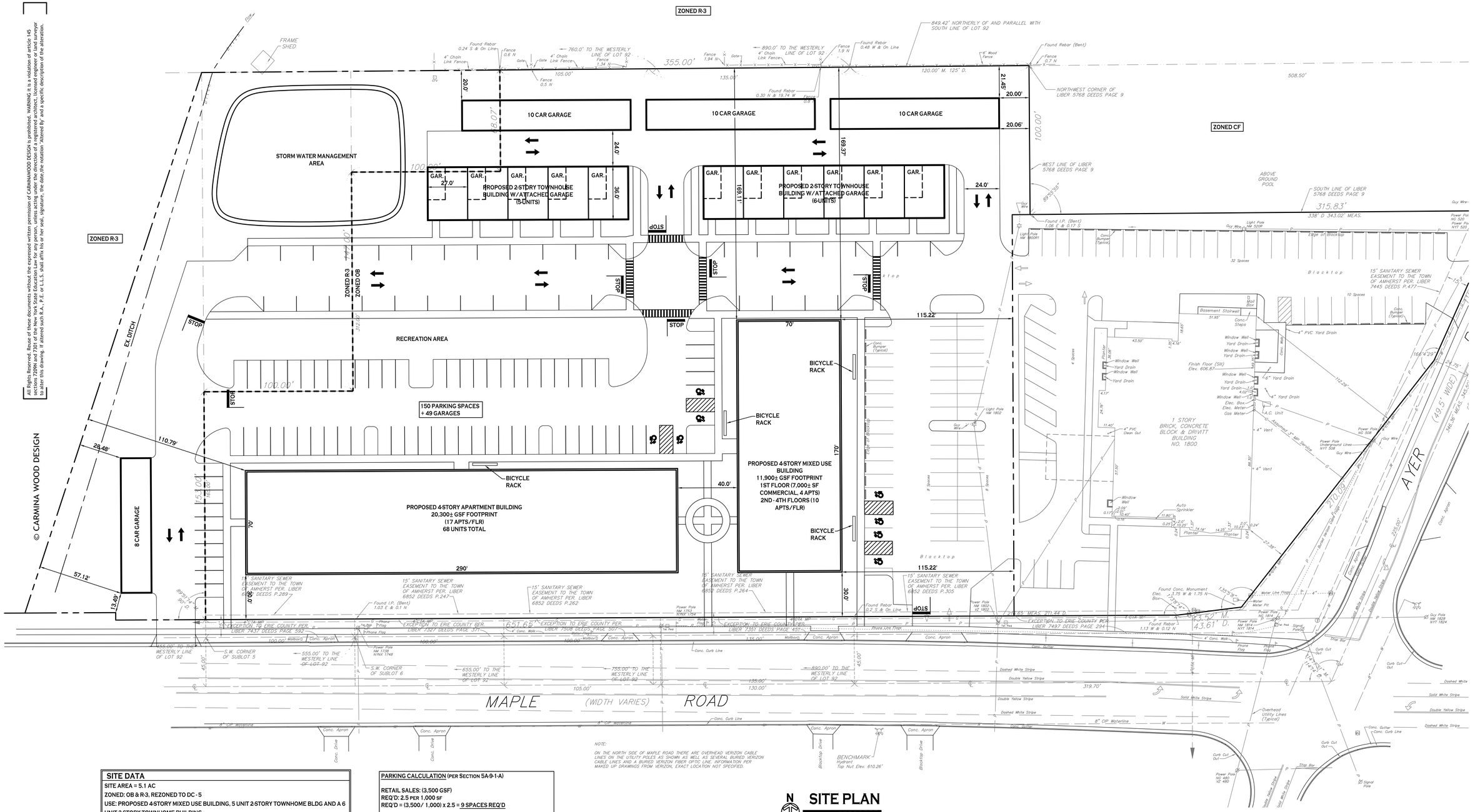
00(00) = AM(PM)

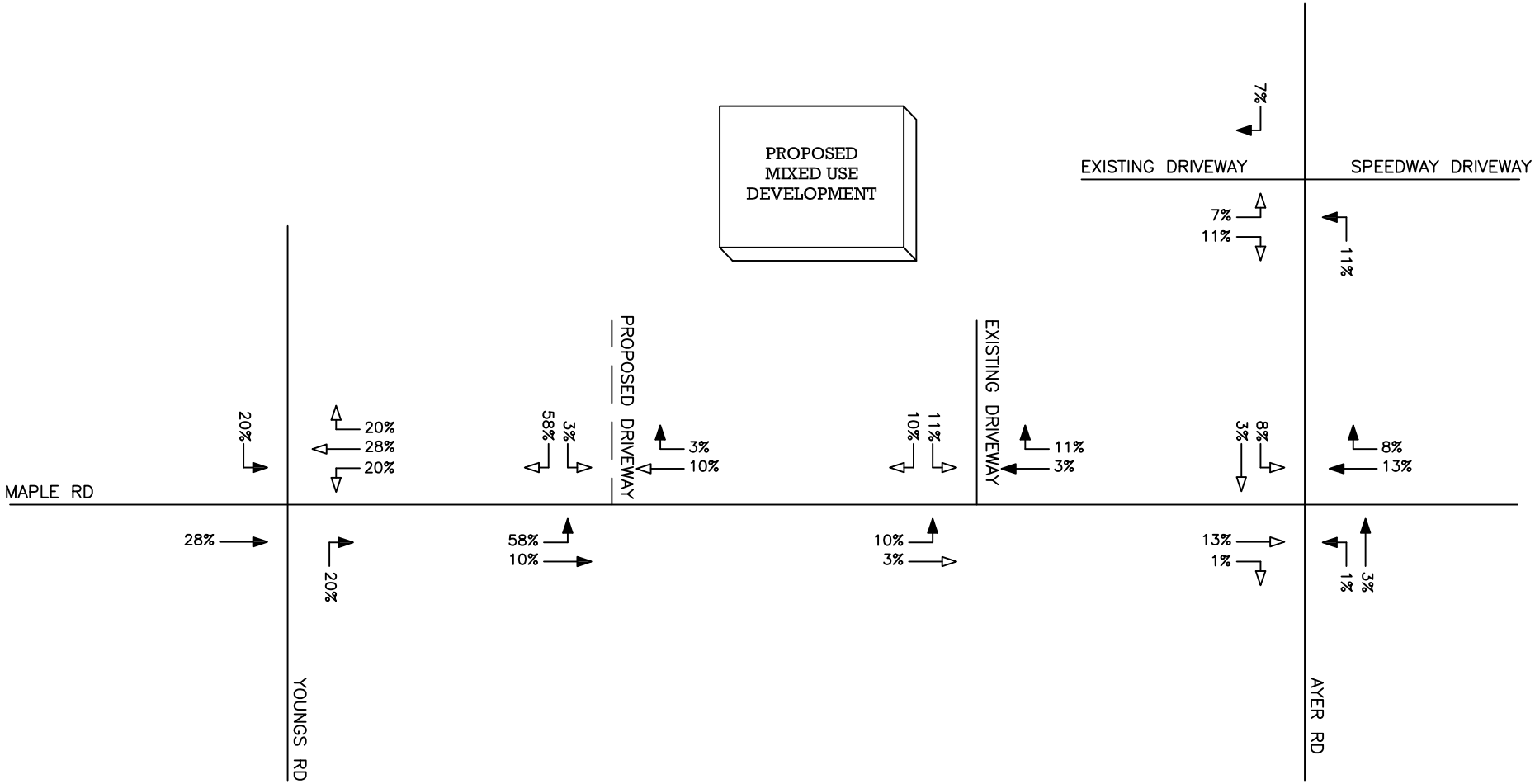
PROJECT NO: 42034

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ZONED R-3
ZONED CF
ZONED R-3
ZONED R-3
ZONED OB
STORM WATER MANAGEMENT AREA
10 CAR GARAGE
10 CAR GARAGE
10 CAR GARAGE
PROPOSED 2-STORY TOWNHOUSE BUILDING W/ ATTACHED GARAGE (5-UNITS)
PROPOSED 2-STORY TOWNHOUSE BUILDING W/ ATTACHED GARAGE (6-UNITS)
RECREATION AREA
150 PARKING SPACES + 49 GARAGES
PROPOSED 4-STORY APARTMENT BUILDING 20,300± GSF FOOTPRINT (17 APTS/FLR) 68 UNITS TOTAL
PROPOSED 4-STORY MIXED USE BUILDING 11,900± GSF FOOTPRINT 1ST FLOOR (7,000± SF COMMERCIAL, 4 APTS) 2ND - 4TH FLOORS (10 APTS/FLR)
8 CAR GARAGE
BICYCLE RACK
BICYCLE RACK
BICYCLE RACK
BICYCLE RACK
STOP
EX. DITCH
FRAME SHED
1 STORY BRICK, CONCRETE BLOCK & DRIVITT BUILDING NO. 1800
Blacktop
Basement Stairwell
Mail Box
Conc. Steps
Window Well
Yard Drain
Finish Floor (Slit) Elev. 606.87
4" PVC Yard Drain
6" Yard Drain
4" Yard Drain
A.C. Unit
Elec. Box
Elec. Meter
Gas Meter
4" Vent
4" PVC Clean Out
Assumed 3" Main Service
Auto Sprinkler
Planter
Conc. Bumper (Typical)
Light Pole NM 1802
Light Pole NM 1801
Light Pole NM 1801F1
Light Pole NM 520R
Power Pole NO 508
Power Pole NO 509
Power Pole NO 460
Power Pole NM 1802 VZ 1802
Power Pole NM 1753 NYNX 1754
Power Pole NM 1738 NYNX 1748
Power Pole NM 1814 NYT 1814
Power Pole NM 1814
Power Pole Underground Lines NYT 508
Guy Wire
Guy Wire-
Found Rebar 0.24' S & On Line
Found Rebar 0.48' W & On Line
Found Rebar 0.30' N & 19.74' W
Found Rebar (Bent)
Found I.P. (Bent) 1.03' E & 0.1' N
Found I.P. (Bent) 1.06' E & 0.17' S
Found Rebar 0.3' S & On Line
Found Rebar 1.13' W & 0.12' N
Found Conc. Monument Elec. Box 1.75' W & 1.75' N
Fence 1.94' N
Fence 0.6' N
Fence 1.34' N
Fence 0.5' N
Fence 1.9' N
Fence 0.7' N
Fence 0.8' N
4' Chain Link Fence
6' Wood Fence
Gate
760.0' TO THE WESTERLY LINE OF LOT 92
890.0' TO THE WESTERLY LINE OF LOT 92
849.42' NORTHERLY OF AND PARALLEL WITH SOUTH LINE OF LOT 92
120.00' M. 125' D.
NORTHWEST CORNER OF LIBER 5768 DEEDS PAGE 9
WEST LINE OF LIBER 5768 DEEDS PAGE 9
SOUTH LINE OF LIBER 5768 DEEDS PAGE 9
ABOVE GROUND POOL
508.50'
315.83'
338° D 343.02' MEAS.
Edge of Blacktop
32 Spaces
10 Spaces
4 Spaces
8 Spaces
15" SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER. LIBER 7445 DEEDS P.477
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER. LIBER 6852 DEEDS P.247
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER. LIBER 6852 DEEDS P.262
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER. LIBER 6852 DEEDS P.264
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER. LIBER 6852 DEEDS P.305
EXCEPTION TO ERIE COUNTY PER. LIBER 7437 DEEDS PAGE 592
EXCEPTION TO ERIE COUNTY PER. LIBER 7327 DEEDS PAGE 371
EXCEPTION TO ERIE COUNTY PER. LIBER 7308 DEEDS PAGE 307
EXCEPTION TO ERIE COUNTY PER. LIBER 7391 DEEDS PAGE 457
EXCEPTION TO ERIE COUNTY PER. LIBER 7497 DEEDS PAGE 294
651.65
S.W. CORNER OF SUBLOT 5
S.W. CORNER OF SUBLOT 6
555.00' TO THE WESTERLY LINE OF LOT 92
655.00' TO THE WESTERLY LINE OF LOT 92
755.00' TO THE WESTERLY LINE OF LOT 92
890.00' TO THE WESTERLY LINE OF LOT 92
105.00' TO THE WESTERLY LINE OF LOT 92
MAPLE (WIDTH VARIES) ROAD
AYER (49.5' WIDE)
NOTE: ON THE NORTH SIDE OF MAPLE ROAD THERE ARE OVERHEAD VERIZON CABLE LINES ON THE UTILITY POLES AS SHOWN AS WELL AS SEVERAL BURIED VERIZON CABLE LINES AND A BURIED VERIZON FIBER OPTIC LINE. INFORMATION PER MARKED UP DRAWINGS FROM VERIZON, EXACT LOCATION NOT SPECIFIED.
BENCHMARK Hydrant Top Nut Elev. 610.26'
Overhead Utility Lines (Typical)
Conc. Curb Line
Conc. Gutter
Conc. Apron
Conc. Drive
Blacktop Drive
Curb Cut Out
Stop Bar
Signal Pole
Double Yellow Stripe
Dashed White Stripe
Solid White Stripe
Solid Yellow Stripe
Solid White Edge
Solid Yellow Edge
Water Line Floats
Water Meter Pit
Phone Flag
Tel Pedestal
Tel Pedestal
Tel Pedestal



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FIGURE 6

TRIP DISTRIBUTION

PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

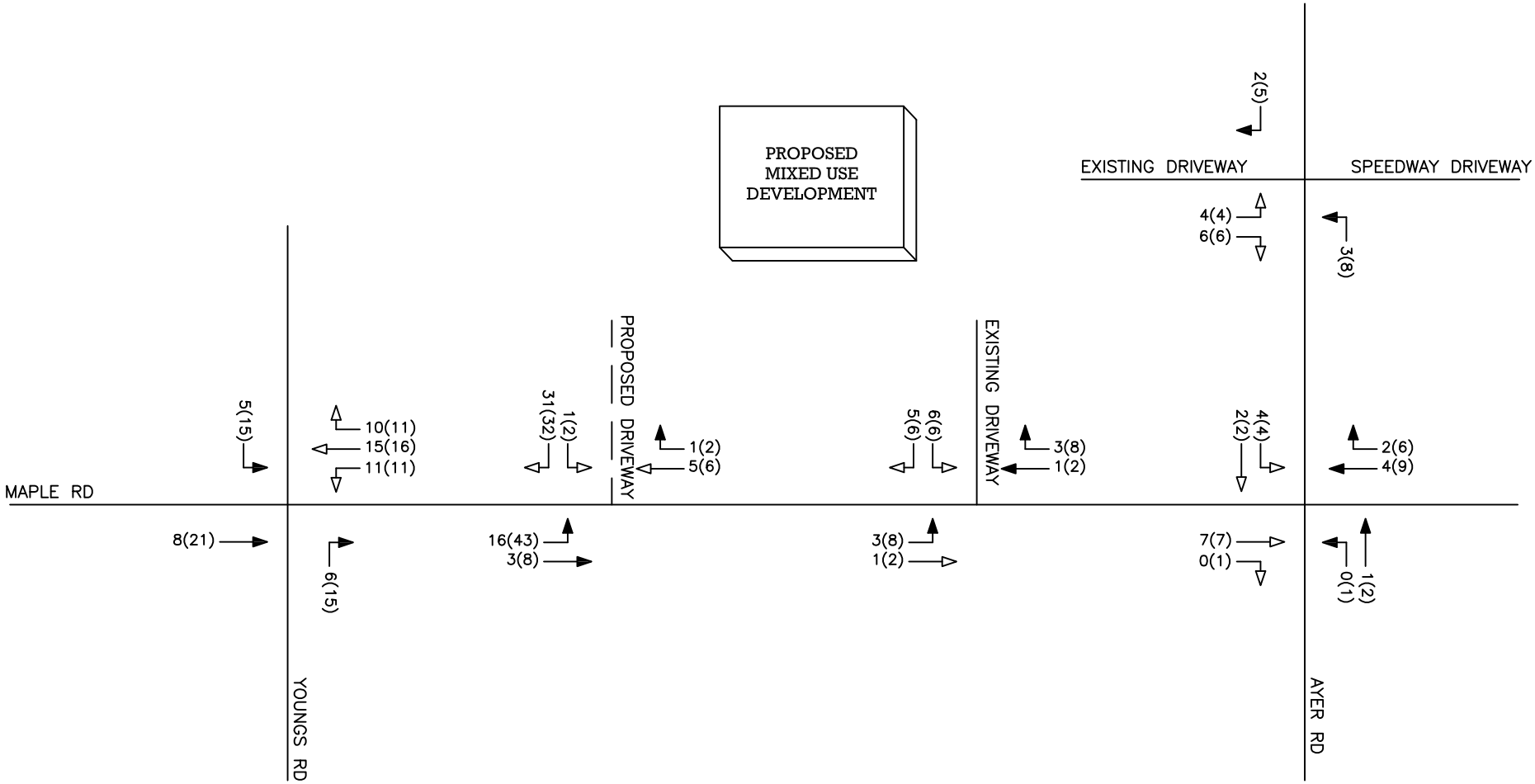
00(00) = AM(PM)

→ = ENTERING TRIPS

→ = EXITING TRIPS

PROJECT NO: 42034

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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FIGURE 7

SITE GENERATED TRIPS

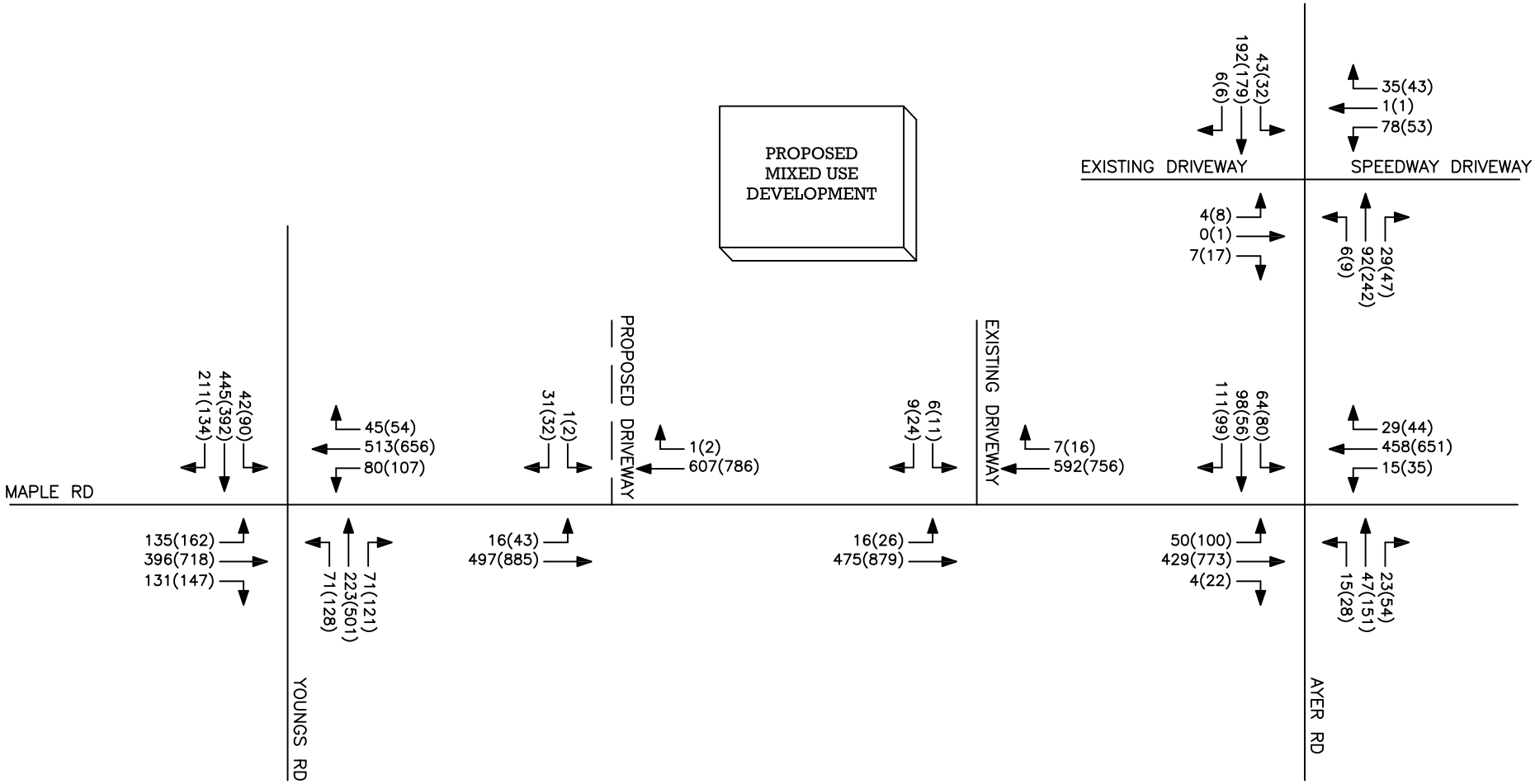
PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

00(00) = AM(PM)
→ = ENTERING TRIPS
→ = EXITING TRIPS

PROJECT NO: 42034

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



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FIGURE 8

PEAK HOUR VOLUMES
FULL DEVELOPMENT CONDITIONS

PROPOSED MIXED-USE DEVELOPMENT
TOWN OF AMHERST, NY

KEY

00(00) = AM(PM)

PROJECT NO: 42034

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

APPENDICES

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

A1

Collected Traffic Volume Data

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022
Page No: 1

Turning Movement Data

Start Time	Ayer Rd Southbound						Speedway Driveway Westbound						Ayer Rd Northbound						Pediatric & Adolescent Urgent Care of WNY Driveway Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	22	12	0	0	35	6	0	17	0	0	23	5	10	1	1	0	17	0	0	0	0	0	0	75
7:15 AM	0	40	14	0	0	54	11	0	17	0	0	28	8	30	0	0	2	38	0	0	0	0	0	0	120
7:30 AM	1	50	14	0	0	65	10	0	18	0	0	28	7	18	2	0	0	27	0	0	0	0	0	0	120
7:45 AM	1	55	7	0	0	63	8	0	20	0	0	28	8	25	0	1	0	34	0	0	0	0	0	0	125
Hourly Total	3	167	47	0	0	217	35	0	72	0	0	107	28	83	3	2	2	116	0	0	0	0	0	0	440
8:00 AM	1	52	9	0	0	62	6	1	19	0	0	26	4	22	0	2	0	28	0	0	0	0	0	0	116
8:15 AM	1	31	12	0	0	44	10	0	19	0	0	29	9	25	1	0	0	35	1	0	0	0	0	1	109
8:30 AM	0	47	16	0	1	63	10	0	20	0	1	30	5	21	0	0	0	26	0	0	0	0	0	0	119
8:45 AM	3	36	9	0	0	48	12	1	18	0	0	31	2	24	0	0	1	26	0	0	0	0	0	0	105
Hourly Total	5	166	46	0	1	217	38	2	76	0	1	116	20	92	1	2	1	115	1	0	0	0	0	1	449
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	40	4	0	0	45	7	0	5	0	1	12	7	51	1	0	0	59	1	0	3	0	0	4	120
4:15 PM	0	20	5	0	0	25	15	0	8	0	0	23	10	54	0	0	0	64	1	1	0	0	0	2	114
4:30 PM	0	34	9	0	0	43	8	1	12	0	0	21	9	51	1	2	0	63	4	1	3	0	0	8	135
4:45 PM	1	39	6	0	0	46	9	0	12	0	0	21	9	43	0	0	0	52	2	0	0	0	0	2	121
Hourly Total	2	133	24	0	0	159	39	1	37	0	1	77	35	199	2	2	0	238	8	2	6	0	0	16	490
5:00 PM	0	39	4	0	0	43	10	0	11	0	0	21	15	64	0	0	0	79	2	0	0	0	0	2	145
5:15 PM	0	41	8	0	0	49	10	0	10	0	0	20	7	48	0	0	0	55	1	0	0	0	0	1	125
5:30 PM	0	23	6	0	0	29	9	0	9	0	0	18	7	53	0	0	0	60	0	2	0	0	0	2	109
5:45 PM	0	24	7	0	0	31	9	0	15	0	0	24	10	35	0	0	0	45	1	0	1	0	0	2	102
Hourly Total	0	127	25	0	0	152	38	0	45	0	0	83	39	200	0	0	0	239	4	2	1	0	0	7	481
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	10	593	142	0	1	745	150	3	230	0	2	383	122	574	6	6	3	708	13	4	7	0	0	24	1860
Approach %	1.3	79.6	19.1	0.0	-	-	39.2	0.8	60.1	0.0	-	-	17.2	81.1	0.8	0.8	-	-	54.2	16.7	29.2	0.0	-	-	-
Total %	0.5	31.9	7.6	0.0	-	40.1	8.1	0.2	12.4	0.0	-	20.6	6.6	30.9	0.3	0.3	-	38.1	0.7	0.2	0.4	0.0	-	1.3	-
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	10	570	141	0	-	721	149	3	228	0	-	380	121	564	6	6	-	697	13	4	7	0	-	24	1822
% Cars & Light Goods	100.0	96.1	99.3	-	-	96.8	99.3	100.0	99.1	-	-	99.2	99.2	98.3	100.0	100.0	-	98.4	100.0	100.0	100.0	-	-	100.0	98.0
Other Vehicles	0	23	1	0	-	24	1	0	2	0	-	3	1	10	0	0	-	11	0	0	0	0	-	0	38
% Other Vehicles	0.0	3.9	0.7	-	-	3.2	0.7	0.0	0.9	-	-	0.8	0.8	1.7	0.0	0.0	-	1.6	0.0	0.0	0.0	-	-	0.0	2.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-	-	-	-	33.3	-	-	-	-	-	-	-	-

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-	-	-	-	66.7	-	-	-	-	-	-	-	-

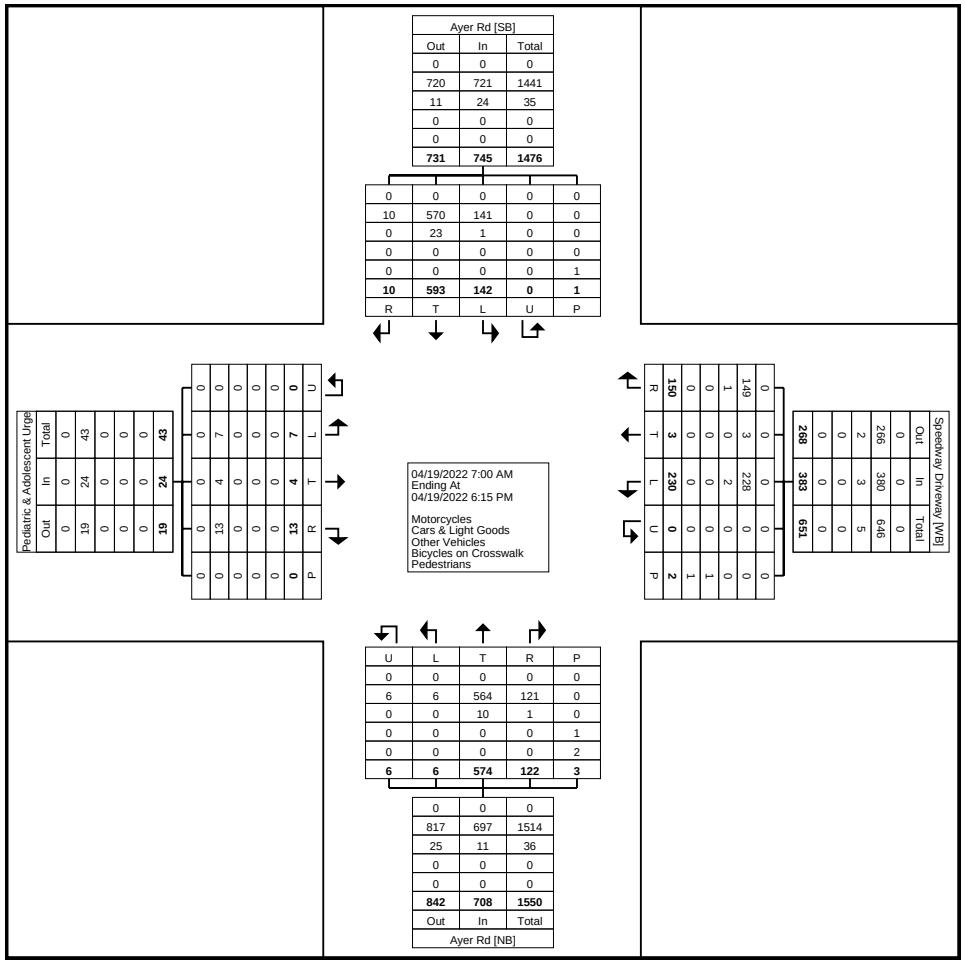
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022



Turning Movement Data Plot

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Ayer Rd Southbound						Speedway Driveway Westbound						Ayer Rd Northbound						Pediatric & Adolescent Urgent Care of WNY Driveway Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:15 AM	0	40	14	0	0	54	11	0	17	0	0	28	8	30	0	0	2	38	0	0	0	0	0	0	120
7:30 AM	1	50	14	0	0	65	10	0	18	0	0	28	7	18	2	0	0	27	0	0	0	0	0	0	120
7:45 AM	1	55	7	0	0	63	8	0	20	0	0	28	8	25	0	1	0	34	0	0	0	0	0	0	125
8:00 AM	1	52	9	0	0	62	6	1	19	0	0	26	4	22	0	2	0	28	0	0	0	0	0	0	116
Total	3	197	44	0	0	244	35	1	74	0	0	110	27	95	2	3	2	127	0	0	0	0	0	0	481
Approach %	1.2	80.7	18.0	0.0	-	-	31.8	0.9	67.3	0.0	-	-	21.3	74.8	1.6	2.4	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.6	41.0	9.1	0.0	-	50.7	7.3	0.2	15.4	0.0	-	22.9	5.6	19.8	0.4	0.6	-	26.4	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.750	0.895	0.786	0.000	-	0.938	0.795	0.250	0.925	0.000	-	0.982	0.844	0.792	0.250	0.375	-	0.836	0.000	0.000	0.000	0.000	-	0.000	0.962
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	0.0
Cars & Light Goods	3	194	44	0	-	241	35	1	74	0	-	110	26	93	2	3	-	124	0	0	0	0	-	0	475
% Cars & Light Goods	100.0	98.5	100.0	-	-	98.8	100.0	100.0	100.0	-	-	100.0	96.3	97.9	100.0	100.0	-	97.6	-	-	-	-	-	-	98.8
Other Vehicles	0	3	0	0	-	3	0	0	0	0	-	0	1	2	0	0	-	3	0	0	0	0	-	0	6
% Other Vehicles	0.0	1.5	0.0	-	-	1.2	0.0	0.0	0.0	-	-	0.0	3.7	2.1	0.0	0.0	-	2.4	-	-	-	-	-	-	1.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

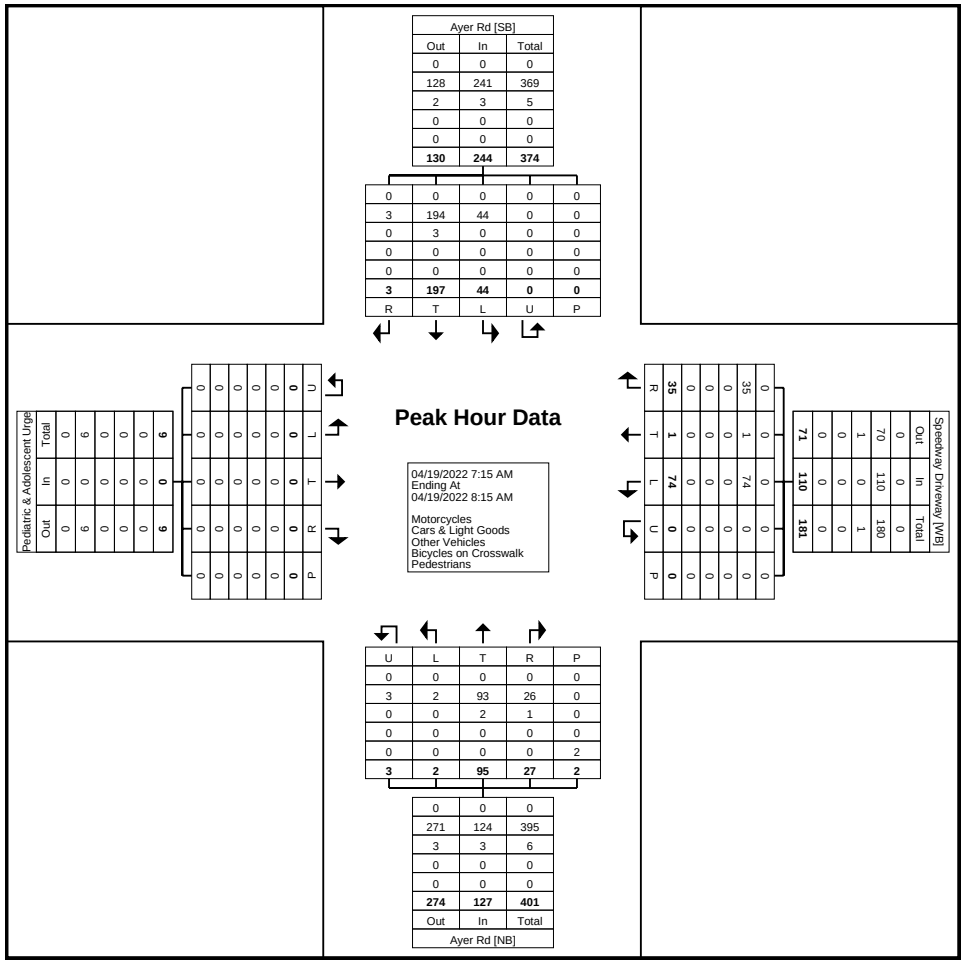
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Ayer Rd Southbound						Speedway Driveway Westbound						Ayer Rd Northbound						Pediatric & Adolescent Urgent Care of WNY Driveway Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:30 PM	0	34	9	0	0	43	8	1	12	0	0	21	9	51	1	2	0	63	4	1	3	0	0	8	135
4:45 PM	1	39	6	0	0	46	9	0	12	0	0	21	9	43	0	0	0	52	2	0	0	0	0	2	121
5:00 PM	0	39	4	0	0	43	10	0	11	0	0	21	15	64	0	0	0	79	2	0	0	0	0	2	145
5:15 PM	0	41	8	0	0	49	10	0	10	0	0	20	7	48	0	0	0	55	1	0	0	0	0	1	125
Total	1	153	27	0	0	181	37	1	45	0	0	83	40	206	1	2	0	249	9	1	3	0	0	13	526
Approach %	0.6	84.5	14.9	0.0	-	-	44.6	1.2	54.2	0.0	-	-	16.1	82.7	0.4	0.8	-	-	69.2	7.7	23.1	0.0	-	-	-
Total %	0.2	29.1	5.1	0.0	-	34.4	7.0	0.2	8.6	0.0	-	15.8	7.6	39.2	0.2	0.4	-	47.3	1.7	0.2	0.6	0.0	-	2.5	-
PHF	0.250	0.933	0.750	0.000	-	0.923	0.925	0.250	0.938	0.000	-	0.988	0.667	0.805	0.250	0.250	-	0.788	0.563	0.250	0.250	0.000	-	0.406	0.907
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	1	153	26	0	-	180	37	1	45	0	-	83	40	203	1	2	-	246	9	1	3	0	-	13	522
% Cars & Light Goods	100.0	100.0	96.3	-	-	99.4	100.0	100.0	100.0	-	-	100.0	100.0	98.5	100.0	100.0	-	98.8	100.0	100.0	100.0	-	-	100.0	99.2
Other Vehicles	0	0	1	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	4
% Other Vehicles	0.0	0.0	3.7	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.0	1.5	0.0	0.0	-	1.2	0.0	0.0	0.0	-	-	0.0	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

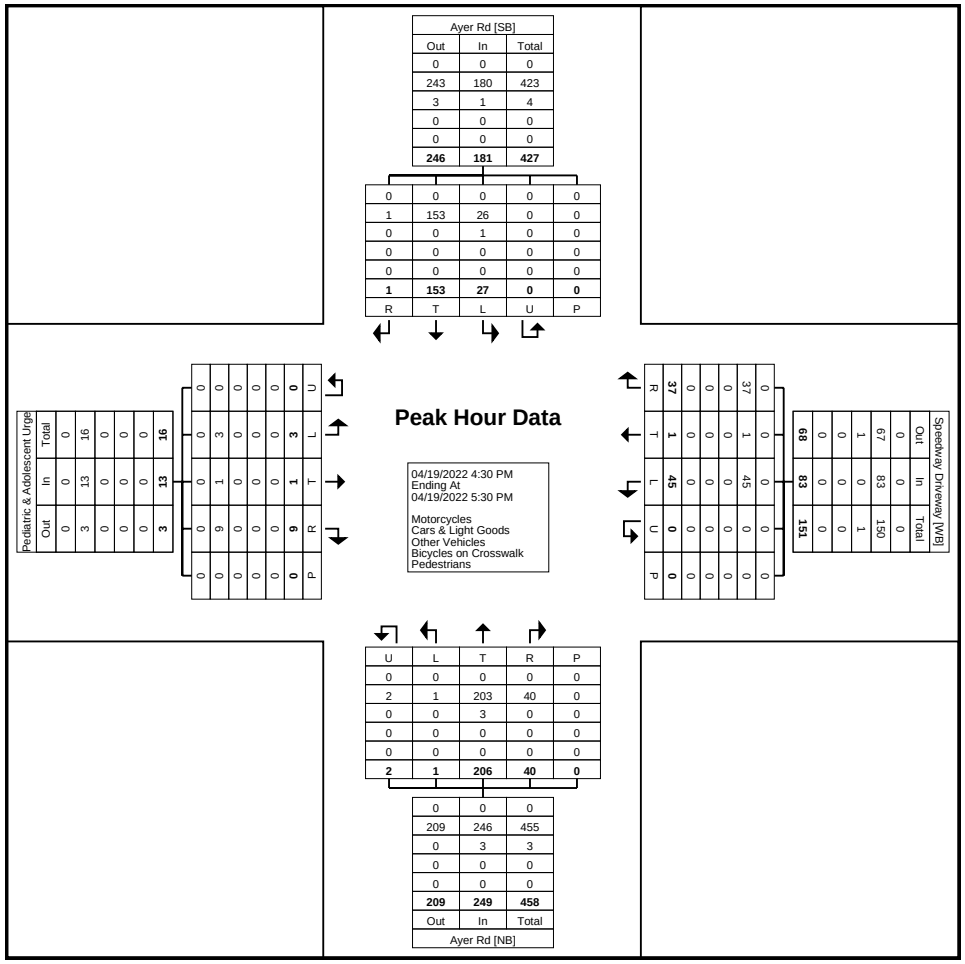
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 22, 2022

Count Name: Ayer Rd & Maple Rd & Pediatric & Adolescent Urgent Care of WNY Driveway
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022
Page No: 1

Turning Movement Data

Start Time	Ayer Rd Southbound							Maple Rd Westbound							Ayer Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	5	8	20	5	0	0	38	5	0	59	4	0	0	68	0	3	4	4	0	0	11	1	2	46	8	0	0	57	174
7:15 AM	12	16	26	5	0	0	59	4	0	75	5	0	0	84	4	2	13	2	0	0	21	2	2	87	20	0	0	111	275
7:30 AM	25	10	19	10	0	0	64	10	0	104	1	0	0	115	2	2	12	3	0	0	19	2	0	88	4	0	0	94	292
7:45 AM	15	12	26	22	0	0	75	3	1	139	8	0	0	151	3	3	10	7	0	0	23	0	0	112	18	0	0	130	379
Hourly Total	57	46	91	42	0	0	236	22	1	377	18	0	0	418	9	10	39	16	0	0	74	5	4	333	50	0	0	392	1120
8:00 AM	17	12	27	17	0	0	73	2	2	97	4	0	0	105	1	6	8	4	0	0	19	1	0	114	14	0	0	129	326
8:15 AM	10	8	22	10	0	1	50	6	2	105	2	0	0	115	4	2	15	1	0	0	22	1	0	100	13	0	0	114	301
8:30 AM	14	8	26	19	0	2	67	4	0	98	5	0	1	107	0	2	7	1	0	1	10	2	0	100	16	0	0	118	302
8:45 AM	15	7	21	13	0	0	56	4	1	87	5	0	0	97	5	2	10	6	0	0	23	2	1	135	11	0	0	149	325
Hourly Total	56	35	96	59	0	3	246	16	5	387	16	0	1	424	10	12	40	12	0	1	74	6	1	449	54	0	0	510	1254
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	15	6	14	11	0	0	46	6	3	128	8	0	0	145	8	2	27	4	0	0	41	0	0	173	24	0	0	197	429
4:15 PM	5	3	11	12	0	1	31	9	1	126	7	0	0	143	9	2	38	1	0	0	50	2	1	181	18	0	0	202	426
4:30 PM	7	7	13	13	0	1	40	5	1	129	9	0	0	144	4	0	37	6	0	0	47	4	1	162	18	0	0	185	416
4:45 PM	20	6	13	18	0	0	57	6	0	128	6	0	0	140	8	1	24	7	0	0	40	3	0	171	21	0	0	195	432
Hourly Total	47	22	51	54	0	2	174	26	5	511	30	0	0	572	29	5	126	18	0	0	178	9	2	687	81	0	0	779	1703
5:00 PM	11	9	9	17	0	0	46	10	4	148	7	0	0	169	17	3	40	7	0	0	67	5	2	162	24	0	0	193	475
5:15 PM	16	8	11	17	0	0	52	6	0	142	8	0	0	156	9	4	26	3	0	0	42	3	0	158	22	0	0	183	433
5:30 PM	9	7	5	9	0	0	30	3	0	136	7	0	0	146	12	2	31	3	0	0	48	5	1	139	20	0	0	165	389
5:45 PM	9	14	8	8	0	0	39	6	2	117	6	0	0	131	3	5	30	0	0	0	38	1	0	166	13	0	0	180	388
Hourly Total	45	38	33	51	0	0	167	25	6	543	28	0	0	602	41	14	127	13	0	0	195	14	3	625	79	0	0	721	1685
Grand Total	205	141	271	206	0	5	823	89	17	1818	92	0	1	2016	89	41	332	59	0	1	521	34	10	2094	264	0	0	2402	5762
Approach %	24.9	17.1	32.9	25.0	0.0	-	-	4.4	0.8	90.2	4.6	0.0	-	-	17.1	7.9	63.7	11.3	0.0	-	-	1.4	0.4	87.2	11.0	0.0	-	-	-
Total %	3.6	2.4	4.7	3.6	0.0	-	14.3	1.5	0.3	31.6	1.6	0.0	-	35.0	1.5	0.7	5.8	1.0	0.0	-	9.0	0.6	0.2	36.3	4.6	0.0	-	41.7	-
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	202	141	260	196	0	-	799	85	17	1794	90	0	-	1986	85	41	330	57	0	-	513	34	10	2057	259	0	-	2360	5658
% Cars & Light Goods	98.5	100.0	95.9	95.1	-	-	97.1	95.5	100.0	98.7	97.8	-	-	98.5	95.5	100.0	99.4	96.6	-	-	98.5	100.0	100.0	98.2	98.1	-	-	98.3	98.2
Other Vehicles	3	0	11	10	0	-	24	4	0	24	2	0	-	30	4	0	2	2	0	-	8	0	0	37	5	0	-	42	104
% Other Vehicles	1.5	0.0	4.1	4.9	-	-	2.9	4.5	0.0	1.3	2.2	-	-	1.5	4.5	0.0	0.6	3.4	-	-	1.5	0.0	0.0	1.8	1.9	-	-	1.7	1.8
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

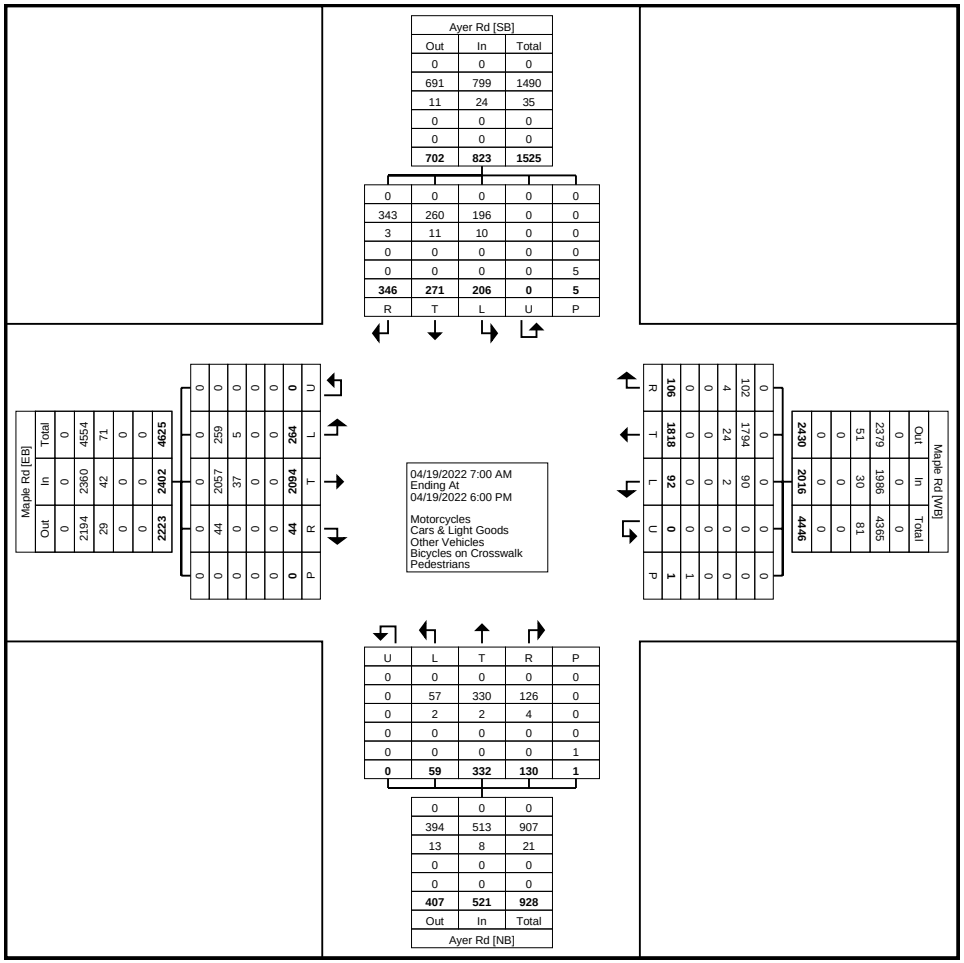
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022



Turning Movement Data Plot

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Ayer Rd Southbound							Maple Rd Westbound							Ayer Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:45 AM	15	12	26	22	0	0	75	3	1	139	8	0	0	151	3	3	10	7	0	0	23	0	0	112	18	0	0	130	379
8:00 AM	17	12	27	17	0	0	73	2	2	97	4	0	0	105	1	6	8	4	0	0	19	1	0	114	14	0	0	129	326
8:15 AM	10	8	22	10	0	1	50	6	2	105	2	0	0	115	4	2	15	1	0	0	22	1	0	100	13	0	0	114	301
8:30 AM	14	8	26	19	0	2	67	4	0	98	5	0	1	107	0	2	7	1	0	1	10	2	0	100	16	0	0	118	302
Total	56	40	101	68	0	3	265	15	5	439	19	0	1	478	8	13	40	13	0	1	74	4	0	426	61	0	0	491	1308
Approach %	21.1	15.1	38.1	25.7	0.0	-	-	3.1	1.0	91.8	4.0	0.0	-	-	10.8	17.6	54.1	17.6	0.0	-	-	0.8	0.0	86.8	12.4	0.0	-	-	-
Total %	4.3	3.1	7.7	5.2	0.0	-	20.3	1.1	0.4	33.6	1.5	0.0	-	36.5	0.6	1.0	3.1	1.0	0.0	-	5.7	0.3	0.0	32.6	4.7	0.0	-	37.5	-
PHF	0.824	0.833	0.935	0.773	0.000	-	0.883	0.625	0.625	0.790	0.594	0.000	-	0.791	0.500	0.542	0.667	0.464	0.000	-	0.804	0.500	0.000	0.934	0.847	0.000	-	0.944	0.863
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	54	40	100	66	0	-	260	14	5	430	17	0	-	466	6	13	39	11	0	-	69	4	0	405	58	0	-	467	1262
% Cars & Light Goods	96.4	100.0	99.0	97.1	-	-	98.1	93.3	100.0	97.9	89.5	-	-	97.5	75.0	100.0	97.5	84.6	-	-	93.2	100.0	-	95.1	95.1	-	-	95.1	96.5
Other Vehicles	2	0	1	2	0	-	5	1	0	9	2	0	-	12	2	0	1	2	0	-	5	0	0	21	3	0	-	24	46
% Other Vehicles	3.6	0.0	1.0	2.9	-	-	1.9	6.7	0.0	2.1	10.5	-	-	2.5	25.0	0.0	2.5	15.4	-	-	6.8	0.0	-	4.9	4.9	-	-	4.9	3.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-

