



CITY OF SARATOGA SPRINGS PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866
Tel: 518-587-3550 fax: 518-580-9480
www.saratoga-springs.org

MARK TORPEY, *Chair*
ROBERT F. BRISTOL, *Vice-Chair*
TOM L. LEWIS
CLIFFORD VAN WAGNER
HOWARD PINSLEY
JANET CASEY
JAMIN TOTINO
AMY DURLAND, *Alternate*
RUTH HORTON, *Alternate*

Planning Board Meeting City Council Room – 7:00 PM

Agenda

Planning Board Meeting – Thursday, July 28, 2016

City Council Room – 7:00 PM

Workshop: July 25, 2016 At 5pm In The City Council Room

Applications Under Consideration

- A. 15.041 77 Excelsior Mixed-Use Development
Excelsior Ave, Site plan review for mixed-use development with 90 multi-family residential units and 1,440 sq ft of commercial space in the Transect-5 Neighborhood Center (T-5) District.
- Documents:
- [15.041 77EXCELSIORMIXEDUSE_APP_REDACTED.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_ENGREPORT7-6-16.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_SITEPLAN7-7-16.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_SWPPP7-7-2016.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_COMMENTRESPONSELTR7-7-16.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_COMMENTRESPONSELTR11-16-15.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_COMMENTRESPONSELTR11-4-15.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_WATERCONNECTAGRMT.PDF](#)
 - [15.041 77EXCELSIORMIXEDUSE_COUNTYRESPONSE.PDF](#)
- B. 16.027 West Avenue Apartments
246 West Ave, Special use permit for construction of 16 multi-family residential units within the Transect-4 (T-4) District.
- Documents:
- [16.027 WESTAVEAPTSSUP_FULLAPP_REDACTED.PDF](#)
- C. 16.028 West Ave Apartments
246 West Ave, Site plan for construction of 16 multi-family residential units within the Transect-4 (T-4) District.
- Documents:
- [16.028 WESTAVEAPTSSITEPLAN_FULLAPP_REDACTED.PDF](#)
- D. 16.023 Saratoga Fairfield Inn And Suites
176 Broadway, Proposed special use permit for 89 room hotel use in a Transect-5 (T-5) Neighborhood Center District.
- Documents:
- [16.023 FAIRFIELDINNSUITESSUP_APP_REDACTED.PDF](#)
- E. 16.024 Saratoga Fairfield Inn And Suites
176 Broadway, Final site plan review for hotel use in a Transect-5 (T-5) Neighborhood Center District.
- Documents:
- [16.024 FAIRFIELDINNSUITESSITEPLAN_APP_REDACTED.PDF](#)
- F. 16.025 Mendenhall Subdivision
101 Old Schuylerville Road, 4-lot preliminary conservation subdivision within the Rural Residential (RR) District.
- Documents:
- [16.025 MENDENHALLSUBDIVISION_APP_REDACTED.PDF](#)
- G. 10.038.1 Excelsior Springs Banquet Valet Parking (Spa Hotel)
47 Excelsior Avenue, Site plan modification to accommodate hotel valet parking area within the Transect-5 (T-5) District.
- Documents:
- [10.038.1 EXCELSIORSPRINGSVALETPARKING_APP_REDACTED.PDF](#)
- H. 16.026 Allerdice Glass & Aluminum
120 Excelsior Avenue, Special use permit for manufacturing, retail, office and recreational facility within the Transect-5 (T-5) District.
- Documents:
- [16.026 ALLERDICEGLASSANDALUMINUM_APP_REDACTED.PDF](#)

Salute To Flag

A. Approval Of Minutes: July 14, 2016, July 28, 2016

Next Meeting: Thursday, September 8, 2016 (W/ Tuesday, September 6, 2016 Caravan & Workshop)



CITY OF SARATOGA SPRINGS

PLANNING BOARD

CITY HALL - 474 BROADWAY
SARATOGA SPRINGS, NEW YORK 12866-2296
TEL: 518-587-3550 FAX: 518-580-9480
HTTP://WWW.SARATOGA-SPRINGS.ORG

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR:
SITE PLAN REVIEW APPROVAL
(INCLUDING PUD)

(Rev: 1/04/11)

1. Project Name: 77 Excelsior Mixed Use Development

2. Project Data

Location: Excelsior Avenue

Current Zoning: T-5, Neighborhood Center

Proposed Use: Mixed Use, commercial/residential

Date zoning variance granted (if any): None

Tax Parcel Number: 166.5-5-5.41

3. Professional Representing Applicant:

Name: David Carr, Jr., RLA

Phone:

Address: The LA Group, P.C.

Fax:

40 Long Alley, Saratoga Springs, NY 12866

4. Application Fee: Total \$ 11,830

A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

- Sketch Plan - \$250
- Final Site Plan Approval

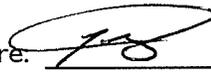
Residential -	\$250 plus \$150/unit	\$ <u>11,200</u>
Non-Residential -	\$500 plus \$100/1,000 SQ. FT	\$ <u>630</u>
- Extension

Residential -	\$250
Non-Residential -	\$500
- Modification

Residential -	\$250
Non-Residential -	\$500

5. Environmental Assessment Form - All applications must include a completed SEQR Short Form.
6. Cost estimates for Letter of Credit - All applications must include cost estimates.
7. Application Check List - All applications must include application check list.
8. Estimate of increase in water consumption: 13,880 gallons/day.
9. For all projects including new water connections to the City system, a copy of a signed water service connection fee agreement with the City Department of Public Works is required and **MUST** be submitted with this application.
10. Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES _____ NO X . If yes, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.
11. Submit 12 copies of complete application including checklist, SEQR form, and all plans (must be 24" x 36").
12. Submission Deadline - All completed applications are due 4 weeks before the Planning Board meeting date.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Site Plan approval by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-5.4 of the Zoning Code of the City of Saratoga Springs.

Applicant Signature:  - Member
 Name: Prime Beechwood³LLC
 Address: 621 Columbia Street
Cohoes, NY 12047

Date: 9/9/15
 Phone: 
 Fax: _____

If applicant is leasee, owner must also sign.

Owner Signature: _____

Date: _____



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SITE PLAN REVIEW REQUIRED SITE PLAN SUBMITTAL CHECK LIST

1. Project Name: 77 Excelsior Mixed Use Development
2. Checklist Prepared By: Excelsior Avenue Date: 8/19/2015

Listed below are the minimum submittal requirements as set forth in Chapter 240-5.4 for any site plan application before the Saratoga Springs Planning Board. The Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimal requirements are not met.

(for reviewers use) YES NO N/A	YOUR SITE PLAN SUBMITTAL SHOULD INCLUDE THE FOLLOWING ITEMS, AS APPLICABLE:
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1. Correct plan size and scale. Sheets <u>must be</u> 24" x 36", drawn to a scale of not more than 1"=50 feet
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2. Property line survey prepared by a licensed land surveyor. Site plan must reference such survey with all corners set and marked on plan. A copy of the original property survey must also be included.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3. Building setback lines, either listed or shown on plans
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4. Identification of all existing or proposed easements
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5. Identification of existing zoning
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6. References to all prior variances or special use permits
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7. Topography data tied to NGVD 1929 datum
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8. Parcel tax map number
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9. Name of all adjacent property owners
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10. Parcel street address (postal address)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	11. North arrow and map scale
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	12. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. Site location map
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Site vicinity map (all features within 300 feet of property)

<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Existing and proposed contours and spot grades (at 2 foot intervals)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all spoil or borrow areas
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Identification of all watercourses, designated State wetlands, Federal wetlands, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	18. Location of proposed storage, if any
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location and distance to fire hydrant
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Location, size, and material of all existing and proposed utility services
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking lot layout plan and identification of all loading areas (number all spaces)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Parking demand calculations
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	26. Location and screening plan for dumpster or recycling bins
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. Location, design, type of construction and materials, proposed use and exterior dimensions of all buildings (existing and proposed) on site
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	28. Identification of storage of any potentially hazardous materials
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	29. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	31. Drainage plan and stormwater management report
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	32. Soil erosion protection measures
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	33. Identification of all federal, state, county, and local permits needed
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	34. Quantities of work items and estimates of costs
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	35. Estimate of increase in water consumption
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	36. Copy of signed water connection agreement with DPW for all projects involving new water connections to the City system
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	37. OTHER: _____ _____ _____

City of Saratoga Springs Complete Streets Checklist

Saratoga Springs Complete Street Policy Vision (May 2012)

The City of Saratoga Springs Complete Streets Policy will encourage the development of a complete streets network throughout the City to create a more balanced transportation system. The Policy shall be consistent with and assist in achieving the goals and recommendations set forth in the City's Comprehensive Plan and other policy documents. The Policy shall ensure new and updated public and private projects are planned, designed, maintained and operated to enable safer, comfortable and convenient travel to the greatest extent possible for users of all abilities including pedestrians, bicyclists, motorists and transit riders.

This checklist is intended to assist the City in achieving its vision for complete streets.

Project Name: 77 Excelsior Avenue Mixed Use Development **Date:** 09/9/2015

Project Location / Limits: 77 Excelsior Avenue

Project Description: Mixed use development with up to 101 residential units and up to 1,300 sf of commercial space.

Instructions: For each box checked, please provide a brief description for how the item is addressed, not addressed, or not applicable and include supporting documentation.

Street Classification (identify street or streets within the project area)			
Principal arterial	<input type="checkbox"/>	Minor arterial	<input checked="" type="checkbox"/>
Mixed use collector	<input type="checkbox"/>	Mixed use local	<input type="checkbox"/>
Residential collector	<input type="checkbox"/>	Residential local	<input type="checkbox"/>
Special use street	<input type="checkbox"/>		

EXISTING CONDITIONS				
Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Existing Bicycle & Pedestrian Operations				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pedestrian sidewalks along project frontage; bike lanes along Excelsior Avenue.
Existing Transit Operations				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CDTA bus stop existing along Excelsior Avenue
Is the project area on a transit route? (CDTA Service Routes)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Route 472
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bike racks only proposed.
Existing Access and Mobility				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Project Area not adjacent or contiguous
Are there gaps inhibiting continuous access between schools, hospitals, senior care, or community centers or persons with disabilities within project area?"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There are no gaps within the project area
Project Area Context				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Connections existing via sidewalks to adjacent shopping.
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: <u>City of Saratoga Springs Comprehensive Plan</u> , <u>City of Saratoga Springs Open Space Plan</u> , <u>Capital District Transportation Committee Bicycle/ Pedestrian Priority Network</u> , <u>City Standard Details</u> , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bike Racks, safe inlets
Pedestrian accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks proposed
Access and Mobility accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adequate sidewalks
Transit accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing CDTA bus stop
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Streetscape elements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Additional sidewalks, landscaping and lighting

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable actuated traffic signal bike detection, including turn lanes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted? *	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable consideration/provision for accessible pedestrian traffic signal features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Pedestrian Facilities:	
Sidewalks on both sides of the street	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Geometric modifications to reduce crossing distances such as curb extensions (e.g. bulb-outs)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Acceptable provision for pedestrian traffic signal features (e.g. ped. buttons)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Safety islands/medians on roadways with two or more traffic lanes in each direction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Are there proposed connections to any key destinations listed on page 1?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Are there proposed connections to neighborhoods?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Design Standards and Guidelines				
Design meets guidelines such as described below for bicycle/pedestrian/bus/transit facilities?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Describe

*American Association of State Highway and Transportation Officials (AASHTO) - *A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities and AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities; Public Right-of-Way Accessibility Guide (PROWAG); Manual on Uniform Traffic Control Devices (MUTCD); Americans with Disabilities Act Accessibility Guidelines (ADAAG); National Association of City Transportation Officials (NACTO) - Urban Bikeway Design Guide. New York State Department of Transportation - Highway Design Manual*

*CDTA was contacted for the Excelsior Avenue Mixed Use Development

Cost Estimate for Letter of Credit				PB # 14.059
Project No:	201391			
Project:	77 Excelsior Avenue Mixed Use Development			
Location:	77 Excelsior Avenue			
	Saratoga Springs, New York			
Date:	9/8/2015			
<i>ON-SITE WORK</i>				
Item	Quantity	Unit	Unit Cost	Subtotal
<u>Site Preparation and Grading</u>				
Erosion Control (including silt fence & access)	1	LS	\$3,500.00	\$3,500.00
Tree clearing	1	LS	\$3,000.00	\$3,000.00
Rough Grading	1	LS	\$6,000.00	\$6,000.00
<u>Hardscape</u>				
Concrete Walk	5,120	SF	\$5.25	\$26,880.00
Asphalt pavement	18,125	SF	\$3.00	\$54,375.00
Cast in Place Concrete Curb	1,095	LF	\$18.00	\$19,710.00
<u>Site Amenities</u>				
Parking lot light pole	5	EA	\$2,200.00	\$11,000.00
Decorative street light	1	EA	\$3,000.00	\$3,000.00
Traffic signs	4	EA	\$350.00	\$1,400.00
Striping	1	LS	\$3,500.00	\$3,500.00
Bike Rack	2	EA	\$500.00	\$1,000.00
Retaining wall	720	LF	\$125.00	\$90,000.00
Decorative Fence	248	LF	\$35.00	\$11,900.00
<u>Site Utilities</u>				
Catch Basins/ Manholes	11	EA	\$1,200.00	\$13,200.00
Yard Drains	9	EA	\$1,000.00	\$9,000.00
Outlet Control Structure	3	EA	\$2,300.00	\$6,900.00
Stormwater Planter	4465	SF	\$12.00	\$53,580.00
Underground sand filter	1	EA	\$15,000.00	\$15,000.00
Underground Storage	1	LS	\$25,000.00	\$25,000.00
Underground Infiltration	1	LS	\$20,000.00	\$20,000.00
6" HDPE Storm Line	94	LF	\$16.00	\$1,504.00
10" HDPE Storm Line	38	LF	\$18.00	\$684.00
12" HDPE Storm Line	570	LF	\$20.00	\$11,400.00
Perforated storm line	400	LF	\$12.00	\$4,800.00
6" PVC Sanitary Line	213	LF	\$20.00	\$4,260.00
Sewer Manhole	2	EA	\$2,300.00	\$4,600.00
Connection to sanitary manhole	1	LS	\$1,000.00	\$1,000.00
6" DIP Water Line	109	LF	\$28.00	\$3,052.00
8" DIP Water Line	25	LF	\$28.00	\$700.00
Water Fittings	1	LS	\$2,000.00	\$2,000.00
<u>Landscaping</u>				
Trees	20	EA	\$500.00	\$10,000.00
Shrubs	9	EA	\$50.00	\$450.00
<i>On-Site Total</i>				\$422,395.00
<i>On-Site Total X .25</i>				\$105,598.75

<i>OFF-SITE WORK</i>				
Asphalt pavement	60	SF	\$3.00	\$180.00
Concrete Walk	1,735	SF	\$5.25	\$9,108.75
Cast in Place Concrete Curb	10	LF	\$18.00	\$180.00
Bench	4	EA	\$400.00	\$1,600.00
6" PVC Sanitary line	29	LF	\$20.00	\$580.00
6" DIP Water Line	30	LF	\$28.00	\$840.00
Water Tapping Sleeve and Valve connection	1	EA	\$3,500.00	\$3,500.00
6" HDPE Storm Line	48	LF	\$16.00	\$768.00
12" HDPE Storm Line	27	LF	\$20.00	\$540.00
Trees	5	EA	\$500.00	\$2,500.00
As Built Drawings	1	LS	\$3,500.00	\$3,500.00
<i>Off-Site Total</i>				\$23,296.75
<i>Total Site Work</i>				\$445,691.75
Letter of Credit Amounts				
Total off-site work				\$23,296.75
Total on-site work x .25				\$105,598.75
<i>Total</i>				\$128,895.50
L.O.C. amount				\$129,000.00

**Engineering Report
Water and Sanitary Sewer**

For

**77 EXCELSIOR AVENUE
MIXED USE DEVELOPMENT**

**EXCELSIOR AVENUE
SARATOGA SPRINGS, NEW YORK**

Planning Board #15.____

Prepared For

**Prime Beachwood LLC
621 Columbia Street
Cohoes, NY 12047
Contact:**

Prepared By

**The LA Group, P.C.
40 Long Alley
Saratoga Springs, New York 12866**



September 9, 2015

I. Introduction

This Project involves the construction and operation of three buildings located on the land adjacent to the Fresh Market property at 77 Excelsior Avenue in Saratoga Springs, Saratoga County. The Project includes the construction of three (3) apartment buildings, one with commercial space fronting Excelsior Avenue. The remainder of the proposed site improvements includes construction of a parking lot, site lighting, landscaping, stormwater controls, and connections to the municipal water and sewer systems.

II. Project Description

The applicant proposes to construct (1) mixed-use building and (2) residential buildings on approximately 2.2 acres. The buildings will include a total of 90 apartment units of 1, 2 or 3 bedrooms, approximately 1,300+/- SF of commercial space, along with garage and exterior parking. Access to the project is proposed from the west access driveway to the Fresh Market site as previously approved.

III. Existing Water and Sanitary Sewer Utilities

Municipal water mains are located along Excelsior and Marion Avenue and are provided by the City of Saratoga Springs Sewer & Water Department. Along Excelsior Avenue there is a 12-inch and 20-inch water main. The 20-inch waterline is a transmission line that feeds the adjacent water treatment plant. The water main along Marion Avenue is an 8-inch branch line that tees off the 12-inch Excelsior Avenue main. An 8-inch service lateral was recently installed for the Fresh Market off the Marion Avenue main. This service line was capped to the west of the Fresh Market building for a future connection and extension into the 77 Excelsior Avenue property.

Municipal sewer services are located along Excelsior and Marion Avenue. The sewer main along Marion Avenue is owned by the City of Saratoga Springs Sewer & Water Department. The sewer main along Excelsior Avenue is owned by the Saratoga County Sewer District No. 1. To service the Fresh Market development, a six-inch gravity lateral was connected to the SCSD main on the south side of Excelsior Avenue. This lateral runs up the access driveway between the Fresh Market development and the 77 Excelsior Avenue development.

IV. Projected Water and Wastewater Flows**Sanitary Sewer Flow Calculations**

The table below provides information on the anticipated wastewater flow rates for the project:

Description	Use Rate	Total Use
<u>Building 4</u>		
(9) 1-bedroom units	110 gpd/unit ¹	990 gpd
(7) 2-bedroom units	220 gpd/unit ¹	1,540 gpd
1,300 sf commercial	0.1 gpd/sf ¹	130 gpd
	Sub-total	2,660 gpd
<u>Building 5</u>		
(18) 1-bedroom units	110 gpd/unit ¹	1,980 gpd
(9) 2-bedroom units	220 gpd/unit ¹	1,980 gpd
	Sub-total	3,960 gpd
<u>Building 6</u>		
(29) 1-bedroom units	110 gpd/unit ¹	3,190 gpd
(17) 2-bedroom units	220 gpd/unit ¹	3,740 gpd
(1) 3-bedroom units	330 gpd/unit ¹	330 gpd
	Sub-total	7,260 gpd
Total		13,880 gpd

Average Daily Flow (ADF) for wastewater is estimated to be 19.3 gallons per minute (gpm) based on a 12 hour day (720 minutes).

Peak Hourly Flow (PHF) = $(13,880 \text{ gpd} \div 720 \text{ minutes per day}) \times (4.2 \text{ peaking factor})^2 = 81.0 \text{ gpm}$.

Domestic Water Demand Calculations

Domestic water average day demand (ADD) is assumed to be equal to sanitary sewer ADF.

Average Day Demand (ADD) = $13,880 \text{ gallons per day (gpd)} \div 720 \text{ minutes per day} = 19.3 \text{ gallons per minute (gpm) average}$.

Peaking factor for instantaneous water use is estimated to be 10 times the average based upon past experience. Maximum Instantaneous Water Demand is estimated at 193 gpm.

For the purposes of input into the City of Saratoga Springs water model, we offer the following estimated water demands for the project:

- Average Day Demand is 19.3 gallons per minute (GPM) over a 12 hour period.
- Max Day Demand is 38.6 gallons per minute (GPM) based on twice the average.
- Peak Hourly Flow is 81.0 gallons per minute (GPM) based on 4.2 times the average.
- Fire Flow Demand is 1,500 gallons per minute (GPM) per ISO guidelines.

V. Proposed Water and Wastewater Utilities

Proposed Water Utilities

To service the project, the existing 8-inch water service line installed with the Fresh Market project is proposed to be extended with an 8-inch ductile iron pipe and new 6-inch DIP building service laterals to serve Building 5 and 6. A separate 6-inch wet-tap off of the existing 12-inch water main along Excelsior Avenue will service Building 4.

The new buildings will have fire sprinklers and the domestic service will be metered. Water system pressure available at the buildings has been calculated based on hydrant flow tests. Water pressure calculations and pressure at all the buildings are provided in Attachment D.

Fire hydrants in the project area include one between the Fresh Market building and proposed Building 6, one at the southeast corner of the Fresh Market building, one on Marion Avenue near Building 2, one on Marion Avenue near the Excelsior Avenue intersection, one on Excelsior Avenue near the Marion Avenue intersection and two on East Avenue near the Excelsior Avenue intersection. These existing hydrants provide adequate coverage for the proposed building development. See Attachment B for a sketch showing the fire hydrant locations.

Needed Fire Flow (NFF) calculations using the ISO Guide for Determination of Needed Fire Flow are presented in Attachment C. The calculation shows a NFF of 1,500 gallons per minute. The hydrant flow test data indicates approximately 8,000 gpm at 20 psi. Based on this information, there is adequate fire protection water supply available at the site.

Connections and appurtenances, including mechanical joints, tees, isolation valves, thrust blocks, trenching, bedding, service connections, as well as testing and disinfection will all be specified in accordance with City of Saratoga Springs standards.

Proposed Wastewater Utilities

Sewer service for the project will be provided from the Saratoga County Sewer District No. 1 sewer main along Excelsior Avenue via the existing on-site service lateral previously installed with the Fresh Market project. No new connection to the SCSD sewer main is proposed. A 6-inch sewer service from Building 5 and 6 is proposed to wye into the existing 6-inch PVC sewer lateral approximately 50' south of the existing sewer manhole (SMH #2). A cleanout is proposed prior to connection into each building and the individual building laterals will maintain a minimum slope of 2%. Sewer service from Building 6 will be provided by a 6" gravity sewer which will run south into a new manhole (SMH #6) then east and pick up the flow from Building 5 at a new manhole (SMH #5). The existing 6-inch sewer line wyes into the existing SCSD sewer main on the south side of Excelsior Avenue approximately 400' west of Marion Avenue.

The capacity of the existing 6-inch PVC service line and the proposed 6-inch PVC service lateral was checked with estimated peak hourly flows.

- Peak hourly flow in the proposed pipe between SMH #5 and the existing 6-inch service line is estimated to be 65.5 gpm. The 6-inch pipe at 1.00% slope is flowing 2.0 inches deep at a velocity of 2.4 feet per second or about 52% of ½ full capacity.
- Peak hourly flow in the proposed pipe between existing SMH #2 and existing SMH #3 is estimated to be 99.1 gpm. The 6-inch pipe at 4.3% slope is flowing 1.7 inches deep at a velocity of 4.5 feet per second or about 38% of ½ full capacity.
- Peak hourly flow in the proposed pipe between existing SMH #3 and existing SCSD main is estimated to be 114.6 gpm. The 6-inch pipe at 3.3% slope is flowing 2.0 inches deep at a velocity of 4.3 feet per second or about 50% of ½ full capacity.

Manholes, pipe, trenching, bedding, service connections, and testing will be specified in accordance with City of Saratoga Springs minimum standards.

Notes

1. From Table B-3, NYSDEC 2014 Design Standards for Wastewater Treatment Works.
2. From Figure 1, GLUMRB Recommended Standards for Wastewater Facilities.

Attachments

Attachment A	Hydrant Flow Test Data
Attachment B	Fire Hydrant Location Sketch
Attachment C	Needed Fire Flow (NFF) Calculations
Attachment D	Water Pressure Calculations
Attachment E	Sanitary Sewer Calculations

ATTACHMENT A
HYDRANT FLOW TEST DATA



North East Fire Protection Systems Inc.

P.O. BOX 508 BURNT HILLS, N.Y. 12027 (518) 885-1115 FAX (518) 885-0526

HYDRANT FLOW TEST REPORT

LOCATION: MARION C EXCELSIOR AV -

SARATOGA SPRINGS N.Y

TEST BY: JIM FANTAUZZ / CARY STEWART

WITNESS STAN BORDEN

DATE: 4-24-13 TIME: 2:15 PM

TARGET HYD. LOCATION (B) CORNER OF

TEST RESULTS : STATIC PRESSURE (B) 102 PSI

RESIDUAL PRESSURE (B) 98 PSI WITH 1570 (A) GPM FLOWING

RESIDUAL PRESSURE (B) _____ PSI WITH _____ (A) GPM FLOWING

FLOW HYD. LOCATION (A) _____

1) PORT FLOWED (A) 1 DIAMETER 2 1/2

2) PORT FLOWED (A) _____ DIAMETER _____

3) PORT FLOWED (A) _____ DIAMETER _____

1) PITOT or FLOW METER READING (A) 87 PSI AT 1570 GPM

2) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

3) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

OUTLET COEFFICIENT USED _____

(smooth 0.90) (square & sharp 0.88) (projecting into barrel 0.77)

$$Q_{20} = Q \left(\frac{P_s - P_{20}}{P_s - P_r} \right)^{.54} = 1570 \left(\frac{102 - 20}{102 - 98} \right)^{.54} = 8021 \text{ gpm}$$

ESTIMATED FLOW AT 20 PSI 8021 GPM

LOCATION SKETCH ATTACHED ? YES NO _____



North East Fire Protection Systems, Inc.

P.O. Box 508

BURNT HILLS, N.Y. 12027

(518) 885-1115

FAX (518) 885-0526

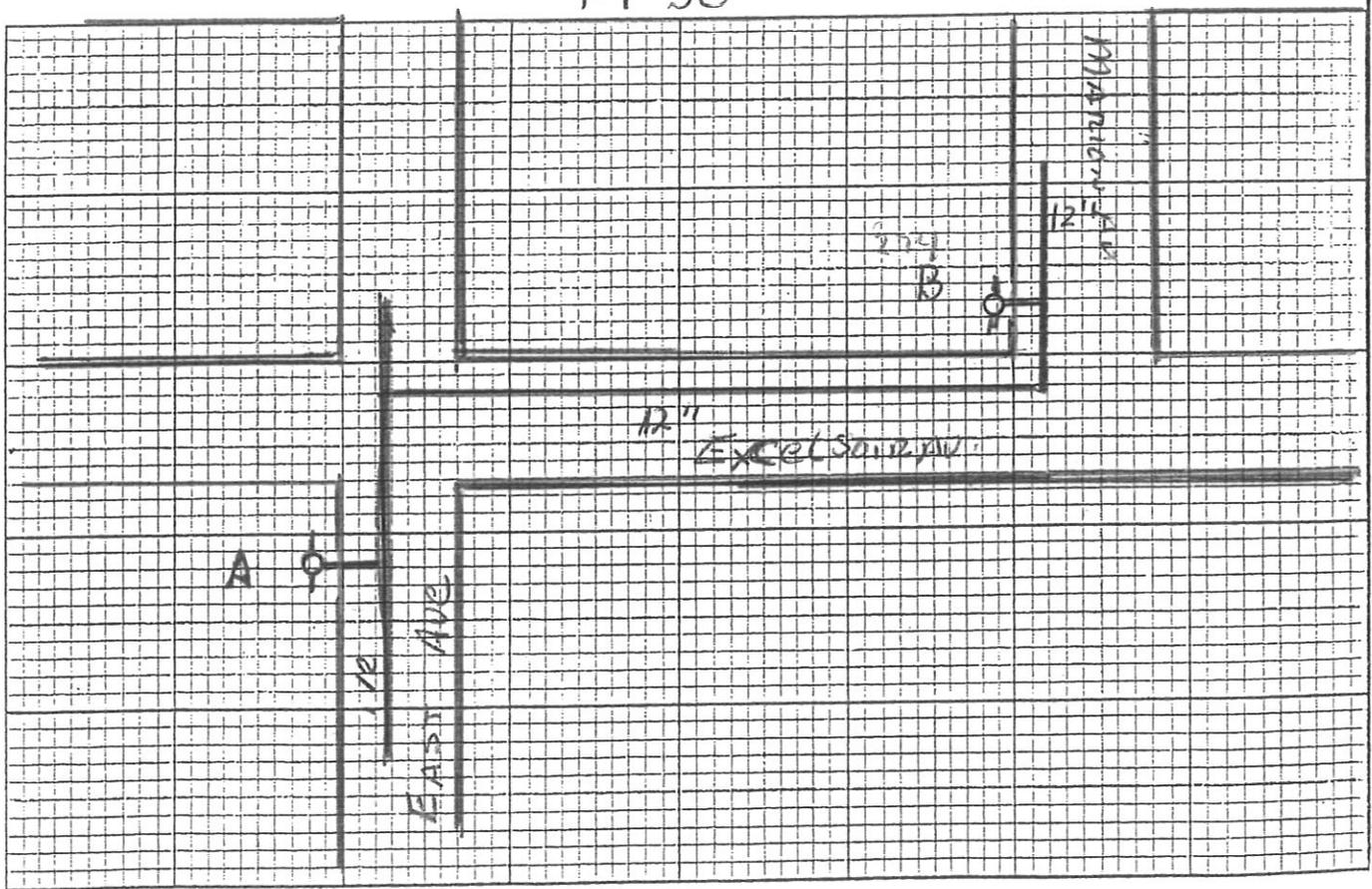
By JMF / CS
 WIT STAN BORDON
 DATE 4-24-13 - 2:15 PM

TEST DATA

TYPE OF TEST (HYDRANT, DRAIN, OR PUMP)	STATIC OR SUCTION- PRESSURE (PSI)	RESIDUAL OR DISCHARGE PRESSURE (PSI)	USG Etc.	PUMP SPEED (RPM)	PITOT PRES.	NO. OF FLOW OPENINGS	DIA. OF FLOW OPENING (IN.)	FLOW AT C = .90 C = .97 (GPM)	OPENING COEFFICIENT C = _____	ACTUAL FLOW (GPM)
	102		274							
		98	261		87	1	2'2	.90		1570

SKETCH OF TEST LOCATION (Show pipe sizes and lengths)

RT 50



NOTES

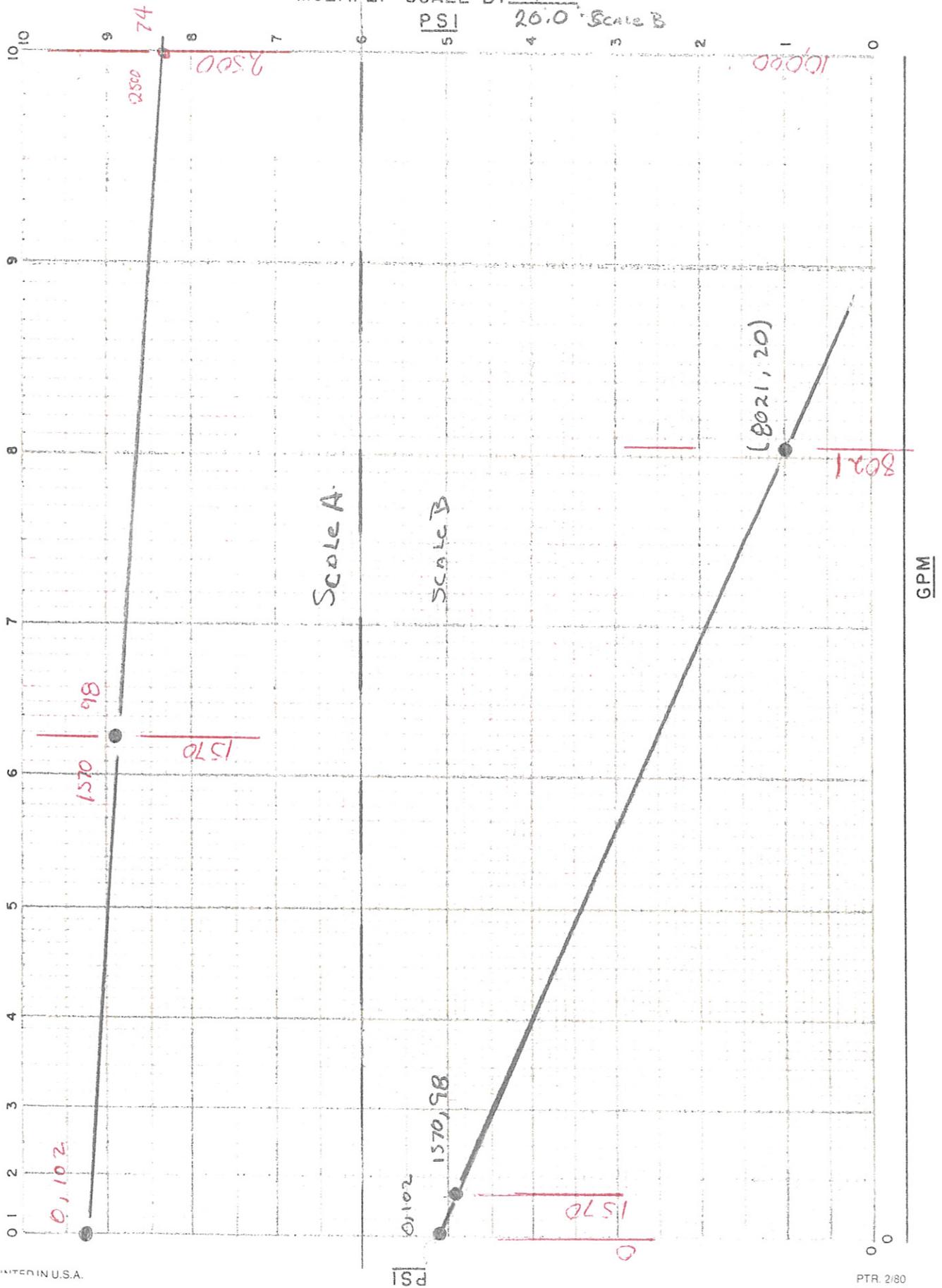


CONTRACT NO. _____
 NAME: Marion Ave @ Excelsior Ave
 ADDRESS: Sanitoga Springs 714

SHEET NO. _____ OF _____
 SYSTEM NO. _____
 DATE: 4-24-13

MULTIPLY SCALE BY $\frac{11.0}{20.0}$ SCALE A
 PSI SCALE B

MULTIPLY SCALE BY $\frac{150}{1000}$ SCALE A
 GPM SCALE B



ATTACHMENT B
FIRE HYDRANT LOCATION SKETCH



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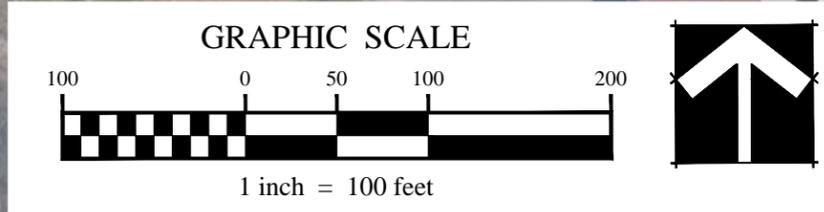
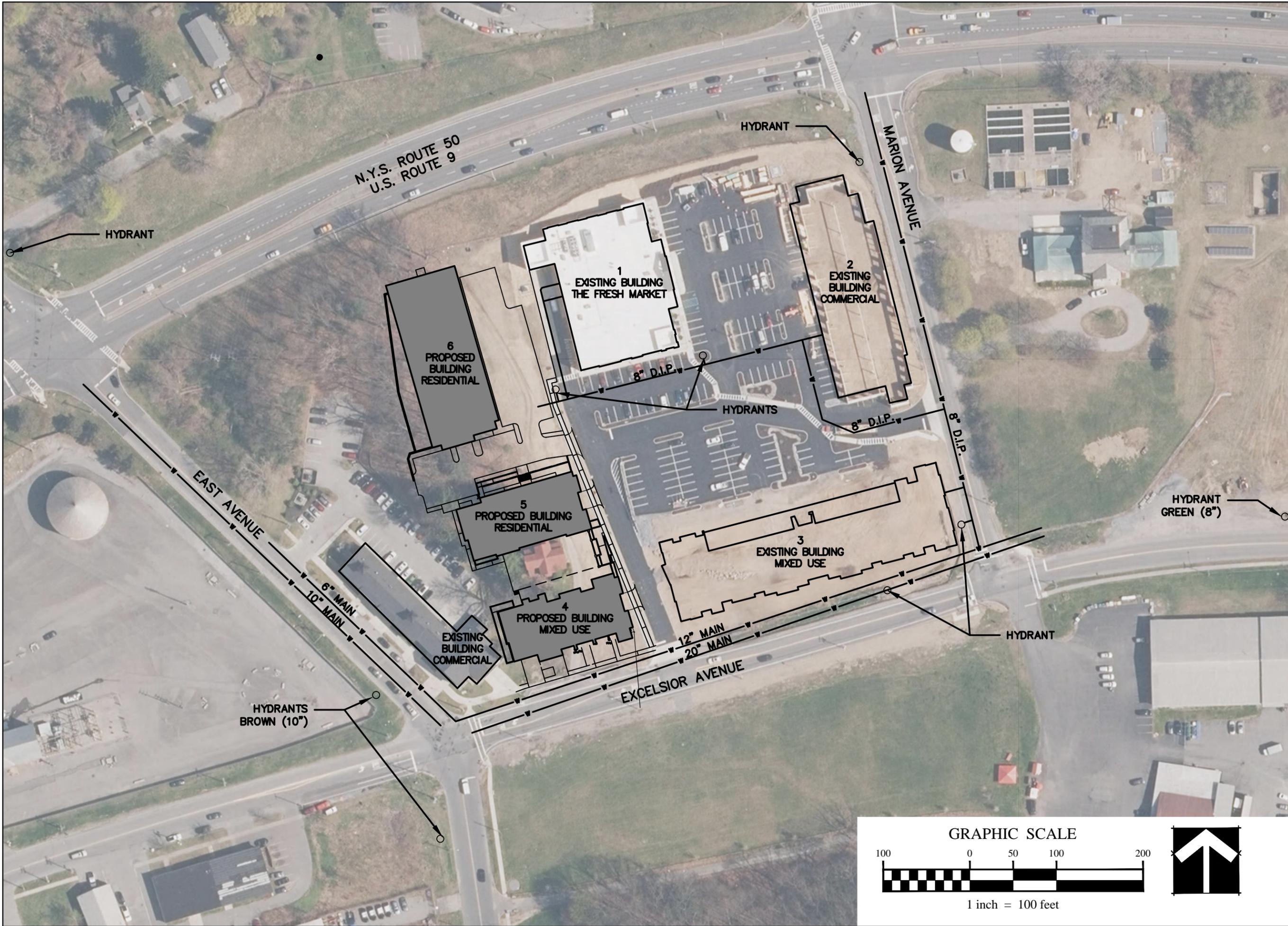
Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.: 201391
Design: DPD
Drawn: KMK Chk'd: DPD
Date: 09/09/15 Scale: 1"=100'

Rev.	Description	Date

Drawing Title:
Hydrant Locations
Drawing No.:
ATTACHMENT B



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ATTACHMENT C
NEEDED FIRE FLOW (NFF) CALCULATIONS

ATTACHMENT D

WATER PRESSURE CALCULATIONS

77 EXCELSIOR AVENUE - NEW DEVELOPMENT

AUGUST 17, 2015

MINOR LOSS COMPUTATION

SEGMENT	FLOW** (GPM)	PIPE DIA. (IN)	PIPE VELOCITY (FT/SEC)	PIPE SEGMENT LENGTH (FT)	FTGS, VALVES EQUIV. LENGTH (FT)	TOTAL LENGTH (FT)	HEAD LOSS (DYNAMIC)		SEGMENT NODE	HGL (FT)	GROUND SURFACE ELEV (FT)	PRESSURE*			SEGMENT	DIA (IN)	NO. OF VALVES	SUB-TOTAL EQUIV. LENGTH	NO. OF SIDE TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF THRU TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF 90 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	NO. OF 45 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	TOTAL EQUIV. LENGTH (FT)		
							C=140 (PSI)	(FT)				STATIC (PSI)	RESIDUAL (FT)	(PSI)															
FROM 12-INCH CITY MAIN ON EXCELSIOR AVENUE AT MARION AVENUE INTERSECTION:																													
AB	3500	8	22.34	60	22.7	83	5.9	13.5	AB	A	509.6	274	102.0	235.6	102.0	AB	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
BC	3500	8	22.34	105	23.9	129	9.1	21.1	BC	B	496.1	277	100.7	219.1	94.8	BC	8	0	0	1	20	1	3.9	0	0	0	0	0	23.9
CD	3500	8	22.34	235	39.2	274	19.4	44.9	CD	C	475.0	281	99.0	194.0	84.0	CD	8	1	2.7	1	20	1	3.9	0	0	2	12.6	39.2	
DE	3500	8	22.34	110	22.7	133	9.4	21.7	DE	D	430.1	285	97.2	145.1	62.8	DE	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
EF	2500	8	15.96	165	3.9	169	6.4	14.8	EF	E	408.4	284	97.7	124.4	53.8	EF	8	0	0	0	0	1	3.9	0	0	0	0	0	3.9
FG	2000	8	12.77	40	6.6	47	1.2	2.7	FG	F	393.5	279	99.8	114.5	49.6	FG	8	1	2.7	0	0	1	3.9	0	0	0	0	0	6.6
										G	390.8	283	98.1	107.8	46.7														
BRANCH LINES (BUILDING SERVICES):																													
FH	500 (BLDG. 1)	6	5.67	140	17.3	157	1.2	2.9	FH	F	393.5	279	99.8	114.5	49.6	FH	6	2	5.2	0	0	1	3.1	0	0	2	9	17.3	
										H	390.7	281	99.0	109.7	47.5														
DI	500 (BLDG. 2)	6	5.67	40	17.6	58	0.5	1.0	DI	D	430.1	285	97.2	145.1	62.8	DI	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	429.0	287	96.4	142.0	61.5														
BJ	500 (BLDG. 3)	6	5.67	25	17.6	43	0.3	0.8	BJ	C	475.0	281	99.0	194.0	84.0	BJ	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	474.2	283	98.1	191.2	82.8														
GK	500 (BLDG. 6)	6	5.67	50	5.7	56	0.4	1.0	GK	G	390.8	283	98.1	107.8	46.7	GK	6	1	2.6	0	0	1	3.1	0	0	0	0	0	5.7
										K	389.8	284	97.7	105.8	45.8														
GL	500 (BLDG. 5)	6	5.67	70	17.6	88	0.7	1.6	GL	G	390.8	283	98.1	107.8	46.7	GL	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										L	389.2	276	101.1	113.2	49.0														
* Static pressure 102 psi measured on 4/24/13. ** Assumes building demand at 500 GPM, fire hydrants flowing 1000 GPM. Assumes (2) hydrants flowing simultaneously. Assumes (3) buildings demanding fire flows simultaneously. Assumes no contribution of flow from the north end of Marion Avenue water main.																													



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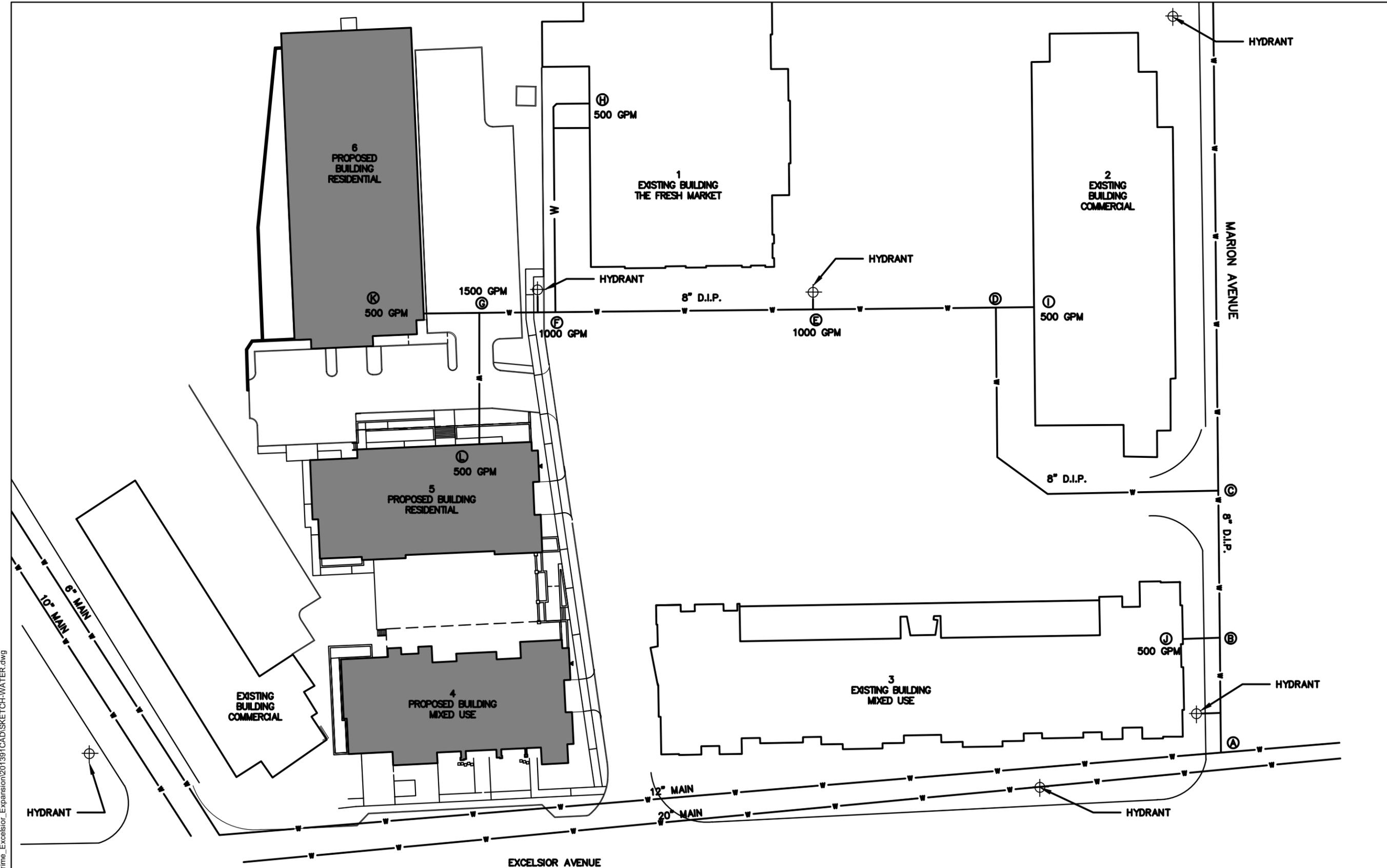
Project No.: 201391
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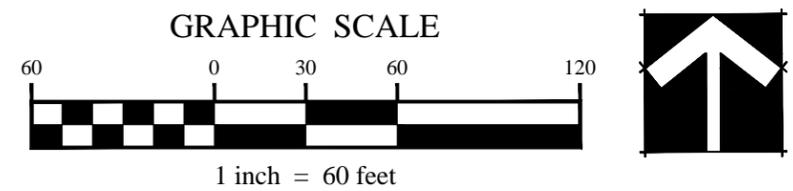
Drawing Title

Waterlines & Fire Hydrants Location

Drawing No.
ATTACHMENT D



SCENARIO:
(2) FIRE HYDRANTS FLOWING @ 1,000 GPM EACH.
(3) BUILDINGS DEMANDING 500 GPM EACH.