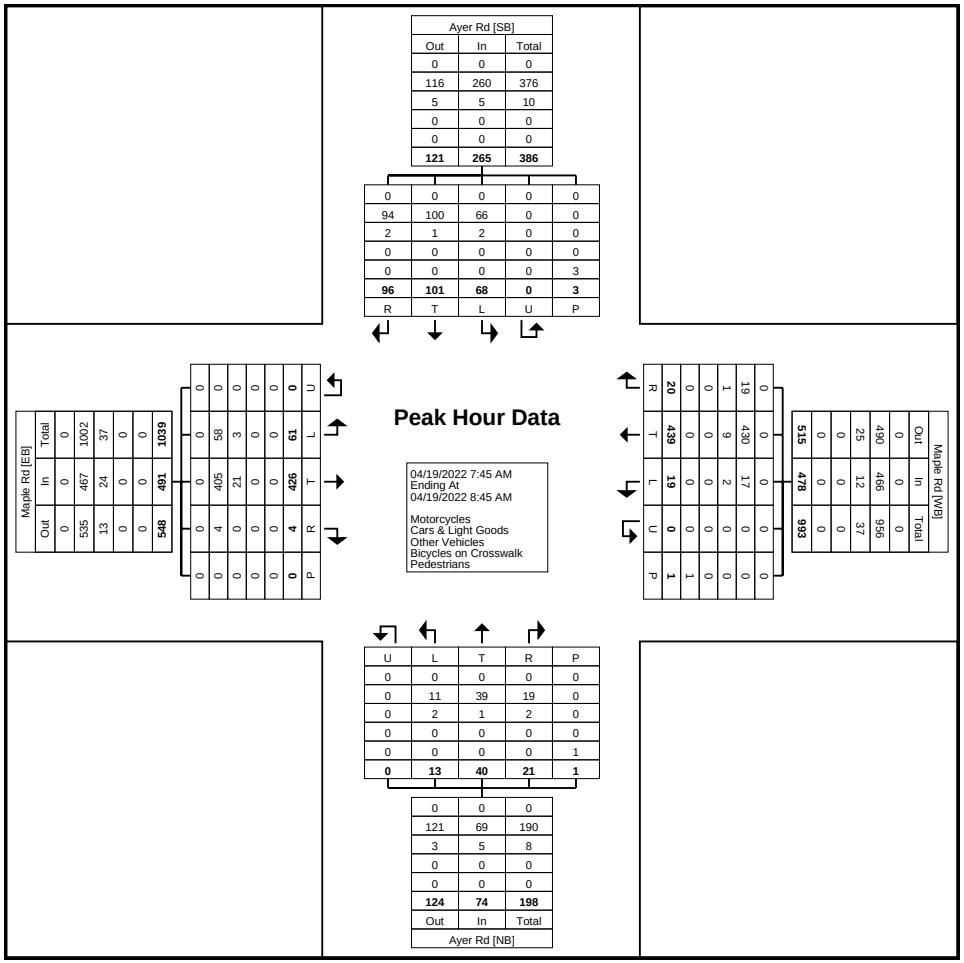
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Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (7:45 AM)

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Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Ayer Rd Southbound							Maple Rd Westbound							Ayer Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
4:30 PM	7	7	13	13	0	1	40	5	1	129	9	0	0	144	4	0	37	6	0	0	47	4	1	162	18	0	0	185	416
4:45 PM	20	6	13	18	0	0	57	6	0	128	6	0	0	140	8	1	24	7	0	0	40	3	0	171	21	0	0	195	432
5:00 PM	11	9	9	17	0	0	46	10	4	148	7	0	0	169	17	3	40	7	0	0	67	5	2	162	24	0	0	193	475
5:15 PM	16	8	11	17	0	0	52	6	0	142	8	0	0	156	9	4	26	3	0	0	42	3	0	158	22	0	0	183	433
Total	54	30	46	65	0	1	195	27	5	547	30	0	0	609	38	8	127	23	0	0	196	15	3	653	85	0	0	756	1756
Approach %	27.7	15.4	23.6	33.3	0.0	-	-	4.4	0.8	89.8	4.9	0.0	-	-	19.4	4.1	64.8	11.7	0.0	-	-	2.0	0.4	86.4	11.2	0.0	-	-	-
Total %	3.1	1.7	2.6	3.7	0.0	-	11.1	1.5	0.3	31.2	1.7	0.0	-	34.7	2.2	0.5	7.2	1.3	0.0	-	11.2	0.9	0.2	37.2	4.8	0.0	-	43.1	-
PHF	0.675	0.833	0.885	0.903	0.000	-	0.855	0.675	0.313	0.924	0.833	0.000	-	0.901	0.559	0.500	0.794	0.821	0.000	-	0.731	0.750	0.375	0.955	0.885	0.000	-	0.969	0.924
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	54	30	46	65	0	-	195	26	5	543	30	0	-	604	38	8	127	23	0	-	196	15	3	650	83	0	-	751	1746
% Cars & Light Goods	100.0	100.0	100.0	100.0	-	-	100.0	96.3	100.0	99.3	100.0	-	-	99.2	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	99.5	97.6	-	-	99.3	99.4
Other Vehicles	0	0	0	0	0	-	0	1	0	4	0	0	-	5	0	0	0	0	0	-	0	0	0	3	2	0	-	5	10
% Other Vehicles	0.0	0.0	0.0	0.0	-	-	0.0	3.7	0.0	0.7	0.0	-	-	0.8	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.5	2.4	-	-	0.7	0.6
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

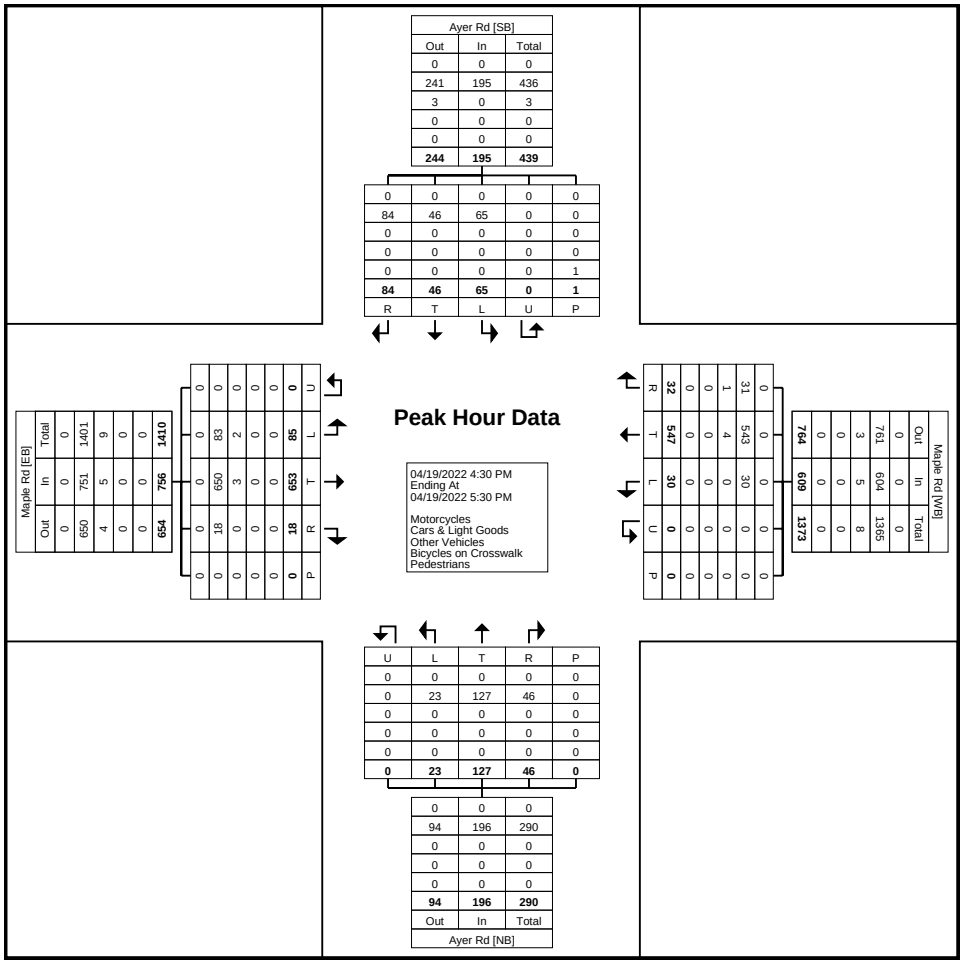
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Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Ayer Rd
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

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184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Pediatric & Adolescent Urgent Care of WNY
Site Code:
Start Date: 04/19/2022

Turning Movement Data

Start Time	Pediatric & Adolescent Urgent Care of WNY Southbound					Maple Rd Westbound					Maple Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	0	0	0	1	0	73	0	0	73	63	0	0	0	63	137
7:15 AM	0	1	0	0	1	1	104	0	0	105	108	2	0	0	110	216
7:30 AM	1	0	0	0	1	0	149	0	0	149	101	2	0	0	103	253
7:45 AM	0	0	0	0	0	1	171	0	0	172	127	2	0	0	129	301
Hourly Total	2	1	0	0	3	2	497	0	0	499	399	6	0	0	405	907
8:00 AM	1	0	0	0	1	1	132	0	0	133	120	3	0	0	123	257
8:15 AM	2	0	0	1	2	2	127	0	0	129	117	6	0	0	123	254
8:30 AM	2	0	0	0	2	0	119	0	0	119	124	0	0	0	124	245
8:45 AM	4	0	0	0	4	2	112	0	0	114	148	3	0	0	151	269
Hourly Total	9	0	0	1	9	5	490	0	0	495	509	12	0	0	521	1025
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	0	0	0	1	1	148	0	0	149	184	3	0	0	187	337
4:15 PM	3	0	0	1	3	0	144	0	0	144	216	2	0	0	218	365
4:30 PM	0	1	0	1	1	1	149	0	0	150	176	4	0	0	180	331
4:45 PM	6	1	0	0	7	4	158	0	0	162	180	4	0	0	184	353
Hourly Total	10	2	0	2	12	6	599	0	0	605	756	13	0	0	769	1386
5:00 PM	4	0	0	0	4	1	166	0	0	167	197	0	0	0	197	368
5:15 PM	5	2	0	0	7	1	170	0	0	171	195	7	0	0	202	380
5:30 PM	2	1	0	0	3	1	151	0	0	152	163	1	0	0	164	319
5:45 PM	4	0	0	0	4	2	144	0	0	146	178	3	0	0	181	331
Hourly Total	15	3	0	0	18	5	631	0	0	636	733	11	0	0	744	1398
Grand Total	36	6	0	3	42	18	2217	0	0	2235	2397	42	0	0	2439	4716
Approach %	85.7	14.3	0.0	-	-	0.8	99.2	0.0	-	-	98.3	1.7	0.0	-	-	-
Total %	0.8	0.1	0.0	-	0.9	0.4	47.0	0.0	-	47.4	50.8	0.9	0.0	-	51.7	-
Motorcycles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	36	6	0	-	42	18	2187	0	-	2205	2351	42	0	-	2393	4640
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	98.6	-	-	98.7	98.1	100.0	-	-	98.1	98.4
Other Vehicles	0	0	0	-	0	0	30	0	-	30	46	0	0	-	46	76
% Other Vehicles	0.0	0.0	-	-	0.0	0.0	1.4	-	-	1.3	1.9	0.0	-	-	1.9	1.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	3	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

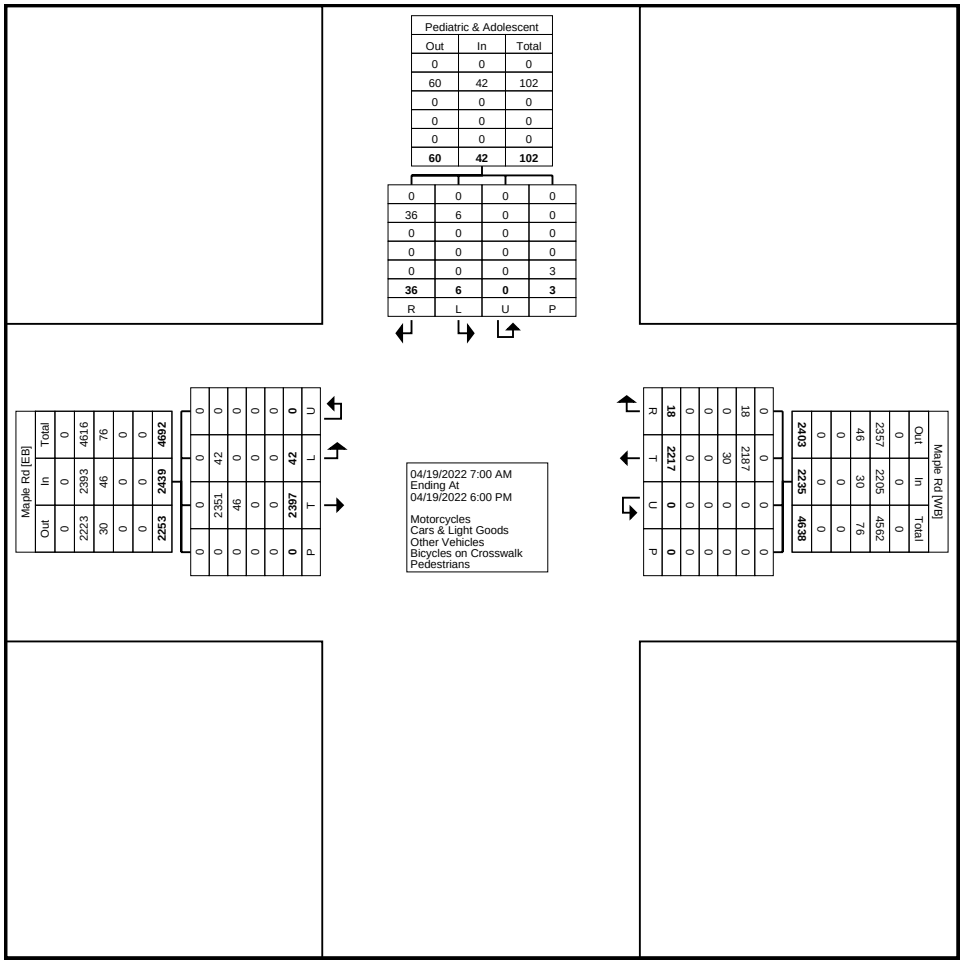
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Amherst, New York
April 19, 2022

Count Name: Maple Rd & Pediatric & Adolescent Urgent Care of WNY
Site Code:
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Turning Movement Data Plot

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Turning Movement Peak Hour Data (7:30 AM)

Start Time	Pediatric & Adolescent Urgent Care of WNY Southbound					Maple Rd Westbound					Maple Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:30 AM	1	0	0	0	1	0	149	0	0	149	101	2	0	0	103	253
7:45 AM	0	0	0	0	0	1	171	0	0	172	127	2	0	0	129	301
8:00 AM	1	0	0	0	1	1	132	0	0	133	120	3	0	0	123	257
8:15 AM	2	0	0	1	2	2	127	0	0	129	117	6	0	0	123	254
Total	4	0	0	1	4	4	579	0	0	583	465	13	0	0	478	1065
Approach %	100.0	0.0	0.0	-	-	0.7	99.3	0.0	-	-	97.3	2.7	0.0	-	-	-
Total %	0.4	0.0	0.0	-	0.4	0.4	54.4	0.0	-	54.7	43.7	1.2	0.0	-	44.9	-
PHF	0.500	0.000	0.000	-	0.500	0.500	0.846	0.000	-	0.847	0.915	0.542	0.000	-	0.926	0.885
Motorcycles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Motorcycles	0.0	-	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	4	0	0	-	4	4	565	0	-	569	444	13	0	-	457	1030
% Cars & Light Goods	100.0	-	-	-	100.0	100.0	97.6	-	-	97.6	95.5	100.0	-	-	95.6	96.7
Other Vehicles	0	0	0	-	0	0	14	0	-	14	21	0	0	-	21	35
% Other Vehicles	0.0	-	-	-	0.0	0.0	2.4	-	-	2.4	4.5	0.0	-	-	4.4	3.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

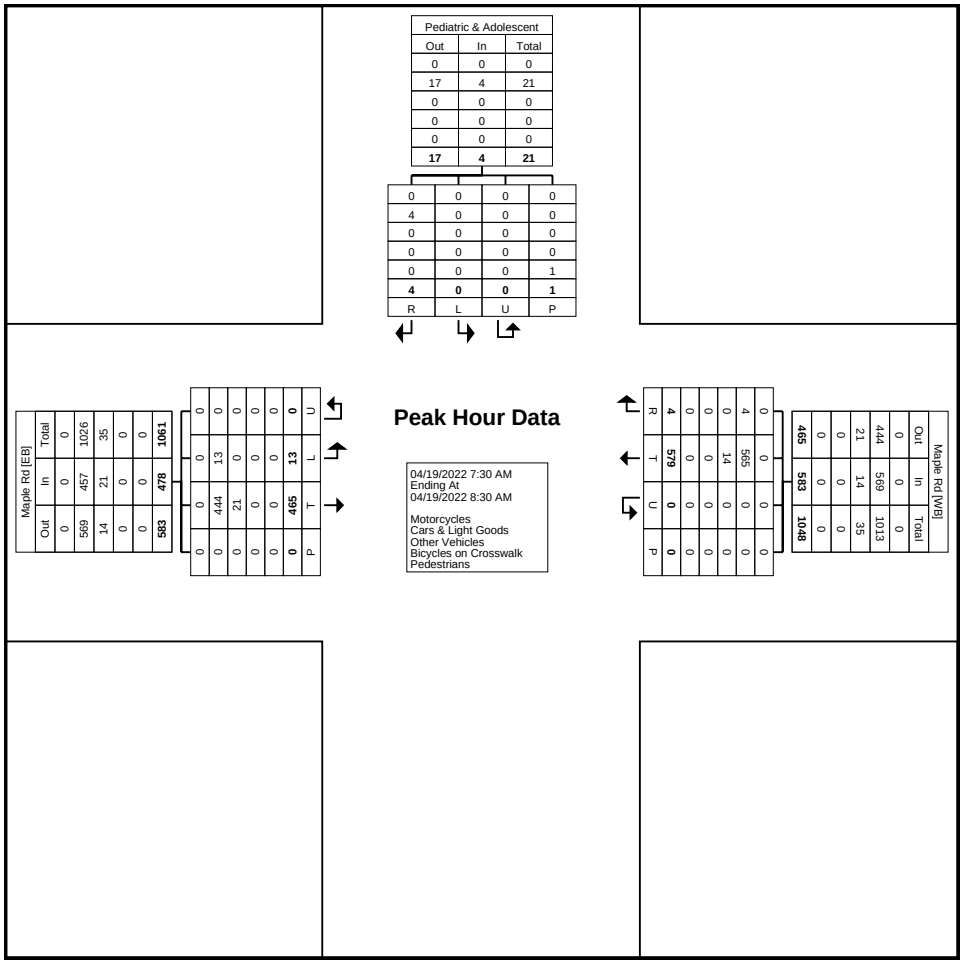
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April 19, 2022

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Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Pediatric & Adolescent Urgent Care of WNY Southbound					Maple Rd Westbound					Maple Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:30 PM	0	1	0	1	1	1	149	0	0	150	176	4	0	0	180	331
4:45 PM	6	1	0	0	7	4	158	0	0	162	180	4	0	0	184	353
5:00 PM	4	0	0	0	4	1	166	0	0	167	197	0	0	0	197	368
5:15 PM	5	2	0	0	7	1	170	0	0	171	195	7	0	0	202	380
Total	15	4	0	1	19	7	643	0	0	650	748	15	0	0	763	1432
Approach %	78.9	21.1	0.0	-	-	1.1	98.9	0.0	-	-	98.0	2.0	0.0	-	-	-
Total %	1.0	0.3	0.0	-	1.3	0.5	44.9	0.0	-	45.4	52.2	1.0	0.0	-	53.3	-
PHF	0.625	0.500	0.000	-	0.679	0.438	0.946	0.000	-	0.950	0.949	0.536	0.000	-	0.944	0.942
Motorcycles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	15	4	0	-	19	7	640	0	-	647	744	15	0	-	759	1425
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	99.5	-	-	99.5	99.5	100.0	-	-	99.5	99.5
Other Vehicles	0	0	0	-	0	0	3	0	-	3	4	0	0	-	4	7
% Other Vehicles	0.0	0.0	-	-	0.0	0.0	0.5	-	-	0.5	0.5	0.0	-	-	0.5	0.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

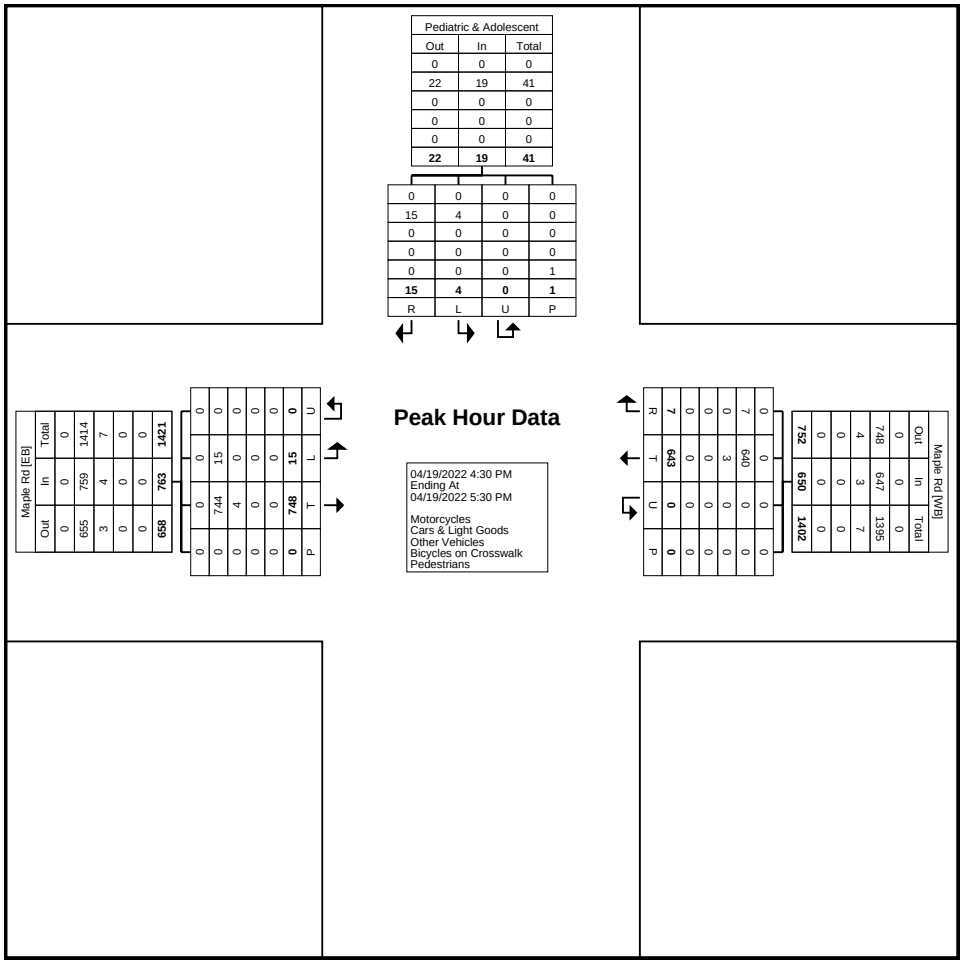
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Pediatric & Adolescent Urgent Care of WNY
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
Site Code:
Start Date: 04/19/2022
Page No: 1

Turning Movement Data

Start Time	Youngs Rd Southbound							Maple Rd Westbound							Youngs Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	12	7	75	2	0	0	96	6	1	64	11	0	0	82	9	7	50	9	0	0	75	13	1	55	11	0	0	80	333
7:15 AM	10	14	90	8	0	0	122	6	0	81	10	0	0	97	5	1	56	17	0	0	79	34	4	89	29	0	0	156	454
7:30 AM	24	13	107	6	0	0	150	10	2	134	16	0	0	162	8	6	47	23	0	0	84	29	7	87	29	0	0	152	548
7:45 AM	51	16	113	7	0	0	187	8	1	139	19	0	0	167	14	7	61	21	0	0	103	33	2	104	36	0	0	175	632
Hourly Total	97	50	385	23	0	0	555	30	4	418	56	0	0	508	36	21	214	70	0	0	341	109	14	335	105	0	0	563	1967
8:00 AM	59	18	102	15	0	0	194	6	1	110	12	0	0	129	16	3	54	17	0	0	90	24	3	100	38	0	0	165	578
8:15 AM	15	11	114	8	0	1	148	4	2	105	21	0	0	132	9	5	57	9	0	1	80	24	6	89	29	0	0	148	508
8:30 AM	16	16	115	17	0	0	164	12	0	89	15	0	0	116	11	7	66	24	0	0	108	26	0	90	34	0	0	150	538
8:45 AM	10	15	102	20	0	0	147	7	0	96	16	0	0	119	16	8	61	20	0	1	105	17	7	96	19	0	0	139	510
Hourly Total	100	60	433	60	0	1	653	29	3	400	64	0	0	496	52	23	238	70	0	2	383	91	16	375	120	0	0	602	2134
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	22	10	80	22	0	0	134	7	1	114	18	0	0	140	18	8	114	25	0	0	165	32	4	148	36	0	0	220	659
4:15 PM	12	16	81	14	0	0	123	3	1	138	14	0	0	156	20	5	89	28	0	0	142	33	1	166	44	0	0	244	665
4:30 PM	21	10	99	20	0	0	150	6	0	117	16	0	0	139	19	2	105	23	0	0	149	26	4	130	33	0	0	193	631
4:45 PM	21	12	77	17	0	0	127	16	0	137	23	0	0	176	13	9	102	25	0	0	149	34	1	173	40	0	0	248	700
Hourly Total	76	48	337	73	0	0	534	32	2	506	71	0	0	611	70	24	410	101	0	0	605	125	10	617	153	0	0	905	2655
5:00 PM	23	6	78	14	0	0	121	3	2	144	21	0	0	170	15	7	112	29	0	0	163	21	7	147	26	0	0	201	655
5:15 PM	13	8	80	13	0	0	114	10	0	148	22	0	0	180	10	15	108	32	0	0	165	28	4	144	39	0	0	215	674
5:30 PM	16	6	60	14	0	0	96	12	2	120	17	0	0	151	10	10	106	19	0	0	145	18	3	131	24	0	0	176	568
5:45 PM	12	6	69	14	0	0	101	8	2	117	15	0	0	142	19	5	99	25	0	0	148	24	5	146	22	0	0	197	588
Hourly Total	64	26	287	55	0	0	432	33	6	529	75	0	0	643	54	37	425	105	0	0	621	91	19	568	111	0	0	789	2485
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	337	184	1442	211	0	1	2174	124	15	1853	266	0	0	2258	212	105	1287	346	0	2	1950	416	59	1895	489	0	0	2859	9241
Approach %	15.5	8.5	66.3	9.7	0.0	-	-	5.5	0.7	82.1	11.8	0.0	-	-	10.9	5.4	66.0	17.7	0.0	-	-	14.6	2.1	66.3	17.1	0.0	-	-	-
Total %	3.6	2.0	15.6	2.3	0.0	-	23.5	1.3	0.2	20.1	2.9	0.0	-	24.4	2.3	1.1	13.9	3.7	0.0	-	21.1	4.5	0.6	20.5	5.3	0.0	-	30.9	-
Motorcycles	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.1	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	327	184	1411	207	0	-	2129	123	15	1828	264	0	-	2230	202	104	1264	341	0	-	1911	410	59	1867	477	0	-	2813	9083
% Cars & Light Goods	97.0	100.0	97.9	98.1	-	-	97.9	99.2	100.0	98.7	99.2	-	-	98.8	95.3	99.0	98.2	98.6	-	-	98.0	98.6	100.0	98.5	97.5	-	-	98.4	98.3
Other Vehicles	10	0	31	4	0	-	45	1	0	24	2	0	-	27	10	1	23	5	0	-	39	6	0	28	12	0	-	46	157
% Other Vehicles	3.0	0.0	2.1	1.9	-	-	2.1	0.8	0.0	1.3	0.8	-	-	1.2	4.7	1.0	1.8	1.4	-	-	2.0	1.4	0.0	1.5	2.5	-	-	1.6	1.7

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-

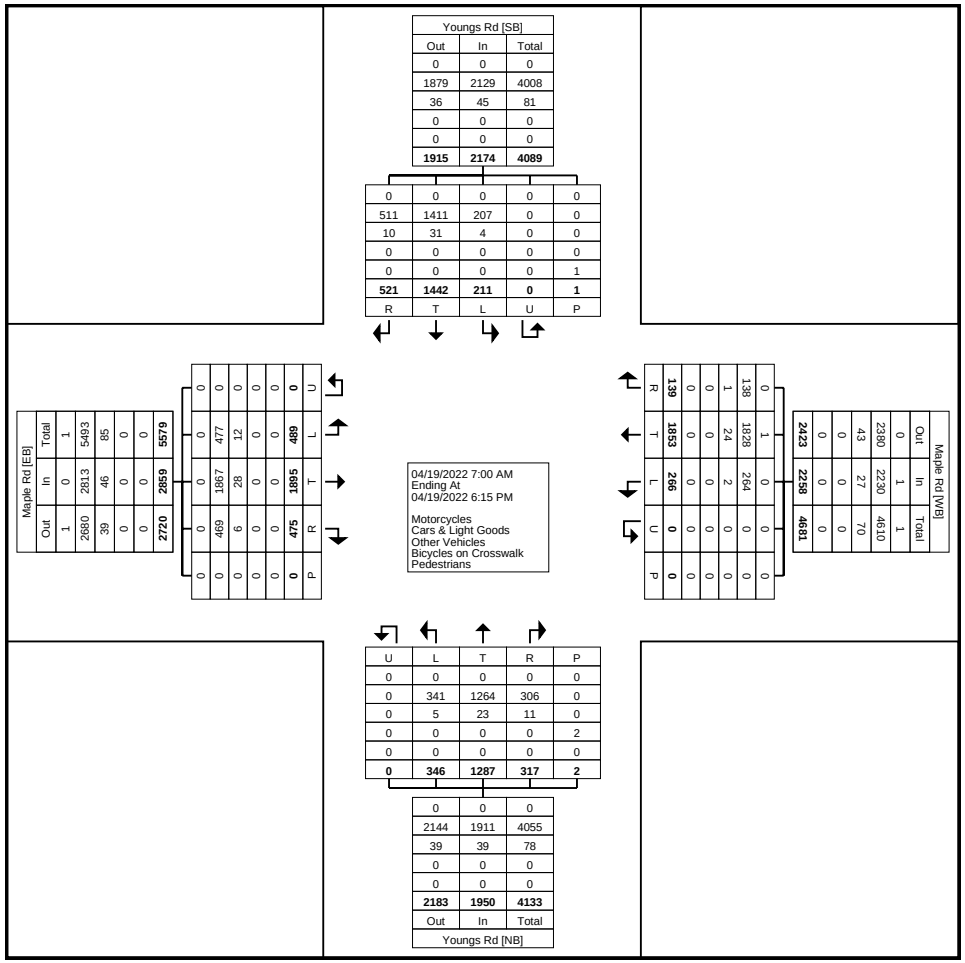
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Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
Site Code:
Start Date: 04/19/2022



Turning Movement Data Plot

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Youngs Rd Southbound							Maple Rd Westbound							Youngs Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	24	13	107	6	0	0	150	10	2	134	16	0	0	162	8	6	47	23	0	0	84	29	7	87	29	0	0	152	548
7:45 AM	51	16	113	7	0	0	187	8	1	139	19	0	0	167	14	7	61	21	0	0	103	33	2	104	36	0	0	175	632
8:00 AM	59	18	102	15	0	0	194	6	1	110	12	0	0	129	16	3	54	17	0	0	90	24	3	100	38	0	0	165	578
8:15 AM	15	11	114	8	0	1	148	4	2	105	21	0	0	132	9	5	57	9	0	1	80	24	6	89	29	0	0	148	508
Total	149	58	436	36	0	1	679	28	6	488	68	0	0	590	47	21	219	70	0	1	357	110	18	380	132	0	0	640	2266
Approach %	21.9	8.5	64.2	5.3	0.0	-	-	4.7	1.0	82.7	11.5	0.0	-	-	13.2	5.9	61.3	19.6	0.0	-	-	17.2	2.8	59.4	20.6	0.0	-	-	-
Total %	6.6	2.6	19.2	1.6	0.0	-	30.0	1.2	0.3	21.5	3.0	0.0	-	26.0	2.1	0.9	9.7	3.1	0.0	-	15.8	4.9	0.8	16.8	5.8	0.0	-	28.2	-
PHF	0.631	0.806	0.956	0.600	0.000	-	0.875	0.700	0.750	0.878	0.810	0.000	-	0.883	0.734	0.750	0.898	0.761	0.000	-	0.867	0.833	0.643	0.913	0.868	0.000	-	0.914	0.896
Motorcycles	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	141	58	433	33	0	-	665	28	6	476	68	0	-	578	39	21	215	68	0	-	343	108	18	370	125	0	-	621	2207
% Cars & Light Goods	94.6	100.0	99.3	91.7	-	-	97.9	100.0	100.0	97.5	100.0	-	-	98.0	83.0	100.0	98.2	97.1	-	-	96.1	98.2	100.0	97.4	94.7	-	-	97.0	97.4
Other Vehicles	8	0	3	3	0	-	14	0	0	11	0	0	-	11	8	0	4	2	0	-	14	2	0	10	7	0	-	19	58
% Other Vehicles	5.4	0.0	0.7	8.3	-	-	2.1	0.0	0.0	2.3	0.0	-	-	1.9	17.0	0.0	1.8	2.9	-	-	3.9	1.8	0.0	2.6	5.3	-	-	3.0	2.6
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-

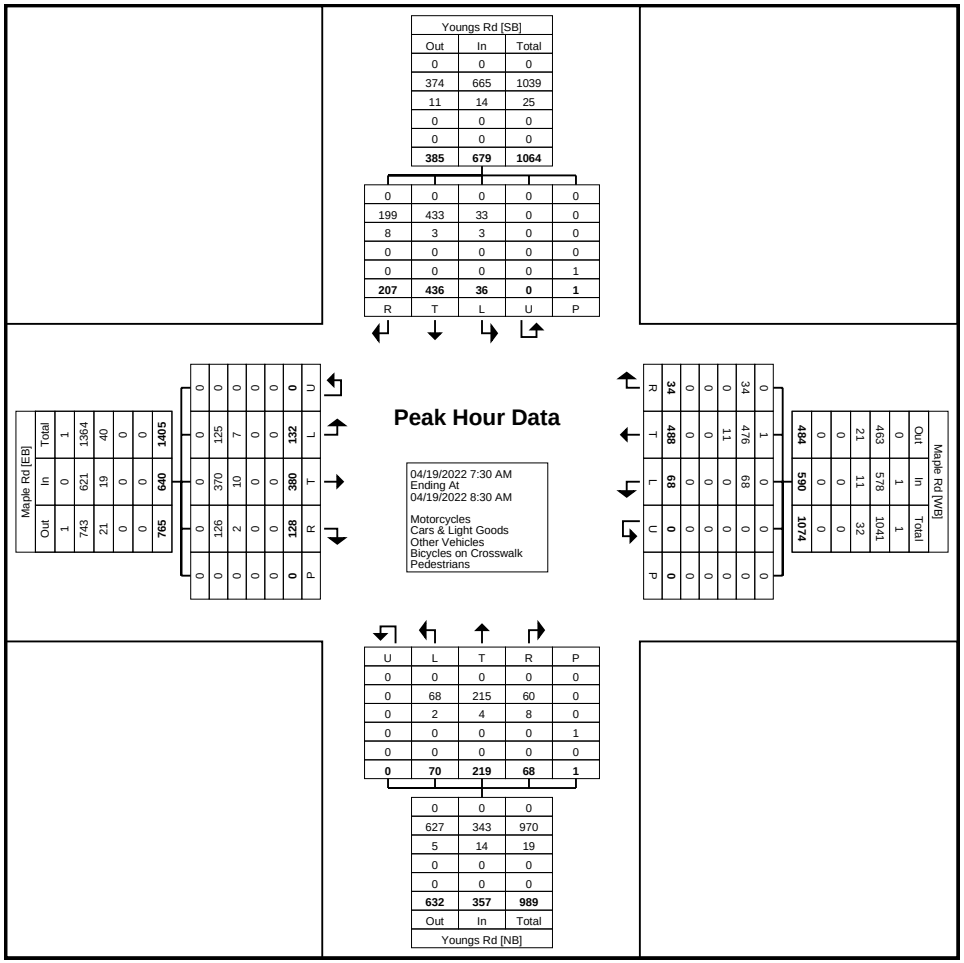
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
Site Code:
Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Tri-State Traffic Data: New York Division
184 Baker Rd

Coatesville , Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
Site Code:
Start Date: 04/19/2022

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Youngs Rd Southbound							Maple Rd Westbound							Youngs Rd Northbound							Maple Rd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
4:30 PM	21	10	99	20	0	0	150	6	0	117	16	0	0	139	19	2	105	23	0	0	149	26	4	130	33	0	0	193	631
4:45 PM	21	12	77	17	0	0	127	16	0	137	23	0	0	176	13	9	102	25	0	0	149	34	1	173	40	0	0	248	700
5:00 PM	23	6	78	14	0	0	121	3	2	144	21	0	0	170	15	7	112	29	0	0	163	21	7	147	26	0	0	201	655
5:15 PM	13	8	80	13	0	0	114	10	0	148	22	0	0	180	10	15	108	32	0	0	165	28	4	144	39	0	0	215	674
Total	78	36	334	64	0	0	512	35	2	546	82	0	0	665	57	33	427	109	0	0	626	109	16	594	138	0	0	857	2660
Approach %	15.2	7.0	65.2	12.5	0.0	-	-	5.3	0.3	82.1	12.3	0.0	-	-	9.1	5.3	68.2	17.4	0.0	-	-	12.7	1.9	69.3	16.1	0.0	-	-	-
Total %	2.9	1.4	12.6	2.4	0.0	-	19.2	1.3	0.1	20.5	3.1	0.0	-	25.0	2.1	1.2	16.1	4.1	0.0	-	23.5	4.1	0.6	22.3	5.2	0.0	-	32.2	-
PHF	0.848	0.750	0.843	0.800	0.000	-	0.853	0.547	0.250	0.922	0.891	0.000	-	0.924	0.750	0.550	0.953	0.852	0.000	-	0.948	0.801	0.571	0.858	0.863	0.000	-	0.864	0.950
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	78	36	331	64	0	-	509	35	2	544	81	0	-	662	57	33	426	109	0	-	625	109	16	589	138	0	-	852	2648
% Cars & Light Goods	100.0	100.0	99.1	100.0	-	-	99.4	100.0	100.0	99.6	98.8	-	-	99.5	100.0	100.0	99.8	100.0	-	-	99.8	100.0	100.0	99.2	100.0	-	-	99.4	99.5
Other Vehicles	0	0	3	0	0	-	3	0	0	2	1	0	-	3	0	0	1	0	0	-	1	0	0	5	0	0	-	5	12
% Other Vehicles	0.0	0.0	0.9	0.0	-	-	0.6	0.0	0.0	0.4	1.2	-	-	0.5	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.8	0.0	-	-	0.6	0.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

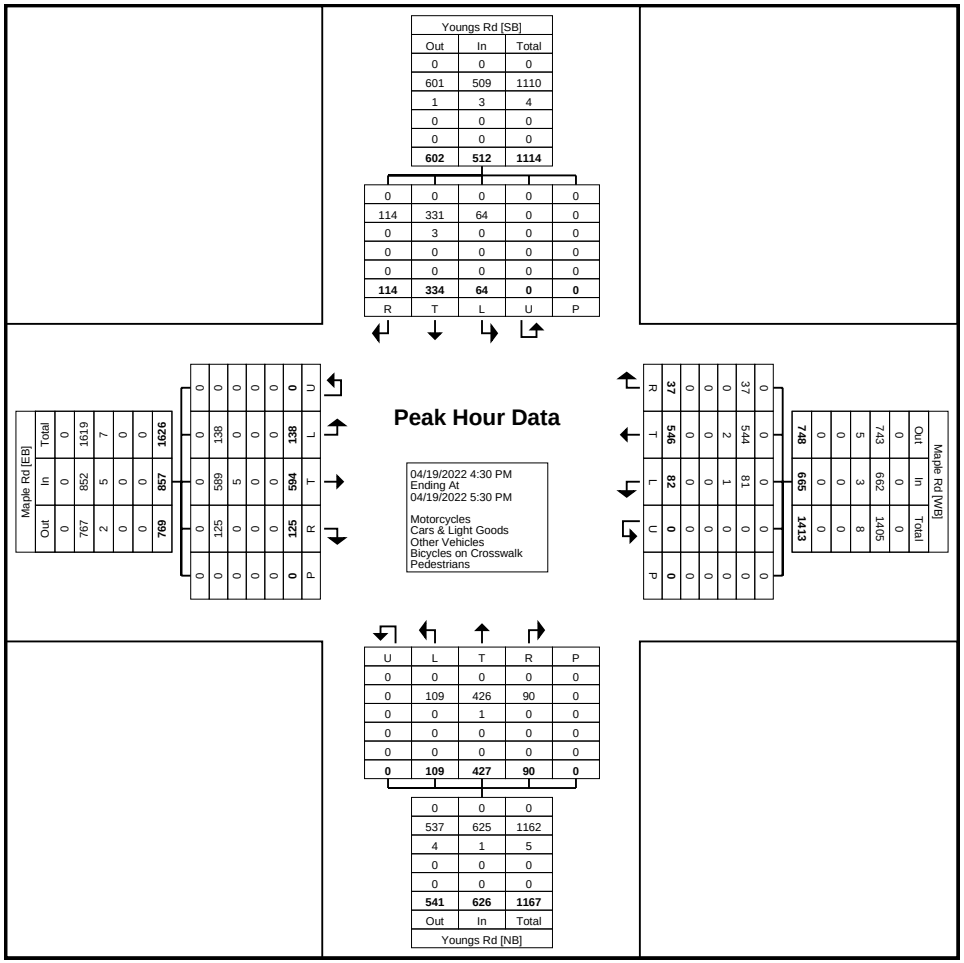
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Amherst, New York
April 19, 2022

Count Name: Maple Rd & Youngs Rd
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Start Date: 04/19/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

A2

Miscellaneous Traffic Data and Calculations

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

```
RG1 4G RG2 8G  Tue Jan-18-2022 23:46:59
MIN 25 MIN 25      1234567890ABCDEF STDBY
MAX 35 MAX 35 O/N     O   O         PAT254
              VEH   R ECC           CYC
              PED                   OFF
              OVL                   MCT
FREE    COMMD POV                   LCT
SP FO         H/O  O   O            PRE
```

2.1 PHASE TIMINGS SET 1 DR

PHASE#	1	2	3	4	5	6	7	8
MIN GRN	5	30	5	25	5	30	5	25
PASS/10	30	0	30	0	30	0	30	0
MAX 1	20	40	20	35	20	40	20	35
MAX 2	0	0	0	0	0	0	0	0
MAX 3	0	0	0	0	0	0	0	0
MAX 4	0	0	0	0	0	0	0	0

```
y=YES n=NO End=NEXT
```

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

```
RG1 4G RG2 8G  Tue Jan-18-2022 23:47:18
MIN  5 MIN  5      1234567890ABCDEF STDBY
MAX 15 MAX 15 O/N     O   O         PAT254
                VEH   R  CR         CYC
                PED                 OFF
                OVL                 MCT
FREE    COMMD   POV                 LCT
SP FO           H/O                 PRE
```

2.1 PHASE TIMINGS SET 1 UDR

PHASE#	1	2	3	4	5	6	7	8
YEL/10	32	43	32	43	32	43	32	43
RED/10	11	11	11	12	11	12	11	11
WALK	0	7	0	7	0	7	0	7
PED CLR	0	15	0	15	0	15	0	15
ADD IN/10	0	0	0	0	0	0	0	0
MAX INIT	0	0	0	0	0	0	0	0

y=YES n=NO End=NEXT

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

```
RG1 2G RG2 5G  Tue Jan-18-2022 23:47:35
MIN 25 EXT2.5      1234567890ABCDEF STDBY
MAX 40 MAX 15 O/N  O  O             PAT254
               VEH  R   C           CYC
               PED                  OFF
               OVL                  MCT
FREE   COMMD   POV                  LCT
SP FO          H/O                  PRE
```

2.1 PHASE TIMINGS SET 1 UDR

PHASE#	1	2	3	4	5	6	7	8
DM STP/10	0	0	0	0	0	0	0	0
RED RV/10	20	20	20	20	20	20	20	20
CS MIN	0	0	0	0	0	0	0	0
ALT MINGR	0	0	0	0	0	0	0	0
ALT PS/10	0	0	0	0	0	0	0	0
ALT WALK	0	0	0	0	0	0	0	0

```
          y=YES n=NO End=NEXT
```

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

```
RG1 2G RG2      Wed Jan-19-2022 00:49:51
GREEN  RED          1234567890ABCDEF STDBY
REST   REST    O/N  O                PAT254
               VEH  R                CYC
               PED                   OFF
               OVL                   MCT
FREE   COMMD   POV                   LCT
SP FO          H/O                   PRE
```

2.1 PHASE TIMINGS SET 1 DR

PHASE#	1	2	3	4	5	6	7	8
MIN GRN	0	30	0	0	0	0	0	10
PASS/10	0	0	0	0	0	0	0	30
MAX 1	0	46	0	0	0	0	0	30
MAX 2	0	0	0	0	0	0	0	0
MAX 3	0	0	0	0	0	0	0	0
MAX 4	0	0	0	0	0	0	0	0

```
y=YES n=NO End=NEXT
```

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

```
RG1 2G RG2      Wed Jan-19-2022 00:50:11
GREEN  RED          1234567890ABCDEF STDBY
REST   REST    O/N  O                PAT254
               VEH  R                CYC
               PED                   OFF
               OVL                   MCT
FREE   COMMD   POV                   LCT
SP FO          H/O                   PRE

2.1          PHASE TIMINGS SET 1          UDR
 PHASE#    1   2   3   4   5   6   7   8
YEL/10     0  43   0   0   0   0   0  36
RED/10     0  11   0   0   0   0   0  16
WALK       0   0   0   0   0   0   0   0
PED CLR    0   0   0   0   0   0   0   0
ADD IN/10  0   0   0   0   0   0   0   0
MAX INIT   0   0   0   0   0   0   0   0

              y=YES n=NO End=NEXT
```

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

```
RG1 2G RG2      Wed Jan-19-2022 00:50:26
GREEN  RED         1234567890ABCDEF STDBY
REST   REST   O/N  O                PAT254
              VEH  R                CYC
              PED                   OFF
              OVL                   MCT
FREE   COMMD  POV                   LCT
SP FO         H/O                   PRE
```

2.1 PHASE TIMINGS SET 1 UDR

PHASE#	1	2	3	4	5	6	7	8
DM STP/10	0	0	0	0	0	0	0	0
RED RV/10	20	20	20	20	20	20	20	20
CS MIN	0	0	0	0	0	0	0	0
ALT MINGR	0	0	0	0	0	0	0	0
ALT PS/10	0	0	0	0	0	0	0	0
ALT WALK	0	0	0	0	0	0	0	0

y=YES n=NO End=NEXT

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-

Proposed Mixed-Use Development, Town of Amherst, Erie County, NY

Documentation of Ambient Traffic Volume Growth

Roadway	Segment starts at	Segment end at	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Annual Growth
Maple Rd	Hopkins Rd	Transit Rd			20,358		29,673			33,906		23,305	1.95%
Youngs Rd	Maple Rd	Klein Rd	12,645			12,682				12,920			0.31%
Youngs Rd	SR324	Maple Rd		13,659			14,848			17,030			3.74%
												AVERAGE	**2.00%**

PROJECT: Proposed Mixed-Use Development
LOCATION: Town of Amherst, New York
PEAK HOUR: AM Peak

Figure Number:		3	4		6			7	8
			Num of yrs						
			1						
LOCATION NUMBER	INTERSECTION DESCRIPTION	2022 Existing Volumes	2023 Bkgd Vol 2.0%	Mixed-Use Development Enter Dist. %	Exit Dist. %	Trips IN 28	Trips OUT 53	Total Site Trips	Full Build Volumes
1	Maple Rd/ Youngs Rd								
	SR	207	211						211
	ST	436	445						445
	SL	36	37	20%		5		5	42
	WR	34	35		20%		10	10	45
	WT	488	498		28%		15	15	513
	WL	68	69		20%		11	11	80
	NR	68	69	20%		6		6	75
	NT	219	223						223
	NL	70	71						71
	ER	128	131						131
	ET	380	388	28%		8		8	396
	EL	132	135						135
2	Maple Rd/ Existing Driveway								
	SR	4	4		10%		5	5	9
	ST								
	SL				11%		6	6	6
	WR	4	4	11%		3		3	7
	WT	579	591	3%		1		1	592
	WL								
	NR								
	NT								
	NL								
	ER								
	ET	465	474		3%		1	1	475
	EL	13	13	10%		3		3	16
3	Maple Rd/ Ayer Rd								
	SR	109	111						111
	ST	94	96		3%		2	2	98
	SL	59	60		8%		4	4	64
	WR	26	27	8%		2		2	29
	WT	445	454	13%		4		4	458
	WL	15	15						15
	NR	23	23						23
	NT	45	46	3%		1		1	47
	NL	15	15	1%		0		0	15
	ER	4	4		1%				4
	ET	414	422		13%		7	7	429
	EL	49	50						50

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PROJECT: Proposed Mixed-Use Development
LOCATION: Town of Amherst, New York
PEAK HOUR: AM Peak

Figure Number:	3	4	6				7	8
		Num of yrs						
		1						

LOCATION NUMBER	INTERSECTION DESCRIPTION	2022 Existing Volumes	2023 Bkgd Vol 2.0%	Mixed-Use Development				Total Site Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 28	Trips OUT 53		
4	Ayer Rd/ Existing Driveway								
	SR	4	4	7%		2		2	6
	ST	188	192						192
	SL	42	43						43
	WR	34	35						35
	WT	1	1						1
	WL	76	78						78
	NR	28	29						29
	NT	90	92						92
	NL	3	3	11%		3		3	6
	ER	1	1		11%		6	6	7
	ET								
	EL				7%		4	4	4
5	Maple Rd/ Proposed Driveway								
	SR				58%		31	31	31
	ST								
	SL				3%		1	1	1
	WR			3%		1		1	1
	WT	590	602		10%		5	5	607
	WL								
	NR								
	NT								
	NL								
	ER								
	ET	484	494	10%		3		3	497
	EL			58%		16		16	16

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PROJECT: Proposed Mixed-Use Development
LOCATION: Town of Amherst, New York
PEAK HOUR: PM Peak