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ATTACHMENT E

SANITARY SEWER CALCULATIONS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 4:

APARTMENTS (1BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 990 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 7 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,540 GPD

COMMERCIAL:

NO. SQ FT 1,300 SF
DESIGN FLOW, Q_c = 0.1 GPD/SF (NYSDEC)

 130 GPD
=====

MAX. DAILY FLOW, Q = 2,660 GPD (Q_a + Q_b + Q_c)

AVG. DAILY FLOW, Q_{av} = 3.69 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 15.5 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

 Flow, Q = 0.40 CFS or 178.1 GPM
 Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 5:

APARTMENTS (1BR):

NO. OF APARTMENTS 18 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 1,980 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,980 GPD

=====

MAX. DAILY FLOW, Q = 3,960 GPD ($Q_a + Q_b$)

AVG. DAILY FLOW, Q_{av} = 5.50 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 23.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.40 CFS or 178.1 GPM
Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 6:

APARTMENTS (1BR):			
NO. OF APARTMENTS	29	EA	
DESIGN FLOW, Q _a =	110	GPD/EA	(NYSDEC)

	3,190	GPD	
APARTMENTS (2BR):			
NO. OF APARTMENTS	17	EA	
DESIGN FLOW, Q _b =	220	GPD/EA	(NYSDEC)

	3,740	GPD	
APARTMENTS (3BR):			
NO. OF APARTMENTS	1	EA	
DESIGN FLOW, Q _c =	330	GPD/EA	(NYSDEC)

	330	GPD	
	=====		
MAX. DAILY FLOW, Q =	7,260	GPD	(Q _a + Q _b + Q _c)
AVG. DAILY FLOW, Q _{av} =	10.08	GPM	(BASED ON A 12 HOUR DAY)
PEAK FLOW, Q _p =	42.4	GPM	(4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area,	A =	0.10	SF
Wetted perimeter,	P =	0.79	FT
Channel slope,	S =	0.020	FT/FT
Roughness coefficient,	n =	0.013	(10 States minimum)

Flow, Q =	0.40	CFS or	178.1	GPM
Velocity, V =	4.04	FPS		

ESTIMATE TOTAL MAXIMUM DAILY FLOW:

MAX. DAILY FLOW, Q =	13,880	GPD	(BLDGS 4,5 & 6)
AVG. DAILY FLOW, Q _{av} =	19.28	GPM	(BASED ON A 12 HOUR DAY)
PEAK FLOW, Q _p =	81.0	GPM	(4.2 x AVG)

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #5 TO EXIST 6":

BLDG 5 (RESIDENTIAL): 3,960 GPD
BLDG 6 (RESIDENTIAL): 7,260 GPD

MAX. DAILY FLOW, Q = 11,220 GPD

AVG. DAILY FLOW, Q_{av} = 15.58 GPM (BASED ON A 12 HOUR DAY)
PEAK HOURLY FLOW, Q_p = 65.5 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.010 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.28 CFS or 125.9 GPM
Velocity, V = 2.86 FPS

At a peak hourly flow = 65.5 GPM, sewer is flowing at a depth of
2.0 inches and a velocity of
2.4 feet per second.

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #2 TO SMH #3:

BLDG 1 (FRESH MARKET) 3,600 GPD (FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL): 2,160 GPD (FROM PREVIOUS STUDY)
BLDG 5 (RESIDENTIAL): 3,960 GPD
BLDG 6 (RESIDENTIAL): 7,260 GPD

MAX. DAILY FLOW, Q = 16,980 GPD

AVG. DAILY FLOW, Q_{av} = 23.58 GPM (BASED ON A 12 HOUR DAY)

PEAK HOURLY FLOW, Q_p = 99.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.043 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.58 CFS or 261.1 GPM
Velocity, V = 5.93 FPS

At a peak hourly flow = 99.1 GPM, sewer is flowing at a depth of
1.7 inches and a velocity of
4.5 feet per second.

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #3 TO DISCHARGE (MAIN):

BLDG 1 (FRESH MARKET)	3,600	GPD	(FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL):	2,160	GPD	(FROM PREVIOUS STUDY)
BLDG 4 (RES/COMM):	2,660	GPD	
BLDG 5 (RESIDENTIAL):	3,960	GPD	
BLDG 6 (RESIDENTIAL):	7,260	GPD	

MAX. DAILY FLOW, Q =	19,640	GPD	
AVG. DAILY FLOW, Q_{av} =	27.28	GPM	(BASED ON A 12 HOUR DAY)
PEAK HOURLY FLOW, Q_p =	114.6	GPM	(4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area,	A =	0.10	SF
Wetted perimeter,	P =	0.79	FT
Channel slope,	S =	0.033	FT/FT
Roughness coefficient,	n =	0.013	(10 States Standards)

Flow, Q =	0.51	CFS	or	228.7	GPM
Velocity, V =	5.19	FPS			

At a peak hourly flow = 114.6 GPM, sewer is flowing at a depth of
2.0 inches and a velocity of
4.3 feet per second.

**Engineering Report
Water and Sanitary Sewer**

For

**77 EXCELSIOR AVENUE
MIXED USE DEVELOPMENT**

**EXCELSIOR AVENUE
SARATOGA SPRINGS, NEW YORK**

Planning Board #15.041

Prepared For

**Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047
Contact: Andre Schmid**

Prepared By

**The LA Group, P.C.
40 Long Alley
Saratoga Springs, New York 12866**



**November 4, 2015
Revised: July 6, 2016**

I. Introduction

This Project involves the construction and operation of three buildings located on the land adjacent to the Fresh Market property at 77 Excelsior Avenue in Saratoga Springs, Saratoga County. The Project includes the construction of three (3) apartment buildings, one with commercial space fronting Excelsior Avenue. The remainder of the proposed site improvements includes construction of a parking lot, site lighting, landscaping, stormwater controls, and connections to the municipal water and sewer systems.

II. Project Description

The applicant proposes to construct (1) mixed-use building and (2) residential buildings on approximately 2.2 acres. The buildings will include a total of 90 apartment units of 1, 2 or 3 bedrooms, approximately 1,440+/- SF of commercial space, along with garage and exterior parking. Access to the project is proposed from the west access driveway to the Fresh Market site as previously approved.

III. Existing Water and Sanitary Sewer Utilities

Municipal water mains are located along Excelsior and Marion Avenue and are provided by the City of Saratoga Springs Sewer & Water Department. Along Excelsior Avenue there is a 12-inch and 20-inch water main. The 20-inch waterline is a transmission line that feeds the adjacent water treatment plant. The water main along Marion Avenue is an 8-inch branch line that tees off the 12-inch Excelsior Avenue main. An 8-inch service lateral was recently installed for the Fresh Market off the Marion Avenue main. This service line was capped to the west of the Fresh Market building for a future connection and extension into the 77 Excelsior Avenue property.

Municipal sewer services are located along Excelsior and Marion Avenue. The sewer main along Marion Avenue is owned by the City of Saratoga Springs Sewer & Water Department. The sewer main along Excelsior Avenue is owned by the Saratoga County Sewer District No. 1. To service the Fresh Market development, a six-inch gravity lateral was connected to the SCSD main on the south side of Excelsior Avenue. This private lateral runs up the access driveway between the Fresh Market development and the 77 Excelsior Avenue development.

IV. Projected Water and Wastewater Flows**Sanitary Sewer Flow Calculations**

The table below provides information on the anticipated wastewater flow rates for the project:

Description	Use Rate	Total Use
<u>Building 4</u>		
(9) 1-bedroom units	110 gpd/unit ¹	990 gpd
(7) 2-bedroom units	220 gpd/unit ¹	1,540 gpd
1,440 sf commercial	0.1 gpd/sf ¹	144 gpd
	Sub-total	2,674 gpd
<u>Building 5</u>		
(18) 1-bedroom units	110 gpd/unit ¹	1,980 gpd
(9) 2-bedroom units	220 gpd/unit ¹	1,980 gpd
	Sub-total	3,960 gpd
<u>Building 6</u>		
(29) 1-bedroom units	110 gpd/unit ¹	3,190 gpd
(17) 2-bedroom units	220 gpd/unit ¹	3,740 gpd
(1) 3-bedroom units	330 gpd/unit ¹	330 gpd
	Sub-total	7,260 gpd
Total		13,894 gpd

Average Daily Flow (ADF) for wastewater is estimated to be 19.3 gallons per minute (gpm) based on a 12 hour day (720 minutes).

Peak Hourly Flow (PHF) = $(13,894 \text{ gpd} \div 720 \text{ minutes per day}) \times (4.2 \text{ peaking factor})^2 = 81.0 \text{ gpm}$.

Domestic Water Demand Calculations

Domestic water average day demand (ADD) is assumed to be equal to sanitary sewer ADF.

Average Day Demand (ADD) = $13,894 \text{ gallons per day (gpd)} \div 720 \text{ minutes per day} = 19.3 \text{ gallons per minute (gpm) average}$.

Peaking factor for instantaneous water use is estimated to be 10 times the average based upon past experience. Maximum Instantaneous Water Demand is estimated at 193 gpm.

For the purposes of input into the City of Saratoga Springs water model, we offer the following estimated water demands for the project:

- Average Day Demand is 19.3 gallons per minute (GPM) over a 12 hour period.
- Max Day Demand is 38.6 gallons per minute (GPM) based on twice the average.
- Peak Hourly Flow is 81.0 gallons per minute (GPM) based on 4.2 times the average.
- Fire Flow Demand is 1,500 gallons per minute (GPM) per ISO guidelines.

V. Proposed Water and Wastewater Utilities

Proposed Water Utilities

To service the project, the existing 8-inch water service line installed with the Fresh Market project is proposed to be extended with an 8-inch ductile iron pipe and new 6-inch DIP building service laterals to serve Building 5 and 6. A separate 6-inch wet-tap off of the existing 12-inch water main along Excelsior Avenue will service Building 4.

The new buildings will have fire sprinklers and the domestic service will be metered. Water system pressure available at the buildings has been calculated based on hydrant flow tests. Water pressure calculations and pressure at all the buildings are provided in Attachment D.

Fire hydrants in the project area include one between the Fresh Market building and proposed Building 6, one at the southeast corner of the Fresh Market building, one on Marion Avenue near Building 2, one on Marion Avenue near the Excelsior Avenue intersection, one on Excelsior Avenue near the Marion Avenue intersection and two on East Avenue near the Excelsior Avenue intersection. These existing hydrants provide adequate coverage for the proposed building development. See Attachment B for a sketch showing the fire hydrant locations.

Needed Fire Flow (NFF) calculations using the ISO Guide for Determination of Needed Fire Flow are presented in Attachment C. The calculation shows a NFF of 1,500 gallons per minute. The hydrant flow test data indicates approximately 8,000 gpm at 20 psi. Based on this information, there is adequate fire protection water supply available at the site.

Connections and appurtenances, including mechanical joints, tees, isolation valves, thrust blocks, trenching, bedding, service connections, as well as testing and disinfection will all be specified in accordance with City of Saratoga Springs standards.

Proposed Wastewater Utilities

Sewer service for the project will be provided from the Saratoga County Sewer District No. 1 sewer main along Excelsior Avenue via the existing private on-site service lateral previously installed with the Fresh Market project. No new connection to the SCSD sewer main is proposed. Sewer service from Building 6 will be provided by a 6" gravity sewer lateral which will run east into an existing manhole (SMH #1). A 6-inch sewer service from Building 5 is proposed to wye into the existing 6-inch PVC sewer lateral approximately midway between two existing sewer manholes (SMH #2 and SMH #3). Sewer service from Building 4 will be provided by a 6" gravity sewer lateral which will run east into an existing manhole (SMH #3). A cleanout is proposed prior to connection into each building and the individual building laterals will maintain a minimum slope of 2%. The existing 6-inch sewer line wyes into the existing SCSD sewer main on the south side of Excelsior Avenue approximately 400' west of Marion Avenue.

The capacity of the existing 6-inch PVC service line and the proposed 6-inch PVC service lateral was checked with estimated peak hourly flows.

- Peak hourly flow in the existing pipe between SMH #1 and SMH #2 is estimated to be 63.4 gpm. The 6-inch pipe at 2.00% slope is flowing 1.7 inches deep at a velocity of 3.0 feet per second or about 36% of ½ full capacity.
- Peak hourly flow in the existing pipe between SMH #2 and existing SMH #3 is estimated to be 99.1 gpm. The 6-inch pipe at 4.3% slope is flowing 1.7 inches deep at a velocity of 4.5 feet per second or about 38% of ½ full capacity.
- Peak hourly flow in the existing pipe between SMH #3 and the existing SCSD main is estimated to be 114.6 gpm. The 6-inch pipe at 3.3% slope is flowing 2.0 inches deep at a velocity of 4.3 feet per second or about 50% of ½ full capacity.

Manholes, pipe, trenching, bedding, service connections, and testing will be specified in accordance with City of Saratoga Springs minimum standards.

Notes

1. From Table B-3, NYSDEC 2014 Design Standards for Wastewater Treatment Works.
2. From Figure 1, GLUMRB Recommended Standards for Wastewater Facilities.

Attachments

Attachment A	Hydrant Flow Test Data
Attachment B	Fire Hydrant Location Sketch
Attachment C	Needed Fire Flow (NFF) Calculations
Attachment D	Water Pressure Calculations
Attachment E	Sanitary Sewer Calculations

ATTACHMENT A
HYDRANT FLOW TEST DATA



North East Fire Protection Systems Inc.

P.O. BOX 508 BURNT HILLS, N.Y. 12027 (518) 885-1115 FAX (518) 885-0526

HYDRANT FLOW TEST REPORT

LOCATION: MARION C EXCELSIOR AV -

SARATOGA SPRINGS N.Y.

TEST BY: JIM FANTAUZZ / CARY STEWART

WITNESS STAN BORDEN

DATE: 4-24-13 TIME: 2:15 PM

TARGET HYD. LOCATION (B) CORNER OF

TEST RESULTS : STATIC PRESSURE (B) 102 PSI

RESIDUAL PRESSURE (B) 98 PSI WITH 1570 (A) GPM FLOWING

RESIDUAL PRESSURE (B) _____ PSI WITH _____ (A) GPM FLOWING

FLOW HYD. LOCATION (A) _____

1) PORT FLOWED (A) 1 DIAMETER 2 1/2

2) PORT FLOWED (A) _____ DIAMETER _____

3) PORT FLOWED (A) _____ DIAMETER _____

1) PITOT or FLOW METER READING (A) 87 PSI AT 1570 GPM

2) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

3) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

OUTLET COEFFICIENT USED _____

(smooth 0.90) (square & sharp 0.88) (projecting into barrel 0.77)

$$Q_{20} = Q \left(\frac{P_s - P_{20}}{P_s - P_r} \right)^{.54} = 1570 \left(\frac{102 - 20}{102 - 98} \right)^{.54} = 8021 \text{ gpm}$$

ESTIMATED FLOW AT 20 PSI 8021 GPM

LOCATION SKETCH ATTACHED ? YES X NO _____



North East Fire Protection Systems, Inc.

P.O. Box 508

BURNT HILLS, N.Y. 12027

(518) 885-1115

FAX (518) 885-0526

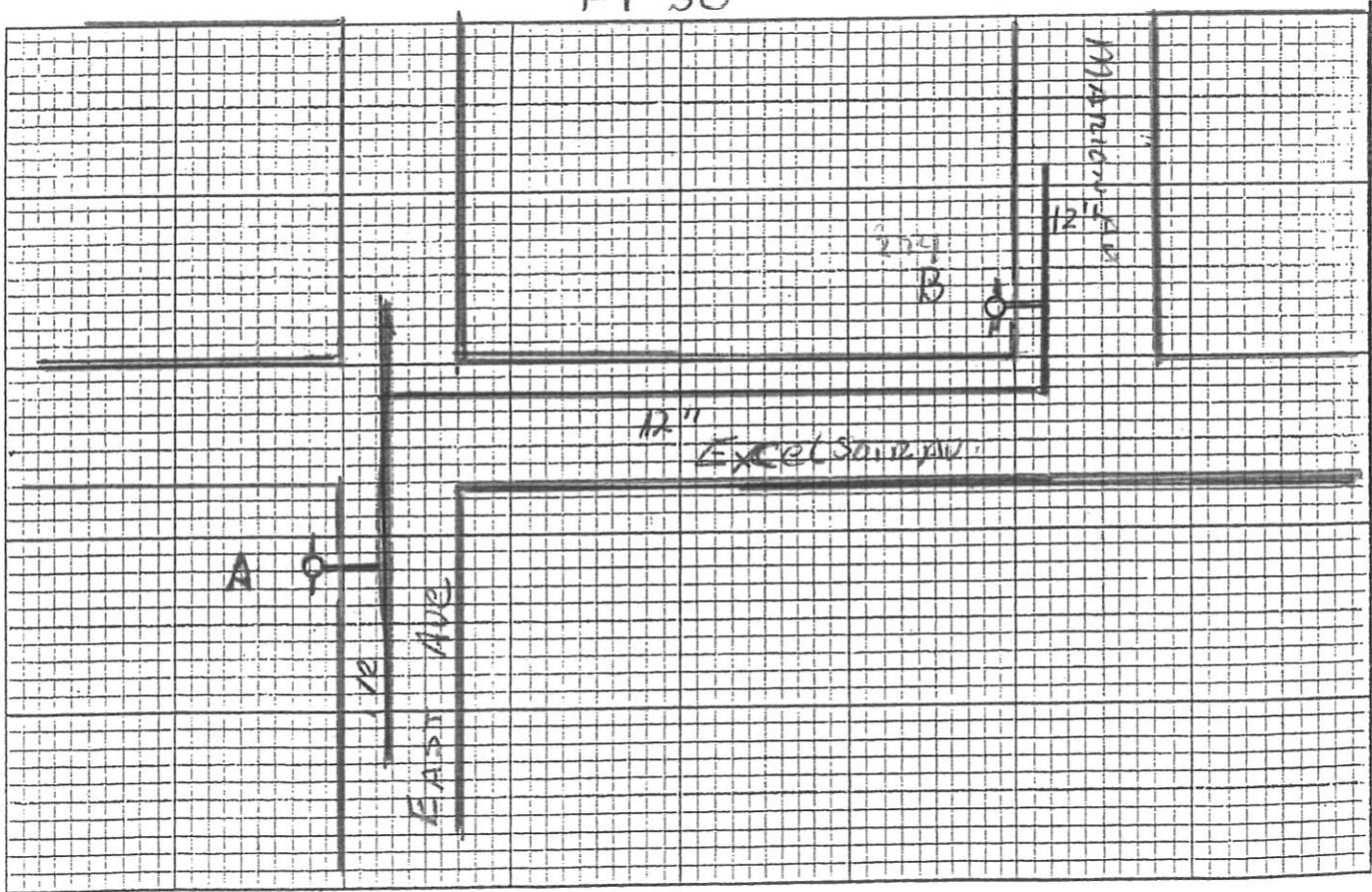
By JMF / CS
 WIT STAN BORDON
 DATE 4-24-13 - 2:15 PM

TEST DATA

TYPE OF TEST (HYDRANT, DRAIN, OR PUMP)	STATIC OR SUCTION- PRESSURE (PSI)	RESIDUAL OR DISCHARGE PRESSURE (PSI)	USG Etc.	PUMP SPEED (RPM)	PITOT PRES.	NO. OF FLOW OPENINGS	DIA. OF FLOW OPENING (IN.)	FLOW AT C = .90 C = .97 (GPM)	OPENING COEFFICIENT C = _____	ACTUAL FLOW (GPM)
	102		274							
		98	261		87	1	2'2	.90		1570

SKETCH OF TEST LOCATION (Show pipe sizes and lengths)

RT 50



NOTES

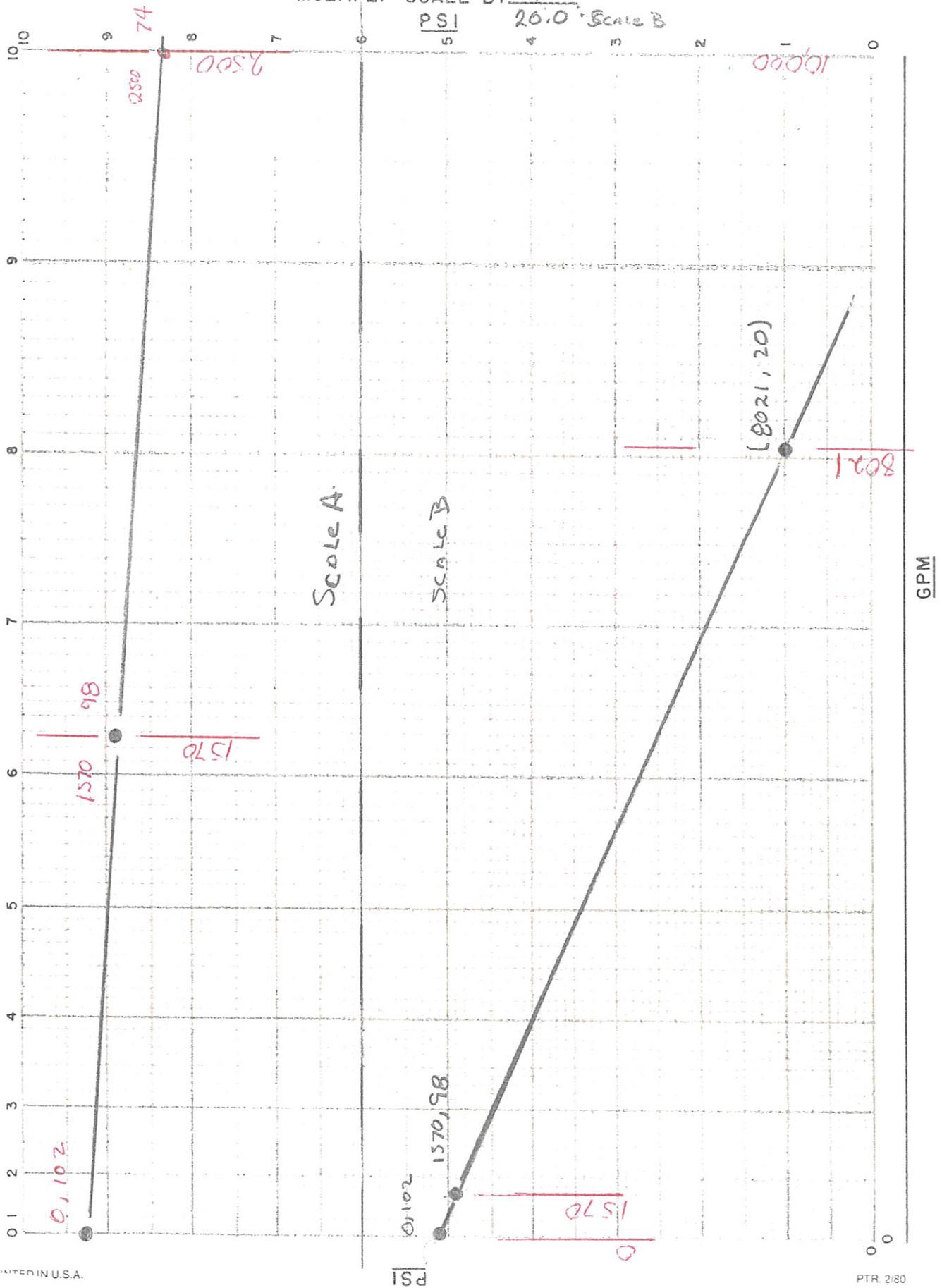


CONTRACT NO. _____
 NAME: Marion Ave @ Excelsior Ave
 ADDRESS: Sanitoga Springs 714

SHEET NO. _____ OF _____
 SYSTEM NO. _____
 DATE: 4-24-13

MULTIPLY SCALE BY $\frac{11.0}{20.0}$ SCALE A
 PSI SCALE B

MULTIPLY SCALE BY $\frac{150}{1000}$ SCALE A
 GPM SCALE B



ATTACHMENT B
FIRE HYDRANT LOCATION SKETCH



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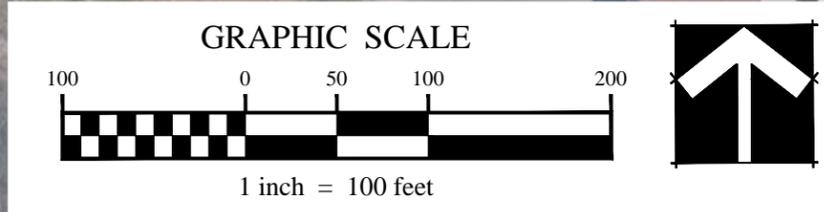
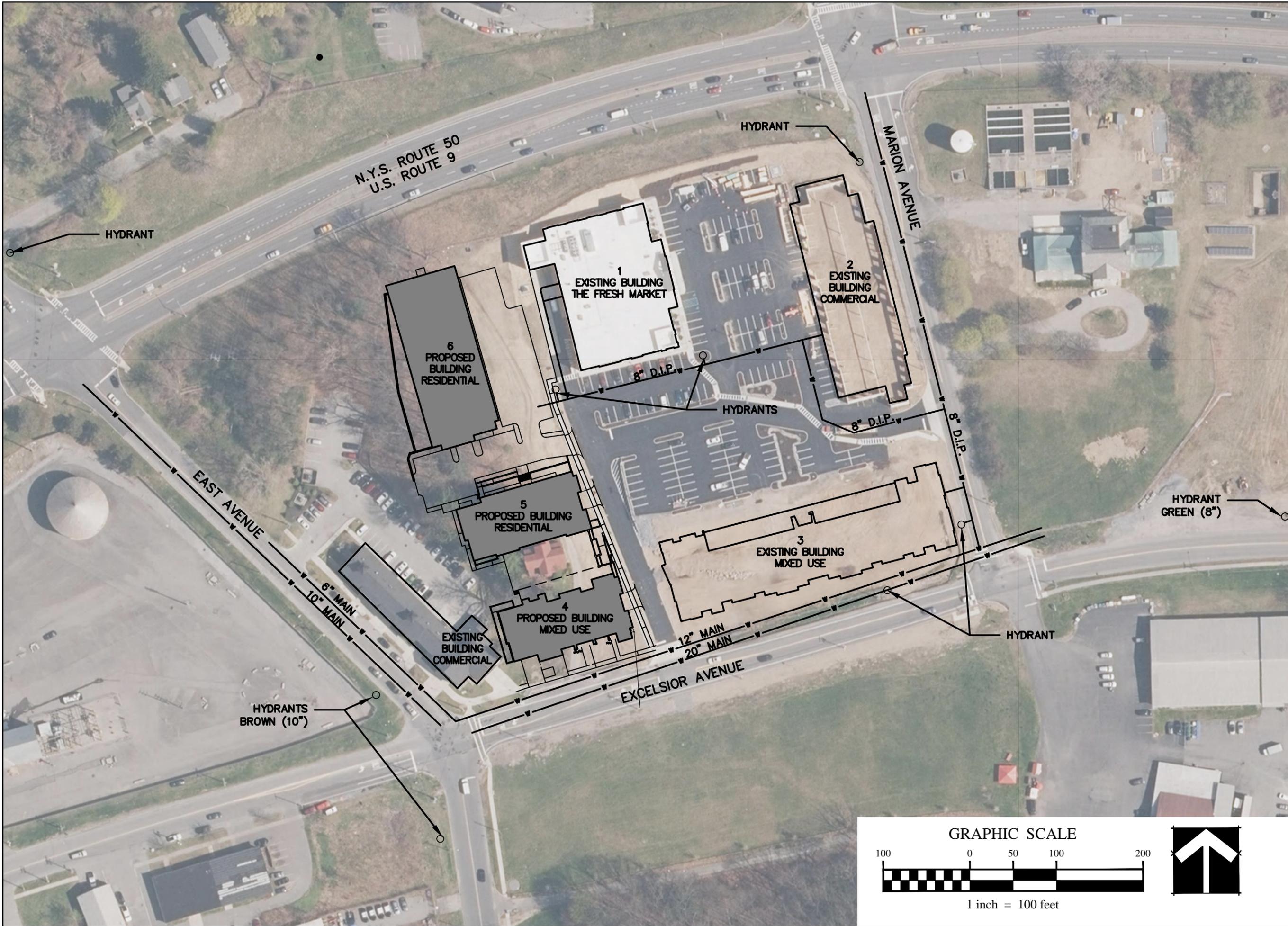
Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.: 201391
Design: DPD
Drawn: KMK Chk'd: DPD
Date: 09/09/15 Scale: 1"=100'

Rev.	Description	Date

Drawing Title:
Hydrant Locations
Drawing No.:
ATTACHMENT B



Plotted By: KATELYN KOURY
Save Date: 9/8/2015 2:01 PM
File Name: G:\Proj\2013\201391_Prime_Excelsior_Expansion\201391_CAD\SKETCH-HYDRANT.dwg

ATTACHMENT C
NEEDED FIRE FLOW (NFF) CALCULATIONS

**Assumptions: Tallest building is 4 stories with basement (Bldg 6).
 Wood frame construction.
 Residential apartments.
 Largest unit is 1,886 SF on 4th floor. Remaining area on floor is 260 SF.
 Largest unit on third floor is 1,580 SF then 1,158 SF on 1st and 2nd floors.**

References: 1. Insurance Services Office (ISO) Guide for Determination of Needed Fire Flow
Edition 06-2014

Needed Fire Flow Formula:

$$NFF_i = (C_i)(O_i)[1.0 + (X + P)]$$

where:

- NFF = the needed fire flow in gallons per minute
- C_i = a factor related to the type of construction and effective area
- O_i = a factor related to the type of occupancy
- X = a factor related to the exposure hazard of adjacent buildings
- P = a factor related to the communication hazard with adjacent buildings

CONSTRUCTION TYPE

Construction Class 1 (wood frame construction)
 Construction type coefficient (F) = 1.5 (Chapter 2, Reference 1)
 Effective area (A) = 3,964 SF 1,886 + (260/2) + ((1,580 + 1,158 + 1,158) x 50%)

$$C = 18F \times A^{1/2}$$

C = 1,699.93 gpm
 C = 1,750 gpm (rounded to nearest 250 gpm)

OCCUPANCY TYPE

Residential (apartments)
 Occupancy combustibility class C-2 (Limited Combustibility)
 Occupancy Factor (O) = 0.85 (Chapter 3, Reference 1)

EXPOSURES AND COMMUNICATION

Exposure Factor (X) = none (Chapter 4, Reference 1, exception for habitational and sprinklered)
 Exposure and Communication Factor (X + P) = 0.00

CALCULATION

$$NFF = (C)(O)(1+(X+P))$$

NFF = 1,487.50 gpm
 NFF = 1,500 gpm (rounded to nearest 250 gpm)

ATTACHMENT D
WATER PRESSURE CALCULATIONS

77 EXCELSIOR AVENUE - NEW DEVELOPMENT

AUGUST 17, 2015

MINOR LOSS COMPUTATION

SEGMENT	FLOW** (GPM)	PIPE DIA. (IN)	PIPE VELOCITY (FT/SEC)	PIPE SEGMENT LENGTH (FT)	FTGS, VALVES EQUIV. LENGTH (FT)	TOTAL LENGTH (FT)	HEAD LOSS (DYNAMIC)		SEGMENT NODE	HGL (FT)	GROUND SURFACE ELEV (FT)	PRESSURE*			SEGMENT	DIA (IN)	NO. OF VALVES	SUB-TOTAL EQUIV. LENGTH	NO. OF SIDE TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF THRU TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF 90 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	NO. OF 45 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	TOTAL EQUIV. LENGTH (FT)		
							C=140 (PSI)	(FT)				STATIC (PSI)	RESIDUAL (FT)	(PSI)															
FROM 12-INCH CITY MAIN ON EXCELSIOR AVENUE AT MARION AVENUE INTERSECTION:																													
AB	3500	8	22.34	60	22.7	83	5.9	13.5	AB	A	509.6	274	102.0	235.6	102.0	AB	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
BC	3500	8	22.34	105	23.9	129	9.1	21.1	BC	B	496.1	277	100.7	219.1	94.8	BC	8	0	0	1	20	1	3.9	0	0	0	0	0	23.9
CD	3500	8	22.34	235	39.2	274	19.4	44.9	CD	C	475.0	281	99.0	194.0	84.0	CD	8	1	2.7	1	20	1	3.9	0	0	2	12.6	39.2	
DE	3500	8	22.34	110	22.7	133	9.4	21.7	DE	D	430.1	285	97.2	145.1	62.8	DE	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
EF	2500	8	15.96	165	3.9	169	6.4	14.8	EF	E	408.4	284	97.7	124.4	53.8	EF	8	0	0	0	0	1	3.9	0	0	0	0	0	3.9
FG	2000	8	12.77	40	6.6	47	1.2	2.7	FG	F	393.5	279	99.8	114.5	49.6	FG	8	1	2.7	0	0	1	3.9	0	0	0	0	0	6.6
										G	390.8	283	98.1	107.8	46.7														
BRANCH LINES (BUILDING SERVICES):																													
FH	500 (BLDG. 1)	6	5.67	140	17.3	157	1.2	2.9	FH	F	393.5	279	99.8	114.5	49.6	FH	6	2	5.2	0	0	1	3.1	0	0	2	9	17.3	
										H	390.7	281	99.0	109.7	47.5														
DI	500 (BLDG. 2)	6	5.67	40	17.6	58	0.5	1.0	DI	D	430.1	285	97.2	145.1	62.8	DI	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	429.0	287	96.4	142.0	61.5														
BJ	500 (BLDG. 3)	6	5.67	25	17.6	43	0.3	0.8	BJ	C	475.0	281	99.0	194.0	84.0	BJ	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	474.2	283	98.1	191.2	82.8														
GK	500 (BLDG. 6)	6	5.67	50	5.7	56	0.4	1.0	GK	G	390.8	283	98.1	107.8	46.7	GK	6	1	2.6	0	0	1	3.1	0	0	0	0	0	5.7
										K	389.8	284	97.7	105.8	45.8														
GL	500 (BLDG. 5)	6	5.67	70	17.6	88	0.7	1.6	GL	G	390.8	283	98.1	107.8	46.7	GL	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										L	389.2	276	101.1	113.2	49.0														
* Static pressure 102 psi measured on 4/24/13. ** Assumes building demand at 500 GPM, fire hydrants flowing 1000 GPM. Assumes (2) hydrants flowing simultaneously. Assumes (3) buildings demanding fire flows simultaneously. Assumes no contribution of flow from the north end of Marion Avenue water main.																													



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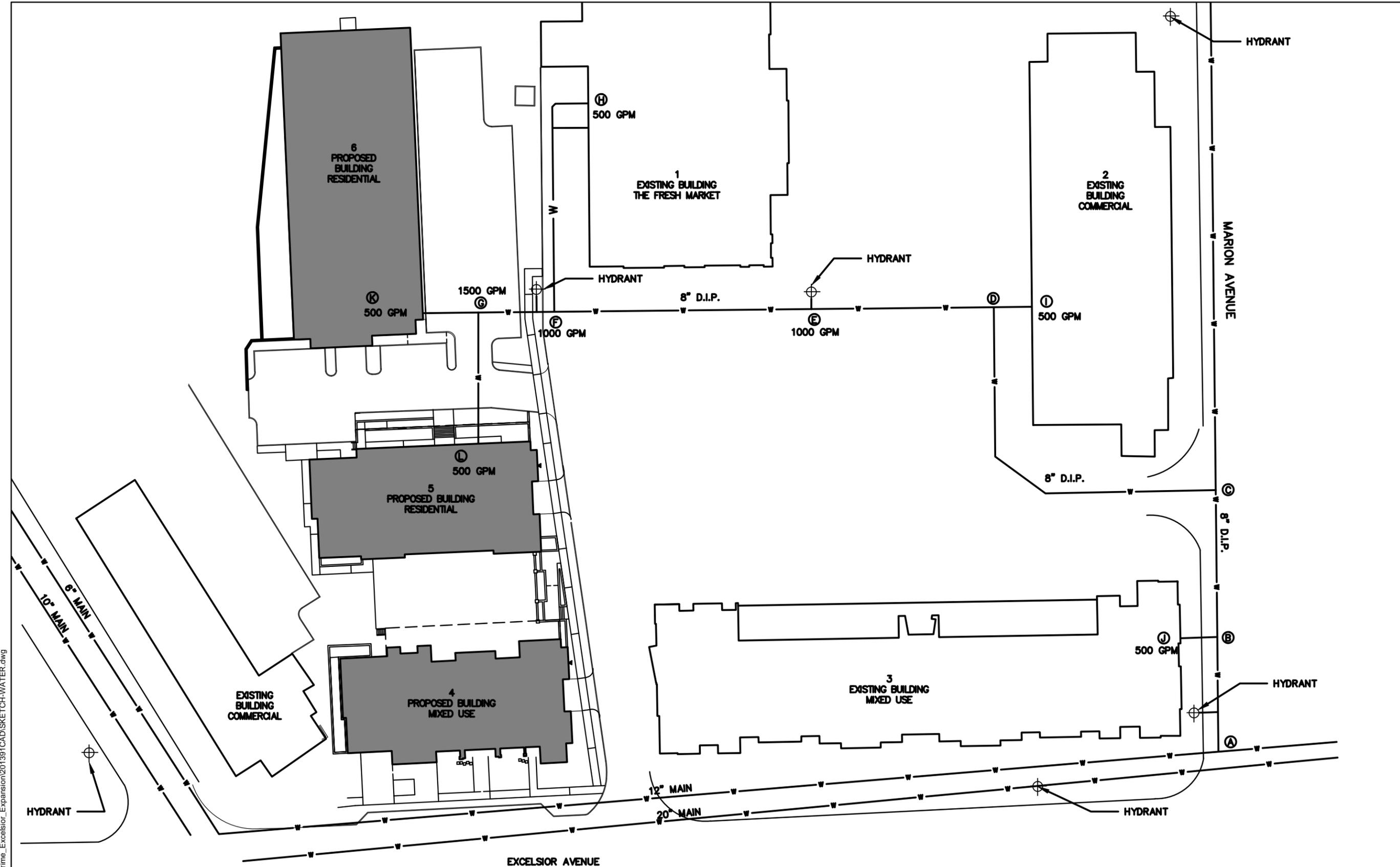
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77 Excelsior Avenue
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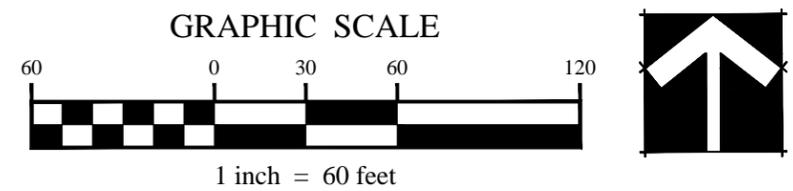
Rev.	Description	Date

Drawing Title:
Waterlines & Fire Hydrants Location

Drawing No.:
ATTACHMENT D



SCENARIO:
(2) FIRE HYDRANTS FLOWING 1,000 GPM EACH.
(3) BUILDINGS DEMANDING 500 GPM EACH.



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ATTACHMENT E
SANITARY SEWER CALCULATIONS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 4:

APARTMENTS (1BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 990 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 7 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,540 GPD

COMMERCIAL:

NO. SQ FT 1,440 SF
DESIGN FLOW, Q_c = 0.1 GPD/SF (NYSDEC)

 144 GPD
=====

MAX. DAILY FLOW, Q = 2,674 GPD (Q_a + Q_b + Q_c)

AVG. DAILY FLOW, Q_{av} = 3.71 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 15.6 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

 Flow, Q = 0.40 CFS or 178.1 GPM
 Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 5:

APARTMENTS (1BR):

NO. OF APARTMENTS 18 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 1,980 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,980 GPD

=====

MAX. DAILY FLOW, Q = 3,960 GPD ($Q_a + Q_b$)

AVG. DAILY FLOW, Q_{av} = 5.50 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 23.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.40 CFS or 178.1 GPM
Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 6:

APARTMENTS (1BR):
NO. OF APARTMENTS 29 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 3,190 GPD

APARTMENTS (2BR):
NO. OF APARTMENTS 17 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 3,740 GPD

APARTMENTS (3BR):
NO. OF APARTMENTS 1 EA
DESIGN FLOW, Q_c = 330 GPD/EA (NYSDEC)

 330 GPD
=====

MAX. DAILY FLOW, Q = 7,260 GPD (Q_a + Q_b + Q_c)

AVG. DAILY FLOW, Q_{av} = 10.08 GPM (BASED ON A 12 HOUR DAY)
PEAK FLOW, Q_p = 42.4 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

 Flow, Q = 0.40 CFS or 178.1 GPM
 Velocity, V = 4.04 FPS

ESTIMATE TOTAL MAXIMUM DAILY FLOW:

MAX. DAILY FLOW, Q = 13,894 GPD (BLDGS 4,5 & 6)

AVG. DAILY FLOW, Q_{av} = 19.30 GPM (BASED ON A 12 HOUR DAY)
PEAK FLOW, Q_p = 81.0 GPM (4.2 x AVG)

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #1 TO SMH #2:

BLDG 1 (FRESH MARKET): 3,600 GPD (FROM PREVIOUS STUDY)
BLDG 6 (RESIDENTIAL): 7,260 GPD

MAX. DAILY FLOW, Q = 10,860 GPD

AVG. DAILY FLOW, Q_{av} = 15.08 GPM (BASED ON A 12 HOUR DAY)
PEAK HOURLY FLOW, Q_p = 63.4 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.40 CFS or 178.1 GPM
Velocity, V = 4.04 FPS

At a peak hourly flow = 63.4 GPM, sewer is flowing at a depth of
1.7 inches and a velocity of
3.0 feet per second.

Capacity used = 36%

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #2 TO SMH #3:

BLDG 1 (FRESH MARKET): 3,600 GPD (FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL): 2,160 GPD (FROM PREVIOUS STUDY)
BLDG 5 (RESIDENTIAL): 3,960 GPD
BLDG 6 (RESIDENTIAL): 7,260 GPD

MAX. DAILY FLOW, Q = 16,980 GPD

AVG. DAILY FLOW, Q_{av} = 23.58 GPM (BASED ON A 12 HOUR DAY)

PEAK HOURLY FLOW, Q_p = 99.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.043 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.58 CFS or 261.1 GPM
Velocity, V = 5.93 FPS

At a peak hourly flow = 99.1 GPM, sewer is flowing at a depth of
1.7 inches and a velocity of
4.5 feet per second.

Capacity used = 38%

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #3 TO DISCHARGE (MAIN):

BLDG 1 (FRESH MARKET):	3,600	GPD	(FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL):	2,160	GPD	(FROM PREVIOUS STUDY)
BLDG 4 (RES/COMM):	2,674	GPD	
BLDG 5 (RESIDENTIAL):	3,960	GPD	
BLDG 6 (RESIDENTIAL):	7,260	GPD	

MAX. DAILY FLOW, Q =	19,654	GPD	
AVG. DAILY FLOW, Q _{av} =	27.30	GPM	(BASED ON A 12 HOUR DAY)
PEAK HOURLY FLOW, Q _p =	114.6	GPM	(4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area,	A =	0.10	SF
Wetted perimeter,	P =	0.79	FT
Channel slope,	S =	0.033	FT/FT
Roughness coefficient,	n =	0.013	(10 States Standards)

Flow, Q =	0.51	CFS	or	228.7	GPM
Velocity, V =	5.19	FPS			

At a peak hourly flow = 114.6 GPM, sewer is flowing at a depth of
2.0 inches and a velocity of
4.3 feet per second.
Capacity used = 50%

77 Excelsior Avenue Mixed Use Development

Site Plan Review Application

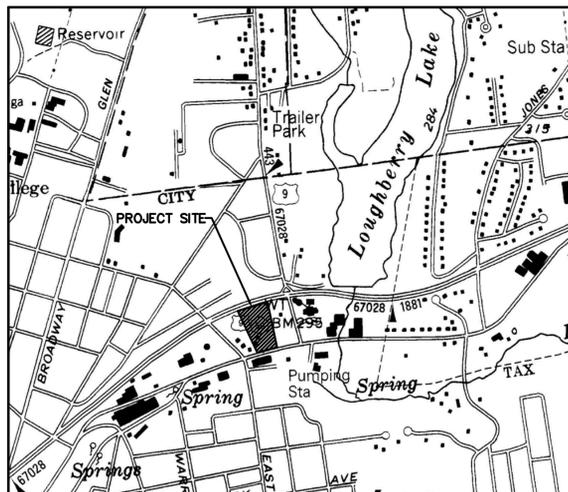
77 Excelsior Avenue
Saratoga Springs, New York

August 19, 2015
Revised November 4, 2015
Revised July 7, 2016



Vicinity Map:

SCALE: NTS



Project Location Map:

SCALE: NTS

CITY OF SARATOGA SPRINGS STANDARD NOTES

- ALL WORK MUST CONFORM TO ALL FEDERAL AND CITY CODES, SPECIFICATIONS, ORDINANCES, RULES AND REGULATIONS.
- THE EVALUATION BASE FOR THE CONTOURS AND BENCHMARKS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM, 1929.
- ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR TO A
- THE CONTRACTOR MUST SET UP A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER OR A DESIGNATED REPRESENTATIVE IS REQUIRED.
- THE COST OF CONSTRUCTION INSPECTIONS IS THE RESPONSIBILITY OF THE APPLICANT/DEVELOPER. AN ESCROW ACCOUNT TO COVER THE COST OF INSPECTIONS MUST BE ESTABLISHED PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM THE BUILDING INSPECTOR IF ANY BLASTING IS REQUIRED FOR THE PROJECT.
- THE CONTRACTOR MUST OBTAIN A STREET OPENING PERMIT ISSUED BY THE DEPARTMENT OF PUBLIC WORKS FOR ANY WORK IN THE STREET OF RIGHT-OF-WAY OF ANY CITY STREET, ROAD OR ALLEY.
- ALL POINTS OF CONSTRUCTION INGRESS OR EGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT OR DEBRIS ONTO A PUBLIC ROAD.
- NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL SITE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS, AND AN AS-BUILT DRAWING HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY ENGINEER.