Figure Number:		3		4	6				7	8
				Num of yrs						
				1						
LOCATION NUMBER	INTERSECTION DESCRIPTION	2022 Existing Volumes	2022 Adjusted Volumes	2023 Bkgd Vol	Mixed-Use Development				Total Site Trips	Full Build Volumes
				2.0%	Enter Dist. %	Exit Dist. %	Trips IN 74	Trips OUT 56		
1	Maple Rd/ Youngs Rd		1.15							
	SR	114	131	134						134
	ST	334	384	392						392
	SL	64	74	75	20%		15		15	90
	WR	37	43	43		20%		11	11	54
	WT	546	628	640		28%		16	16	656
	WL	82	94	96		20%		11	11	107
	NR	90	104	106	20%		15		15	121
	NT	427	491	501						501
	NL	109	125	128						128
	ER	125	144	147						147
	ET	594	683	697	28%		21		21	718
	EL	138	159	162						162
2	Maple Rd/ Existing Driveway									
	SR	15	17	18		10%		6	6	24
	ST									
	SL	4	5	5		11%		6	6	11
	WR	7	8	8	11%		8		8	16
	WT	643	739	754	3%		2		2	756
	WL									
	NR									
	NT									
	NL									
	ER									
	ET	748	860	877		3%		2	2	879
	EL	15	17	18	10%		8		8	26
3	Maple Rd/ Ayer Rd									
	SR	84	97	99						99
	ST	46	53	54		3%		2	2	56
	SL	65	75	76		8%		4	4	80
	WR	32	37	38	8%		6		6	44
	WT	547	629	642	13%		9		9	651
	WL	30	35	35						35
	NR	46	53	54						54
	NT	127	146	149	3%		2		2	151
	NL	23	26	27	1%		1		1	28
	ER	18	21	21		1%		1	1	22
	ET	653	751	766		13%		7	7	773
	EL	85	98	100						100

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PROJECT: Proposed Mixed-Use Development
LOCATION: Town of Amherst, New York
PEAK HOUR: PM Peak

Figure Number:		3		4	6				7	8
				Num of yrs						
				1						
LOCATION NUMBER	INTERSECTION DESCRIPTION	2022 Existing Volumes	2022 Adjusted Volumes	2023 Bkgd Vol	Mixed-Use Development				Total Site Trips	Full Build Volumes
				2.0%	Enter Dist. %	Exit Dist. %	Trips IN 74	Trips OUT 56		
4	Ayer Rd/ Existing Driveway									
	SR	1	1	1	7%		5		5	6
	ST	153	176	179						179
	SL	27	31	32						32
	WR	37	43	43						43
	WT	1	1	1						1
	WL	45	52	53						53
	NR	40	46	47						47
	NT	206	237	242						242
	NL	1	1	1	11%		8		8	9
	ER	9	10	11		11%		6	6	17
	ET	1	1	1						1
	EL	3	3	4		7%		4	4	8
5	Maple Rd/ Proposed Driveway									
	SR					58%		32	32	32
	ST									
	SL					3%		2	2	2
	WR				3%		2		2	2
	WT	665	765	780		10%		6	6	786
	WL									
	NR									
	NT									
	NL									
	ER									
	ET	748	860	877	10%		8		8	885
	EL				58%		43		43	43

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PROJECT DETAILS

Project Name:	Maple Rd Mixed Use	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Amy Dake	Clients Name:	
Date:	5/12/2022	ZIP/Postal Code:	
State/Province:		No. of Scenarios:	2
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	AM Peak	2	1	0		28	53	81
Scenario - 2	PM Peak	2	1	0		74	56	130

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Scenario - 1

Scenario Name: AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
822 - Strip Retail Plaza (<40k)	General Urban/Suburban	1000 Sq. Ft. GLA	7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	14	9	23
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.66Ln(X) + 1.84	60%	40%	
220 - Multifamily Housing (Low-Rise) - Not Close	General Urban/Suburban	Dwelling Units	113	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	14	44	58
Data Source: Trip Generation Manual, 11th Ed					T = 0.31(X) + 22.85	24%	76%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
822 - Strip Retail Plaza (<40k)	100	100	1	1	60	40
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	100	100	1	1	24	76

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
822 - Strip Retail Plaza (<40k)	14	9	0	0	14	9
	23		0		23	
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	14	44	0	0	14	44
	58		0		58	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
822 - Strip Retail Plaza (<40k)	14	9	23
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	14	44	58

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	28	53	81
External Vehicle Trips	28	53	81
New Vehicle Trips	28	53	81

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Scenario - 2

Scenario Name: PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
822 - Strip Retail Plaza (<40k)	General Urban/Suburban	1000 Sq. Ft. GLA	7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	30	30	60
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.71Ln(X) + 2.72	50%	50%	
220 - Multifamily Housing (Low-Rise) - Not Close	General Urban/Suburban	Dwelling Units	113	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	44	26	70
Data Source: Trip Generation Manual, 11th Ed					T = 0.43(X) + 20.55	63%	37%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
822 - Strip Retail Plaza (<40k)	100	100	1	1	50	50
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	100	100	1	1	63	37

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
822 - Strip Retail Plaza (<40k)	30	30	0	0	30	30
	60		0		60	
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	44	26	0	0	44	26
	70		0		70	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
822 - Strip Retail Plaza (<40k)	30	30	60
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	44	26	70

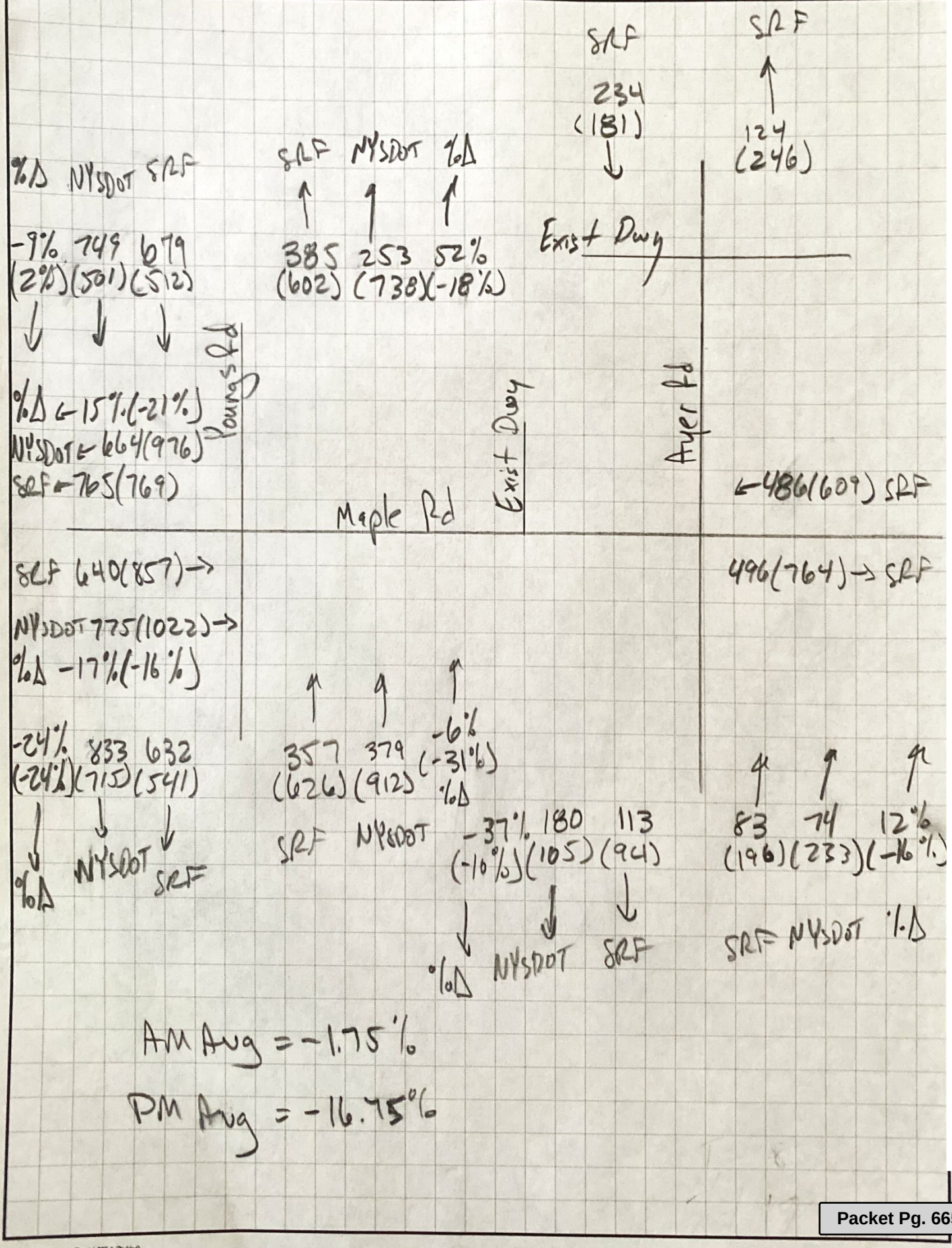
RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	74	56	130
External Vehicle Trips	74	56	130
New Vehicle Trips	74	56	130

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

SRF & Associates
Traffic Engineering & Planning Consultants
3495 Winton Place, Bldg. E-110
Rochester, NY 14623
Phone 585-272-4660 Fax 585-272-4662

JOB Maple Rd COVID Check
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____



AM Avg = -1.75%

PM Avg = -16.75%

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

PRODUCT 204-1 (Single Sheets) 205-1 (Padded)

A3

Level of Service: Criteria and Definitions

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Level of Service Criteria

Highway Capacity Manual 2016

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

A4

Level of Service Calculations: Existing Conditions

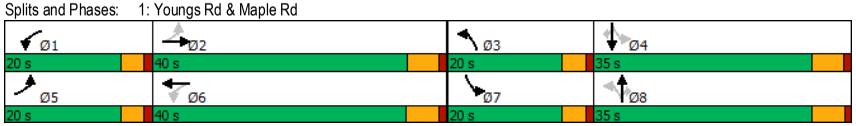
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	380	128	68	488	34	70	219	68	36	436	207
Future Volume (vph)	132	380	128	68	488	34	70	219	68	36	436	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3380	0	1805	3508	0	1752	1863	1442	1671	1881	1553
Flt Permitted	0.281			0.402			0.162			0.559		
Satd. Flow (perm)	508	3380	0	764	3508	0	299	1863	1442	983	1881	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			6				105			152
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			985			568			463	
Travel Time (s)		9.6			14.9			8.6			7.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	2%	0%	2%	0%	3%	2%	12%	8%	1%	4%
Adj. Flow (vph)	147	422	142	76	542	38	78	243	76	40	484	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	564	0	76	580	0	78	243	76	40	484	230
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	45.6	35.6		39.1	30.2		39.3	32.9	32.9	36.4	29.6	29.6
Actuated g/C Ratio	0.48	0.37		0.41	0.31		0.41	0.34	0.34	0.38	0.31	0.31
v/c Ratio	0.39	0.44		0.19	0.52		0.32	0.38	0.13	0.09	0.83	0.39
Control Delay	18.2	24.1		16.1	29.9		20.4	27.8	3.1	17.2	46.6	12.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	24.1		16.1	29.9		20.4	27.8	3.1	17.2	46.6	12.6
LOS	B	C		B	C		C	C	A	B	D	B
Approach Delay		22.8			28.3			21.6			34.7	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 95.9			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 27.6		Intersection LOS: C	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Packet Pg. 669
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	465	579	4	0	4
Future Volume (vph)	13	465	579	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999		0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1805	3438	3536	0	1644	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	3438	3536	0	1644	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		985	255		243	
Travel Time (s)		14.9	3.9		5.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	2%	0%	0%	0%
Adj. Flow (vph)	15	522	651	4	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	522	655	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	465	579	4	0	4
Future Volume (Veh/h)	13	465	579	4	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	15	522	651	4	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.93				0.96	0.93
vC, conflicting volume	655				944	328
vC1, stage 1 conf vol					653	
vC2, stage 2 conf vol					291	
vCu, unblocked vol	484				577	133
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1015				531	837

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	15	261	261	434	221	4
Volume Left	15	0	0	0	0	0
Volume Right	0	0	0	0	4	4
cSH	1015	1700	1700	1700	1700	837
Volume to Capacity	0.01	0.15	0.15	0.26	0.13	0.00
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	8.6	0.0	0.0	0.0	0.0	9.3
Lane LOS	A					A
Approach Delay (s)	0.2			0.0		9.3
Approach LOS						A

Intersection Summary				
Average Delay		0.1		
Intersection Capacity Utilization		26.1%	ICU Level of Service	A
Analysis Period (min)		15		

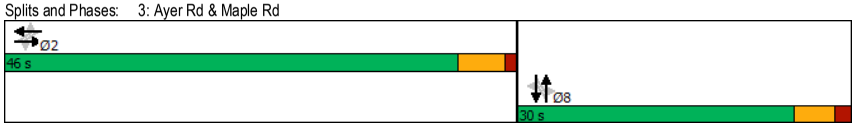
Packet Pg. 670
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	414	4	15	445	26	15	45	23	59	94	109
Future Volume (vph)	49	414	4	15	445	26	15	45	23	59	94	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.992			0.949			0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3499	0	1597	3548	0	1597	1705	0	1752	1718	0
Flt Permitted	0.448			0.475			0.563			0.706		
Satd. Flow (perm)	818	3499	0	799	3548	0	947	1705	0	1302	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			12			27			82	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	3%	0%	13%	1%	0%	13%	2%	13%	3%	0%	3%
Adj. Flow (vph)	57	481	5	17	517	30	17	52	27	69	109	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	486	0	17	547	0	17	79	0	69	236	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	30.1	30.1		30.1	30.1		11.8	11.8		11.8	11.8	
Actuated g/C Ratio	0.57	0.57		0.57	0.57		0.22	0.22		0.22	0.22	
v/c Ratio	0.12	0.24		0.04	0.27		0.08	0.20		0.24	0.53	
Control Delay	6.8	6.3		6.2	6.3		16.5	12.9		18.5	16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.8	6.3		6.2	6.3		16.5	12.9		18.5	16.0	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		6.4			6.3			13.5			16.6	
Approach LOS		A			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 52.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	76	1	34	3	90	28	42	188	4
Future Volume (vph)	0	0	1	76	1	34	3	90	28	42	188	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.959			0.969			0.998	
Flt Protected					0.967			0.999			0.991	
Satd. Flow (prot)	0	1644	0	0	1762	0	0	1787	0	0	1835	0
Flt Permitted					0.967			0.999			0.991	
Satd. Flow (perm)	0	1644	0	0	1762	0	0	1787	0	0	1835	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	3%	0%
Adj. Flow (vph)	0	0	1	81	1	36	3	96	30	45	200	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	118	0	0	129	0	0	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	76	1	34	3	90	28	42	188	4
Future Volume (Veh/h)	0	0	1	76	1	34	3	90	28	42	188	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	1	81	1	36	3	96	30	45	200	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked												
vC, conflicting volume	446	424	202	410	411	111	204			126		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446	424	202	410	411	111	204			126		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	85	100	96	100			97		
cM capacity (veh/h)	493	508	844	541	516	948	1380			1473		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	118	129	249
Volume Left	0	81	3	45
Volume Right	1	36	30	4
cSH	844	622	1380	1473
Volume to Capacity	0.00	0.19	0.00	0.03
Queue Length 95th (ft)	0	17	0	2
Control Delay (s)	9.3	12.1	0.2	1.6
Lane LOS	A	B	A	A
Approach Delay (s)	9.3	12.1	0.2	1.6
Approach LOS	A	B		

Intersection Summary					
Average Delay		3.7			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A	
Analysis Period (min)	15				

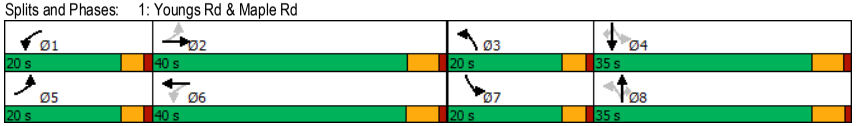
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	683	144	94	628	43	125	491	104	74	384	131
Future Volume (vph)	159	683	144	94	628	43	125	491	104	74	384	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3487	0	1787	3574	0	1805	1900	1615	1805	1881	1615
Flt Permitted	0.207			0.195			0.218			0.154		
Satd. Flow (perm)	393	3487	0	367	3574	0	414	1900	1615	293	1881	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			6				105			109
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			985			568			463	
Travel Time (s)		9.6			14.9			8.6			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	167	719	152	99	661	45	132	517	109	78	404	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	871	0	99	706	0	132	517	109	78	404	138
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	47.1	36.4		41.1	31.3		41.9	32.3	32.3	37.4	28.1	28.1
Actuated g/C Ratio	0.47	0.36		0.41	0.31		0.42	0.32	0.32	0.37	0.28	0.28
v/c Ratio	0.49	0.68		0.36	0.63		0.42	0.85	0.18	0.34	0.77	0.26
Control Delay	20.6	31.1		19.4	33.2		22.4	47.9	7.1	22.0	45.5	10.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	31.1		19.4	33.2		22.4	47.9	7.1	22.0	45.5	10.6
LOS	C	C		B	C		C	D	A	C	D	B
Approach Delay		29.5			31.5			37.6			34.8	
Approach LOS		C			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 100.4			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 32.9		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	860	739	8	5	17
Future Volume (vph)	17	860	739	8	5	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.894	
Flt Protected	0.950				0.989	
Satd. Flow (prot)	1805	3574	3568	0	1680	0
Flt Permitted	0.950				0.989	
Satd. Flow (perm)	1805	3574	3568	0	1680	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		985	255		243	
Travel Time (s)		14.9	3.9		5.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	18	915	786	9	5	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	915	795	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	860	739	8	5	17
Future Volume (Veh/h)	17	860	739	8	5	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	18	915	786	9	5	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.90				0.87	0.90
vC, conflicting volume	795				1284	398
vC1, stage 1 conf vol					790	
vC2, stage 2 conf vol					494	
vCu, unblocked vol	552				506	111
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	98
cM capacity (veh/h)	926				481	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	18	458	458	524	271	23
Volume Left	18	0	0	0	0	5
Volume Right	0	0	0	0	9	18
cSH	926	1700	1700	1700	1700	720
Volume to Capacity	0.02	0.27	0.27	0.31	0.16	0.03
Queue Length 95th (ft)	1	0	0	0	0	2
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	10.2
Lane LOS	A					B
Approach Delay (s)	0.2			0.0		10.2
Approach LOS						B

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	33.8%	ICU Level of Service		A
Analysis Period (min)	15			

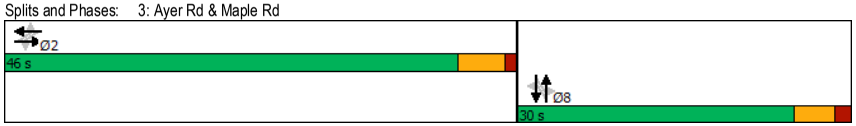
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	751	21	35	629	37	26	146	53	75	53	97
Future Volume (vph)	98	751	21	35	629	37	26	146	53	75	53	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.992			0.960			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3561	0	1805	3542	0	1805	1824	0	1805	1716	0
Flt Permitted	0.367			0.314			0.654			0.588		
Satd. Flow (perm)	684	3561	0	597	3542	0	1243	1824	0	1117	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			12			26			105	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	107	816	23	38	684	40	28	159	58	82	58	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	839	0	38	724	0	28	217	0	82	163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	32.5	32.5		32.5	32.5		12.7	12.7		12.7	12.7	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.23	0.23		0.23	0.23	
v/c Ratio	0.27	0.41		0.11	0.35		0.10	0.50		0.32	0.35	
Control Delay	8.9	7.5		7.1	7.0		18.7	21.2		22.5	10.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.9	7.5		7.1	7.0		18.7	21.2		22.5	10.2	
LOS	A	A		A	A		B	C		C	B	
Approach Delay		7.6			7.0			20.9			14.3	
Approach LOS		A			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 56			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 86.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	10	52	1	43	1	237	46	31	176	1
Future Volume (vph)	3	1	10	52	1	43	1	237	46	31	176	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.901			0.940			0.978			0.999	
Flt Protected		0.990			0.974						0.993	
Satd. Flow (prot)	0	1695	0	0	1740	0	0	1828	0	0	1874	0
Flt Permitted		0.990			0.974						0.993	
Satd. Flow (perm)	0	1695	0	0	1740	0	0	1828	0	0	1874	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	4%	0%	0%
Adj. Flow (vph)	3	1	11	57	1	47	1	260	51	34	193	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	105	0	0	312	0	0	228	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	10	52	1	43	1	237	46	31	176	1
Future Volume (Veh/h)	3	1	10	52	1	43	1	237	46	31	176	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	3	1	11	57	1	47	1	260	51	34	193	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94				0.94		
vC, conflicting volume	596	574	194	560	550	286	194			311		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540	516	194	502	490	209	194			236		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	87	100	94	100			97		
cM capacity (veh/h)	394	426	853	439	441	787	1391			1241		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	105	312	228
Volume Left	3	57	1	34
Volume Right	11	47	51	1
cSH	656	547	1391	1241
Volume to Capacity	0.02	0.19	0.00	0.03
Queue Length 95th (ft)	2	18	0	2
Control Delay (s)	10.6	13.1	0.0	1.4
Lane LOS	B	B	A	A
Approach Delay (s)	10.6	13.1	0.0	1.4
Approach LOS	B	B		

Intersection Summary					
Average Delay		2.8			
Intersection Capacity Utilization	48.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Packet Pg. 676
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

A5

Level of Service Calculations: Background Conditions

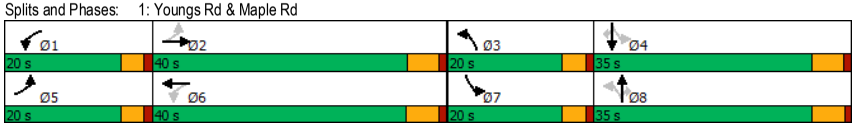
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	388	131	69	498	35	71	223	69	37	445	211
Future Volume (vph)	135	388	131	69	498	35	71	223	69	37	445	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3380	0	1805	3508	0	1752	1863	1442	1671	1881	1553
Flt Permitted	0.272			0.393			0.152			0.549		
Satd. Flow (perm)	492	3380	0	747	3508	0	280	1863	1442	966	1881	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			6				105			152
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			985			568			463	
Travel Time (s)		9.6			14.9			8.6			7.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	2%	0%	2%	0%	3%	2%	12%	8%	1%	4%
Adj. Flow (vph)	150	431	146	77	553	39	79	248	77	41	494	234
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	577	0	77	592	0	79	248	77	41	494	234
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	45.8	35.8		39.2	30.2		39.4	33.0	33.0	36.6	29.7	29.7
Actuated g/C Ratio	0.48	0.37		0.41	0.31		0.41	0.34	0.34	0.38	0.31	0.31
v/c Ratio	0.40	0.45		0.20	0.54		0.33	0.39	0.14	0.10	0.85	0.40
Control Delay	18.3	24.2		16.2	30.3		20.8	28.1	3.2	17.3	48.3	13.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	24.2		16.2	30.3		20.8	28.1	3.2	17.3	48.3	13.0
LOS	B	C		B	C		C	C	A	B	D	B
Approach Delay		23.0			28.7			21.9			35.9	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 96.2			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Packet Pg. 678
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	474	591	4	0	4
Future Volume (vph)	13	474	591	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999		0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1805	3438	3536	0	1644	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	3438	3536	0	1644	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		985	255		243	
Travel Time (s)		14.9	3.9		5.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	2%	0%	0%	0%
Adj. Flow (vph)	15	533	664	4	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	533	668	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	474	591	4	0	4
Future Volume (Veh/h)	13	474	591	4	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	15	533	664	4	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.93				0.96	0.93
vC, conflicting volume	668				962	334
vC1, stage 1 conf vol					666	
vC2, stage 2 conf vol					296	
vCu, unblocked vol	492				577	132
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1006				526	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	15	266	266	443	225	4
Volume Left	15	0	0	0	0	0
Volume Right	0	0	0	0	4	4
cSH	1006	1700	1700	1700	1700	836
Volume to Capacity	0.01	0.16	0.16	0.26	0.13	0.00
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	8.6	0.0	0.0	0.0	0.0	9.3
Lane LOS	A					A
Approach Delay (s)	0.2			0.0		9.3
Approach LOS						A

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	26.5%	ICU Level of Service		A
Analysis Period (min)	15			

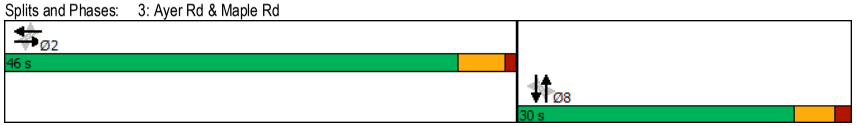
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	422	4	15	454	27	15	46	23	60	96	111
Future Volume (vph)	50	422	4	15	454	27	15	46	23	60	96	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.992			0.949			0.920	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3499	0	1597	3548	0	1597	1706	0	1752	1720	0
Flt Permitted	0.442			0.470			0.553			0.705		
Satd. Flow (perm)	807	3499	0	790	3548	0	930	1706	0	1300	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			12			27			81	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	3%	0%	13%	1%	0%	13%	2%	13%	3%	0%	3%
Adj. Flow (vph)	58	491	5	17	528	31	17	53	27	70	112	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	496	0	17	559	0	17	80	0	70	241	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	30.1	30.1		30.1	30.1		11.9	11.9		11.9	11.9	
Actuated g/C Ratio	0.57	0.57		0.57	0.57		0.23	0.23		0.23	0.23	
v/c Ratio	0.13	0.25		0.04	0.27		0.08	0.20		0.24	0.53	
Control Delay	7.0	6.4		6.3	6.5		16.4	12.9		18.5	16.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.0	6.4		6.3	6.5		16.4	12.9		18.5	16.3	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		6.5			6.5			13.5			16.8	
Approach LOS		A			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 52.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	78	1	35	3	92	29	43	192	4
Future Volume (vph)	0	0	1	78	1	35	3	92	29	43	192	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.959			0.968			0.998	
Flt Protected					0.967			0.999			0.991	
Satd. Flow (prot)	0	1644	0	0	1762	0	0	1785	0	0	1835	0
Flt Permitted					0.967			0.999			0.991	
Satd. Flow (perm)	0	1644	0	0	1762	0	0	1785	0	0	1835	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	3%	0%
Adj. Flow (vph)	0	0	1	83	1	37	3	98	31	46	204	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	121	0	0	132	0	0	254	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	78	1	35	3	92	29	43	192	4
Future Volume (Veh/h)	0	0	1	78	1	35	3	92	29	43	192	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	1	83	1	37	3	98	31	46	204	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked												
vC, conflicting volume	455	433	206	418	420	114	208			129		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	455	433	206	418	420	114	208			129		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	84	100	96	100			97		
cM capacity (veh/h)	485	501	840	534	510	945	1375			1469		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	121	132	254
Volume Left	0	83	3	46
Volume Right	1	37	31	4
cSH	840	615	1375	1469
Volume to Capacity	0.00	0.20	0.00	0.03
Queue Length 95th (ft)	0	18	0	2
Control Delay (s)	9.3	12.3	0.2	1.6
Lane LOS	A	B	A	A
Approach Delay (s)	9.3	12.3	0.2	1.6
Approach LOS	A	B		

Intersection Summary				
Average Delay		3.8		
Intersection Capacity Utilization	42.7%	ICU Level of Service		A
Analysis Period (min)	15			

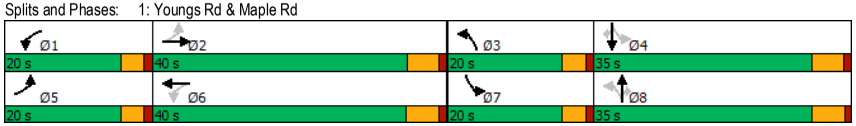
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	697	147	96	640	43	128	501	106	75	392	134
Future Volume (vph)	162	697	147	96	640	43	128	501	106	75	392	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3487	0	1787	3578	0	1805	1900	1615	1805	1881	1615
Flt Permitted	0.198			0.183			0.208			0.145		
Satd. Flow (perm)	376	3487	0	344	3578	0	395	1900	1615	276	1881	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			6				105			109
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			985			568			463	
Travel Time (s)		9.6			14.9			8.6			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	171	734	155	101	674	45	135	527	112	79	413	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	889	0	101	719	0	135	527	112	79	413	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	47.1	36.4		41.2	31.3		42.4	32.7	32.7	37.8	28.4	28.4
Actuated g/C Ratio	0.47	0.36		0.41	0.31		0.42	0.32	0.32	0.37	0.28	0.28
v/c Ratio	0.51	0.70		0.38	0.65		0.44	0.86	0.19	0.35	0.78	0.27
Control Delay	21.3	32.0		20.0	33.8		22.7	48.9	7.5	22.2	46.3	11.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	32.0		20.0	33.8		22.7	48.9	7.5	22.2	46.3	11.0
LOS	C	C		B	C		C	D	A	C	D	B
Approach Delay		30.3			32.1			38.3			35.4	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 100.9			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	877	754	8	5	18
Future Volume (vph)	18	877	754	8	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.893	
Flt Protected	0.950				0.990	
Satd. Flow (prot)	1805	3574	3568	0	1680	0
Flt Permitted	0.950				0.990	
Satd. Flow (perm)	1805	3574	3568	0	1680	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		985	255		243	
Travel Time (s)		14.9	3.9		5.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	19	933	802	9	5	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	933	811	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	877	754	8	5	18
Future Volume (Veh/h)	18	877	754	8	5	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	19	933	802	9	5	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.90				0.86	0.90
vC, conflicting volume	811				1311	406
vC1, stage 1 conf vol					806	
vC2, stage 2 conf vol					504	
vCu, unblocked vol	562				507	110
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	98
cM capacity (veh/h)	915				474	834

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	19	466	466	535	276	24
Volume Left	19	0	0	0	0	5
Volume Right	0	0	0	0	9	19
cSH	915	1700	1700	1700	1700	720
Volume to Capacity	0.02	0.27	0.27	0.31	0.16	0.03
Queue Length 95th (ft)	2	0	0	0	0	3
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	10.2
Lane LOS	A					B
Approach Delay (s)	0.2			0.0		10.2
Approach LOS						B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		34.2%	ICU Level of Service	A
Analysis Period (min)		15		

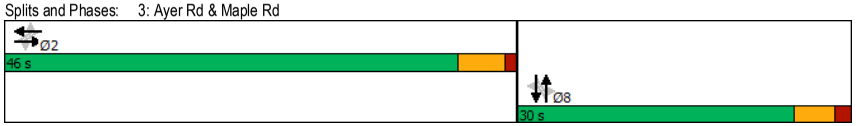
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	766	21	35	642	38	27	149	54	76	54	99
Future Volume (vph)	100	766	21	35	642	38	27	149	54	76	54	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.992			0.960			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3561	0	1805	3542	0	1805	1824	0	1805	1716	0
Flt Permitted	0.359			0.306			0.651			0.579		
Satd. Flow (perm)	669	3561	0	581	3542	0	1237	1824	0	1100	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			12			26			108	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	109	833	23	38	698	41	29	162	59	83	59	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	856	0	38	739	0	29	221	0	83	167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	32.5	32.5		32.5	32.5		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.23	0.23		0.23	0.23	
v/c Ratio	0.28	0.41		0.11	0.36		0.10	0.51		0.33	0.35	
Control Delay	9.2	7.6		7.3	7.1		18.7	21.4		22.7	10.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.2	7.6		7.3	7.1		18.7	21.4		22.7	10.2	
LOS	A	A		A	A		B	C		C	B	
Approach Delay		7.8			7.1			21.1			14.3	
Approach LOS		A			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 56.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 87.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	11	53	1	43	1	242	47	32	179	1
Future Volume (vph)	4	1	11	53	1	43	1	242	47	32	179	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.905			0.940			0.978			0.999	
Flt Protected		0.988			0.973						0.993	
Satd. Flow (prot)	0	1699	0	0	1738	0	0	1828	0	0	1874	0
Flt Permitted		0.988			0.973						0.993	
Satd. Flow (perm)	0	1699	0	0	1738	0	0	1828	0	0	1874	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	4%	0%	0%
Adj. Flow (vph)	4	1	12	58	1	47	1	266	52	35	197	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	106	0	0	319	0	0	233	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	11	53	1	43	1	242	47	32	179	1
Future Volume (Veh/h)	4	1	11	53	1	43	1	242	47	32	179	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	4	1	12	58	1	47	1	266	52	35	197	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94				0.94		
vC, conflicting volume	609	588	198	574	562	292	198			318		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	551	528	198	513	500	213	198			240		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	86	100	94	100			97		
cM capacity (veh/h)	386	418	849	429	433	781	1387			1234		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	106	319	233
Volume Left	4	58	1	35
Volume Right	12	47	52	1
cSH	632	536	1387	1234
Volume to Capacity	0.03	0.20	0.00	0.03
Queue Length 95th (ft)	2	18	0	2
Control Delay (s)	10.9	13.4	0.0	1.4
Lane LOS	B	B	A	A
Approach Delay (s)	10.9	13.4	0.0	1.4
Approach LOS	B	B		

Intersection Summary				
Average Delay		2.9		
Intersection Capacity Utilization	48.1%	ICU Level of Service		A
Analysis Period (min)	15			

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

A6

Level of Service Calculations: Full Development Conditions

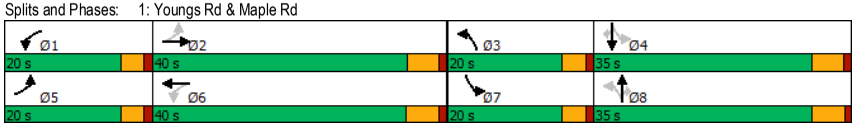
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	396	131	80	513	45	71	223	71	42	445	211
Future Volume (vph)	135	396	131	80	513	45	71	223	71	42	445	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3383	0	1805	3502	0	1752	1863	1442	1671	1881	1553
Flt Permitted	0.257			0.381			0.153			0.545		
Satd. Flow (perm)	465	3383	0	724	3502	0	282	1863	1442	959	1881	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			8				105			152
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			576			568			463	
Travel Time (s)		9.6			8.7			8.6			7.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	2%	0%	2%	0%	3%	2%	12%	8%	1%	4%
Adj. Flow (vph)	150	440	146	89	570	50	79	248	79	47	494	234
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	586	0	89	620	0	79	248	79	47	494	234
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	45.6	35.4		39.6	30.2		39.2	32.8	32.8	36.8	29.7	29.7
Actuated g/C Ratio	0.47	0.37		0.41	0.31		0.41	0.34	0.34	0.38	0.31	0.31
v/c Ratio	0.42	0.46		0.23	0.56		0.33	0.39	0.14	0.11	0.85	0.40
Control Delay	18.6	24.7		16.4	30.7		20.8	28.4	3.5	17.5	48.4	13.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	24.7		16.4	30.7		20.8	28.4	3.5	17.5	48.4	13.0
LOS	B	C		B	C		C	C	A	B	D	B
Approach Delay		23.5			28.9			22.1			35.8	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 96.2			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	475	592	7	6	9
Future Volume (vph)	16	475	592	7	6	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.921	
Flt Protected	0.950				0.980	
Satd. Flow (prot)	1805	3438	3533	0	1715	0
Flt Permitted	0.950				0.980	
Satd. Flow (perm)	1805	3438	3533	0	1715	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		409	255		243	
Travel Time (s)		6.2	3.9		5.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	2%	0%	0%	0%
Adj. Flow (vph)	18	534	665	8	7	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	534	673	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	475	592	7	6	9
Future Volume (Veh/h)	16	475	592	7	6	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	18	534	665	8	7	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.93				0.94	0.93
vC, conflicting volume	673				972	336
vC1, stage 1 conf vol					669	
vC2, stage 2 conf vol					303	
vCu, unblocked vol	493				697	131
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	99
cM capacity (veh/h)	1003				508	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	18	267	267	443	230	17
Volume Left	18	0	0	0	0	7
Volume Right	0	0	0	0	8	10
cSH	1003	1700	1700	1700	1700	661
Volume to Capacity	0.02	0.16	0.16	0.26	0.14	0.03
Queue Length 95th (ft)	1	0	0	0	0	2
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	10.6
Lane LOS	A					B
Approach Delay (s)	0.3			0.0		10.6
Approach LOS						B

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	26.6%	ICU Level of Service	A	
Analysis Period (min)	15			

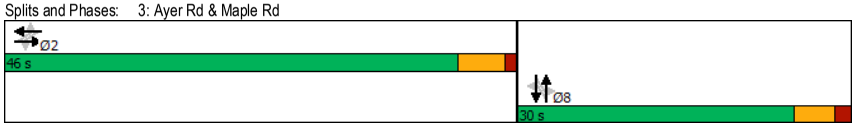
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	429	4	15	458	29	15	47	23	64	98	111
Future Volume (vph)	50	429	4	15	458	29	15	47	23	64	98	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.991			0.951			0.920	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3502	0	1597	3544	0	1597	1711	0	1752	1721	0
Flt Permitted	0.439			0.467			0.550			0.704		
Satd. Flow (perm)	802	3502	0	785	3544	0	925	1711	0	1299	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			13			27			80	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	3%	0%	13%	1%	0%	13%	2%	13%	3%	0%	3%
Adj. Flow (vph)	58	499	5	17	533	34	17	55	27	74	114	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	504	0	17	567	0	17	82	0	74	243	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	30.1	30.1		30.1	30.1		12.0	12.0		12.0	12.0	
Actuated g/C Ratio	0.57	0.57		0.57	0.57		0.23	0.23		0.23	0.23	
v/c Ratio	0.13	0.25		0.04	0.28		0.08	0.20		0.25	0.54	
Control Delay	7.0	6.5		6.3	6.5		16.4	13.0		18.7	16.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.0	6.5		6.3	6.5		16.4	13.0		18.7	16.4	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		6.5			6.5			13.6			17.0	
Approach LOS		A			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 52.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	7	78	1	35	6	92	29	43	192	6
Future Volume (vph)	4	0	7	78	1	35	6	92	29	43	192	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.914			0.959			0.969			0.997	
Flt Protected		0.982			0.967			0.998			0.991	
Satd. Flow (prot)	0	1705	0	0	1762	0	0	1786	0	0	1833	0
Flt Permitted		0.982			0.967			0.998			0.991	
Satd. Flow (perm)	0	1705	0	0	1762	0	0	1786	0	0	1833	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	3%	0%
Adj. Flow (vph)	4	0	7	83	1	37	6	98	31	46	204	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	121	0	0	135	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	7	78	1	35	6	92	29	43	192	6
Future Volume (Veh/h)	4	0	7	78	1	35	6	92	29	43	192	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	7	83	1	37	6	98	31	46	204	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked												
vC, conflicting volume	462	440	207	432	428	114	210			129		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	462	440	207	432	428	114	210			129		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	84	100	96	100			97		
cM capacity (veh/h)	479	496	839	519	504	945	1373			1469		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	121	135	256
Volume Left	4	83	6	46
Volume Right	7	37	31	6
cSH	659	602	1373	1469
Volume to Capacity	0.02	0.20	0.00	0.03
Queue Length 95th (ft)	1	19	0	2
Control Delay (s)	10.6	12.5	0.4	1.6
Lane LOS	B	B	A	A
Approach Delay (s)	10.6	12.5	0.4	1.6
Approach LOS	B	B		

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	497	607	1	1	31
Future Volume (vph)	16	497	607	1	1	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt					0.869	
Flt Protected	0.950				0.999	
Satd. Flow (prot)	1770	3539	3539	0	1617	0
Flt Permitted	0.950				0.999	
Satd. Flow (perm)	1770	3539	3539	0	1617	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		576	409		166	
Travel Time (s)		13.1	9.3		3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	540	660	1	1	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	540	661	0	35	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	497	607	1	1	31
Future Volume (Veh/h)	16	497	607	1	1	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	540	660	1	1	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		576	664			
pX, platoon unblocked	0.98				0.93	0.98
vC, conflicting volume	661				964	330
vC1, stage 1 conf vol					660	
vC2, stage 2 conf vol					304	
vCu, unblocked vol	625				746	289
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	95
cM capacity (veh/h)	938				465	697

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	17	270	270	440	221	35
Volume Left	17	0	0	0	0	1
Volume Right	0	0	0	0	1	34
cSH	938	1700	1700	1700	1700	687
Volume to Capacity	0.02	0.16	0.16	0.26	0.13	0.05
Queue Length 95th (ft)	1	0	0	0	0	4
Control Delay (s)	8.9	0.0	0.0	0.0	0.0	10.5
Lane LOS	A					B
Approach Delay (s)	0.3			0.0		10.5
Approach LOS						B

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		26.8%	ICU Level of Service	A
Analysis Period (min)		15		

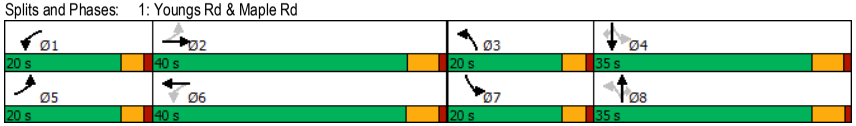
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	718	147	107	656	54	128	501	121	90	392	134
Future Volume (vph)	162	718	147	107	656	54	128	501	121	90	392	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	125		125	165		165
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3487	0	1787	3570	0	1805	1900	1615	1805	1881	1615
Flt Permitted	0.189			0.141			0.218			0.139		
Satd. Flow (perm)	359	3487	0	265	3570	0	414	1900	1615	264	1881	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			8				105			109
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		632			576			568			463	
Travel Time (s)		9.6			8.7			8.6			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	171	756	155	113	691	57	135	527	127	95	413	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	911	0	113	748	0	135	527	127	95	413	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	30.0		5.0	30.0		5.0	25.0	25.0	5.0	25.0	25.0
Minimum Split (s)	9.3	35.4		9.3	35.5		9.3	30.4	30.4	9.3	30.5	30.5
Total Split (s)	20.0	40.0		20.0	40.0		20.0	35.0	35.0	20.0	35.0	35.0
Total Split (%)	17.4%	34.8%		17.4%	34.8%		17.4%	30.4%	30.4%	17.4%	30.4%	30.4%
Maximum Green (s)	15.7	34.6		15.7	34.5		15.7	29.6	29.6	15.7	29.5	29.5
Yellow Time (s)	3.2	4.3		3.2	4.3		3.2	4.3	4.3	3.2	4.3	4.3
All-Red Time (s)	1.1	1.1		1.1	1.2		1.1	1.1	1.1	1.1	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.4		4.3	5.5		4.3	5.4	5.4	4.3	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0			15.0			15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	46.1	33.7		41.9	31.5		42.0	32.3	32.3	38.5	28.5	28.5
Actuated g/C Ratio	0.46	0.33		0.41	0.31		0.42	0.32	0.32	0.38	0.28	0.28
v/c Ratio	0.53	0.78		0.46	0.67		0.43	0.87	0.22	0.41	0.78	0.26
Control Delay	22.0	35.7		22.0	34.4		22.6	50.8	9.4	23.4	46.3	11.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	35.7		22.0	34.4		22.6	50.8	9.4	23.4	46.3	11.0
LOS	C	D		C	C		C	D	A	C	D	B
Approach Delay		33.5			32.7			39.3			35.3	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 101.1			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 35.0		Intersection LOS: D	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Youngs Rd & Maple Rd



Packet Pg. 692
1.a
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	879	756	16	11	24
Future Volume (vph)	26	879	756	16	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.997		0.908	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1805	3574	3564	0	1698	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1805	3574	3564	0	1698	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		409	255		243	
Travel Time (s)		6.2	3.9		5.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	28	935	804	17	12	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	935	821	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	879	756	16	11	24
Future Volume (Veh/h)	26	879	756	16	11	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	28	935	804	17	12	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		985	255			
pX, platoon unblocked	0.89				0.86	0.89
vC, conflicting volume	821				1336	410
vC1, stage 1 conf vol					812	
vC2, stage 2 conf vol					524	
vCu, unblocked vol	564				504	105
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	97
cM capacity (veh/h)	910				474	837

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	28	468	468	536	285	38
Volume Left	28	0	0	0	0	12
Volume Right	0	0	0	0	17	26
cSH	910	1700	1700	1700	1700	674
Volume to Capacity	0.03	0.28	0.28	0.32	0.17	0.06
Queue Length 95th (ft)	2	0	0	0	0	4
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	10.7
Lane LOS	A					B
Approach Delay (s)	0.3			0.0		10.7
Approach LOS						B

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	34.3%	ICU Level of Service	A	
Analysis Period (min)	15			

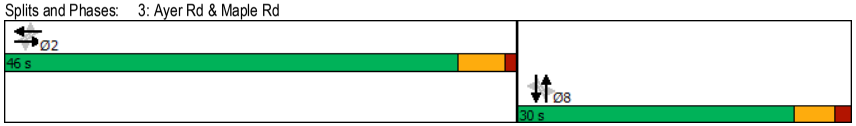
Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	773	22	35	651	44	28	151	54	80	56	99
Future Volume (vph)	100	773	22	35	651	44	28	151	54	80	56	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	100		0	75		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.990			0.960			0.904	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3561	0	1805	3534	0	1805	1824	0	1805	1718	0
Flt Permitted	0.350			0.302			0.650			0.575		
Satd. Flow (perm)	652	3561	0	574	3534	0	1235	1824	0	1092	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			14			25			108	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		255			922			419			317	
Travel Time (s)		3.9			14.0			8.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	109	840	24	38	708	48	30	164	59	87	61	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	864	0	38	756	0	30	223	0	87	169	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			2			8			8		
Detector Phase	2	2		2	2		8	8		8	8	
Switch Phase												
Minimum Initial (s)	30.0	30.0		30.0	30.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	35.4	35.4		35.4	35.4		15.2	15.2		15.2	15.2	
Total Split (s)	46.0	46.0		46.0	46.0		30.0	30.0		30.0	30.0	
Total Split (%)	60.5%	60.5%		60.5%	60.5%		39.5%	39.5%		39.5%	39.5%	
Maximum Green (s)	40.6	40.6		40.6	40.6		24.8	24.8		24.8	24.8	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.1	1.1		1.1	1.1		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		5.2	5.2		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	32.8	32.8		32.8	32.8		13.1	13.1		13.1	13.1	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.23	0.23		0.23	0.23	
v/c Ratio	0.29	0.42		0.11	0.37		0.11	0.51		0.35	0.35	
Control Delay	9.5	7.7		7.4	7.3		18.8	21.5		23.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.5	7.7		7.4	7.3		18.8	21.5		23.0	10.3	
LOS	A	A		A	A		B	C		C	B	
Approach Delay		7.9			7.3			21.2			14.6	
Approach LOS		A			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 76			
Actuated Cycle Length: 56.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Ayer Rd & Maple Rd



Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	17	53	1	43	9	242	47	32	179	6
Future Volume (vph)	8	1	17	53	1	43	9	242	47	32	179	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.912			0.940			0.979			0.996	
Flt Protected		0.985			0.973			0.998			0.993	
Satd. Flow (prot)	0	1707	0	0	1738	0	0	1827	0	0	1868	0
Flt Permitted		0.985			0.973			0.998			0.993	
Satd. Flow (perm)	0	1707	0	0	1738	0	0	1827	0	0	1868	0
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		300			181			317			208	
Travel Time (s)		6.8			4.1			6.2			4.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	4%	0%	0%
Adj. Flow (vph)	9	1	19	58	1	47	10	266	52	35	197	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	106	0	0	328	0	0	239	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	17	53	1	43	9	242	47	32	179	6
Future Volume (Veh/h)	8	1	17	53	1	43	9	242	47	32	179	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	9	1	19	58	1	47	10	266	52	35	197	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								317				
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94				0.94		
vC, conflicting volume	630	608	200	602	586	292	204			318		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	571	548	200	541	524	210	204			238		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	98	86	100	94	99			97		
cM capacity (veh/h)	372	404	846	404	416	782	1380			1234		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	29	106	328	239
Volume Left	9	58	10	35
Volume Right	19	47	52	7
cSH	590	515	1380	1234
Volume to Capacity	0.05	0.21	0.01	0.03
Queue Length 95th (ft)	4	19	1	2
Control Delay (s)	11.4	13.8	0.3	1.4
Lane LOS	B	B	A	A
Approach Delay (s)	11.4	13.8	0.3	1.4
Approach LOS	B	B		

Intersection Summary					
Average Delay		3.2			
Intersection Capacity Utilization	41.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	885	786	2	2	32
Future Volume (vph)	43	885	786	2	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt					0.872	
Flt Protected	0.950				0.997	
Satd. Flow (prot)	1770	3539	3539	0	1619	0
Flt Permitted	0.950				0.997	
Satd. Flow (perm)	1770	3539	3539	0	1619	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		576	409		166	
Travel Time (s)		8.7	6.2		3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	962	854	2	2	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	962	856	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	885	786	2	2	32
Future Volume (Veh/h)	43	885	786	2	2	32
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	962	854	2	2	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		576	664			
pX, platoon unblocked	0.92				0.83	0.92
vC, conflicting volume	856				1430	428
vC1, stage 1 conf vol					855	
vC2, stage 2 conf vol					575	
vCu, unblocked vol	661				647	194
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	95
cM capacity (veh/h)	846				419	747

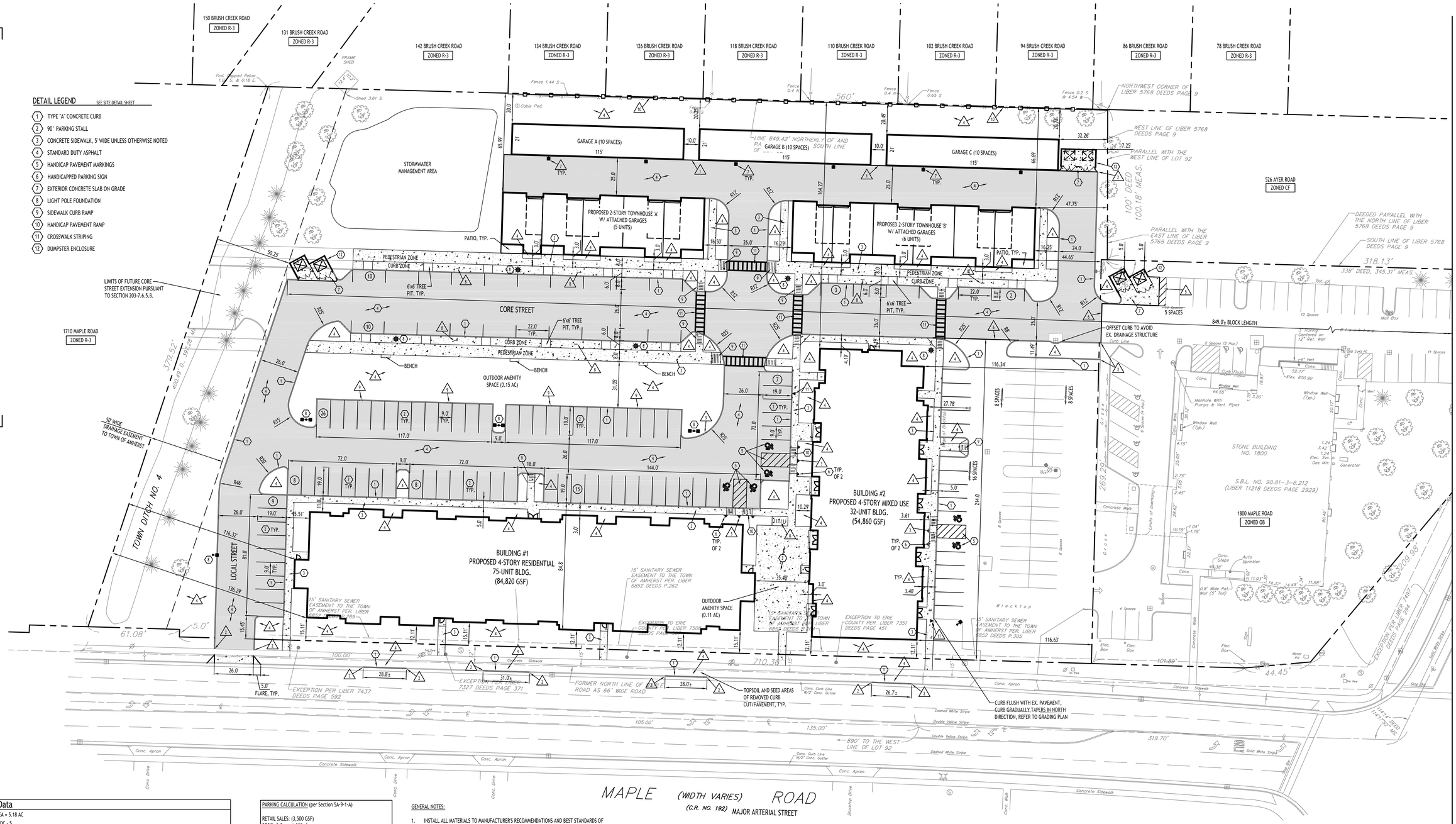
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	47	481	481	569	287	37
Volume Left	47	0	0	0	0	2
Volume Right	0	0	0	0	2	35
cSH	846	1700	1700	1700	1700	717
Volume to Capacity	0.06	0.28	0.28	0.33	0.17	0.05
Queue Length 95th (ft)	4	0	0	0	0	4
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	10.3
Lane LOS	A					B
Approach Delay (s)	0.4			0.0		10.3
Approach LOS						B

Intersection Summary					
Average Delay		0.4			
Intersection Capacity Utilization		38.5%	ICU Level of Service		A
Analysis Period (min)		15			

Attachment: SP-20230-06 application 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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Site Data

SITE AREA = 5.18 AC
ZONED: DC - 5
USE: PROPOSED 4-STORY MIXED USE BUILDING, 4-STORY MULTI-FAMILY BUILDING, 5 & 6 UNIT 2-STORY TOWNHOME BLDG WITH ATTACHED GARAGES

	REQUIRED	PROVIDED
SETBACKS - BUILDING		
FRONT	5 FT	12.11' MIN.
SIDE (< 3 STORIES/ > 3 STORIES)	30 FT/60 FT	44.65 MIN. /116.32' MIN.
REAR (< 3 STORIES/ > 3 STORIES)	30 FT/60 FT	66.69' / 164.27' MIN.
ACCESSORY STRUCT.	20 FT	20 FT MIN.
SETBACKS - PARKING		
FRONT	10 FT	15.45 FT. MIN.
SIDE	N/A	> 30 FT.
REAR	N/A	> 90 FT.
TOTAL VEHICLE SPACES	143	149 + 41 GAR. = 190
BICYCLE	23	24
ELECTRIC VEHICLE STATION	2	2
GREENSPACE		
INTERIOR PARKING GREENSPACE:	5% (0.1 AC)	12.5% (0.25 AC)
OVERALL:	N/A	39% (2.0 AC)
MAX. BUILDING HEIGHT	5 stories / 75'	4 stories / 50'
OUTDOOR AMENITY SPACE	5% (0.26 AC)	5% (0.26 AC)

PARKING CALCULATION (per Section 5A-9-1-A)

RETAIL SALES: (3,500 GSF)
REQ'D: 2.5 per 1,000 sf
REQ'D = (3,500/ 1,000) x 2.5 = 9 SPACES REQ'D

OFFICE: (3,500 GSF)
REQ'D: 2.5 per 1,000 sf
REQ'D = (3,500/ 1,000) x 2.5 = 9 SPACES REQ'D

APARTMENTS/TOWNHOMES:
REQ'D: 1 space per 1/2-bdrm unit = 1 x 105 units = 105 spaces
1.5 space per 3-bdrm unit = 1.5 x 13 units = 20 spaces
REQ'D = 125 SPACES REQ'D

TOTAL PARKING SPACES REQUIRED = 143 SPACES

BICYCLE CALCULATION (per Section 5A-9-1-A)

RESIDENTIAL:
REQ'D: 0.5 per UNIT (20 max.)
REQ'D = 0.5 x 118 = 59 therefore 20 SPACES REQ'D.

COMMERCIAL:
REQ'D: 1 space per 3,000 sf
REQ'D = 7,000/ 3,000 = 3 SPACES REQ'D

TOTAL BICYCLE SPACES REQUIRED = 23 SPACES

ELECTRIC VEHICLE CALCULATION (per Section 5A-9-1-D)

1% OF TOTAL PARKING = 190 x 0.01 = 2 SPACES REQ'D.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS FORM FOR PLACING NEW CURB.
10. SANITARY SEWER EASEMENTS SHOWN ARE APPROXIMATE BASED ON RECORD PLANS PROVIDED BY TOWN OF AMHERST ENGINEERING DEPARTMENT. SURVEYOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

Site Plan

SCALE: 1"=30'

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.
6. ALL HANDICAP RAMPS (NOT WITHIN THE NYSDOT R.O.W.) AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPS WHERE ENTERING PARKING AREAS/DRIVEWAYS. SIDEWALKS FLUSH TO PAVEMENT WITHIN THE NYSDOT R.O.W. SHALL ADHERE TO THE NOTES AND DESIGN REGULATIONS AS STATED ON NYSDOT STANDARD SHEET 608-01.

NOTE LEGEND

1 EDGE OF PAVEMENT
2 RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3 INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. R7-1C
4 LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
5 4" WIDE WHITE PAINT STRIPE @ 45° & 2' O.C., INFILL AREA AS SHOWN
6 MATCH EX. PAVEMENT, SAWCUT AS REQ'D TO ACHIEVE SQUARE EDGE TO MATCH
7 WALL PACK LIGHT, REFER TO LIGHTING PLAN LP-100
8 BIKE RACK, BELSON OUTDOORS "U-RACK" OR APPROVED EQUAL
9 2' CUT OUT IN CURBING
10 6' HT. WHITE VINYL FENCE
11 ELECTRIC VEHICLE CHARGING STATION

SITE LEGEND

PROPERTY LINE
PROPOSED SIDEWALK / CONCRETE PAD
NUMBER OF PARKING SPACES (27)
PROPOSED SIGN
PROPOSED STANDARD DUTY ASPHALT PAVEMENT
PROPOSED LIGHT POLE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 0 30 60Ft.
30'

CARMINAWOOD DESIGN
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Greensboro, North Carolina 27406
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487 Main Street, Suite 500
Buffalo, New York 14203
Phone: (716) 842-3165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date
1	Rev. per Town comments	9/18/23

DRAWING NAME:
Site Plan

Date: 8/21
Drawn By: P. She
Scale: As No

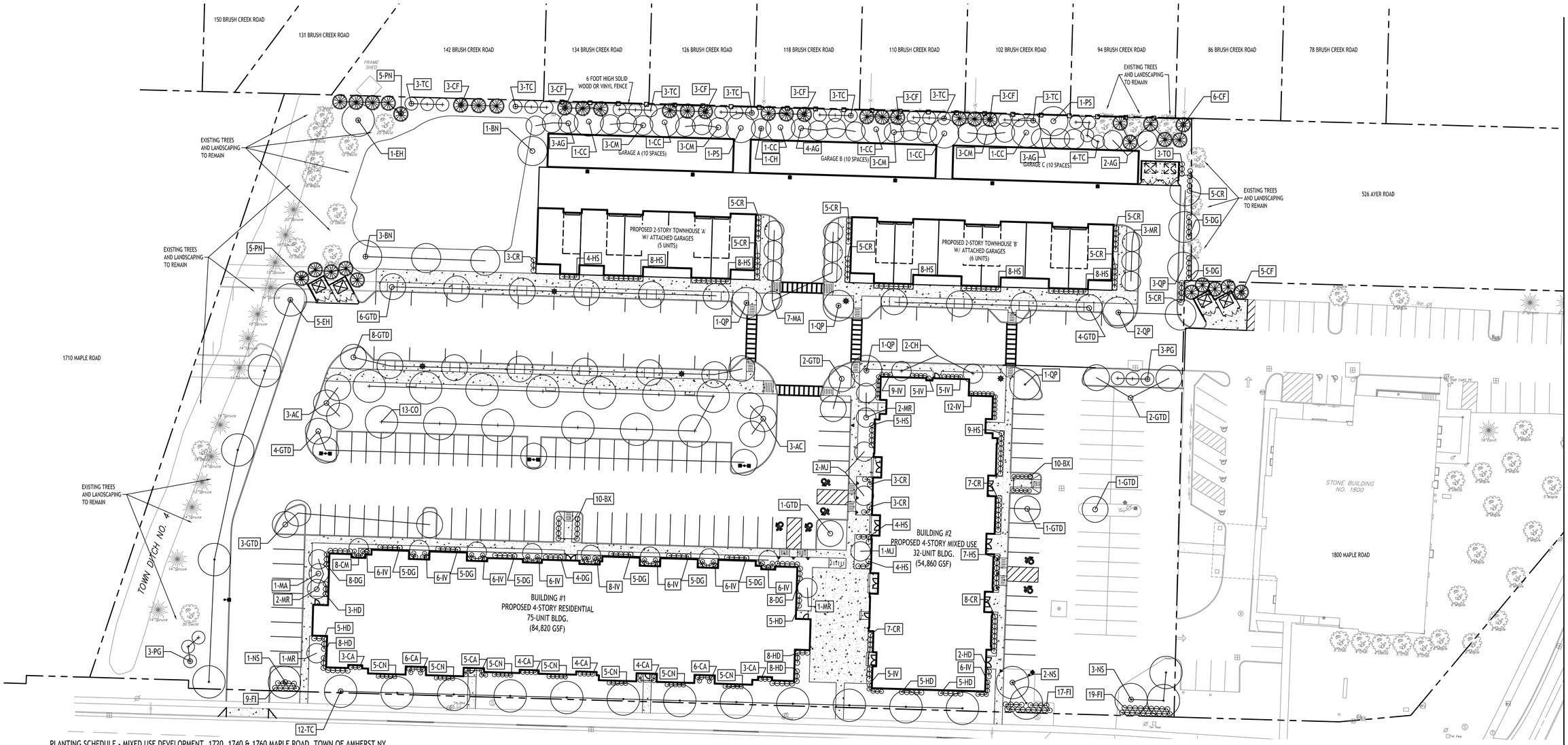
DRAWING NO.
C-100

Project No: 22.060

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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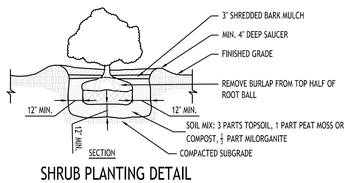
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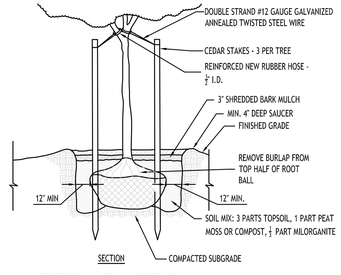
PLANTING SCHEDULE - MIXED USE DEVELOPMENT, 1720, 1740 & 1760 MAPLE ROAD, TOWN OF AMHERST NY

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
AG	12	GINKGO BIOBA	GINKGO "AUTUMN GOLD"	2 1/2" – 3" CAL.	B&B
BN	4	BETULA NIGRA 'CULLY'	HERITAGE RIVER BIRCH	10'–12' HT.	B&B; MULTI-STEM (3-BOLE MIN)
CC	6	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2" – 3" CAL.	B&B
CO	13	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE'	PRAIRIE PRIDE HACKBERRY	2 1/2" – 3" CAL.	B&B
EH	6	TSUGA CANADENSIS	EASTERN HEMLOCK	2 1/2" – 3" CAL.	
GTD	32	GLEDITSIA TRIACANTHOS INERMIS "DRAVES"	DRAVES THORNLESS HONEYLOCUST	2 1/2" – 3" CAL.	B&B, HT. OF 45' & 20' WIDE
NS	6	NYSSA SYLVATICA 'WILDFIRE'	WILDFIRE BLACK GUM	2 1/2" – 3" CAL.	B&B
PS	2	PRUNUS SEROTINA	BLACK CHERRY	2 1/2" – 3" CAL.	B&B
QP	9	QUERCUS PALUSTRIS	PIN OAK	2 1/2" – 3" CAL.	B&B
TC	37	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LITTLELEAF LINDEN	2 1/2" – 3" CAL.	B&B
		SMALL/ORNAMENTAL TREES			
AC	6	AMELANCHIER CANADENSIS	SERVICEBERRY	7' – 8' HT.	B&B, MULTI–STEM
CH	3	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1 3/4" – 2" CAL.	B&B, THORNLESS
CM	20	CERCIS CANADENSIS 'MERLOT'	MERLOT EASTERN REDBUD	1–3/4" – 2" CAL.	B&B
MA	8	MALUS 'ADIRONDACK'	ADIRONDACK FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MJ	5	MALUS 'RED JEWEL'	RED JEWEL FLOWERING CRABAPPLE	1–3/4" – 2" CAL.	B&B
MR	10	MALUS "ROYAL RAINDROPS"	ROYAL RAINDROP CRABAPPLE	1–3/4" – 2" CAL.	B&B, 15' WIDE
		EVERGREEN TREES			
CF	26	ABIES CONCOLOR	CONCOLOR FIR	5' – 6' MIN. HT.	B&B, FULL TO GROUND
PG	6	PICEA GLAUCA	WHITE SPRUCE	5 ' –6' MIN. HT.	B&B, FULL TO GROUND
PN	10	PINUS RESINOSA	RED PINE	5' – 6' MIN. HT.	B&B, FULL TO GROUND
		SHRUBS			
BX	20	BUXUS x "GREEN MOUNTAIN"	GREEN MOUNTAIN BOXWOOD	18" HIGH MIN.	NO. 3 CONT.
CN	35	CALLICARPA X 'NCCX2'	PEARL GLAM BEAUTYBERRY	24" HIGH MIN.	NO. 3 CONT
CR	76	CRATAEGUS CRUS–GALLI 'CRUZAM'	CRUSADER HAWTHORN	1–3/4" – 2" CAL.	B&B, THORNLESS
DG	60	DIERVILLA 'G2X88544'	KODIAK ORANGE DIERVILLA	24" HT MIN., NO. 3 CONT.	
FI	45	FORSYTHIA X INTERMEDIA 'KOLGOLD'	MAGICAL GOLD FORSYTHIA	24" HIGH MIN.	NO. 3 CONT.
HD	47	HYPERICUM X 'DEPPE'	SUNNY BOULEVARD HYPERICUM	24" HIGH MIN.	NO. 5 CONT.
HS	78	HYDRANGEA SERRATA 'SMNMAKTSR'	TUFF STUFF RED HYDRANGEA	24" HIGH MIN.	B&B
IV	92	ITEA VIRGINICA 'SMNIVDFC'	SCENTLANDIA SWEETSPIRE	18" HIGH MIN.	NO. 3 CONT.
TO	3	THUJA OCCIDENTALIS 'ART BOE'	NORTH POLE ARBORVITAE	4' HIGH, NO. 3 CONT.	B&B, FULL TO GROUND
		ORNAMENTAL GRASS			
CA	35	CALAMAGROSTIS X ACUTIFOLIA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 3 CONT.	

NOTES:
1. EVERGREEN TREE HEIGHT SHALL BE MEASURED FROM THE BOTTOM OF LEADER.
2. ORNAMENTAL GRASSES SHOULD BE PRUNED BACK IN LATE FALL, OR EARLY SPRING, TO ALLOW FOR NEW FOLIAGE TO GROW IN SPRING.
3. ALL PLANTING BEDS & TREE PITS SHALL RECEIVE A MIN. 3" DEPTH OF DARK SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE CALLED OUT ON PLANS.



SHRUB PLANTING DETAIL



TREE PLANTING DETAIL

N

Landscape Plan

SCALE: 1"=30'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30' 30 0 30 60Ft.

CARMINAWOOD DESIGN

111 Bain Street, Suite 332
Greensboro, North Carolina 27406
Phone: (336) 937-9009

487 Main Street, Suite 500
Buffalo, New York 14203
Phone: (716) 842-3165

Mixed Use Development

1720, 1740 & 1760 Maple Road
Amherst, NY

REVISIONS:

No.	Description	Date
1	Rev. per Town comments	9/18/23

Robert C. Walter, RLA
Registered Landscape Architect
Member American Society of Landscape Architects
2765 Dodge Road, East Amherst, NY 14051-2113
Phone: 716-364-5564
RCWLandscapeArchitect@gmail.com

DRAWING NAME:

Landscape Plan

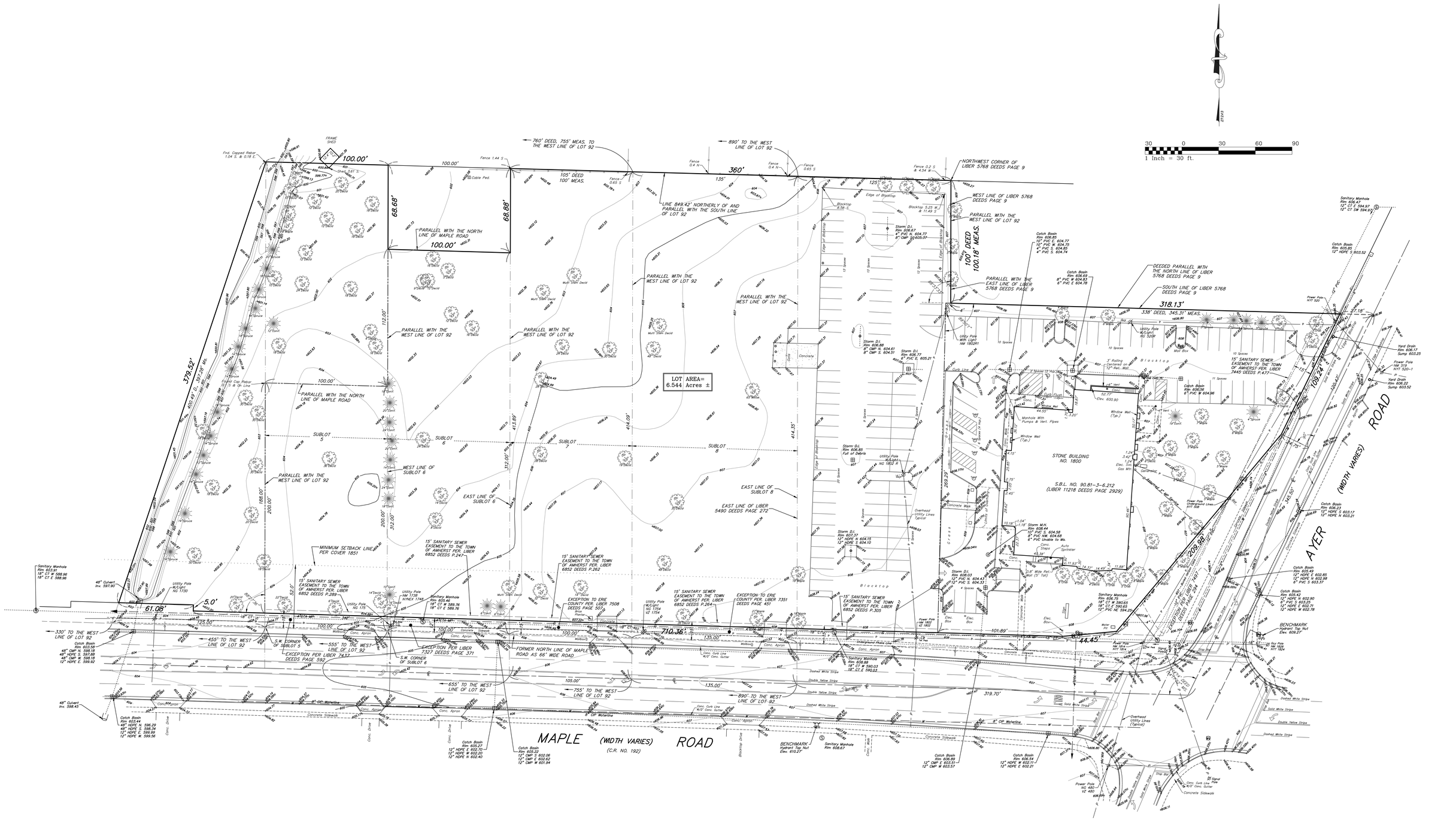
Date: 8/21
Drawn By: P. She
Scale: As No

DRAWING NO.

L-100

Project No: 22.060

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)


30 0 30 60 90
1 Inch = 30 ft.
379.52'
N00°49'10"E 400.00' Meas.
61.08'
5.0'
100.00'
68.68'
68.88'
112.00'
200.00'
188.00'
312.00'
413.89'
414.09'
414.35'
269.29'
209.98'
108.24'
318.13'
338' DEED, 345.31' MEAS.
100' DEED
100.18' MEAS.
105' DEED
100' MEAS.
760' DEED, 755' MEAS. TO THE WEST LINE OF LOT 92
890' TO THE WEST LINE OF LOT 92
360'
135'
125'
LINE 849.42' NORTHERLY OF AND PARALLEL WITH THE SOUTH LINE OF LOT 92
PARALLEL WITH THE NORTH LINE OF MAPLE ROAD
PARALLEL WITH THE WEST LINE OF LOT 92
PARALLEL WITH THE EAST LINE OF LIBER 5768 DEEDS PAGE 9
DEEDED PARALLEL WITH THE NORTH LINE OF LIBER 5768 DEEDS PAGE 9
SOUTH LINE OF LIBER 5768 DEEDS PAGE 9
WEST LINE OF LIBER 5768 DEEDS PAGE 9
NORTHWEST CORNER OF LIBER 5768 DEEDS PAGE 9
LOT AREA= 6.544 Acres ±
SUBLOT 5
SUBLOT 6
SUBLOT 7
SUBLOT 8
WEST LINE OF SUBLOT 6
EAST LINE OF SUBLOT 6
EAST LINE OF SUBLOT 8
EAST LINE OF LIBER 5490 DEEDS PAGE 272
MINIMUM SETBACK LINE PER COVER 1851
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.247
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.262
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.264
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.289
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 6852 DEEDS P.305
15' SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER LIBER 7445 DEEDS P.477
EXCEPTION PER LIBER 7327 DEEDS PAGE 371
EXCEPTION PER LIBER 7437 DEEDS PAGE 592
EXCEPTION TO ERIE COUNTY PER LIBER 7508 DEEDS PAGE 509
EXCEPTION TO ERIE COUNTY PER LIBER 7351 DEEDS PAGE 451
S.W. CORNER OF SUBLOT 5
S.W. CORNER OF SUBLOT 6
FORMER NORTH LINE OF MAPLE ROAD AS 66' WIDE ROAD
330' TO THE WEST LINE OF LOT 92
455' TO THE WEST LINE OF LOT 92
555' TO THE WEST LINE OF LOT 92
655' TO THE WEST LINE OF LOT 92
755' TO THE WEST LINE OF LOT 92
890' TO THE WEST LINE OF LOT 92
710.36'
101.89'
44.45'
319.70'
STONE BUILDING NO. 1800
S.B.L. NO. 90.81-3-6.212
(LIBER 11218 DEEDS PAGE 2929)
MAPLE (WIDTH VARIES) ROAD (C.R. NO. 192)
AYER (WIDTH VARIES) ROAD
Blacktop
Concrete Sidewalk
Concrete Apron
Conc. Curb Line w/2' Conc. Gutter
Conc. Drive
Edge of Blacktop
Double Yellow Stripe
Dashed White Stripe
Solid White Stripe
Overhead Utility Lines (Typical)
Underground Fiber Line
Underground Phone Line
Underground Water Line
Underground Gas Line
Underground Electric Line
Storm D.I. Rim 606.67 4" PVC N. 604.77 6" CMP S. 605.57
Storm D.I. Rim 606.68 6" CMP N. 604.61 6" CMP S. 604.51
Storm D.I. Rim 606.77 6" PVC E. 605.21
Storm D.I. Rim 606.85 Full of Debris
Storm D.I. Rim 607.37 12" HDPE N. 604.15 12" HDPE S. 604.10
Storm D.I. Rim 608.03 12" PVC N. 604.43 12" PVC S. 604.33
Storm M.H. Rim 608.44 10" PVC S. 604.58 6" PVC NW. 604.68 6" PVC Unable to Ms.
Catch Basin Rim 606.85 10" PVC E. 604.77 10" PVC W. 604.79 4" PVC S. 604.85 4" PVC S. 604.74
Catch Basin Rim 606.69 6" PVC W 604.63 6" PVC E 604.78
Catch Basin Rim 606.56 6" PVC W 604.96
Catch Basin Rim 606.54 12" CMP E 603.51 12" CMP W 603.57
Catch Basin Rim 606.54 12" CMP E 602.11 12" HDPE E 602.21
Catch Basin Rim 606.44 48" HDPE S. 596.29 48" HDPE S. 596.34 12" HDPE E. 599.99 12" HDPE W. 599.56
Catch Basin Rim 603.58 48" CMP N. 596.08 48" HDPE S. 596.18 48" CMP W. 596.18 12" HDPE E. 599.92
Catch Basin Rim 605.27 12" HDPE E 602.70 12" HDPE W 602.20 12" HDPE N 602.40
Catch Basin Rim 604.32 12" CMP E 602.06 12" CMP E 602.62 15" CMP W 601.94
Catch Basin Rim 605.85 12" HDPE S 603.52
Catch Basin Rim 606.17 12" HDPE E 602.85 12" HDPE N 602.98 8" PVC S 603.37
Catch Basin Rim 605.42 12" HDPE N 602.90 6" PVC S 603.25 12" HDPE E 602.71 12" HDPE W 602.78
Catch Basin Rim 606.23 12" HDPE S 603.17 12" HDPE W 603.21
Sanitary Manhole Rim 606.47 12" CT E 594.97 12" CT SW 594.97
Sanitary Manhole Rim 606.75 18" CT W 590.65 18" CT E 590.65 12" PVC NE 594.25
Sanitary Manhole Rim 608.44 18" CT W 590.03 18" CT E 590.03
Sanitary Manhole Rim 608.67
Sanitary Manhole Rim 603.91 18" CT W 588.96 18" CT E 588.96
Yard Drain Rim 606.17 Sump 603.25
Yard Drain Rim 606.22 Sump 603.52
Power Pole WYT 520
Power Pole NM 519 WYT 520-1
Power Pole NM 1738 NYNEX 1748
Power Pole NG 175
Power Pole NG 480 VZ 480
Power Pole Underground Lines WYT 558
Utility Pole NG 1730
Utility Pole NG 1803
Utility Pole NM 1738 NYNEX 1748
Utility Pole W/Light NG 1754 VZ 1754
Utility Pole W/Light NG 5209
Utility Pole with Light NM 1802R1
Utility Pole W/Light NG 1803
Utility Pole NG 1803
48" Culvert Inv. 597.90
48" Culvert Inv. 598.45
Found Capped Rebar 1.04' S. & 0.18' E.
Found Cap Rebar 0.3' S. & 0' Line
Found Cable Ped.
Fence 1.44' S
Fence 0.4' N
Fence 0.65' S
Fence 0.0' S & 4.54' W
Blacktop 6.56' S
Blacktop 5.25' W & 11.49' S
Gate
Concrete
Gravel
Grass
Shrubs
Mulch Stone Deciid
Mailbox
Flower Planter
Retaining Wall
Concrete Steps
Concrete Walk
Auto Sprinkler
Mail Box
Window Well (Typ.)
Manhole With Pumps & Vent. Pipes
Generator
Gas Meter
Elec. Box
Elec. Meter
Water Shut Off
Gas Line
Water Line
Telephone Line
Electric Line
Utility Lines
Cable Lines
Overhead Utility Lines Typical
Guide Rail
Stop Sign
Stop Line
Sign Post
Traffic Signal Pole
Traffic Signal Box
Traffic Signal Cable
Traffic Signal Conduit
Traffic Signal Loop
Traffic Signal Controller
Traffic Signal Pedestal
Traffic Signal Pedestrian Push Button
Traffic Signal Pedestrian Signal
Traffic Signal Vehicle Signal
Traffic Signal Video Detection Camera
Traffic Signal Video Detection Cable
Traffic Signal Video Detection Processor
Traffic Signal Video Detection Rack
Traffic Signal Video Detection Wire
Traffic Signal Video Detection Wire Harness
Traffic Signal Video Detection Wire Harness Connector
Traffic Signal Video Detection Wire Harness Connector Cover
Traffic Signal Video Detection Wire Harness Connector Cover Screw
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt
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Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer
Traffic Signal Video Detection Wire Harness Connector Cover Screw Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut Bolt Washer Nut











CARMINA WOOD DESIGN

REVISIONS:

No.	Description	Date

BLISS

PROJECT NAME:

Concept Documents for:

Mixed Use Development

1760 Maple Drive
Amherst, New York

Issued for Approval:	09.19.2023
Drawn By:	BJS
Checked By:	BJS

DRAWING NAME:

Exterior Perspectives

DRAWING NO.

A-500

Project No: 22.015

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



1 A-501 MAPLE ROAD ELEVATION
SCALE: 3/32" = 1'-0"

Total Upper: 12551sf x 20% = 2510.20sf Required Upper Floor Transparency = 3904.42sf or 31.11% Provided
Total Ground: 2876sf x 20% = 575.20sf Required Ground Floor Transparency = 1079.56sf or 37.54% Provided



2 A-501 COURTYARD ELEVATION
SCALE: 3/32" = 1'-0"



3 A-501 WEST ELEVATION
SCALE: 3/32" = 1'-0"

Total Upper: 2972sf x 20% = 594.40sf Required Upper Floor Transparency = 345.00sf or 11.61% Provided
Total Ground: 681sf x 20% = 136.20sf Required Ground Floor Transparency = 115.00sf or 16.89% Provided



4 A-501 PARKING LOT ELEVATION
SCALE: 3/32" = 1'-0"

CARMINAWOOD DESIGN

REVISIONS:
No. Description Date

BLISS

PROJECT NAME:
Concept Documents for:
Mixed Use Development
1760 Maple Drive
Amherst, New York

Issued for Approval: 09.19.2023
Drawn By: BJS
Checked By: BJS

DRAWING NAME:
Building 1
Exterior Elevations

DRAWING NO.
A-501

Project No: 22.015

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



1 A-502 PARKING LOT ELEVATION
SCALE: 3/32" = 1'-0"

Total Upper: 7920 x 20% = 1584sf Required Upper Floor Transparency = 2462.75sf or 31.10% Provided
Total Ground: 2494sf x 20% = 498.80sf Required Ground Floor Transparency = 972.00sf or 38.97% Provided



2 A-502 MAPLE ROAD ELEVATION
SCALE: 3/32" = 1'-0"

Total Upper: 2972 x 20% = 594.40sf Required Upper Floor Transparency = 414.00sf or 13.93% Provided
Total Ground: 935sf x 20% = 187.00sf Required Ground Floor Transparency = 210.00sf or 22.46% Provided



3 A-502 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



4 A-502 COURTYARD ELEVATION
SCALE: 3/32" = 1'-0"

CARMINAWOOD DESIGN

REVISIONS:
No. Description Date

BLISS

PROJECT NAME:
Concept Documents for:
Mixed Use Development
1760 Maple Drive
Amherst, New York

Issued for Approval: 09.19.2023
Drawn By: BJS
Checked By: BJS

DRAWING NAME:
Building 2
Exterior Elevations

DRAWING NO.
A-502

Project No: 22.015

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)



1 A-503 PARKING LOT ELEVATION
SCALE: 3/32" = 1'-0"

Total Upper: 1570sf x 20% = 314.00sf Required Upper Floor Transparency = 421.84sf or 26.87% Provided
Total Ground: 1570sf x 20% = 314.00sf Required Ground Floor Transparency = 421.80sf or 26.87% Provided



2 A-503 END ELEVATIONS
SCALE: 3/32" = 1'-0"

Total Upper: 332sf x 20% = 66.40sf Required Upper Floor Transparency = 35.16sf or 10.59% Provided
Total Ground: 332sf x 20% =66.40sf Required Ground Floor Transparency = 23.00sf or 6.93% Provided



3 A-503 NORTH ELEVATION
SCALE: 3/32" = 1'-0"

CARMINAWOOD DESIGN

REVISIONS:

No.	Description	Date

BLISS

PROJECT NAME:
Concept Documents for:
Mixed Use Development
1760 Maple Drive
Amherst, New York

Issued for Approval: 09.19.2023
Drawn By: BJS
Checked By: BJS

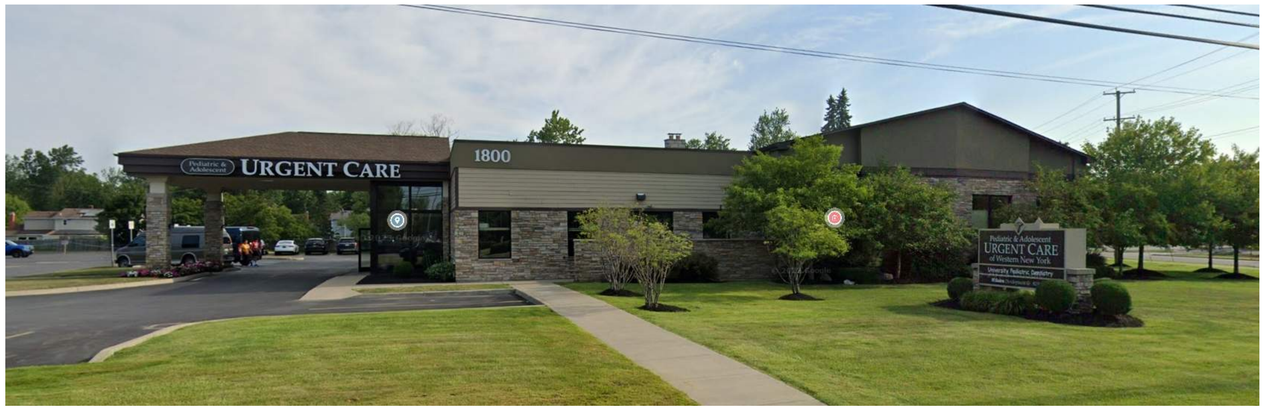
DRAWING NAME:
Townhome
Exterior Elevations

DRAWING NO.
A-503

Project No: 22.015

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)









CARMINA WOOD DESIGN

REVISIONS:

No.	Description	Date

BLISS

PROJECT NAME:

Concept Documents for:

Mixed Use Development

1760 Maple Drive
Amherst, New York

Issued for Approval:	09.19.2023
Drawn By:	BJS
Checked By:	BJS

DRAWING NAME:

Context Buildings

DRAWING NO.

A-504

Project No: 22.015

Attachment: SP-20230-06 drawings 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard,
Planning Direct

Daniel J. Ulatowski,
Assistant Planning D

SEQR
Negative Declaration

OCT25'23 A:10:17 RCVD

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency: Town of Amherst
Planning Board

Project: SP-2023-06

Address: 5583 Main Street
Williamsville, NY 14221
(716) 631-7051

Date: October 19, 2023

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: Unlisted Action

Description of Action: A mixed use project consisting of two four-story mixed use buildings totaling 139,680± square feet with 7,000 sq. ft. of commercial space on the first floor of the easterly building and 107 total apartment units for lease in the two buildings, two two-story townhome buildings with attached garages totaling 11 units and three ten car garage structures. Parking is proposed for 188 vehicles with two curb cuts to Maple Road. Work will include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 1720, 1740 & 1760 Maple Road, Amherst, Erie County

Petitioner: PB Investors, LLC

Attachment: SP-2023-06 signed neg dec 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

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 (Assistant Town Engineer, Engineering Services Division and Stormwater Management Officer) on October 17, 2023, October 16, 2023, and October 18, 2023 reviewed the Grading, Drainage and Utility Plans submitted on October 10, 2023, Engineer's Report submitted on October 10, 2023, Erosion Control Plan submitted on October 10, 2023 and Geotechnical Report prepared by Barron & Associates, PC dated January 9, 2009. The Stormwater Pollution Prevention Plan (SWPPP) submitted on August 21, 2023 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. The Planning Department reviewed a Landscape Plan submitted on October 10, 2023 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 Town amended its Comprehensive Plan on July 25, 2022 to permit mixed uses, and subsequently rezoned the subject property to permit the subject project.

4. The project is within an area identified by the State as having potential archaeological or historical significance. The NYS Office of Parks, Recreation and Historic Preservation has reviewed the project and, as stated in their letter of September 22, 2023 determined that there will be no impact on these 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 Deep Corridor 5 (DC-5) zoning district; neighboring uses are, Office, Multi-family and single family and zoned Office Building District (OB), Community Facilities District (CF), Multi-family Residential district Seven (MFR-7) and Residential District Three (R-3); therefore, the project is consistent with surrounding land use.

Attachment: SP-2023-06 signed neg dec 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

6. The proposed subject development includes two four-story mixed use buildings totaling 139,680± and 107 apartment units, and 11 townhomes which will not cause a major change in the use of either the quantity or type of energy.

7. The project will not create any hazard to human health. The Fire Chief's Association on October 19, 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 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. The two four-story mixed use buildings totaling 139,680± square feet with 7,000 sq. ft. of commercial space on the first floor of the easterly building and 107 total apartment units for lease in the two buildings which are located along the Maple Road frontage of the parcel with two, two-story townhome buildings with attached garages and three ten car garage structures located on the northerly portion of the site between the four story building and adjacent residential district and therefore will be consistent with the scale of surrounding land uses.

9. The function of the proposed 7,000 sq. ft. of commercial space and 118 leased units will increase the number of people using the site over its previous level of use.

10. Review of the Traffic Impact Study (TIS) prepared by SRF Associates dated August 23, 2022 and submitted to the Planning Department on August 21, 2023 and reviewed by the Town Traffic/Safety Board on September 7, 2023 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, Highway on September 25, 2023, Assessor on August 30, 2023, Plumbing Division on October 12, 2023, and Right-of-Way Agent on August 28, 2023 along with outside agency New York State Office of Parks, Recreation and Historic Preservation on September 22, 2023. 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.

Attachment: SP-2023-06 signed neg dec 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Planning Board Approval
Moved by Giuliani; Seconded by Kahn; Ayes 6; Noes 0; Absent 1 (Chmiel).

Scott Marshall, Principal Planner — Date 10/24/2023

Robert J. Gilmour, Planning Board Chair — Date 10/26/2023

SM/ac
X:\Current_Planning\Files\Site Plans\2023\SP-2023-06_(1720_1740_&_1760_Maple_Rd)_2023\SP-2023-06_neg dec_101923.doc.docx
cc: Commissioner of Building
Town Engineer
Fire Chiefs'
Highway
Traffic/Safety
ECDEP
Sean Hopkins, 5500 Main Street, Suite 343, Williamsville, NY 14221
Patrick Sheedy Jr., Carmina Wood Design, 487 Main St., Suite 500, Buffalo, NY 14203
Paul Bliss, 6790 Main St., Suite 100, Williamsville, NY 14221

Attachment: SP-2023-06 signed neg dec 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2023-06

PETITIONER

PB Investors LLC
c/o Sean Hopkins, Esq.
Hopkins Sorgi and McCarthy
5500 Main Street, Suite 343
Williamsville, NY 14221

PROPERTY LOCATION

1720, 1740 & 1760 Maple Road

WHEREAS, the Town of Amherst Planning Board on Thursday, October 19, 2023 held a public hearing on a Site Plan for a mixed use project consisting of two four-story buildings totaling 139,680±, 11 townhomes and 107 apartment units, 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, the site and building plans were reviewed by the Town's Design Advisory Board and their recommendations were provided, and

WHEREAS, in accordance with Section 8-7-8 of the Zoning Ordinance, the Planning Board finds that:

A. The site plan includes usable space for active and passive recreation, including pedestrian connections.

B. The site plan does not include open space lands for public ownership and use offered for dedication or other disposition to the Town or other public entity.

C. School sites and facilities are adequate to accommodate the proposed site plan.

D. The site plan includes the extension of private streets to adjacent properties.

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.

Attachment: SP-2023-06 signed resolution 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2023-06

PETITIONER	PROPERTY LOCATION
PB Investors LLC	1720, 1740 & 1760 Maple Road

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 may be waived as no potential regulated wetlands were identified on the project site as stipulated in the Earth Dimensions, Inc. letter dated October 12, 2022.

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

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:

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, 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 rezoning of the subject site from R3 and OB to DC-5 (Z-2022-08 be finalized prior to issuance of an approved site plan drawing set by the Planning Department.

5. That the properties located at 1720, 1740 and 1760 Maple Road be merged into a single parcel as stipulated in the Assessor's Office letter dated August 30, 2023 prior to issuance of an approved site plan drawing set by the Planning Department.

6. That the 50 foot wide drainage easement to the Town of Amherst along the western portion of the subject site be approved and filed copies be provided to the Planning Department prior to issuance of an approved site plan drawing set by the Planning Department.

Attachment: SP-2023-06 signed resolution 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2023-06

PETITIONER

PB Investors LLC

PROPERTY LOCATION

1720, 1740 & 1760 Maple Road

7. That the reciprocal agreement for the shared use of common and or shared facilities between the subject site and the site located at 1800 Maple Road be approved and filed copies be provided to the Planning Department prior to issuance of an approved site plan drawing set by the Planning Department.

8. That a minor site plan be submitted and approved for changes to the site located at 1800 Maple Road shown to be implanted as part of the subject site plan prior to issuance of an approved site plan drawing set by the Planning Department.

9. That an address plan for the development be submitted and approved and incorporated into the approved site plan drawing set issued by the Planning Department.

10. That the concerns raised in the Traffic Safety Board's letter dated September 7, 2023 be addressed to the satisfaction of that board.

11. That the requirements in the Town's Stormwater Managements Officer's letter dated October 18, 2023 be addressed to the satisfaction of that officer.

12. That the revisions requested in the Amherst Fire Chiefs' Association letter dated October 19, 2023 be made to the satisfaction of the association.

13. That the concerns and requirements raised in the Engineering Department letter dated October 17, 2023 relating to sanitary sewer service be address to the satisfaction of the Town Engineer.

14. That the requirements in the Engineering Services Division letter dated October 16, 2023 are complied with.

15. That the Zoning Enforcement Officer's comments in the Planning Department letter dated October 18, 2023 be addressed to the satisfaction of that officer.

16. That the departmental comments in the Planning Department letter dated October 18, 2023 be addressed to the satisfaction of that department.

17. That the Town's Landscape Architect's comments in the Planning Department letter dated October 18, 2023 be addressed to the satisfaction of the architect.

18. That the recommendations of the Design Advisory Board relative to building design be incorporated into the approved site plan drawing set issued by the Planning Department

Attachment: SP-2023-06 signed resolution 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2023-06

PETITIONER	PROPERTY LOCATION
PB Investors LLC	1720, 1740 & 1760 Maple Road

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 19, 2023; moved by Giuliani; seconded by Kahn; ayes 6; noes 0; absent 1 (Raffaele).

Robert J. Gilmour, Planning Board Chair

10/26/2023
Date

SM/ac
X:\Current_Planning\Files\Site Plans\2023\SP-2023-06_(1720_1740_&_1760_Maple_Rd)_2023\SP-2023-06_resolution_101923.doc

cc: Commissioner of Building
Town Engineer
Fire Chiefs
Traffic/Safety
Highway Superintendent
ECDEP
Sean Hopkins, 5500 Main Street, Suite 343, Williamsville, NY 14221
Patrick Sheedy Jr., Carmina Wood Design, 487 Main St., Suite 500, Buffalo, NY 14203
Paul Bliss, 6790 Main St., Suite 100, Williamsville, NY 14221

Approved Plan: Carmina Wood Design
Received: October 10, 2023

Attachment: SP-2023-06 signed resolution 101923 (27916 : SP-2023-06 - 1720, 1740, 1760 Maple Road)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

ADOPTED

Meeting: 10/19/23 06:30 PM
Department: Planning
Category: Subdivisions & Relief from Conditions
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 27793

PLANNING BOARD ITEM (ID # 27793)

Request to Rezone 5.03± Acres of Land from R-3 to R-4, Z-2023-07

Property located at 4774 & 4780 Sheridan Drive
RAS Development Company LLC, Petitioner

The purpose of this rezoning request is to allow for the potential future development of the subject site as single-family attached residential homes as required for the petitioner's entry into the NYSDEC Brownfield Cleanup Program to remediate hazardous materials on the subject sites. (For further information please refer to the letter from Roux Environmental Engineering & Geology, DPC to the Planning Director dated September 28, 2023.)

Sean Hopkins, Esq., Hopkins Sorgi and McCarthy, represented the petitioner, explained the proposal and was available to answer questions from the Board. Patrick Sheedy, Carmina Wood Design, and Rob Savarino, RAS Development, were also present.

In response to the Board's questions, Mr. Hopkins stated the petitioner is proceeding with 22 units, and the neighbors had the opportunity to raise concerns at a meeting held by Mr. Savarino. Mr. Savarino stated the parcel will be cleaned up to the highest level allowed for residential use and Track 4 is less expensive than Track 1.

Elliott Frank, 4784 Sheridan Drive; Edgar DeLeon, 50 Jordan Road; and Susan Wolf 45 Jordan Road spoke in opposition to the proposal.

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

Following discussion, Mr. Chmiel moved to approve the request and amend draft condition 1 that the density of the project site shall not exceed 4.3 units per acre on the resolution. The motion was seconded by Ms. Kahn and carried. Ayes 4, Noes 2 (Gill, Penberthy), Absent 1 (Raffaele).

ATTACHMENTS:

- Z-2023-07 application 101923 (PDF)
- Z-2023-07 drawings 101923 (PDF)
- Z-2023-07 signed resolution 101923 (PDF)

RESULT:	**APPROVED [4 TO 2]**
MOVER:	Michael Chmiel, Board Member
SECONDER:	Carrie H. Kahn, Board Member
AYES:	Robert J. Gilmour, Michael Chmiel, Dal Giuliani, Carrie H. Kahn
NAYS:	Harbinder Gill, Brittany Lee Penberthy
ABSENT:	Joseph P. Raffaele Jr.

Rezoning Application & Supporting Documentation - Rezoning of 4774 & 4780 Sheridan Drive from R-3 to R-4
Applicant: Savarino Development Corp. I c/o Sean Hopkins, Esq., Hopkins Sorgi & McCarthy PLLC

Prepared by: Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

RECEIVED
JUL 17 2023
TOWN OF AMHERST
PLANNING DEPT.

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Rezoning Review and, if required Comprehensive Plan Amendment

For Official Use

File #: Z-2023-07 **Acreage** 5.03 **Fee $** 2,265

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Accepted by Town Clerk & Fee Paid _____ ACCEPTED BY DATE

Materials Checked by Building Dept. _____ RECEIVED BY DATE

Materials Received by Planning Dept. SJD 7.17.23 RECEIVED BY DATE

		Fill In Applicable Fees
2 ACRES OR LESS	**$1,250**	$1,250.00
2 – 20 ACRES **$1,250 + $250/acres or fraction thereof over 2 acres**		$1,000.00
20 – 30 ACRES **$5,700 + $150/acre or fraction thereof over 20 acres**		_____
OVER 30 ACRES **$6,900 +$75/acre or fraction thereof over 30 acres**		_____
Request for Relief of/Change to Conditions of Zoning Approval	**$ 1,200**	_____
AFFIDAVIT FEE FOR PUBLIC HEARING	**$ 15.00**	$15.00
TOTAL FEE:	$ 2,265.00	

[Note: A completed Part 1 of the Full Environmental Assessment Form along with Page 5[a] and Attachment "A" is attached as Exhibit "1".]

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

TO BE COMPLETED BY APPLICANT

1. **Petitioner:** Name: Savarino Development Corp. I

Address: c/o Sean Hopkins, Esq.
5500 Main Street, Suite 343
Williamsville, New York 14221
City State Zip Code

Phone: 510-4338 Fax:

E Mail shopkins@hsmlegal.com

2. **The undersigned hereby petitions the Honorable Town Board to rezone the following described property**

From: R-3 District

To: R-4 District

3. **Street address of land to be rezoned:** (must be verified by Town Assessor's Office)

4774 and 4780 Sheridan Drive

SBL #: SBL Nos. 68.12-1-10 and 68.12-1-11

4. **Area of land to be rezoned** (in acres): Approximately 5.029 Acres

5. **Owner of Land:**

Name: Estate of Edith Fruehauf, Rudolph Gleason and Greta Gleason

Address: 4780 Sheridan Drive - Williamsville, NY 14221

Telephone:

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

Name: Sean W. Hopkins, Esq.

Address: 5500 Main Street, Suite 343
Williamsville, New York 14221
Tel: 716.510-4338 - E-mail: shopkins@hsmlegal.com
City State Zip Code

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

7. Petitioner's interest in property

_____ Option to purchase

_____ Owner

__X____ Other (explain) [Authorization Letter of Property Owner Attached]

8. The following are all others having an interest in this application and join herein with the petitioner named above: (describe extent of interest; attach sheets as needed)

Not Applicable.

9. Attach Survey and Legal description of land to be rezoned. The Survey must be prepared by a New York State Licensed Land Surveyor. Legal description of the property to be rezoned from R-3 to R-4 attached as Exhibit "2" and Survey of the Project Site attached as Exhibit "3".

10. Said property has the following deed restrictions or Covenants: (attach copy) Not Applicable.

Liber _____ Page _____

11. Information on proposed project:

A. Description of the character of the proposed development:

See Exhibit 4.