GENERAL NOTES

- EXISTING CONDITIONS ARE TAKEN FROM A SURVEY PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY MAP OF LANDS OWNED BY 77 EXCELSIOR AVENUE, LLC, LOCATED AT ST. NO. 77 EXCELSIOR AVENUE", DATED FEBRUARY 4, 2014, AS PREPARED BY ADVANCED ENGINEERING & SURVEYING, PLLC.
- PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL CONTACT U.P.O. (1-800-962-7862) AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANY HAVING JURISDICTION TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY COSTS INCURRED BY THE CONTRACTOR DUE TO FAILURE TO CONTACT THE PROPER AUTHORITIES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.
- THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. ANY DAMAGE AND INCURRED COSTS DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCY BETWEEN THE PLANS AND THE ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT.
- LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL MEET LINE AND GRADE OF EXISTING CONDITIONS AT LIMIT OF WORK LINE. IF NO LIMIT OF WORK IS SHOWN, THE PROPERTY LINE SHALL BE THE LIMIT OF WORK.
- THE CONTRACTOR SHALL ESTABLISH PERMANENT BENCH MARKS. MAINTAIN ALL ESTABLISHED BOUNDS AND BENCH MARKS AND REPLACE AS DIRECTED ANY WHICH ARE DESTROYED OR DISTURBED.
- CONTRACTOR SHALL EMPLOY SPECIAL CARE IN SCHEDULING CONSTRUCTION SO AS TO MAINTAIN EXISTING VEHICULAR TRAFFIC PATTERNS, AND MINIMIZE DISRUPTION TO SURROUNDING PEDESTRIAN TRAFFIC. CONTRACTOR SHALL EMPLOY SPECIAL CARE TO PROTECT SAFETY OF PEDESTRIANS INSIDE AND OUTSIDE OF THE LIMIT OF WORK LINE.
- VARIOUS PERMITS ARE REQUIRED FOR THIS WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL REQUIRED PERMITS FROM ALL JURISDICTIONS AFFECTED BY THIS WORK ARE IN PLACE PRIOR TO CONSTRUCTION. FOR PERMITS ALREADY ISSUED, CONTRACTOR SHALL OBTAIN COPIES OF PERMITS AND STRICTLY ADHERE TO PERMIT CONDITIONS. PERMITS THAT ARE OUTSTANDING SHALL BE SECURED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE.
- ALL ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE CONTRACTOR ON "AS-BUILT DRAWINGS," AS SPECIFIED
- STORAGE AREAS FOR THE GENERAL CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE LOCATED WITHIN THE LIMITS OF WORK AS SHOWN ON THE PLANS OR AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- SHOULD ANYTHING BE OMITTED FROM THE PLANS WHICH IS NECESSARY FOR A COMPLETE UNDERSTANDING OF THE WORK, OR SHALL ANY ERROR APPEAR IN THE VARIOUS INSTRUMENTS FURNISHED OR IN THE WORK BY OTHER CONTRACTORS AFFECTING THE WORK COVERED HEREBY, THE CONTRACTOR SHALL AND WILL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE, AND IN THE EVENT OF THE CONTRACTOR'S FAILURE TO DO SO, HE SHALL AND WILL MAKE GOOD OF ANY DAMAGE OR DEFECT IN HIS WORK CAUSED THEREBY.
- PROVIDE EXPANSION JOINTS AT ALL CURBS, WALLS, STEPS, LIGHT POLE BASES, PULL BOXES, MANHOLES, TRAFFIC CONTROLLER BOXES AND AS SHOWN ON PLAN.
- CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXISTING INFRASTRUCTURE FOR THE DURATION OF CONSTRUCTION.
- CONTRACTOR SHALL PROTECT AND SUSTAIN IN NORMAL SERVICE ALL EXISTING UTILITIES, STRUCTURES, EQUIPMENT, ROADWAYS AND DRIVEWAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS EFFORTS OF DEMOLITION, REMOVALS AND OR RELOCATION WORK WITH ALL TRADES, IF APPLICABLE. CONSULT ALL DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- CONTRACTOR TO COMPLY WITH ALL OSHA AND OTHER STATE AND LOCAL SAFETY REQUIREMENTS DURING CONSTRUCTION (PROPER SHORING, ETC.).
- CONTRACTOR SHALL MAINTAIN PROPER SIGNS, BARRICADES, FENCES, TO PROPERLY PROTECT THE WORK EQUIPMENT, PERSONS AND PROPERTY FROM DAMAGE. ALL DAILY TRAFFIC IN THE VICINITY OF THE SITE SHALL NOT BE IMPEDED.

SITE STATISTICS

PROPOSED USE:	COMMERCIAL RETAIL, OFFICE, EATING & DRINKING ESTABLISHMENT, SERVICE ESTABLISHMENT RESIDENTIAL APARTMENTS: 101 UNITS (ALLOWED) 90 UNITS (PROPOSED)
PARCEL SIZE:	2.20 ACRES
TAX MAP PARCEL NUMBER:	166.5-5-4.1
EXISTING ZONING:	T-5 NEIGHBORHOOD CENTER
FRONTAGE BUILD-OUT:	(MINIMUM 70%) 71% PROPOSED
BUILD TO LINE ALL BUILDINGS FROM FRONTAGE LINE	0 TO 12 FT
SIDE SETBACK	0 FT MINIMUM

PARKING DEMAND

AREA/USE	#UNITS/SEATS	REQUIREMENTS/ZONING	# REQUIRED	# PROVIDED
APARTMENTS	90 UNITS	1.5/UNIT	135	
COMMERCIAL/ EATING & DINING	1,440 SF 6 EMPLOYEES	1/4 SEATS (40) 1/2 EMPLOYEES	10 (BASED ON EATING & DRINKING ESTABLISHMENT) 3	
TOTAL REQUIRED			148	
SITE				43
STREET PARKING				5
GARAGE				109
TOTAL PROVIDED				157

SHEET INDEX:

S-01	COVER
L-1.0	SURVEY
L-1.0	SITE PREPARATION, EROSION & SEDIMENT CONTROL PLAN
L-2.0	LAYOUT & MATERIALS PLAN
L-2.1	PARKING & LIGHTING PLAN
L-3.0	GRADING & DRAINAGE PLAN
L-4.0	UTILITY PLAN
L-4.1	SEWER PROFILES
L-5.0	LANDSCAPE PLAN
L-6.0	SITE DETAILS
L-6.1	SITE DETAILS
L-6.2	SITE DETAILS
L-6.3	STORMWATER DETAILS
L-6.4	STORMWATER DETAILS
L-6.5	STORMWATER DETAILS
L-6.6	UTILITY DETAILS



CITY OF SARATOGA SPRINGS
PLANNING BOARD
City Hall - 474 Broadway
Saratoga Springs, New York 12866
Tel: 518-587-3550 fax: 518-580-9480
www.saratoga-springs.org

MARK TORPEY, Chair
ROBERT F. BRISTOL, Vice-Chair
CLIFFORD VAN WAGNER
TOM L. LEWIS
DAN GABA
HOWARD PINSLEY
JANET CASEY

NOTICE OF DECISION

In the matter of the special use permit application #14.059 of: **RECEIVED**
77 Excelsior Avenue Mixed Use
77 Excelsior Avenue
Saratoga Springs, NY 12866
JUL 14 2015
ACCOUNTS DEPARTMENT

Involving the premises at 77 Excelsior Avenue, tax parcel #166.5-5-4.1, in the City of Saratoga Springs, on an application for a permanent special use permit for 101 multi-family residential units; up to 5,000SF for office uses; 30,000SF for parking facility; and up to 2,000SF of retail, bakery/retail, real estate office, art gallery, financial institution, eating and drinking establishment, recreational facility, or service establishment uses in a Transect-5 Neighborhood Center District with the Planning Board who met on July 8, 2015 and made the following decision(s) with a 6-0 vote (In favor: Torpey, Bristol, Lewis, Gaba, Pinsley, Casey; Absent: Van Wagner):

- Following review of the SEQRA Part 1 and completion of the Part 2 of the short Environmental Assessment Form, issued a SEQRA negative declaration.
- Following evaluation of the identified six standards for the issuance of special use permits as set forth in Article 240-6.4 of the City of Saratoga Springs Zoning Ordinance, moved to approve the permanent special use permit with the following conditions:
 - \$8,500 contribution towards Excelsior Avenue Cross-Section Plan is accepted with appreciation by the Planning Board.

Unless otherwise extended by the Planning Board, this approval shall expire if the applicant fails to comply with any required conditions and start actual construction, or otherwise implement this approval within 18 months from this date.

July 13, 2015
Date

Mark R. Torpey
Chair

cc: Steve Shaw, Bldg Inspector
Tim Wales, City Engineer
File
Accounts Dept.
Todd Curley, Beechwood Prime
Dave Carr, LA Group

Approval

Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
_____, Chairperson
Date Signed _____

Planning Board # 15.041

Applicant/Owner:

Prime Beechwood, LLC
621 Columbia Street
Cohoes, New York 12047

Prepared By:

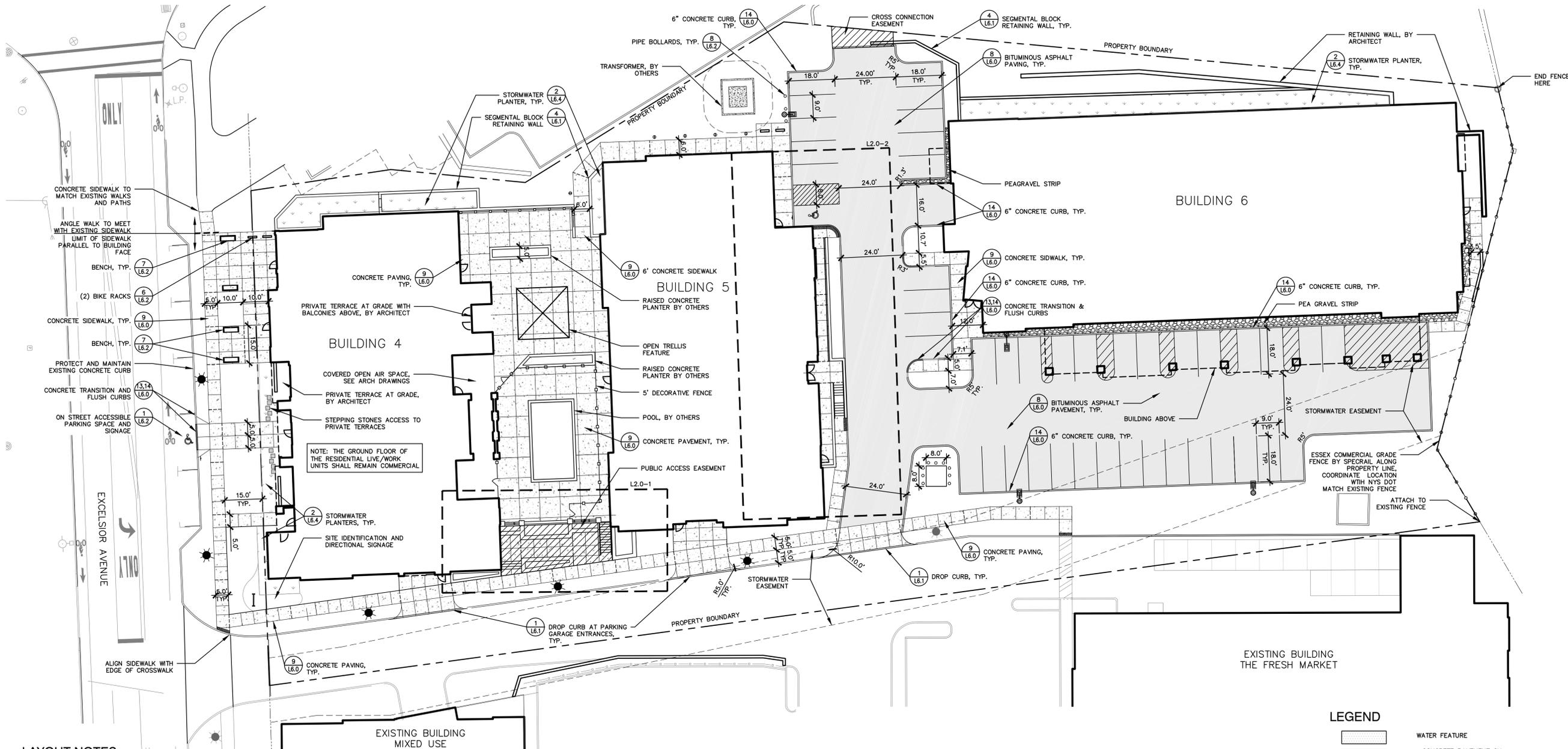
The LA GROUP
Landscape Architecture & Engineering P.C.
People. Purpose. Place.
40 Long Alley # 518-587-8100
Saratoga Springs # 518-587-0180
NY 12866 www.thelagroup.com

Architect:

balzer + tuck | architecture · pllc
468 broadway · saratoga springs · new york · 12866
p 518.580.8818 · f 518.580.8824 · balzertuck.com

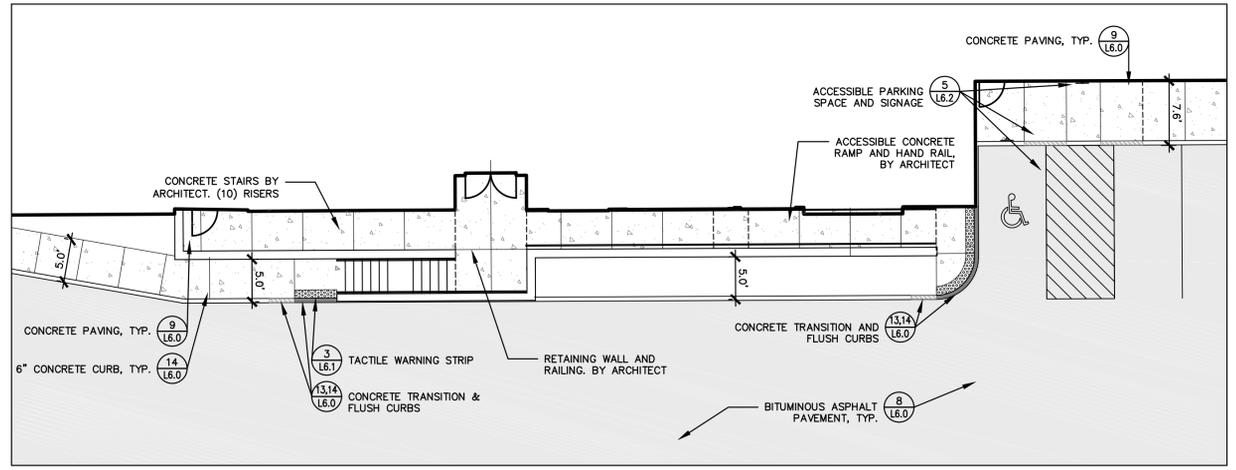
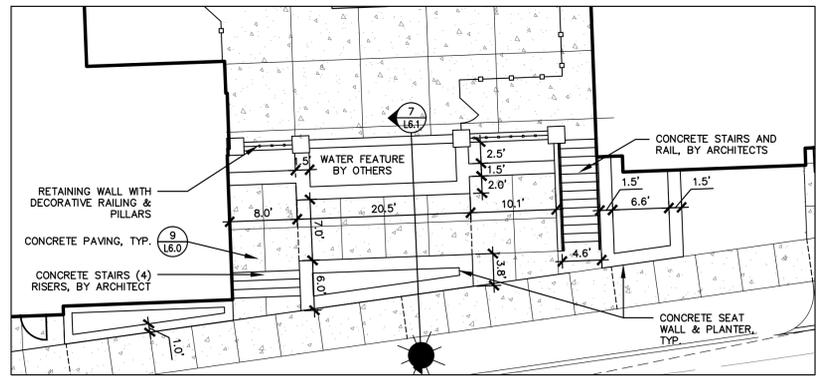
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 Prepared for:
Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047



LAYOUT NOTES

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. ALL LINE AND GRADE PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A NEW YORK STATE REGISTERED CIVIL ENGINEER OWNER'S REPRESENTATIVE OR SURVEYOR ENGAGED BY THE CONTRACTOR. ALL STACKED LAYOUTS OF PAVEMENTS AND SITE IMPROVEMENTS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE ON AND WITHIN LIMITS OF WORK AS SHOWN ON THE PLANS AND AS APPROVED BY THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
5. AT ALL LOCATIONS WHERE EXISTING CURBING, BITUMINOUS CONCRETE ROADWAY OR CONCRETE SIDEWALK ADJUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.
6. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE AND CITY ENGINEER PRIOR TO CONSTRUCTION.
7. ALL EXISTING UTILITIES SHOWN IN THEIR RELATIVE POSITION. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE VERTICAL AND HORIZONTAL POSITION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.



LEGEND

- WATER FEATURE
- CONCRETE PAVEMENT ON STRUCTURE
- CONCRETE PAVEMENT ON GRADE
- ASPHALT PAVEMENT
- CURB
- RETAINING WALL
- CONCRETE SIDEWALK
- ACCESSIBLE PARKING
- TRAFFIC PATTERN ARROW
- SIGNAGE
- PROPOSED LIGHT FIXTURE
- EXISTING LIGHT FIXTURE
- BOLLARD
- DECORATIVE RAILING
- DECORATIVE FENCE
- BENCH / BIKE RACK
- PROPERTY LINE

Planning Board # 15.041

Approval
 Approved under authority of a resolution adopted _____
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____ Chairperson

Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391	DRC
Design:	KMK	Ch'kd: DRC
Drawn:	09/09/2015	Scale: 1"=20'
Date:		
Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title:
Layout & Materials Plan

Drawing No.:
L-2.0

Prepared by: KATELYN MCKEY
 Date: 07/20/15 11:25 AM
 File Name: 072015072015_Plan_Materials_Excelsior20151212.dwg

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Prepared for:
Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

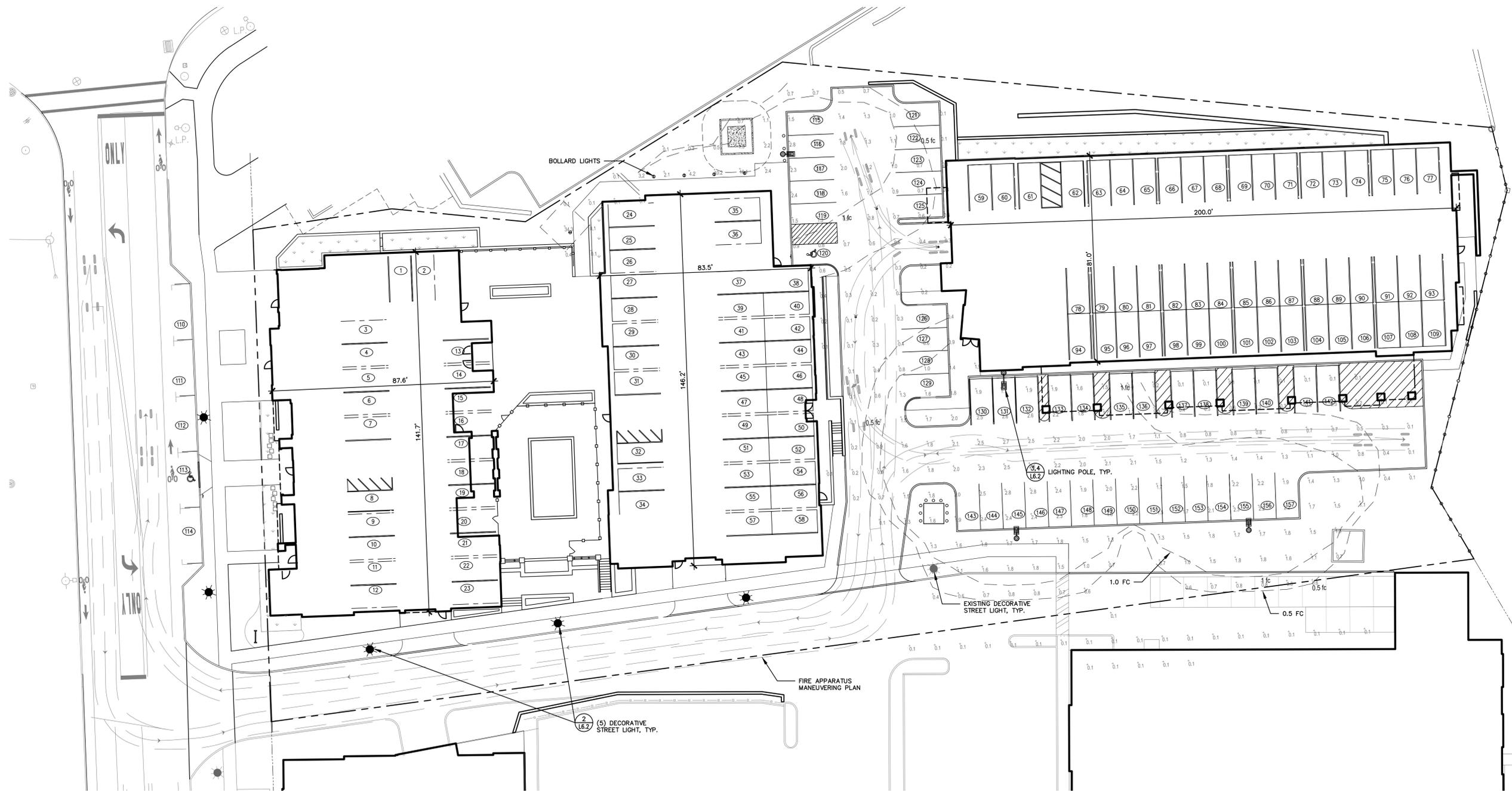
Project No.: 201391
 Design: DRC
 Drawn: KMK Chk'd: DRC
 Date: 09/09/2015 Scale: 1"=20'

Rev.	Description	Date
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title:
Parking & Lighting Plan

Drawing No.:

L-2.1



Luminaire Schedule						
SYMBOL	QTY	TYPE	DESCRIPTION	LLF	LUM. WATTS	LUM. LUMENS
	3	LED-3	FORM 10 LED - EH19L - TYPE 3 - 110LA-NW-HSS	0.850	107.9	11053
	1	LED-4	FORM 10 LED - EH19L - TYPE 4 - 110LA-NW-HSS	0.850	107.7	11050
	5	B	SLEEKVISION - VBC-15L350NW-G1-3-CAGE-HS	0.850	18.1	1248

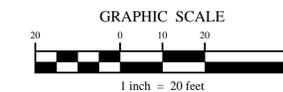
Calculation Summary						
AREA	UNITS	AVG	MAX	MIN	AVG / MIN	MAX / MIN
BEYOND PROPERTY LINE - GROUND LEVEL	Fc	0.01	0.3	0.0	N.A.	N.A.
PARKING LOTS & FRONT - GROUND LEVEL	Fc	0.56	34.3	0.0	N.A.	N.A.

LEGEND

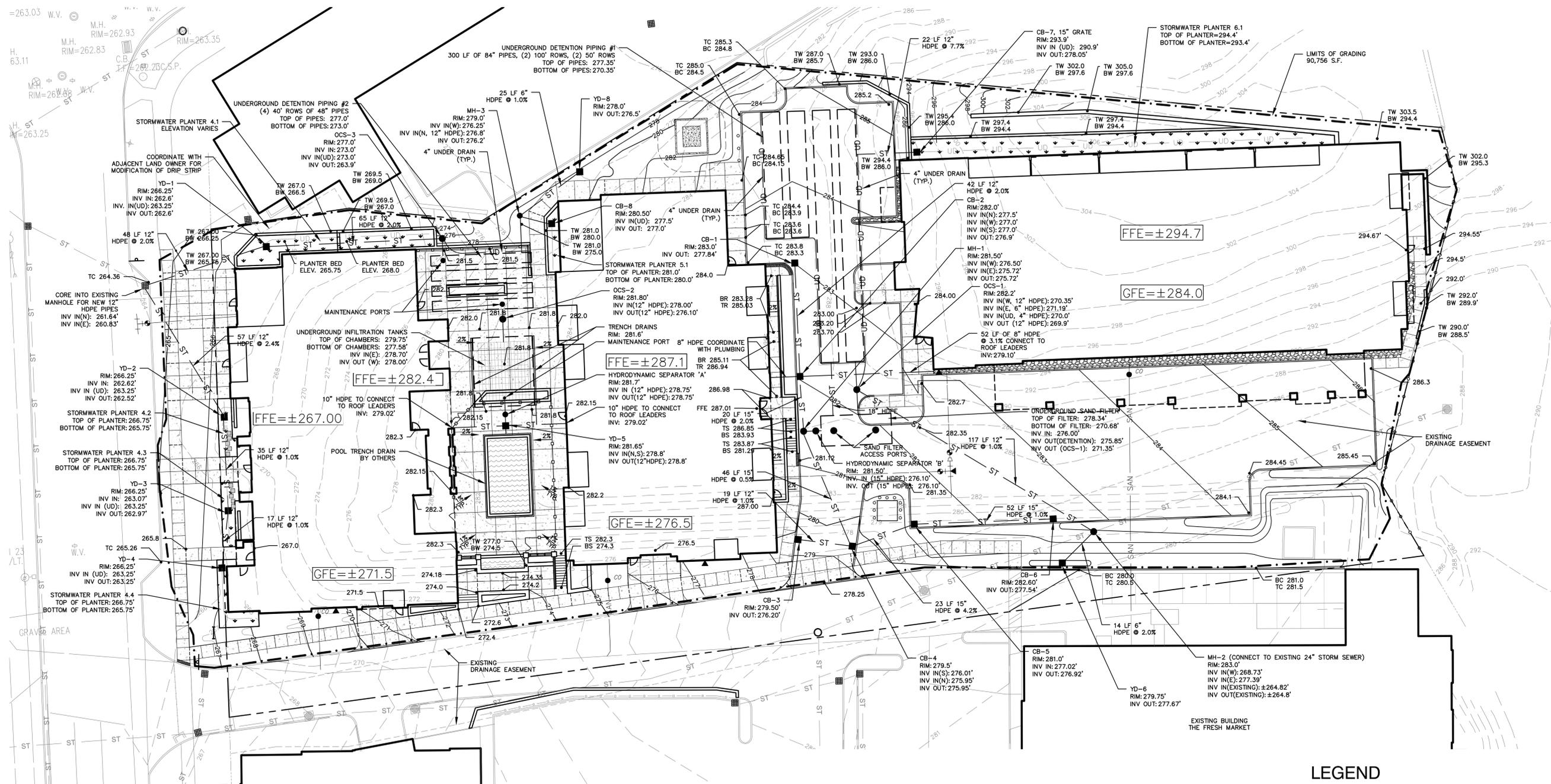
- PARKING COUNT
- PROPOSED LIGHT FIXTURE
- EXISTING LIGHT FIXTURE
- PHOTOMETRIC POINTS
- FOOT CANDLE CONTOURS
- PARKING GARAGE
- PROPERTY LINE

Planning Board # 15.041

Approval
 Approved under authority of a resolution adopted _____
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____ Chairperson



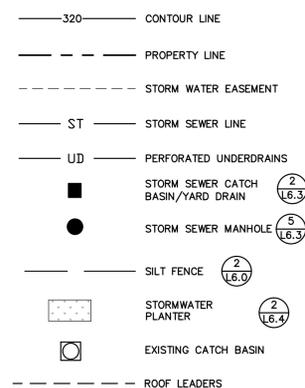
Plotted By: KATELYN MCKAY
 Save Date: 7/27/2016 11:26 AM
 File Name: G:\Proj\20150709\77 Prime Beechwood\20150709\77_Parking_Lighting.dwg



GRADING NOTES

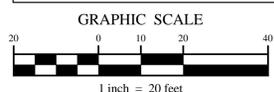
1. SURVEY INFORMATION FROM MAP TITLED BOUNDARY & TOPOGRAPHIC SURVEY MAP OF LANDS OWNED BY 77 EXCELSIOR AVENUE, LLC, CREATED BY ADVANCED ENGINEERING AND SURVEYING, PLLC, DATED FEBRUARY 4, 2014.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNERS REPRESENTATIVE.
3. THE CONTRACTOR SHALL VERIFY PROPOSED GRADES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNERS REPRESENTATIVE.
4. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION CONTROL AS INCLUDED IN THE ORIGINAL SWPPP BY THE LA GROUP.
5. ALL FILL SLOPES 3:1 OR GREATER SHALL RECEIVE BIO-DEGRADABLE FABRIC OR APPROVED EQUAL FOR EROSION CONTROL, UNLESS OTHERWISE SHOWN OR DIRECTED BY THE PROJECT ENGINEER.
6. THE CONTRACTOR SHALL BLEND ALL NEW EARTHWORK INTO EXISTING GRADES AT THE LIMITS OF GRADING. PROVIDE SMOOTH ROUNDED TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPES.
7. PITCH EVENLY BETWEEN SPOT GRADES. ALL AREAS SHALL PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES PROHIBITING THIS SHALL BE REPORTED TO THE PROJECT ENGINEER PRIOR TO CONTINUING WORK.
8. EXCAVATION REQUIRED WITHIN 3 FEET OF EXISTING UTILITY LINES SHALL BE DONE BY HAND; DO NOT EXCAVATE SOIL WITH MACHINERY. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS.
9. ANY AREA OUTSIDE THE PROJECT LIMITS THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
10. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL DEBRIS & EXCESS MATERIAL FROM THE SITE. ALSO, ANY DAMAGE TO FIELD OR FACTORY FINISHES SHALL BE REPAIRED.

LEGEND



Planning Board # 15.041

Approval
Approved under authority of a resolution adopted
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson



Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No:	201391
Design:	BCS
Drawn:	BCS Ch'kd: DBH
Date:	09/09/2015 Scale: 1"=20'

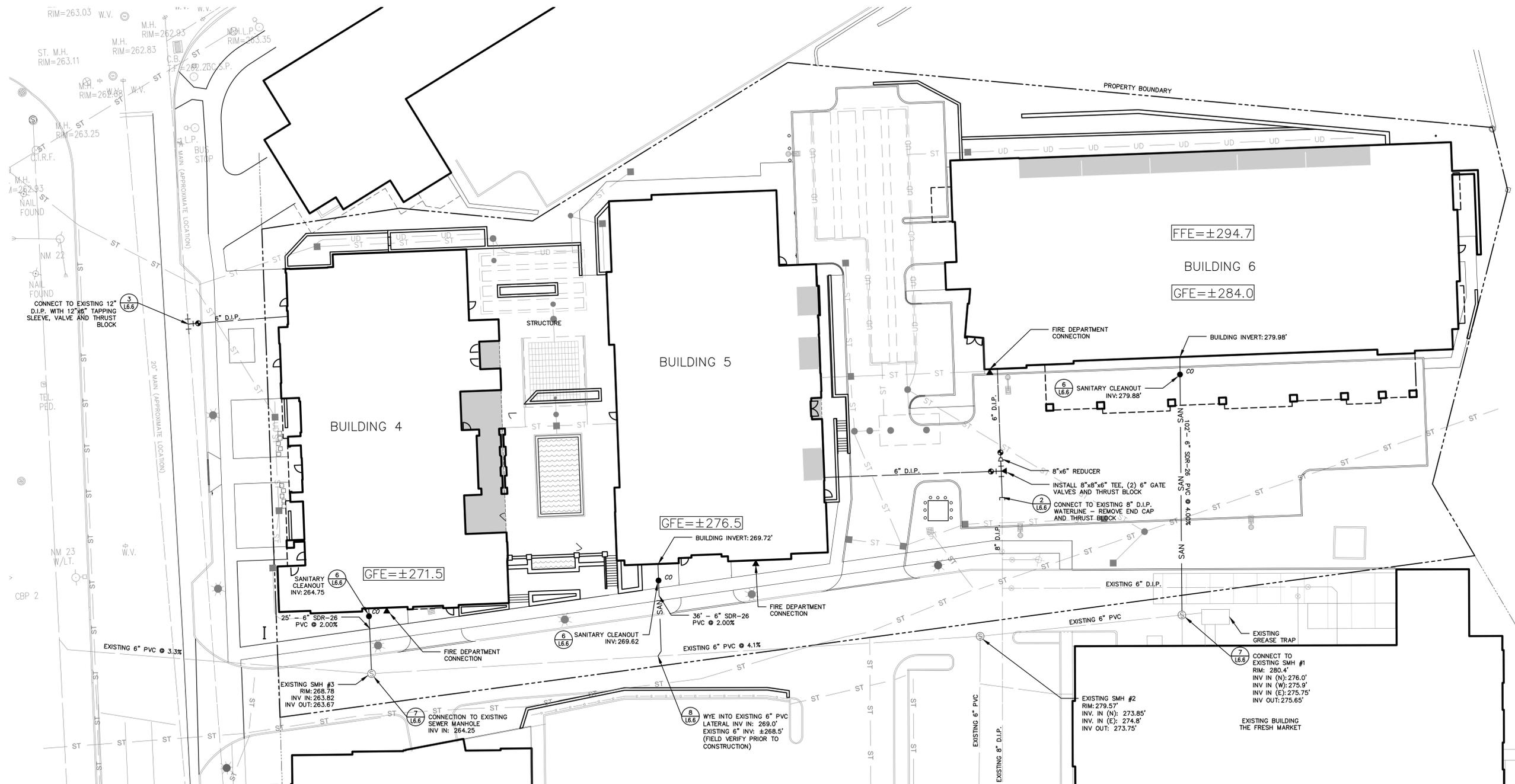
Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title
Grading & Drainage Plan

Drawing No.
L-3.0

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 Prepared for:
Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047



GENERAL NOTES

1. LOCATION OF UTILITY CONNECTIONS AT BUILDING TO BE FIELD VERIFIED AND RECORDED ON AS-BUILT PLANS TO BE PROVIDED TO THE OWNER.
2. ALL UTILITY INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL CODES AND LOCAL BUILDING CODES.
3. CONTRACTOR SHALL COORDINATE ALL REQUIRED UTILITY INSPECTIONS BY MUNICIPAL DEPARTMENTS IN ACCORDANCE WITH THEIR RESPECTIVE REQUIREMENTS.

WATER SYSTEM NOTES

1. WATER MAINS AND SERVICES SHALL BE INSTALLED AT A MINIMUM DEPTH OF COVER BELOW FINISHED GRADE OF 5'-0".
2. ALL CAST IRON AND DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT, DOUBLE CEMENT LINED, PAINT SEAL COATED, 350 P.S.I. PRESSURE RATING.
3. CHLORINATION, PRESSURE AND LEAKAGE TESTS OF WATER MAINS SHALL BE IN CONFORMANCE WITH THE CITY OF SARATOGA SPRINGS AND A.W.W.A. STANDARDS AND SHALL BE PERFORMED UNDER THE SUPERVISION OF THE CITY ENGINEER. BACTERIA EXAMINATION AFTER DISINFECTION AT A N.Y.S.D.H. APPROVED LABORATORY WILL TAKE PLACE PRIOR TO TURNING WATER MAIN OVER TO THE CITY TO VERIFY SANITARY QUALITY.
4. THERE SHALL BE A MINIMUM HORIZONTAL SEPARATION OF TEN FEET BETWEEN ANY WATER MAIN AND ANY SANITARY OR STORM SEWER MEASURED EDGE TO EDGE. THERE SHALL ALSO BE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN INCHES BETWEEN ANY WATER MAIN AND ANY SANITARY OR STORM SEWER.
5. THRUST BLOCKING SHALL COMPLY WITH DETAILS ON THESE DRAWINGS AND CITY STANDARDS.
6. DURING ALL EXCAVATION IN WHICH THE EXISTING WATER MAIN IS OR CAN EASILY BE EXPOSED, THE CONTRACTOR SHALL LOCATE THE WATER LINE, BOTH HORIZONTALLY AND VERTICALLY. THIS INFORMATION SHALL BE PROVIDED TO THE CITY OF SARATOGA SPRINGS AND INCORPORATED IN THE AS-BUILT DRAWINGS.
7. THE CONTRACTOR SHALL PROVIDE TWO (2) BRONZE WEDGES AT EACH BELL JOINT OF PUSH-ON PIPE.
8. THE CONTRACTOR SHALL PROVIDE ID TAPE ABOVE WATER LINES AS SHOWN ON THE TRENCHING DETAIL.
9. MECHANICAL JOINT TAPPING SLEEVE SHALL CONFORM TO ANSI B16.1, CLASS 125 FLANGE, MSS SP-60 STANDARD, AND ANSI/AWWA C111 STANDARD, AND HAVE A MAXIMUM WORKING PRESSURE OF 200PSIG FOR SERVICES 4-INCH THRU AND INCLUDING 12-INCH.
10. MECHANICAL JOINT RESILIENT WEDGE TAPPING VALVES SHALL CONFORM TO AWWA C500 STANDARD AND HAVE A MAXIMUM WORKING PRESSURE OF 200 PSIG. VALVE SHALL BE NON-RISING STEM TYPE AND SHALL OPEN "RIGHT" (CLOCKWISE)
11. VALVE BOXES
 - A. CAST IRON TWO PIECE VALVE BOX AS MANUFACTURED BY CLOW (MODEL F2494), OR APPROVED EQUAL.
 - B. COVER SHALL BE STAY-PUT TYPE (CLOW MODEL F2490), OR APPROVED EQUAL, AND BE CLEARLY MARKED "WATER".

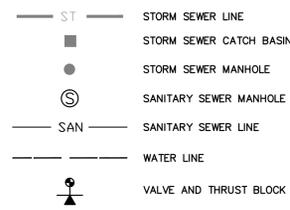
SANITARY SEWER NOTES

1. PVC SANITARY SEWERS, FITTINGS AND SERVICE LATERALS TO PROPERTY LINES SHALL CONFORM TO AND BE INSTALLED AND TESTED IN ACCORDANCE WITH THE CITY OF SARATOGA SPRINGS STANDARDS AND SARATOGA COUNTY SEWER DISTRICT NO. 1.
2. ALL SEWER PIPING AND FITTINGS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PVC PIPE, ASTM DESIGNATION D-3034-78 OR LATEST REVISION AND TO THE DIMENSIONS AND TOLERANCES OF CLASSIFICATION SDR-26 WITH SINGLE GASKET PUSH-ON JOINTS.
3. INFORMATION AND SHOP DRAWINGS FOR MATERIALS USED SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO THE PLACEMENT OF ANY ORDERS OF SAID MATERIALS.
4. LEAKAGE OUTWARD OR INWARD SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM. LEAKAGE TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET AND SHALL BE IN ACCORDANCE WITH CITY OF SARATOGA SPRINGS STANDARDS.
5. FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LA GROUP AND THE CITY OF SARATOGA SPRINGS CITY ENGINEER, PRIOR TO INSTALLATIONS.
6. LOW PRESSURE AIR TESTING IS PERMITTED. TEST IS TO CONFORM TO UNIBELL PVC PIPE ASSOCIATION, UNI-B-6-98.

SARATOGA COUNTY SEWER DISTRICT #1 NOTES

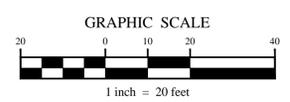
1. THE CONTRACTOR SHALL OBTAIN SANITARY SEWER CONSTRUCTION PERMITS FROM SARATOGA COUNTY SEWER DISTRICT #1 PRIOR TO CONSTRUCTION OF ANY SANITARY SEWER.
2. S.C.S.D. #1 REQUIRES ALL NECESSARY EASEMENTS TO BE FILED IN THE STANDARD COUNTY FORMAT PRIOR TO ISSUANCE OF A SEWER CONSTRUCTION PERMIT.
3. THE CONTRACTOR SHALL NOTIFY S.C.S.D. #1 (518) 664-7396 AT LEAST 48 HOURS PRIOR TO THE START OF ANY SEWER RELATED WORK.
4. NO DISCHARGE OF FLOWS WILL BE ALLOWED UNTIL FINAL APPROVAL OF THE PROJECT HAS BEEN GRANTED.

LEGEND



Planning Board # 15.041

Approval
 Approved under authority of a resolution adopted _____
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____ Chairperson



Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DBH
Drawn:	KMK Ch'kd: DBH
Date:	09/09/2015 Scale: 1"=20'

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title
Utility Plan

Drawing No.
L-4.0

Drawn by: BRETT STROM
 Scale: 1"=20'
 Date: 09/09/2015
 File Name: C:\Proj\201391\Drawings\Plan\Utility\Utility.dwg



The LA GROUP

Landscape Architecture & Engineering P.C.

People. Purpose. Place.

40 Long Alley
Saratoga Springs
NY 12866
P: 518-587-8100
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www.thelagroup.com

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Prepared for:

Prime Beechwood, LLC

621 Columbia Street
Cohoes, NY 12047

Project Title:

77 Excelsior Mixed Use Development

77 Excelsior Avenue
Saratoga Springs, New York

Project No.: 201391
Design: BCS
Drawn: BCS Ch'k'd: DBH
Date: 09/09/2015 Scale: NTS

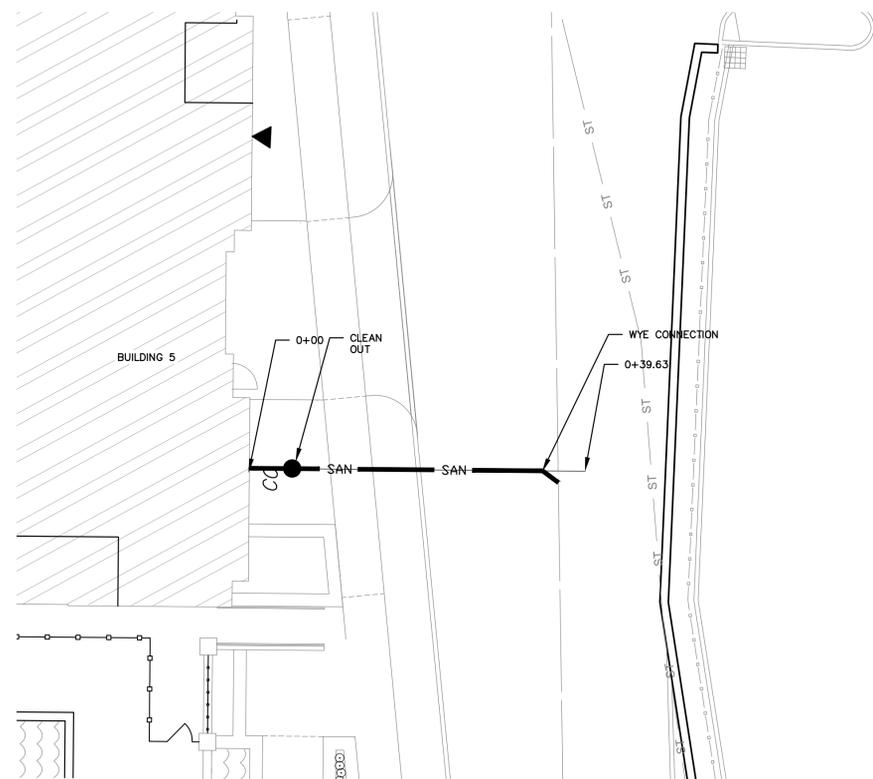
Rev: Description: Date:
1 Revised per TDE Comments 11/4/15
2 Revised per TDE Comments 7/07/16

Drawing Title

Sewer Profiles

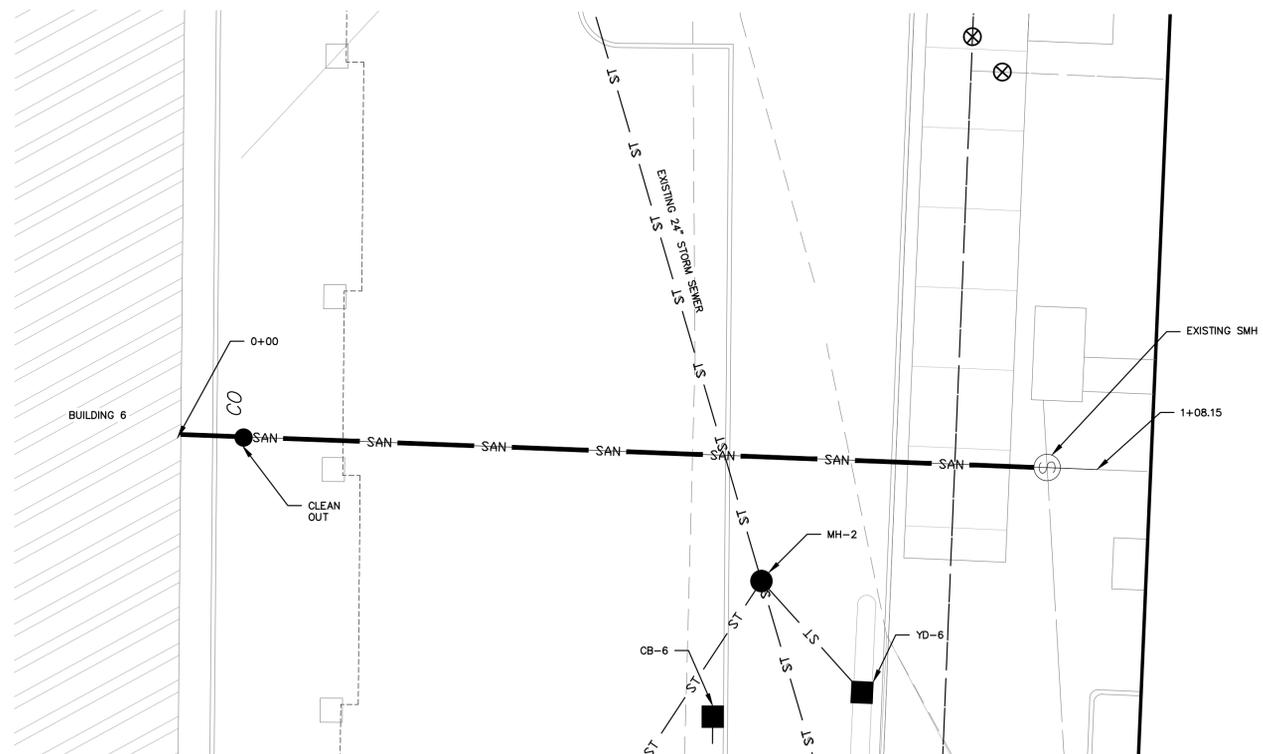
Drawing No.

L-4.1



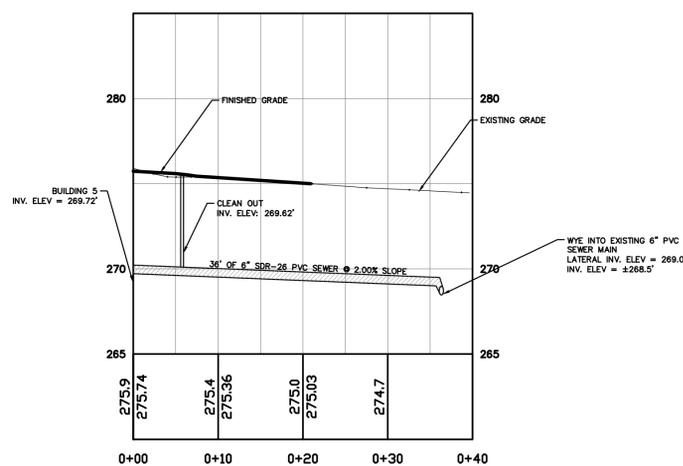
1 BUILDING 5 SEWER PLAN

SCALE: 1"=10'



3 BUILDING 6 SEWER PLAN

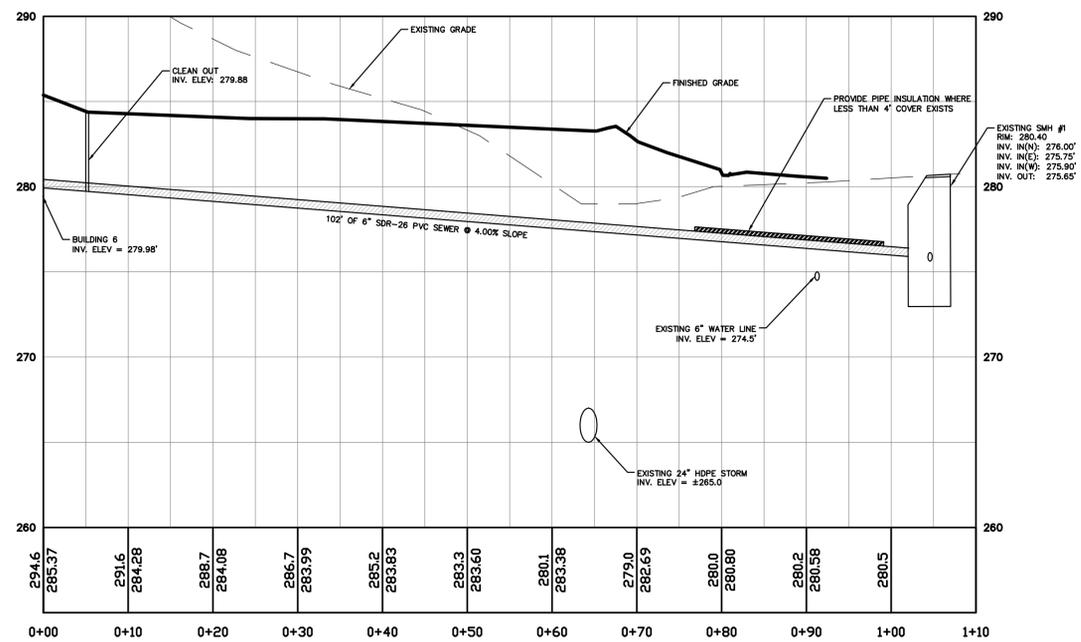
SCALE: 1"=10'



2 BUILDING 5 SEWER PROFILE

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=5'

SCALE: 1"=10'

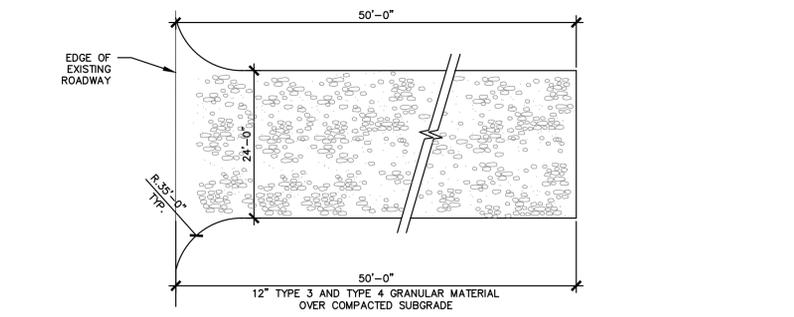


4 BUILDING 6 SEWER PROFILE

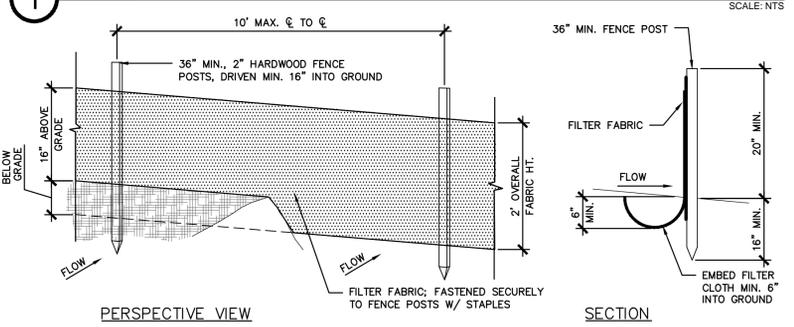
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=5'

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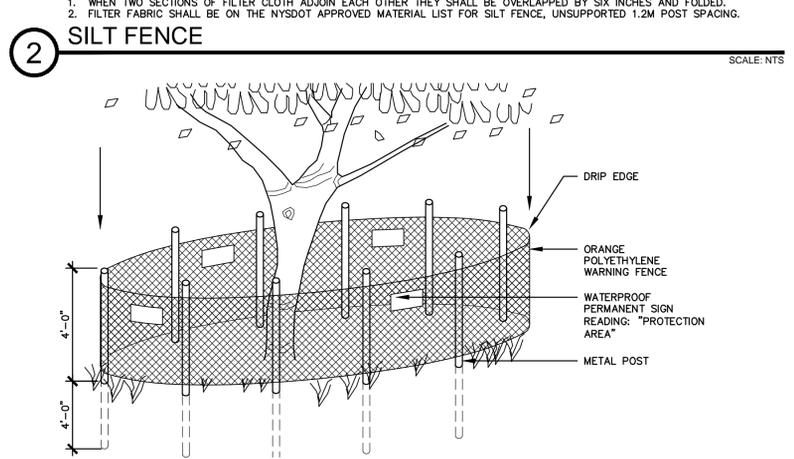
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 Prepared for:
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 Cohoes, NY 12047



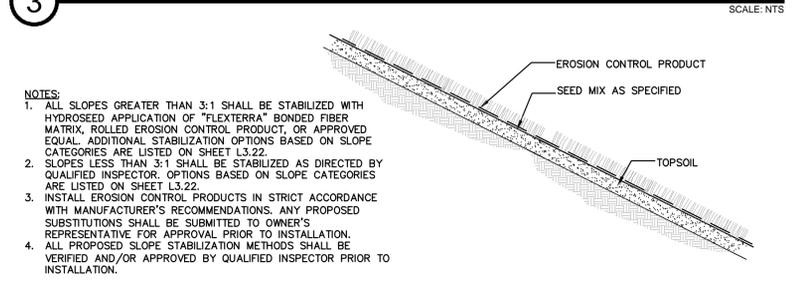
1 STABILIZED CONSTRUCTION ENTRANCE SCALE: NTS



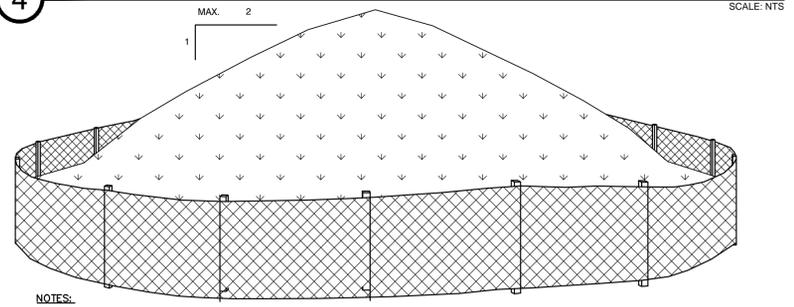
2 SILT FENCE SCALE: NTS



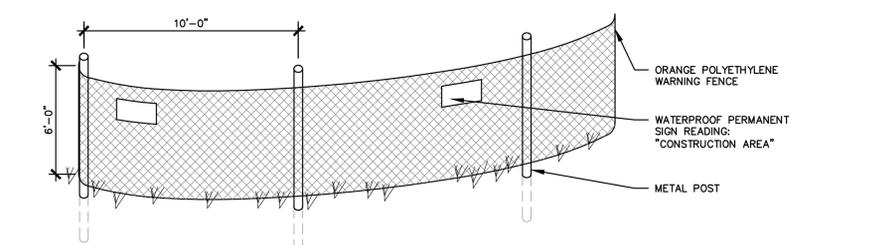
3 TREE PROTECTION FENCE SCALE: NTS



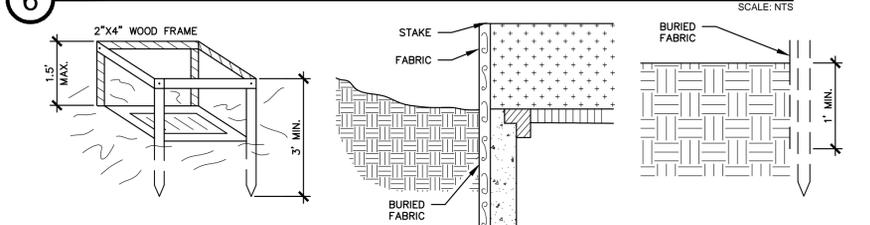
4 SLOPE STABILIZATION SCALE: NTS



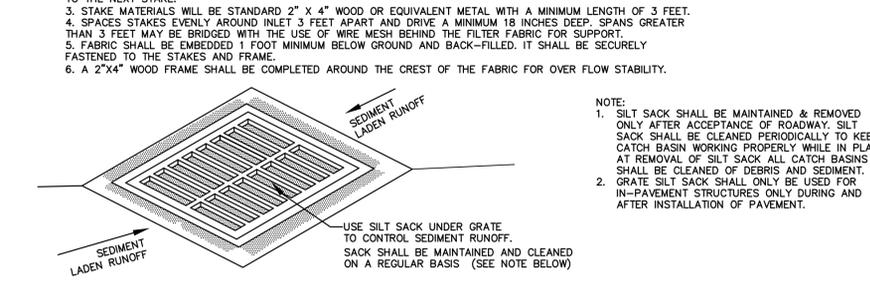
5 TEMPORARY STOCKPILE SCALE: NTS



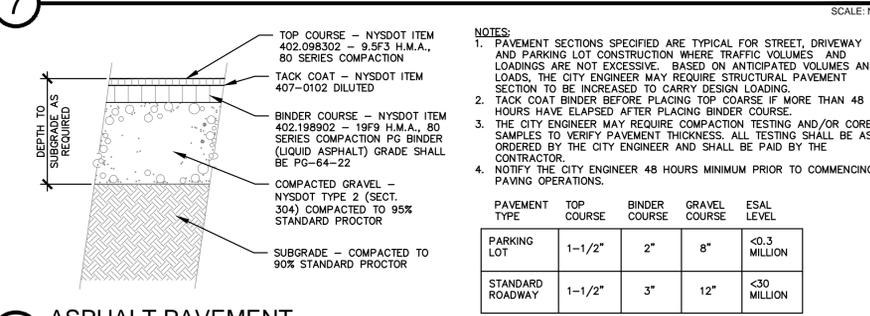
6 CONSTRUCTION FENCE SCALE: NTS



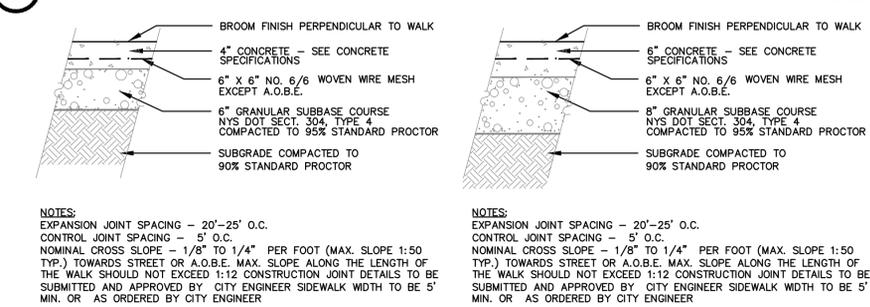
7 INLET PROTECTION SCALE: NTS



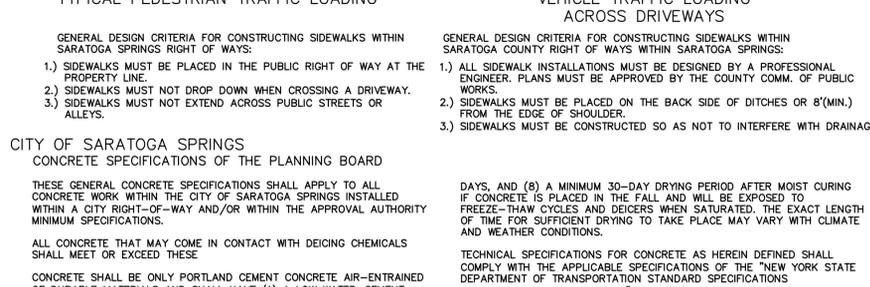
8 ASPHALT PAVEMENT SCALE: NTS



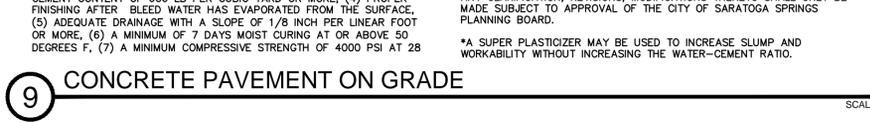
9 CONCRETE PAVEMENT ON GRADE SCALE: NTS



10 CONCRETE CURB SCALE: NTS



11 CONCRETE PAVMENT EXPANSION/SCORE JOINT SCALE: NTS



12 PAVEMENT KEY SCALE: NTS

13 TRANSITION CURB SCALE: NTS

14 CONCRETE CURB SCALE: NTS

15 FLUSH CURB IN PAVING SCALE: NTS

16 FULL CURB AT SIDEWALK SCALE: NTS

17 FULL CURB AT LAWN SCALE: NTS

18 FLUSH CURB IN PAVING SCALE: NTS

19 FULL CURB AT SIDEWALK SCALE: NTS

20 FULL CURB AT LAWN SCALE: NTS

21 FLUSH CURB IN PAVING SCALE: NTS

22 FULL CURB AT SIDEWALK SCALE: NTS

23 FULL CURB AT LAWN SCALE: NTS

24 FLUSH CURB IN PAVING SCALE: NTS

25 FULL CURB AT SIDEWALK SCALE: NTS

26 FULL CURB AT LAWN SCALE: NTS

27 FLUSH CURB IN PAVING SCALE: NTS

28 FULL CURB AT SIDEWALK SCALE: NTS

29 FULL CURB AT LAWN SCALE: NTS

30 FLUSH CURB IN PAVING SCALE: NTS

31 FULL CURB AT SIDEWALK SCALE: NTS

32 FULL CURB AT LAWN SCALE: NTS

33 FLUSH CURB IN PAVING SCALE: NTS

34 FULL CURB AT SIDEWALK SCALE: NTS

35 FULL CURB AT LAWN SCALE: NTS

36 FLUSH CURB IN PAVING SCALE: NTS

37 FULL CURB AT SIDEWALK SCALE: NTS

38 FULL CURB AT LAWN SCALE: NTS

39 FLUSH CURB IN PAVING SCALE: NTS

40 FULL CURB AT SIDEWALK SCALE: NTS

41 FULL CURB AT LAWN SCALE: NTS

42 FLUSH CURB IN PAVING SCALE: NTS

43 FULL CURB AT SIDEWALK SCALE: NTS

44 FULL CURB AT LAWN SCALE: NTS

45 FLUSH CURB IN PAVING SCALE: NTS

46 FULL CURB AT SIDEWALK SCALE: NTS

47 FULL CURB AT LAWN SCALE: NTS

48 FLUSH CURB IN PAVING SCALE: NTS

49 FULL CURB AT SIDEWALK SCALE: NTS

50 FULL CURB AT LAWN SCALE: NTS

51 FLUSH CURB IN PAVING SCALE: NTS

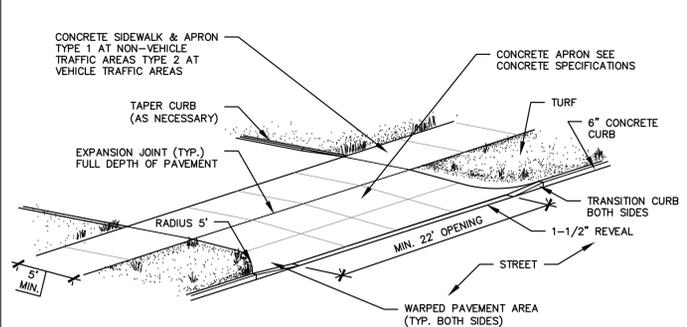
52 FULL CURB AT SIDEWALK SCALE: NTS

53 FULL CURB AT LAWN SCALE: NTS

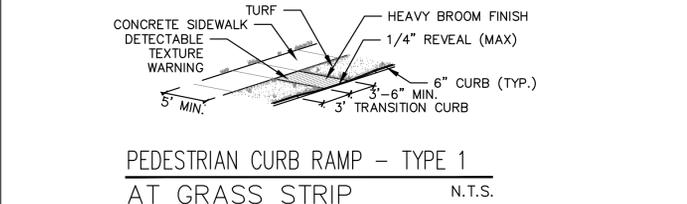
54 FLUSH CURB IN PAVING SCALE: NTS

55 FULL CURB AT SIDEWALK SCALE: NTS

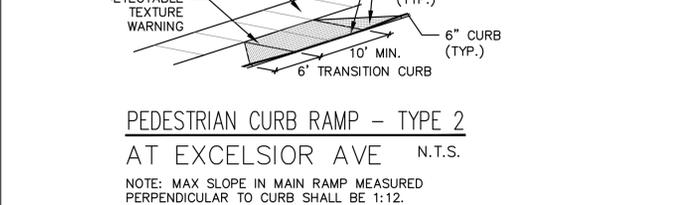
56 FULL CURB AT LAWN SCALE: NTS



1 DROP CURB AT PARKING GARAGE ENTRANCES
SCALE: NTS



PEDESTRIAN CURB RAMP - TYPE 1 AT GRASS STRIP
N.T.S.



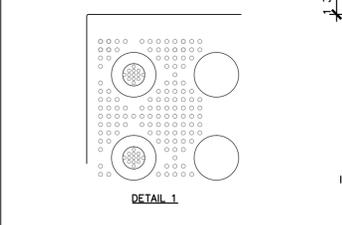
PEDESTRIAN CURB RAMP - TYPE 2 AT EXCELSIOR AVE
N.T.S.
NOTE: MAX SLOPE IN MAIN RAMP MEASURED PERPENDICULAR TO CURB SHALL BE 1:12.

2 PEDESTRIAN CURB RAMP
SCALE: NTS

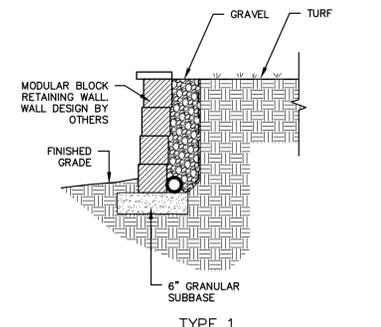
Armor-Tile
Tactile Systems

ENGINEERED PLASTICS, INC.
300 INTERNATIONAL DR., SUITE 100
WILLIAMSVILLE, NY
USA, 14221
1 (800) 682-2525
PHONE: (716) 626-3826
FAX: 1 (800) 769-4463
www.armor-tile.com

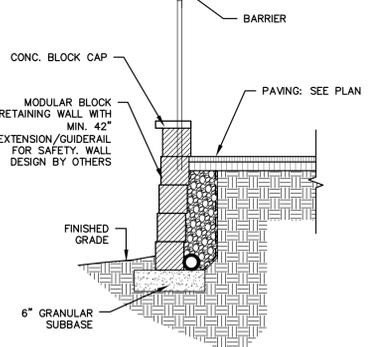
- NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. FOR CUSTOM SIZING CONTACT MANUFACTURER.
4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT WWW.CADDETAILS.COM/INFO/REFERENCE NUMBER 681-001A.



3 TACTILE WARNING STRIP
SCALE: NTS



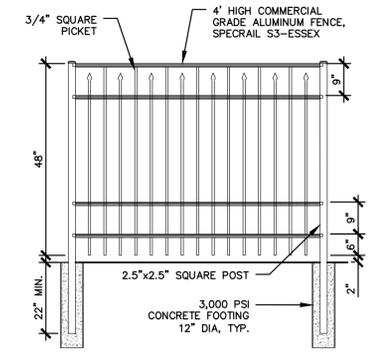
TYPE 1



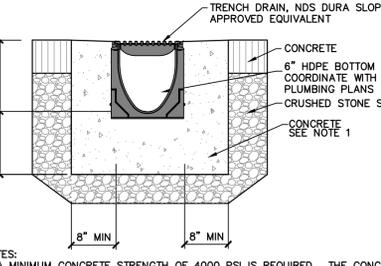
TYPE 2

NOTE: RETAINING WALL SHALL BE DESIGNED AND STAMPED BY AN ENGINEER LICENSED IN NEW YORK

4 SEGMENTAL BLOCK RETAINING WALL
SCALE: NTS

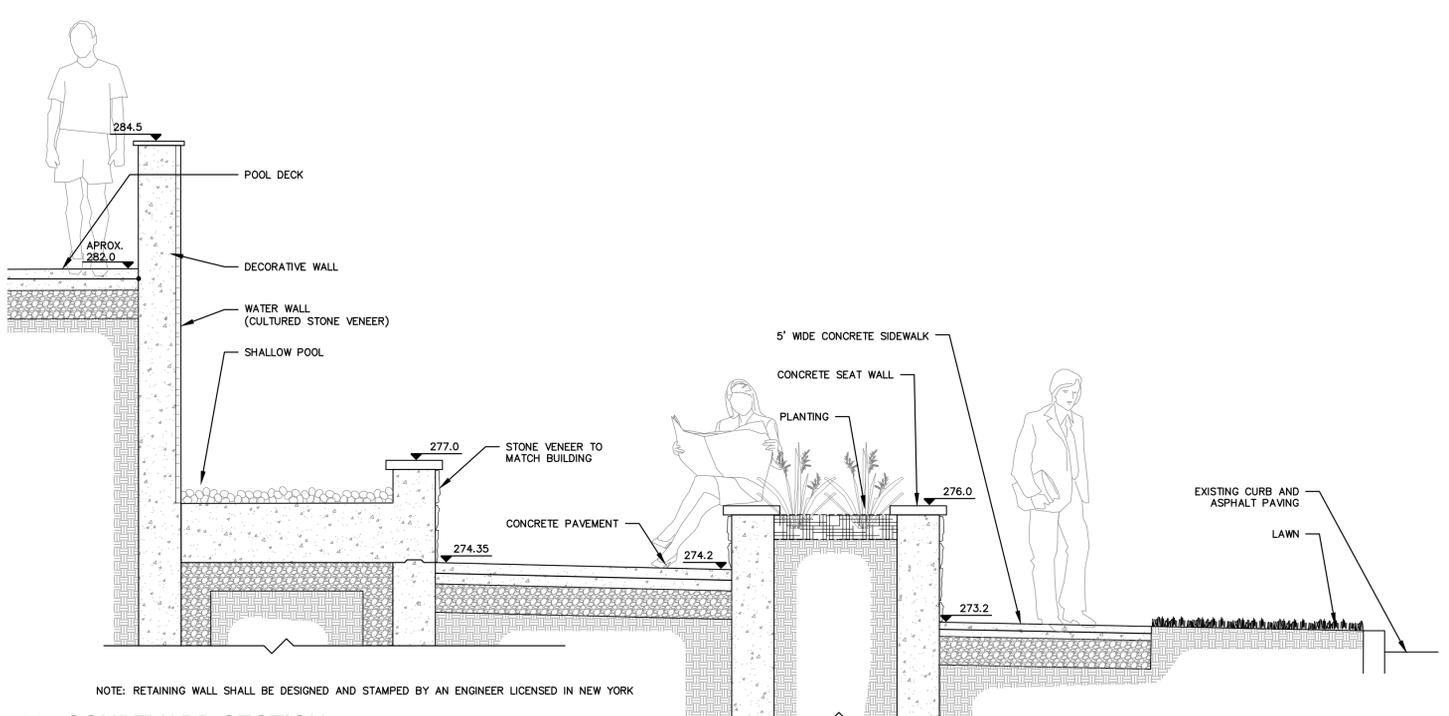


5 ALUMINUM FENCE
SCALE: NTS



NOTES:
1. A MINIMUM CONCRETE STRENGTH OF 4000 PSI IS REQUIRED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.

6 TRENCH DRAIN
SCALE: NTS



7 COURTYARD SECTION
SCALE: NTS

NOTE: RETAINING WALL SHALL BE DESIGNED AND STAMPED BY AN ENGINEER LICENSED IN NEW YORK

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Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

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Drawn: KMK	Ch'kd: DRC
Date: 09/09/2015	Scale: NTS

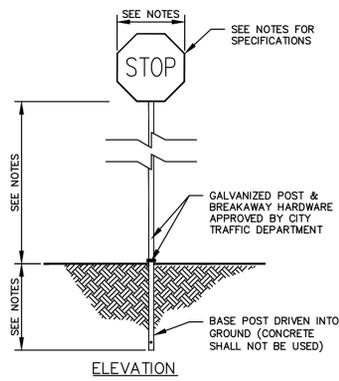
Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title
Site Details

Drawing No.
L-6.1

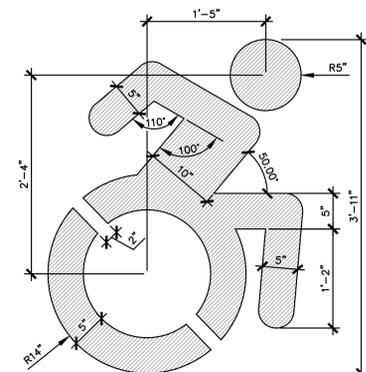
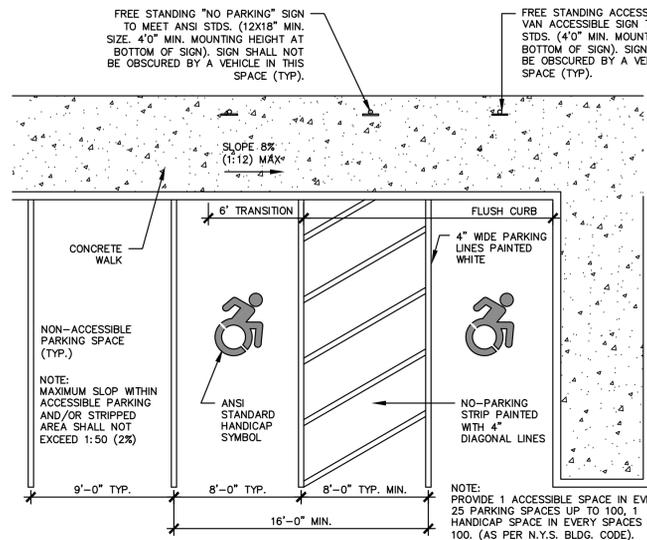
Planning Board # 15.041

Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson

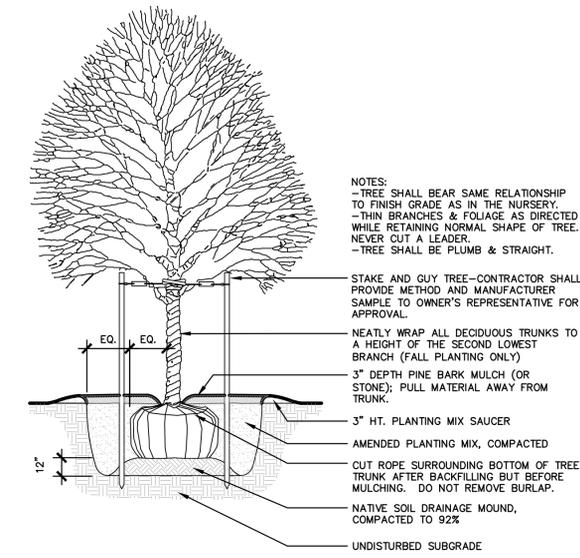


TEXT	LETTER	APPROX. SIZE OF SIGN	M.U.T.C.D. NO.
STOP	A	30"x30" 6.25 S.F.	R1-1C
RESERVED PARKING	B	12"x18" 3.00 S.F.	P4-6C
NO PARKING ANY TIME	C	12"x18"	P-1-1
DO NOT ENTER	D	30"x30" 6.25 S.F.	R3-15C
VAN ACCESSIBLE	E	18"x9" 1.125 S.F.	R7-8P

- NOTE: OWNER TO APPROVE LOCATIONS PRIOR TO INSTALLATION.
- SCHEDULE**
- NOTES:
- ALL TRAFFIC CONTROL DEVICES ARE GOVERNED BY THE MOST CURRENT VERSION OF THE NYS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE NYS DOT STANDARD SHEETS AND ARE SUBJECT TO REVIEW BY THE TRAFFIC DEPARTMENT PRIOR TO FINAL PLANNING BOARD APPROVAL. PHYSICAL LIMITATIONS AND/OR VISIBILITY CONSIDERATIONS MAY REQUIRE SPECIAL CONSTRUCTION METHODS AS DETERMINED IN THE FIELD.
 - POST TYPE, SIZE AND NUMBER ARE BASED ON SIGN AREA AND MOUNTING HEIGHT.
 - ALL STOP SIGN AND WARNING SIGN FACING SHALL BE AS MANUFACTURED BY 3M OR APPROVED EQUAL AND SHALL MEET THE LATEST RETROREFLECTIVITY REQUIREMENTS.
 - SIGNS TO BE INSTALLED WITHIN THE SARATOGA COUNTY RIGHT OF WAY SHALL BE REVIEWED AND APPROVED BY THE SARATOGA COUNTY COMMISSIONER OF PUBLIC WORKS.



- NOTES:
- ALL PAINT TO BE COLOR BLUE AND AS SPECIFIED
- THE NEW SYMBOL DOES NOT MATCH THE HISTORICAL ADA STANDARDS, BUT SLIGHT VARIATIONS ON THE HISTORICAL SYMBOL ARE PERMISSIBLE UNDER SECTION 103 WHEREAS THE SYMBOL CLEARLY DISPLAYS A WHEELCHAIR AND SIGNIFIES ACCESSIBILITY.



1 SIGN DETAIL / SIGN SCHEDULE

SCALE: NTS

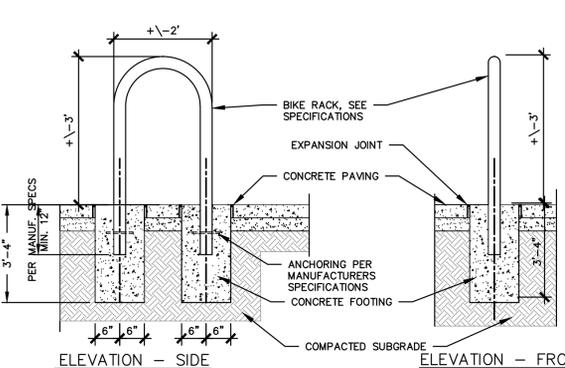
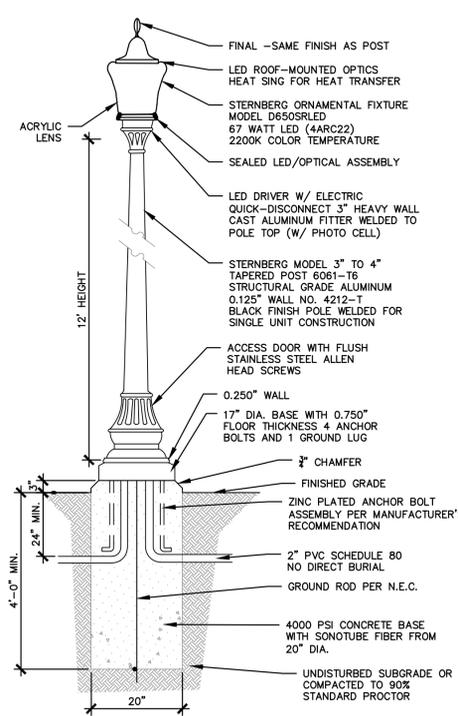
5 ACCESSIBLE PARKING

SCALE: NTS

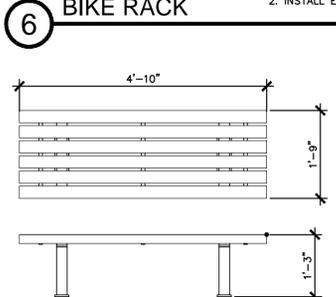
9 DECIDUOUS TREE PLANTING

SCALE: NTS

- NOTES:
- INSTALLATION OF DECORATIVE LIGHTS SHALL BE COORDINATED WITH THE CITY ELECTRICIAN AND DEPARTMENT OF PUBLIC WORKS. *WATTAGE SHALL BE AS DIRECTED BY CITY ELECTRICIAN.
 - THE OWNER/DEVELOPER IS RESPONSIBLE FOR ELECTRIFYING THE SYSTEM AND PAYING THE ELECTRIC BILLS UNTIL ACCEPTED AND TAKEN OVER BY THE CITY OF SARATOGA SPRINGS.
 - ELECTRIC SERVICE: SWEEPS AT CONCRETE BASES AND BETWEEN BASES USE 2" SCH. 80 PVC NON-METALLIC CONDUIT. FOR WIRE: URD 3-CONDUCTOR NO. 2, 120 VOLT, 100 AMP CABLE. IF CONNECTING TO NATIONAL GRID FROM A POLE, PROVIDE A SEPARATE HANDHOLE TO BE OWNED BY THE CITY FOR THE DISCONNECT AT THE BASE OF ELECTRIC POLE AT THE BEGINNING OF ELECTRIC SERVICE. WIRE AND CONDUIT FROM HANDHOLE TO POLE PER NATIONAL GRID STANDARDS. USE POLARIS CONNECTORS, CATALOG NUMBER IT-1/0, FOR CONNECTIONS IN HANDHOLE AND IN BASE OF LIGHTS. EACH LIGHT TO BE FUSED IN BASE OF LAMP POLE WITH 10 AMP FUSE WITH BUSSMANN HEB-AA IN-LINE FUSE HOLDER. IF CONNECTING MORE THAN THREE LIGHTS FROM THE SAME SOURCE OF POWER, PROVIDE 30 AMP IN-LINE FUSE WITH WATER-TIGHT FUSE HOLDER OF PROPER SIZE FOR WIRE. SEPARATE HANDHOLE IS NOT REQUIRED IF CONNECTING TO A NATIONAL GRID HANDHOLE.

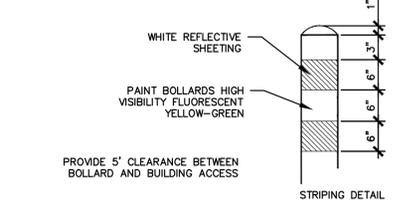
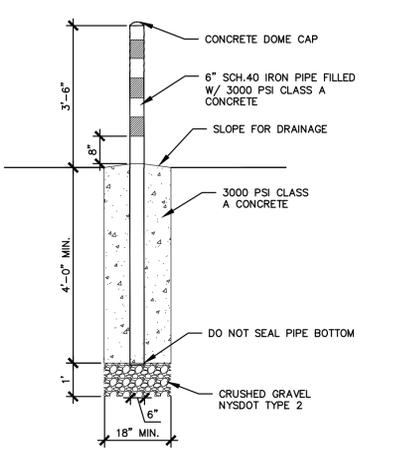


- NOTES:
- VERIFY DIMENSIONS OF BICYCLE RACK & STAKE LOCATION PRIOR TO START OF FOOTING CONSTRUCTION & INSTALLATION
 - INSTALL EMBEDDED ANCHORING PER MANUFACTURERS SPECIFICATIONS



7 BENCH

SCALE: NTS

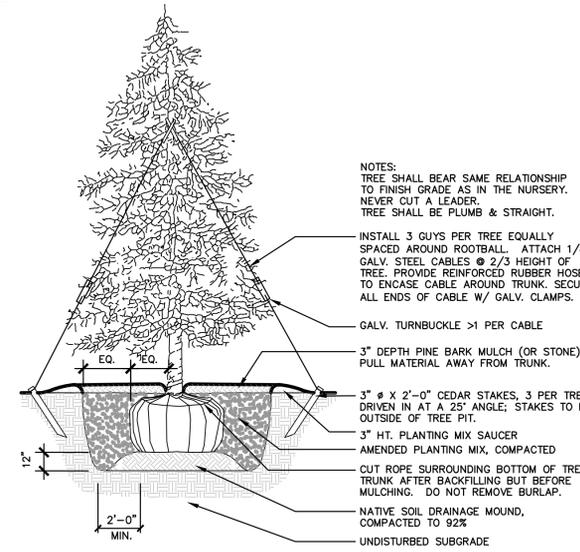


8 PIPE BOLLARD

SCALE: NTS

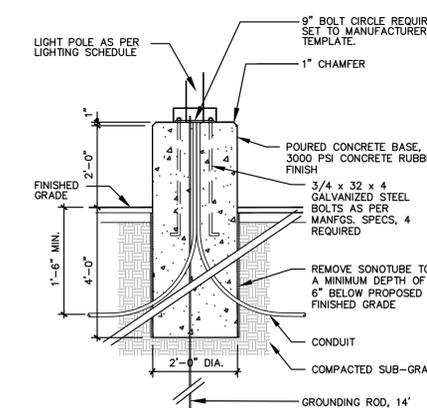
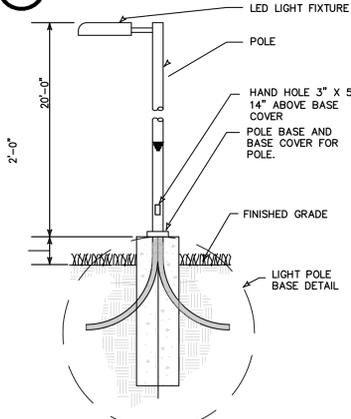
10 EVERGREEN TREE PLANTING

SCALE: NTS



2 DECORATIVE STREET LIGHT DETAIL

SCALE: NTS



3 LIGHTING POLE DETAIL

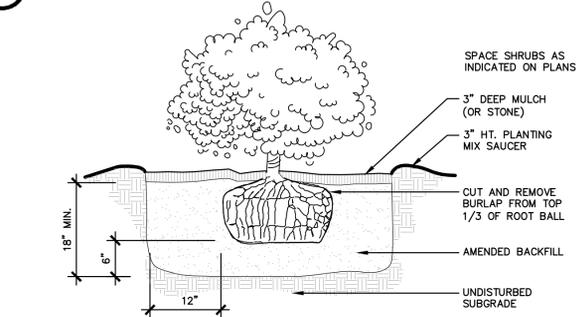
SCALE: NTS

4 LIGHT POLE BASE PEDESTAL DETAIL

SCALE: NTS

11 SHRUB PLANTING

SCALE: NTS



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Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
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Drawing Title

Site Details

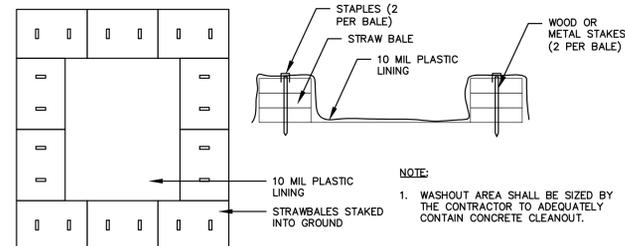
Drawing No.

L-6.2

Planning Board # 15.041

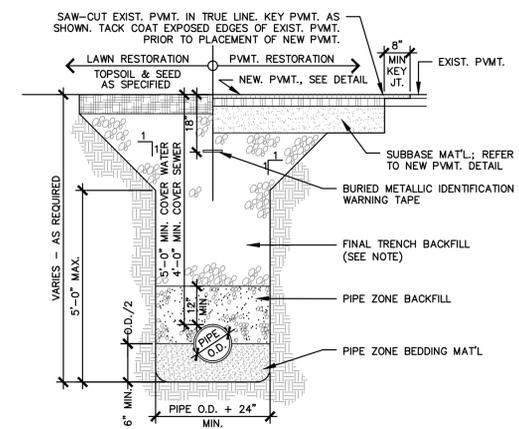
Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson

Project No: 201391
 Sheet Title: Planning Board # 15.041
 File Name: C:\p15\201391\15.041_Plan_Excelsior_Development\15.041_Plan_Details.dwg



1 CONCRETE WASHOUT DETAIL

SCALE: NTS

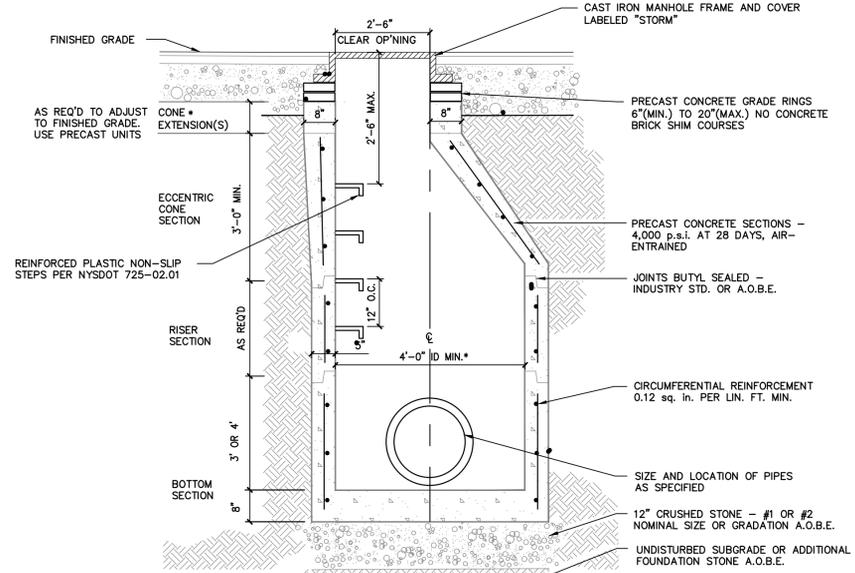


ITEM	DEPTH	MATERIAL	NYSDOT TYPE	METHOD OF PLACEMENT
PIPE ZONE BEDDING	6" MIN.	ANGULAR CRUSHED STONE	1&2	MECHANICAL COMPACTION
PIPE ZONE BACKFILL	12" MIN. COVER	CLEAN SAND OR GRAVEL	1A OR 1	MECHANICAL COMPACTION
FINAL TRENCH BACKFILL	VARIES	SEE NOTE	SEE NOTE	MECHANICAL COMPACTION

NOTES:
 1. FINAL TRENCH BACKFILL
 1.a. IN NON-PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE EXCAVATED MATERIAL WHEN DETERMINED SUITABLE BY THE ENGINEER OF RECORD; OTHERWISE IT SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN. MOD. PROCTOR DENSITY SHALL BE 85 PERCENT.
 1.b. IN PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN. MODIFIED PROCTOR DENSITY SHALL BE 95 PERCENT.
 2. ALL PIPE ZONE BEDDING, PIPE ZONE BACKFILL, AND FINAL TRENCH BACKFILL SHALL BE PLACED IN 6" INCH MAX. COMPACTED LIFTS. ALL BEDDING AND BACKFILL MATERIALS SHALL BE MECHANICALLY COMPACTED TO THE SATISFACTION OF THE ENGINEER. EXCAVATION SHALL BE KEPT DRY AND DEWATERED AT ALL TIMES.

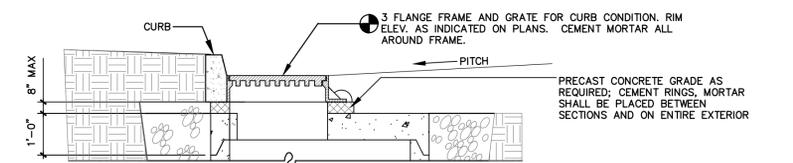
4 PIPE TRENCH SECTION

SCALE: NTS

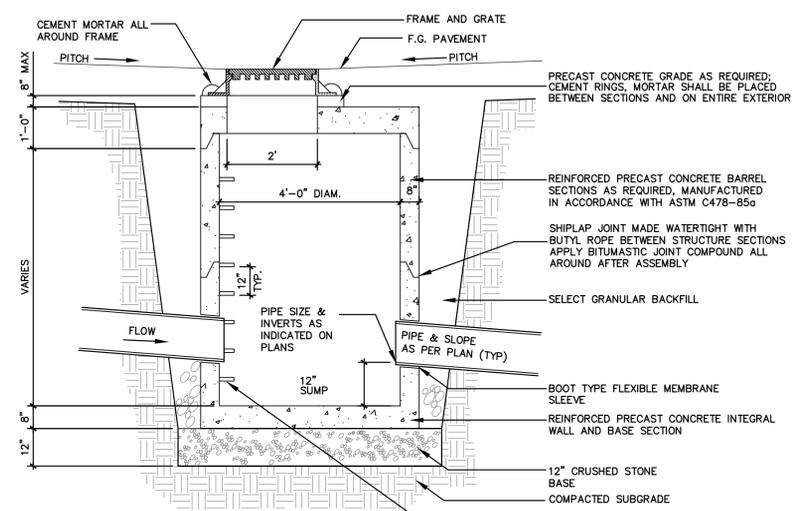


5 PRECAST CONCRETE MANHOLE FOR STORM

SCALE: NTS



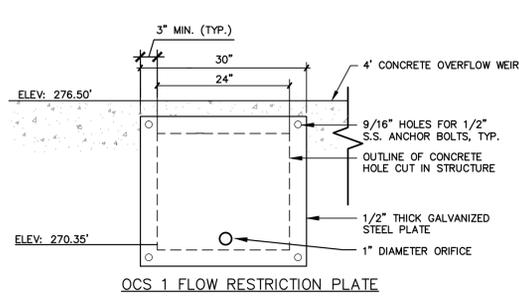
A. 3 FLANGE FRAME & GRATE ALONG CURB



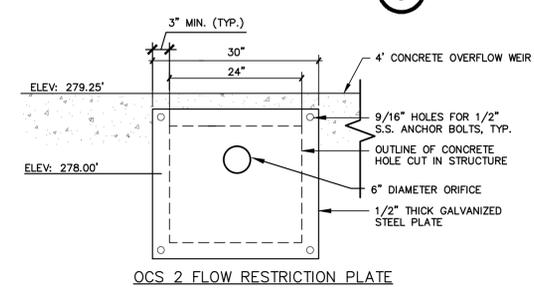
B. 4 FLANGE FRAME & GRATE

2 CATCH BASIN DETAIL

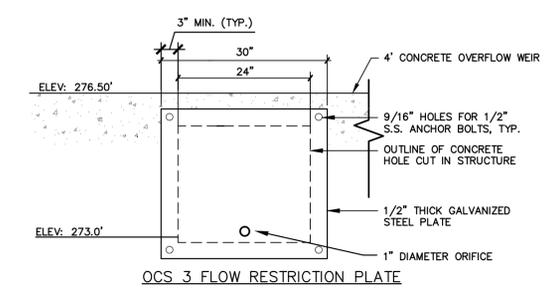
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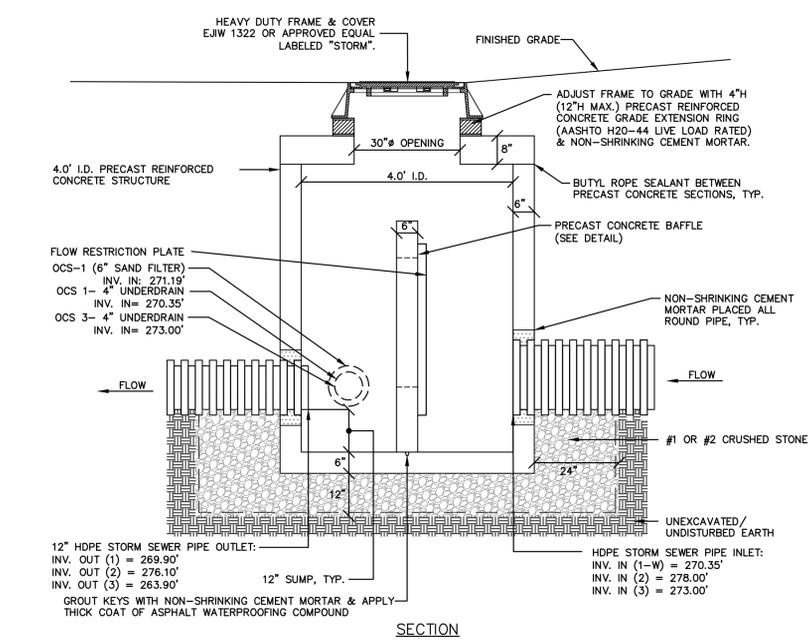
OCS 1 FLOW RESTRICTION PLATE



OCS 2 FLOW RESTRICTION PLATE



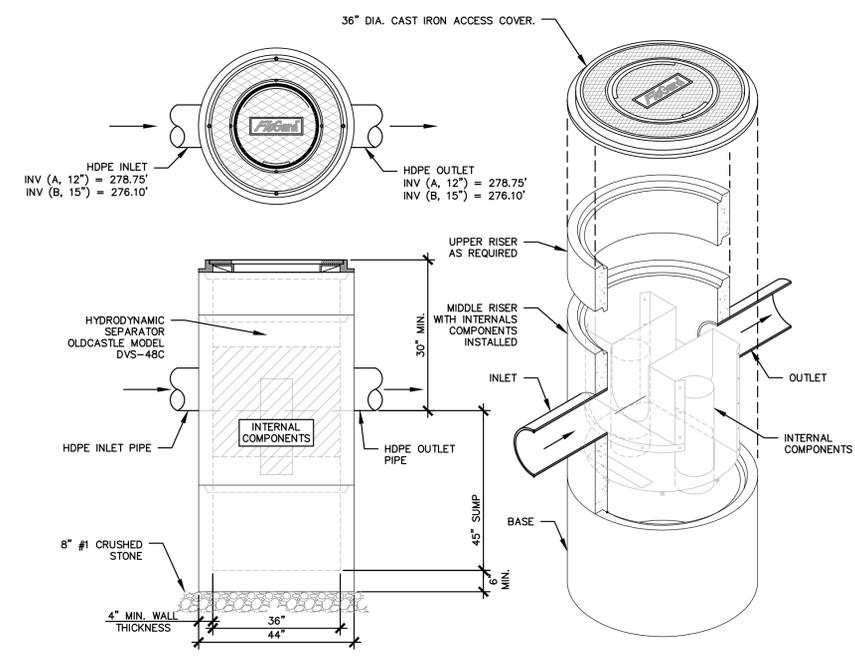
OCS 3 FLOW RESTRICTION PLATE



SECTION

6 OUTLET CONTROL STRUCTURE

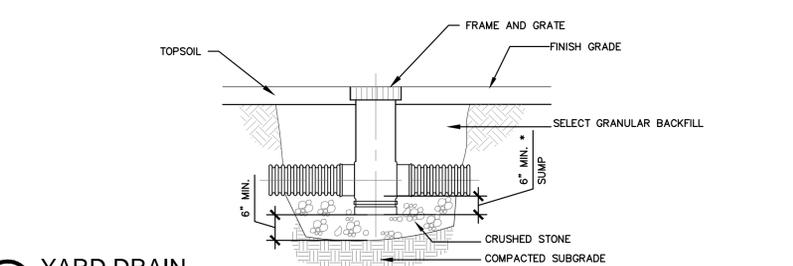
SCALE: NTS



NOTES:
 1. BOLTED & GASKETED MANHOLE ACCESS COVER ELEVATION MAY BE ADJUSTED TO GRADE.
 2. CONCRETE COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM DESIGNATION C478.