B. Rationale for rezoning request:

1. Why was this site chosen?

See Exhibit 4.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

2. Why cannot land be used with the existing zoning?

See Exhibit 4.

3. How will this rezoning impact surrounding properties?

See Exhibit 4.

4. How will this rezoning impact the school system?

See Exhibit 4.

12. Quantitative Data:

A. Total # of dwelling units: 22 units

B. Distribution of dwelling units by type: Attached residential units for sale

C. Gross Residential Density per acre: 4.4 units per acre

D. Total amount of Open Space: Not Applicable

E. Proposed Non-Residential Floor Area: Not Applicable.

[Note: A reduced size copy of the Concept Site Plan for the proposed project is provided at Exhibit "6".]

13. Development Schedule:

Start: 2024

Finish: 2025

Stages (# of): 1 stage for infrastructure and site improvements

14. If any portion of the proposed development is planned to be sold or leased, please describe:

The apartments will be leased.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

15. Open Space ownership and maintenance provisions (if applicable):

Greenspace and landscaping will be privately owned and maintained.

16. Basis for Findings (Sec. 8-3-5 of the Town Zoning Code) (Attach sheets and supplemental materials as necessary.)

A. The proposed zoning and development plan must be generally consistent with the policies of the Comprehensive Plan and the Town Zoning Ordinance.

1. State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps, and/or figures in the plan that support the proposed zoning at this location (The Comprehensive Plan document is available at the Planning Department, Town Clerk's Office, Amherst libraries, or at www.amherst.ny.us). Add sheets as needed.

See Exhibit 5.

2. Pursuant to NYS Town Law Section 272a(11), "all Town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this Section." The Town Board adopted the Comprehensive Plan pursuant to NYS Town Law 272 on January 2, 2007. If the rezoning is approved, the Town Board may require the Plan to be amended, as applicable.

Cite all text, map, and / or figures that must be amended to support the proposed zoning at this location (attach pages as necessary) and provide detailed suggested amendments.

See Exhibit 5.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

3. State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance:

See Exhibit 5.

B. Adequate Services and Utilities are available or are proposed to be made available with the construction of the development:

1. Sanitary Sewer

Yes.

2. Storm Sewer/Drainage

Yes.

3. Water

Yes.

4. Other Yes.

C. Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:

See Exhibit 5.

D. Suitability of the subject property for uses permitted by the current versus the proposed district:

See Exhibit 5.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

E. Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:

See Exhibit 5.

17. The petitioner encloses herewith the sum of $ 2,265.00 to pay the fee, and consents to the placement of a sign(s) at the described location identifying this request for a period of time to be determined by the Town Clerk.

18. The undersigned certifies that all information required to be disclosed pursuant to Section 809 of the General Municipal Law (see below) is as follows:

The undersigned swears or affirms that all statements made herein are true, that all drawings submitted correctly show the situation involved in this petition.

Signature of Petitioner

Subscribed and sworn to before me this 15th day of July, 2023

Notary Public, Erie County, New York

MARIANNE BRAUTLACHT
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 01/14/20

N.Y.S. General Municipal Law - Section 809 Disclosure in certain applications:

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provision of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state office or any office or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them

   (a) is the applicant, or
   (b) is an officer, director, partner or employee of the applicant, or
   (c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
   (d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such applicant, petition or request.

3. In the county of Nassau the provisions of subdivisions one and two of this section shall also apply to a party officer. "Party Officer" shall mean any person holding any position or office, whether by election, appointment or otherwise, in any party as defined by subdivision four or section two of the election law.

4. Ownership of less than five per cent of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

5. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

P/CurrPlan/Applications2007/Rezoning & Comp Plan Amend App.
10/08

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

AUTHORIZATION

Estate of Edith Fruehauf, Rudolph Gleason and Greta Gleason, as the owners of property located at 4774 and 4780 Sheridan Drive in the Town of Amherst ("Project Site"), hereby authorizes Savarino Development Corp. I, Hopkins Sorgi & McCarthy PLLC, Carmina Wood Design and its other consultants to seek an amendment of the zoning classification of the Project Site from R-3 to MFR-4A, as well as all other required approvals from the Town of Amherst municipal boards and all other governmental agencies in connection with the development of the Project Site as a residential project.

Date: June 9, 2023

ESTATE OF EDITH FRUEHAUF

Signature: Diane Wolf POA Fo
Print Name: Diane Wolf Rudolph

Signature: Diane Wolf POA Gleas
Print Name: Greta Gleason Exec

Signature: Diane Wolf POA Ed
Print Name: Rudolph Gleason Est

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 1

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Full Environmental Assessment Form
Part 1 - Project and Setting

Prepared By: Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

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: Proposed Residential Project		
Project Location (describe, and attach a general location map): 4774 and 4780 Sheridan Drive - Town of Amherst - Erie County		
Brief Description of Proposed Action (include purpose or need): The proposed project ("action") consists of the development of the parcels at 4774 and 4780 Sheridan Drive ("Project Site") as a residential project consists of eleven two-story building each comprised of two homes for sale [22 total units]. The proposed action has been defined broadly to include all all proposed site improvements as well as all required discretionary approvals and permits as well as including an amendment of the zoning classification of the Project Site from R-3 to R-4 by the Town of Amherst Town Board and approvals and permits needed from involved agencies including entry into the NYSDEC Brownfield Cleanup Program. The project purpose is to develop the Project Site for low density residential purposes per the recommended land use in Figure 6 of the Town's adopted Comprehensive Plan. The proposed project is an Unlisted Action pursuant to the State Environmental Quality Review Act ("SEQRA") and will not result in any potentially significant adverse environmental impacts.		
Name of Applicant/Sponsor: Savarino Development Corp. I c/o Sean Hopkins, Esq.	Telephone: 716.510-4338 E-Mail: shopkins@hsmlegal.com	
Address: 5500 Main Street, Suite 343		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role): Same as above.	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Estate of Edith Fruehauf, Rudolph Gleason and Greta Gleason	Telephone: E-Mail:	
Address: 4780 Sheridan Drive		
City/PO: Williamsville	State: NY	Zip Code: 14221

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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	Town Board - Rezoning	July 17, 2023
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Planning Board - Site Plan Approval	To be Determined
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	Zoning Board of Appeals - Area Variances	To be Determined
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	ECDOH - Sewer and ECWA - Water	To be Determined
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOT - Highway Work Permit , NYSDEC - Brownfield Cleanup, SPDES Permit and DSCA	To be Determined
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):

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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?
Residential District Four (R-3)

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? Residential District Four (R-4)

C.4. Existing community services.

a. In what school district is the project site located? Amherst Central Schools

b. What police or other public protection forces serve the project site?
Town of Amherst Police Department

c. Which fire protection and emergency medical services serve the project site?
Hutchinson Hose Company

d. What parks serve the project site?
Amherst State 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)? Low density residential consisting of two-unit homes for sale.

b. a. Total acreage of the site of the proposed action? 5.03 acres
b. Total acreage to be physically disturbed? 5.03 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.03 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		22		
At completion of all phases		22		

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: stormwater management area
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater runoff
iii. If other than water, identify the type of impounded/contained liquids and their source. Not applicable.
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: 0.25 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): Earth Fill - The stormwater management area does not constitute a dam regulated by the NYSDEC.

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☑ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
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): _____

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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:

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: 5,080 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: Erie County Water Authority
- 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: 4,600 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):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Town of Amherst Wastewater Treatment Facility
- Name of district: Town of Amherst
- 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

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- 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 2.20 acres (impervious surface)

_____ Square feet or 5.03 acres (parcel size)

ii. Describe types of new point sources. Building roofs, asphalt driveway

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)?

On-site stormwater management facility

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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 _____ Proposed _____ Net increase/decrease _____

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:

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):

local grid

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: 7am to 5pm
- Saturday: 7am to 5pm [as needed]
- Sunday: n/a
- Holidays: n/a

ii. During Operations:

- Monday - Friday: n/a
- Saturday: n/a
- Sunday: n/a
- Holidays: n/a

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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:

Temporary and unavoidable storm term noise impacts resulting from the use of construction equipment during construction of the proposed project

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:

Proposed on site lighting will be dark sky compliant and in compliance with all Town of Amherst lighting regulations.

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): Golf course

ii. If mix of uses, generally describe:

Mixture of uses including Park Country Club Golf Course and residential uses including single-family and multifamily.

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	1.4	2.20	+ 0.8
• Forested	0.0	0.0	0.0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.0	0.0	0.0
• Agricultural (includes active orchards, field, greenhouse etc.)	0.0	0.0	0.0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.0	0.0	0.0
• Wetlands (freshwater or tidal)	0.0	0.0	0.0
• Non-vegetated (bare rock, earth or fill)	0.0	0.0	0.0
• Other Describe: Greenspace and landscaping	3.63	2.83	- 0.8

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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: _____

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:
There is contamination on the project site resulting from its historical use as a nursery [herbicides and pesticides].

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? > 40 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:

Schoharie silt loam	84 %
Urban Land-Odessa complex	16 %
	%

d. What is the average depth to the water table on the project site? Average: 36 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? [There are any wetlands subject to the jurisdiction of either the USACE or NYSDEC located on 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:
- 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:
Typical suburban species

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: Amherst State Park, Glen Park, Audubon Town Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): local park

iii. Distance between project and resource: 1-4 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 Savarino Development Corp. I Date July 17, 2023

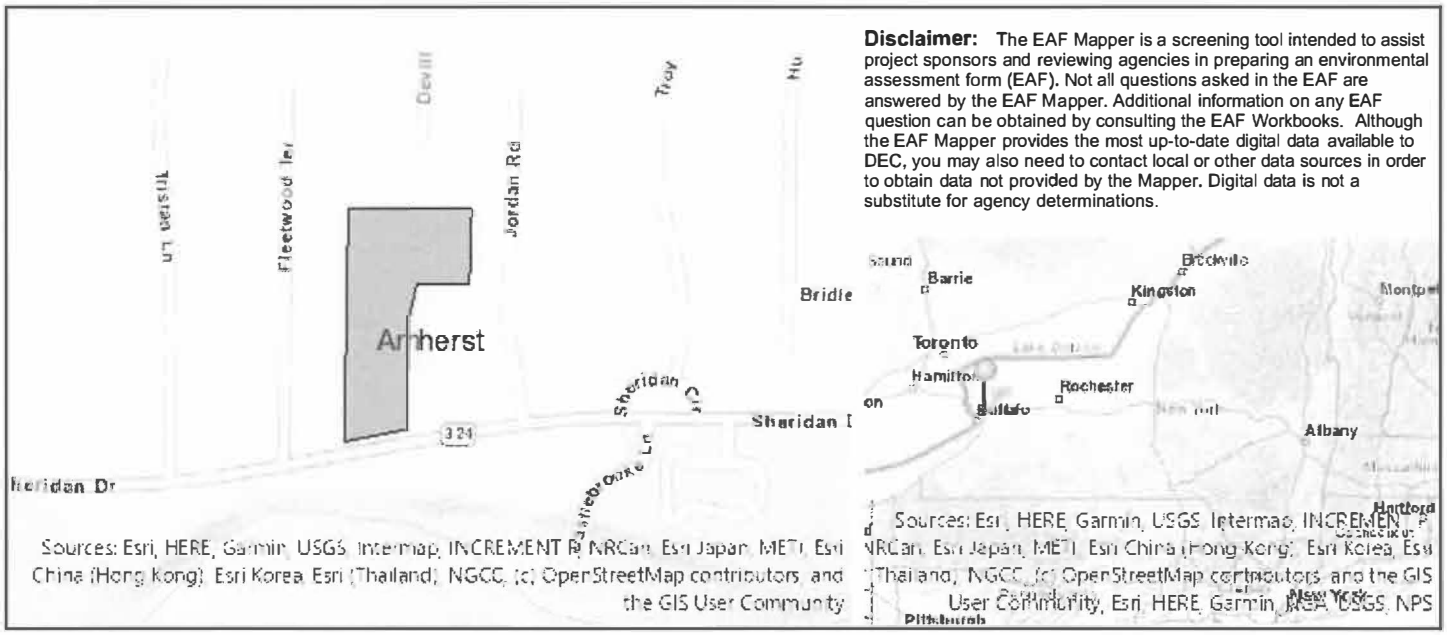
Signature _____ Title Attorney for Project Sponsor

PRINT FORM

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EAF Mapper Summary Report

Friday, June 16, 2023 10:58 AM



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]	No
E.2.j. [100 Year Floodplain]	No
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

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
Proposed Residential Project - 4774 & 4780 Sheridan Drive

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
Schoharie silt loam	✔		✔		✔
Urban Land Odessa complex	✔		✔		✔

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

[Three copies of the Geotechnical Report prepared by Ray Teeter dated November 16, 2018 have been submitted.]

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:
4774 Sheridan Drive - 0.67 ac
4780 Sheridan Drive - 4.36 ac

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 hour upon completion of project 12
Source: ITE Trip Generator

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:

4,400 average flow 17,600 peak flow.

(Please note that 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.)

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 2

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 2 OF REZONING APPLICATION

LEGAL DESCRIPTION OF PROPERTY TO BE REZONED FROM R-3 TO 4-4

ALL THAT TRACT OR PARCEL OF LAND, situate in the Town of Amherst, County of Erie, and State of New York, being part of Lot No, 60, Township 12, and Range 7 of the Holland Land Company's Survey, bounded and described as follows:

COMMENCING at a point in the center line of Sheridan Drive, distant 214.37 feet west of the east line of lands conveyed to Michael Trenz and Elsie Trenz, his wife by deed recorded in the Erie County Clerk's Office in Liber 3381 of Deeds at page 411;

thence northerly along the west line of lands per deed filed in the Erie County Clerk's Office in Liber 5022 Deeds page 430, at an interior angle of 101º11', a distance 50.97 feet to a point in the south line of said Sheridan Drive being the True Point and Place of Beginning;

thence westerly along the said south line of Sheridan Drive 215.35 feet to a point in the west line of said Michael Trenz and Elsie Trenz in Liber 3381 of Deeds at page 411;

thence northerly at an interior angle of 78º47' and along the west line of said Trenz, 789.86 feet to a point;

thence east at an interior angle of 90º59', a distance of 422.64 feet to a point in the east line of said Michael Trenz and Elsie Trenz in Liber 3381 of Deeds at page 411;

thence south at an interior angle of 88º38'9" and along the east line of said Trenz, 257.10 feet to a point, being the northeast corner of lands conveyed to Edward Roessel and Jennie Roessel, his wife by deed recorded in said Erie County Clerk's Office in Liber 4296 of Deeds at page 180;

thence westerly at right angles along said Roessel's north line, 178.00 feet to the northwest corner thereof;

thence southerly along said Roessel's west line, 101.72 feet to an angle point therein;

thence continuing along said Roessel's west line and parallel with the east line of Lot No. 60, 18.00 feet to a point;

thence westerly at right angles to the east line of said Lot No. 60, 8.29 feet to the northwest corner of lands conveyed to John J. Julian and Frances J. Julian, his wife by deed recorded in said Erie County Clerk's Office in Liber 5022 of Deeds at page 430;

thence southerly at right angles and along the west line of said lands so conveyed to said John J. Julian and Frances J. Julian, 144.32 feet to an angle point therein;

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

thence continuing southerly at an exterior angle of 178º21'05", 237.22 feet to the True Point and Place of Beginning.

This parcel containing 5.029 acres of land more or less.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Exhibit 2 of Rezoning Application
Legal Description of Property to be Rezoned from R-3 to R-4
Page 2 of 2

EXHIBIT 3

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

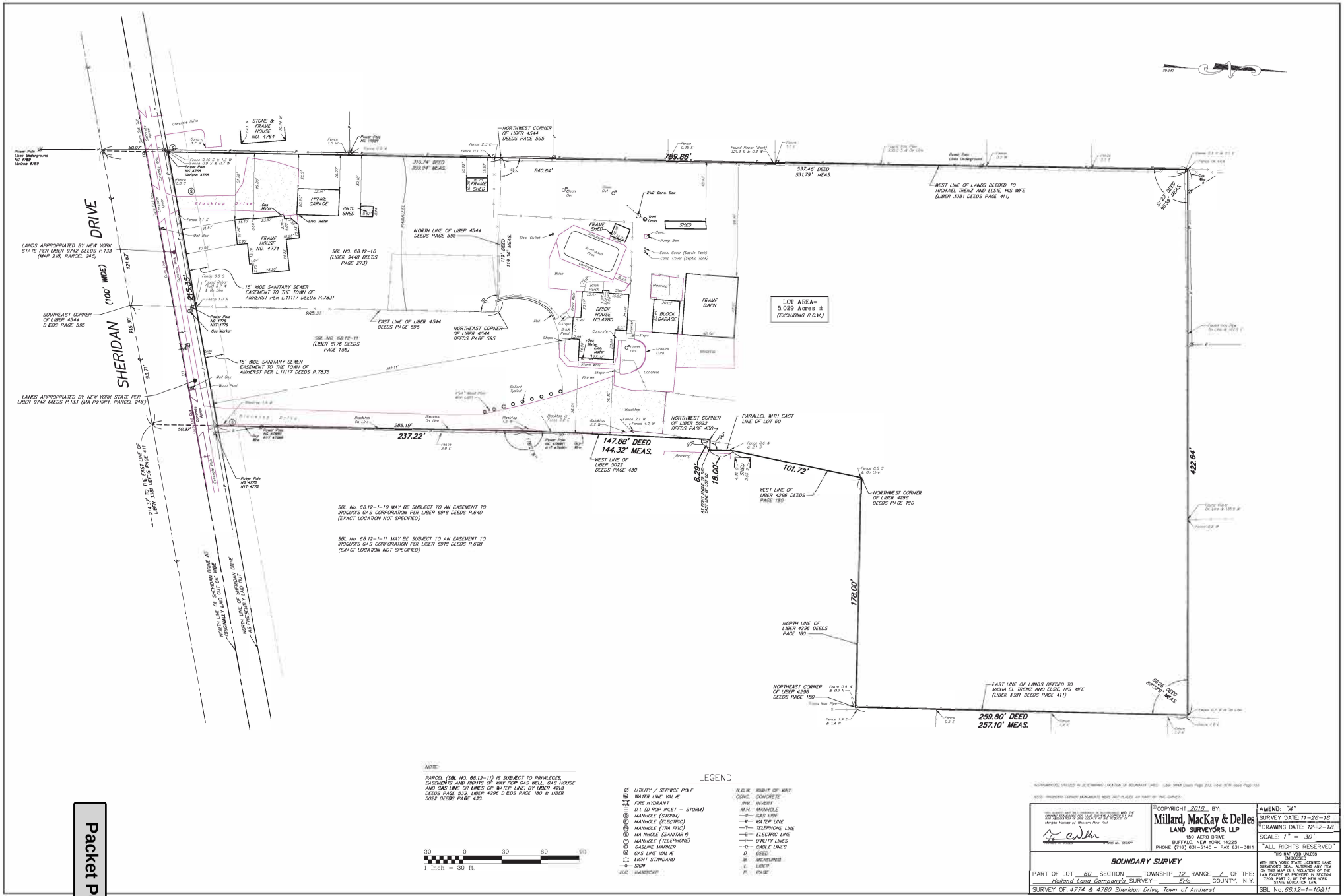

SHERIDAN DRIVE (100' WIDE)
LANDS APPROPRIATED BY NEW YORK STATE PER LIBER 9742 DEEDS P.133 (MAP 218, PARCEL 245)
LANDS APPROPRIATED BY NEW YORK STATE PER LIBER 9742 DEEDS P.133 (MA P219R1, PARCEL 246)
SOUTHEAST CORNER OF LIBER 4544 DEEDS PAGE 595
NORTHWEST CORNER OF LIBER 4544 DEEDS PAGE 595
NORTH LINE OF LIBER 4544 DEEDS PAGE 595
EAST LINE OF LIBER 4544 DEEDS PAGE 595
NORTHEAST CORNER OF LIBER 4544 DEEDS PAGE 595
SBL NO. 68.12-10 (LIBER 9448 DEEDS PAGE 273)
SBL NO. 68.12-11 (LIBER 8176 DEEDS PAGE 155)
15' WIDE SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER L.11117 DEEDS P.7831
15' WIDE SANITARY SEWER EASEMENT TO THE TOWN OF AMHERST PER L.11117 DEEDS P.7835
STONE & FRAME HOUSE NO. 4764
FRAME HOUSE NO. 4774
FRAME GARAGE
VINYL SHED
FRAME SHED
SHED
BRICK HOUSE NO.4780
FRAME BARN
BLOCK GARAGE
LOT AREA= 5.029 Acres ± (EXCLUDING R.O.W.)
789.86'
840.84'
537.45' DEED
531.79' MEAS.
310.74' DEED
339.04' MEAS.
119.34' DEED
119.34' MEAS.
237.22'
288.19'
147.88' DEED
144.32' MEAS.
101.72'
422.64'
178.00'
259.80' DEED
257.10' MEAS.
NORTHWEST CORNER OF LIBER 5022 DEEDS PAGE 430
WEST LINE OF LIBER 5022 DEEDS PAGE 430
PARALLEL WITH EAST LINE OF LOT 60
WEST LINE OF LIBER 4296 DEEDS PAGE 180
NORTHWEST CORNER OF LIBER 4296 DEEDS PAGE 180
NORTH LINE OF LIBER 4296 DEEDS PAGE 180
NORTHEAST CORNER OF LIBER 4296 DEEDS PAGE 180
EAST LINE OF LANDS DEEDED TO MICHAEL TRENZ AND ELSIE, HIS WIFE (LIBER 3381 DEEDS PAGE 411)
WEST LINE OF LANDS DEEDED TO MICHAEL TRENZ AND ELSIE, HIS WIFE (LIBER 3381 DEEDS PAGE 411)
214.37' TO THE EAST LINE OF LIBER 3381 DEEDS PAGE 411
NORTH LINE OF SHERIDAN DRIVE AS ORIGINALLY LAID OUT 66' WIDE
NORTH LINE OF SHERIDAN DRIVE AS PRESENTLY LAID OUT
SBL No. 68.12-1-10 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.640 (EXACT LOCATION NOT SPECIFIED)
SBL No. 68.12-1-11 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.628 (EXACT LOCATION NOT SPECIFIED)
NOTE:
PARCEL (SBL NO. 68.12-1-11) IS SUBJECT TO PRIVILEGES, EASEMENTS AND RIGHTS OF WAY FOR GAS WELL, GAS HOUSE AND GAS LINE OR LINES OR WATER LINE, BY LIBER 4218 DEEDS PAGE 538, LIBER 4296 D EDS PAGE 180 & LIBER 5022 DEEDS PAGE 430.
LEGEND
UTILITY / SERVICE POLE
WATER LINE VALVE
FIRE HYDRANT
D.I. (D ROP INLET – STORM)
MANHOLE (STORM)
MANHOLE (ELECTRIC)
MANHOLE (TRA FFIC)
MA NHOLE (SANITARY)
MANHOLE (TELEPHONE)
GASLINE MARKER
GAS LINE VALVE
LIGHT STANDARD
SIGN
H.C. HANDICAP
R.O.W. RIGHT OF WAY
CONC. CONCRETE
INV. INVERT
M.H. MANHOLE
GAS LINE
WATER LINE
TELEPHONE LINE
ELECTRIC LINE
UTILITY LINES
CABLE LINES
D. DEED
M. MEASURED
L. LIBER
P. PAGE
30 0 30 60 90
1 Inch = 30 ft.
COPYRIGHT 2018 BY:
Millard, MacKay & Delles
LAND SURVEYORS, LLP
150 AERO DRIVE
BUFFALO, NEW YORK 14225
PHONE (716) 631-5140 ~ FAX 631-3811
AMEND: "A"
SURVEY DATE: 11-26-18
DRAWING DATE: 12-2-18
SCALE: 1" = 30'
"ALL RIGHTS RESERVED"
THIS MAP VOID UNLESS EMBOSSED WITH NEW YORK STATE LICENSED LAND SURVEYOR'S SEAL. NOTICE: ANY TEXT OR GRAPHIC ALTERATION OF THIS MAP IN ANY WAY EXCEPT AS PROVIDED BY SECTION 7209, PART 2, OF THE NEW YORK STATE EDUCATION LAW.
BOUNDARY SURVEY
PART OF LOT 60 SECTION ____ TOWNSHIP 12 RANGE 7 OF THE: Holland Land Company's SURVEY – Erie COUNTY, N.Y.
SURVEY OF: 4774 & 4780 Sheridan Drive, Town of Amherst
SBL No. 68.12-1-10&11

EXHIBIT 4

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 4

REZONING OF 4774 & 4780 SHERIDAN DRIVE FROM R-3 TO R-4

Question 11(A): Description of the character of the proposed development:

Response to Question 11(A): The proposed project consists of the development of 4774 and 4780 Sheridan Drive (the "Project Site") as eleven (11) residential buildings each consisting of two residential units for sale [22 total units].[1] Each of the residential units will have an attached garage and the project will result in the clean-up of the contamination located on the parcel at 4780 Sheridan Drive resulting from former use as a nursery [Gleason Nursery] via entry into the NYSDEC Brownfield Program. A full-size copy of the Concept Site Plan [Drawing C-100] prepared by Carmina Wood Design depicting the layout of the proposed project is attached is attached and a reduced-size copy of the Concept Site Plan is also attached as **Exhibit "6"**.

Question 11(B)(1): Rationale for rezoning request: 1. What was this site chosen?

Response to Question 11(B)(1): The Project Site is an appropriate location for the requested rezoning from R-3 to R-4 to accommodate the proposed residential project since the requested R-4 zoning classification is consistent with Figure 6 of the adopted Comprehensive Plan that designates the Project Site as appropriate for low intensity residential uses. A color copy of Figure 6 of the Comprehensive Plan is attached as **Exhibit "7"**. A color excerpt of the Town of Amherst Zoning Map is attached as Exhibit "8" and an aerial photograph of the Project Site and surrounding vicinity is attached as Exhibit "9".

Question 11(B)(2): Why cannot land be used with the existing zoning?

[1] A legal description of the Project is attached as **Exhibit "2"** and a full-size copy of the Survey of the Project Site is attached to this Rezoning Application. A reduced-size copy of the Survey of the Project Site is also attached as **Exhibit "3"**.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Response to Question 11(B)(2): The Project Site cannot be developed as single-family homes on individual lots per the existing R-3 zoning classification since this would prevent the project from being eligible for entry into the NYSDEC Brownfield Cleanup Program. A residential subdivision was previously approved for the Project Site by the Planning Board but the project was unable to move forward due to the contamination resulting from the former use of 4780 Sheridan Drive as a nursery.

Question 11(B)(3): How will this rezoning impact surrounding properties?

Response to Question 11(B)(3): The requested rezoning of the Project Site from R-3 and R-4 to accommodate the proposed residential project consisting of upscale attached residential units for sale will not result in any potentially significant adverse impacts on surrounding properties. A completed Part 1 of the Full Environmental Assessment Form with attached Page 5[a] as prepared pursuant to the State Environmental Quality Review Act ("SEQRA") is provided at **Exhibit "1"** of this Rezoning Application. It is important to mention that the project will allow the contaminated portion of the Project Site to be remediated via the requirements of the NYSDEC Brownfield Cleanup Program. The proposed project will also require site plan approval from the Planning Board which will ensure compliance with the applicable standards for landscaping, lighting, stormwater management, etc.

Question 11(B)(4): How will this rezoning impact the school system?

Response to Question 11(B)(4): The proposed residential project will have positive impacts on the school district since it will generate annual property taxes. The target market for the proposed upscale residential units consists of empty nesters and seniors. The proposed project will potentially

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

generate some demand for educational services provided by the school district but it is anticipated the project will have overall positive fiscal impacts since it is anticipated that the annual school taxes will be higher than the cost of educational services for school age children of the future residents of the project.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 5

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 5

REZONING OF 4774 & 4780 SHERIDAN DRIVE FROM R-3 TO R-4

Question 16(A)(1): **State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps and/or figures in the plan that support the proposed zoning at this location.**

Response to Question 16(A)(1): The Town of Amherst adopted the Bicentennial Comprehensive Plan in January of 2007 after completing a lengthy planning process that included numerous public meetings and public hearings involving the Comprehensive Plan Advisory Committee, the Planning Board and the Town Board.[1] On December 14, 2020, the Town Board most recently adopted amendments to the Bicentennial Comprehensive Plan. The proposed residential project consisting of two-family buildings comprised of upscale residential units for sale is consistent with the adopted Comprehensive Plan and the land uses in the vicinity of the Project Site that includes various zoning classifications including R-3, R-4, MFR-5, MFR-6 and RC. A color excerpt of the Town of Amherst Zoning Map is attached as **Exhibit "8"**.

Question 16(A)(2): **Cite all text, map, and/or figures that must be amended to support the proposed zoning at this location and provide detailed suggested amendments.**

Response to Question 16(A)(2): The proposed project is consistent with the Comprehensive Plan and such there is not a need to amend the Comprehensive Plan to accommodate the proposed residential project consisting of two-story units with attached garages for sale.

---

[1] A copy of the resolution adopted by the Town Board for the purpose of adopting the Bicentennial Comprehensive Plan pursuant to Town Law Section 272-a is included at the beginning of the Comprehensive Plan. This resolution recites the lengthy planning history that incorporated numerous opportunities for public input as well as a coordinated environmental review pursuant to SEQRA that involved the preparation a Generic EIS and the issuance of a Findings Statement.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Question 16(A)(3): State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance:

Response to Question 16(A)(3): Section 1-2-1 of the Zoning Code is titled "Purpose" and it states as follows:

> *"The purpose of this Zoning Ordinance and the intent of the legislative authority in its adoption is to promote the environment of the town and its public health, safety, convenience, comfort, prosperity and the general welfare by regulating the use of buildings, other structures and land for residences, open space, public facilities, business, services, industry or other purposes; by regulating and restricting the bulk, height, design, building coverage and location of structures; by regulating and limiting population density; and for the aforesaid purposes, to divide the land within the limits of the town into districts of such number and dimensions generally consistent with the policies of the Comprehensive Plan and to provide procedures for the administration and amendment of said Zoning Ordinance."*

The requested rezoning of the Project Site from R-3 to R-4 to accommodate the proposed residential project consisting of units for sale on the Project Site is consistent with the "Purpose" of the Zoning Code. Section 1-2-2 of the Zoning Code sets forth the objectives of the Zoning Code. This section of the Zoning Code lists thirteen objectives that are discussed below as follows:

A. To protect the character and values of residential, institutional and public uses, business, commercial and manufacturing uses and to insure their orderly and beneficial development;

Response: The proposed rezoning of the Project Site will be consistent with the objective of protecting the character and value of existing land uses. The proposed rezoning will allow the contaminated Project Site to be developed as a 2-story buildings consisting of two units each [22 total units] with attached garages, which represents orderly and beneficial development.

B. To provide adequate open spaces for light, air and outdoor uses to include public, common and private open space areas;

Response: The proposed rezoning of the Project Site will not be inconsistent with this objective.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

C. To prevent overcrowding of land;

Response: The proposed project will not result in the overcrowding of land. The project is consistent with the type of development designated as appropriate for the Project Site per the adopted Comprehensive Plan.

D. To prevent excessive concentration of population and to prevent spare and uncoordinated development;

Response: The proposed rezoning of the Project Site will not result in excessive concentration of population and the residential project represents an example of coordinated development.

E. To regulate and control the location and spacing of buildings on the lot and in relation to the surrounding property generally consistent with the policies of the Comprehensive Plan.

Response: The responses to the Questions in Section 16 provided above sets forth the reasons the proposed rezoning is consistent with the policies of the Comprehensive Plan.

F. To protect persons and property from damage and injury due to fire or flood;

Response: The Project Site is not located in a regulated floodway or 100 yr. floodplain. The Site Plan Application review process will trigger the need for an Engineer's Report to be prepared by a licensed engineer to be prepared for review and approval by the Town's Engineering Department. The project will not increase the likelihood of damage and injury due to fire and flood. The proposed upscale residential buildings will be constructed per the stringent requirements of the NYS Building Code including the fire safety standards contained therein.

G. To preserve and protect significant natural features and vegetation, thereby preventing ecological damage and visual blight which occur when those features or vegetation are eliminated or substantially altered to serve development purposes only.

Response: The proposed rezoning and the proposed project will not be inconsistent with this objective. There are not significant natural features located on the Project Site.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

H. To assure that structure and land use arrangements are aesthetically harmonious with nearby areas and structures.

Response: The development of the Project Site in a manner consistent with the Concept Site Plan [Drawing C-100] prepared by Carmina Wood Design submitted with this Rezoning Application will be aesthetically harmonious with nearby areas and structures.[2]

I. To regulate the location of buildings and intensity of uses in relation to streets according to plans so as to cause the least interference with and be damaged least by traffic movements and hence result in lessened street congestion and improved public safety.

Response: The proposed project will have a driveway connection to Sheridan Drive. There are currently three curb cuts from the Project Site onto Sheridan Drive.

J. To establish zoning patterns that insure economical extensions for sewers, water supply waste disposal and other public utilities, as well as development of recreation, schools and other public facilities;

Response: The Project Site has access to sanitary sewer and water lines as well as necessary public utilities to service the proposed residential project.

K. To guide the future development of the town so as to being the gradual conformity of land, structures and uses generally consistent with the policies of the Comprehensive Plan.

Response: The proposed rezoning of the Project Site is consistent with this objective since the proposed use is consistent with the policies contained in the Comprehensive Plan.

L. To accomplish the specific intents and goals set forth in the introduction to the respective sections.

Response: The proposed rezoning of the Project Site is consistent with this objective.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

[2] A reduced-size copy of the Concept Site Plan [Drawing C-100] is attached as **Exhibit "6"**.

M. To protect the community from visual pollution resulting from the unregulated use of signs and other advertising devices.

Response: The proposed rezoning and the proposed project will not be inconsistent with this objective.

Question 16(C): Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:

Response to Question 16(C): The proposed rezoning of the Project Site is compatible with the present zoning and conforming uses of nearby properties and the character of the neighborhood which includes a mixture of uses and zoning classifications.

Question 16(D): Suitability of the subject property for uses permitted by the current versus the proposed district:

Response to Question 16(D): The Project Site is not suitable for uses permitted by the existing R-3 zoning classification since the development of the Project Site as single-family homes for sale on individual lots is a project type that would enable remediation of the existing contamination per the standards of the NYSDEC Brownfield Cleanup Program. The proposed project to be developed as permitted by the R-4 zoning classification represent a suitable use of the Project Site.

Question 16(E): Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:

Response to Question 16(D): The proposed change in the zoning classification of the Project Site from R-R-3 to R-4 to accommodate the proposed project will have positive impacts on the balance of uses in the Town by providing two-unit buildings consisting of upscale residential uses for sale, which will be attractive to empty nesters and seniors. This project type is uncommon in the Town of

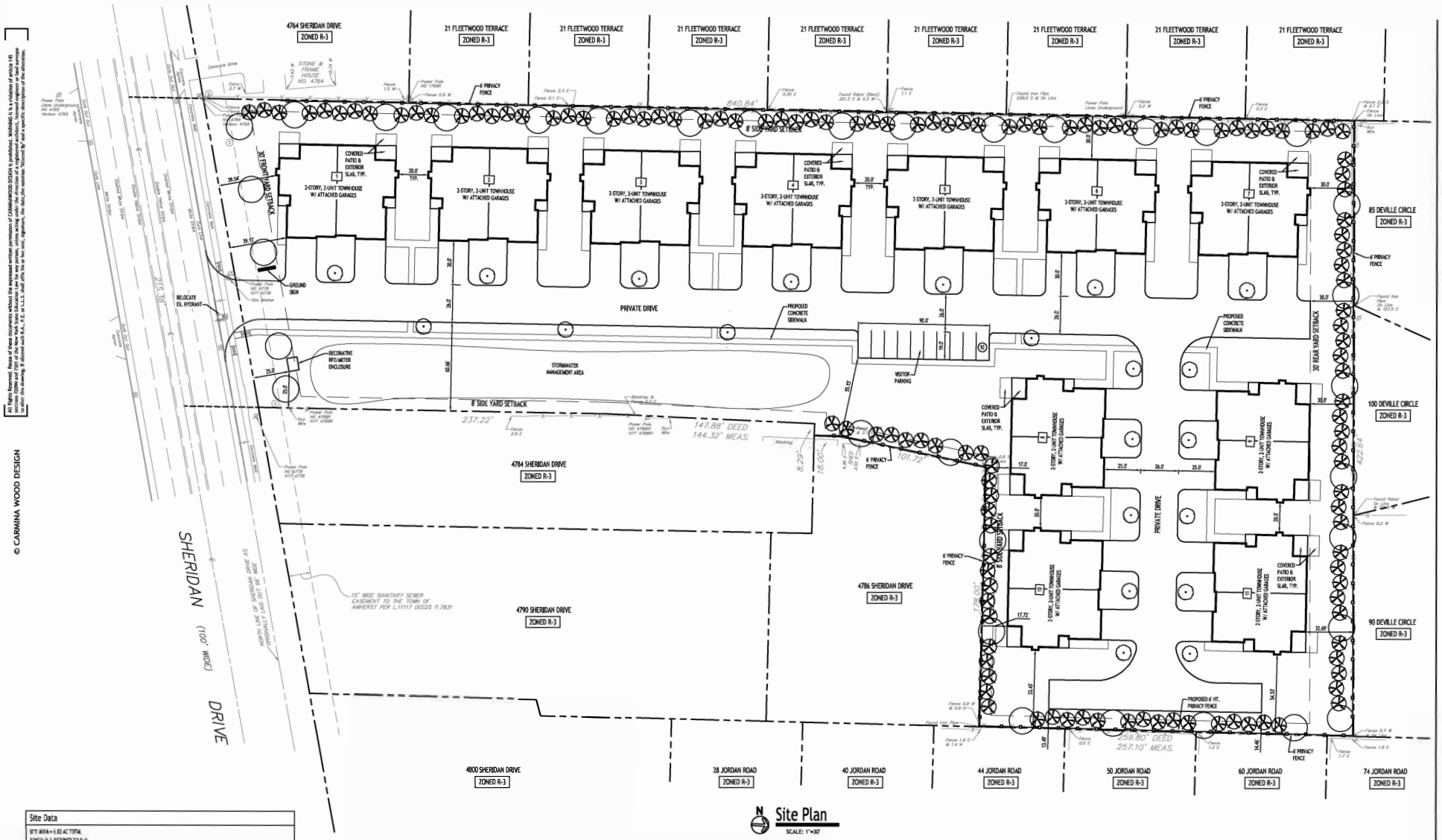
Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Amherst and the adopted Comprehensive Plan recognizes the need for a diverse range of residential housing choices including those that are attractive to seniors.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 6

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)



Site Plan
SCALE: 1"=30'

Site Data

SITE AREA = 5.83 AC TOTAL
ZONED: R-3 (RECOMMEND TO R-4)
PROPOSED USE: 2-UNIT RESIDENTIAL TOWNHOUSE BUILDINGS WITH ATTACHED GARAGES (22 UNITS TOTAL)

SETBACKS (BLDG)	REQUIRED	PROVIDED
FRONT	30 FT.	39.72 FT. MIN.
SIDE	8 FT. / 30 FT. (COMBINED)	17 FT. MIN. / > 30 FT. (COMBINED)
REAR	30 FT.	30 FT. MIN.
BUILDING DENSITY:	37	22
[illegible] AREA (2-STORY):	760 SF	> 760 SF
[illegible] ZONING COVERAGE:	35% (1.76 AC)	1.14 AC (23.7%)
[illegible] ZONING HEIGHT:	35 FT.	< 35 FT.
[illegible] (TYP'F)	44	54 SURFACE + 44 GARAGE SPACES = 98 TOTAL
[illegible]	1.35 AC (25%)	> 25%

[illegible] REQUIRED

PARKING CALCULATION:
"MULTI-FAMILY"
2 SPACES PER UNIT
22 UNITS x 2 = 44 SPACES REQD (9'x19')

BUILDING DENSITY REQUIREMENTS:
PER R-4 ZONING REQUIREMENTS
5,850 SF / DWELLING
5.03 AC * 43,560 SF = 219,106 SF / 5,850 SF = 37.5
37 UNITS ALLOWED

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 0 30 60ft.

CARMINA WOOD DESIGN
Buffalo | Utica | Greensboro

Proposed Multi-Family
4774 & 4780 Sheridan Drive
Amherst, NY

REVISIONS:
No. Description Date

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:
Site Plan Concept

Date: 7/10/23
Drawn By: P. Sheedy
Scale: As Noted

DRAWING NO.
C-100

Project No:

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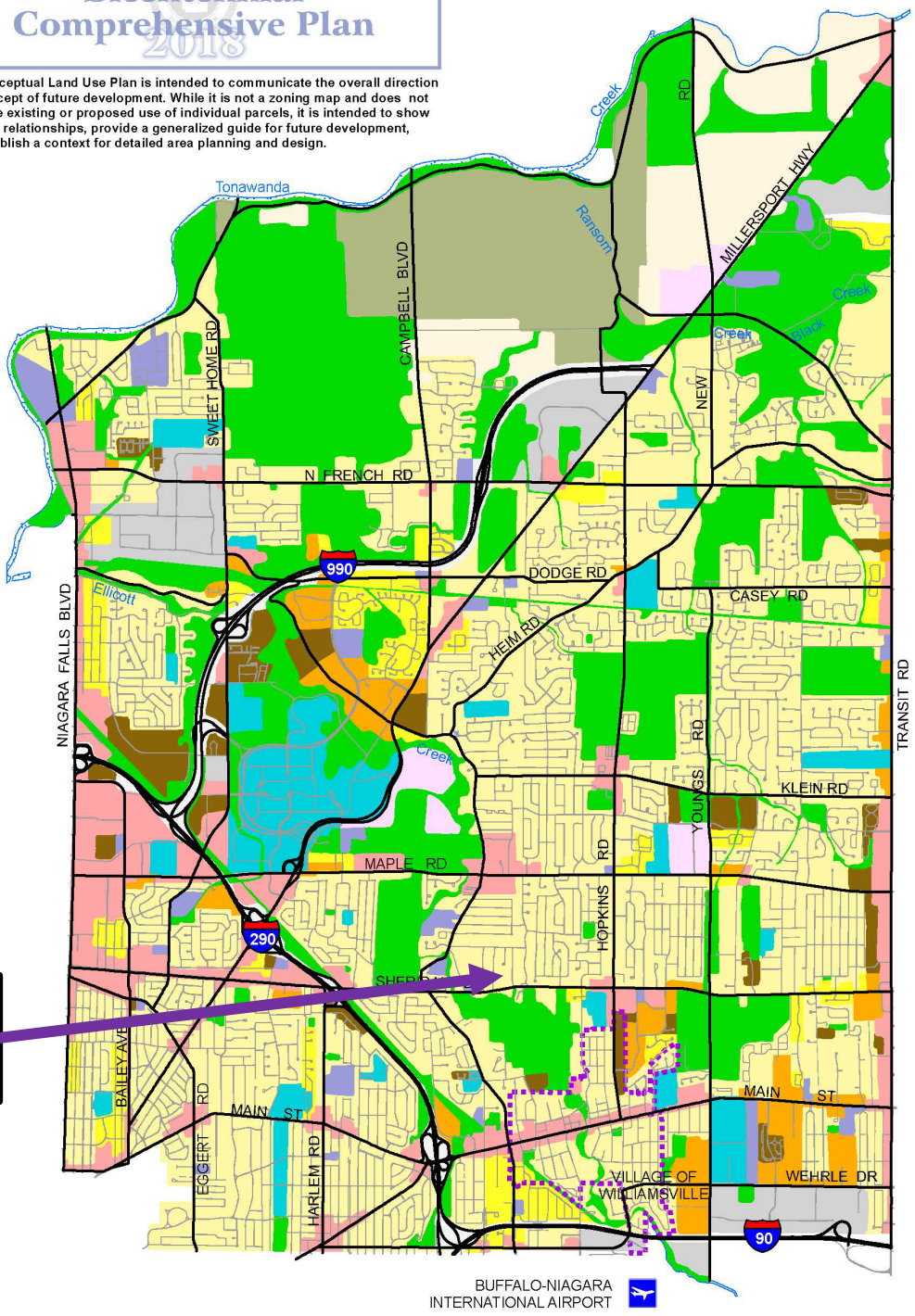
EXHIBIT 7

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Town of Amherst Bicentennial Comprehensive Plan

1818 2018

The Conceptual Land Use Plan is intended to communicate the overall direction and concept of future development. While it is not a zoning map and does not show the existing or proposed use of individual parcels, it is intended to show land use relationships, provide a generalized guide for future development, and establish a context for detailed area planning and design.



Project Site

Conceptual Land Use Plan

FIGURE 6

- Rural Residential
- Single Family Residential
- Mixed Residential
- Medium Residential
- Commercial / Mixed Use*
- Special Use Center
- Commercial - Office
- Industrial - Office
- Community Facilities
- Educational Campus
- Recreation, Open Space & Greenways
- Agriculture
- Transportation
- Surface Water
- Village of Williamsville Boundary

* See Map Figure 6-A for Additional Designations

SOURCE NOTES:

Original Source Data Provided by the Town of Amherst Information Technology Department, URS Corporation and Wallace Roberts & Todd, LLC

Map Compiled by the Town of Amherst Planning Department

Date: December 2020

N

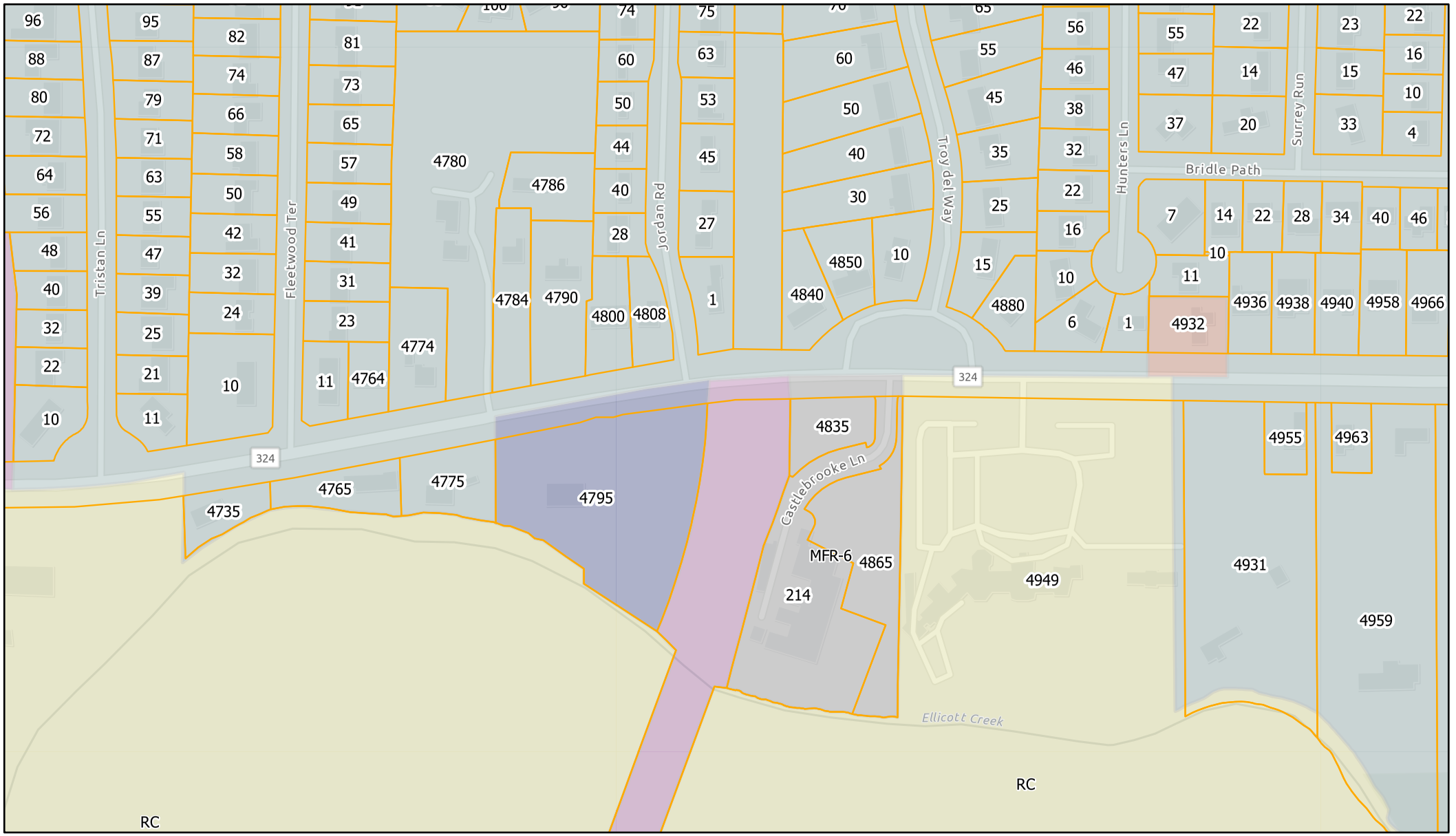
0 0.25 0.5 0.75 1 1.25 Miles

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EXHIBIT 8

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

ArcGIS Web Map



Parcels

Zoning

MFR-5

R-3

RC

Other

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

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Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NAS
USGS, EPA, NPS, US Census Bureau, USDA

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Esri Community Maps Contributors, Province of Ontario, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | NYS GIS Clearinghouse -https://gis.ny.gov/ | Federal Emergency Management Agency

EXHIBIT 9

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

ArcGIS Web Map



7/18/2023, 12:04:03 AM

Parcels

Town Boundary

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

Maxar

Full Environmental Assessment Form
Part 1 - Project and Setting

Prepared By: Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsmlegal.com

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: Proposed Residential Project		
Project Location (describe, and attach a general location map): 4774 and 4780 Sheridan Drive - Town of Amherst - Erie County		
Brief Description of Proposed Action (include purpose or need): The proposed project ("action") consists of the development of the parcels at 4774 and 4780 Sheridan Drive ("Project Site") as a residential project consists of eleven two-story building each comprised of two homes for sale [22 total units]. The proposed action has been defined broadly to include all all proposed site improvements as well as all required discretionary approvals and permits as well as including an amendment of the zoning classification of the Project Site from R-3 to R-4 by the Town of Amherst Town Board and approvals and permits needed from involved agencies including entry into the NYSDEC Brownfield Cleanup Program. The project purpose is to develop the Project Site for low density residential purposes per the recommended land use in Figure 6 of the Town's adopted Comprehensive Plan. The proposed project is an Unlisted Action pursuant to the State Environmental Quality Review Act ("SEQRA") and will not result in any potentially significant adverse environmental impacts.		
Name of Applicant/Sponsor: Savarino Development Corp. I c/o Sean Hopkins, Esq.	Telephone: 716.510-4338 E-Mail: shopkins@hsmlegal.com	
Address: 5500 Main Street, Suite 343		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role): Same as above.	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Estate of Edith Fruehauf, Rudolph Gleason and Greta Gleason	Telephone: E-Mail:	
Address: 4780 Sheridan Drive		
City/PO: Williamsville	State: NY	Zip Code: 14221

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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	Town Board - Rezoning	July 17, 2023
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Planning Board - Site Plan Approval	To be Determined
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	Zoning Board of Appeals - Area Variances	To be Determined
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	ECDOH - Sewer and ECWA - Water	To be Determined
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOT - Highway Work Permit , NYSDEC - Brownfield Cleanup, SPDES Permit and DSCA	To be Determined
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: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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?
Residential District Four (R-3)

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? Residential District Four (R-4)

C.4. Existing community services.

a. In what school district is the project site located? Amherst Central Schools

b. What police or other public protection forces serve the project site?
Town of Amherst Police Department

c. Which fire protection and emergency medical services serve the project site?
Hutchinson Hose Company

d. What parks serve the project site?
Amherst State 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)? Low density residential consisting of two-unit homes for sale.

b. a. Total acreage of the site of the proposed action? 5.03 acres
b. Total acreage to be physically disturbed? 5.03 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.03 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: _____

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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		22		
At completion of all phases		22		

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: stormwater management area
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater runoff
iii. If other than water, identify the type of impounded/contained liquids and their source.
Not applicable.
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: 0.25 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):
Earth Fill - The stormwater management area does not constitute a dam regulated by the NYSDEC.