7 HYDRODYNAMIC SEPARATOR

SCALE: NTS



3 YARD DRAIN

SCALE: NTS

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 Prepared for:
 Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047

Project Title:
 77 Excelsior Mixed
 Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DRC
Drawn:	KMK Ch'kd: DRC
Date:	09/09/2015 Scale: NTS

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

Drawing Title
 Stormwater
 Details

Drawing No.
 L-6.3

Planning Board # 15.041

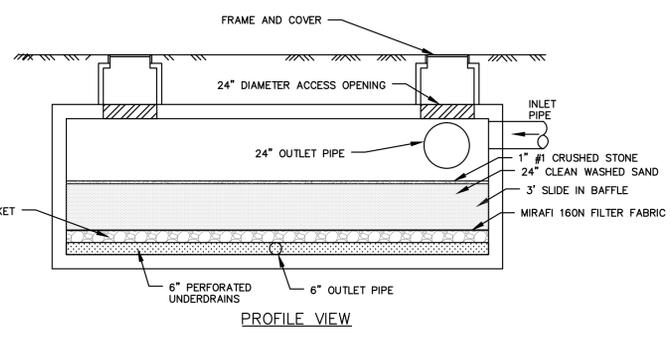
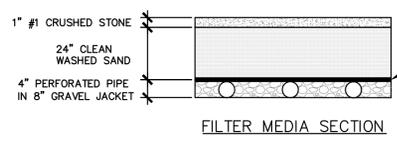
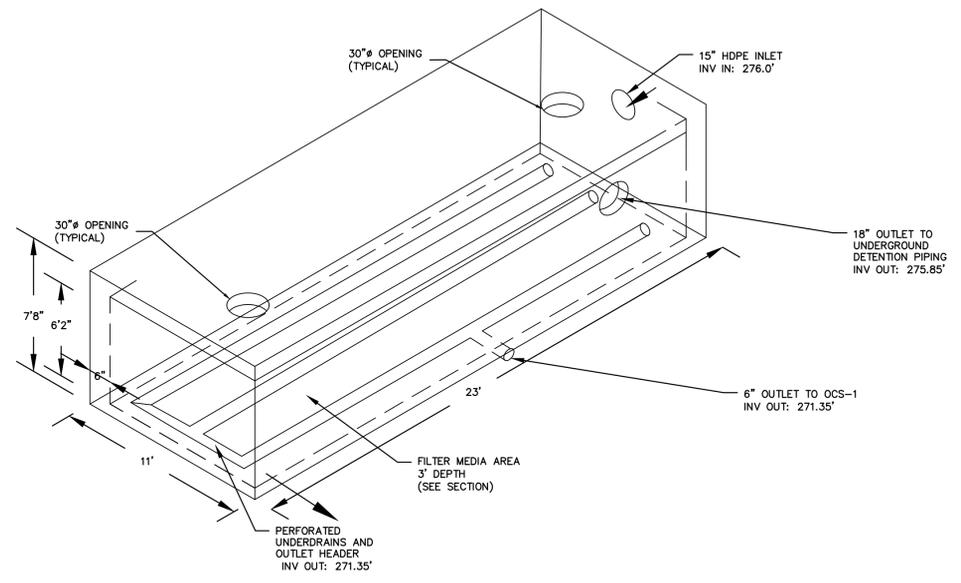
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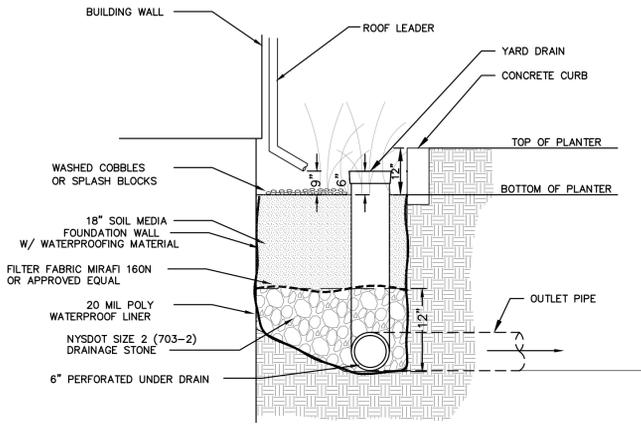
Project No.: 201391
 Sheet No.: 11 of 14
 File Name: C:\p\2013\201309\1_Plan_Excelsior_Edpm\20130915\CAD\DETAILS\STORMWATER.dwg

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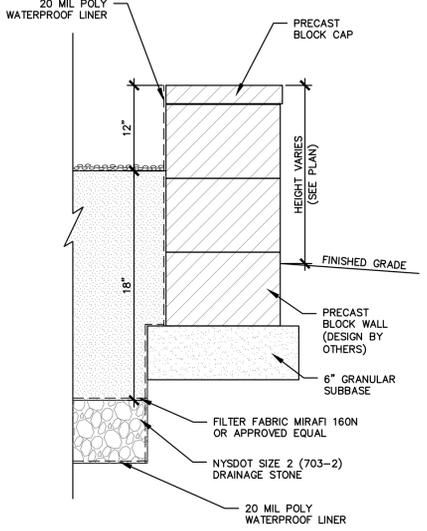


1 UNDERGROUND SAND FILTER SCALE: NTS

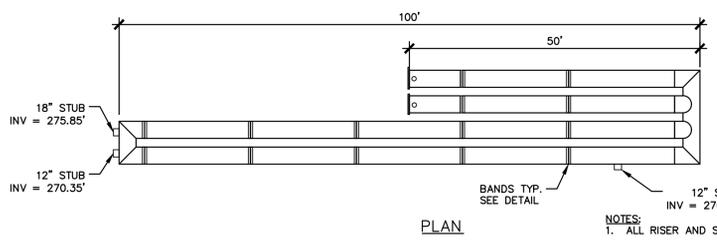


NOTE:
 1. SOIL MEDIA INFILTRATION RATE ± 2 " PER HOUR. MEDIA TO CONSIST OF 70% SAND, (100% PASSING 1" SIEVE, 5% PASSING NO. 200 SIEVE) AND 30% TOPSOIL (5% ORGANIC MATERIAL)
 2. VEGETATION SELECTED SHALL BE IN ACCORDANCE WITH NYSDEC STORMWATER MANUAL AND BE RELATIVELY SELF-SUSTAINING AND ADAPTABLE. ALL PLANTS SHALL BE CONTAINER-GROWN WITH A WELL ESTABLISHED ROOT SYSTEM, PLANTED ON ONE-FOOT CENTERS. PLEASE SEE DWG L-5 FOR LANDSCAPING DETAILS.

2 STORMWATER PLANTER SCALE: NTS

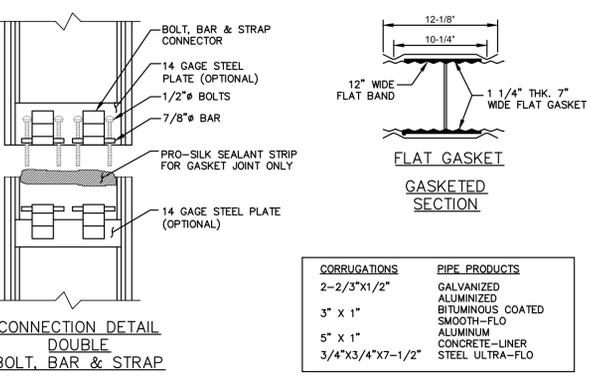


6 UNDERGROUND DETENTION PIPING #1 SCALE: NTS



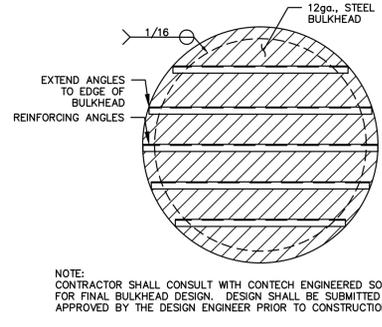
NOTES:
 1. ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
 2. ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
 3. ALL RISERS AND STUBS ARE 2-2/3" X 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
 RISERS TO BE FIELD TRIMMED TO GRADE.
 QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES.

7 UNDERGROUND DETENTION PIPING #2 SCALE: NTS

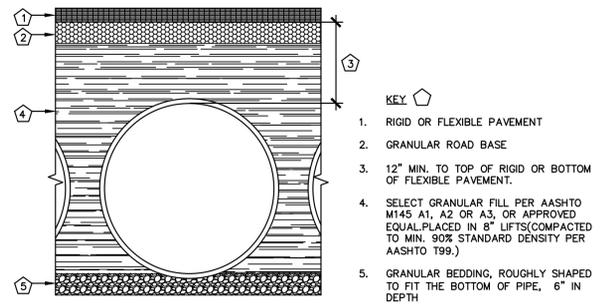


3 H-12 HUGGER BAND DETAIL SCALE: NTS

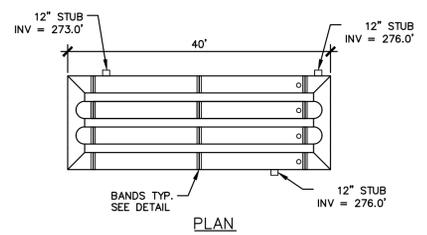
CORRUGATIONS	PIPE PRODUCTS
2-2/3" X 1/2"	GALVANIZED
3" X 1"	ALUMINIZED
5" X 1"	BITUMINOUS COATED
3/4" X 3/4" X 7-1/2"	SMOOTH-FLO
	ALUMINUM
	CONCRETE-LINER
	STEEL ULTRA-FLO



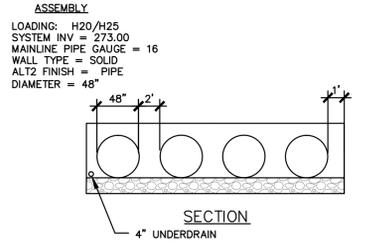
4 BULKHEAD DETAIL SCALE: NTS



5 BACKFILL DETAIL SCALE: NTS



NOTES:
 1. ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
 2. ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
 3. ALL RISERS AND STUBS ARE 2-2/3" X 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
 RISERS TO BE FIELD TRIMMED TO GRADE.
 QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES.



Planning Board # 15.041

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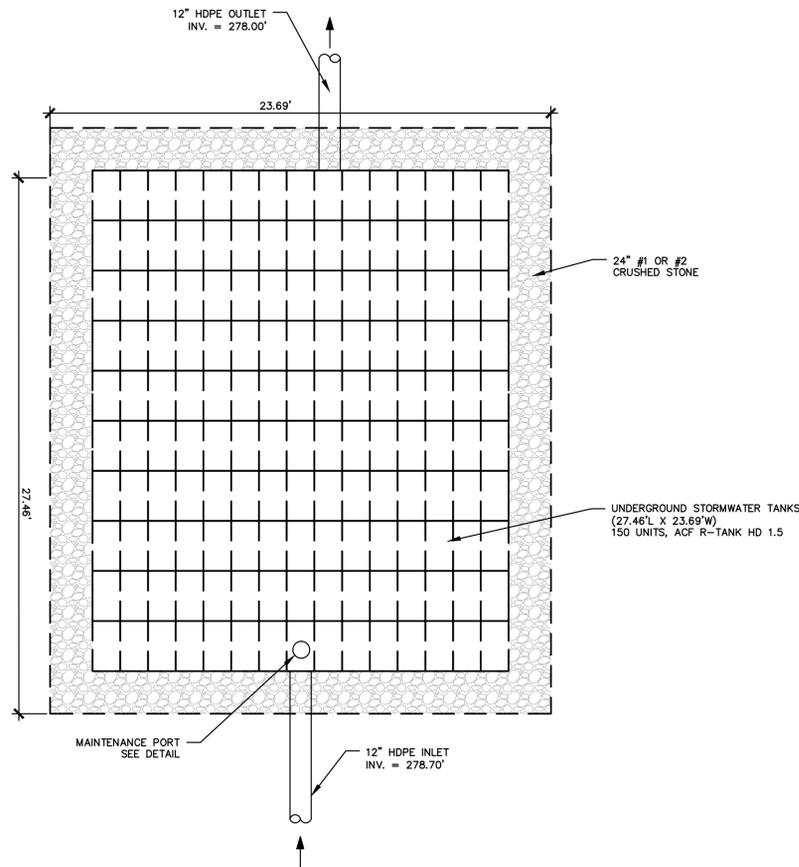
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77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391	
Design:	DRC	
Drawn:	KMK Ch'kd: DRC	
Date:	09/09/2015 Scale: NTS	
Rev:	Description: Date:	
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	7/07/16

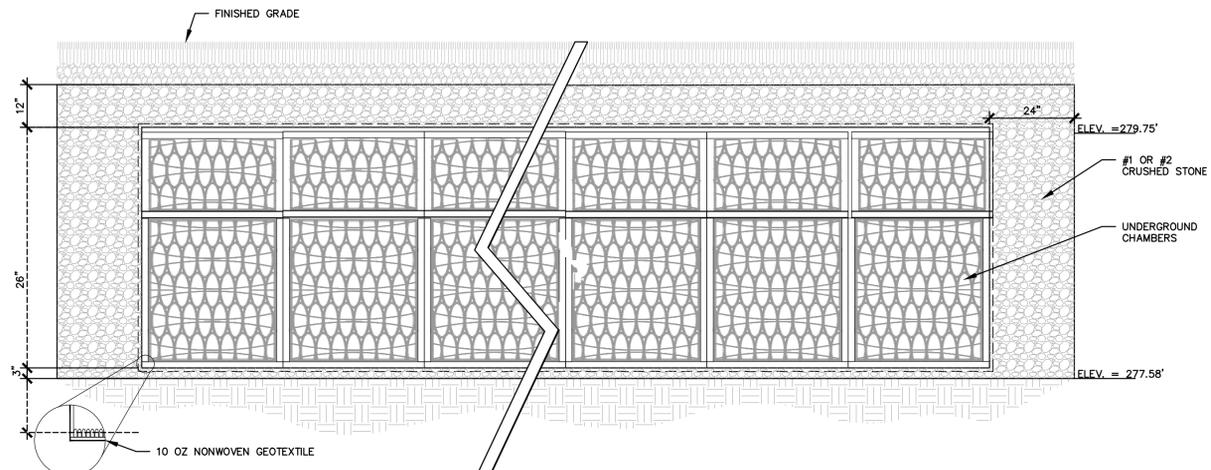
Drawing Title
Stormwater Details

Drawing No.
L-6.4

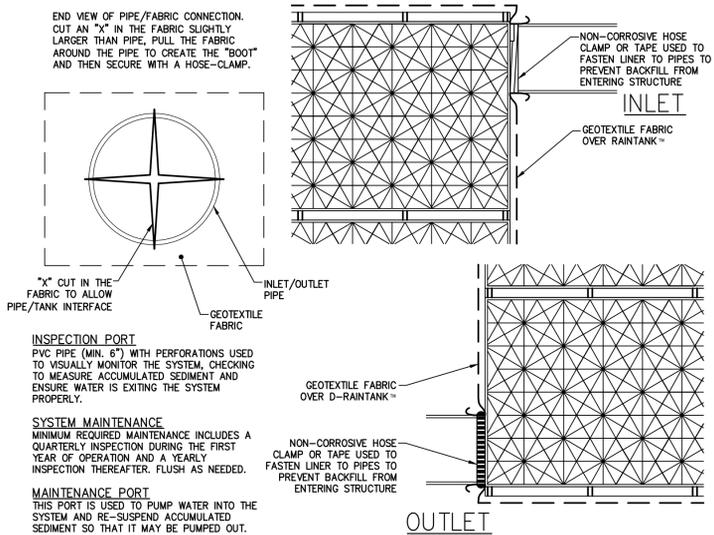
Project No.: 201391
 Date: 09/09/2015
 Scale: NTS
 Drawing Title: Stormwater Details
 Drawing No.: L-6.4
 Design: DRC
 Drawn: KMK
 Ch'kd: DRC
 Date: 09/09/2015
 Scale: NTS



1 UNDERGROUND CHAMBERS (PLAN) SCALE: NTS



3 UNDERGROUND CHAMBERS (SECTION) SCALE: NTS



END VIEW OF PIPE/FABRIC CONNECTION.
 CUT AN "X" IN THE FABRIC SLIGHTLY LARGER THAN PIPE, PULL THE FABRIC AROUND THE PIPE TO CREATE THE "BOOT" AND THEN SECURE WITH A HOSE-CLAMP.

INLET
 NON-CORROSIVE HOSE CLAMP OR TAPE USED TO FASTEN LINER TO PIPES TO PREVENT BACKFILL FROM ENTERING STRUCTURE.
 GEOTEXTILE FABRIC OVER RAIN TANK "

OUTLET
 NON-CORROSIVE HOSE CLAMP OR TAPE USED TO FASTEN LINER TO PIPES TO PREVENT BACKFILL FROM ENTERING STRUCTURE.
 GEOTEXTILE FABRIC OVER D-RAIN TANK "

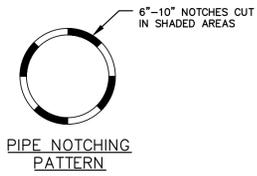
INSPECTION PORT
 PVC PIPE (MIN. 6") WITH PERFORATIONS USED TO VISUALLY MONITOR THE SYSTEM, CHECKING TO MEASURE ACCUMULATED SEDIMENT AND ENSURE WATER IS EXITING THE SYSTEM PROPERLY.

SYSTEM MAINTENANCE
 MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.

MAINTENANCE PORT
 THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.

4 UNDERGROUND CHAMBERS MAINTENANCE PORT SCALE: NTS

MAINTENANCE PORT NOTE:
 THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.



2 RAIN TANK INLET/OUTLET DETAIL SCALE: NTS

Planning Board # 15.041

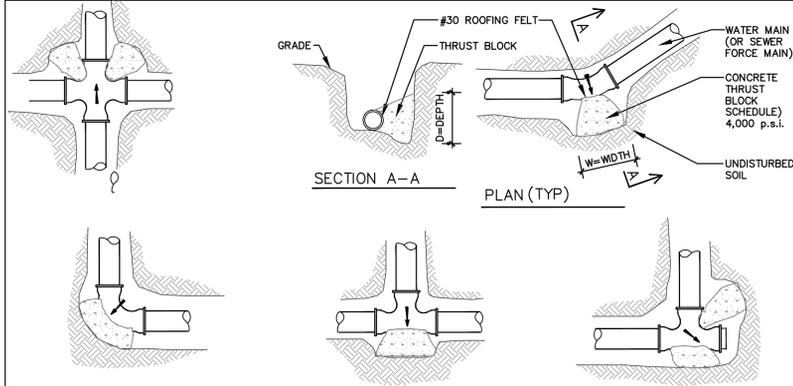
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Drawing Title
Stormwater Details

Drawing No.
L-6.5



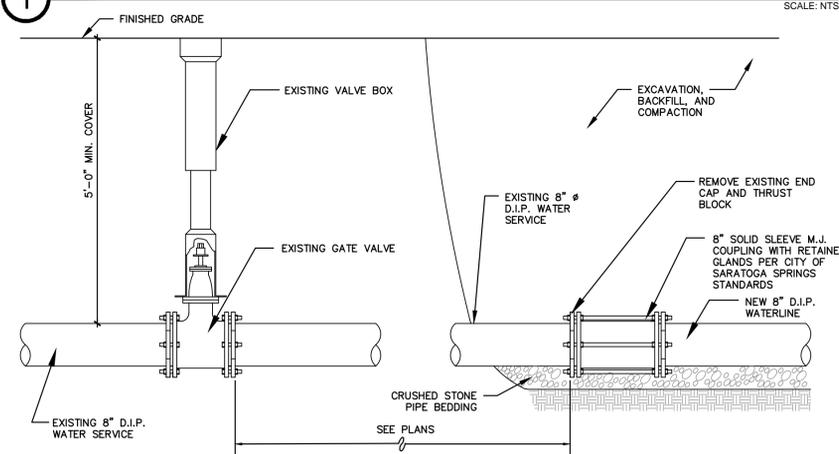
NOTES:

- FOR REQUIRED BEARING AREA AND DIMENSIONS L AND D, SEE SCHEDULE BELOW. VALUES OF L AND D OTHER THAN THOSE SHOWN IN THE TABLE MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR LARGER THAN THAT REQUIRED.
- CONCRETE NOT TO OVERLAP ANY JOINT.
- CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.
- BEARING AREAS FOR THRUST BLOCKS FOR WATER MAINS LARGER THAN 12" DIA. TO BE APPROVED BY CITY ENGINEER.
- APPROXIMATE VOLUME OF CONCRETE THRUST BLOCK: $V \pm = LD (W \pm LD) - LD$
WHERE:
V = VOLUME IN CUBIC YARDS
L = LENGTH OF BLOCK IN FEET
D = DEPTH OF BLOCK IN FEET
W = WIDTH OF BLOCK IN FEET
LD = INSIDE DIAMETER OF PIPE IN FEET
- REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 2000 p.s.i. WITH A SAFETY FACTOR OF 1.7. PRESSURE OF FLUID FLOW IS BASED ON A 300' HEAD.
- IN MUCK, PEAT OR RECENTLY PLACED FILL ALL THRUST SHALL BE RESISTED BY PILES OR THE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

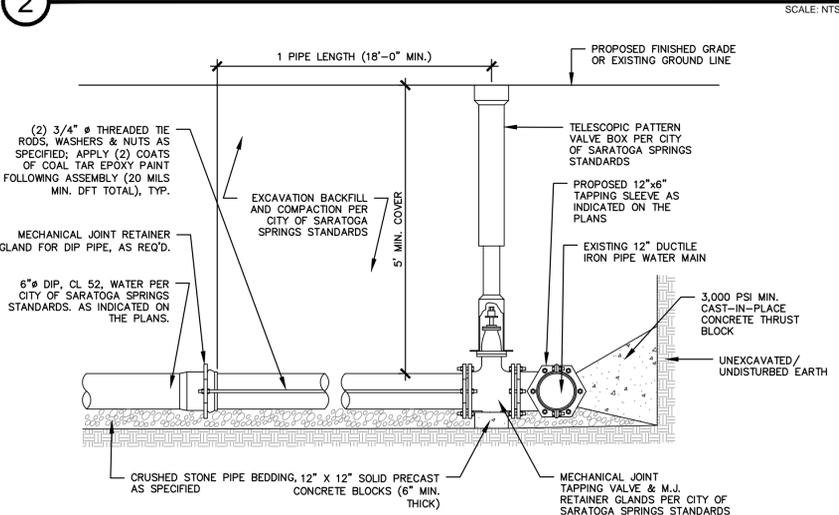
REQUIRED BEARING AREAS & DIMENSIONS FOR CONCRETE THRUST BLOCKS

PIPE SIZE INCHES	TEE AREA SQ. FT.	90° (1/4) BEND		45° (1/8) BEND		22-1/2° (1/16) BEND		11-1/4° (1/32) BEND		
		DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	
4	1.4	1.0 x 1.5	2.0	1.0 x 2.0	1.1	1.0 x 1.5	1.6	.5 x 1.5	0.3	0.5 x 1.0
6	3.2	1.5 x 2.5	4.5	2.0 x 2.5	2.4	1.5 x 2.0	1.2	1.0 x 1.5	0.6	0.5 x 1.5
8	5.7	2.0 x 3.0	8.0	2.0 x 4.0	4.3	2.0 x 2.5	2.2	1.5 x 1.5	1.1	1.0 x 1.5
10	8.8	2.5 x 3.5	12.5	3.0 x 4.5	6.8	2.0 x 3.0	3.4	1.5 x 2.5	1.7	1.0 x 2.0

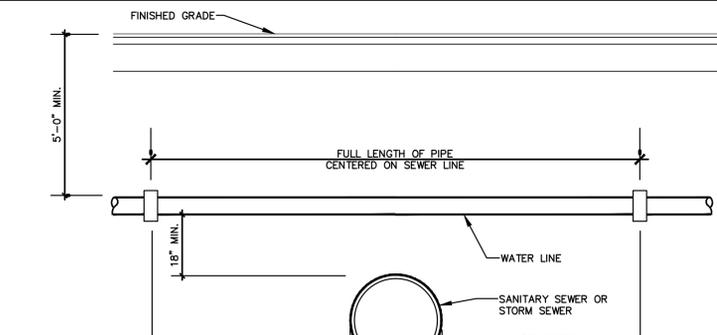
1 THRUST BLOCK



2 CONNECTION TO EXISTING WATER SERVICE

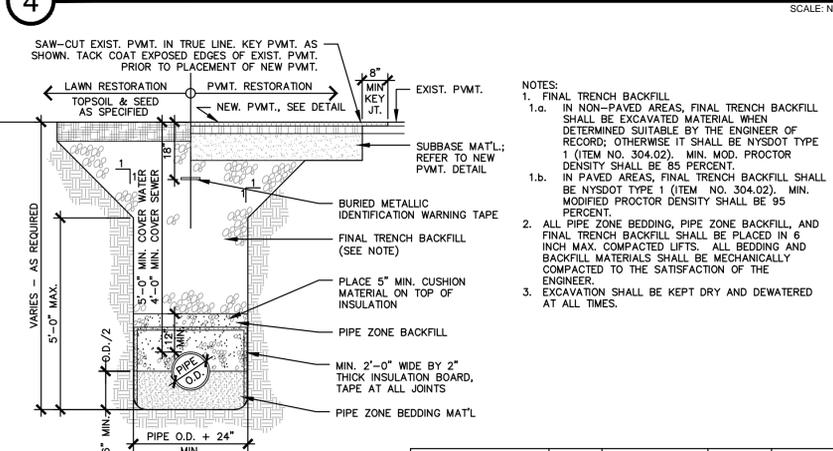


3 CONNECTION TO EXISTING WATER MAIN



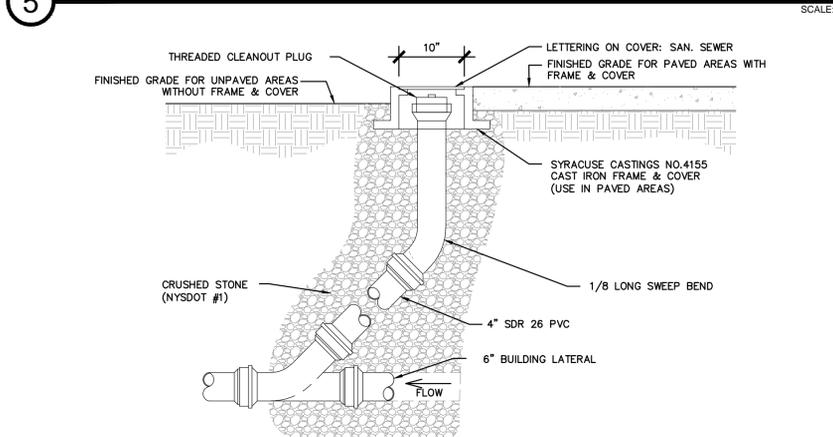
NOTE: (REFERENCE - "TEN STATE STANDARDS")
WHEN INSTALLED PARALLEL, ALL WATER AND SEWER LINES SHALL HAVE A MINIMUM SEPARATION OF 10', EDGE TO EDGE. IF MINIMUM CANNOT BE MAINTAINED, WATER MAIN SHALL BE IN SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELVE TO ONE SIDE OF SEWER, WITH BOTTOM OF WATER MAIN 18" MINIMUM ABOVE TOP OF SEWER PIPE. WHEN CROSSING, MAINS SHALL BE INSTALLED TO INSURE 18" MINIMUM VERTICAL SEPARATION BETWEEN PIPES, OUTSIDE TO OUTSIDE. WHERE WATER MAIN IS UNDERNEATH SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO WATER MAIN. WHEN IT IS IMPOSSIBLE TO PROVIDE THE ABOVE MINIMUMS, THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE, AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHT PRIOR TO BACKFILLING.

4 UTILITY CROSSING

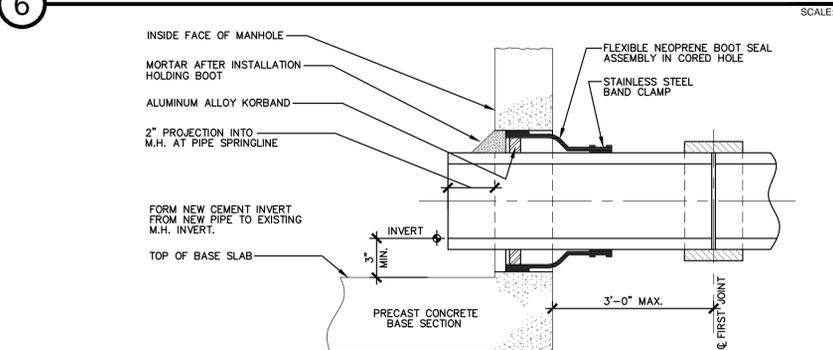


ITEM	DEPTH	MATERIAL	NYSDOT TYPE	METHOD OF PLACEMENT
PIPE ZONE BEDDING	6" MIN.	ANGULAR CRUSHED STONE	1&2	MECHANICAL COMPACTION
PIPE ZONE BACKFILL	12" MIN. COVER	CLEAN SAND OR GRAVEL	1A OR 1	MECHANICAL COMPACTION
FINAL TRENCH BACKFILL	VARIABLE	SEE NOTE	SEE NOTE	MECHANICAL COMPACTION

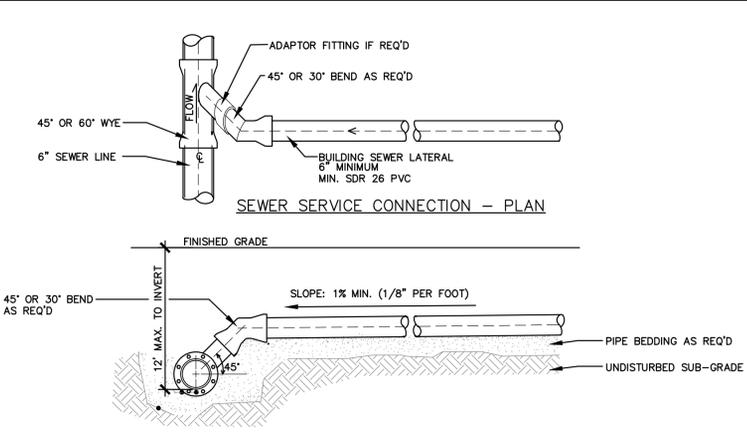
5 PIPE TRENCH-SECTION



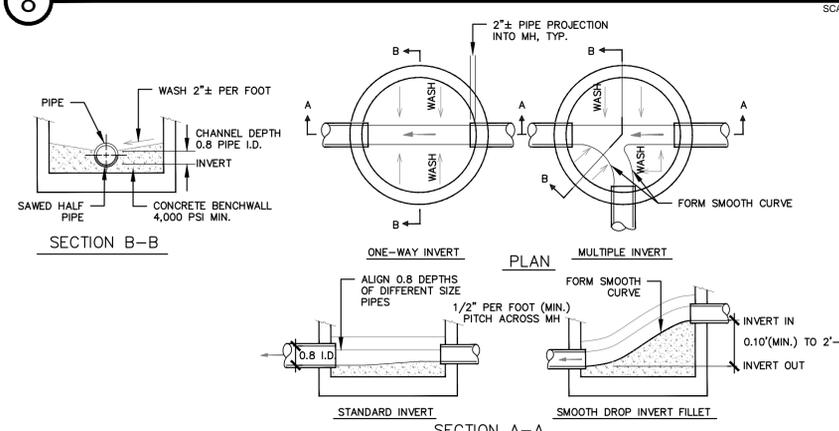
6 SANITARY SEWER CLEANOUT



7 CONNECTION TO EXISTING MANHOLE



8 CONNECTION TO EXISTING SEWER SERVICE



9 MANHOLE BENCHWALL



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Cohoes, NY 12047

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Drawing Title
Utility Details
Drawing No.

Planning Board # 15.041

Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson

Stormwater Pollution Prevention Plan

Prepared in accordance with NYS DEC General Permit GP-0-15-002

for:

**77 Excelsior Avenue
Mixed Use Development**

Owner/Operator(s):

Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

SWPPP Contact(s):

The LA Group, PC
40 Long Alley
Saratoga Springs, NY 12866
1-518-587-8100
1-518-587-0180

SWPPP Preparation Date:

September 9, 2015
Revised: July 7, 2016

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Appendices

- A Notice of Intent (NOI) and MS4 Acceptance Form**
- B Stormwater Management Report and Hydro CAD**
- C Map Set – Location Map and Construction Drawing**
- D SWPPP Inspection Forms –SWPPP Inspection Report**
- E Other SWPPP Forms – Construction Sequence, SWPPP Plan Changes, Spill Response Form, Stormwater Management Practice Maintenance Log**
- F SPDES General Permit GP-0-15-002**
- G Historic Preservation/Endangered Species Documentation**
- H Deep Ripping and De-compaction (DEC, 2008)**
- I Restrictive Covenant for Maintenance of Post-Construction Stormwater Management Practices**

1.0 PERMIT OVERVIEW AND REQUIREMENTS

1.1 Permit Overview

This Stormwater Pollution Prevention Plan (SWPPP) is prepared to inform the landowner and construction personnel of the measures to be implemented for controlling runoff and pollutants from the site during and after construction activities. The objective of this plan is to comply with the New York Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-15-002 requirements. Any material conflicts between this plan and the site plans, specification or instructions, must be brought to the attention of the design professional. The project may have other permits and it is the responsibility of the owner and contractor to know and understand all permits.

The operator will be issued a bill from New York State for a one hundred and ten dollar (\$110.00) annual fee for the open GP-0-15-002 permit. The operator will also be billed by New York State for a one time one hundred and ten dollar (\$110.00) per acre fee for the proposed disturbed soil area listed in the NOI, and finally a one time six hundred and seventy five dollar (\$675.00) per acre fee for the proposed increased impervious area listed in the NOI.

The operator is responsible to maintain onsite in a secure location that is accessible during normal working hours to an individual performing a compliance inspection, the following information:

- ✓ the Notice of Intent (NOI),
- ✓ the NYS Department of Environmental Conservation NOI Acknowledgement Letter,
- ✓ the SWPPP,
- ✓ a copy of the General Permit (included in the SWPPP),
- ✓ MS4 SWPPP Acceptance Form (where applicable), and
- ✓ All inspection reports.

Technical standards are detailed in the “New York State Standards and Specifications for Sediment and Erosion and Sediment Control (August 2010)”, as well as illustrated on the Construction Drawings included in **Appendix C**. The design of post-construction stormwater control practices follow the guidance provided by “New York State Stormwater Management Design Manual.”

2.0 SWPPP REVIEW, UPDATE

2.1 SWPPP Review

Applicable Federal, State, and local regulatory agencies that have jurisdiction may elect to review this SWPPP and notify the permittee in writing that the SWPPP does

not meet the requirements of their regulations. If the SWPPP needs to be revised, the permittee and the site contractor will make the required modifications within seven days of such notification and submit written certification to the notifying agency that the changes have been implemented. A copy of the SWPPP will be kept available on site for review by regulatory agencies, engineers, and subcontractors.

This Project is in the City of Saratoga Springs which is a regulated MS4 Community, so a copy of this SWPPP was sent to the City for review. A copy of the signed MS4 Acceptance form is provided in Appendix A of this SWPPP.

2.2 SWPPP Update

The permittee identified in this SWPPP shall amend the SWPPP under the following conditions:

- ✓ Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharge from the site
- ✓ Whenever there is a change in design, construction or operation that could have an effect on the discharge of pollutants
- ✓ To address issues or deficiencies identified during an inspection by the qualified inspector, the Department or other regulatory authority
- ✓ To identify a new subcontractor that will implement any part of the SWPPP.

If modifications are required to the post-stormwater management practices and the Project is within a regulated, traditional land use control MS4, the owner or operator of the Project must notify the MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP. Unless otherwise notified by the MS4, the owner or operator shall have the SWPPP amendments or modifications reviewed and accepted by the MS4 prior to commencing construction of the post-construction stormwater management practice. The SWPPP PLAN CHANGES, AUTHORIZATION, AND CHANGE CERTIFICATION form (Appendix E) must be filled out and a copy retained onsite during construction.

If modifications are required to the post-stormwater management practices and the Project is not within a Regulated, Traditional Land Use Control MS4, the changes shall be documented in the SWPPP kept onsite.

3.0 SITE ASSESSMENT, EVALUATION AND PLANNING

3.1 Project Location

The Project is located at 77 Excelsior Avenue in the City of Saratoga Springs, Saratoga County, NY 12866. Access to the site is off of Excelsior Avenue.

See **Appendix C** for a general site location map.

3.2 Pre-Development Conditions

Currently the site is bounded by commercial buildings with associated parking, drives, and utilities. The cover type in the proposed area of disturbance is a mixture of grass and trees. Site consisted of residential home and drive that were demolished in 2014 in preparation for the project.

3.3 Project Type

This project is a new development project and has been designed in accordance with Chapter 4 of the NYSDEC Stormwater Management Design Manual and NYSDEC's General Permit (GP-0-15-002) for construction activities.

3.4 Project Scope

The Project includes the construction of three (3) mixed use buildings. The remainder of the proposed site improvements includes construction of a parking lot, site lighting, landscaping, stormwater controls, and connections to the municipal water and sewer. The Project Site represents the area that will be disturbed as a result of the Project.

3.5 Historic Preservation Determination/Endangered Species

The project area is within an area that is shown on the OPRHP website that might possibly contain archeologically sensitive resources. All phases of the project received OPRHP signoff in 2014, see Appendix G.

The Project will have no impact on any listed, proposed to be listed, threatened or endangered species, or a critical habitat. The NYSDEC Environmental map indicating that the project is not within area of state-listed animals or plants, or significant natural communities is provided in Appendix G.

3.6 Receiving Waters

The site drains to an unnamed stream via municipal storm sewer network.

3.7 Soils

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the area including and surrounding the Project Site is comprised of Windsor loamy sand and Deerfield loamy fine sand. The hydrological soil group classification for both Windsor and Deerfield is 'A'. Test pits and falling head permeability tests were completed in July 2015 by the LA Group. Soil report and

test results are provided in Attachment A of the Stormwater Management Report (Appendix B).

4.0 EROSION AND SEDIMENT CONTROL

4.1 Erosion and Sediment Control Practices

Temporary Structural Practices

- ✓ Silt Fence
- ✓ Dust Control
- ✓ Storm Drain Inlet Protection
- ✓ Stabilized Construction Entrance

Permanent Structural Controls

- ✓ Grading
- ✓ Rock Outlet Protection
- ✓ Seeding and Mulching

Temporary Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch bare soil areas within 14 days of disturbance unless construction will resume in that area within 21 days.

Permanent Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch all disturbed areas. Slopes that are 3:1 or steeper should receive a Rolled Erosion Control Product (RECP), sodding, and or hydro-seeding a homogenous mixture of wood fiber mulch with tackifying agent.

Refer to Construction Drawings attached in **Appendix C** for detailed information on each practice.

4.2 Erosion and Sediment Control Drawings

Erosion and Sediment Control practices are shown on Construction Drawings included in **Appendix C**.

4.3 Construction Phasing Plan and Sequence of Operations

The project will disturb less than five acres at a single time.

- ✓ Temporary structural erosion controls will be installed prior to earthwork as per the attached plans.
- ✓ Areas to be undisturbed for more than 14 days will be temporarily stabilized by seeding.
- ✓ Disturbed areas will be reseeded and mulched immediately after final contours are re-established and no more than 14 days after the completion of construction at that site.

- ✓ Temporary erosion control devices will not be removed until the area served is stabilized by the growth of vegetation and the area is certified as being stabilized by the Erosion Control Superintendent.

Construction Activities	Reference Sheet Number	Start → Stop
Sequence must include major items such as, but not limited to, clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity resulting in soil disturbance. Include installation of erosion and sediment control practices and timing of installation.		
Install silt fence and construction entrance	L-01	Week 1
Clear site and rough grade	L-01 & L-03	Weeks 2-5
Begin utility installation	L-03 & L-04	Weeks 5-12
Begin building construction	Arch	Weeks 9-completion
Begin parking lot construction	L-02	Weeks 12-20
Monitor/maintain erosion and sediment control measures		Ongoing
Remove erosion and sediment control measures upon stabilization of contributing areas		Ongoing

4.4 Erosion and Sediment Control Practice Maintenance

- ✓ Silt fence – maintenance shall be performed as needed and material removed when “bulges” develop in the silt fence.
- ✓ Stabilized construction entrance – entrance shall be maintained in a condition which shall prevent tracking. This may require periodic top dressing with additional aggregate. All sediment tracked onto or spilled on public rights of way shall be removed immediately. When necessary, wheels must be cleaned to remove sediment prior to entrance on public rights of way. When washing is required, it shall be done in an area stabilized with aggregate and wash water shall be directed away from streams or wetlands preferably to a broad grassed area or a stormwater pond.
- ✓ Storm drain inlet protection – inspect after each storm event. Remove sediment when 50 percent of the storage volume is achieved.
- ✓ Replace top-soil, mulch and seed where seeding has been disturbed.

4.5 Erosion and Sediment Control Inspection

- It is recommended that a rain gage be installed at the site.
- A qualified inspector shall conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by GP-0-15-002 have been adequately installed to ensure overall preparedness of the site for commencement of construction.
- This qualified inspector must be a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 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 qualified inspector shall receive 4 hours of training every 3 years.
- The day-to-day erosion control activities on the site will be monitored by the construction manager. The qualified inspector (as defined by the NYS DEC SPDES regulations) and his crew will make **at least one inspection every seven (7) days of** erosion control devices, and non-stabilized areas during construction. A maintenance inspection report will be completed by the qualified inspector after each inspection. The report form to be completed by the inspector is attached in **Appendix D**. Reports should be compiled and maintained on-site in the SWPPP 3-ring binder.

- All measures will be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of report. The qualified inspector shall take photographs of any needed repairs and also photograph when the repairs are completed. These photographs will be time and date stamped and attached to the weekly inspection report.
- Seeded and planted areas will be inspected for bare spots, washouts, and healthy growth. If necessary, spot reseeding or sodding will be implemented.
- A trained contractor will be an employee from the contracting company responsible for the implementation of the SWPPP. This person will be onsite when any soil disturbing activities are being conducted. The trained contractor must have received 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 qualified inspector shall receive 4 hours of training every 3 years. This trained contractor cannot conduct the regular SWPPP compliance inspections unless they meet the qualified inspector qualifications.

4.6 Contractor Sequence Form

The operator shall prepare a summary of construction status using the Construction Sequence Form (included in **Appendix E**) once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated.

5.0 POST CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

5.1 Stormwater Management Controls

The proposed Post Construction Stormwater Management controls on this project are listed below:

- ✓ Stormwater Planters
- ✓ Underground Detention
- ✓ Underground Infiltration
- ✓ Underground Sand Filter

5.2 Green Infrastructure Practices/Runoff Reduction Techniques

The proposed Green Infrastructure practices or Standard Management practices with Runoff Reduction capabilities on this project are listed below:

- ✓ Stormwater Planters
- ✓ Underground Infiltration Tanks

The provided runoff reduction volume is 0.073 ac-ft, which is greater than the minimum runoff reduction volume, 0.070 ac-ft.

Soil Restoration

Excessively compacted areas and areas of cut and fill on the Project Site will have soil restoration applied as needed and as specified in the table below. Attached in Appendix H is “Deep Ripping and De-compaction, (DEC 2008).” This methodology should be followed for soil restoration as specified in the table below:

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
Minimal Soil Disturbance	Restoration not permitted		Preservation of Natural Features
Areas where topsoil is stripped only-no change in grade	Restoration not required		Clearing and Grubbing
Areas of cut and fill	HSG A& B	HSG C & D	
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Heavy traffic areas onsite (especially in a zone 5-25 feet around buildings, but not within a 5 foot perimeter around foundation walls)	HSG A& B	HSG C & D	
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration**	
Areas where Runoff Reduction and/or infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.

*Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler

**Per "Deep Ripping and Decompaction, DEC 2008"

- If compost amendment is required, 2 to 4 inches of screened compost will be incorporated into the soil.
- Prior to application of the deep-ripping and de-compaction, the depth to bedrock or naturally occurring hardpan should be known so that the depth of tillage be adjusted according to those restrictive depths.
- Soils with a slope that exceeds 10% will not have full soil restoration with deep-ripping and de-compaction due to potential for erosion from tilled soil.
- Any soil tillage (deep or shallow) will not be done on soils that are excessively wet, as this will damage the soil.

- Any tillage will not be done within approximately 10' of the drip-line of any existing established trees.
- Any large stones that are unearthed during tillage should be removed from the surface prior to final surface preparation and vegetation establishment.

5.3 Post Construction Stormwater Management Drawings

Post construction stormwater management controls are shown on Construction Drawings included in **Appendix C**.

5.4 Hydraulic and Hydrologic Analysis

The program utilized for quantifying stormwater runoff rates and volumes was **HydroCAD** software, produced by Applied Microcomputer Systems of Chocorua, NH. The SCS 24-hour Type II design storms for 1, 10, and 100-year frequency rainfall were analyzed.

- ✓ Hydrologic/hydraulic analysis for all structural components of the stormwater control system for the applicable design storms (see **Appendix B**).
- ✓ Comparison of post-development stormwater runoff conditions with pre-development conditions (see **Appendix B**).
- ✓ Dimensions, material specifications and installation details for each post-construction stormwater control practice (see **Appendix B and C**).

5.5 Comparison of Pre and Post Construction Stormwater Runoff

Stormwater Quantity. These calculations are based on the HydroCAD analysis.

	Pre Development	Post Development
10 year, 24 hour storm (Qp)	2.93 CFS	2.89 CFS
100 year, 24 hour storm (Qf)	7.18 CFS	6.04 CFS

Water Quality Volume Calculations

The following was utilized to determine water quality volume:

$$WQ_v = \frac{(P)(R_v)(A)}{12}$$

Where:

WQ_v = Water Quality Volume (acre/feet)

P = 90% Rainfall Event

R_v = 0.05 + 0.009(I) where I is impervious cover in percent

A = Subcatchment area in acres

	Required	Provided
Water Quality Volume (WQv)	0.139 AC FT	0.139 AC FT

6.0 POST CONSTRUCTION STORMWATER MAINTENANCE

6.1 Maintenance to be Performed

Prime Beechwood, LLC will be responsible for the continuous upkeep and maintenance of all post construction stormwater management facilities.

Post-construction maintenance for this project will consist of regular inspections of permanent stormwater management facilities and steep slopes. These maintenance procedures are essential to assure continual performance of the stormwater management practices on your site. During the inspection and any maintenance activity to the stormwater management practices, the responsible party should fill out an inspection and maintenance log (Appendix E) to record that it was done.

Underground Pipe Storage/Infiltration System

- The systems should be inspected quarterly for the first year and if there are no problems, the system can be inspected annually after the first year.
- If sediment is accumulating on the bottom of the system, pump in water via a flushing port or observation well and then pump the sediment laden water out via the flushing port or the inlet. This can be done with a vacuum truck. The system may have to be flushed multiple times until it is clean of sediment.
- Also, the manifold feeding the pipe storage should be flushed by pumping water in the manhole access and out the flushing port. This should be done during the routine inspection.
- The catch basins should also be pumped out with a vacuum truck and remove trash. This should be done during the routine inspection.

Stormwater Planters

- Clean trash and debris out of system as necessary
- Dead or diseased vegetation should be replaced
- When the filtering capacity of the filter diminishes substantially (when water ponds for more than 48 hours), the top few inches of discolored material shall be removed and be replaced with fresh material. The removed sediments shall be disposed of in an acceptable manner (i.e. landfill).
- Silt and sediment should be removed from the filter bed when the accumulation exceeds one inch.
- Areas devoid of mulch shall be re-mulched on an annual basis

Tree Planting

- During the first three years, mulching, watering and protection of young trees may be necessary and should be included in the inspection list.
- Inspections should be performed every three months and within one week of ice storms, within one week of high wind events that reach speeds of 20 mph until trees have reached maturity, and according to established tree inspection requirements as identified within the design manual.
- As a minimum, the following items should be included in the regular inspection list:
 - Assess tree health
 - Determine survival rate; replace any dead trees.
 - Inspect tree for evidence of insect and disease damage; treat as necessary
 - Inspect tree for damages or dead limbs; prune as necessary

Underground Sand Filter

- The sand filter should be inspected quarterly for the first year and if there are no problems, the system can be inspected annually after the first year.
- Silt/sediment shall be removed from the filter bed when the accumulation exceeds one inch. When the filtering capacity of the filter diminishes substantially (i.e. when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments shall be disposed in an acceptable manner (i.e. landfill).

Catch Basins

- Sediment removal with a vacuum truck should be done at least once a year, preferably after spring runoff and then in early fall, or when they are at 50% capacity, whichever comes first.
- Any mechanical valves should be operated for inspection every two months.

7.0 CONSTRUCTION WASTE

Waste Materials: All waste materials generated during construction will be disposed at a suitable landfill, or transfer station.

Hazardous Waste: The project will not be a generator of hazardous waste and it is not anticipated that any hazardous waste will be generated during construction. If there are any materials generated, a licensed hazardous waste carrier will be contracted to dispose the hazardous material at a suitable disposal site. If hazardous materials are discovered during construction, the work will be stopped until the issue is resolved.

Waste: Portable sanitary facilities will be made available to construction personnel and will be serviced regularly.

8.0 OFFSITE VEHICLE TRACKING

Excavation equipment involved with the construction will remain on the project site and will not regularly egress or ingress the site. Any trucks used to bring in materials or remove materials via municipal paved roads will do so over a stabilized construction entrance. If any off-site vehicle tracking occurs, the contractor will be directed to initiate, street sweeping program in the immediate vicinity of the site.

9.0 TEMPORARY STABILIZATION FOR FROZEN CONDITIONS

The following temporary stabilization measures **MUST** be performed when construction is occurring during winter/frozen ground conditions. The following requirements do not supersede any other requirements of this SWPPP as they apply to non-frozen ground conditions.

- Perimeter erosion control **MUST** still be installed prior to earthwork disturbance as per this SWPPP.
- Any areas that cannot be seeded to turf by October 1 or earlier will receive a temporary seeding. The temporary seeding will consist of winter rye seeded at the rate of 120 pounds per acre (2.5 pounds per 1,000 square feet) or stabilized as per the temporary stabilization for winter construction/frozen conditions.
- Any area of disturbance that will remain inactive for a period of 14 consecutive days **MUST** be mulched. This includes any previously disturbed areas that are covered with snow.
- Mulch **MUST** consist of loose straw applied at the rate of 2 to 3 bales (90 to 100 pounds) per thousand square feet.
- Mulch **MUST** be applied uniformly over the area of bare soil or bare soil that is covered with snow. For the latter condition, mulch **MUST** be applied on top of snow.
- Using a tracked vehicle, mulch **MUST** be crimped into the bare soil/snow. The tracked vehicle **MUST** be driven across the mulched areas in at least two directions to maximize crimping of mulch into the soil/snow.
- If mulch gets blown off an area to a significant degree, the site inspector **WILL** require that an area be re-mulched in accordance with Items 2 through 5 above, and this area **WILL** be included on the inspection checklist for the next inspection.
- If a particular area repeatedly experiences loss of mulch due to wind, then the inspector **WILL** require that an alternative method be used to secure the mulch in place. Such alternatives may include the use of

netting, tackifier or other methods deemed appropriate by the inspector.

- During periods when snow is melting and/or surface soils are thawing during daytime hours, mulched areas **MUST** be re-tracked (crimped) as per Item 5 above at least once every seven days, more frequently if directed by the inspector. Additional mulch may be required to obtain complete coverage of an area. Biodegradable erosion control matting may be required on steeper slopes.
- Additional stabilization measures for non-frozen ground conditions described in this SWPPP **WILL** be implemented at the time deemed appropriate by the inspector.

During the winter season, if a site has been stabilized and soil disturbing activities have been suspended for the winter, weekly inspections can be suspended. However, monthly inspections must still be conducted. All normal weekly inspections must resume when soil disturbing activities resume.

10.0 SPILL PREVENTION PRACTICES

Good Housekeeping and Material Management Practices

The following good housekeeping and material management practices will be followed on site during the construction project to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- Materials will be brought on site in the minimum quantities required.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposal.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The construction manager or his designee will inspect regularly to ensure proper use and disposal of materials on site.
- The contractor shall prohibit washing of tools, equipment, and machinery in or within 100 feet of any watercourse or wetland.
- All above grade storage tanks are to be protected from vehicle damage by temporary barriers.

Inventory for Pollution Prevention Plan

The materials and substances listed below are expected to be on-site during construction.

- Petroleum for fueling vehicles will be stored in above ground storage tanks. Tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or of a Con-Store, concrete encased type typically employed by NYSDOT. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.
- Paints and other similar materials will be stored in their original containers and all empty containers will be disposed of in accordance with label directions.
- Portable sanitary facilities, which contain chemical disinfectants (deodorants) will be located on-site, with the disinfectants held in the tank of the toilet.

Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Spill Prevention

The following product specific practices will be followed on site.

Petroleum Products:

- Construction personnel should be made aware that emergency telephone numbers are located in this SWPPP.
- The contractor shall immediately contact NYSDEC in the event of a spill, and shall take all appropriate steps to contain the spill, including construction of a dike around the spill and placing absorbent material over this spill.
- The contractor shall instruct personnel that spillage of fuels, oils, and similar chemicals must be avoided and will have arranged with a qualified spill remediation company to serve the site.
- Fuels, oils, and chemicals will be stored in appropriate and tightly capped containers. Containers shall not be disposed of on the project site.

- Fuels, oils, chemicals, material, equipment, and sanitary facilities will be stored/located away from trees and at least 100 feet from streams, wells, wet areas, and other environmentally sensitive sites.
- Dispose of chemical containers and surplus chemicals off the project site in accordance with label directions.
- Use tight connections and hoses with appropriate nozzles in all operations involving fuels, lubricating materials or chemicals.
- Use funnels when pouring fuels, lubricating materials or chemicals.
- Refueling and cleaning of construction equipment will take place in parking areas to provide rapid response to emergency situations.
- All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Any vehicle leaking fuel or hydraulic fuel will be immediately scheduled for repairs and use will be discontinued until repairs are made.

Fertilizers:

- Fertilizer will be stored in its original containers on pallets with water resistant coverings.
- Proper delivery scheduling will minimize storage time.
- Any damaged containers will be repaired immediately upon discovery and any released fertilizer recovered to the fullest extent practicable.

Paints:

- All containers will be tightly sealed and stored when not required for use.
- Excess paint will not be discharged to the storm water system or wastewater system, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

- Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water only at designated locations on site.

Asphalt Trucks:

- Asphalt trucks shall not discharge surplus asphalt on the site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup. The construction manager or site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the onsite construction office or trailer.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two gallons will be reported to the NYSDEC Regional Spill Response Unit. Notification to the NYSDEC (1-800-457-7362) must be completed within two hours of the discovery of the spill.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activated clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size

11.0 CERTIFICATIONS

Preparer Certification of Compliance with Federal, State, and Local Regulations

This Stormwater Pollution Prevention Plan was prepared in accordance with the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-15-002), pursuant to Article 17, Titles 7, 8 and Article 70 of the Environmental Conservation Law. This SPDES General Permit implements the Federal Clean Water Act pertaining to stormwater discharges.

Name: Doug Heller Title: Civil Engineer

Signature: _____ Date: _____

Company Name: The LA Group, PC

Owner Pollution Prevention Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

I understand that GP-0-15-002 requires site inspections be conducted by a qualified professional once every seven (7) days based on a discharge to a 303(d) watershed as determined by the NYSDEC and when approved in writing by the NYSDEC, disturbances of greater than five (5) acres at one time require site inspections once every seven (7) days. These inspections shall be performed by a qualified professional as defined by the General Permit.

The Owner/Operator will be held financially responsible for any and all fines related to work tasks that are not specified by the Contractor(s)/Subcontractor(s) below.

Name: _____ Title: Owner/Operator

Signature: _____ Date: _____

Company Name: Prime Beechwood, LLC

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

- SWPPP Components You Are Responsible For
- 1. _____
 - 2. _____
 - 3. _____
 - 4. _____
 - 5. _____
 - 6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You
Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained
Individual Responsible for
SWPPP Implementation _____ Title _____Signature of Trained
Individual Responsible for
SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

12.0 DEFINITIONS

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, tree removal, stump removal and/or brush 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 Phasing Plan - a plan designed to construct particular portions of an individual project at different times. Phasing is often used when a project is very large to limit the disturbance at a single time to 5 acres per phase.

Erosion and Sediment Control Practices – temporary measures installed prior to construction and maintained during construction to temporarily treat any stormwater runoff. Once construction is completed and post-construction stormwater management practices are installed and the site is stabilized, the erosion and sediment control practices are removed from the site.

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 pavement.

Green Infrastructure – in the context of stormwater management, the term green infrastructure includes a wide array of practices at multiple scales to manage and treat stormwater, maintain and restore natural hydrology and ecological function by infiltration, evapotranspiration, capture and reuse of stormwater, and establishment of natural vegetative features. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed or ecoregion. On the local scale green infrastructure consist of site and neighborhood specific practices and runoff reduction techniques. Such practices essentially result in runoff reduction and or establishment of habitat areas with significant utilization of soils, vegetation, and engineered media rather than traditional hardscape collection, conveyance and storage structures. Some examples include green roofs, trees and tree boxes, pervious pavement, rain gardens, vegetated swales, planters, reforestation and protection and enhancement of riparian buffers and floodplains.

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.

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
- iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Notice of Intent – a standardized format notification sent to the NYSDEC to inform them of the proposed activity to be sent after the SWPPP has been completed.

Owner or Operator – means the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Post-Construction Stormwater Management Practices – permanent devices constructed or installed onsite to treat stormwater from a site when construction is completed.

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, 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.

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.

Regulated, Traditional Land Use Control MS4 - means a city, town, or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Sequence of Operations – the individual steps and their specific order which are undertaken in order to construct a project or a given phase of a project from beginning to end. (i.e. clearing, grading, foundation work, landscaping, etc.)

State Pollutant Discharge Elimination System (SPDES) – means the system established pursuant to Article 17 of the Environmental Conservation Law (ECL) and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Stormwater Pollution Prevention Plan (SWPPP) - a report that is compiled providing detailed information about the proposed activity and the specifics to how the stormwater will be managed during construction and after construction is completed.

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 or underground 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 800-941.

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).

Trained Contractor – means an employee from a contracting (construction) company responsible for the day to day implementation of the SWPPP. The trained contractor must have received 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 qualified inspector shall receive 4 hours of training every 3 years.

It can also mean an employee from the contracting (construction) company that meets the qualified inspector qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, 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 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.

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Appendix A

**Notice of Intent
(NOI)
and
MS4 Acceptance Form**

Details

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)

Prime Beechwood, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Curley

Owner/Operator Contact Person First Name

Todd

Owner/Operator Mailing Address

621 Columbia Street

City

Cohoes

State

NY

Zip

12047

Phone

5187869000

Email

tcurley@cbcprime.net

Federal Tax ID

NONE PROVIDED

Project Location

Project/Site Name

77 Excelsior Avenue Mixed Use Development

Street Address (Not P.O. Box)

77 Excelsior Avenue

Side of Street

North

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Saratoga Springs

State

NY - New York

Zip

12866

County

SARATOGA

DEC Region

5

Name of Nearest Cross Street

East Avenue

Distance to Nearest Cross Street (Feet)

350

Project In Relation to Cross Street

East

Tax Map Numbers Section-Block-Parcel

NONE PROVIDED

Tax Map Numbers

166.5-5-4.1

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are: - Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates. - The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates

43.09097909442613,-73.77282321453094

Project Details**2. What is the nature of this project?**

New Construction

3. Select the predominant land use for both pre and post development conditions.**Pre-Development Existing Landuse**

Pasture/Open Land

Post-Development Future Land Use

Multifamily Residential

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots.

NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area. *** ROUND TO THE NEAREST TENTH OF AN ACRE. *

Total Site Area (acres)

3.0

Total Area to be Disturbed (acres)

2.1

Existing Impervious Area to be Disturbed (acres)

.1

Future Impervious Area Within Disturbed Area (acres)

1.4

5. Do you plan to disturb more than 5 acres of soil at any one time?

No

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

A (%)

100

B (%)

0

C (%)

0

D (%)

0

7. Is this a phased project?

No

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

Start Date

10/01/2016

End Date

11/01/2017

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

Unnamed

9a. Type of waterbody identified in question 9?

Stream/Creek Off Site

Other Waterbody Type Off Site Description

NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified?

NONE PROVIDED

10. Has the surface waterbody(ies in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002?

No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002?

No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?

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?

If Yes, what is the acreage to be disturbed?

NONE PROVIDED

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?

No

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?

Yes

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

Saratoga Springs

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?

No

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?

No

19. Is this property owned by a state authority, state agency, federal government or local government?

No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.)

No

Required SWPPP Components

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

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

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

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

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

Professional Engineer (P.E.)

SWPPP Preparer

The LA Group

Contact Name (Last, Space, First)

Heller, Douglas

Mailing Address

40 Long Alley

City

Saratoga Springs

State

NY

Zip

12866

Phone

5185878100

Email

dheller@thelagroup.com

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form: 1) Click on the link below to download a blank certification form 2) The certified SWPPP preparer should sign this form 3) Scan the signed form 4) Upload the scanned doc

[Download SWPPP Preparer Certification Form](#)

Please upload the SWPPP Preparer Certification - Attachment

NONE PROVIDED

Comment: NONE PROVIDED

Erosion & Sediment Control Criteria

25. Has a construction sequence schedule for the planned management practices been prepared?

Yes

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

Temporary Structural

Dust

Control

Silt Fence

Stabilized Construction Entrance

Storm Drain Inlet
Protection

Biotechnical
None

Vegetative Measures

Mulching
Seeding

Permanent Structural

None

Other

NONE PROVIDED

Post-Construction Criteria

* 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.

Locating Development in Less Sensitive Areas

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).

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

0.139

29. Post-construction SMP Identification

Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRV Capacity that were used to reduce the Total WQv Required (#28). Identify the SMPs to be used by providing 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 the Post-Construction SMP Identification section 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 SM

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

0.073

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

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)] (acre-feet)

0.070

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

Yes

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; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. SMPs

Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30). Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section to identify the SMPs used on Redevelopment proje

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. (acre-feet)

.066

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 - 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).

0.139

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

If Yes, go to question 36. If No, sizing criteria has not been met; therefore, 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 (acre-feet)

NONE PROVIDED

CPv Provided (acre-feet)

NONE PROVIDED

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

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.

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)

2.93

Post-Development (CFS)

2.89

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)

7.18

Post-Development (CFS)

6.04

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

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?

Yes

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

Prime Beechwood, 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.

Full WQv is not reduced due to existing steep slopes and shallow depth to groundwater.

Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs

Identify the Post-construction SMPs to be used by providing 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.

RR Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1)

0

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1)

0

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)

0

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)

0

Total Contributing Acres for Tree Planting/Tree Pit (RR-3)

0

Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3)

0

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4)

0

RR Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4)

0

Total Contributing Impervious Acres for Vegetated Swale (RR-5)

0

Total Contributing Impervious Acres for Rain Garden (RR-6)

0

Total Contributing Impervious Acres for Stormwater Planter (RR-7)

0.44

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)

0

Total Contributing Impervious Acres for Porous Pavement (RR-9)

0

Total Contributing Impervious Acres for Green Roof (RR-10)

0

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1)

0

Total Contributing Impervious Acres for Infiltration Basin (I-2)

0

Total Contributing Impervious Acres for Dry Well (I-3)

0

Total Contributing Impervious Acres for Underground Infiltration System (I-4)

0.38

Total Contributing Impervious Acres for Bioretention (F-5)

0

Total Contributing Impervious Acres for Dry Swale (O-1)

0

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1)

NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2)

0

Total Contributing Impervious Acres for Wet Extended Detention (P-3)

0

Total Contributing Impervious Acres for Multiple Pond System (P-4)

0

Total Contributing Impervious Acres for Pocket Pond (P-5)

0

Total Contributing Impervious Acres for Surface Sand Filter (F-1)

0

Total Contributing Impervious Acres for Underground Sand Filter (F-2)

0.70

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3)

0

Total Contributing Impervious Acres for Organic Filter (F-4)

0

Total Contributing Impervious Acres for Shallow Wetland (W-1)

0

Total Contributing Impervious Acres for Extended Detention Wetland (W-2)

0

Total Contributing Impervious Acres for Pond/Wetland System (W-3)

0

Total Contributing Impervious Acres for Pocket Wetland (W-4)

0

Total Contributing Impervious Acres for Wet Swale (O-2)

0

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

Total Contributing Impervious Area for Hydrodynamic

0

Total Contributing Impervious Area for Wet Vault

0

Total Contributing Impervious Area for Media Filter

0

"Other" Alternative SMP?

0

Total Contributing Impervious Area for "Other"

0

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

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.

Manufacturer of Alternative SMP

0

Name of Alternative SMP

0

Other Permits

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

None

If SPDES Multi-Sector GP, then give permit ID

NONE PROVIDED

If Other, then identify

NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit?

No

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth

NONE PROVIDED

42. 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.

NONE PROVIDED

MS4 SWPPP Acceptance

43. Is this project subject to the requirements of a regulated, traditional land use control MS4?

Yes - Please

attach the MS4 Acceptance form below

If No, skip question 44

44. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?

Yes

MS4 Acceptance Form Download

Download form from the link below. Complete, sign, and upload.

MS4 SWPPP Acceptance Form

MS4 Acceptance Form Upload - Attachment

NONE
 PROVIDED
 Comment: NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form.

[Owner/Operator Certification Form \(PDF, 45KB\)](#)

Upload Owner/Operator Certification Form * - Attachment

NONE
 PROVIDED
 Comment: NONE PROVIDED

Attachments

Date	Attachment Name	Context
None		

Status History

Date	User	Processing Status
None		

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted - Review	Toni Cioffi	
Deemed Complete	Toni Cioffi	

Appendix B

**Stormwater Management Report
Hydro CAD**

Stormwater Management Report

for:

77 Excelsior Avenue Mixed Use Development
Saratoga Springs, NY 12866
Saratoga County

Owner/Operator(s):

Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

SWM Report Contact(s):

The LA Group, PC
40 Long Alley
Saratoga Springs, NY 12866
1-518-587-8100
Project No. 201540

Preparation Date:

September 9, 2015
Revised: July 7, 2016

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Attachment

- A Soil Investigations**
 - Soil Survey**
 - Natural Resource Map**

- B Existing Conditions Watershed Map and HydroCAD Calculations**

- C Proposed Conditions Watershed Map and HydroCAD Calculations**

- D Proposed Frozen Conditions Watershed Map and HydroCAD Calculations**

- E Storm Data**

1.0 INTRODUCTION

The following is a Stormwater Management Report (SWM Report) developed for the Operator, Prime Beechwood, LLC, for 77 Excelsior Avenue Mixed Use Development, herein referred to as the “Project.” It is prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Stormwater Management Design Manual, dated January, 2015.

The Project has been designed in accordance with Chapter 4 of the NYSDEC Stormwater Management Design Manual (SWMDM), and NYSDEC’s General Permit GP-0-15-002 for construction activities. Stormwater calculations were performed utilizing widely accepted engineering methodologies, including TR-55, and the stormwater modeling computer program HydroCAD (version 10.00) produced by HydroCAD Software Solutions, LLC.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The Project is located off of Excelsior Avenue in the City of Saratoga Springs, Saratoga County, NY 12866. Access to the site is off of Excelsior Avenue, approximately 300 feet east of the intersection of Excelsior Avenue and East Avenue.

2.2 Project Description

The Project includes the construction of three (3) mixed use buildings. The remainder of the proposed site improvements includes construction of parking lots, site lighting, landscaping, stormwater controls, and connections to municipal water and sewer. The project is considered a new development project per Chapter 4 of the SWMDM. The Project Site represents the area that will be disturbed as a result of the Project.

2.3 Soil Conditions/Soil Testing

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the area surrounding the Project Site is comprised of Windsor loamy sand and Deerfield loamy fine sand. The hydrological soil group classifications for the soil groups are ‘A’.

Test pits and falling head permeability tests were completed by The LA Group in July 2015 and October 2015. Results of the tests are provided in Attachment B.

2.4 Curve Numbers and Rainfall Data

The surface cover for the project area is woods, grass and impervious building and drive recently demolished. The curve numbers utilized in the modeling were assigned based on cover type and HSG soil classification.

The design storms used for the pre-development versus post-development comparison were the 1, 10, and 100-year, 24-hour duration, SCS Type II events. The rainfall amounts for these storms are 2.15, 3.75, and 6.20 inches, respectively.

3.0 EXISTING CONDITIONS

The Project area existing condition, for which this stormwater management plan is based, consists of woods, grass and impervious building and drive. Under the watershed's Existing Condition, the watershed is divided into eight (8) subcatchments. Runoff from the majority of the Project area sheet flows to existing stormwater infrastructure along Excelsior Avenue (Analysis Point 1 & 3) with minor runoff to the neighboring property to the west (Analysis Point 2). The Analysis Points were utilized in comparing all pre- versus post-runoff conditions. Refer to drawing "W-1 Existing Conditions Watershed Map," located in Attachment B for more information.

Table 3-1 below provides a summary of the existing conditions peak discharge rates for the Project's watershed.

Table 3-1 Existing Conditions Peak Discharge Rates			
Analysis Point	AP-1	AP-2	AP-3
Design Storm	(cfs)	(cfs)	(cfs)
10-Year	0.81	0.00	2.12
100-Year	3.00	0.06	4.12

Refer to Attachment B for more information on the existing conditions watershed modeling.

4.0 PROPOSED CONDITIONS

Under the watershed's Proposed Condition, all stormwater from the Project will continue to discharge to the same points as in the Existing Condition (Analysis Points 1-3). The total watershed area has generally remained unchanged, as is shown on the drawing "W-2 Proposed Conditions Watershed Map" contained in Attachment C. To meet NYSDEC requirements (see Section 5.0 NYSDEC Design Criteria of this report) underground infiltration chambers, underground sand filter and detention system, and stormwater planters have been incorporated

into the stormwater management design to mitigate the quality and quantity of stormwater runoff discharged from the Project Site.

Table 4-1 below provides a summary of the existing conditions versus proposed conditions peak discharge rates for the Project's watershed.

Analysis Point	AP-1		AP-2		AP-3	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Design Storm	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
10-Year	0.81	0.78	0.00	0.00	2.12	2.11
100-Year	3.00	2.09	0.06	0.01	4.12	3.94

Refer to Attachment C for more information on the proposed conditions watershed modeling.

5.0 NYSDEC DESIGN CRITERIA

The New York State Stormwater Management Design Manual, dated January 2015 (The Manual) has been utilized to develop the stormwater management plan. The Manual includes a five-step process that involves site planning and stormwater management practice selection. The five steps include;

- Site planning to preserve natural features and reduce impervious cover,
- Calculation of the Water Quality Volume (WQv) for the Site,
- Incorporation of green infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity,
- Use of standard SMPs where applicable, to treat the portion of WQv not addressed by green infrastructure techniques and standard SMPs with RRv capacity, and
- Design of volume and peak rate control (where required)

The approach of the stormwater management plan was to address the stormwater requirements separately. The five steps were reduced to Site Planning to Preserve Natural Features, Water Quality Volume, Runoff Reduction Volume, Channel Protection Volume, and Overbank Flood and Extreme Storm Attenuation, as discussed in the following sections.

Attachment E of this report contains detailed calculations for determining and summarizing the required and provided volumes for Water Quality and Runoff Reduction. In general, the required design criteria (WQv and RRv) were calculated for all areas where site disturbance or green infrastructure techniques are proposed.

5.1 Site Planning to Preserve Natural Features

Within Chapter 3 of The Manual, Table 3.1 Green Infrastructure Planning General Categories and Specific Practices includes a list of planning practices utilized in the planning and design of a project. There are two categories, Preservation of Natural Resources and Reduction of Impervious Cover.

Preservation of Natural Resources includes:

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Open Space Design
- Soil Restoration

Reduction of Impervious Cover includes:

- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

A Natural Resource Map for Green Infrastructure Planning has been developed which indicates natural resource areas and critical environmental areas to be protected (where feasible). As required in Section 3.6 of The Manual, the map includes (where applicable):

- Jurisdictional Wetlands
 - There are no wetlands located within the site.
- Waterways
 - No waterways are impacted by the Project.
- Wetland Adjacent Area
 - There are no wetlands located within the site. The development does not impact NYSDEC wetland buffer areas.
- Floodplains
 - The project is not within the flood plain.
- Forest, vegetative cover
 - Project is designed to maintain as much of the woods as feasible.
- Topography/Steep slopes
 - There are steep slopes located throughout the project. The development is situated to preserve these slopes to the greatest extent feasible.

- Existing soils, including hydrologic soil groups and soil erodibility
 - See Section 2.3 of this Report.
- Drainage Patterns
 - See Section 3.0 of this Report.
- Bedrock/Significant geological features
 - See Section 2.3 of this Report.

The Natural Resource Plan indicates the areas to be avoided and depicts the area most suitable for development.

5.2 Water Quality Volume (WQv)

The Water Quality Volume (WQv) requirement is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volumes. The WQv is directly related to the amount of impervious cover created at a site. The following equation is used to determine the water quality storage volume.

$$WQv = \frac{(P)(Rv)(A)}{12}$$

Where:

- WQv = Water quality volume (acre/feet)
 P = 90% Rainfall Event (1.15" for Saratoga Springs)
 Rv = 0.05 + 0.009(I) where I is percent impervious cover
 A = Site area in acres

The required WQv will be provided by underground infiltration chambers, underground sand filter and stormwater planters designed in accordance with the SWMDM. Refer to Table 5-1 for a summary of the required versus provided water quality volumes for the Project.

Table 5-1			
Water Quality Volume (WQv) Summary			
SMP	Type	Required	Provided
		(ac-ft)	(ac-ft)
SMP-1	Infiltration Tanks	0.035	0.035
SMP-2	Underground Sand Filter	0.064	0.064
SMP-4.1	Stormwater Planter	0.007	0.007
SMP-4.2	Stormwater Planter	0.002	0.002
SMP-4.3	Stormwater Planter	0.001	0.001
SMP-4.4	Stormwater Planter	0.002	0.002

SMP-5.1	Stormwater Planter	0.003	0.003
SMP-6.1	Stormwater Planter	0.025	0.025
TOTAL		0.139	0.139

Refer to Attachment E for detailed WQv calculations.

5.3 Runoff Reduction Volume (RRv)

Section 4.3 of the Manual states, “Runoff reduction shall be achieved by infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration of 100 percent of the post-development water quality volumes to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow by using runoff control techniques to provide treatment in a distributed manner before runoff reaches the collection system.”

The stormwater management plan must demonstrate that all green infrastructure planning and design options were evaluated to meet the runoff reduction requirement. The following is a list of green infrastructure practices that were evaluated during design and specific limitations of the site:

- 5.3.1 Conservation of Natural Areas
 - No conservation areas are proposed as part of this project as there is insufficient area on the site.
- 5.3.2 Sheetflow to Riparian Buffers/Filter Strips
 - Sheetflow is not practical for this project due to surrounding steep slopes.
- 5.3.3 Vegetated Open Swales
 - Vegetated swales are not practical for this project due to surrounding slopes.
- 5.3.4 Tree Planting/Tree Box
 - Tree plantings have been proposed throughout the site but credit is not taken due to the low RRv credit (<0.001 ac-ft) provided.
- 5.3.5 Disconnection of Rooftop Runoff
 - Not utilized as there is not sufficient receiving area.
- 5.3.6 Stream Daylighting
 - All subsurface storm sewer piping will be daylighted as soon as possible.
- 5.3.7 Rain Garden
 - Rain gardens are typically suitable for residential development and are therefore not used.
- 5.3.8 Green Roof
 - A green roof is not proposed as part of this project as it is not financially feasible.
- 5.3.9 Stormwater Planters
 - Stormwater planters are proposed as part of this project.

- 5.3.10 Rain Tanks/Cisterns
 - Rain tanks/cisterns do not have any tangible functionality on this site as there is little potential for reuse.
- 5.3.11 Porous Pavement
 - Porous pavement is not proposed due to shallow depths to seasonal high groundwater.

Projects that cannot achieve 100% runoff reduction of the required Water Quality Volume, must at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the HSG of the site, and is determined by the Specific Reduction Factor (S). The following lists the specific reduction factors per HSG:

HSG	Specific Reduction Factor (S)
A	0.55 (e.g. 55% reduction)
B	0.40
C	0.30
D	0.20

The following equation is used to determine the minimum runoff reduction volume:

$$RRv = \frac{(P)(Rv^*)(Ai)}{12}$$

Where:

- RRv = Minimum Runoff Reduction volume (acre/feet)
- P = 90% Rainfall Event (1.15" for Saratoga Springs)
- Rv* = 0.05 + 0.009(I), where I is 100% impervious
- Ai = Impervious cover targeted for runoff reduction, and

$$Ai = (S)(Aic)$$

S = Specific Runoff Reduction Factor (per HSG)

Aic = Total area of new impervious cover

The Project does not achieve 100% runoff reduction of the on-site WQv due to the sites surrounding slopes and shallow depth to groundwater. However, the Project does achieve the minimum required RRv for the project which is 0.070 acre-feet. Utilizing green infrastructure and stormwater management practices with RRv capabilities throughout the project an RRv of 0.073 acre-feet is provided. See Table 5-2 for a summary of the provided runoff reduction volumes for each green infrastructure practice.

Table 5-2 Runoff Reduction Volume (RRv) Summary	
SMP	Provided
	(unit)
5.3.1 Conservation of Natural Areas	-
5.3.2 Sheetflow to Riparian Buffers/Filter Strips	-
5.3.3 Vegetated Open Swales	-
5.3.4 Tree Planting/Tree Box	-
5.3.5 Disconnection of Rooftop Runoff	-
5.3.6 Stream Daylighting	-
5.3.7 Rain Garden	-
5.3.8 Green Roof	-
5.3.9 Stormwater Planters	0.040
5.3.10 Rain Tanks/Cisterns	-
5.3.11 Porous Pavement	-
Underground Infiltration Tanks	0.033
TOTAL	0.073 (ac-ft)

Refer to Attachment E for detailed RRv calculations.

5.4 Channel Protection Volume (CPv)

Channel Protection Volume (CPv) is achieved by a combination of volume reduction through green infrastructure practices, i.e. Stormwater Planters, and detaining the one-year, 24-hour storm event, i.e. underground detention systems. Per Section 4.4 of the New York State Stormwater Management Design Manual, “volume reduction achieved through green infrastructure can be deducted from CPv.” The required Channel Protection Volume, CPv, is 4,110 c.f., see Attachment D for calculations. Infiltration Tanks SMP-1 and the six stormwater planters SMP-4.1-6.1 provide a runoff reduction volume of 3,265 c.f. The remaining CPv required, after runoff reduction volume, is 847 c.f. Per Section 4.4 “an individual orifice may not be required for CPv at sites where the resulting diameter of the ED orifice is too small to prevent clogging.” The underground detention system provides a 1” orifice, which is the smallest recommended orifice per the Design Manual. The two proposed detention systems provide approximately 13,380 c.f. of combined storage between the 1” orifice and the Overbank Flood and Extreme Flood orifices.

5.5 Overbank Flood (Qp) and Extreme Flood (Qf) Attenuation

The primary purpose of the Overbank Flood (Qp) control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development. It requires storage and attenuation of the 10-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

The intent of the Extreme Flood (Qf) criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the pre-development 100-year floodplain, and (c) protect the physical integrity of stormwater management practices. It requires storage and attenuation of the 100-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

During the 10-year and 100-year 24-hour storm the post-development peak discharge rates do not exceed the pre-development rates. See Table 4-1 of this Report for detailed comparison of pre- and post-development peak rates.

6.0 PROPOSED STORMWATER FACILITIES

The Project is proposing installing Underground Infiltration Tanks, Underground Sand Filter and Stormwater Planters to address stormwater requirements for the project. The stormwater facilities have been indicated on the plans and HydroCAD reports as SMP-1 through SMP-6.1. SMP-1 represents the underground infiltration tanks located in between buildings 4 and 5. The tanks will receive stormwater from the roofs and courtyard runoff. SMP-2 is the underground sand filter located east of building 6 and will treat runoff from the two parking lots and nearby roofs. SMP-4.1-6.1 are the stormwater planters (6 planters in total) located throughout the site and will treat runoff from nearby roof sections. The Stormwater Facilities have been designed to provide the necessary pretreatment, treatment, and peak rate attenuation for stormwater runoff, for the project, as required by NYSDEC.

6.1 Pretreatment

Runoff contributing to the Underground Infiltration Chambers (SMP-1) is pretreated through a hydrodynamic separator. The peak flow rate during the WQv storm (1.15" for Saratoga Springs) is less than the maximum treatment volume runoff for the proposed hydrodynamic separator. Treatment flow rates for the hydrodynamic separator (Old-Castle Model DVS-36C) can be found in Attachment E. Pretreatment of runoff to the Underground Sand Filter (SMP-2) is provided by a hydrodynamic separator.

6.2 Treatment

Treatment for the underground sand filter is provided by capturing and treating the WQv through the sand media prior to controlled discharge to the existing stormwater infrastructure located to the east. Treatment for the stormwater planters is provided by capturing and treating the WQv through soil media prior to a controlled discharge to existing stormwater infrastructure. During large storm events runoff enters an overflow structure prior to entering the underground storage pipes.

Treatment for the underground infiltration chambers is provided by capturing and treating the entire WQv through infiltration into the underlying soils.

7.0 POST-CONSTRUCTION MAINTENANCE REQUIREMENTS

Prime Beechwood, LLC will be responsible for the continuous upkeep and maintenance of all stormwater management facilities. Maintenance includes, but is not limited to, cleaning of sediment from SMPs, cleaning conveyance piping and channels of obstructions, inspection and repair as required of any outlet control mechanisms, and repairing any other detriments in the design that is resulting in the facilities to not function as intended in the design.

8.0 REFERENCES

1. Urban Hydrology for Small Watersheds. Published by the U.S. Soil Conservation Service, Washington, D.C., June 1986.
2. HydroCAD 10.00 Computer Program, by HydroCAD Software Solutions, LLC.
3. NYSDEC Stormwater Management Design Manual. Published by the New York State Department of Environmental Conservation, Updated January 2015.

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Attachment A

**Soil Investigations
Soil Survey
Natural Resource Map**



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Saratoga County, New York



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:1,680 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Saratoga County, New York
 Survey Area Data: Version 13, Dec 15, 2013

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

Date(s) aerial images were photographed: Jun 19, 2010—Oct 11, 2010

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

Map Unit Legend

Saratoga County, New York (NY091)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeA	Deerfield loamy fine sand, nearly level	0.4	8.8%
WnB	Windsor loamy sand, undulating	4.2	91.2%
Totals for Area of Interest		4.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Saratoga County, New York

DeA—Deerfield loamy fine sand, nearly level

Map Unit Setting

Elevation: 0 to 1,000 feet

Mean annual precipitation: 36 to 48 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 125 to 160 days

Map Unit Composition

Deerfield and similar soils: 75 percent

Minor components: 25 percent

Description of Deerfield

Setting

Landform: Deltas, terraces, outwash plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciofluvial or deltaic deposits derived mainly from granite, gneiss, or sandstone

Typical profile

H1 - 0 to 10 inches: strongly acid, loamy fine sand

H2 - 10 to 26 inches: strongly acid, loamy fine sand

H3 - 26 to 72 inches: strongly acid, fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: A

Minor Components

Oakville

Percent of map unit: 10 percent

Claverack

Percent of map unit: 7 percent

Wareham

Percent of map unit: 4 percent

Custom Soil Resource Report

Wareham

Percent of map unit: 4 percent

WnB—Windsor loamy sand, undulating

Map Unit Setting

Mean annual precipitation: 36 to 48 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 125 to 160 days

Map Unit Composition

Windsor and similar soils: 80 percent

Minor components: 20 percent

Description of Windsor

Setting

Landform: Deltas, terraces, outwash plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciofluvial or deltaic deposits

Typical profile

Oe - 0 to 2 inches: very strongly acid, moderately decomposed plant material

Ap - 2 to 11 inches: strongly acid, loamy sand

H3 - 11 to 25 inches: strongly acid, loamy sand

H4 - 25 to 72 inches: strongly acid, loamy sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Minor Components

Deerfield

Percent of map unit: 10 percent

Custom Soil Resource Report

Oakville

Percent of map unit: 5 percent

Hinckley

Percent of map unit: 5 percent

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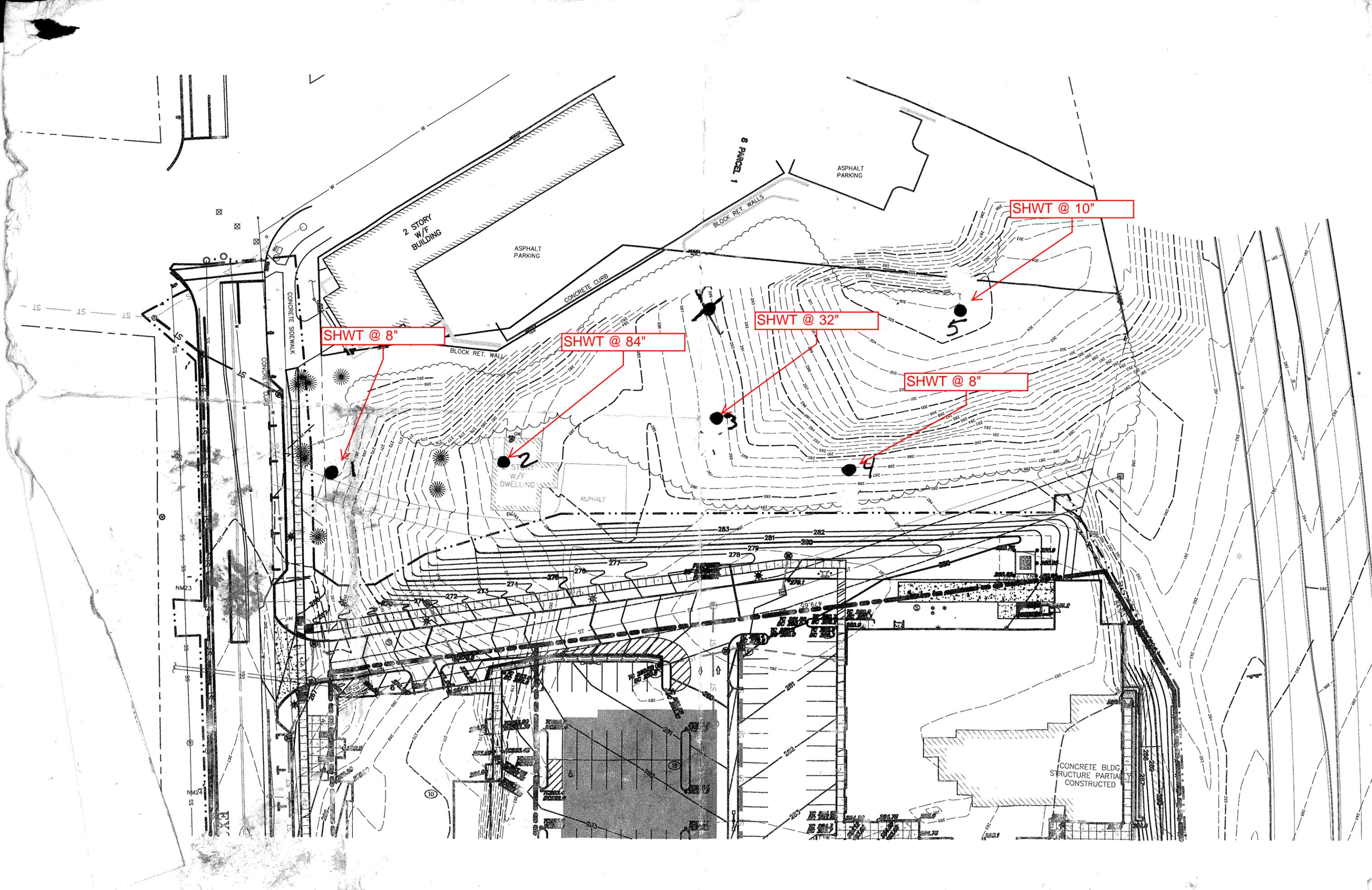
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SHWT @ 8"

SHWT @ 84"

SHWT @ 32"

SHWT @ 8"

SHWT @ 10"

The LA GROUP
 Landscape Architecture & Engineering P.C.
People. Purpose. Place.
 40 Long Alley Saratoga Springs, NY 12866
 518-587-8100 / 518-587-0180
 www.thelagroup.com

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 Prepared for:
Prime Beechwood, LLC
 Address (line 1)
 Address (line 2)

Project Title:
Excelsior Mix Use Development
 77 Excelsior Avenue
 Saratoga Springs, NY 12866

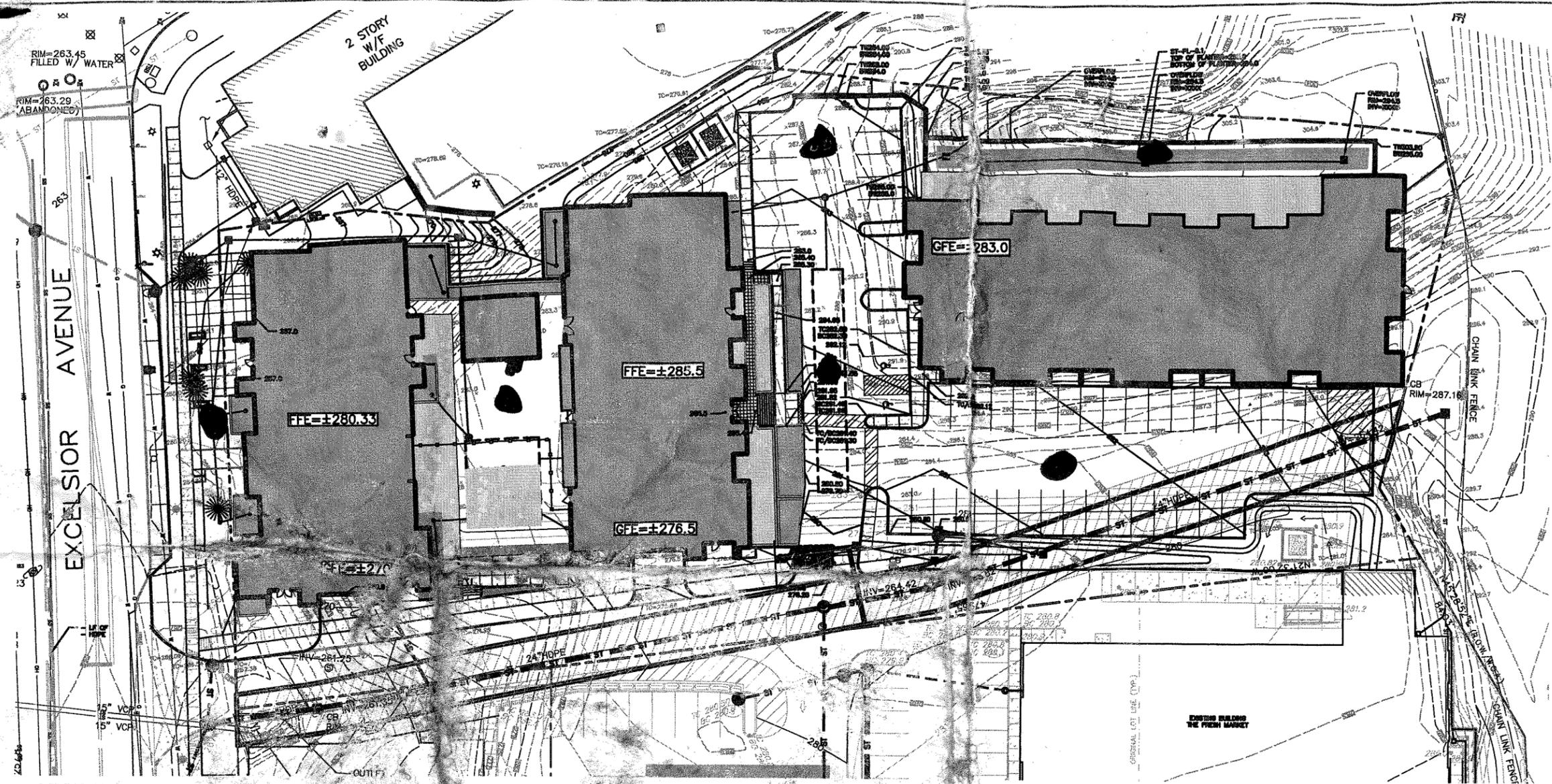
Project No.: 201391
 Design: DBH
 Drawn: BCS Ch'k'd: DBH
 Date: 06/15/2015 Scale: 1"=20'

Rev.	Description	Date

Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____

Drawing Title:
Grading & Drainage Plan
 Drawing No.:
L-3

ABBREVIATIONS:
 FG FINISHED GRADE ELEVATION
 FFE FINISHED FLOOR ELEVATION
 LP LOW POINT
 TC TOP OF CURB
 BC BOTTOM OF CURB
 TS TOP OF STEP
 BS BOTTOM OF STEP
 TW TOP OF WALL
 BW BOTTOM OF WALL
 SW MATCH EXISTING ELEVATION
 CB-1 PROPOSED CATCHBASIN



LEGEND

- PLUG LINE
- OUTLINE LINE
- PROPERTY LINE
- EXISTING STREET LINE
- IMPROVED UNDERGROUND
- STREET CENTER
- STREET WIDTH
- CURB FINISH
- SIDE WALK FINISH
- SIDE WALK GRASS
- SIDE WALK GRASS
- SIDE WALK GRASS
- PLUG CURB
- PLUG CURB
- PLUG CURB

GRADING NOTES

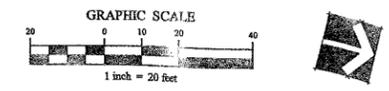
1. SURVEY INFORMATION FROM THE TITLED CONDITIONS PLAN OF RECORD FOR THE PROPOSED DEVELOPMENT AND EXISTING AVENUE LOCATED BY AN ENGINEERING AND SURVEYING F.I.C., DATE 06/15/2015.
2. THE CONTRACTOR SHALL VERIFY ALL CONTOUR POINTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE REPRESENTATIVE.
3. THE CONTRACTOR SHALL VERIFY PROPOSED ELEVATIONS TO EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE REPRESENTATIVE.
4. THE CONTRACTOR SHALL PROVIDE BEST AVAILABLE EROSION CONTROL AS REQUIRED BY THE LOCAL CODES AND THE LA GROUP CODES.
5. ALL FILL SLOPED 3:1 OR GREATER SHALL BE PROTECTED WITH EROSION CONTROL UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
6. THE CONTRACTOR SHALL BLEND ALL NEW EXISTING INTO EXISTING SLOPED AT THE LIMITS OF GRADING. SMOOTH ROUNDED TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPE.
7. PATCH EVENLY BETWEEN EXISTING GRADING. ALL PATCHES SHALL PATCH TO EXISTING AT A MINIMUM SLOPE OF 1:10. PATCHES SHALL BE REPORTED TO THE PROJECT ENGINEER PRIOR TO CONTINUING WORK.
8. EXCAVATION REQUIRED WITHIN 3 FEET OF EXISTING UTILITY LINES SHALL BE DONE BY HAND, DO NOT EXCAVATE DEEPER THAN NECESSARY. THE CONTRACTOR SHALL REPORT ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES BEFORE CONSTRUCTION OPERATIONS.
9. ANY AREA OUTSIDE THE PROJECT LIMITS THAT IS DAMAGED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
10. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL FROM THE SITE. ANY DAMAGE TO FIELD OR FARMY PRODUCTS SHALL BE REPAIRED.