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☑ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
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): _____
_____

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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:

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: 5,080 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: Erie County Water Authority
- 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: 4,600 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):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Town of Amherst Wastewater Treatment Facility
- Name of district: Town of Amherst
- 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: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

- 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 2.20 acres (impervious surface)

_____ Square feet or 5.03 acres (parcel size)

ii. Describe types of new point sources. Building roofs, asphalt driveway

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)?

On-site stormwater management facility

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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 _____ Proposed _____ Net increase/decrease _____

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:

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):

local grid

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: 7am to 5pm
- Saturday: 7am to 5pm [as needed]
- Sunday: n/a
- Holidays: n/a

ii. During Operations:

- Monday - Friday: n/a
- Saturday: n/a
- Sunday: n/a
- Holidays: n/a

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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:

Temporary and unavoidable storm term noise impacts resulting from the use of construction equipment during construction of the proposed project

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:

Proposed on site lighting will be dark sky compliant and in compliance with all Town of Amherst lighting regulations.

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: _____

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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): Golf course

ii. If mix of uses, generally describe:

Mixture of uses including Park Country Club Golf Course and residential uses including single-family and multifamily.

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	1.4	2.20	+ 0.8
• Forested	0.0	0.0	0.0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.0	0.0	0.0
• Agricultural (includes active orchards, field, greenhouse etc.)	0.0	0.0	0.0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.0	0.0	0.0
• Wetlands (freshwater or tidal)	0.0	0.0	0.0
• Non-vegetated (bare rock, earth or fill)	0.0	0.0	0.0
• Other Describe: Greenspace and landscaping	3.63	2.83	- 0.8

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

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:
There is contamination on the project site resulting from its historical use as a nursery [herbicides and pesticides].

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):

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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? > 40 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:

Schoharie silt loam	84 %
Urban Land-Odessa complex	16 %
	%

d. What is the average depth to the water table on the project site? Average: 36 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? [There are any wetlands subject to the jurisdiction of either the USACE or NYSDEC located on 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:

- 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: _____

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

m. Identify the predominant wildlife species that occupy or use the project site:
Typical suburban species

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:

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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: Amherst State Park, Glen Park, Audubon Town Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): local park

iii. Distance between project and resource: 1-4 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 Savarino Development Corp. I Date July 17, 2023

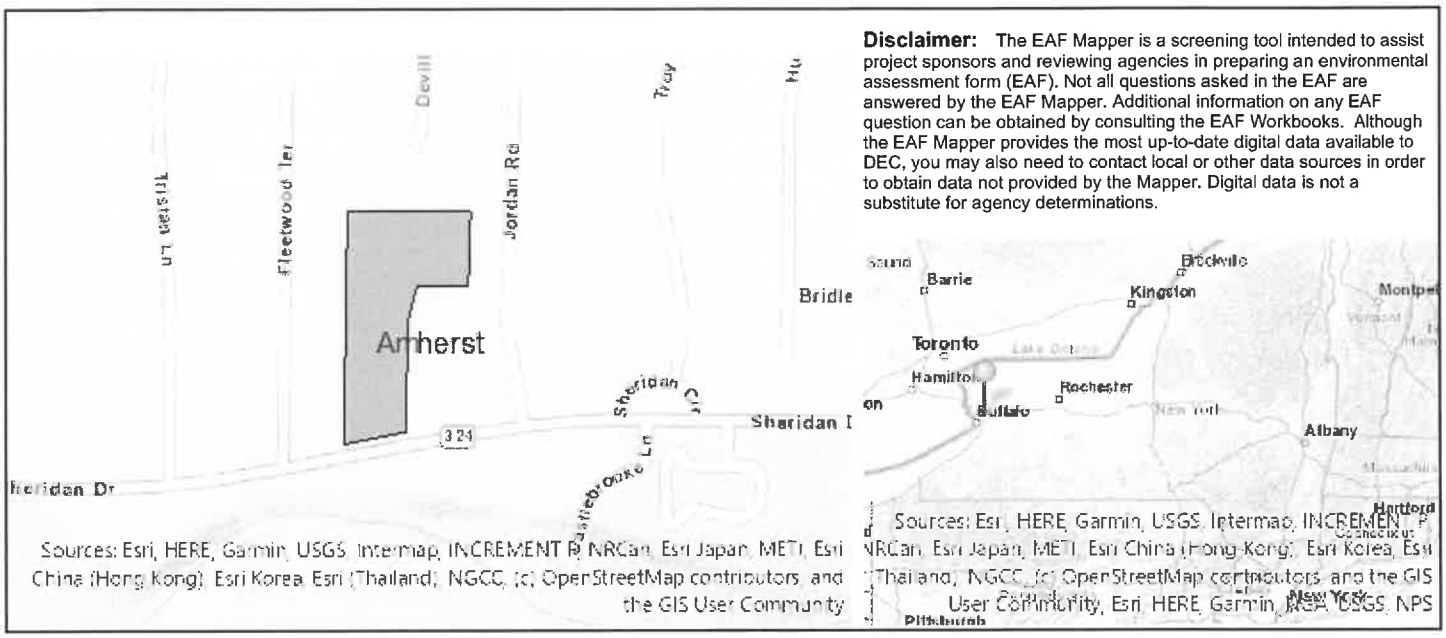
Signature _____ Title Attorney for Project Sponsor

PRINT FORM

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EAF Mapper Summary Report

Friday, June 16, 2023 10:58 AM



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]	No
E.2.j. [100 Year Floodplain]	No
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

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM
Proposed Residential Project - 4774 & 4780 Sheridan Drive

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
Schoharie silt loam	✔		✔		✔
Urban Land Odessa complex	✔		✔		✔

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

[Three copies of the Geotechnical Report prepared by Ray Teeter dated November 16, 2018 have been submitted.]

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:
4774 Sheridan Drive - 0.67 ac
4780 Sheridan Drive - 4.36 ac

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 hour upon completion of project 12
Source: ITE Trip Generator

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:

4,400 average flow 17,600 peak flow.

(Please note that 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.)

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

RAY M. TEETER, P.E.
CONSULTING GEOTECHNICAL ENGINEER

November 16, 2018

Jim Warren
Morgan Homes of Western New York
5520 Strickler Road
Clarence, New York 14031

Subject: Proposed Residential Subdivision
4774 and 4780 Sheridan Drive
Town of Amherst, Erie County, New York
RMT-12986

Mr. Warren:

This letter presents geotechnical engineering comments regarding the general suitability for construction at the site identified above. All information regarding the site was provided to me by others.

Subsurface Explorations

Two test borings, identified as B-1-18 and B-2-18, were performed by Earth Dimensions, Inc. on 10/31/18 and 11/1/18. Boring B-1-18 was located within a building lot near the south end of the project. Boring B-2-18 was located within a building lot near the north end of the project.

The logs of the borings, as well as a sketch showing the locations of the borings, will be sent to you directly by Earth Dimensions, Inc.

It should be noted that short-term observations may not be representative of actual groundwater levels, and that groundwater levels will vary with factors including location, time, precipitation, season, and site activities.

Suitability for Construction

Based on the information obtained thus far, it is my opinion that the site is generally suitable for the use of conventional footings and slab-on-grade floors.

A preliminary allowable bearing pressure would be 1,500 pounds per square foot.

P.O. BOX 316
CANANDAIGUA, NEW YORK 14424
PHONE 585-393-4762

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Additional borings and geotechnical evaluations will be necessary, before final design and construction.

It is also possible that a limited amount of geotechnical laboratory testing will be required by the Town of Amherst.

Closing Comments

Professional services were performed in accordance with generally accepted geotechnical engineering practices, exclusively for the subject project. No warranty, expressed or implied, is made.

If you have questions or comments, please contact me.

Yours truly,



RAY M. TEETER, P.E.

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

7J18a HOLE NO. B-1-18 SURF. ELEVATION —

PROJECT 4774 & 4780 Sheridan Drive LOCATION —
Town of Amherst, Erie County, NY

CLIENT Morgan Homes of WNY DATE STARTED 10/31/18 COMPLETED 10/31/18

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	3						Moist to extremely moist dark brown (SILTY-SAND) topsoil fill with mostly very fine to fine size sand, little to some silt, trace to little organic matter, loose, massive soil structure, (SM).	Sandy topsoil fill with little to some silt, trace to little organic matter to 1.3 feet over sandy soil fill with little to some silt, trace clay to 1.9 feet over coarse silty slack water sediment with little to some sand, trace clay to 2.4 feet over water sorted and deposited sand with trace silt to 4.2 feet over clayey slack water with trace sand to 14.7 feet over coarse silty slack water sediment with little sand, trace clay to 18.0 feet over water sorted and deposited sand with little silt, trace clay to 23.0 feet over water sorted and deposited sand with trace to little silt, trace gravel to 26.0 feet over sandy glacial till with little to some gravel, little silt, trace clay to 38.0 feet over sandy glacial till with some silt, little gravel, trace clay to end of boring.
	20		4			9			
				5					
					5				
	2	4							
	21		7			15			
				8					
					11				
	3	12							
5	24		11			25			
				14					
					16				
	4	3							
	20		9			22			
				13					
					16				
	5	7							
	24		8			18			
				10					
					13				
10	6	8							
	24		7			15			
				8					
					11				
	7	3							
	24		3			7			
				4					
					5				
	8	4							
15	24		7			11			
				4					
					7				
	9	21							
	18		17			29			
				12					
20					11				

Extremely moist light brown (SANDY-SILT) with little to some sand, trace clay, compact, thinly bedded, (ML). — 2.4

Extremely moist gray (SAND) trace silt, compact, thinly bedded, (SP). grades downward to — 4.2

Moist to extremely moist light gray to gray (SILTY-CLAY) with trace sand, very stiff, thinly laminated with very thin coarse silt lenses, (CL). grades downward to — 12.0

Extremely moist gray (SILTY-CLAY) trace sand, stiff, thinly laminated with very thin coarse silt lenses, (CL). grades downward to — 14.7

Extremely moist gray (SANDY-SILT) with little mostly very fine to fine size sand, trace clay, compact, thinly bedded, (ML). grades downward to — 18.0

Extremely moist to wet gray (SILTY-SAND) with mostly very fine to fine size sand, little silt, trace clay, compact, (SM).

Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to 16.0 feet and 5.0-foot interval sampling to end of boring at 40.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.

No water at completion.

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Jason Kryszak, Geologist, (cns) SHEET 1 OF 2

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

7J18a HOLE NO. B-1-18 SURF. ELEVATION —

PROJECT 4774 & 4780 Sheridan Drive LOCATION —
Town of Amherst, Erie County, NY

CLIENT Morgan Homes of WNY DATE STARTED 10/31/18 COMPLETED 10/31/18

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
								Extremely moist to wet gray (SILTY-SAND) with mostly very fine to fine size sand, little silt, trace clay, compact, (SM).	
								grades downward to 23.0	
	10	4						Wet gray to dark gray (SILTY-SAND) with 3 to 7% gravel, trace to little silt, compact, stratified, (SW).	
	15		7			16			
				9					
25					9				
								grades downward to 26.0	
								Extremely moist gray gravelly (SILTY-SAND) with 20 to 30% gravel, little silt, trace clay, very dense, massive soil structure, (SM).	
	11	18							
	24		28			69			
				41					
30					47				
								grades downward to 38.0	
	12	10							
	1		36			79			
				43					
35					47				
	13	4						Moist gray (SILTY-SAND) with 10 to 20% gravel, some silt, trace clay, very dense, massive soil structure, (SM).	
	7		14			39			
				25					
40					30			Boring completed at 40.0 feet. 40.0	

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Jason Kryszak, Geologist, (cns) SHEET 2 OF 2

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

7J18a HOLE NO. B-2-18 SURF. ELEVATION —

PROJECT 4774 & 4780 Sheridan Drive LOCATION —

Town of Amherst, Erie County, NY

CLIENT Morgan Homes of WNY DATE STARTED 10/31/18 COMPLETED 11/01/18

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Moist to extremely moist dark brown (SILTY-SAND) topsoil fill with mostly very fine to fine size sand, some silt, trace to little organic matter, loose, massive soil structure, (SM).	Sandy topsoil fill with some silt, trace to little organic matter to 1.2 feet over sandy soil fill with little to some silt to 2.0 feet over water sorted and deposited sand with trace to little silt to 5.0 feet over clayey slack water sediment with trace sand to 18.0 feet over water sorted and deposited sand with trace to little silt to 18.4 feet over coarse silty glacial till with little to some sand, trace to little gravel to 19.0 feet over water sorted and deposited sand with trace to little silt to 23.0 feet over coarse silty glacial till with some sand, little gravel, trace clay to 24.3 feet over water sorted and deposited sand with some gravel, trace to little silt to 29.5 feet over coarse silty glacial till with little sand and gravel to end of boring.
	24		3			7		1.2	
				4				Moist light brown (SILTY-SAND) fill with mostly very fine to fine size sand, little to some silt, loose, massive soil structure, (SM).	
					5			2.0	
	2	4						Extremely moist light brown (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt, compact, thinly bedded, (SM).	
	24		5			14		grades downward to 5.0	
				9				Moist to extremely moist faintly mottled light gray (SILTY-CLAY) with trace sand, very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
					9			grades downward to 6.1	
	3	11						Moist to extremely moist gray (SILTY-CLAY) with trace sand, stiff, thinly laminated with very thin coarse silt lenses, (CL).	
5	18		8			17		grades downward to 14.0	
				9				Extremely moist gray (SILTY-CLAY) with trace sand, soft, thinly laminated with very thin coarse silt lenses, (CL).	
					13				
	4	5							
	24		5			12			
				7					
					10				
	5	4							
	24		6			13			
				7					
10					9				
	6	3							
	24		3			8			
				5					
					6				
	7	2							
	24		2			6			
				4					
					4				
	8	1							
15	24		2			4		grades downward to 18.0	
				2				Moist gray (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt, dense, thinly bedded, (SM).	
					4				
	9	20							
	18		30			62			
				32					
20					36				

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Jason Kryszak, Geologist, (cns) SHEET 1 OF 2

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

7J18a HOLE NO. B-2-18 SURF. ELEVATION —

PROJECT 4774 & 4780 Sheridan Drive LOCATION —

Town of Amherst, Erie County, NY

CLIENT Morgan Homes of WNY DATE STARTED 10/31/18 COMPLETED 11/01/18

DEPTH IN FT	SN / REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
								Moist gray (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt, dense, thinly bedded, (SM). grades downward to 18.4	
	10	3						Moist gray (SANDY-SILT) with 5 to 15% gravel, little to some sand, very dense, massive soil structure, (ML).	
	20		8			20		grades downward to 19.0	
				12				Moist to extremely moist gray (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt,	
25					14			very dense, thinly bedded, (SM). grades downward to 23.0	
								Extremely moist gray (SANDY-SILT) with 10 to 20% gravel, some sand, trace clay, compact, massive soil structure, (ML).	
	11	6						grades downward to 24.3	
	20		8			19		Wet gray gravelly (SILTY-SAND) with 20 to 30% gravel, trace to little silt,	
				11				compact, stratified, (SM). grades downward to 29.5	
30					17			Moist gray (SANDY-SILT) with 10 to 20% gravel, little sand, dense, massive soil structure, (ML).	
	12	10							
	10		16			34			
				18					
35					25				
	13	13							
	9		14			34			
				20					
40					20			Boring completed at 40.0 feet. 40.0	▼ Water level at 36.2 feet after augers left in hole for 18 hours at 38.0 feet.

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Jason Kryszak, Geologist, (cns) SHEET 2 OF 2

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

EDI# 7518a

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N SITE PLAN
SCALE: 1"=20'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

20' 20 0 20 40FL

Carmina Wood Morris DPC
487 Main Street Suite 600
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Proposed Subdivision
4780 Sheridan Drive
Town of Amherst, NY 14228

Date: 7/26/18
Drawn by: C. Wood
Scale: As Noted

DRAWING NAME:
Site Plan

DRAWING NO.
C-100

Project

Attachment: Z-2023-07 application 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

20847 Topo

SHERIDAN DRIVE (100' WIDE)

NORTH LINE OF SHERIDAN DRIVE AS ORIGINALLY LAID OUT 66' WIDE

NORTH LINE OF SHERIDAN DRIVE AS PRESENTLY LAID OUT

214.37' TO THE EAST LINE OF LIBER 3381 DEEDS PAGE 411

LANDS APPROPRIATED BY NEW YORK STATE PER LIBER 9742 DEEDS P.133 (MAP 21981, PARCEL 245)

LANDS APPROPRIATED BY NEW YORK STATE PER LIBER 9742 DEEDS P.133 (MAP 21981, PARCEL 246)

SOUTHEAST CORNER OF LIBER 4544 DEEDS PAGE 595

215.35'

121.67'

93.71'

215.38'

50.92'

019°

SBL No. 68.12-1-10 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.640 (EXACT LOCATION NOT SPECIFIED)

SBL No. 68.12-1-11 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.628 (EXACT LOCATION NOT SPECIFIED)

ELEVATION DATUM

ELEVATIONS ON THIS MAP WERE DETERMINED UTILIZING GPS DATUM: NAD83 (2011) EPOCH 2010.0 DATUM

UTILITIES

The underground utilities shown have been located from field survey information & existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from the information available. This surveyor has not physically located the underground utilities.

Note: Underground Utility information has been ordered from the respective utility companies. As the information is received, this map will be amended to reflect said information.

National Fuel Attn: Ed Kulpa (716) 857-7967	Spectrum Cable Attn: Chris Smith (800) 262-8600	Verizon Attn: Mark Granschow (716) 840-8656
Erie County Water Dept. Attn: Steve Denzler (716) 685-8289	N.Y.S. Electric & Gas Attn: Sam Ceppaglia (716) 651-5256	National Grid Attn: Roy Schultz (315) 428-6319

NOTE:

PARCEL (SBL NO. 68.12-11) IS SUBJECT TO PRIVILEGES, EASEMENTS AND RIGHTS OF WAY FOR GAS WELL, GAS HOUSE AND GAS LINE OR LINES OR WATER LINE, BY LIBER 4218 DEEDS PAGE 539, LIBER 4296 DEEDS PAGE 180 & LIBER 5022 DEEDS PAGE 430.

30 0 30 60 90

1 Inch = 30 ft.

LEGEND

Ø	UTILITY / SERVICE POLE	R.O.W.	RIGHT OF WAY
WV	WATER LINE VALVE	CONC.	CONCRETE
FH	FIRE HYDRANT	INV.	INVERT
D.I.	D.I. (DROP INLET – STORM)	M.H.	MANHOLE
S	MANHOLE (STORM)	—G—	GAS LINE
E	MANHOLE (ELECTRIC)	—W—	WATER LINE
TR	MANHOLE (TRAFFIC)	—T—	TELEPHONE LINE
S	MANHOLE (SANITARY)	—E—	ELECTRIC LINE
T	MANHOLE (TELEPHONE)	—P—	UTILITY LINES
G	GASLINE MARKER	—C—	CABLE LINES
GV	GAS LINE VALVE	D.	DEED
	LIGHT STANDARD	M.	MEASURED
—○—	SIGN	L.	LIBER
H.C.	HANDICAP	P.	PAGE

AMEND 1-4-19: ADDED UNDERGROUND UTILITIES
AMEND 1-17-19: ADDED EASEMENTS & APPROPRIATIONS

INSTRUMENT(S) UTILIZED IN DETERMINING LOCATION OF BOUNDARY LINES: Liber 9448 Deeds Page 273, Liber 8176 Deed Page 155

NOTE: PROPERTY CORNER MONUMENTS WERE NOT PLACED AS PART OF THIS SURVEY.

THIS SURVEY MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT STANDARDS FOR LAND SURVEYS ADOPTED BY THE BAR ASSOCIATION OF ERIE COUNTY AT THE REQUEST OF Morgan Homes of Western New York

FRANCIS C. DELLES NYSPLS No. 050477

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Millard, MacKay & Delles
LAND SURVEYORS, LLP
150 AERO DRIVE
BUFFALO, NEW YORK 14225
PHONE (716) 631-5140 ~ FAX 631-3811

AMEND:
SURVEY DATE: 11-26-18
©DRAWING DATE: 12-2-18
SCALE: 1" = 30'
"ALL RIGHTS RESERVED"

BOUNDARY & TOPOGRAPHIC SURVEY

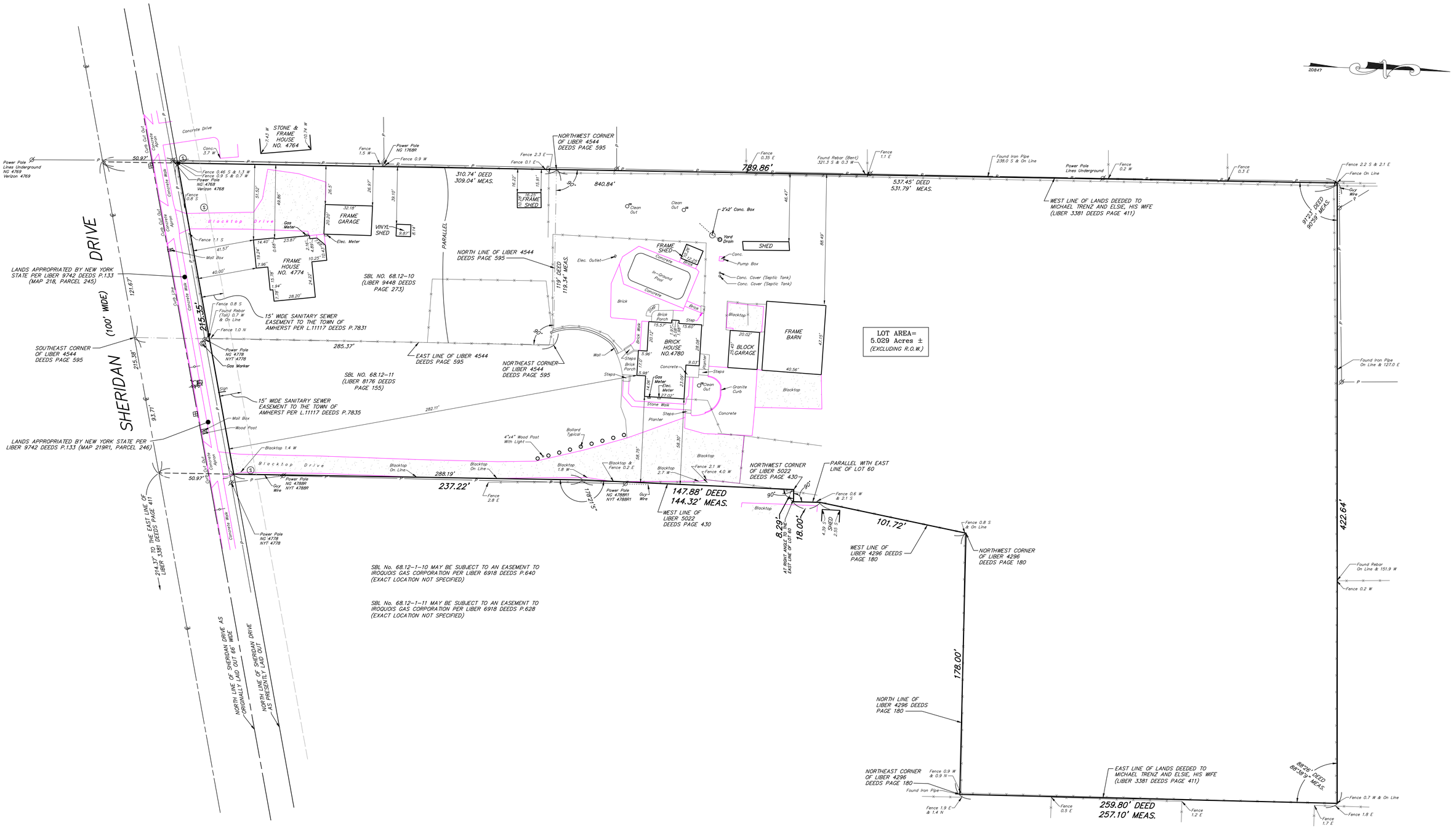
PART OF LOT 60 SECTION ____ TOWNSHIP 12 RANGE 7 OF THE: Holland Land Company's SURVEY – Erie COUNTY, N.Y.

SURVEY OF: 4774 & 4780 Sheridan Drive, Town of Amherst

THIS MAP VOID UNLESS EMBOSSED WITH NEW YORK STATE LICENSED LAND SURVEYOR'S SEAL. ALTERING ANY ITEM ON THIS MAP IS A VIOLATION OF THE LAW EXCEPT AS PROVIDED IN SECTION 7209, PART 2, OF THE NEW YORK STATE EDUCATION LAW.

SBL No. 68.12-1-10&11

Attachment: Z-2023-07 drawings 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)



SBL No. 68.12-1-10 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.640 (EXACT LOCATION NOT SPECIFIED)

SBL No. 68.12-1-11 MAY BE SUBJECT TO AN EASEMENT TO IROQUOIS GAS CORPORATION PER LIBER 6918 DEEDS P.628 (EXACT LOCATION NOT SPECIFIED)

NOTE:

PARCEL (SBL NO. 68.12-11) IS SUBJECT TO PRIVILEGES, EASEMENTS AND RIGHTS OF WAY FOR GAS WELL, GAS HOUSE AND GAS LINE OR LINES OR WATER LINE, BY LIBER 4218 DEEDS PAGE 539, LIBER 4296 DEEDS PAGE 180 & LIBER 5022 DEEDS PAGE 430.

30 0 30 60 90
1 Inch = 30 ft.

LEGEND

Ø	UTILITY / SERVICE POLE	R.O.W.	RIGHT OF WAY
WV	WATER LINE VALVE	CONC.	CONCRETE
FH	FIRE HYDRANT	INV.	INVERT
D.I.	(DROP INLET – STORM)	M.H.	MANHOLE
(D)	MANHOLE (STORM)	—G—	GAS LINE
(E)	MANHOLE (ELECTRIC)	—W—	WATER LINE
(TR)	MANHOLE (TRAFFIC)	—T—	TELEPHONE LINE
(S)	MANHOLE (SANITARY)	—E—	ELECTRIC LINE
(T)	MANHOLE (TELEPHONE)	—P—	UTILITY LINES
GM	GASLINE MARKER	—C—	CABLE LINES
GV	GAS LINE VALVE	D.	DEED
LS	LIGHT STANDARD	M.	MEASURED
—○—	SIGN	L.	LIBER
H.C.	HANDICAP	P.	PAGE

INSTRUMENT(S) UTILIZED IN DETERMINING LOCATION OF BOUNDARY LINES: Liber 9448 Deeds Page 273, Liber 8176 Deed Page 155

NOTE: PROPERTY CORNER MONUMENTS WERE NOT PLACED AS PART OF THIS SURVEY.

THIS SURVEY MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT STANDARDS FOR LAND SURVEYS ADOPTED BY THE BAR ASSOCIATION OF ERIE COUNTY AT THE REQUEST OF Morgan Homes of Western New York

FRANCIS C. DELLES NYSPLS No. 050477

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LAND SURVEYORS, LLP
150 AERO DRIVE
BUFFALO, NEW YORK 14225
PHONE (716) 631-5140 ~ FAX 631-3811

AMEND: "A"
SURVEY DATE: 11-26-18
©DRAWING DATE: 12-2-18
SCALE: 1" = 30'
"ALL RIGHTS RESERVED"

THIS MAP VOID UNLESS EMBOSSED WITH NEW YORK STATE LICENSED LAND SURVEYOR'S SEAL. ALTERING ANY ITEM ON THIS MAP IS A VIOLATION OF THE LAW EXCEPT AS PROVIDED IN SECTION 7209, PART 2, OF THE NEW YORK STATE EDUCATION LAW.

BOUNDARY SURVEY

PART OF LOT 60 SECTION ____ TOWNSHIP 12 RANGE 7 OF THE: Holland Land Company's SURVEY— Erie COUNTY, N.Y.

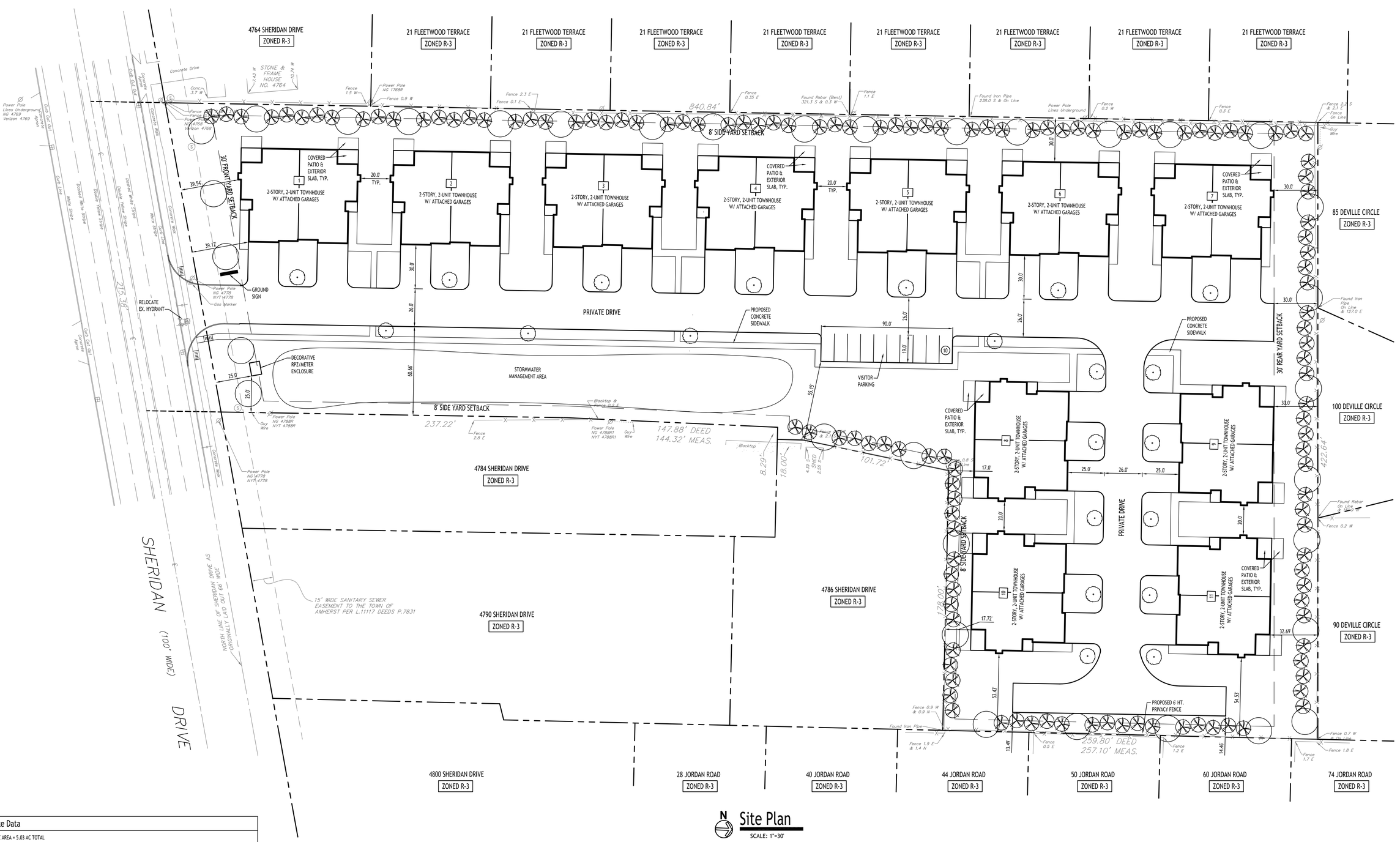
SURVEY OF: 4774 & 4780 Sheridan Drive, Town of Amherst

SBL No. 68.12-1-10&11

Attachment: Z-2023-07 drawings 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

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© CARMINA WOOD DESIGN



Site Plan

SCALE: 1"=30'

Site Data		
SITE AREA = 5.03 AC TOTAL		
ZONED: R-3 (REZONED TO R-4)		
PROPOSED USE: 2-UNIT RESIDENTIAL TOWNHOUSE BUILDINGS WITH ATTACHED GARAGES (22 UNITS TOTAL)		
SETBACKS (BLDG)	REQUIRED	PROVIDED
FRONT	30 FT.	39.12 FT. MIN.
SIDE	8 FT. / 20 FT. (COMBINED)	17 FT. MIN. / > 20 FT. (COMBINED)
REAR	30 FT.	30 FT. MIN.
BUILDING DENSITY:	37	22
MIN. FLOOR AREA (2-BDRM):	760 SF	> 760 SF
MAX. BUILDING COVERAGE:	35% (1.76 AC)	1.14 AC (22.7%)
MAX. BUILDING HEIGHT:	35 FT.	< 35 FT.
PARKING: (9'x19')	44	54 SURFACE + 44 GARAGE SPACES = 98 TOTAL
GREENSPACE		
OVERALL:	1.25 AC (25%)	> 25%

* VARIANCE REQUIRED

PARKING CALCULATION:

"MULTI-FAMILY"
2 SPACES PER UNIT
22 UNITS x 2 = 44 SPACES REQD (9'x19')

BUILDING DENSITY REQUIREMENTS:

PER R-4 ZONING REQUIREMENTS

5,850 SF / DWELLING
5.03 AC * 43,560 SF = 219,106 SF / 5,850 SF = 37.5

37 UNITS ALLOWED

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 30' 0 30 60Ft.

CARMINAWOOD DESIGN
Buffalo | Utica | Greensboro

Proposed Multi-Family

4774 & 4780 Sheridan Drive
Amherst, NY

REVISIONS:

No.	Description	Date

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:
Site Plan Concept

Date: 7/10
Drawn By: P. She
Scale: As No

DRAWING NO.
C-100

Project No: 23-4xxx

Attachment: Z-2023-07 drawings 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2023-07

PETITIONER

RAS Development Company LLC
c/o Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy
5500 Main Street, Suite 343
Williamsville, New York 14221

PROPERTY LOCATION

4774 & 4780 Sheridan Drive

WHEREAS the Town of Amherst Planning Board on Thursday, October 19, 2023 held a public hearing on the proposed rezoning of land from Residential District Three (R-3) to Residential District Four (R-4), and

WHEREAS the Planning Board has reviewed plans and other materials regarding the rezoning proposal, and

WHEREAS the materials and plans have been referred to the Town's various review agencies, and

WHEREAS in accordance with Section 8-3-5 of the Zoning Ordinance the Planning Board finds that:

A. The proposed zoning and development plan is generally consistent with the policies of the Comprehensive Plan and the Zoning Ordinance.

B. The proposal is consistent with the Conceptual Land Use Plan which shows "Single-Family Residential" land use in this area of the Town.

B. There are adequate services and utilities available or proposed to be made available in the construction of the development.

C. The proposal is compatible with the present zoning and conforming uses of nearby property and with the character of the neighborhood.

D. The subject property is suitable for uses permitted by the current versus the proposed district.

E. The proposed change tends to improve the balance of uses, and meets a specific demand in the Town.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act may be waived because the parcel is developed.

Attachment: Z-2023-07 signed resolution 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2023-07

PETITIONER

RAS Development Company LLC

PROPERTY LOCATION

4774 & 4780 Sheridan Drive

WHEREAS pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

NOW THEREFORE BE IT RESOLVED that the Planning Board recommends to the Town Board in accordance with Section 8-3-4 of the Zoning Ordinance, that the rezoning request be approved subject to the following conditions:

1. That the density of the project site shall not exceed 4.3 units per acre.
2. That the use of the project site to be rezoned from R-3 to R-4 shall be limited to two (2) unit-attached townhomes only.
3. That the maximum allowable height of any residential building on the project site as measured from finished grade shall be thirty-five (35) feet.
4. That the project site's contaminated soil be remediated to residential standards under the purview of, and in accordance with the NYSDEC Brownfield Cleanup Program.
5. That the conditions stated above shall be memorialized via the recording of a Declaration of Restrictions at the Erie County Clerk's Office.

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 19, 2023; moved by Chmiel; seconded by Kahn; ayes 4, noes 2 (Gill, Penberthy); absent 1 (Raffaele).

Robert J. Gilmour, Planning Board Chair

10-26-2023
Date

TV/ac
X:\Current_Planning\Files\Rezonings\2023\Z-2023-07_(4774_&_4780_Sheridan_Dr)_2023\Z-2023-07_resolution_101923.doc
cc: Town Clerk
Commissioner of Building
Highway Superintendent
Town Engineer
Traffic/Safety Coordinator
RAS Development Company, c/o Sean Hopkins, 5500 Main Street, Suite 343, Williamsville, NY 14221

Attachment: Z-2023-07 signed resolution 101923 (27793 : Z-2023-07 4774 & 4780 Sheridan Dr.)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 10/19/23 06:30 PM
Department: Planning
Category: Rezoning and Relief from Conditions of Rezoning
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 27919

ADOPTED

PLANNING BOARD ITEM (ID # 27919)

Request to Rezone 1.09± Acres of Land from SA to R-3, Z-2023-08

Property located at 420 New Road
Joseph Rubino, Petitioner

The purpose of the rezoning request is to utilize the dimensional standards of the R-3 District in order to facilitate a parcel split into 3 separate lots. Each lot as proposed will consist of a single-family residential home.

Joseph Rubino explained the proposal and was available to answer questions from the Board.

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

Following discussion, Ms. Penberthy moved to approve the request based on the resolution. The motion was seconded by Mr. Chmiel and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

ATTACHMENTS:

- Z-2023-08 application 101923 (PDF)
- Z-2023-08 drawings 101923 (PDF)
- Z-2023-08 signed resolution 101923 (PDF)

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

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Rezoning

For Official Use

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

Address Verified by Assessor's Office _____
VERIFIED BY DATE

Application Received by Planning Department _____
ACCEPTED BY DATE

Materials Checked by Zoning Enforcement Officer _____
CHECKED BY DATE

Materials & Fee Paid to Town Clerk _____
ACCEPTED BY DATE

		Fill In Applicable Fees
2 ACRES OR LESS	**$1,250.**	_____
2 – 20 ACRES **$1,250 + $250/acre or fraction thereof over 2 acres** (fractions of an acre to be counted as 1 acre)		_____
21 – 30 ACRES **$5,700 + $150/acre or fraction thereof over 21 acres** (fractions of an acre to be counted as 1 acre)		_____
OVER 30 ACRES **$6,900 +$75/acre or fraction thereof over 30 acres** (fractions of an acre to be counted as 1 acre)		_____
Request for Relief of / Change to Conditions of Zoning Approval	**$1,200.**	_____
AFFIDAVIT FEE FOR PUBLIC HEARING	**$15.**	_____
	TOTAL FEE:	**$**_____

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: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

TO BE COMPLETED BY APPLICANT

1. **Petitioner:**

Name: Joseph Rubino

Address: 5462 Sheridan Drive Suite 1

Williamsville NY 14221
City State Zip Code

Phone: 716-983-1155 Fax

E Mail: josephrubino@howardhanna.com

2. **The undersigned hereby petitions the Honorable Town Board to rezone the following described property:**

From: SA District

To: R3 District

3. **Street address of land to be rezoned:** (must be verified by Town Assessor's Office)

420 New Road

SBL #: 28.06-1-55.11

4. **Area of land to be rezoned** (in acres): 1.09

5. **Owner of Land:**

Name: Joseph Rubino

Address: 5462 Sheridan Dr. Suite 1

Williamsville NY 14221
City State Zip Code

Phone:

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

Name: Joseph Rubino

Address:

City State Zip Code

Phone: Fax

E Mail:

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

7. **Petitioner's interest in property**

_____Option to purchase
__✓__Owner
_____Other (explain) _____

8. **The following are all others having an interest in this application and join herein with the petitioner named above:** (describe extent of interest; attach sheets as needed)

N/A

9. **Attach Survey and Legal description of land to be rezoned. The Survey must be prepared by a New York State Licensed Land Surveyor.**

10. **Said property has the following deed restrictions or covenants:** (attach copy)

Liber _____ Page _____

11. **Information on proposed project:**

A. Description of the character of the proposed development: Existing house located on the 420 New Road Parcel. Parcel is on the corner of Autumn Meadows Lane. Petitioner would like to create two additional building lots.

B. Rationale for rezoning request:

1. Why was this site chosen? This site has sufficient area and frontage to create two additional building lots.

2. Why cannot land be used with the existing zoning? The existing zoning requires larger lot sizes.

3. How will this rezoning impact surrounding properties? Will have no impact. The surrounding neighborhoods are mostly R3 zoning

4. How will this rezoning impact the school system? No Impact

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

12. Quantitative Data:

A. Total # of dwelling units 2

B. Distribution of dwelling units by type 2 single family homes

C. Gross Residential Density per acre .36

D. Total amount of Open Space 0

E. Proposed Non-Residential Floor Area 0

13. Development Schedule:

Start 12/2023

Finish 12/2024

Stages (# of) 1

14. If any portion of the proposed development is planned to be sold or leased, please describe:

The existing home is to be re sold and 2 new homes will be built and sold.

15. Open Space ownership and maintenance provisions (if applicable):

N/A

16. Basis for Findings (Sec. 8-3-5 of the Town Zoning Code) (Attach sheets and supplemental materials as necessary.)

A. <u>The proposed zoning and development plan must be generally consistent with the policies of the Comprehensive Plan and the Town Zoning Ordinance.</u>

1. State in detail why the proposed zoning is consistent with the adopted <u>Town of Amherst Bicentennial Comprehensive Plan</u>. Cite specific sections, maps, and/or figures in the Plan that support the proposed zoning at this location (The Comprehensive Plan document is available at the Planning Department, Town Clerk's Office, Amherst libraries, or at <u>www.amherst.ny.us</u>). Add sheets as needed.

Consistant with figure 6
shows single family homes

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

2. Pursuant to NYS Town Law Section 272a(11), "All Town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this Section." The Amherst Town Board adopted the Bicentennial Comprehensive Plan pursuant to NYS Town Law 272 on January 2, 2007. If the rezoning is approved, the Town Board may require the Plan to be amended, as applicable.

   Cite all text, maps, or figures that must be amended to support the proposed zoning at this location (attach pages as necessary) and provide detailed suggested amendments.

3. State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance: The Lots will meet the R3 District requirements

B. Adequate Services and Utilities are available or are proposed to be made available with the construction of the development:

1. Sanitary Sewer Available
2. Storm Sewer/Drainage Available
3. Water Available
4. Other gas : electric are Available

C. Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:
Single family homes will be Consistant with Surrounding neighborhood

D. Suitability of the subject property for uses permitted by the current versus the proposed district: Consistant with Surrounding single family homes

E. Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:
There is a high demand for single family housing in the Town of Amherst

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

17. The petitioner encloses herewith the sum of $_____ to pay the fee, and consents to the placement of a sign(s) at the described location identifying this request for a period of time to be determined by the Town Clerk.

18. The undersigned certifies that all information required to be disclosed pursuant to Section 809 of the General Municipal Law (see below) is as follows:

The undersigned swears or affirms that all statements made herein are true, that all drawings submitted correctly show the situation involved in this petition.

Joseph Rubino Joanne B Shubert

Signature of Petitioner

Subscribed and sworn to before me this 15 *day of* August, 2023

Notary Public, Erie County, New York Joseph Rubino

appeared before me + signed

JOANNE B. SHUBERT
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 11-30-20

N.Y.S. General Municipal Law - Section 809 Disclosure in certain applications:

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provision of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state office or any office or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them

(a) is the applicant, or
(b) is an officer, director, partner or employee of the applicant, or
(c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
(d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such applicant, petition or request.

3. In the county of Nassau the provisions of subdivisions one and two of this section shall also apply to a party officer. "Party Officer" shall mean any person holding any position or office, whether by election, appointment or otherwise, in any party as defined by subdivision four or section two of the election law.

4. Ownership of less than five per cent of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

5. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

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: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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			Severe		
Cosad loamy fine Sand			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).

   _____ 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:
   No

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 4
   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:
    600 average flow 2,400 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: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

Full Environmental Assessment Form
Part 1 - Project and Setting

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: 420 New Road (subdivide)		
Project Location (describe, and attach a general location map): 420 New Road		
Brief Description of Proposed Action (include purpose or need): 420 New Road has a 3 bedroom home on an acre lot on the Northwest corner of New Road and Autumn Meadows Lane. Applicant would like to create two additional building lots. The home at 420 New Road will have a new lot size of 90' frontage by 150' depth. Lot 1 will have 107.21' frontage on New Road and 150' frontage on Autumn Meadows Lane. Lot 2 will have 90' frontage on Autumn Meadows and 197.21 in depth. Applicant is requesting the parcel be rezoned from SA to R3.		
Name of Applicant/Sponsor: Joseph Rubino	Telephone: 716-983-1155 E-Mail: josephrubino@howardhanna.com	
Address: 5462 Sheridan Dr Suite 1		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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	TB rezoning	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	PB recommendation on rezoning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	239 M referral	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☐Yes ☑No		
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):

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):

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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?
SA

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? R3

C.4. Existing community services.

a. In what school district is the project site located? Williamsville Central

b. What police or other public protection forces serve the project site?
Amherst Police Department

c. Which fire protection and emergency medical services serve the project site?

d. What parks serve the project site?
Local Amherst Town Parks

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)? Residential

b. a. Total acreage of the site of the proposed action? 1.09 acres
b. Total acreage to be physically disturbed? .77 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.09 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)? % 66% Units: 2

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)
Residential
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: 16 months
ii. If Yes:
- Total number of phases anticipated 1
- Anticipated commencement date of phase 1 (including demolition) Jan month 2024 year
- Anticipated completion date of final phase May month 2025 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	2			
At completion of all phases	2			

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? ☐ Yes ☐ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

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): _____

_____

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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:

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: 600 +/- 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: Erie County Water
- 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: Town Of Amherst
- Name of district: Amherst Sewer 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

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- 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 _____ acres (parcel size)

ii. Describe types of new point sources. _____

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)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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 _____ Proposed _____ Net increase/decrease _____

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:

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: 8-5
- Saturday: 8-5
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- 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:

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:

standard residential lighting

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): _____

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	2,000 +/- sf	7,000 +/- sf	5,000 +/- sf
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• 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: Developed lot for single family home	1.09 Acres	1.09 acres	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: _____

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):

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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? greater than 8' 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:

Odessa Silt	50% %
Cosad Loamy Fine	50% %
	%

d. What is the average depth to the water table on the project site? Average: _____ 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:

- 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:
None known, developed residential lot

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:

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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 Joseph Rubino Date 8/08/2023

Signature _____ Title Property Owner

PRINT FORM

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

BARRON & ASSOCIATES, P.C.
Geotechnical Consulting and Special Inspections
10440 Main Street (716) 759-7821
Clarence, NY 14031 www.barronandassociatespc.com

August 31, 2023 Job No: 23-568

Mr. Joseph Rubino
5462 Sheridan Drive, Suite 1
Williamsville, New York 14221

RECEIVED
SEP 11 2023
TOWN OF AMHERST
PLANNING DEPT.

RE: Preliminary Geotechnical Engineering Report
Proposed Parcel Rezoning 420 NEW ROAD
Autumn Meadows Lane (90 ft. Lot and 150 ft. Lot)
Town of Amherst, Erie Co., New York 14051

Mr. Rubino:

This Barron & Associates, P.C. - Buffalo Drilling Company, Inc. (B&A-BDC) letter report presents the findings of the subsurface investigation program and the geotechnical engineering recommendations for the above referenced project. The geographic orientation of the site is illustrated on the U.S. Geologic Survey (USGS) site location map in Figure No. 1. The project site is illustrated in Figure No. 2 and entitled "Test Boring Location Plan". The test boring logs are shown in Appendix A. Refer to Appendix B entitled, "Geotechnical Reference Standards", for an explanation of the terminology that is used for soil and rock descriptions.

SITE AND SUBSURFACE CONDITIONS

SITE CONDITIONS: The proposed project site is currently addressed as 420 New Road in the Town of Amherst, New York and will involve subdividing this parcel into three. The two new parcels will be single-family residential lots, one with 95 of feet frontage and one with 150 feet of frontage along Autumn Meadows Lane. The site topography is generally flat with ground surface elevations between test boring locations varying by less than one foot.