DRAINAGE SCHEDULE

CATCH BASIN NUMBER	DESCRIPTION

Planning Board # XX.XXX

Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____



To: Doug Heller
From: Rob Fraser
Date: 7-17-2015

Subject: Prime Excelsior Expansion Site Deep Hole Test Pit and Falling Head Permeability Test Results

On July 1, 2015 I conducted five deep hole test pit evaluations and one falling head permeability test. Please refer to the attached map for the locations of the test pits.

TP-1

0 – 6" 10 YR 3/2 loose sand and gravel fill
6 - 8" 7.5 YR 2/2 fine sandy loam
8 – 64" 7.5 YR 4/4 silty mottled clay with weak seeps at 8 inches and strong seeps at 64 inches

SHWT at 8"
Ground water at 64 inches
No Permeability Test

TP-2

This test pit is located at the former house site.

0 – 8" 10 YR 3/2 loose sand and gravel fill
8 – 84" 10 YR 3/6 loose sand fill
84 – 96" 7.5 Y 4/3 silty mottled clay, very firm, blocky structure
96 – 132" 10 YR 4/3 mottled fine sand
132 – 166" 7.5 Y 4/3 silty mottled clay, very firm, blocky structure

SHWT at 84"
Greater than 166 inches to the water table or bedrock

Falling Head Permeability Test at 48 inches
00:00:45, 00:00:55, 00:01:05, 00:01:07, 00:01:07, 00:01:00, 00:01:36, 00:01:40, 00:01:31

TP – 3

0 – 8" 10 YR 3/2 loose sand and gravel fill
8 – 32" 10 YR 3/6 fine silty loam
32 – 52" 7.5 Y 4/4 mottled clay, very firm, blocky structure
52 – 76" 10 YR 4/4 mottled fine sand
76 – 88" 7.5 Y 4/3 mottled clay, very firm, blocky structure
88 – 120" 10 YR 4/3 mottled fine sand

SHWT at 32"
Greater than 120 inches to the water table or bedrock

No Falling Head Permeability Test

TP – 4

0 – 10" 10 YR 3/2 loose sand and gravel fill
8 – 120" 7.5 Y 4/4 mottled clay, very firm, blocky structure

SHWT at 8"
Greater than 120 inches to the water table or bedrock

No Falling Head Permeability Test

TP – 5

0 – 10" 10 YR 3/2 loose sand and gravel fill
10 – 48" 7.5 Y 4/4 mottled clay, very firm, blocky structure,
48" – 72" 10 YR 3/4 mottled fine sand, strong seeps at 72"

SHWT at 10"
72 inches to the water table

No Falling Head Permeability Test

Date: 11-02-2015

Subject: Prime Excelsior Expansion Site Deep Hole Test Pit and Falling Head Permeability Test Results

On October 29, 2015 Doug Heller, PE from the LA Group conducted a deep hole test pit evaluation and falling head permeability test. Please refer to Site Preparation, Erosion & Sediment Control Plan for location of the test pit location.

TP-6

0 – 9" Topsoil
9" – 28" 10 YR 5/6 sand, loose
28" – 54" 10 YR 4/6 fine sand, firm, roots till 54"
54" – 7' 10 YR 3/6 fine sand, firm
7' – 9' 10 YR 5/6 silty clay

SHWT: Not encountered

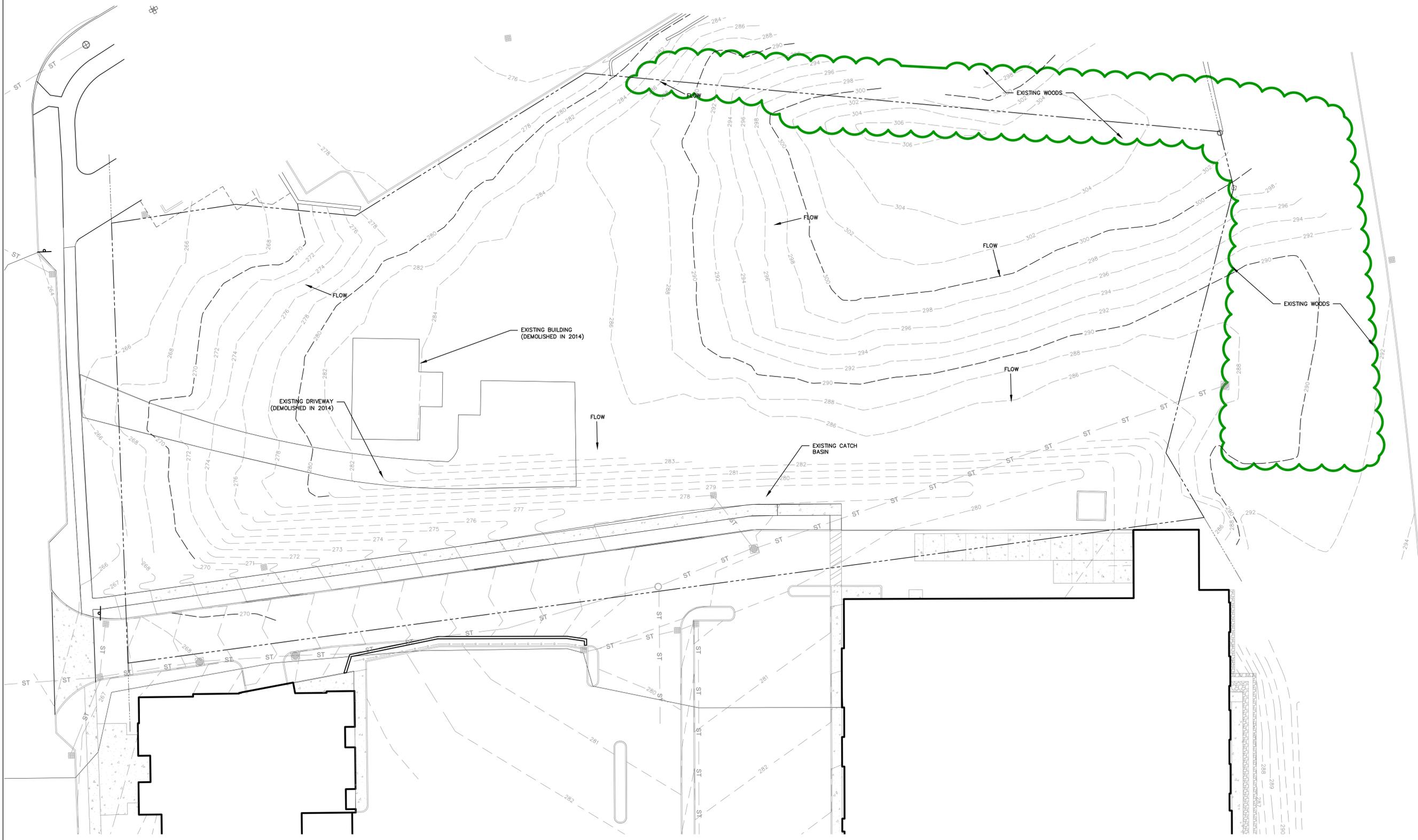
Observed water: Not Encountered

Falling Head Permeability Test at 5'-6"

<u>Time</u>	<u>Depth to Water</u>
0	11-1/8"
2	12-1/4"
4	13-1/4"
6	14"
8	14-3/4"

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 Cohoes, NY 12047



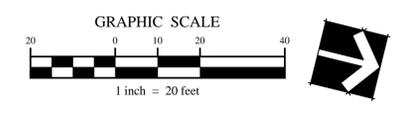
Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.: 201391
 Design: BCS
 Drawn: BCS Chk'd: DBH
 Date: 08/09/2015 Scale: 1"=20'

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Drawing Title
Natural Resources Map

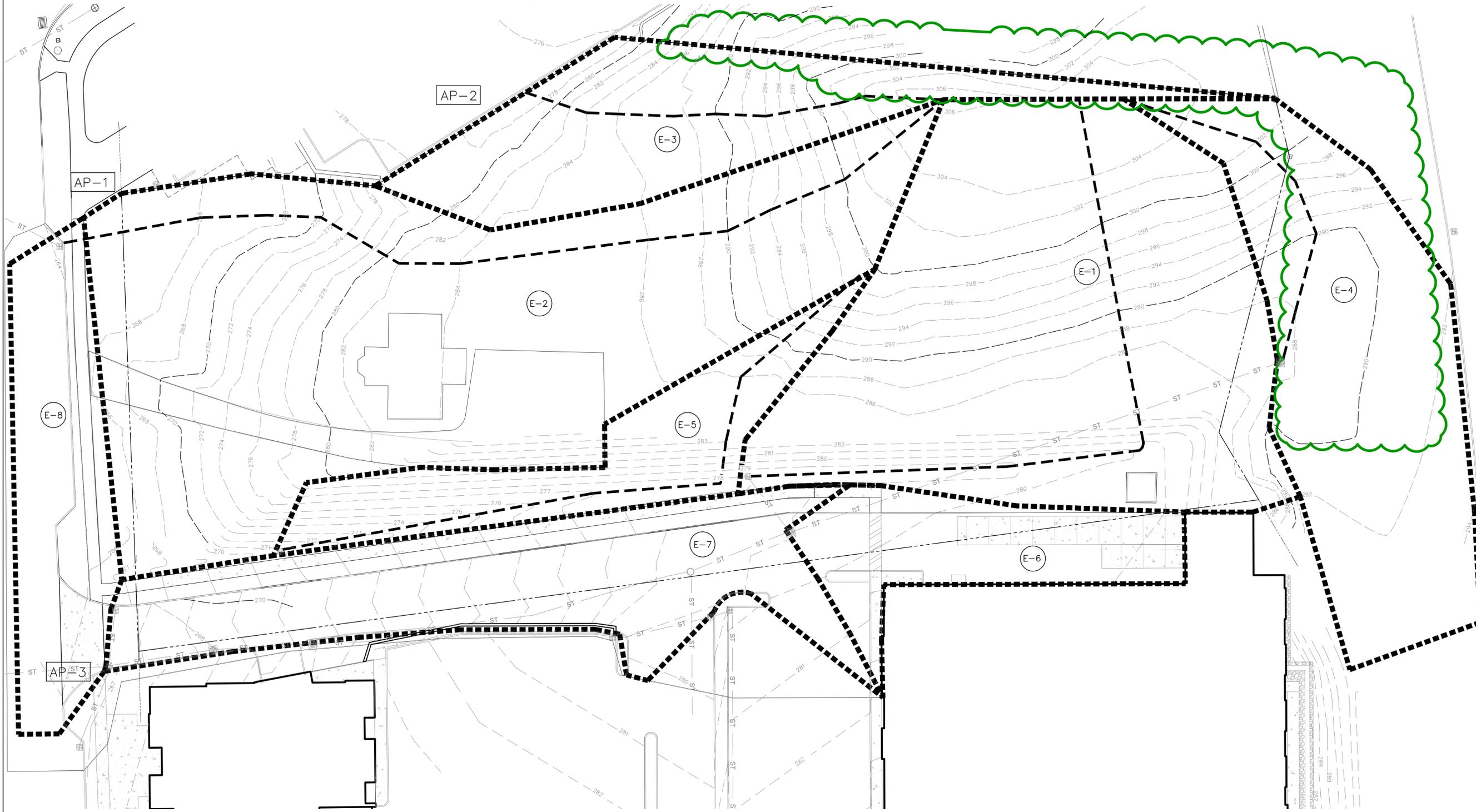
Drawing No.
NR-1



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 Draw Date: 11/04/15 2:04 PM
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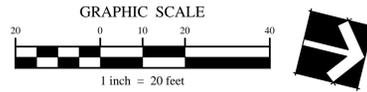
Attachment B

**Existing Conditions Watershed Map and
HydroCAD Calculations**



LEGEND

-  SUBCATCHMENT BOUNDARY
-  TIME OF CONCENTRATION PATH
-  SUBCATCHMENT ID
-  ANALYSIS POINT



Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

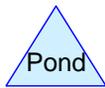
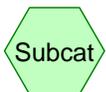
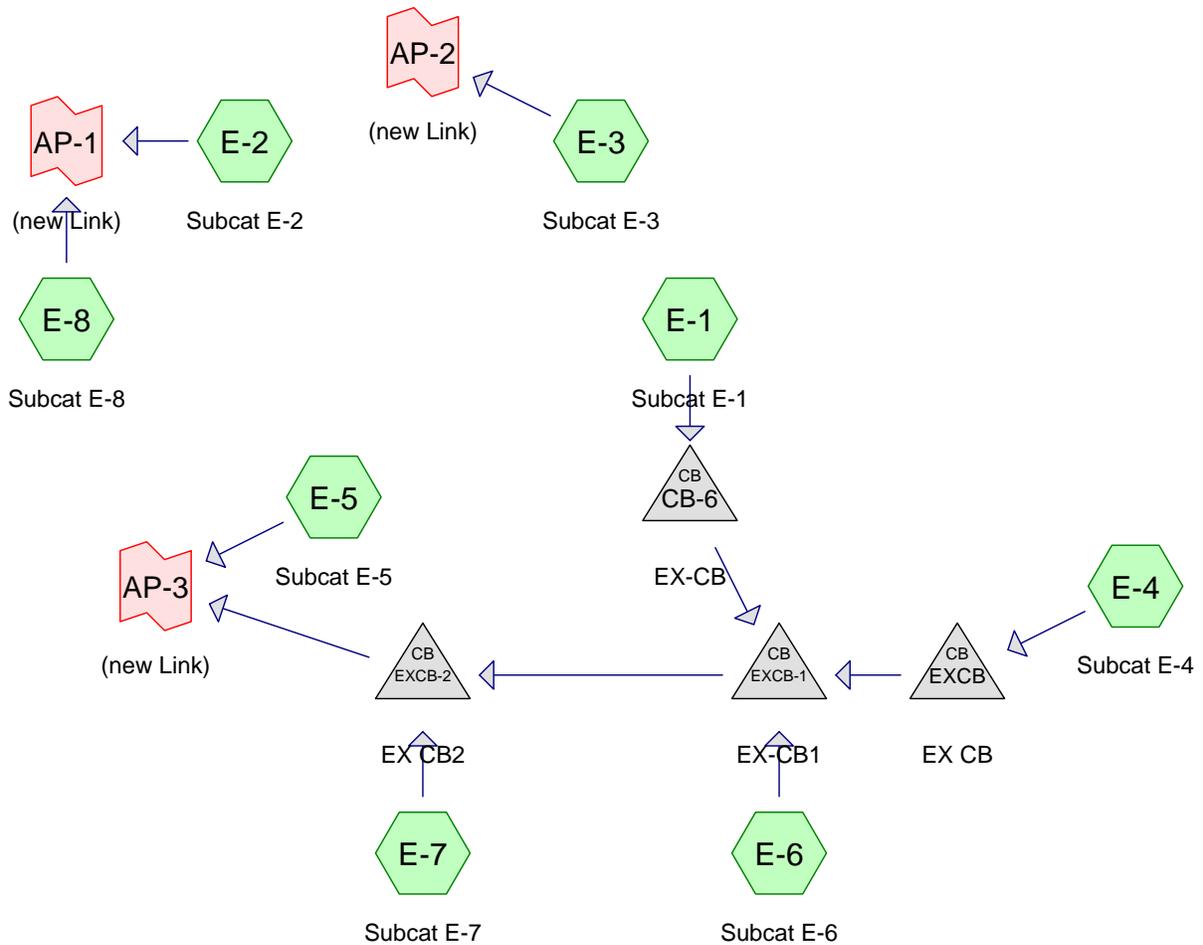
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 Date: 09/09/2015 Scale: 1"=20'

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15
2	Revised per TDE Comments	6/30/16

Drawing Title:
Existing Conditions Watershed Map

Drawing No.:
W-1

Plotted by: BETT STROM
 Draw Date: 07/20/16 at 1:17 PM
 File Name: G:\Projects\2015\77 Excelsior Mixed Use Development\77 Excelsior Mixed Use Development.dwg



Routing Diagram for 201391 EXISTING CONDITIONS
 Prepared by The LA Group, Printed 7/5/2016
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201391 EXISTING CONDITIONS

Prepared by The LA Group

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.051	39	>75% Grass cover, Good, HSG A (E-1, E-2, E-3, E-4, E-5, E-6, E-7, E-8)
0.698	98	Paved parking, HSG A (E-1, E-2, E-5, E-6, E-7, E-8)
0.243	30	Woods, Good, HSG A (E-1, E-2, E-3, E-4)
2.992	52	TOTAL AREA

201391 EXISTING CONDITIONS

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Page 3

Soil Listing (all nodes)

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

201391 EXISTING CONDITIONS

Prepared by The LA Group

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
2.051	0.000	0.000	0.000	0.000	2.051	>75% Grass cover, Good	E-1, E-2, E-3, E-4, E-5, E-6, E-7, E-8
0.698	0.000	0.000	0.000	0.000	0.698	Paved parking	E-1, E-2, E-5, E-6, E-7, E-8
0.243	0.000	0.000	0.000	0.000	0.243	Woods, Good	E-1, E-2, E-3, E-4
2.992	0.000	0.000	0.000	0.000	2.992	TOTAL AREA	

201391 EXISTING CONDITIONS

Type II 24-hr 1-YEAR Rainfall=2.15"

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Page 5

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment E-1: Subcat E-1	Runoff Area=29,264 sf 0.60% Impervious Runoff Depth=0.00" Flow Length=316' Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment E-2: Subcat E-2	Runoff Area=37,457 sf 16.74% Impervious Runoff Depth=0.00" Flow Length=395' Tc=6.0 min CN=49 Runoff=0.00 cfs 0.000 af
Subcatchment E-3: Subcat E-3	Runoff Area=11,437 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=179' Tc=6.5 min CN=37 Runoff=0.00 cfs 0.000 af
Subcatchment E-4: Subcat E-4	Runoff Area=16,538 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=35 Runoff=0.00 cfs 0.000 af
Subcatchment E-5: Subcat E-5	Runoff Area=7,553 sf 0.87% Impervious Runoff Depth=0.00" Tc=6.0 min CN=40 Runoff=0.00 cfs 0.000 af
Subcatchment E-6: Subcat E-6	Runoff Area=6,275 sf 89.44% Impervious Runoff Depth=1.37" Tc=6.0 min CN=92 Runoff=0.34 cfs 0.016 af
Subcatchment E-7: Subcat E-7	Runoff Area=13,991 sf 85.44% Impervious Runoff Depth=1.15" Tc=6.0 min CN=89 Runoff=0.66 cfs 0.031 af
Subcatchment E-8: Subcat E-8	Runoff Area=0.180 ac 81.02% Impervious Runoff Depth=1.02" Tc=6.0 min CN=87 Runoff=0.33 cfs 0.015 af
Pond CB-6: EX-CB	Peak Elev=270.00' Inflow=0.00 cfs 0.000 af 18.0" Round Culvert n=0.013 L=19.0' S=0.0421 '/' Outflow=0.00 cfs 0.000 af
Pond EXCB: EX CB	Peak Elev=265.50' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=230.0' S=0.0047 '/' Outflow=0.00 cfs 0.000 af
Pond EXCB-1: EX-CB1	Peak Elev=264.66' Inflow=0.34 cfs 0.016 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.34 cfs 0.016 af
Pond EXCB-2: EX CB2	Peak Elev=261.62' Inflow=1.00 cfs 0.047 af 24.0" Round Culvert n=0.013 L=10.0' S=0.0250 '/' Outflow=1.00 cfs 0.047 af
Link AP-1: (new Link)	Inflow=0.33 cfs 0.015 af Primary=0.33 cfs 0.015 af
Link AP-2: (new Link)	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Link AP-3: (new Link)	Inflow=1.00 cfs 0.047 af Primary=1.00 cfs 0.047 af

Total Runoff Area = 2.992 ac Runoff Volume = 0.063 af Average Runoff Depth = 0.25"
76.66% Pervious = 2.294 ac 23.34% Impervious = 0.698 ac

201391 EXISTING CONDITIONS

Type II 24-hr 10-YEAR Rainfall=3.75"

Prepared by The LA Group

Printed 7/5/2016

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Page 6

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment E-1: Subcat E-1	Runoff Area=29,264 sf 0.60% Impervious Runoff Depth=0.02" Flow Length=316' Tc=6.0 min CN=39 Runoff=0.00 cfs 0.001 af
Subcatchment E-2: Subcat E-2	Runoff Area=37,457 sf 16.74% Impervious Runoff Depth=0.23" Flow Length=395' Tc=6.0 min CN=49 Runoff=0.11 cfs 0.017 af
Subcatchment E-3: Subcat E-3	Runoff Area=11,437 sf 0.00% Impervious Runoff Depth=0.01" Flow Length=179' Tc=6.5 min CN=37 Runoff=0.00 cfs 0.000 af
Subcatchment E-4: Subcat E-4	Runoff Area=16,538 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=35 Runoff=0.00 cfs 0.000 af
Subcatchment E-5: Subcat E-5	Runoff Area=7,553 sf 0.87% Impervious Runoff Depth=0.04" Tc=6.0 min CN=40 Runoff=0.00 cfs 0.001 af
Subcatchment E-6: Subcat E-6	Runoff Area=6,275 sf 89.44% Impervious Runoff Depth=2.88" Tc=6.0 min CN=92 Runoff=0.69 cfs 0.035 af
Subcatchment E-7: Subcat E-7	Runoff Area=13,991 sf 85.44% Impervious Runoff Depth=2.59" Tc=6.0 min CN=89 Runoff=1.43 cfs 0.069 af
Subcatchment E-8: Subcat E-8	Runoff Area=0.180 ac 81.02% Impervious Runoff Depth=2.41" Tc=6.0 min CN=87 Runoff=0.75 cfs 0.036 af
Pond CB-6: EX-CB	Peak Elev=270.02' Inflow=0.00 cfs 0.001 af 18.0" Round Culvert n=0.013 L=19.0' S=0.0421 '/' Outflow=0.00 cfs 0.001 af
Pond EXCB: EX CB	Peak Elev=265.50' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=230.0' S=0.0047 '/' Outflow=0.00 cfs 0.000 af
Pond EXCB-1: EX-CB1	Peak Elev=264.76' Inflow=0.69 cfs 0.036 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.69 cfs 0.036 af
Pond EXCB-2: EX CB2	Peak Elev=261.83' Inflow=2.12 cfs 0.105 af 24.0" Round Culvert n=0.013 L=10.0' S=0.0250 '/' Outflow=2.12 cfs 0.105 af
Link AP-1: (new Link)	Inflow=0.81 cfs 0.053 af Primary=0.81 cfs 0.053 af
Link AP-2: (new Link)	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Link AP-3: (new Link)	Inflow=2.12 cfs 0.106 af Primary=2.12 cfs 0.106 af

Total Runoff Area = 2.992 ac Runoff Volume = 0.158 af Average Runoff Depth = 0.64"
76.66% Pervious = 2.294 ac 23.34% Impervious = 0.698 ac

201391 EXISTING CONDITIONS

Type II 24-hr 100-YEAR Rainfall=6.20"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment E-1: Subcat E-1	Runoff Area=29,264 sf 0.60% Impervious Runoff Depth=0.50" Flow Length=316' Tc=6.0 min CN=39 Runoff=0.31 cfs 0.028 af
Subcatchment E-2: Subcat E-2	Runoff Area=37,457 sf 16.74% Impervious Runoff Depth=1.17" Flow Length=395' Tc=6.0 min CN=49 Runoff=1.62 cfs 0.084 af
Subcatchment E-3: Subcat E-3	Runoff Area=11,437 sf 0.00% Impervious Runoff Depth=0.39" Flow Length=179' Tc=6.5 min CN=37 Runoff=0.06 cfs 0.009 af
Subcatchment E-4: Subcat E-4	Runoff Area=16,538 sf 0.00% Impervious Runoff Depth=0.29" Flow Length=119' Tc=10.9 min CN=35 Runoff=0.02 cfs 0.009 af
Subcatchment E-5: Subcat E-5	Runoff Area=7,553 sf 0.87% Impervious Runoff Depth=0.56" Tc=6.0 min CN=40 Runoff=0.10 cfs 0.008 af
Subcatchment E-6: Subcat E-6	Runoff Area=6,275 sf 89.44% Impervious Runoff Depth=5.27" Tc=6.0 min CN=92 Runoff=1.22 cfs 0.063 af
Subcatchment E-7: Subcat E-7	Runoff Area=13,991 sf 85.44% Impervious Runoff Depth=4.93" Tc=6.0 min CN=89 Runoff=2.61 cfs 0.132 af
Subcatchment E-8: Subcat E-8	Runoff Area=0.180 ac 81.02% Impervious Runoff Depth=4.71" Tc=6.0 min CN=87 Runoff=1.42 cfs 0.070 af
Pond CB-6: EX-CB	Peak Elev=270.24' Inflow=0.31 cfs 0.028 af 18.0" Round Culvert n=0.013 L=19.0' S=0.0421 '/' Outflow=0.31 cfs 0.028 af
Pond EXCB: EX CB	Peak Elev=265.58' Inflow=0.02 cfs 0.009 af 24.0" Round Culvert n=0.013 L=230.0' S=0.0047 '/' Outflow=0.02 cfs 0.009 af
Pond EXCB-1: EX-CB1	Peak Elev=264.91' Inflow=1.45 cfs 0.101 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=1.45 cfs 0.101 af
Pond EXCB-2: EX CB2	Peak Elev=262.12' Inflow=4.04 cfs 0.233 af 24.0" Round Culvert n=0.013 L=10.0' S=0.0250 '/' Outflow=4.04 cfs 0.233 af
Link AP-1: (new Link)	Inflow=3.00 cfs 0.154 af Primary=3.00 cfs 0.154 af
Link AP-2: (new Link)	Inflow=0.06 cfs 0.009 af Primary=0.06 cfs 0.009 af
Link AP-3: (new Link)	Inflow=4.12 cfs 0.241 af Primary=4.12 cfs 0.241 af

Total Runoff Area = 2.992 ac Runoff Volume = 0.404 af Average Runoff Depth = 1.62"
76.66% Pervious = 2.294 ac 23.34% Impervious = 0.698 ac

201391 EXISTING CONDITIONS

Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Subcatchment E-1: Subcat E-1

Runoff = 0.31 cfs @ 12.02 hrs, Volume= 0.028 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
28,906	39	>75% Grass cover, Good, HSG A
177	98	Paved parking, HSG A
181	30	Woods, Good, HSG A
29,264	39	Weighted Average
29,087		99.40% Pervious Area
177		0.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	100	0.2000	0.39		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
1.7	216	0.0200	2.12		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
6.0	316	Total			

Summary for Subcatchment E-2: Subcat E-2

Runoff = 1.62 cfs @ 11.99 hrs, Volume= 0.084 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
31,184	39	>75% Grass cover, Good, HSG A
6,272	98	Paved parking, HSG A
2	30	Woods, Good, HSG A
37,457	49	Weighted Average
31,185		83.26% Pervious Area
6,272		16.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	100	0.2000	0.39		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
1.0	295	0.1000	4.74		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
5.3	395	Total, Increased to minimum Tc = 6.0 min			

201391 EXISTING CONDITIONS

Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Subcatchment E-3: Subcat E-3

Runoff = 0.06 cfs @ 12.03 hrs, Volume= 0.009 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
9,208	39	>75% Grass cover, Good, HSG A
2,230	30	Woods, Good, HSG A
11,437	37	Weighted Average
11,437		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	10	0.1000	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"
4.3	90	0.1600	0.34		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.2	79	0.1520	5.85		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
6.5	179	Total			

Summary for Subcatchment E-4: Subcat E-4

Runoff = 0.02 cfs @ 12.14 hrs, Volume= 0.009 af, Depth= 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
8,376	39	>75% Grass cover, Good, HSG A
8,162	30	Woods, Good, HSG A
16,538	35	Weighted Average
16,538		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	100	0.1450	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"
0.1	19	0.0520	3.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
10.9	119	Total			

Summary for Subcatchment E-5: Subcat E-5

Runoff = 0.10 cfs @ 12.01 hrs, Volume= 0.008 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Area (sf)	CN	Description
7,487	39	>75% Grass cover, Good, HSG A
65	98	Paved parking, HSG A
7,553	40	Weighted Average
7,487		99.13% Pervious Area
65		0.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment E-6: Subcat E-6

Runoff = 1.22 cfs @ 11.97 hrs, Volume= 0.063 af, Depth= 5.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
663	39	>75% Grass cover, Good, HSG A
5,612	98	Paved parking, HSG A
6,275	92	Weighted Average
663		10.56% Pervious Area
5,612		89.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment E-7: Subcat E-7

Runoff = 2.61 cfs @ 11.97 hrs, Volume= 0.132 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
2,037	39	>75% Grass cover, Good, HSG A
11,954	98	Paved parking, HSG A
13,991	89	Weighted Average
2,037		14.56% Pervious Area
11,954		85.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Subcatchment E-8: Subcat E-8

Runoff = 1.42 cfs @ 11.97 hrs, Volume= 0.070 af, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (ac)	CN	Description
0.034	39	>75% Grass cover, Good, HSG A
0.146	98	Paved parking, HSG A
0.180	87	Weighted Average
0.034		18.98% Pervious Area
0.146		81.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond CB-6: EX-CB

Inflow Area = 0.672 ac, 0.60% Impervious, Inflow Depth = 0.50" for 100-YEAR event
 Inflow = 0.31 cfs @ 12.02 hrs, Volume= 0.028 af
 Outflow = 0.31 cfs @ 12.02 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.31 cfs @ 12.02 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 270.24' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	270.00'	18.0" Round Culvert L= 19.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 270.00' / 269.20' S= 0.0421 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.31 cfs @ 12.02 hrs HW=270.24' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 0.31 cfs @ 1.67 fps)

Summary for Pond EXCB: EX CB

Inflow Area = 0.380 ac, 0.00% Impervious, Inflow Depth = 0.29" for 100-YEAR event
 Inflow = 0.02 cfs @ 12.14 hrs, Volume= 0.009 af
 Outflow = 0.02 cfs @ 12.14 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.02 cfs @ 12.14 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 265.58' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	265.50'	24.0" Round Culvert L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 265.50' / 264.42' S= 0.0047 '/' Cc= 0.900

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Type II 24-hr 100-YEAR Rainfall=6.20"

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n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.02 cfs @ 12.14 hrs HW=265.58' (Free Discharge)↑**1=Culvert** (Barrel Controls 0.02 cfs @ 0.90 fps)**Summary for Pond EXCB-1: EX-CB1**

Inflow Area = 1.196 ac, 11.12% Impervious, Inflow Depth = 1.01" for 100-YEAR event
 Inflow = 1.45 cfs @ 11.98 hrs, Volume= 0.101 af
 Outflow = 1.45 cfs @ 11.98 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.45 cfs @ 11.98 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 264.91' @ 11.98 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.42'	24.0" Round Culvert L= 250.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 264.42' / 261.36' S= 0.0122 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.44 cfs @ 11.98 hrs HW=264.91' (Free Discharge)↑**1=Culvert** (Inlet Controls 1.44 cfs @ 2.39 fps)**Summary for Pond EXCB-2: EX CB2**

Inflow Area = 1.517 ac, 26.86% Impervious, Inflow Depth = 1.84" for 100-YEAR event
 Inflow = 4.04 cfs @ 11.97 hrs, Volume= 0.233 af
 Outflow = 4.04 cfs @ 11.97 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.04 cfs @ 11.97 hrs, Volume= 0.233 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 262.12' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	261.21'	24.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 261.21' / 260.96' S= 0.0250 '/ Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=4.03 cfs @ 11.97 hrs HW=262.12' (Free Discharge)↑**1=Culvert** (Barrel Controls 4.03 cfs @ 4.27 fps)**Summary for Link AP-1: (new Link)**

Inflow Area = 1.040 ac, 27.85% Impervious, Inflow Depth = 1.78" for 100-YEAR event
 Inflow = 3.00 cfs @ 11.98 hrs, Volume= 0.154 af
 Primary = 3.00 cfs @ 11.98 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Link AP-2: (new Link)

Inflow Area = 0.263 ac, 0.00% Impervious, Inflow Depth = 0.39" for 100-YEAR event
Inflow = 0.06 cfs @ 12.03 hrs, Volume= 0.009 af
Primary = 0.06 cfs @ 12.03 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link AP-3: (new Link)

Inflow Area = 1.690 ac, 24.19% Impervious, Inflow Depth = 1.71" for 100-YEAR event
Inflow = 4.12 cfs @ 11.98 hrs, Volume= 0.241 af
Primary = 4.12 cfs @ 11.98 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Attachment C

**Proposed Conditions Watershed Map and
HydroCAD Calculations**



The LA GROUP

Landscape Architecture & Engineering P.C.

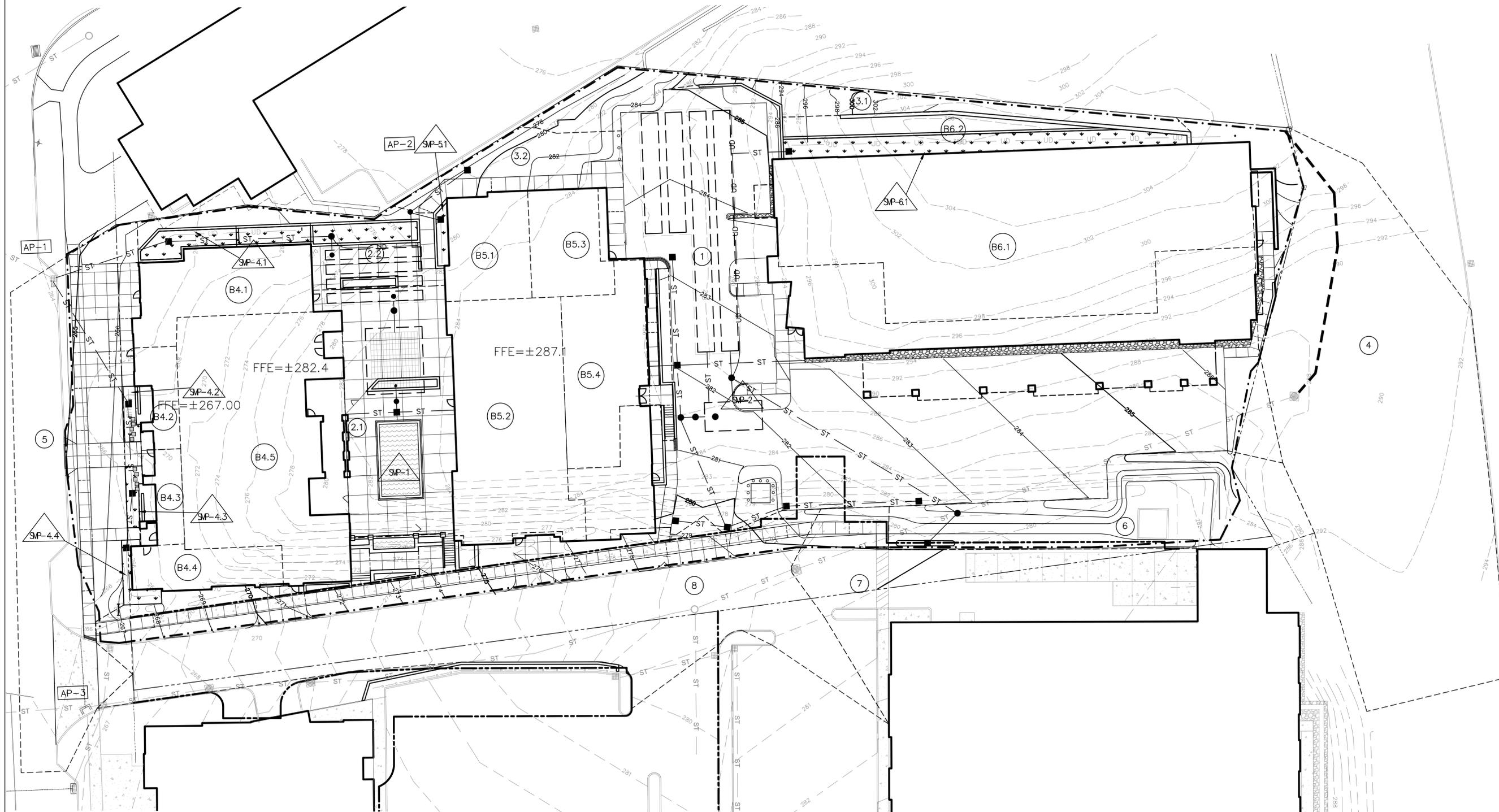
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LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION PATH
- SUBCATCHMENT ID
- ANALYSIS POINT
- STORMWATER MANAGEMENT PRACTICE

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.:	201391
Design:	BCS
Drawn:	BCS Ch'K'd: DBH
Date:	09/09/2015 Scale: 1"=20'

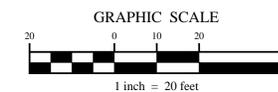
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2	Revised per TDE Comments	6/30/16

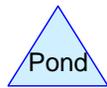
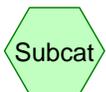
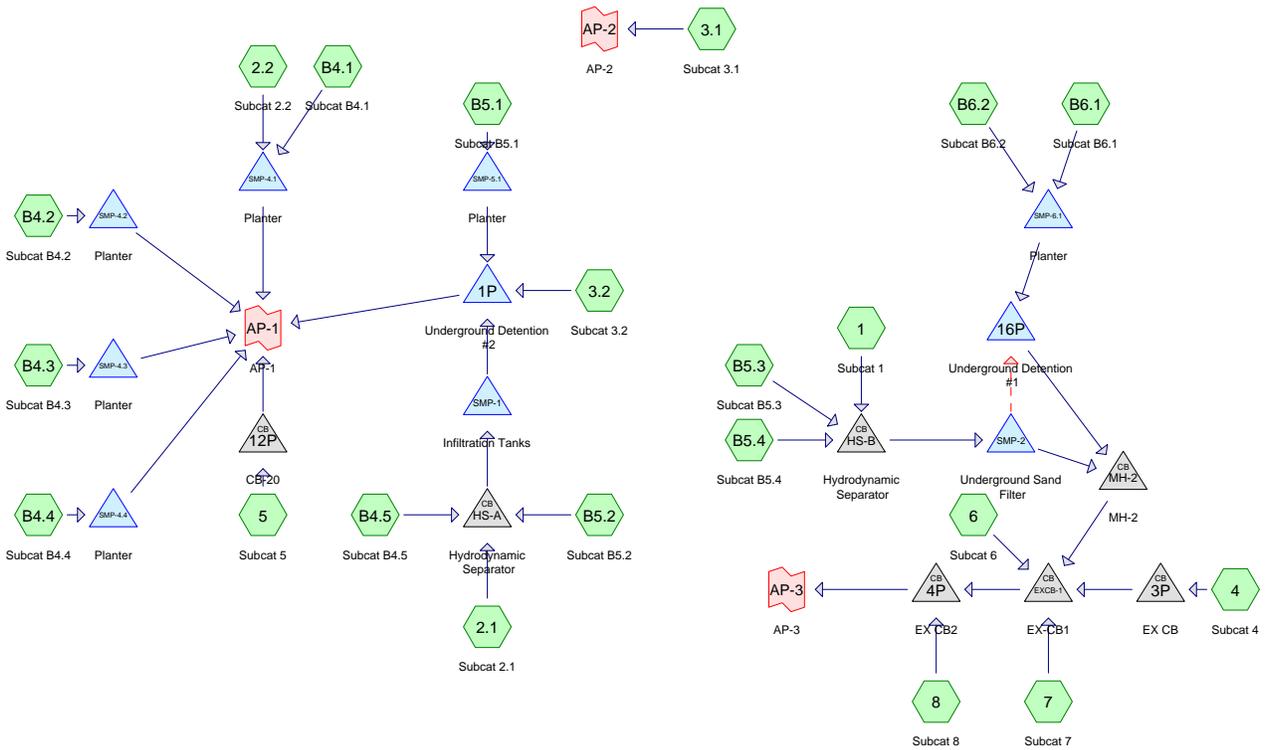
Drawing Title

Proposed Conditions Watershed Map

Drawing No.