PREDOMINATE SUBSURFACE CONDITIONS: A synopsis of the subsurface fill, soil, bedrock and groundwater conditions is as follows:

- Topsoil: A three-inch-thick layer of topsoil exists at each boring location.
- Random Fill Materials: No random fill materials were encountered during subsurface exploration.
- Organic Materials: No buried topsoil or peat layers were encountered within the natural soil layers. Organic materials are unacceptable for foundation and load bearing purposes.
- Naturally Deposited Soils: The natural soil deposits in this area of the Town of Amherst are predominately composed of lacustrine silty clay that mantles cohesive or granular glacial till. Beneath the topsoil, lacustrine silty clay exists and extends approximately 22 feet below existing ground surface. This moderately plastic soil ranges from moist and stiff to hard within the upper portions of the unit to soft and wet below a depth of eight to 10 feet. Beneath the lacustrine silty clay, cohesive glacial till soils where encountered and extend the remaining depth drilled. The retrieved till samples are noted to be very stiff to hard and moist. Based on regional geology the till soils transition to auger refusal approximately 45 to 50 feet below ground surface.
- Bedrock: Auger refusal, generally inferred to be the top of competent bedrock, was not encountered during subsurface exploration of the site. Based upon our experience and knowledge of regional geology bedrock beneath the site is expected to be the Camillus Shale Formation.

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

- Groundwater Measurements: At the completion of drilling, groundwater was not encountered. The static groundwater level is believed to be below the assumed bearing elevations and no other severe groundwater condition was encountered during the subsurface exploration.

SEISMIC/EARTHQUAKE CONSIDERATIONS: For the given site conditions, the most applicable site definition is Site Class E which corresponds to Seismic Design Category B, for residential construction (Seismic Risk Category II). The design spectral response acceleration parameters S_{DS}, at 0.2 seconds, and S_{D1}, at one second, are 0.28g and 0.13g (g = 32.2 feet/sec^2), respectively.

FOUNDATION AND CONSTRUCTION RECOMMENDATIONS

BUILDING(S): Proposed development of the site is to include rezoning of the existing parcel and the construction of two, single-family residential lots. Top of finish first floor elevations and maximum design loads are not known at the time of this preliminary report.

FOOTINGS: For adequate frost protection, foundation excavations must extend at least 42 inches below finished exterior grade, or as required by local code. All excavation efforts should be monitored by experienced construction personnel. Bearing surfaces that are soft or in any manner unacceptable, must be undercut to a stable grade. All undercut areas beneath proposed shallow foundations must extend laterally beyond each vertically projected edge of the foundation by a minimum distance equal to one-half the total depth of the undercut or equating to a slope of two vertical to one horizontal. Undercuts shall be backfilled with granular fill that is placed in loose lifts not exceeding 12 inches deep and compacted to a minimum 95 percent of maximum dry density as determined by ASTM D1557. All footings for proposed buildings are recommended to be designed at/near the same contact pressure.

The footings should bear directly on the approved very stiff or better natural inorganic silty clay or on a thoroughly compacted (i.e., 95 percent minimum of ASTM D1557 maximum dry density) select/approved granular fill or other approved fill (i.e., fill used for a raised subgrade) section that extends to the approved stiff or better natural inorganic soil. Refer to Appendix C entitled "Engineering Computations, Schematics, and Profile", for additional details and notes on foundation bearing depth and capacity.

The maximum net allowable bearing capacity for continuous strip and spread footings is preliminarily recommended not to exceed 1,500 pounds per square foot (psf) of footing area on approved natural soils or compacted select granular fill. Total and differential settlements of less than one inch and three-fourths of an inch, respectively, may be expected.

BACKFILL MATERIALS: Imported granular fill material may be used for foundation backfill material in accordance with the provisions stipulated in the RCNYS. On-site excavated soils may also be considered for placement as wall backfill and for raising site grades, providing that the following conditions are met:

- Upper silty and clay lacustrine soils are estimated to have an Expansion Index ranging between 10 and 20 (1-2%) with a low to medium swell potential. Properly conditioned on-site soils should be acceptable for placement as wall backfill above the perimeter drainage material. In accordance with the RCNYS, however, additional laboratory testing may be required at the discretion of the Code Enforcement Officer, to quantify the Expansion Index of on-site clay backfill materials.

- Based on experience with similar soils, excavated materials are expected to be near or slightly wet of optimum moisture content needed to achieve satisfactory compaction. If excavated soils become wet (i.e. during stockpiling), some drying efforts may be necessary for soils to be reused as compacted structural fill.

- If the excavated materials are substantially contaminated with organic or other deleterious matter, cannot be properly moisture conditioned, or are in a wet to saturated state, these materials are only acceptable for use in green or non-structural areas.

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

FLOOR SLABS: Prior to fill placement, the exposed subgrade surface would be thoroughly compacted and proofrolled. Typically, any encountered soft/medium stiff soils/fills would be removed for subsequent replacement with a select or approved compacted (i.e., minimum 92 percent of the maximum dry density from ASTM D1557) granular fill. If suitable for reuse on-site, the in-place or excavated existing fills/natural soft/medium stiff soils would be conditioned (i.e., sorted, dried, blended) and thoroughly compacted. Where required to raise the subgrade, an approved soil/fill will be placed and thoroughly compacted in thin lifts.

A geotextile fabric that separates the subgrade or raised subgrade and the select granular base layer is recommended. The use of a thin gravel cushion, as a capillary break, or a thin sand cushion over a vapor barrier that is placed beneath the concrete slabs are at the discretion of the design architect/engineer or as required by local code.

Above the approved subgrade, a minimum six-inch thick select granular fill (i.e., number two crusher run stone or equal) layer is preliminarily recommended as the base course for a concrete floor slabs. The recommended subgrade modulus at the top of the base layer for a concrete floor slab bearing on a thoroughly compacted (i.e., minimum 95 percent compaction) base layer and prepared soil/fill subgrade (i.e., minimum 92 percent compaction) is recommended not to exceed 100 pounds per cubic inch with a Poisson Ratio of 0.40. The actual design thickness, application of reinforcement, and use of a vapor barrier is at the discretion of the design architect or structural engineer.

LIMITATIONS: This report is based on the information that is provided by project representatives and the subsurface conditions that were encountered at the test boring locations. Due to the nature of the investigation method, additional test borings and/or test pit excavations will provide a greater level of delineation of the subsurface soil/fill/rock conditions than can be defined by the single test boring data alone. As detailed in Appendix D "Limitations, modification regarding proposed building/structure locations and other site developments can result in changes to the provided recommendations.

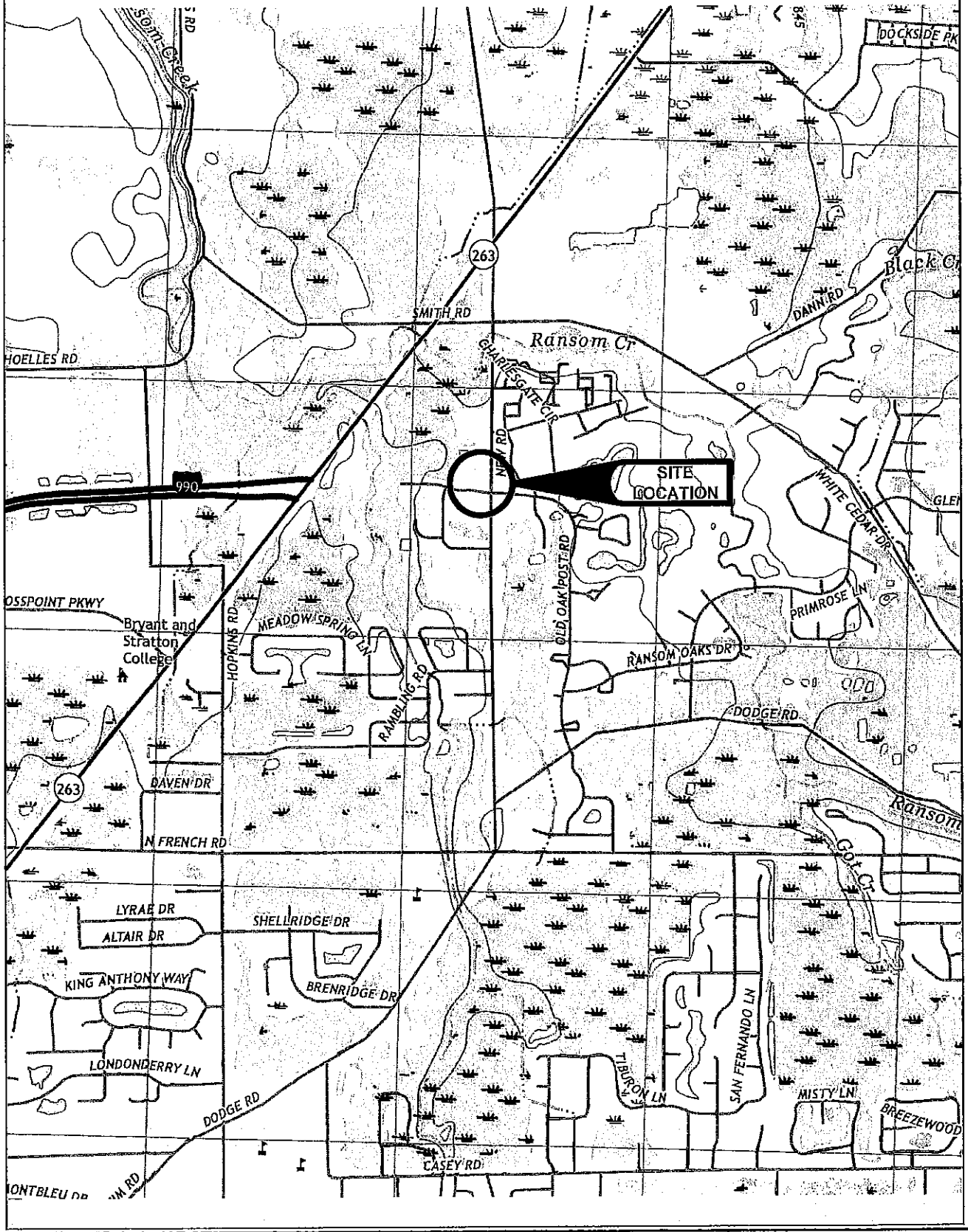
Thank you for the opportunity to assist on this project. If questions should arise, please call either of the undersigned at your earliest convenience.

Very truly yours,
BARRON & ASSOCIATES, INC.
and
BUFFALO DRILLING COMPANY, INC.

Andrew J. Camping, PG
Senior Geologist

James S. Barron, PE
President

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)



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BUFFALO DRILLING COMPANY
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(716)759-7621
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INFO@BUFFALODRILLING.COM
INFO@BARRONANDASSOCIATESPC.COM

DRAWN: DAN KASPROWICZ

CLIENT: MR. JOSEPH RUBINO
5452 SHERIDAN DRIVE, SUITE 1
WILLIAMSVILLE, NEW YORK 14221

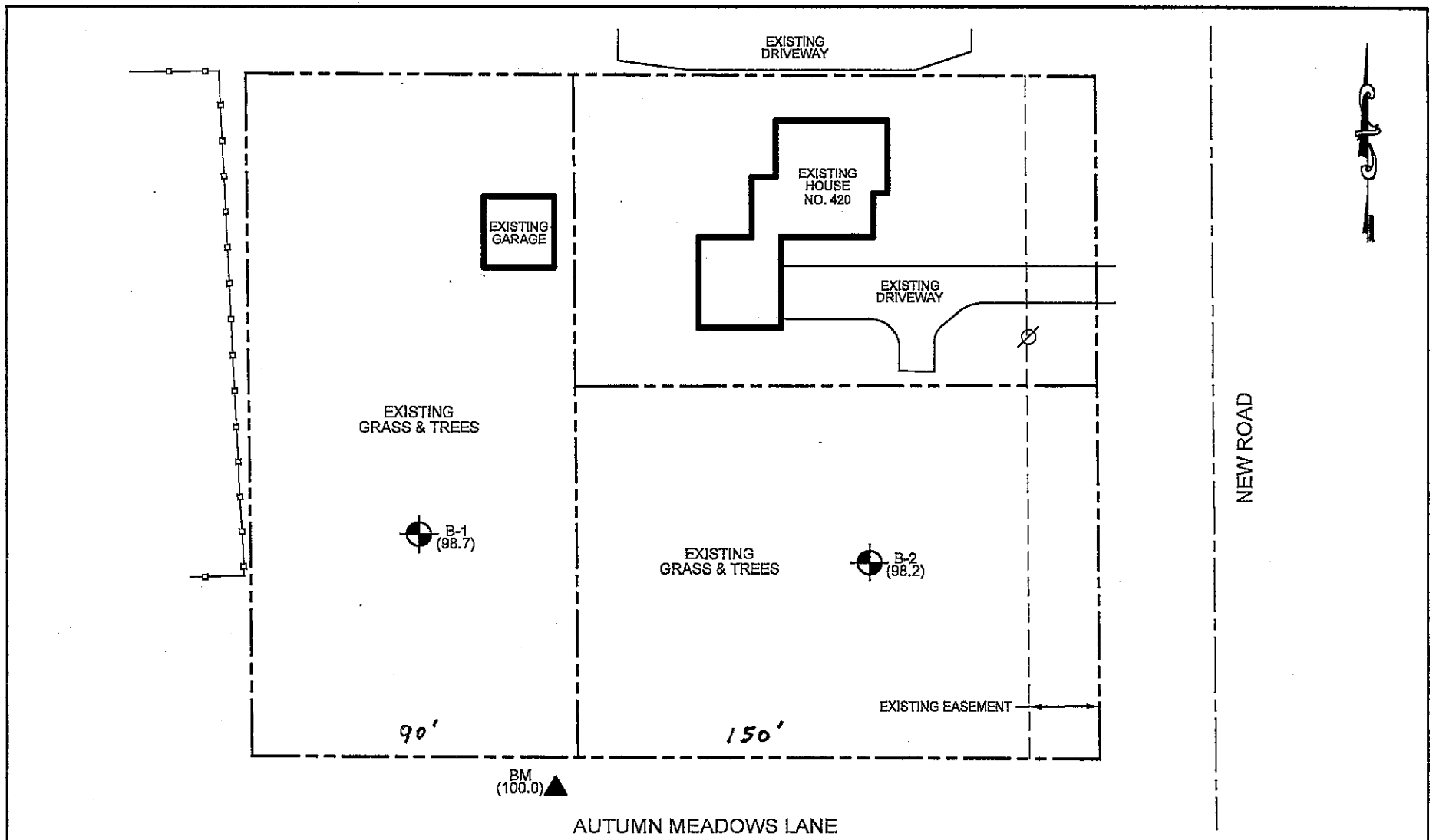
PROJECT: PROPOSED PARCEL REZONING
AUTUMN MEADOWS LANE (90FT. & 150FT.)
TOWN OF AMHERST, NEW YORK 14051

NEW YORK STATE SITE LOCATION

USGS SITE LOCATION PLAN
CLARENCE CENTER
2019

JOB NO.: 23-568 | SCALE: N.T.S.
DATE: 8/15/2023

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)



LEGEND

⊕	B-2	= TEST BORING & NO.
	(98.2)	= RELATIVE GROUND SURFACE ELEVATION (FT.)
▲	BM	= BENCH MARK (NORTH RIM OF MAN HOLE)

NOTES:

1. BORINGS, BUILDINGS, SITE FEATURES, PROPERTY LINE LOCATIONS, AND SCALE OF DRAWING ARE APPROXIMATE.
2. BASE MAP REFERENCE PROVIDED BY NUSSBAUMER & CLARKE, INC., TITLED "BOUNDARY SURVEY NO. 420 NEW ROAD", PROJECT NO. 23J4-0176, UNDATED.

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5452 SHERIDAN DRIVE, SUITE 1
WILLIAMSVILLE, NEW YORK 14221

PROJECT: PROPOSED PARCEL REZONING
AUTUMN MEADOWS LANE (90FT. & 150FT.)

TEST BORING LOCATION PLAN

0 20 40 80

JOB NO.: 23-568 | SCALE: 1" = 40'±

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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B&A JOB NO: 23-568
CLIENT: Mr. Joseph Rubino
PROJECT: Proposed Parcel Rezoning
Autumn Meadows Lane (90 ft. Lot and 150 ft. Lot)
Town of Amherst, New York 14051

TABLE NO. 1
LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth	Moisture Content ASTM D2216	Organic Matter Content ASTM D2974	Unconfined Compressive Strength ASTM D2166	Wet Density ASTM D2166	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classificatio ASTM D2487 ASTM D2488
							Gravel	Sand	Silt	Clay	LL	PL	PI	
		(ft.)	(%)	(%)	(psf)	(pcf)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(-)
B-1	S-1	0-2	20.0	-	-	-	-	-	-	-	-	-	-	CL
	S-2	2-4	21.1	-	-	-	-	-	-	-	-	-	-	CL
	S-3	4-6	23.5	-	-	-	-	-	-	-	-	-	-	CL
	S-4	6-8	24.7	-	-	-	-	-	-	-	-	-	-	CL
	S-5	8-10	36.3	-	-	-	-	-	-	-	50	22	28	CL
	S-6	10-12	34.6	-	-	-	-	-	-	-	-	-	-	CL
	S-7	14-16	40.3	-	-	-	-	-	-	-	-	-	-	CL
	S-8	19-21	44.1	-	-	-	-	-	-	-	-	-	-	CL
	S-9	23-25	10.3	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-10	28-30	8.2	-	-	-	-	-	-	-	-	-	-	CL-Till

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

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APPENDIX A

TEST BORING LOG

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

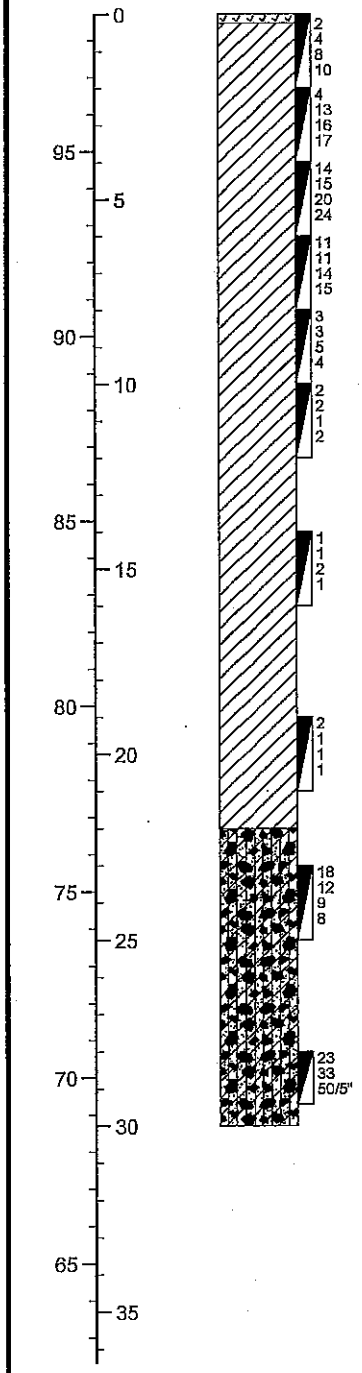
BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 23-568 **BORING No.:** B-1

PROJECT: Proposed Parcel Rezoning
Autumn Meadows Lane (90 ft. Lot & 150 ft. Lot), Town of Amherst, New York 14051

DRILLER:	A. Lobur	**TYPE OF DRILL RIG:**	CME-55
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	8/18/23	**SURFACE ELEVATION (ft.):**	98.7
DATE COMPLETED:	8/18/23	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Topsoil (3")
S-1 : 0.0'- 2.0'	12	40	Dk. brown, stiff CLAY, some Silt, little f/c Sand, tr. Gravel, tr. Roots, mod. plastic, moist (CL)
S-2 : 2.0'- 4.0'	29	90	...grade: Brown, v. stiff
S-3 : 4.0'- 6.0'	35	80	...grade: hard
S-4 : 6.0'- 8.0'	25	70	...grade: v. stiff
S-5 : 8.0'- 10.0'	8	100	...grade: stiff, wet
S-6 : 10.0'- 12.0'	3	80	...grade: soft
S-7 : 14.0'- 16.0'	3	100	Same as S-6
S-8 : 19.0'- 21.0'	2	100	Same as S-6
S-9 : 23.0'- 25.0'	21	90	Brown, v. stiff CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
S-10 : 28.0'- 29.4'	83+	60	...grade: hard
			Depth to Bottom of Hole: 30.0 feet

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

Logged by:

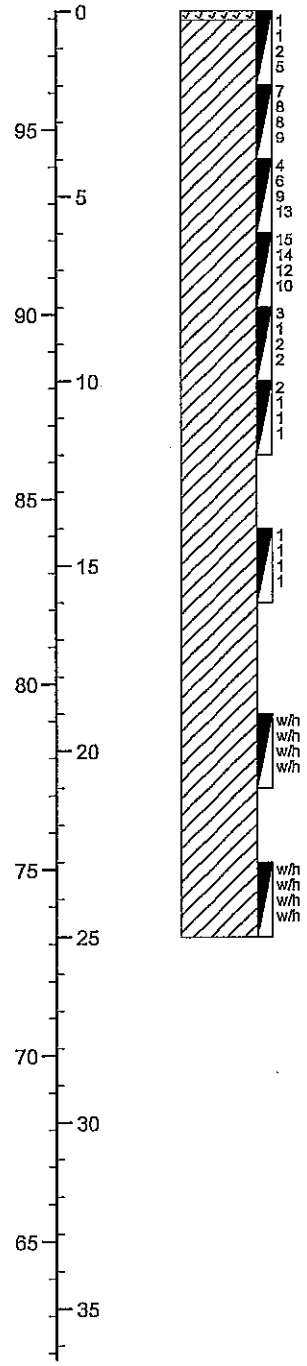
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CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 23-568 **BORING No.:** B-2

PROJECT: Proposed Parcel Rezoning
Autumn Meadows Lane (90 ft. Lot & 150 ft. Lot), Town of Amherst, New York 14051

DRILLER:	A. Lobur	**TYPE OF DRILL RIG:**	CME-55
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	2 1/4" I.D. H.S.A.
DATE STARTED:	8/21/23	**SURFACE ELEVATION (ft.):**	98.2
DATE COMPLETED:	8/21/23	**GROUNDWATER DEPTH (ft.):** (measured at completion unless indicated below)	None



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
		S-1 : 0.0'- 2.0'	3	15	Topsoil (3") Dk. brown, soft CLAY, some Silt, little f/c Sand, tr. Gravel, tr. Roots, mod. plastic, moist (CL)
		S-2 : 2.0'- 4.0'	16	50	...grade: Brown, v. stiff
		S-3 : 4.0'- 6.0'	15	95	Same as S-2
		S-4 : 6.0'- 8.0'	26	90	Same as S-2
		S-5 : 8.0'- 10.0'	3	100	...grade: soft, wet
		S-6 : 10.0'- 12.0'	2	100	Same as S-5
		S-7 : 14.0'- 16.0'	2	100	Same as S-5
		S-8 : 19.0'- 21.0'	1	100	...grade: v. soft
		S-9 : 23.0'- 25.0'	1	100	Same as S-8
					Depth to Bottom of Hole: 25.0 feet

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

Logged by:

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APPENDIX B

GEOTECHNICAL REFERENCE STANDARDS

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

BARRON & ASSOCIATES, P.C.
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Clarence, NY 14031 www.barronandassociatespc.com

Column Header Descriptions

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BUFFALO DRILLING COMPANY, INC.
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CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: **BORING No.:**

PROJECT: EXAMPLE

DRILLER:
SAMPLING METHODS:
DATE STARTED:
DATE COMPLETED:
TYPE OF DRILL RIG:
SIZE AND TYPE OF BIT:
SURFACE ELEVATION (ft.):
GROUNDWATER DEPTH (ft.):
(measured at completion unless indicated below)

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
100 — 0	1 1 1 2	S-1 : 0.0'- 2.0'	2	50	Dk. brown, soft, CLAY, some Silt, little f. Sand, tr. Gravel, tr. Roots, tr. Organic matter, mod. plastic, wet (CL)
	6 8 11 14	S-2 : 2.0'- 4.0'	19	50	Brown, m. dense f. SAND, some Silt, tr. Gravel, tr. Clay, tr. Roots, non-plastic, moist (SM)

Elevation/Depth: The depth column provides the vertical scale of the boring log in feet below ground surface.

Sample No. : Range: Disturbed samples are identified with "S" preceding the sample number. Undisturbed (Shelby-tube) samples are identified with "U" preceding the sample number. Rock core samples identified with "C" preceding the core run. The range of elevation/depth where the sample was taken is identified in one-tenth foot increments.

N-value: The Standard Penetration Test N-value, as specified by ASTM D1586, is defined as the number of blows required by a 140-pound hammer falling 30 inches, each blow, to drive a 2-in outside diameter split-spoon sampler 12 inches.

% REC (RQD): "Percent Recovery" is the length of samples recovered divided by the total length sampled. The result is numerically expressed as a percent. The Rock Quality Designation (RQD) is the total length of places >4 inches divided by the total length of core run.

Soil and Rock Description / Remarks: This column denotes the exact depth of recovery and general documentation of drilling efforts. Description and classification are based on visual inspection of samples and boring operations. The stratum lines shown on the boring logs are based upon interpretation and may not represent precise subsurface conditions. Water-level readings have been made in the drill holes at time under conditions stated on the boring logs. Fluctuations in the water level may occur due to other factors than those present the time measurement was taken. See attached sheet.

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Soil and Rock Description / Remarks: Terminology Used for Soil Description

Density Description of Granular Soil

Number of Blows per ft., N	*Relative Density*
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium
30 - 50	Dense
Over 50	Very Dense

Consistency Description of Cohesive Soil

Number of Blows per ft., N	*Consistency*
Below 2	Very Soft
2 - 4	Soft
4 - 8	Medium
8 - 15	Stiff
15 - 30	Very Stiff
Over 30	Hard

Grain Size

	Passing / Retained on
Boulder	LARGE / 12-in sieve
Cobble	12-in / 3-in sieve
Gravel	3-in sieve / No. 4 sieve
	No. 4 sieve / No. 10 sieve
Sand	No. 10 sieve / No. 40 sieve
	No. 40 sieve / No. 200 sieve
Silt	No. 200 sieve / 0.005 mm sieve
Clay	Smaller than 0.005 mm

Abbreviations Used in Soil Sample Classification

f - fine	v - very
m - medium	gr - gray
c - coarse	bn - brown
f/m - fine to medium	yel - yellow
f/c - fine to coarse	sl - slight
tr - trace	dk - dark

Bedding

Parting	Less than 0.02 ft.
Band	0.02 - 0.2 ft.
Thin bed	0.2 - 0.5 ft.
Medium bed	0.5 - 1.0 ft.
Thick bed	1.0 - 2.0 ft.
Massive	Over 2.0 ft.

Hardness

Very Soft or Plastic	Can be indented with thumb
Soft	Can be scratched with fingernail
Moderately Hard	Can be scratched with knife
Hard	Difficulty to scratch with knife
Very hard	Cannot be scratched with knife

Percentage Terminology Used in Soil Classification

Trace	0 - 10 %	Some	20 - 35 %
Little	10 - 20 %	And	35 - 50 %

Moisture

Dry	Absence of moisture, dusty, dry to the touch.
Moisture	Small quantity of moisture. Soil usually above groundwater level.
Wet	Moisture noticeable to the touch. Soil may be below groundwater level.
Saturated	Visible free water, usually soil is below groundwater level.

Plasticity

Non-plastic	An 1/8-in thread cannot be rolled at any water content.
Slight plasticity	Thread can be barley rolled.
Moderate plasticity	Thread is easy to roll and little time is required to reach the plastic limit (PL).
Plasticity	Considerable time is required to reach PL. Thread can be re-rolled several times after reaching the PL.

Crystallinity or Texture

Dense	Crystals are to small they cannot be distinguished with the naked eye.
Very Fine Crystalline	Crystals barely discernable with the naked eye.
Crystalline	Crystals are medium size, up to 1/8-in diameter.
Very Coarsely Crystalline	Crystals larger than 1/8-in diameter.

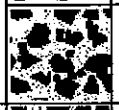
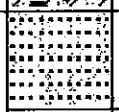
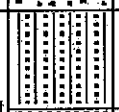
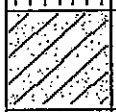
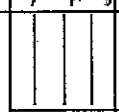
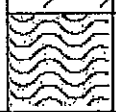
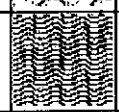
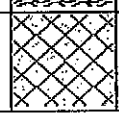
Voids

Porous	Smaller than pinhead. Their presence is indicated by the degree of absorbency.
Pitted	Pinhead size to 1/4 in. If thin walls separate the individuals pits, the core may be described as honeycomb.
Vug	1/4 inch to the diameter of the core. The upper limit will vary with core size.
Cavity	Larger than the diameter of the core.

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Soil Classification Chart: Unified Soil Classification System (USCS)

Major Divisions			Pattern	USCS ID	Typical Descriptions
Coarse-Grained Soils: More than 50% of material larger than No. 200 sieve	**Gravels:** More than 50% of coarse fraction larger than No. 4 sieve	Clean Gravels (little or no fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with appreciable amounts of fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-silt mixtures
	Sands: Less than 50% of coarse fraction larger than No. 4 sieve	Clean sands (little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		Sand with appreciable amount of fines		SM	Silty sands, silt-sand mixtures
				SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils: Less than 50% of material larger than No. 200 sieve	**Silts and Clays, Low plasticity:** Liquid Limit < 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays, High plasticity: Liquid Limit > 50%			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils				Pt	Peat, humus, swamp soils with organic contents
Miscellaneous Fill				FILL	Miscellaneous fill may belong in any division but is identified as FILL

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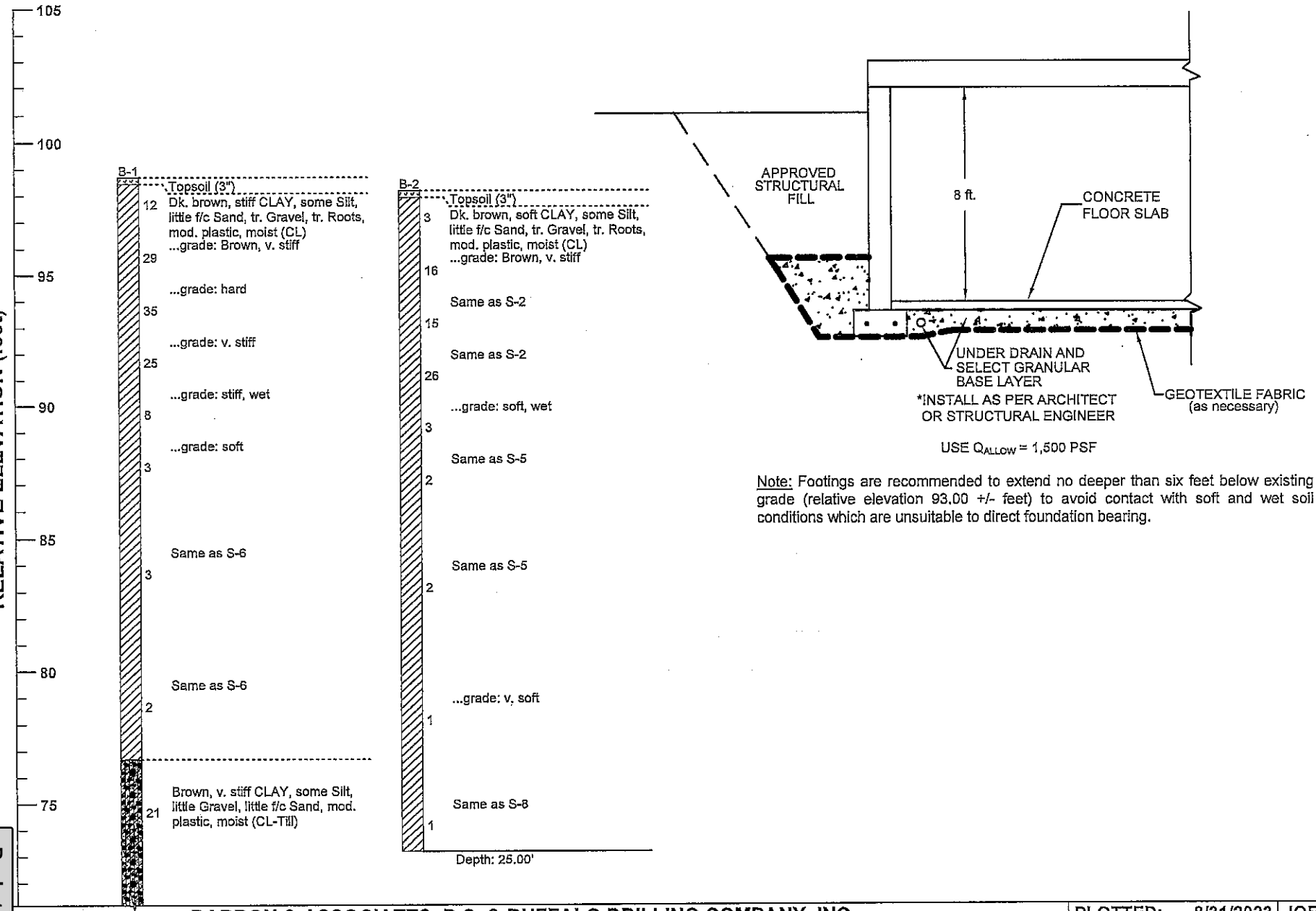
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APPENDIX C

ENGINEERING COMPUTATIONS, SCHEMATICS AND PROFILE

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

"PROFILE OF BORINGS"



Note: Footings are recommended to extend no deeper than six feet below existing grade (relative elevation 93.00 +/- feet) to avoid contact with soft and wet soil conditions which are unsuitable to direct foundation bearing.

BARRON & ASSOCIATES, P.C. & BUFFALO DRILLING COMPANY, INC. 10440 MAIN STREET, CLARENCE, NEW YORK 14031	PLOTTED: 8/31/2023 BY: A. Camping	JOB NO.: 23-568	
OJECT: Proposed Parcel Rezoning	PAGE NO.:	FIGURE NO.:	3.a

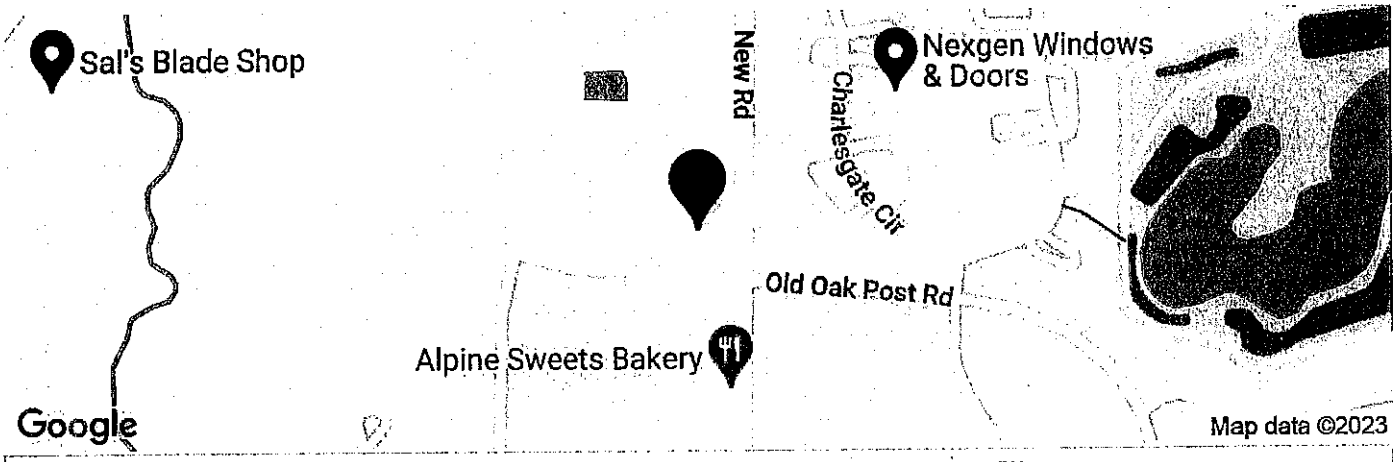
Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

OSHPD

Parcel Rezoning, Autumn Meadows Ln., Amherst, NY 14051

Latitude, Longitude: 43.0477, -78.7251



Date	8/31/2023, 12:06:37 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	E - Soft Clay Soil

Type	Value	Description
S_S	0.172	MCE_R ground motion. (for 0.2 second period)
S_1	0.046	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.414	Site-modified spectral acceleration value
S_{M1}	0.192	Site-modified spectral acceleration value
S_{DS}	0.276	Numeric seismic design value at 0.2 second SA
S_{D1}	0.128	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	B	Seismic design category
F_a	2.4	Site amplification factor at 0.2 second
F_v	4.2	Site amplification factor at 1.0 second
PGA	0.097	MCE_G peak ground acceleration
F_{PGA}	2.4	Site amplification factor at PGA
PGA_M	0.233	Site modified peak ground acceleration
T_L	6	Long-period transition period in seconds
SsRT	0.172	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	0.18	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.046	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.049	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.097	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.958	Mapped value of the risk coefficient at short periods
C_{R1}	0.934	Mapped value of the risk coefficient at a period of 1 s

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B&A JOB NO.: 23-568

DATE: 08/31/23

LATERAL EARTH PRESSURE ON GENERIC BLOCK FOUNDATIONS FOR SIGNS, FREE-STANDING RETAINING WALLS, OR BELOW GRADE/BASEMENT/TANK/POOL RETAINING WALLS (Less Than 20 Feet High)

a) Porous filter media, in contact with the basement/below grade foundation wall or retaining walls, protects and is in contact with a minimum 4 inch diameter perforated drainage pipes at the footing/base of the foundation/structural wall (exterior backfill side and interior basement side) and/or weep pipes through the wall, as needed and as applicable.

b) Where recommended, a geotextile filter fabric will protect the gravel filter media from the earth backfill. Overlap unsewn seams as per the manufacturer's recommendations.

c) Waterproof earth side of wall, as is customarily provided in practice.

d) Drainage pipes are connected to an appropriately designed collector pipe, conveyance, and/or sump pump system as is applicable for the intended purpose of the wall and as customarily provided/installed in practice.

e) For potential groundwater table conditions above the top of the basement slab-on-grade condition, install continuous waterstops (with no joints in stop) at wall and floor construction joints, as is customarily provided in practice. Interior intermediate drainage pipes beneath the slab, that are spaced on-center and in both directions, do appear to be needed.

f) Assume a uniformly graded, clean coarse sand or sandy gravel backfills:
* equivalent N-value in a dense state: $(N_1)_{60}$ = 40 blows/foot
* friction angle: ϕ' = 38 degrees (Teng, pg. 12)
* average in-place densities: moist - γ_m = 120 pcf
saturated - γ_{sat} = 132 pcf submerged - $\gamma' = (\gamma_{sat} - \gamma_w)$ = 70 pcf

g) Assume at base of wall/footing, coefficient of friction against sliding (f_s) at base of wall (Refer to Teng, pg. 320-1):
$f_s = \tan(0.58 \times \phi') = 0.40$ (AREA silty soil to silty coarse-grained soil)

h) Use equivalent fluid pressure design approach (Hough, pg. 249 and NAVFAC pg. 7.10-9):
* at rest pressure coefficient - $K_o = 1 - \sin(\phi') = 0.38$
* effective lateral pressure of soil - $\gamma'_l = K_o \times \gamma' = 26.6$ pcf
* hydrostatic pressure - γ_w = 62.4 pcf
* equivalent fluid pressure with water level at the top of the grade at the wall - $\gamma_{eo} = \gamma'_l + \gamma_w$ = 89 pcf (say 90 pcf)
* equivalent fluid pressure with compaction induced lateral stress increase (W&F, pg 409) $\gamma_{eo} = 2 \times K_o \times \gamma_m$ = 91 pcf (say 90 pcf)
* active pressure case - $K_a = [1 - \sin(\phi')] / [1 + \sin(\phi')] = 0.24$
$\gamma_{ea} = K_a \times \gamma_m$ = 29 pcf (say 30 pcf)
* passive pressure case - $K_p = [1 + \sin(\phi')] / [1 - \sin(\phi')] = 4.2$
$\gamma_{ep} = K_p \times \gamma_m$ = 504 pcf (say 330 pcf with a F.S. = 1.5)

		Thoroughly Compacted ⇒	Uniformly Graded & Clean Coarse Sand or Sandy Gravel Fill	Non-Plastic Silty Sand or Sandy Silt Fill	
USE:	Earth Pressure Coefficient	Static Active =	0.24	0.33	
		Static At-Rest =	0.76	1.00	
		Static Passive =	2.80	2.00	(with F.S. = 1.5)
		Static Passive =	4.20	3.00	(with F.S. = 1.0)
USE:	Equivalent Fluid Pressure	Static Active =	30 pcf		
		Static At-Rest =	90 pcf (for rigid walls)		
		Static Passive =	330 pcf (with F.S. = 1.5)	[500 pcf with (with F.S. = 1.0)]	

[For earthquakes, structural engineer may elect to use the above Static Passive case instead of the below Earthquake Lateral Load for Non-Yielding Wall movement into the soil backfill.]

USE: Simplified Model for Earthquake Lateral Load/Ft. Wall Length @ 0.6 H_{bw} above base. Loads for Non-Yielding Wall. H_{bw} = Earth Height Behind Wall (feet)

Reduce load by 33% for Yielding Wall (active case) = (6.8 psf / foot) x H_{bw}^2 (NYS, S_{ds} = 0.25 g)
(γ_m = 120 pcf for S_{ds} value. Add to Static At Rest/ Active Pressure/Load for unsaturated backfill case) = (13.5 psf / foot) x H_{bw}^2 (NYS, S_{ds} = 0.50 g)
= (17.5 psf / foot) x H_{bw}^2 (NEern NYS, $S_{ds} \leq 0.65$ g)

[Above for Site Class C to E soils. Interpolate for other S_{ds} values.
Use 1.75 x values for walls on Class B/A rock or on rigid foundation base. (FEMA NEHRP Guidelines)]

Saturated/Liquified Soil During Earthquake = 132 pcf
(Equivalent Fluid Pressure. Add to inertial hydrodynamic pressure, not presented here.)
If looser/denser backfills, adjust above pressures by the ratio = new density / 120 pcf or / 132 pcf (for saturated case))

USE:	Coefficient of Friction Against Sliding (f_s)	= 0.45	(on compacted NYSDOT Item #304.12 or #304.14 gravels)
	(use lowest f_s with no underlying weaker layers)	= 0.35	(on compacted granular soil & non-plastic silt)
		= 0.20	(slab-on-grade on polyethylene on granular fill)
	[with a F.S. = 1.0]	= 0.60/0.50	(on clean, rough, & sound bedrock/smooth bedrock)
	Min. Factor of Safety Against Sliding	= 1.5	*[Rev.9-30-09]*

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APPENDIX D

LIMITATIONS

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LIMITATIONS

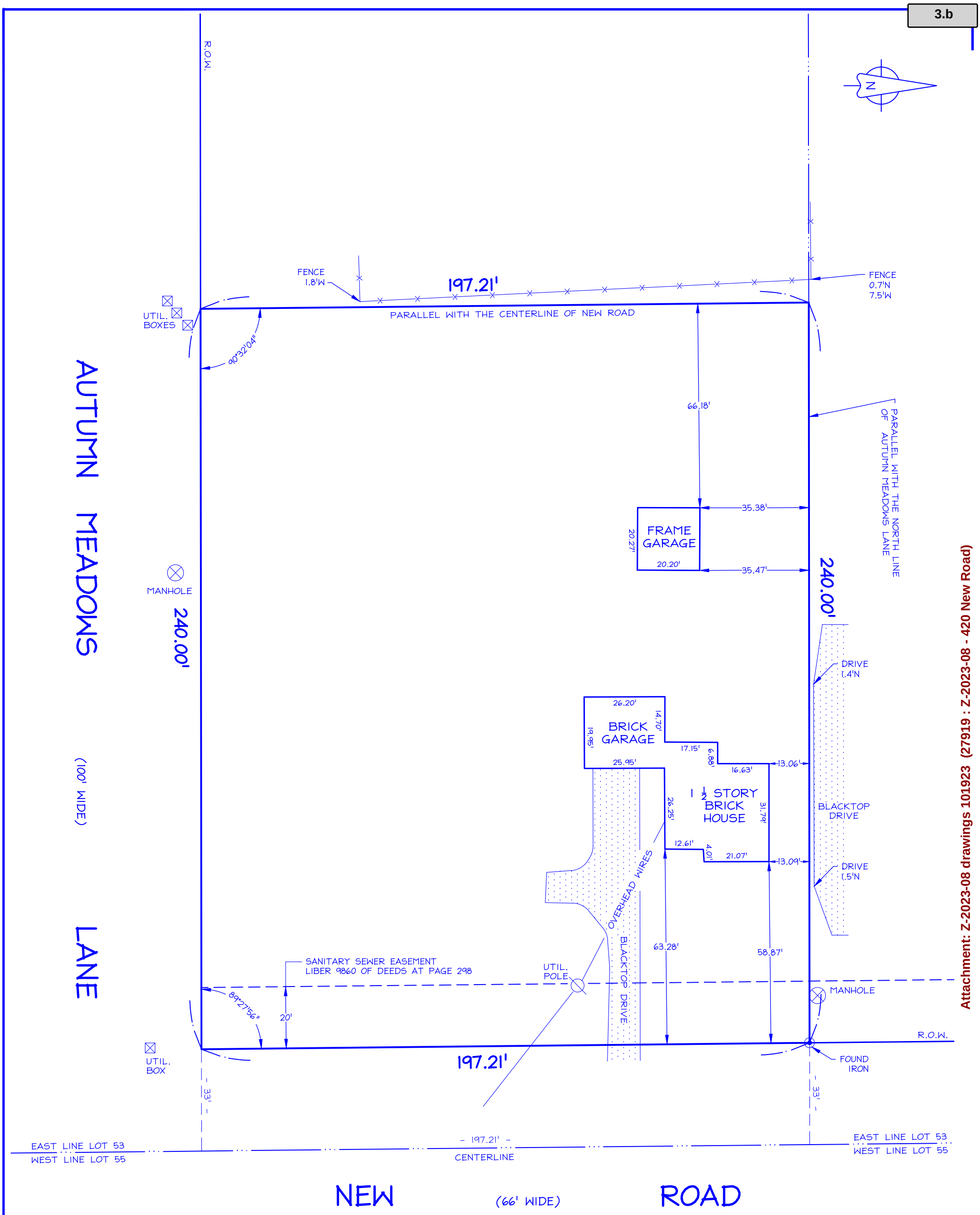
1. This report is based on the data that was obtained from the subsurface explorations and on the information submitted to the geotechnical engineer. A geotechnical engineer, who is experienced in foundation construction and earthwork, should be engaged to review the final design and specifications in order to determine whether any change in concept may have any effect on the validity of the conclusions presented herein, and whether these conclusions have, in fact, been implemented in the design and specifications.

2. The subsurface conditions, including thickness, between the exploration locations are approximate and simplified representations of the strata and transitions. There is the possibility that variations in soil and rock conditions and boundaries will be encountered during construction. In order to permit correlation between the exploratory soil data and the actual soil conditions encountered during construction and so as to assess conformance with the plans and specifications as originally contemplated, it is recommended that a geotechnical engineer, who is experienced in foundation construction and earthwork monitoring, should be retained to perform continuous construction review during the site preparation and foundation construction operations.

3. The subsurface exploration logs and subsurface conditions may aid in estimating material quality and quantities, such as topsoil/organic matter, fills, natural soils, and rock, but are not to be relied upon as the exclusive means for bid preparation purposes. It is the responsibility of the contractor to perform any additional site examinations and explorations and to prepare an accurate bid.

4. Disclaimers:
   a. In the event that any changes in the nature, design or location of the structure are planned, the conclusions that are contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing.
   b. The geotechnical engineering report has been prepared for this project by Barron & Associates, P.C. This report is for assistance in design only and is not a sufficient basis on which to prepare an accurate bid.
   c. This report has been prepared for the exclusive use of Mr. Joseph Rubino and his designated design representatives, for specific application to the rezoning of a parcel to be developed as two residential lots along Autumn Meadows Lane, south/southwest of 420 New Road in the Town of Amherst, Erie County, New York and in accordance with generally accepted geotechnical engineering practice. No other warranty, expressed or implied, is made.

Attachment: Z-2023-08 application 101923 (27919 : Z-2023-08 - 420 New Road)



Unauthorized alterations or additions to any survey, drawing, design, specification, plan or report is a violation of section 7209, provision 2 of the New York State Education Law.

This survey was prepared without the benefit of an abstract of title and is subject to any state of facts that may be revealed by an examination of such.

NO IRONS SET OR FOUND AT PROPERTY CORNERS UNLESS NOTED HEREON

84 Sweeney Street, Suite C-13 North Tonawanda, NY 14120
Phone: (716) 692-0800 fax: (716) 389-0491 www.nussclarke.com

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1933

Successors to the records of James L. Shisler, Land Surveyor
Successors to the records of Graf Land Surveyors

BOUNDARY SURVEY
No. 420 New Road

Part of Lot 53, Township 13, Range 7
Holland Land Company's Survey
Town of Amherst
County of Erie, State of New York

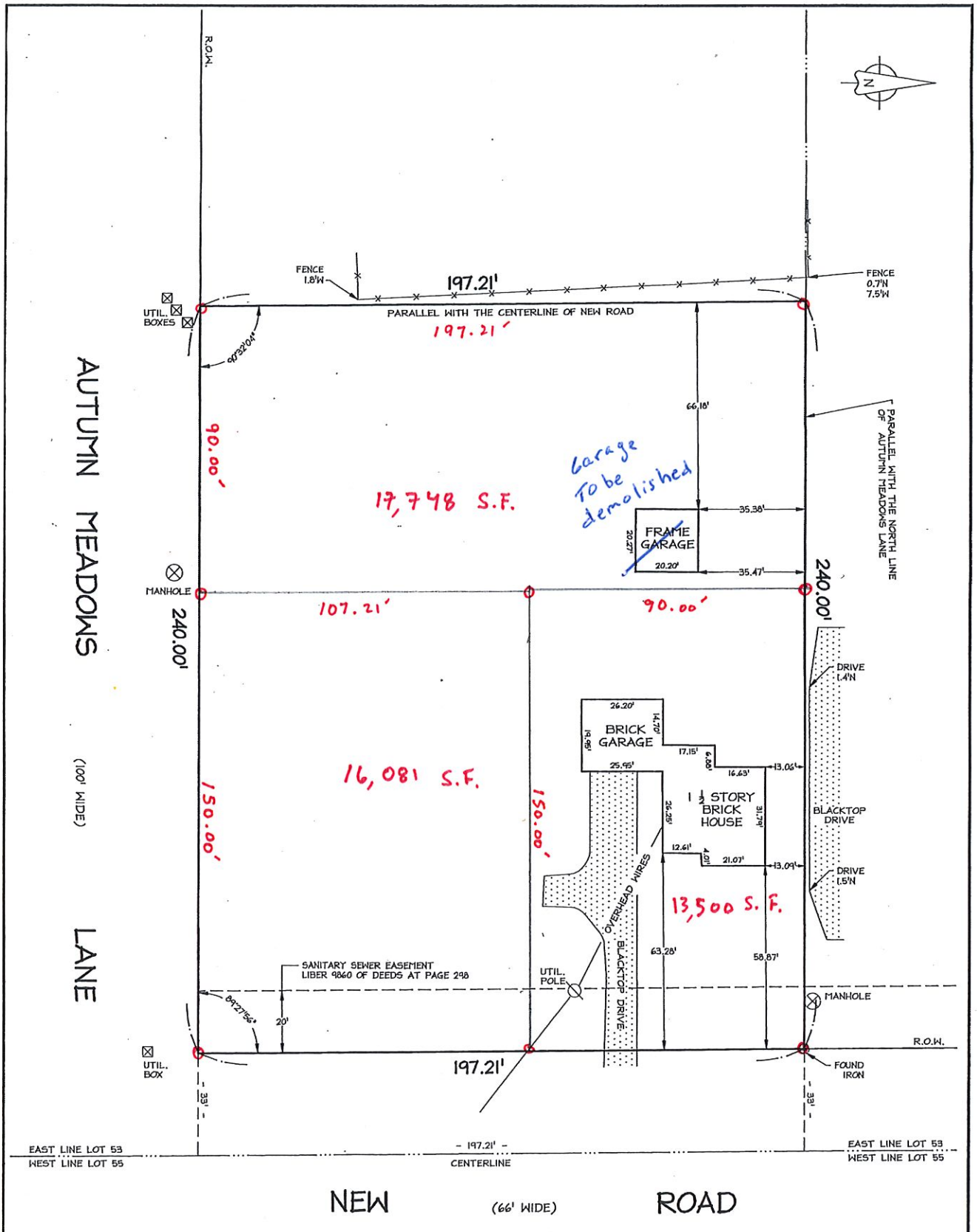
Date of Survey: 05/31/2023 SBL No. 28.06-1-55.11

Project No. : 23J4-0176
Scale: 1" = 30'

John F. Raimonde, P.L.S.

Attachment: Z-2023-08 drawings 101923 (27919 : Z-2023-08 - 420 New Road)

Proposed Lot Split



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Phone: (716) 692-0800 fax: (716) 389-0491 www.nussclarke.com
NUSSBAUMER & CLARKE, INC.

BOUNDARY SURVEY
No. 420 New Road
Part of Lot 53, Township 13, Range 7
Holland Land Company's Survey
Town of Amherst

Project No.: 23J4-0176
Scale: 1" = 30'

Attachment: Z-2023-08 drawings 101923 (27919 : Z-2023-08 - 420 New Road)

Erie County On-Line Mapping Application





Legend

- Parcels

0 0.04 0.1 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: 2,257

Attachment: Z-2023-08 drawings 101923 (27919 : Z-2023-08 - 420 New Road)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2023-08

PETITIONER

Joseph Rubino
5462 Sheridan Drive, Suite 1
Williamsville, NY 14221

PROPERTY LOCATION

420 New Road

WHEREAS the Town of Amherst Planning Board on Thursday, October 19, 2023 held a public hearing on the proposed rezoning of land from Suburban Agriculture (SA) district to Residential District Three (R-3) district, and

WHEREAS the Planning Board has reviewed plans and other materials regarding the rezoning proposal, and

WHEREAS the materials and plans have been referred to the Town's various review agencies, and

WHEREAS in accordance with Section 8-3-5 of the Zoning Ordinance the Planning Board finds that:

A. The proposed zoning and development plan is generally consistent with the policies of the Comprehensive Plan and the Zoning Ordinance.

B. The proposal **is** consistent with the Conceptual Land Use Plan which shows "Single Family Residential" land use in this area of the Town.

B. There are adequate services and utilities available or proposed to be made available in the construction of the development.

C. The proposal is compatible with the present zoning and conforming uses of nearby property and with the character of the neighborhood.

D. The subject property is not suitable for uses permitted by the current versus the proposed district.

E. The proposed change tends to improve the balance of uses, or meet a specific demand in the Town.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act is not required as the parcel is developed and is maintained as lawn and associated residential landscaping.

WHEREAS pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

Attachment: Z-2023-08 signed resolution 101923 (27919 : Z-2023-08 - 420 New Road)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2023-08

RCVD

PETITIONER

Joseph Rubino

PROPERTY LOCATION

420 New Road

NOW THEREFORE BE IT RESOLVED that the Planning Board recommends to the Town Board in accordance with Section 8-3-4 of the Zoning Ordinance, that the rezoning request be approved.

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 19, 2023; moved by Penberthy; seconded by Chmeil; ayes 6, noes 0; absent 1 (Raffaele).

Robert J. Gilmour, Planning Board Chair

10-26-2023
Date

TV/ac
X:\Current_Planning\Files\Rezonings\2023\Z-2023-08_(420_New_Rd)_2023\Z-2023-08_resolution_101923.doc
Cc: Town Clerk
Commissioner of Building
Highway Superintendent
Town Engineer
Traffic/Safety Coordinator
Joseph Rubino, 5462 Sheridan Dr., Suite 1, Williamsville, NY 14221

Attachment: Z-2023-08 signed resolution 101923 (27919 : Z-2023-08 - 420 New Road)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

TABLED

Meeting: 10/19/23 06:30 PM
Department: Planning
Category: Miscellaneous
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 27918

PLANNING BOARD ITEM (ID # 27918)

Request to Amend the Comprehensive Plan "Figure 6" from Single Family Residential to Mixed Residential, BCPA-2023-02

Properties located at 46, 54, 60, 68, 74 & 84 South Linden Street
South Linden LLC, Petitioner

The purpose of this request is to amend the Bicentennial Comprehensive Plan to change the land use designation from "Single Family Residential" to "Mixed Residential". The "Mixed Residential" land use designation is meant for a variety of residential housing types that allows for more density than single family residential housing. The subject parcels are currently zoned Residential Three (R-3) and therefore, to implement the concept plan provided the petitioner would need to file a subsequent rezoning request to one of the multifamily residential districts, provided the Town Board agrees to amend the Bicentennial Comprehensive Plan. The application materials indicate that the petitioner intends to seek a rezoning from R-3 to MFR-5 in order to develop 28 town homes.

No comments were heard on this proposal.

Mr. Giuliani moved to adjourn the request. The motion was seconded by Ms. Penberthy and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

ATTACHMENTS:

- BCPA-2023-02 application packet 101923 (PDF)

RESULT:	**ADJOURNED [UNANIMOUS]**	**Next: 1/18/2024 6:30 PM**
MOVER:	Dal Giuliani, Board Member	
SECONDER:	Brittany Lee Penberthy, Board Member	
AYES:	Gilmour, Chmiel, Gill, Giuliani, Penberthy, Kahn	
ABSENT:	Joseph P. Raffaele Jr.	





TOWN OF AMHERST PLANNING DEPARTMENT

Request for Bicentennial Comprehensive Plan Amendment

For Official Use

File #: BCPA-2023-02 **Acreage** 2.4± **Fee $** 15

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Application Received by Planning Department _____ ACCEPTED BY DATE

Materials & Fee Paid to Town Clerk _____ ACCEPTED BY DATE

		Fill In Applicable Fees
COMPREHENSIVE PLAN AMMENDMENT	**$0***	
AFFIDAVIT FEE FOR PUBLIC HEARING	**$15**	✓

Fee schedule subject to change by future Town Board action

TOTAL FEE: $ 15

TO BE COMPLETED BY APPLICANT

Petitioner:

Name: South Linden LLC

Address: 493 Kennedy Road

Cheektowaga (City) NY (State) 14227 (Zip Code\)

Phone: (716) 432-6947 Fax _____

Email: john@kimilco.com

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Owner of Land (if different than above):

Name: _____

Address: _____

_____

City State Zip Code

Phone: _____ Fax _____

E Mail: _____

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

Name: Jeffery D. Palumbo, Esq. / Block, Longo, LaMarca & Brzezinski, P.C.

Address: 9276 Main Street, Suite 3

Clarence NY 14031

City State Zip Code

Phone: (716) 317-0664 Fax (716) 854-0057

E Mail: jpalumbo@blockandlongo.com

Petitioner's interest in property

- ☐ Option to purchase
- ☒ Owner
- ☐ Other (explain) _____

The following are all others having an interest in this application and join herein with the petitioner named above: (describe extent of interest; attach sheets as needed)

N/A

Street address(es) of land subject to Bicentennial Comprehensive Plan Amendment:

South Linden Street, a paper street

SBL #(s): TBD

INFORMATION ON REQUEST

1. **The undersigned hereby requests the Honorable Town Board to amend the following text sections of the Bicentennial Comprehensive Plan:**

   Section(s) #/page(s): N/A

Note: If the requested amendment does not involve a map change, skip #2 and #3.

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

2. **The undersigned hereby requests the Honorable Town Board to amend the Conceptual Land Use Map (Figure 6) and/or Commercial and Mixed-Use Designations (Figure 6A) as follows:**

FROM:

- ☐ Rural Residential
- ☒ Single Family Residential
- ☐ Mixed Residential
- ☐ Medium Residential
- ☐ Commercial/ Mixed Use*
- ☐ Special Use Center
- ☐ Commercial-Office
- ☐ Industrial-Office
- ☐ Community Facilities
- ☐ Educational Campus
- ☐ Recreation, Open Space, & Greenways
- ☐ Agriculture
- ☐ Transportation

*Additional Designations in Figure 6-A:

- ☐ Suburban Center
- ☐ Suburban Corridor
- ☐ Traditional Areas

TO:

- ☐ Rural Residential
- ☐ Single Family Residential
- ☒ Mixed Residential
- ☐ Medium Residential
- ☐ Commercial/ Mixed Use*
- ☐ Special Use Center
- ☐ Commercial-Office
- ☐ Industrial-Office
- ☐ Community Facilities
- ☐ Educational Campus
- ☐ Recreation, Open Space, & Greenways
- ☐ Agriculture
- ☐ Transportation

*Additional Designations in Figure 6A:

- ☐ Suburban Center
- ☐ Suburban Corridor
- ☐ Traditional Areas

3. **Other Bicentennial Comprehensive Plan Map Amendments (if applicable):**

Figure # or Name: Figure 6 Conceptual Land Use Plan

4. **Information on prospective action (*to be provided in separate attachment*):**

A. Description of any prospective action:

B. Rationale for request of amendment:

1. How will the requested amendment to the Bicentennial Comprehensive Plan consistent with *Section 2.2 (Vison Statement)*?
2. How will the requested amendment to the Bicentennial Comprehensive Plan consistent with *Section 2.3 (Key Initiatives)*?

C. How is the requested amendment align with the defined policies in Sections;

1. *3.0 Land Use and Development?*
2. *4.0 Natural and Cultural Resources?*
3. *5.0 Economic Development?*
4. *6.0 Transportation?*
5. *7.0 Infrastructure?*
6. *8.0 Housing & Neighborhoods?*
7. *9.0 Community Facilities & Services?*

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

SECTION 809 CERTIFICATION

The undersigned certifies that all information required to be disclosed pursuant to Section 809 of the General Municipal Law (see below) is as follows:

The undersigned swears or affirms that all statements made herein are true, that all drawings submitted correctly show the situation involved in this petition.

Signature of Petitioner

Subscribed and sworn to before me this 21 *day of* August, *20* 23

Notary Public, Erie County, New York

TRACY A. MURRAY
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01MU5077295
Qualified in Genesee County
Commission Expires May 5, 20 27

N.Y.S. General Municipal Law - Section 809 Disclosure in certain applications:

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provision of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state office or any office or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them

   (a) is the applicant, or
   (b) is an officer, director, partner or employee of the applicant, or
   (c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
   (d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such applicant, petition or request.

3. In the county of Nassau the provisions of subdivisions one and two of this section shall also apply to a party officer. "Party Officer" shall mean any person holding any position or office, whether by election, appointment or otherwise, in any party as defined by subdivision four or section two of the election law.

4. Ownership of less than five per cent of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

5. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

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: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Survey and Legal Description

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

NOTE: THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE.

NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 PROVISION 2

• SET OR EX. 5/8" REBAR

McINTIRE (50.0' WIDE) ROAD

SOUTH LINE McINTIRE ROAD

SOUTH LINE LANDS APPROPRIATED BY THE NYS THRUWAY L-5292, P-169

NOW OR FORMERLY
SOUTH LINDEN, LLC
L-11185, P-8858
SBL: 80.16-4-2

61.80

FENTON (50.0' WIDE) STREET ABANDONED
SEE RESOLUTION L-6053, P-41

NOW OR FORMERLY
SOUTH LINDEN, LLC
L-11186, P-8871
SBL: 80.16-4-3

95.00

NOW OR FORMERLY
SOUTH LINDEN, LLC
L-11186, P-8871
SBL: 80.16-4-4

70.00

NOW OR FORMERLY
SOUTH LINDEN, LLC
L-11186, P-8871
SBL: 80.16-4-5

70.00

NOW OR FORMERLY
SOUTH LINDEN, LLC
L-11186, P-8871
SBL: 80.16-4-6

70.00

668.50'

NOW OR FORMERLY
JOSEPH P MARASCO
& VANDINA MARASCO
SBL: 80.16-4-7

70.00

NOW OR FORMERLY
MICHELE R. HOOD
L-11081, P-4878
SBL: 80.16-4-8

70.00

NOW OR FORMERLY
DAVID DI MINNI
L-10952, P-6438
SBL: 80.16-4-9.2

70.00

NOW OR FORMERLY
SUFIAN B. ALMASHHADANY
L-11084, P-2333
SBL: 80.16-4-10

91.70

50.00'

AREA: 0.767± ACRE

(UNIMPROVED)

668.64'

SOUTH HARVEST (50.0' WIDE) STREET

SOUTH LINDEN (50.0' WIDE) STREET

WEHRLE (WIDTH VARIES) DRIVE

DATE	REVISION/TYPE

SURVEY OF
PART OF LOT 22, TOWNSHIP 11, RANGE 7
HOLLAND LAND SURVEY
TOWN OF AMHERST, ERIE COUNTY, NEW YORK

GPI ENGINEERING, LANDSCAPE ARCHITECTURE & SURVEYING, LLP
ENGINEERING · SURVEYING · LANDSCAPE ARCHITECTURE
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225
(716) 633-4844 FAX 633-4940

Job No. 9394
Scale 1" = 50'

Date: JULY 14, 2021
Tax No.

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

LEGAL DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND ALL THAT TRACT OR PARCEL OF LAND, situated in the Town of Amherst, County of Erie and State of New York, being part of Lot 22, Township 11 and Range 7 of the Holland Land Company's Survey, bounded and described as follows:

BEGINNING at the intersection of the west line of Linden Street (AKA South Linden Street) (50.0 feet wide) as shown on a subdivision map of Cayuga Heights filed in the Erie County Clerk's Office under Ma Cover 898 and the north line of Wehrle Drive (width varies), said point being the southeast corner of lands conveyed to Sufian B. Almashhadany by deed recorded in the Erie County Clerk's Office in Liber 11084 of Deeds at Page 2333:

THENCE: Northerly, along the west line of Linden Street, a distance of 668.50 feet to the south line of McIntire Road (50.0 feet wide) as appropriated by the NYS Thruway and recorded in the Erie County Clerk's Office in Liber 5292 of Deeds at Page 169;

THENCE: Easterly, along the said south line of McIntire Road, a distance of 50.00 feet to the east line of Linden Street;

THENCE: Southerly, along the said east line of Linden Street, a distance of 668.64 feet to the aforementioned north line of Wehrle Drive;

THENCE: Westerly, along the said north line of Wehrle Drive, a distance of 50.00 feet to the POINT OF BEGINNING containing 0.767 acre be the same more or less.

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Preliminary Site Plan

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

© CARMINA WOOD DESIGN

All Rights Reserved. Reuse of these documents without ... sections 7209A and 7307 of the New York State Ed... to alter this drawing. If altered by any party other ... and specific description of the alt...

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

DRAWING NAME:
Site Plan
Concept

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS:

No.	Description	Date

Multi-family Devleopment
S Linden Street
Amherst, New York

CARMINAWOOD
DESIGN
Buffalo | Utica | Greensboro

Date: 7/11/23
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-100
Project No: 23-xxxx

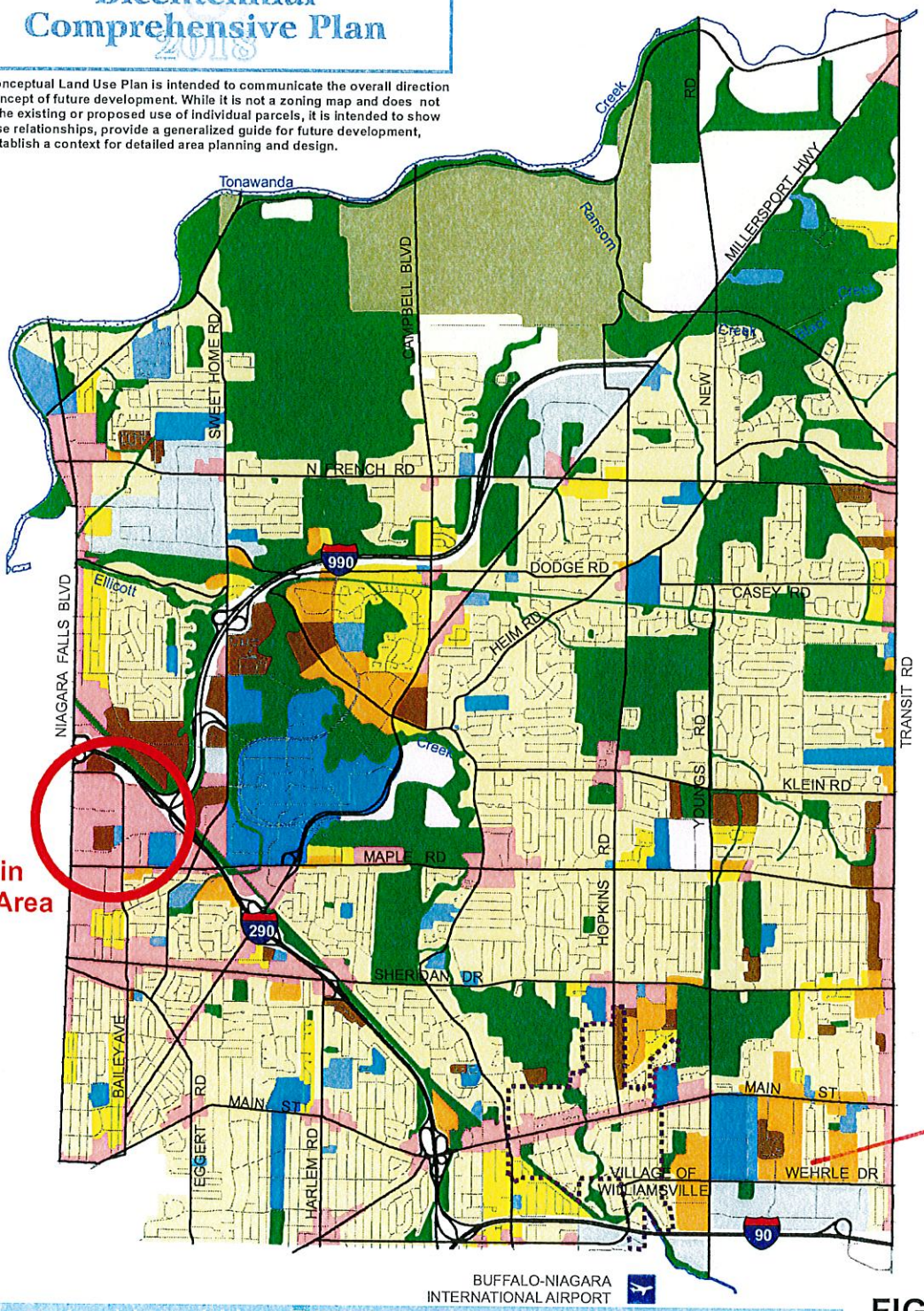
Map Graphic
depicting requested Comprehensive Plan Change

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Town of Amherst Bicentennial Comprehensive Plan

1818 2018

The Conceptual Land Use Plan is intended to communicate the overall direction and concept of future development. While it is not a zoning map and does not show the existing or proposed use of individual parcels, it is intended to show land use relationships, provide a generalized guide for future development, and establish a context for detailed area planning and design.



Increase in Mixed-Use Area

Property Location

Requested Classification

Conceptual Land Use Plan

- Rural Residential
- Single Family Residential
- Mixed Residential
- Medium Residential
- Commercial / Mixed Use*
- Special Use Center
- Commercial - Office
- Industrial - Office
- Community Facilities
- Educational Campus
- Recreation, Open Space & Greenways
- Agriculture
- Transportation
- Surface Water
- Village of Williamsville Boundary

* See Map Figure 6-A for Additional Designations

SOURCE NOTES:

Original Source Data Provided by the Town of Amherst Information Technology Department, URS Corporation and Wallace Roberts & Todd, LLC

Map Compiled by the Town of Amherst Planning Department

Date: June 2019

N

0 0.25 0.5 0.75 1 1.25 Miles

FIGURE 6

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Comprehensive Plan Amendment Analysis

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Comprehensive Plan Amendment Analysis S. Lynden Street

As set forth in the Town of Amherst Bicentennial Comprehensive Plan ("Plan") amendment application form, Petitioner must provide information on the prospective action in relation to the plan. The application form questions are outlined below in bold with Petitioner's response noted.

A. Description of Prospective Actions:

Petitioner's Response: Petitioner is proposing to build four (4) buildings, each containing seven (7) two (2) story townhomes, for a total of 28 townhome units.

B. Rationale for Request of Amendment:

1. How will the requested amendment be consistent with Section 22 (Vision Statement)

Petitioner's Response: The requested amendment will enhance the livability of the area in offering a lifestyle option not readily available in the immediate area. In addition, it will serve to enhance community character by investing in and revitalizing older neighborhoods. Further, the requested amendment and subsequent development will present a very high standard for quality development while respecting appropriate buffers in existing neighborhoods. Finally, this is consistent with the Shared Direction as set forth in the plan as it enhances the diverse economy of the Town, strengthening the tax base and attraction to the community by carefully using vacant land with an infill development.

2. How will the requested amendment be consistent with Section 2.3 (Key Initiatives)

Petitioner's Response: Regarding "Aesthetic/Community Character" as set forth in the plan, the amendment will only add to the renowned beauty, character and environmental quality of the Town. A first-class townhome community seeks to "raise the bar" by adding a new lifestyle choice in an underserved area.

Regarding the "Revitalization" initiative in the plan, again, this proposal injects new life and new investment into an older area of the Town, by providing a diverse choice of living for empty nesters, young professionals, or others seeking limited maintenance obligations.

Finally, the amendment is consistent with the "Governance" initiative as the proposed townhomes do not introduce inconsistency or unfairness in zoning and land use.

C. How is the requested amendment aligned with the defined policies in sections:

1. 3.0. Land Use and Development?

Petitioner's Response: The requested amendment adds new diverse housing and an investment to the established community and does so with a context-sensitive architectural and site design. Ultimately, the Properties call for residential dwellings and the requested

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

amendment and development result in residential dwellings. Specifically, the requested amendment seeks to have the Properties classified as "Mixed Residential." Mixed Residential is appropriate for residences along roads like Wehrle Drive and as a buffer to more traditional single-family neighborhoods. The Properties and Development perfectly capture Mixed Residential as set forth in the Comprehensive Plan.

2. ***4.0 Natural and Cultural Resources:***

Petitioner's Response: As set forth in the Plan, "best management practices" will be employed to retain stormwater on site, thus reducing downstream flooding and allowing pollutants to filter out over time. Additionally, silt fences and various other techniques will be employed to prevent sediment from leaving this site during construction.

3. ***5.0 Economic Development:***

Petitioner's Response: As stated in the Plan, "A healthy tax and employment base are essential not only to Amherst's economy, but also the Town's quality of life." Further, the amendment, by introducing new housing, meets the town's objective of maintaining Amherst's strong tax base. Additionally, the proposed townhomes will respect the character and quality of life in the area.

4. ***6.0 Transportation:***

Petitioner's Response: The plan defines the area as "Traditional Character" which describes a corridor located within higher intensity centers and other neighborhoods. Traffic from the proposed townhome will not significantly alter any traffic patterns in the area.

5. ***7.0 Infrastructure:***

Petitioner's Response: The proposed amendment will not stress existing storm or waste water service. Other utilities such as water, electric and gas are available on site.

6. ***8.0 Housing and Neighborhoods:***

Petitioner's Response: The proposed amendment furthers the Comprehensive Plan objective to achieve a diversity of housing options. The Petitioner will ensure that the diverse housing option will be well managed and contribute to the surrounding neighborhood's health and stability. While the proposed amendment changes the Comprehensive Plan conceptual land use plan, Figure 6, by making the Properties mixed residential, the change allows Amherst residents to remain in Amherst by downsizing into a maintenance free environment.

7. ***9.0 Community Facilities & Services:***

Petitioner's Response: The proposed townhomes are not far from the Main Street corridors. This will allow the residents to visit nearby businesses, restaurants, movie theaters, etc.

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Environmental Assessment Form

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

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:
South Linden Townhomes

Project Location (describe, and attach a location map):
South Linden Street, a paper street

Brief Description of Proposed Action:
Four (4) buildings each containing seven (7) townhomes.

Name of Applicant or Sponsor:	Telephone: (716) 317-0667
South Linden LLC, Jeffery D. Palumbo, agent	E-Mail: jpalumbo@blockandlongo.com

Address:
c/o Block, Longo, LaMarca & Brzezinski, P.C. - 9276 Main Street, Suite 3

City/PO:	State:	Zip Code:
Clarence	NY	14031

	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: Town Board rezoning approval and Planning Board sit plan approval.	☐	☑

3. a. Total acreage of the site of the proposed action? 2.4 acres
   b. Total acreage to be physically disturbed? 2.0 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.4 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

	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 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? If the proposed action will exceed requirements, describe design features and technologies: _____	NO ☐	YES ☑	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO ☐	YES ☑	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO ☐	YES ☑	
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: _____	☑	☐	

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

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: Storm water management system will discharge to the Town of Amherst system on McIntire Road		
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: Storm water management, size TBD		
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: JEFFERY D. PALUMBO - AS ATTORNEY Date: 8-21-23

Signature: [signature] Title: ATTORNEY

PRINT FORM

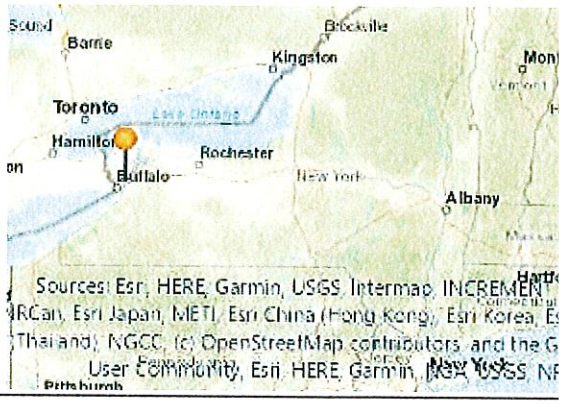
Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

EAF Mapper Summary Report

Monday, August 21, 2023 8:48 AM



Disclaimer: The EAF Mapper is a screening tool intended to assi project sponsors and reviewing agencies in preparing an environment 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. Althoug 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 orde to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	No
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Owner Authorization

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

AUTHORIZATION

John Militello, as Member of South Linden LLC, record property owner of property located at South Linden Street, a paper street in the Town of Clarence, New York (SBL No. TBD), hereby authorize Block, Longo, LaMarca & Brzezinski, P.C. to file any and all applications along with any necessary supporting documentation, with the Town of Amherst in connection with the approvals sought for the properties referenced above.

SOUTH LINDEN LLC

By: Militello, John
John Militello, Member
Dated: 08 / 21 / 2023

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)

Renderings

Attachment: BCPA-2023-02 application packet 101923 (27918 : BCPA-2023-02 - 46-74 South Linden Road)





Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

ADOPTED

Meeting: 10/19/23 06:30 PM
Department: Planning
Category: Miscellaneous
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 28063

PLANNING BOARD ITEM (ID # 28063)

Proposed Amendment to Chapter 203 of Town Code for the Standard for Establishing an Accessory Dwelling Unit, ZTA-2023-03

Town of Amherst, Petitioner

The proposed text amendment aims to broaden housing opportunities in the Town of Amherst by allowing for a simpler path in establishing an Accessory Dwelling Unit (ADU). The proposed changes will not require any familial connection or age requirement and will instead focus on the design of the unit itself and how the ADU fits into the fabric of an existing community.

Dan Ulatowski, Assistant Planning Director and Zoning Enforcement Officer and Laurie Stillwell, Community Development Director, explained the proposal and were available to answer questions from the Board.

Ms. Stillwell stated the current interest rate is 8.6% and the unit will have to be owner occupied. Mr. Ulatowski stated the Town Board will also hear this proposal.

Jane Cox, 4584 Harlem Road, and Laura Flumerfeldt, 1001 N. French Road, spoke in favor of the proposal.

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

Following discussion, Ms. Penberthy moved to recommend approval of the text amendments with modification as follows:

the last sentence in section 2-4 being amended to read "….. for a period of time longer than 6 months" instead of 30 days.

The motion was seconded by Mr. Chmiel and carried. Ayes 6, Noes 0, Absent 1 (Raffaele).

ATTACHMENTS:

- ZTA-2023-03_application packet 101923 (PDF)
- ZTA-2023-03 signed resolution 101923 (PDF)

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

TOWN OF AMHERST PLANNING DEPARTMENT

Zoning & Subdivision Text Amendment Application

File # __**ZTA-2023-03**__

1. Zoning Ordinance Text Amendment ☒
2. Subdivision Regulations Text Amendment ☐

PETITIONER:

- ☐ Town Board
- ☐ Planning Board
- ☐ Zoning Board of Appeals
- ☐ Commissioner of Building
- ☐ Planning Director
- ☒ Zoning Enforcement Officer

Sections Proposed to be Amended: (Attach sheets as necessary.)

See Attachment A_____

_____

_____

_____

_____

Description of Amendments: (Attached sheets as necessary.)

See Attachment B

_____

_____

_____

_____

Materials Received by Planning Department _____
RECEIVED BY DATE

Materials Filed with Town Clerk _____
ACCEPTED BY DATE

X:\Current_Planning\Application Forms 2019\Zoning or Subdivision Text Amend App 2022.doc

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

ATTACHMENT A

Proposed ADU Text Amendment **October 4, 2023**
ZTA-2023-03

§2-4
~~Auxiliary Housing~~ **Accessory Dwelling** Unit
~~A room or group of rooms within a detached single-family dwelling forming a semi-independent habitable unit, which may be occupied by elderly or disabled members of the family occupying the dwelling for separate living, sleeping, cooking or eating purposes.~~
A separate dwelling unit that is attached to or located on the same lot as a principal residential dwelling used for the living, sleeping, cooking, and bathroom facilities of individuals for a period of time longer than 30 days.

§3-2-3A, 3-3-3A, 3-4-3A, 3-5-3A, 3-6-3A, 3-7-3A, 3-9-3A, 3-10-3A, 3-11-3A(1), 3-12-3A(1)
~~Auxiliary Housing~~ **Accessory Dwelling** Unit

§6-8-2.
~~Auxiliary Housing~~ **Accessory Dwelling** Units.
Where permitted as an accessory use in Part 3, an ~~auxiliary housing~~ **accessory dwelling** unit may be constructed ~~within any single-family detached dwelling~~ following approval of a Special Use Permit as set forth in §8-6, subject to the following standards;

~~A. An auxiliary housing unit shall accommodate not more than two members of the family occupying the principal dwelling. At least one of the persons housed in the auxiliary housing unit shall be at least 60 years of age or handicapped or otherwise incapacitated to the extent that independent housing is not practical.~~

~~B. The auxiliary housing unit shall not exceed 500 square feet.~~

~~C. The permit for the auxiliary housing unit shall be valid for a period not exceeding two years. Thereafter, it can be renewed, from time to time, for additional two-year periods upon proof satisfactory to the ZBA that the circumstances warranting the original permit continue to exist.~~

A. General Standards for Accessory Dwelling Units

1. **A maximum of one (1) accessory dwelling unit is permitted on an individual lot.**
2. **Accessory dwelling units shall be within or substantially attached to the principal structure with the exception of lots located in the R-R, R-1, SA and AG zoning districts that satisfy the minimum dimensional standards listed in Part 3, as amended.**
3. **Accessory dwelling units shall be a minimum of 500 sq. ft and the accessory dwelling unit shall not exceed 49% of the gross floor area of the principal dwelling up to 900 sq. ft., whichever is less restrictive.**
4. **The maximum height of an accessory dwelling unit is limited to the maximum height of the principal structure.**

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

5. A maximum of 2 bedrooms shall be permitted for an accessory dwelling unit. A third bedroom is permitted if built within the roof portion of the structure.
6. The accessory dwelling unit shall have its own entrance, which may be shared with the principal dwelling by a common area.
7. A minimum of one (1) off street parking space shall be provided with a maximum of two (2) parking spaces permitted. Any required off-street parking for an ADU shall not be located in front of the principal structure.
8. The principal dwelling or accessory dwelling unit must be owner occupied. The property owner must certify that either unit is their principal place of residence and legal domicile. Both the principal structure and accessory dwelling unit must remain in common ownership.
9. Accessory dwelling units must maintain a complimentary exterior finish to the principal structure.
10. Exterior lighting shall meet the standards listed in §7-3 of this Ordinance.

B. Standards for Detached Accessory Dwelling Units
   1. The minimum separation from the principal structure shall be 10 feet.
   2. Detached accessory dwelling units must have the same roof style as the principal dwelling and shall have a maximum height of 2 stories (up to 25 ft).
   3. A detached accessory dwelling unit shall not be located between the front of the structure that it is subordinate to and the right-of-way line of the street(s) servicing it, and must meet the side yard requirements as specified for the principal dwelling.

C. The Special Use Permit for an accessory dwelling unit shall be valid for a period not exceeding two years. Thereafter the Building Commissioner, with concurrence from the Zoning Enforcement Officer, may renew a Special Use Permit upon satisfactory proof of compliance with the standards listed in §6-8-2 above and any conditions placed by the Zoning Board of Appeals on the original permit.
   1. A Special Use Permit renewal shall be valid for a period not exceeding two years.
   2. The original Special Use Permit or any subsequent renewal by the Building Commissioner shall not be transferable. A new property owner shall seek approval from the Zoning Board of Appeals.
   3. The Building Commissioner may deny the renewal of a Special Use Permit based on the following:
      a. Failure to comply with NYS Building Code for property maintenance
      b. Falsification of a certification of legal residence.
   4. If a Special Use Permit renewal is denied, the property owner must seek a new Special Use Permit approval from the Zoning Board of Appeals pursuant to §8-6 of this Ordinance.

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

ATTACHMENT B

Proposed ADU Text Amendment **October 4, 2023**
ZTA-2023-03

Amherst's code allows for Accessory Dwelling Units (ADUs) in certain zoning districts, however the associated use standards are considered burdensome or intimidating for applicants to meet and often act as a barrier to homeowners attempting to create an ADU. ADUs are permitted under two approaches, as "Attached Dwellings" in multi-family districts or as "Auxiliary Housing Units" in single-family districts, both approaches have the following limitations:

Attached Dwellings currently permitted "as of right" include properties zoned Residential 4 (R-4); Multifamily Residential (MFR) 4A; MFR-5 or MFR-6. These Attached Dwellings must be attached to the principal structure and require the parcel to have additional frontage based on the number of units on the lot, as well as adequate off-street parking. For example, an existing single-family home zoned R-4 requesting to add an attached Dwelling Unit would need 90' frontage and a total lot area of 5,850 sq. ft./dwelling unit. In comparison a typical single-family suburban lot is 50' wide and 10,890 sq. ft. Amherst currently has 169 parcels zoned as R-4, MFR-4A, MFR-5, and MFR-6 and many of these districts have parcels that would meet the frontage and lot size requirements to add an Attached Dwelling Unit.

Auxiliary Housing Units are an allowable accessory use to a principal residential structure in the Rural Residential (RR); Suburban Agriculture (SA); Residential-1 (R-1); Residential (R-2); and Residential-3 (R-3) Zoning Districts. In these districts Auxiliary Housing Units are not permitted as of right and must receive a Special Use Permit from the Zoning Board of Appeals (ZBA) to be established. Auxiliary Dwelling Units must be attached to the principal structure; limited in height and size (500 sq. ft max); with occupancy limited to 2 persons (either over 60+ years of age or handicapped) and of familial relationship to the principal structure occupants. Essentially Auxiliary Housing Units are drafted into code as a typical in-law suite, which is reflective of what's most commonly in place in suburban zoning codes around WNY. The RR, SA, R-1, R-2, and R-3 Zoning Districts currently make up the large majority of Amherst zoning districts and the uncertainty of the ZBA process can be intimidating to potential applicants.

The draft text amendments as described in "Attachment A" allow for an easier path to establishment for ADUs and aim to create consistency with surrounding community character by focusing more heavily on form and less on the end user and familial relationship.

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

The most prominent proposed text amendment is the removal of restriction on age and relationship. The provision of a typical “in-law” suite was once a common way to provide an alternative form of housing for a family member in need, however recent housing trends have made finding an affordable place to live more difficult for a greater number of people. The proposed ADU standards will not restrict whom can occupy the accessory unit, instead will restrict the occupancy of the principal dwelling to the property owner. This will demand that the principal dwelling remain owner occupied and maintain the use of the property as a single-family home in existing single-family neighborhoods.

The from controls that are proposed will create conformity to existing community character by forcing the ADU to be designed in a way that is complimentary to the principal dwelling. The draft text would require that in the R-2 and R-3 districts, any ADU would be required to be substantially attached to or within the principal dwelling. This requirement will force the design of the ADU to be aesthetically indistinguishable from an expansion to a single-family home. Further, an increase in floor area will be permitted on a scale with the size of the principal dwelling. Minimally, the ADU may be 500 square feet in area, and at a maximum as proposed, an ADU may not exceed 900 square feet in area. This increase in size from the current standards will allow for better design of interior and exterior spaces and will be more accommodating to groups of people that may functionally need more than one bedroom. Even with an increased size allowance, the proposed text changes will not deviate from the requirements of any accessory structures being subordinate in extent to the principal structure. The maximum height of an ADU will be 2 stories (up to 25 ft), however, in no instance may an ADU be taller than the principal structure (if the principal dwelling is a 1 story ranch, the ADU will be limited to 1 story). This requirement will further ensure that the ADU be consistent with the existing community character and form.

Detached ADUs are not currently permitted and as part of this application would be permitted in the AG, RR, SA and R-1 zoning districts. These districts are predominantly located in North Amherst and are characterized by large lot sizes with single family homes or farming practices. The intent of limiting the allowance of detached ADUs in these districts and not others is the availability of land and the reduced risk of increased density. Detached ADUs will be required to meet all setbacks of the principal structure, be designed in way that is complimentary to the principal dwelling and in some instances, provide a larger footprint than an attached ADU.

For all ADUs, a Special Use Permit will continue to be required to act as another layer of review by the Zoning Board of Appeals (ZBA). Currently, a Special Use Permit issued for an ADU would have

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

to be renewed by public hearing at the ZBA every two years. The proposed text would shift that authority to the Building Commissioner based on an inspection of the premises to ensure that the ADU is compliant with the zoning standards and New York State Building Code.

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

Full Environmental Assessment Form
Part 1 - Project and Setting

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: ZTA-2023-03		
Project Location (describe, and attach a general location map): Town of Amherst		
Brief Description of Proposed Action (include purpose or need): Amendment to Chapter 203 of Town Code to accommodate the allowance of Accessory Dwelling Units (ADUs). Changes include: 1. Amending the name and definition of ADUs to better suit modern terminology & best zoning practice, 2. Providing clearer, more equitable standards for the establishment of an ADU such as setbacks, height, and size, 3. Adding design standards that will demand consistency with surrounding community character, 4. Allowing the Code Enforcement Officer to renew a Special Use Permit for an ADU on a 2 year basis.		
Name of Applicant/Sponsor: Town of Amherst Planning Department	Telephone: (716) 631-7051 E-Mail: planningemail@amherst.ny.us	
Address: 5583 Main Street		
City/PO: Williamsville	State: New York	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role): Thomas Voigt, Assistant Planner	Telephone: (716) 631-7118 E-Mail: tvoigt@amherst.ny.us	
Address: 5583 Main Street		
City/PO: Williamsville	State: New York	Zip Code: 14221
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

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	Town Board (Approval)	November 2023
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Planning Board (Reccomendation)	October 2023
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	239M NYS GML	October 2023
f. Regional agencies ☐Yes ☑No		
g. State agencies ☐Yes ☑No		
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):

_____

_____

_____

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):

Agriculture and Farmland Protection Plan (Adopted 2022)

_____

_____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

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?

_____
_____

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? _____

b. What police or other public protection forces serve the project site?

_____

c. Which fire protection and emergency medical services serve the project site?

_____

d. What parks serve the project site?

_____
_____

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)?

_____

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

_____
_____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

f. Does the project include new residential uses? ☐Yes☐

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? ☐Yes☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

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): _____

_____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

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:

_____

_____

_____

_____

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: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

- Do existing sewer lines serve the project site? ☐Yes ☐
- 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 _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

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)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

_____

_____

- 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)

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

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 _____ Proposed _____ Net increase/decrease _____

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:

_____

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: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☐

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

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:

_____

_____

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: _____

  _____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

5.a

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☐

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): _____

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			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• 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: _____ _____			

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☐ No
i. If Yes: explain: _____

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):

_____
_____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐

- 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? _____ 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: _____ _____%
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☐ 0-10%: _____% 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:

- 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: _____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

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: _____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

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. **See Attachment A**

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. **See Attachment B**

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date_____

Signature_____ Title_____

Attachment: ZTA-2023-03_application packet 101923 (28063 : Zta-2023-03 Aud)

PRINT FORM

TOWN OF AMHERST
PLANNING BOARD
ZONING TEXT AMENDMENTS
ZTA-2023-03

PETITIONER
Town of Amherst
5583 Main Street
Williamsville, NY 14221

WHEREAS the Town of Amherst Planning Board on Thursday, October 19, 2023 held a public hearing on the proposed Zoning Code Text Amendment: Local Law to amend the Zoning Ordinance for Accessory Dwelling Unit (ADU) Standards, and

WHEREAS the Planning Board has reviewed materials regarding the text amendments proposal, and

WHEREAS the materials have been referred to the Town's various review agencies, and

WHEREAS per Section 203 - 8-5-5(A) & (B) of the Town Code, the Planning Board finds that:

1. The proposed text amendment is consistent with the remainder of the Zoning Ordinance, including, specifically, the following purpose statement as found in Section 1-2-2: To regulate and control the location and spacing of buildings on the lot and in relation to the surrounding property generally consistent with the policies of the Comprehensive Plan.

2. The proposed text amendment represents a revision necessitated by changing circumstances over time.

3. The proposed text amendment does not correct an error in the Ordinance.

4. The proposed text amendment does not revise the Ordinance to comply with state or federal statutes or case law.

5. The proposed text amendment advances the public health, safety or welfare and is consistent with the Zoning Ordinance.

6. The proposed text amendment is generally consistent with the policies of the Comprehensive Plan.

NOW THEREFORE BE IT RESOLVED that the Planning Board recommends to the Town Board in accordance with Section 8-3-4 of the Zoning Ordinance, that the request be approved with the following condition;

1. That the language in §2-4 be amended to "a period of time longer than 6 months."

Attachment: ZTA-2023-03 signed resolution 101923 (28063 : Zta-2023-03 Aud)

TOWN OF AMHERST
PLANNING BOARD
ZONING TEXT AMENDMENTS
ZTA-2023-03

PETITIONER
Town of Amherst

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 19, 2023; moved by Penberthy; seconded by Chmiel; ayes 6, noes 0; absent 1 (Raffaele).

Robert J. Gilmour, Planning Board Chair

10-26-2023
Date

TV/ac
X:\Current_Planning\Files\Text Amendments\ZTA-2023\ZTA-2023-03_(Accessory Dwelling Unit)\ZTA-2023-03 resolution 101923.doc
cc: Traffic/Safety Coordinator
Commissioner of Building
Highway Superintendent
Town Engineer

Attachment: ZTA-2023-03 signed resolution 101923 (28063 : Zta-2023-03 Aud)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

ADOPTED

Meeting: 10/19/23 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: 28007

PLANNING BOARD ITEM (ID # 28007)

Sidewalk Waiver for North Bailey Avenue, SP-2023-03, SP-2023-07, SP-1996-14D & SP-1983-42J

4200, 4224 (portion), 4228-4230 & 4252-4258 Ridge Lea Road and 256, 270, 280 (portion) and 306 Meyer Road
Benderson Development Co. LLC, Petitioner

The subject site plans were approved by the Planning Board at its meeting of August 17, 2023 at which meeting, the Planning Board adjourned its decision on the requested sidewalk waiver on Bailey Avenue for the development. In the interim the petitioner has modified its request as stated in the project description below.

The petitioner is requesting that public sidewalks required along the Meyer Road frontage of the Amherst Commons Center development be waived as there are no existing public sidewalk on either side of Meyer Road from Bailey Avenue easterly to the terminus of Meyer Road.

Mr. Giuliani moved to approve the request based on the resolution. The motion was seconded by Mr. Gill and carried. Ayes 5, Noes 0, Abstain 1 (Chmiel), Absent 1 (Raffaele).

ATTACHMENTS:

- SP-2023-03, SP-2023-07, SP-1996-14D & SP-1983-42J signed resolution 101923 (PDF)

RESULT:	**APPROVED [5 TO 0]**
MOVER:	Dal Giuliani, Board Member
SECONDER:	Harbinder Gill, Board Member
AYES:	Gilmour, Gill, Giuliani, Penberthy, Kahn
ABSTAIN:	Michael Chmiel
ABSENT:	Joseph P. Raffaele Jr.

TOWN OF AMHERST
PLANNING BOARD
SIDEWALK WAIVER REQUEST
SP-2023-07, SP-2023-03, SP-1996-14D & SP1983-42J

OCT 25 '23 13:29 RCVD

PETITIONER

Benderson Development Co.
570 Delaware Ave.
Buffalo, NY 14202

PROPERTY LOCATION

4200, 4224, 4228-4230, 4252-4258 Ridge Lea Road
& 256, 270, 280 and 306 Meyer Road

WHEREAS, the Town of Amherst Planning Board on Thursday, October 19, 2023 considered a request for a sidewalk waiver for the Amherst Commons Center Development for the parcels fronting on Meyer Road located at 256, 270, 280 and 306 Meyer Road and 4252-4258 Ridge Lea Road, and

NOW THEREFORE BE IT RESOLVED that the Planning Board, in accordance with Part II Chapter 83-9-1-1.1 of Town Code, grants a sidewalk waiver along the north side of Meyer Road for the developments frontage with the following condition:

1. That sidewalks can be ordered in by the Town in the future and at the owner's expense.

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 19, 2023; moved by Giuliani; seconded by Gill; ayes 5, noes 0; abstain 1 (Chmiel), absent 1 (Raffaele).

Robert J. Gilmour, Planning Board Chair

10-26-2023
Date

SM/ac
X:\Current_Planning\Files\Site Plans\2023\SP-2023-03_(4200, 4224,_4228-4230_Ridge_Lea_Rd)_2023\SP-2023-03_SWW resolution_101923.doc
cc: Town Clerk
Commissioner of Building
Town Engineer
Highway Superintendent
James Boglioli, Benderson Development Co, LLC, 570 Delaware Avenue, Buffalo, NY 14202
Matt Oates, Benderson Development Co. LLC, 570 Delaware Avenue, Buffalo, NY 14202
Chris Wood, Carmina Wood Design, 487 Main St., Ste. 500, Buffalo, NY 14203

Attachment: SP-2023-03, SP-2023-07, SP-1996-14D & SP-1983-42J signed resolution 101923 (28007 : SP-2023-03, SP-2023-07, SP-1996-14D &

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

ADOPTED

Meeting: 10/19/23 06:30 PM
Department: Planning
Category: Miscellaneous
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 28056

PLANNING BOARD ITEM (ID # 28056)

2024 Planning Board Meetings Calendar

A motion was made by Ms. Penberthy to accept the Draft 2024 Schedule of Planning Board meetings. The motion was seconded by Ms. Kahn and passed. Ayes 6, Noes 0, Absent 1 (Raffaele).

ATTACHMENTS:

- draft Calendar 2024 (PDF)

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Brittany Lee Penberthy, Board Member
SECONDER:	Carrie H. Kahn, Board Member
AYES:	Gilmour, Chmiel, Gill, Giuliani, Penberthy, Kahn
ABSENT:	Joseph P. Raffaele Jr.

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard, AICP
Planning Director

Daniel J. Ulatowski, AICP
Assistant Planning Director

DRAFT

2024
Schedule of Planning Board Meetings

Note:

1. A pre-application meeting is required with the Planning Department before a submittal will be accepted. Submissions will not be accepted at a pre-application meeting.

2. **A submittal appointment is required.** When scheduling an appointment, please let the Planning Department know how many petitions you are intending to submit. At least one-half hour per submittal is required.

3. On-time submission does not necessarily guarantee a place on the next month's agenda. You will be notified before the meeting if your project has been placed on the agenda.

Submittal Date **Monday 3 pm**	**Planning Board Meeting** **Thursday 6:30 pm**
11/20/2023	01/18/2024
12/18/2023	02/15/2024
1/22/2024	03/21/2024
Tuesday 2/20/2024	04/18/2024
3/25/2024	05/16/2024
4/22/2024	06/20/2024
	No July meting
6/24/2024	08/15/2024
7/15/2024	09/19/2024
8/19/2024	10/17/2024
9/23/2024	11/21/2024
	No December meeting
11/25/2024	01/16/2025
12/16/2024	2/20/2025

Attachment: draft Calendar 2024 (28056 : 2024 Planning Board Meetings Calendar)

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