W-2





Routing Diagram for 201391 PROPOSED CONDITIONS
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.700	39	>75% Grass cover, Good, HSG A (1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.2, B5.4, B6.1, B6.2)
2.092	98	Paved parking, HSG A (1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2)
0.185	30	Woods, Good, HSG A (3.1, 4, B6.2)
2.978	80	TOTAL AREA

201391 PROPOSED CONDITIONS

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.978	HSG A	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.978		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.700	0.000	0.000	0.000	0.000	0.700	>75% Grass cover, Good	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.2, B5.4, B6.1, B6.2
2.092	0.000	0.000	0.000	0.000	2.092	Paved parking	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2
0.185	0.000	0.000	0.000	0.000	0.185	Woods, Good	3.1, 4, B6.2
2.978	0.000	0.000	0.000	0.000	2.978	TOTAL AREA	

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Type II 24-hr 1-YEAR Rainfall=2.15"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=1.63" Tc=6.0 min CN=95 Runoff=1.76 cfs 0.087 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=1.72" Tc=6.0 min CN=96 Runoff=0.31 cfs 0.016 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=0.10" Tc=6.0 min CN=61 Runoff=0.00 cfs 0.001 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=67' Slope=0.1400 '/ Tc=7.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=0.07" Flow Length=60' Slope=0.2300 '/ Tc=6.0 min CN=59 Runoff=0.00 cfs 0.000 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=0.70" Tc=6.0 min CN=81 Runoff=0.27 cfs 0.013 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=1.54" Tc=6.0 min CN=94 Runoff=0.37 cfs 0.018 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=0.91" Tc=6.0 min CN=85 Runoff=0.56 cfs 0.026 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.15 cfs 0.008 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=1.15" Tc=6.0 min CN=89 Runoff=0.04 cfs 0.002 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=1.02" Tc=6.0 min CN=87 Runoff=0.04 cfs 0.002 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=1.15" Tc=6.0 min CN=89 Runoff=0.06 cfs 0.003 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.49 cfs 0.026 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.11 cfs 0.006 af

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Type II 24-hr 1-YEAR Rainfall=2.15"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.33 cfs 0.018 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.09 cfs 0.005 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=1.22" Tc=6.0 min CN=90 Runoff=0.14 cfs 0.007 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.81 cfs 0.043 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Pond 1P: Underground Detention #2	Peak Elev=273.56' Storage=171 cf Inflow=0.32 cfs 0.009 af Outflow=0.02 cfs 0.009 af
Pond 3P: EX CB	Peak Elev=265.50' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: EX CB2	Peak Elev=261.68' Inflow=0.97 cfs 0.176 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=0.97 cfs 0.176 af
Pond 12P: CB-20	Peak Elev=261.05' Inflow=0.27 cfs 0.013 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=0.27 cfs 0.013 af
Pond 16P: Underground Detention #1	Peak Elev=272.75' Storage=3,500 cf Inflow=1.98 cfs 0.111 af Outflow=0.04 cfs 0.101 af
Pond EXCB-1: EX-CB1	Peak Elev=264.68' Inflow=0.40 cfs 0.150 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.40 cfs 0.150 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=279.41' Inflow=1.13 cfs 0.059 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=1.13 cfs 0.059 af
Pond HS-B: Hydrodynamic Separator	Peak Elev=276.90' Inflow=1.99 cfs 0.099 af 15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=1.99 cfs 0.099 af
Pond MH-2: MH-2	Peak Elev=264.92' Inflow=0.05 cfs 0.132 af 24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/' Outflow=0.05 cfs 0.132 af
Pond SMP-1: Infiltration Tanks	Peak Elev=278.31' Storage=440 cf Inflow=1.13 cfs 0.059 af Discarded=0.34 cfs 0.057 af Primary=0.24 cfs 0.003 af Outflow=0.58 cfs 0.059 af
Pond SMP-2: Underground Sand Filter	Peak Elev=276.68' Storage=754 cf Inflow=1.99 cfs 0.099 af Primary=0.01 cfs 0.031 af Secondary=1.92 cfs 0.068 af Outflow=1.93 cfs 0.099 af
Pond SMP-4.1: Planter	Peak Elev=265.84' Storage=80 cf Inflow=0.15 cfs 0.009 af Discarded=0.04 cfs 0.009 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.009 af
Pond SMP-4.2: Planter	Peak Elev=265.94' Storage=26 cf Inflow=0.04 cfs 0.002 af Outflow=0.01 cfs 0.002 af

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Type II 24-hr 1-YEAR Rainfall=2.15"

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Pond SMP-4.3: Planter	Peak Elev=265.88' Storage=20 cf Inflow=0.04 cfs 0.002 af Outflow=0.01 cfs 0.002 af
Pond SMP-4.4: Planter	Peak Elev=265.96' Storage=39 cf Inflow=0.06 cfs 0.003 af Outflow=0.01 cfs 0.003 af
Pond SMP-5.1: Planter	Peak Elev=280.55' Storage=63 cf Inflow=0.11 cfs 0.006 af Outflow=0.11 cfs 0.006 af
Pond SMP-6.1: Planter	Peak Elev=293.91' Storage=692 cf Inflow=0.81 cfs 0.043 af Outflow=0.09 cfs 0.043 af
Link AP-1: AP-1	Inflow=0.30 cfs 0.028 af Primary=0.30 cfs 0.028 af
Link AP-2: AP-2	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Link AP-3: AP-3	Inflow=0.97 cfs 0.176 af Primary=0.97 cfs 0.176 af

Total Runoff Area = 2.978 ac Runoff Volume = 0.279 af Average Runoff Depth = 1.13"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 10-YEAR Rainfall=3.75"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=3.18" Tc=6.0 min CN=95 Runoff=3.29 cfs 0.171 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=3.29" Tc=6.0 min CN=96 Runoff=0.56 cfs 0.030 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=0.69" Tc=6.0 min CN=61 Runoff=0.07 cfs 0.004 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=67' Slope=0.1400 '/' Tc=7.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=0.60" Flow Length=60' Slope=0.2300 '/' Tc=6.0 min CN=59 Runoff=0.04 cfs 0.002 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=1.91" Tc=6.0 min CN=81 Runoff=0.74 cfs 0.035 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.02" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=3.08" Tc=6.0 min CN=94 Runoff=0.70 cfs 0.036 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=2.24" Tc=6.0 min CN=85 Runoff=1.36 cfs 0.064 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.015 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=2.59" Tc=6.0 min CN=89 Runoff=0.09 cfs 0.004 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=2.41" Tc=6.0 min CN=87 Runoff=0.08 cfs 0.004 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=2.59" Tc=6.0 min CN=89 Runoff=0.13 cfs 0.006 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.87 cfs 0.048 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.20 cfs 0.011 af

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Type II 24-hr 10-YEAR Rainfall=3.75"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.58 cfs 0.032 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.17 cfs 0.009 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=2.68" Tc=6.0 min CN=90 Runoff=0.29 cfs 0.014 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=1.43 cfs 0.079 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.02" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Pond 1P: Underground Detention #2	Peak Elev=275.09' Storage=1,062 cf Inflow=1.05 cfs 0.034 af Outflow=0.04 cfs 0.034 af
Pond 3P: EX CB	Peak Elev=265.51' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: EX CB2	Peak Elev=261.91' Inflow=2.11 cfs 0.292 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=2.11 cfs 0.292 af
Pond 12P: CB-20	Peak Elev=261.24' Inflow=0.74 cfs 0.035 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=0.74 cfs 0.035 af
Pond 16P: Underground Detention #1	Peak Elev=274.96' Storage=8,061 cf Inflow=4.59 cfs 0.240 af Outflow=0.06 cfs 0.158 af
Pond EXCB-1: EX-CB1	Peak Elev=264.77' Inflow=0.75 cfs 0.228 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.75 cfs 0.228 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=279.70' Inflow=2.02 cfs 0.110 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=2.02 cfs 0.110 af
Pond HS-B: Hydrodynamic Separator	Peak Elev=277.29' Inflow=3.75 cfs 0.195 af 15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=3.75 cfs 0.195 af
Pond MH-2: MH-2	Peak Elev=264.94' Inflow=0.07 cfs 0.192 af 24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/' Outflow=0.07 cfs 0.192 af
Pond SMP-1: Infiltration Tanks	Peak Elev=279.09' Storage=841 cf Inflow=2.02 cfs 0.110 af Discarded=0.34 cfs 0.089 af Primary=0.87 cfs 0.021 af Outflow=1.20 cfs 0.110 af
Pond SMP-2: Underground Sand Filter	Peak Elev=277.03' Storage=868 cf Inflow=3.75 cfs 0.195 af Primary=0.01 cfs 0.034 af Secondary=3.67 cfs 0.161 af Outflow=3.68 cfs 0.195 af
Pond SMP-4.1: Planter	Peak Elev=266.02' Storage=238 cf Inflow=0.33 cfs 0.018 af Discarded=0.04 cfs 0.018 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.018 af
Pond SMP-4.2: Planter	Peak Elev=266.26' Storage=70 cf Inflow=0.09 cfs 0.004 af Outflow=0.02 cfs 0.004 af

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Type II 24-hr 10-YEAR Rainfall=3.75"

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Pond SMP-4.3: Planter	Peak Elev=266.19' Storage=66 cf Inflow=0.08 cfs 0.004 af Outflow=0.01 cfs 0.004 af
Pond SMP-4.4: Planter	Peak Elev=266.27' Storage=97 cf Inflow=0.13 cfs 0.006 af Outflow=0.05 cfs 0.006 af
Pond SMP-5.1: Planter	Peak Elev=280.57' Storage=66 cf Inflow=0.20 cfs 0.011 af Outflow=0.20 cfs 0.011 af
Pond SMP-6.1: Planter	Peak Elev=294.08' Storage=920 cf Inflow=1.43 cfs 0.079 af Outflow=1.08 cfs 0.079 af
Link AP-1: AP-1	Inflow=0.78 cfs 0.083 af Primary=0.78 cfs 0.083 af
Link AP-2: AP-2	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Link AP-3: AP-3	Inflow=2.11 cfs 0.292 af Primary=2.11 cfs 0.292 af

Total Runoff Area = 2.978 ac Runoff Volume = 0.564 af Average Runoff Depth = 2.27"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=5.61" Tc=6.0 min CN=95 Runoff=5.60 cfs 0.301 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=0.95 cfs 0.052 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=2.14" Tc=6.0 min CN=61 Runoff=0.25 cfs 0.012 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.34" Flow Length=67' Slope=0.1400 '/' Tc=7.9 min CN=36 Runoff=0.01 cfs 0.002 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=1.97" Flow Length=60' Slope=0.2300 '/' Tc=6.0 min CN=59 Runoff=0.14 cfs 0.007 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.34" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.04 cfs 0.011 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=4.07" Tc=6.0 min CN=81 Runoff=1.53 cfs 0.074 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.50" Tc=6.0 min CN=39 Runoff=0.05 cfs 0.005 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=5.49" Tc=6.0 min CN=94 Runoff=1.20 cfs 0.064 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=4.49" Tc=6.0 min CN=85 Runoff=2.63 cfs 0.129 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.44 cfs 0.025 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=4.93" Tc=6.0 min CN=89 Runoff=0.16 cfs 0.008 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=4.71" Tc=6.0 min CN=87 Runoff=0.15 cfs 0.008 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=4.93" Tc=6.0 min CN=89 Runoff=0.24 cfs 0.012 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=1.45 cfs 0.081 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.34 cfs 0.019 af

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.97 cfs 0.054 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.28 cfs 0.016 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=5.04" Tc=6.0 min CN=90 Runoff=0.53 cfs 0.027 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=2.38 cfs 0.134 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.50" Tc=6.0 min CN=39 Runoff=0.02 cfs 0.002 af
Pond 1P: Underground Detention #2	Peak Elev=276.70' Storage=1,942 cf Inflow=3.42 cfs 0.079 af Outflow=1.20 cfs 0.079 af
Pond 3P: EX CB	Peak Elev=265.60' Inflow=0.04 cfs 0.011 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.04 cfs 0.011 af
Pond 4P: EX CB2	Peak Elev=262.20' Inflow=3.94 cfs 0.554 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=3.94 cfs 0.554 af
Pond 12P: CB-20	Peak Elev=261.46' Inflow=1.53 cfs 0.074 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=1.53 cfs 0.074 af
Pond 16P: Underground Detention #1	Peak Elev=276.69' Storage=10,998 cf Inflow=8.59 cfs 0.444 af Outflow=1.17 cfs 0.310 af
Pond EXCB-1: EX-CB1	Peak Elev=264.90' Inflow=1.38 cfs 0.425 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=1.38 cfs 0.425 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=280.17' Inflow=3.37 cfs 0.188 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=3.37 cfs 0.188 af
Pond HS-B: Hydrodynamic Separator	Peak Elev=277.93' Inflow=6.41 cfs 0.344 af 15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=6.41 cfs 0.344 af
Pond MH-2: MH-2	Peak Elev=265.33' Inflow=1.19 cfs 0.345 af 24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/' Outflow=1.19 cfs 0.345 af
Pond SMP-1: Infiltration Tanks	Peak Elev=279.53' Storage=1,066 cf Inflow=3.37 cfs 0.188 af Discarded=0.34 cfs 0.134 af Primary=2.94 cfs 0.053 af Outflow=3.28 cfs 0.188 af
Pond SMP-2: Underground Sand Filter	Peak Elev=277.54' Storage=972 cf Inflow=6.41 cfs 0.344 af Primary=0.01 cfs 0.035 af Secondary=6.46 cfs 0.308 af Outflow=6.48 cfs 0.344 af
Pond SMP-4.1: Planter	Peak Elev=266.32' Storage=500 cf Inflow=0.69 cfs 0.036 af Discarded=0.04 cfs 0.032 af Primary=0.20 cfs 0.004 af Outflow=0.24 cfs 0.036 af
Pond SMP-4.2: Planter	Peak Elev=266.31' Storage=77 cf Inflow=0.16 cfs 0.008 af Outflow=0.16 cfs 0.008 af

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Pond SMP-4.3: Planter	Peak Elev=266.31' Storage=83 cf Inflow=0.15 cfs 0.008 af Outflow=0.14 cfs 0.008 af
Pond SMP-4.4: Planter	Peak Elev=266.33' Storage=107 cf Inflow=0.24 cfs 0.012 af Outflow=0.23 cfs 0.012 af
Pond SMP-5.1: Planter	Peak Elev=280.60' Storage=69 cf Inflow=0.34 cfs 0.019 af Outflow=0.34 cfs 0.019 af
Pond SMP-6.1: Planter	Peak Elev=294.20' Storage=1,082 cf Inflow=2.39 cfs 0.136 af Outflow=2.22 cfs 0.136 af
Link AP-1: AP-1	Inflow=2.09 cfs 0.185 af Primary=2.09 cfs 0.185 af
Link AP-2: AP-2	Inflow=0.01 cfs 0.002 af Primary=0.01 cfs 0.002 af
Link AP-3: AP-3	Inflow=3.94 cfs 0.554 af Primary=3.94 cfs 0.554 af

Total Runoff Area = 2.978 ac Runoff Volume = 1.042 af Average Runoff Depth = 4.20"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Subcatchment 1: Subcat 1

Runoff = 5.60 cfs @ 11.97 hrs, Volume= 0.301 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
26,522	98	Paved parking, HSG A
1,553	39	>75% Grass cover, Good, HSG A
28,075	95	Weighted Average
1,553		5.53% Pervious Area
26,522		94.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 0.95 cfs @ 11.97 hrs, Volume= 0.052 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4,592	98	Paved parking, HSG A
133	39	>75% Grass cover, Good, HSG A
4,724	96	Weighted Average
133		2.81% Pervious Area
4,592		97.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 2.2: Subcat 2.2

Runoff = 0.25 cfs @ 11.98 hrs, Volume= 0.012 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,042	98	Paved parking, HSG A
1,780	39	>75% Grass cover, Good, HSG A
2,822	61	Weighted Average
1,780		63.08% Pervious Area
1,042		36.92% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 3.1: Subcat 3.1

Runoff = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,798	39	>75% Grass cover, Good, HSG A
698	30	Woods, Good, HSG A
0	98	Paved parking, HSG A
2,496	36	Weighted Average
2,496		100.00% Pervious Area
0		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	67	0.1400	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"

Summary for Subcatchment 3.2: Subcat 3.2

Runoff = 0.14 cfs @ 11.98 hrs, Volume= 0.007 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
618	98	Paved parking, HSG A
1,191	39	>75% Grass cover, Good, HSG A
1,809	59	Weighted Average
1,191		65.83% Pervious Area
618		34.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	60	0.2300	0.17		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"

Summary for Subcatchment 4: Subcat 4

Runoff = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Area (sf)	CN	Description
7,347	30	Woods, Good, HSG A
325	98	Paved parking, HSG A
9,737	39	>75% Grass cover, Good, HSG A
17,409	36	Weighted Average
17,084		98.13% Pervious Area
325		1.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	100	0.1450	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"
0.1	19	0.0520	3.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
10.9	119	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
6,750	98	Paved parking, HSG A
2,704	39	>75% Grass cover, Good, HSG A
9,454	81	Weighted Average
2,704		28.60% Pervious Area
6,750		71.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 6: Subcat 6

Runoff = 0.05 cfs @ 12.02 hrs, Volume= 0.005 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4,850	39	>75% Grass cover, Good, HSG A
13	98	Paved parking, HSG A
4,863	39	Weighted Average
4,850		99.73% Pervious Area
13		0.27% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 7: Subcat 7

Runoff = 1.20 cfs @ 11.97 hrs, Volume= 0.064 af, Depth= 5.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
365	39	>75% Grass cover, Good, HSG A
5,710	98	Paved parking, HSG A
6,076	94	Weighted Average
365		6.01% Pervious Area
5,710		93.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 8: Subcat 8

Runoff = 2.63 cfs @ 11.97 hrs, Volume= 0.129 af, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
11,804	98	Paved parking, HSG A
3,224	39	>75% Grass cover, Good, HSG A
15,027	85	Weighted Average
3,224		21.45% Pervious Area
11,804		78.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.1: Subcat B4.1

Runoff = 0.44 cfs @ 11.97 hrs, Volume= 0.025 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Area (sf)	CN	Description
2,170	98	Paved parking, HSG A
0	39	>75% Grass cover, Good, HSG A
2,170	98	Weighted Average
0		0.00% Pervious Area
2,170		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.2: Subcat B4.2

Runoff = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
749	98	Paved parking, HSG A
134	39	>75% Grass cover, Good, HSG A
883	89	Weighted Average
134		15.18% Pervious Area
749		84.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.3: Subcat B4.3

Runoff = 0.15 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
692	98	Paved parking, HSG A
153	39	>75% Grass cover, Good, HSG A
845	87	Weighted Average
153		18.15% Pervious Area
692		81.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment B4.4: Subcat B4.4

Runoff = 0.24 cfs @ 11.97 hrs, Volume= 0.012 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
198	39	>75% Grass cover, Good, HSG A
1,075	98	Paved parking, HSG A
1,273	89	Weighted Average
198		15.56% Pervious Area
1,075		84.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.5: Subcat B4.5

Runoff = 1.45 cfs @ 11.97 hrs, Volume= 0.081 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
3	39	>75% Grass cover, Good, HSG A
7,134	98	Paved parking, HSG A
7,137	98	Weighted Average
3		0.04% Pervious Area
7,134		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.1: Subcat B5.1

Runoff = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,664	98	Paved parking, HSG A
1,664		100.00% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.2: Subcat B5.2

Runoff = 0.97 cfs @ 11.97 hrs, Volume= 0.054 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
0	39	>75% Grass cover, Good, HSG A
4,778	98	Paved parking, HSG A
4,778	98	Weighted Average
0		0.00% Pervious Area
4,778		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.3: Subcat B5.3

Runoff = 0.28 cfs @ 11.97 hrs, Volume= 0.016 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,377	98	Paved parking, HSG A
1,377		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.4: Subcat B5.4

Runoff = 0.53 cfs @ 11.97 hrs, Volume= 0.027 af, Depth= 5.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
2,423	98	Paved parking, HSG A
356	39	>75% Grass cover, Good, HSG A
2,779	90	Weighted Average
356		12.81% Pervious Area
2,423		87.19% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B6.1: Subcat B6.1

Runoff = 2.38 cfs @ 11.97 hrs, Volume= 0.134 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4	39	>75% Grass cover, Good, HSG A
11,708	98	Paved parking, HSG A
11,712	98	Weighted Average
4		0.04% Pervious Area
11,708		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B6.2: Subcat B6.2

Runoff = 0.02 cfs @ 12.02 hrs, Volume= 0.002 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
7	30	Woods, Good, HSG A
3	98	Paved parking, HSG A
2,326	39	>75% Grass cover, Good, HSG A
2,336	39	Weighted Average
2,333		99.86% Pervious Area
3		0.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Underground Detention #2

Inflow Area = 0.462 ac, 93.40% Impervious, Inflow Depth = 2.06" for 100-YEAR event
 Inflow = 3.42 cfs @ 11.98 hrs, Volume= 0.079 af
 Outflow = 1.20 cfs @ 12.10 hrs, Volume= 0.079 af, Atten= 65%, Lag= 6.9 min
 Primary = 1.20 cfs @ 12.10 hrs, Volume= 0.079 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

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Peak Elev= 276.70' @ 12.10 hrs Surf.Area= 338 sf Storage= 1,942 cf

Plug-Flow detention time= 310.7 min calculated for 0.079 af (100% of inflow)

Center-of-Mass det. time= 310.8 min (1,061.3 - 750.5)

Volume	Invert	Avail.Storage	Storage Description
#1	273.00'	2,011 cf	48.0" Round Pipe Storage L= 160.0'

Device	Routing	Invert	Outlet Devices
#1	Device 3	273.00'	1.0" Vert. Orifice/Grate C= 0.600
#2	Device 3	276.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	263.90'	12.0" Round Culvert L= 113.0' Ke= 0.500 Inlet / Outlet Invert= 263.90' / 261.64' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.19 cfs @ 12.10 hrs HW=276.70' (Free Discharge)↑ **3=Culvert** (Passes 1.19 cfs of 10.52 cfs potential flow)↑ **1=Orifice/Grate** (Orifice Controls 0.05 cfs @ 9.21 fps)↑ **2=Sharp-Crested Rectangular Weir** (Weir Controls 1.14 cfs @ 1.45 fps)**Summary for Pond 3P: EX CB**

Inflow Area = 0.400 ac, 1.87% Impervious, Inflow Depth = 0.34" for 100-YEAR event
 Inflow = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af
 Outflow = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 265.60' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	265.50'	24.0" Round Culvert L= 216.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 265.50' / 264.42' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.04 cfs @ 12.11 hrs HW=265.60' (Free Discharge)↑ **1=Culvert** (Barrel Controls 0.04 cfs @ 1.10 fps)**Summary for Pond 4P: EX CB2**

Inflow Area = 2.058 ac, 66.80% Impervious, Inflow Depth > 3.23" for 100-YEAR event
 Inflow = 3.94 cfs @ 11.97 hrs, Volume= 0.554 af
 Outflow = 3.94 cfs @ 11.97 hrs, Volume= 0.554 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.94 cfs @ 11.97 hrs, Volume= 0.554 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 262.20' @ 11.97 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	261.21'	24.0" Round Culvert L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 261.21' / 260.96' S= 0.0050 '/ Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=3.93 cfs @ 11.97 hrs HW=262.20' (Free Discharge)↑**1=Culvert** (Barrel Controls 3.93 cfs @ 3.71 fps)**Summary for Pond 12P: CB-20**

Inflow Area = 0.217 ac, 71.40% Impervious, Inflow Depth = 4.07" for 100-YEAR event
 Inflow = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af
 Outflow = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 261.46' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	260.80'	12.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 260.80' / 259.30' S= 0.0300 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.53 cfs @ 11.97 hrs HW=261.46' (Free Discharge)↑**1=Culvert** (Inlet Controls 1.53 cfs @ 2.77 fps)**Summary for Pond 16P: Underground Detention #1**

Inflow Area = 0.323 ac, 83.36% Impervious, Inflow Depth = 16.53" for 100-YEAR event
 Inflow = 8.59 cfs @ 11.98 hrs, Volume= 0.444 af
 Outflow = 1.17 cfs @ 12.26 hrs, Volume= 0.310 af, Atten= 86%, Lag= 17.1 min
 Primary = 1.17 cfs @ 12.26 hrs, Volume= 0.310 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 276.69' @ 12.26 hrs Surf.Area= 1,225 sf Storage= 10,998 cf

Plug-Flow detention time= 669.6 min calculated for 0.310 af (70% of inflow)

Center-of-Mass det. time= 570.1 min (1,352.5 - 782.4)

Volume	Invert	Avail.Storage	Storage Description
#1	270.35'	11,545 cf	84.0" Round Pipe Storage L= 300.0'

Device	Routing	Invert	Outlet Devices
#1	Device 3	270.35'	1.0" Vert. Orifice/Grate C= 0.600
#2	Device 3	276.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	269.90'	12.0" Round Culvert L= 117.0' Ke= 0.500 Inlet / Outlet Invert= 269.90' / 268.73' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

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Primary OutFlow Max=1.16 cfs @ 12.26 hrs HW=276.69' (Free Discharge)↑ **3=Culvert** (Passes 1.16 cfs of 7.31 cfs potential flow)↑ **1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 12.09 fps)↑ **2=Sharp-Crested Rectangular Weir** (Weir Controls 1.10 cfs @ 1.44 fps)**Summary for Pond EXCB-1: EX-CB1**

Inflow Area = 1.713 ac, 64.43% Impervious, Inflow Depth > 2.98" for 100-YEAR event
 Inflow = 1.38 cfs @ 12.26 hrs, Volume= 0.425 af
 Outflow = 1.38 cfs @ 12.26 hrs, Volume= 0.425 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.38 cfs @ 12.26 hrs, Volume= 0.425 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 264.90' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.42'	24.0" Round Culvert L= 250.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 264.42' / 261.36' S= 0.0122 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.38 cfs @ 12.26 hrs HW=264.90' (Free Discharge)↑ **1=Culvert** (Inlet Controls 1.38 cfs @ 2.36 fps)**Summary for Pond HS-A: Hydrodynamic Separator**

Inflow Area = 0.382 ac, 99.18% Impervious, Inflow Depth = 5.89" for 100-YEAR event
 Inflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af
 Outflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 280.17' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	278.75'	12.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 278.75' / 278.70' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.36 cfs @ 11.97 hrs HW=280.17' (Free Discharge)↑ **1=Culvert** (Barrel Controls 3.36 cfs @ 4.28 fps)**Summary for Pond HS-B: Hydrodynamic Separator**

Inflow Area = 0.740 ac, 94.08% Impervious, Inflow Depth = 5.58" for 100-YEAR event
 Inflow = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af
 Outflow = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Peak Elev= 277.93' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	276.10'	15.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 276.10' / 276.00' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=6.40 cfs @ 11.97 hrs HW=277.93' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 6.40 cfs @ 5.21 fps)

Summary for Pond MH-2: MH-2

Inflow Area = 1.062 ac, 90.83% Impervious, Inflow Depth > 3.90" for 100-YEAR event
 Inflow = 1.19 cfs @ 12.26 hrs, Volume= 0.345 af
 Outflow = 1.19 cfs @ 12.26 hrs, Volume= 0.345 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.19 cfs @ 12.26 hrs, Volume= 0.345 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 265.33' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.81'	24.0" Round Culvert L= 83.0' Ke= 0.500 Inlet / Outlet Invert= 264.81' / 264.42' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.19 cfs @ 12.26 hrs HW=265.33' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 1.19 cfs @ 2.78 fps)

Summary for Pond SMP-1: Infiltration Tanks

Inflow Area = 0.382 ac, 99.18% Impervious, Inflow Depth = 5.89" for 100-YEAR event
 Inflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af
 Outflow = 3.28 cfs @ 11.98 hrs, Volume= 0.188 af, Atten= 3%, Lag= 1.0 min
 Discarded = 0.34 cfs @ 11.59 hrs, Volume= 0.134 af
 Primary = 2.94 cfs @ 11.98 hrs, Volume= 0.053 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 279.53' @ 11.98 hrs Surf.Area= 650 sf Storage= 1,066 cf

Plug-Flow detention time= 4.9 min calculated for 0.188 af (100% of inflow)

Center-of-Mass det. time= 4.9 min (749.0 - 744.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	277.33'	489 cf	23.69'W x 27.46'L x 3.42'H Field A 2,221 cf Overall - 1,000 cf Embedded = 1,221 cf x 40.0% Voids
#2A	277.58'	950 cf	ACF R-Tank HD 1.5 x 150 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 15 Rows of 10 Chambers
		1,438 cf	Total Available Storage

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Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	277.33'	22.500 in/hr Exfiltration over Surface area
#2	Primary	276.10'	12.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 276.10' / 276.00' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	279.25'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Device 2	278.00'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.34 cfs @ 11.59 hrs HW=277.36' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.34 cfs)

Primary OutFlow Max=2.93 cfs @ 11.98 hrs HW=279.53' (Free Discharge)
 ↳ **2=Culvert** (Passes 2.93 cfs of 6.47 cfs potential flow)
 ↳ **3=Sharp-Crested Rectangular Weir** (Weir Controls 1.86 cfs @ 1.72 fps)
 ↳ **4=Orifice/Grate** (Orifice Controls 1.07 cfs @ 5.44 fps)

Summary for Pond SMP-2: Underground Sand Filter

Inflow Area = 0.740 ac, 94.08% Impervious, Inflow Depth = 5.58" for 100-YEAR event
 Inflow = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af
 Outflow = 6.48 cfs @ 11.96 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.01 cfs @ 2.85 hrs, Volume= 0.035 af
 Secondary = 6.46 cfs @ 11.96 hrs, Volume= 0.308 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 277.54' @ 11.96 hrs Surf.Area= 324 sf Storage= 972 cf

Plug-Flow detention time= 51.7 min calculated for 0.344 af (100% of inflow)
 Center-of-Mass det. time= 51.8 min (811.7 - 759.9)

Volume	Invert	Avail.Storage	Storage Description
#1	274.35'	972 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
274.35	324	0	0
277.35	324	972	972

Device	Routing	Invert	Outlet Devices
#1	Device 2	274.35'	1.750 in/hr Exfiltration over Surface area
#2	Primary	271.35'	6.0" Round Culvert L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 271.35' / 271.19' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Secondary	275.85'	18.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 275.85' / 275.85' S= 0.0000 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

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Primary OutFlow Max=0.01 cfs @ 2.85 hrs HW=274.38' (Free Discharge)↳ **2=Culvert** (Passes 0.01 cfs of 1.58 cfs potential flow)↳ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)**Secondary OutFlow** Max=6.43 cfs @ 11.96 hrs HW=277.53' (Free Discharge)↳ **3=Culvert** (Barrel Controls 6.43 cfs @ 4.06 fps)**Summary for Pond SMP-4.1: Planter**

Inflow Area = 0.115 ac, 64.34% Impervious, Inflow Depth = 3.80" for 100-YEAR event
 Inflow = 0.69 cfs @ 11.97 hrs, Volume= 0.036 af
 Outflow = 0.24 cfs @ 12.08 hrs, Volume= 0.036 af, Atten= 64%, Lag= 6.8 min
 Discarded = 0.04 cfs @ 11.57 hrs, Volume= 0.032 af
 Primary = 0.20 cfs @ 12.08 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 266.32' @ 12.08 hrs Surf.Area= 873 sf Storage= 500 cf

Plug-Flow detention time= 69.6 min calculated for 0.036 af (100% of inflow)
 Center-of-Mass det. time= 69.6 min (846.5 - 776.9)

Volume	Invert	Avail.Storage	Storage Description			
#1	265.75'	873 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
265.75	873	252.0	0	0	873	
266.75	873	252.0	873	873	1,125	

Device	Routing	Invert	Outlet Devices
#1	Discarded	265.75'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	262.60'	12.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 262.60' / 261.64' S= 0.0200 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.04 cfs @ 11.57 hrs HW=265.76' (Free Discharge)↳ **1=Exfiltration** (Exfiltration Controls 0.04 cfs)**Primary OutFlow** Max=0.20 cfs @ 12.08 hrs HW=266.32' (Free Discharge)↳ **3=Culvert** (Passes 0.20 cfs of 6.79 cfs potential flow)↳ **2=Orifice/Grate** (Weir Controls 0.20 cfs @ 0.88 fps)**Summary for Pond SMP-4.2: Planter**

Inflow Area = 0.020 ac, 84.82% Impervious, Inflow Depth = 4.93" for 100-YEAR event
 Inflow = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af
 Outflow = 0.16 cfs @ 11.98 hrs, Volume= 0.008 af, Atten= 1%, Lag= 0.7 min
 Primary = 0.16 cfs @ 11.98 hrs, Volume= 0.008 af

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Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 266.31' @ 11.98 hrs Surf.Area= 137 sf Storage= 77 cf

Plug-Flow detention time= 59.3 min calculated for 0.008 af (100% of inflow)
 Center-of-Mass det. time= 59.3 min (843.1 - 783.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	265.75'	137 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
265.75	137	60.0	0	0	137	
266.75	137	60.0	137	137	197	

Device	Routing	Invert	Outlet Devices
#1	Device 3	265.75'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	262.52'	12.0" Round Culvert L= 57.0' Ke= 0.500 Inlet / Outlet Invert= 262.52' / 260.83' S= 0.0296 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.16 cfs @ 11.98 hrs HW=266.31' (Free Discharge)

- ←3=Culvert (Passes 0.16 cfs of 6.86 cfs potential flow)
- ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)
- ←2=Orifice/Grate (Weir Controls 0.16 cfs @ 0.81 fps)

Summary for Pond SMP-4.3: Planter

Inflow Area = 0.019 ac, 81.85% Impervious, Inflow Depth = 4.71" for 100-YEAR event
 Inflow = 0.15 cfs @ 11.97 hrs, Volume= 0.008 af
 Outflow = 0.14 cfs @ 11.99 hrs, Volume= 0.008 af, Atten= 5%, Lag= 1.5 min
 Primary = 0.14 cfs @ 11.99 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 266.31' @ 11.99 hrs Surf.Area= 150 sf Storage= 83 cf

Plug-Flow detention time= 63.8 min calculated for 0.008 af (100% of inflow)
 Center-of-Mass det. time= 63.7 min (854.0 - 790.3)

Volume	Invert	Avail.Storage	Storage Description			
#1	265.75'	150 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
265.75	150	65.0	0	0	150	
266.75	150	65.0	150	150	215	

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Device	Routing	Invert	Outlet Devices
#1	Device 3	265.75'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	262.97'	12.0" Round Culvert L= 35.0' Ke= 0.500 Inlet / Outlet Invert= 262.97' / 262.62' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.14 cfs @ 11.99 hrs HW=266.31' (Free Discharge)

- ↑ **3=Culvert** (Passes 0.14 cfs of 6.37 cfs potential flow)
- ↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)
- ↑ **2=Orifice/Grate** (Weir Controls 0.14 cfs @ 0.77 fps)

Summary for Pond SMP-4.4: Planter

Inflow Area = 0.029 ac, 84.44% Impervious, Inflow Depth = 4.93" for 100-YEAR event
 Inflow = 0.24 cfs @ 11.97 hrs, Volume= 0.012 af
 Outflow = 0.23 cfs @ 11.98 hrs, Volume= 0.012 af, Atten= 1%, Lag= 0.7 min
 Primary = 0.23 cfs @ 11.98 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 266.33' @ 11.98 hrs Surf.Area= 185 sf Storage= 107 cf

Plug-Flow detention time= 58.5 min calculated for 0.012 af (100% of inflow)
 Center-of-Mass det. time= 58.4 min (842.2 - 783.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	265.75'	185 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
265.75	185	93.0	0	0	185	
266.75	185	93.0	185	185	278	

Device	Routing	Invert	Outlet Devices
#1	Device 3	265.75'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	263.25'	12.0" Round Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 263.25' / 263.07' S= 0.0106 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.23 cfs @ 11.98 hrs HW=266.33' (Free Discharge)

- ↑ **3=Culvert** (Passes 0.23 cfs of 6.07 cfs potential flow)
- ↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)
- ↑ **2=Orifice/Grate** (Weir Controls 0.23 cfs @ 0.92 fps)

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Summary for Pond SMP-5.1: Planter

Inflow Area = 0.038 ac, 100.00% Impervious, Inflow Depth = 5.96" for 100-YEAR event
 Inflow = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af
 Outflow = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.4 min
 Primary = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 280.60' @ 11.97 hrs Surf.Area= 115 sf Storage= 69 cf

Plug-Flow detention time= 46.8 min calculated for 0.019 af (100% of inflow)
 Center-of-Mass det. time= 46.8 min (787.3 - 740.5)

Volume	Invert	Avail.Storage	Storage Description			
#1	280.00'	115 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
280.00	115	59.0	0	0	115	
281.00	115	59.0	115	115	174	

Device	Routing	Invert	Outlet Devices
#1	Device 3	280.00'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	280.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	277.00'	12.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 277.00' / 276.80' S= 0.0200 ' S= 0.0200 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.34 cfs @ 11.97 hrs HW=280.60' (Free Discharge)

- ↑ 3=Culvert (Passes 0.34 cfs of 6.66 cfs potential flow)
- ↑ 1=Exfiltration (Exfiltration Controls 0.01 cfs)
- ↑ 2=Orifice/Grate (Weir Controls 0.33 cfs @ 1.04 fps)

Summary for Pond SMP-6.1: Planter

Inflow Area = 0.323 ac, 83.36% Impervious, Inflow Depth = 5.05" for 100-YEAR event
 Inflow = 2.39 cfs @ 11.97 hrs, Volume= 0.136 af
 Outflow = 2.22 cfs @ 12.00 hrs, Volume= 0.136 af, Atten= 7%, Lag= 1.7 min
 Primary = 2.22 cfs @ 12.00 hrs, Volume= 0.136 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 294.20' @ 12.00 hrs Surf.Area= 1,345 sf Storage= 1,082 cf

Plug-Flow detention time= 51.3 min calculated for 0.136 af (100% of inflow)
 Center-of-Mass det. time= 51.3 min (795.3 - 744.0)

Volume	Invert	Avail.Storage	Storage Description			
#1	293.40'	1,345 cf	Custom Stage Data (Irregular) Listed below (Recalc)			

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
293.40	1,345	387.0	0	0	1,345
294.40	1,345	387.0	1,345	1,345	1,732

Device	Routing	Invert	Outlet Devices
#1	Device 3	293.40'	2.000 in/hr Exfiltration over Surface area
#2	Device 3	293.90'	15.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Primary	278.05'	12.0" Round Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 278.05' / 276.35' S= 0.0773 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.22 cfs @ 12.00 hrs HW=294.20' (Free Discharge)

3=Culvert (Passes 2.22 cfs of 14.96 cfs potential flow)

1=Exfiltration (Exfiltration Controls 0.06 cfs)

2=Orifice/Grate (Weir Controls 2.16 cfs @ 1.80 fps)

Summary for Link AP-1: AP-1

Inflow Area = 0.862 ac, 83.24% Impervious, Inflow Depth = 2.57" for 100-YEAR event
 Inflow = 2.09 cfs @ 11.98 hrs, Volume= 0.185 af
 Primary = 2.09 cfs @ 11.98 hrs, Volume= 0.185 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link AP-2: AP-2

Inflow Area = 0.057 ac, 0.00% Impervious, Inflow Depth = 0.34" for 100-YEAR event
 Inflow = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af
 Primary = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link AP-3: AP-3

Inflow Area = 2.058 ac, 66.80% Impervious, Inflow Depth > 3.23" for 100-YEAR event
 Inflow = 3.94 cfs @ 11.97 hrs, Volume= 0.554 af
 Primary = 3.94 cfs @ 11.97 hrs, Volume= 0.554 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Attachment D

**Proposed Frozen Conditions Watershed Map and
HydroCAD Calculations**

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.700	39	>75% Grass cover, Good, HSG A (1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.2, B5.4, B6.1, B6.2)
2.092	98	Paved parking, HSG A (1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2)
0.185	30	Woods, Good, HSG A (3.1, 4, B6.2)
2.978	80	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.978	HSG A	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.978		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.700	0.000	0.000	0.000	0.000	0.700	>75% Grass cover, Good	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.2, B5.4, B6.1, B6.2
2.092	0.000	0.000	0.000	0.000	2.092	Paved parking	1, 2.1, 2.2, 3.1, 3.2, 4, 5, 6, 7, 8, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.2, B5.3, B5.4, B6.1, B6.2
0.185	0.000	0.000	0.000	0.000	0.185	Woods, Good	3.1, 4, B6.2
2.978	0.000	0.000	0.000	0.000	2.978	TOTAL AREA	

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=1.63" Tc=6.0 min CN=95 Runoff=1.76 cfs 0.087 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=1.72" Tc=6.0 min CN=96 Runoff=0.31 cfs 0.016 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=0.10" Tc=6.0 min CN=61 Runoff=0.00 cfs 0.001 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=67' Slope=0.1400 '/ Tc=7.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=0.07" Flow Length=60' Slope=0.2300 '/ Tc=6.0 min CN=59 Runoff=0.00 cfs 0.000 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=0.70" Tc=6.0 min CN=81 Runoff=0.27 cfs 0.013 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=1.54" Tc=6.0 min CN=94 Runoff=0.37 cfs 0.018 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=0.91" Tc=6.0 min CN=85 Runoff=0.56 cfs 0.026 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.15 cfs 0.008 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=1.15" Tc=6.0 min CN=89 Runoff=0.04 cfs 0.002 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=1.02" Tc=6.0 min CN=87 Runoff=0.04 cfs 0.002 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=1.15" Tc=6.0 min CN=89 Runoff=0.06 cfs 0.003 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.49 cfs 0.026 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.11 cfs 0.006 af

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Type II 24-hr 1-YEAR Rainfall=2.15"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.33 cfs 0.018 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.09 cfs 0.005 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=1.22" Tc=6.0 min CN=90 Runoff=0.14 cfs 0.007 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=1.92" Tc=6.0 min CN=98 Runoff=0.81 cfs 0.043 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Pond 1P: Underground Detention #2	Peak Elev=273.65' Storage=212 cf Inflow=0.32 cfs 0.008 af Outflow=0.02 cfs 0.008 af
Pond 3P: EX CB	Peak Elev=265.50' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: EX CB2	Peak Elev=261.68' Inflow=0.96 cfs 0.165 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=0.96 cfs 0.165 af
Pond 5P: Frozen Planter 4.1	Peak Elev=266.18' Storage=372 cf Inflow=0.15 cfs 0.009 af Outflow=0.00 cfs 0.000 af
Pond 6P: Frozen Planter 4.2	Peak Elev=266.25' Storage=69 cf Inflow=0.04 cfs 0.002 af Outflow=0.00 cfs 0.000 af
Pond 7P: Frozen Planter 4.3	Peak Elev=266.23' Storage=72 cf Inflow=0.04 cfs 0.002 af Outflow=0.00 cfs 0.000 af
Pond 8P: Frozen Planter 4.4	Peak Elev=266.25' Storage=93 cf Inflow=0.06 cfs 0.003 af Outflow=0.00 cfs 0.001 af
Pond 9P: Frozen Planter 5.1	Peak Elev=280.55' Storage=63 cf Inflow=0.11 cfs 0.006 af Outflow=0.11 cfs 0.005 af
Pond 10P: Frozen Planter 6.1	Peak Elev=295.40' Storage=877 cf Inflow=0.81 cfs 0.043 af Outflow=0.61 cfs 0.028 af
Pond 12P: CB-20	Peak Elev=261.05' Inflow=0.27 cfs 0.013 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=0.27 cfs 0.013 af
Pond 16P: Underground Detention #1	Peak Elev=272.52' Storage=3,047 cf Inflow=2.48 cfs 0.096 af Outflow=0.04 cfs 0.090 af
Pond EXCB-1: EX-CB1	Peak Elev=264.68' Inflow=0.40 cfs 0.139 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.40 cfs 0.139 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=279.41' Inflow=1.13 cfs 0.059 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=1.13 cfs 0.059 af

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Type II 24-hr 1-YEAR Rainfall=2.15"

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Pond HS-B: Hydrodynamic Separator Peak Elev=276.90' Inflow=1.99 cfs 0.099 af
15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/ Outflow=1.99 cfs 0.099 af

Pond MH-2: MH-2 Peak Elev=264.92' Inflow=0.05 cfs 0.121 af
24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/ Outflow=0.05 cfs 0.121 af

Pond SMP-1: Infiltration Tanks Peak Elev=278.31' Storage=440 cf Inflow=1.13 cfs 0.059 af
Discarded=0.34 cfs 0.057 af Primary=0.24 cfs 0.003 af Outflow=0.58 cfs 0.059 af

Pond SMP-2: Underground Sand Filter Peak Elev=276.68' Storage=754 cf Inflow=1.99 cfs 0.099 af
Primary=0.01 cfs 0.031 af Secondary=1.92 cfs 0.068 af Outflow=1.93 cfs 0.099 af

Link AP-1: AP-1 Inflow=0.28 cfs 0.022 af
Primary=0.28 cfs 0.022 af

Link AP-2: AP-2 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link AP-3: AP-3 Inflow=0.96 cfs 0.165 af
Primary=0.96 cfs 0.165 af

Total Runoff Area = 2.978 ac Runoff Volume = 0.279 af Average Runoff Depth = 1.13"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 10-YEAR Rainfall=3.75"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=3.18" Tc=6.0 min CN=95 Runoff=3.29 cfs 0.171 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=3.29" Tc=6.0 min CN=96 Runoff=0.56 cfs 0.030 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=0.69" Tc=6.0 min CN=61 Runoff=0.07 cfs 0.004 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=67' Slope=0.1400 '/ Tc=7.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=0.60" Flow Length=60' Slope=0.2300 '/ Tc=6.0 min CN=59 Runoff=0.04 cfs 0.002 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.00" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.00 cfs 0.000 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=1.91" Tc=6.0 min CN=81 Runoff=0.74 cfs 0.035 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.02" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=3.08" Tc=6.0 min CN=94 Runoff=0.70 cfs 0.036 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=2.24" Tc=6.0 min CN=85 Runoff=1.36 cfs 0.064 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.015 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=2.59" Tc=6.0 min CN=89 Runoff=0.09 cfs 0.004 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=2.41" Tc=6.0 min CN=87 Runoff=0.08 cfs 0.004 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=2.59" Tc=6.0 min CN=89 Runoff=0.13 cfs 0.006 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.87 cfs 0.048 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.20 cfs 0.011 af

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Type II 24-hr 10-YEAR Rainfall=3.75"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.58 cfs 0.032 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=0.17 cfs 0.009 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=2.68" Tc=6.0 min CN=90 Runoff=0.29 cfs 0.014 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=3.52" Tc=6.0 min CN=98 Runoff=1.43 cfs 0.079 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.02" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Pond 1P: Underground Detention #2	Peak Elev=275.16' Storage=1,105 cf Inflow=1.05 cfs 0.033 af Outflow=0.04 cfs 0.033 af
Pond 3P: EX CB	Peak Elev=265.51' Inflow=0.00 cfs 0.000 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: EX CB2	Peak Elev=261.91' Inflow=2.11 cfs 0.283 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=2.11 cfs 0.283 af
Pond 5P: Frozen Planter 4.1	Peak Elev=266.28' Storage=459 cf Inflow=0.33 cfs 0.018 af Outflow=0.04 cfs 0.008 af
Pond 6P: Frozen Planter 4.2	Peak Elev=266.29' Storage=74 cf Inflow=0.09 cfs 0.004 af Outflow=0.08 cfs 0.003 af
Pond 7P: Frozen Planter 4.3	Peak Elev=266.28' Storage=79 cf Inflow=0.08 cfs 0.004 af Outflow=0.05 cfs 0.002 af
Pond 8P: Frozen Planter 4.4	Peak Elev=266.30' Storage=102 cf Inflow=0.13 cfs 0.006 af Outflow=0.12 cfs 0.004 af
Pond 9P: Frozen Planter 5.1	Peak Elev=280.57' Storage=66 cf Inflow=0.20 cfs 0.011 af Outflow=0.20 cfs 0.010 af
Pond 10P: Frozen Planter 6.1	Peak Elev=295.50' Storage=1,009 cf Inflow=1.43 cfs 0.079 af Outflow=1.28 cfs 0.063 af
Pond 12P: CB-20	Peak Elev=261.24' Inflow=0.74 cfs 0.035 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=0.74 cfs 0.035 af
Pond 16P: Underground Detention #1	Peak Elev=274.76' Storage=7,663 cf Inflow=4.93 cfs 0.224 af Outflow=0.05 cfs 0.149 af
Pond EXCB-1: EX-CB1	Peak Elev=264.77' Inflow=0.75 cfs 0.218 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=0.75 cfs 0.218 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=279.70' Inflow=2.02 cfs 0.110 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=2.02 cfs 0.110 af

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Pond HS-B: Hydrodynamic Separator Peak Elev=277.29' Inflow=3.75 cfs 0.195 af
15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/ Outflow=3.75 cfs 0.195 af

Pond MH-2: MH-2 Peak Elev=264.94' Inflow=0.07 cfs 0.182 af
24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/ Outflow=0.07 cfs 0.182 af

Pond SMP-1: Infiltration Tanks Peak Elev=279.09' Storage=841 cf Inflow=2.02 cfs 0.110 af
Discarded=0.34 cfs 0.089 af Primary=0.87 cfs 0.021 af Outflow=1.20 cfs 0.110 af

Pond SMP-2: Underground Sand Filter Peak Elev=277.03' Storage=868 cf Inflow=3.75 cfs 0.195 af
Primary=0.01 cfs 0.034 af Secondary=3.67 cfs 0.161 af Outflow=3.68 cfs 0.195 af

Link AP-1: AP-1 Inflow=0.96 cfs 0.085 af
Primary=0.96 cfs 0.085 af

Link AP-2: AP-2 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link AP-3: AP-3 Inflow=2.11 cfs 0.283 af
Primary=2.11 cfs 0.283 af

Total Runoff Area = 2.978 ac Runoff Volume = 0.564 af Average Runoff Depth = 2.27"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=28,075 sf 94.47% Impervious Runoff Depth=5.61" Tc=6.0 min CN=95 Runoff=5.60 cfs 0.301 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=4,724 sf 97.19% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=0.95 cfs 0.052 af
Subcatchment 2.2: Subcat 2.2	Runoff Area=2,822 sf 36.92% Impervious Runoff Depth=2.14" Tc=6.0 min CN=61 Runoff=0.25 cfs 0.012 af
Subcatchment 3.1: Subcat 3.1	Runoff Area=2,496 sf 0.00% Impervious Runoff Depth=0.34" Flow Length=67' Slope=0.1400 '/' Tc=7.9 min CN=36 Runoff=0.01 cfs 0.002 af
Subcatchment 3.2: Subcat 3.2	Runoff Area=1,809 sf 34.17% Impervious Runoff Depth=1.97" Flow Length=60' Slope=0.2300 '/' Tc=6.0 min CN=59 Runoff=0.14 cfs 0.007 af
Subcatchment 4: Subcat 4	Runoff Area=17,409 sf 1.87% Impervious Runoff Depth=0.34" Flow Length=119' Tc=10.9 min CN=36 Runoff=0.04 cfs 0.011 af
Subcatchment 5: Subcat 5	Runoff Area=9,454 sf 71.40% Impervious Runoff Depth=4.07" Tc=6.0 min CN=81 Runoff=1.53 cfs 0.074 af
Subcatchment 6: Subcat 6	Runoff Area=4,863 sf 0.27% Impervious Runoff Depth=0.50" Tc=6.0 min CN=39 Runoff=0.05 cfs 0.005 af
Subcatchment 7: Subcat 7	Runoff Area=6,076 sf 93.99% Impervious Runoff Depth=5.49" Tc=6.0 min CN=94 Runoff=1.20 cfs 0.064 af
Subcatchment 8: Subcat 8	Runoff Area=15,027 sf 78.55% Impervious Runoff Depth=4.49" Tc=6.0 min CN=85 Runoff=2.63 cfs 0.129 af
Subcatchment B4.1: Subcat B4.1	Runoff Area=2,170 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.44 cfs 0.025 af
Subcatchment B4.2: Subcat B4.2	Runoff Area=883 sf 84.82% Impervious Runoff Depth=4.93" Tc=6.0 min CN=89 Runoff=0.16 cfs 0.008 af
Subcatchment B4.3: Subcat B4.3	Runoff Area=845 sf 81.85% Impervious Runoff Depth=4.71" Tc=6.0 min CN=87 Runoff=0.15 cfs 0.008 af
Subcatchment B4.4: Subcat B4.4	Runoff Area=1,273 sf 84.44% Impervious Runoff Depth=4.93" Tc=6.0 min CN=89 Runoff=0.24 cfs 0.012 af
Subcatchment B4.5: Subcat B4.5	Runoff Area=7,137 sf 99.96% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=1.45 cfs 0.081 af
Subcatchment B5.1: Subcat B5.1	Runoff Area=1,664 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.34 cfs 0.019 af

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Subcatchment B5.2: Subcat B5.2	Runoff Area=4,778 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.97 cfs 0.054 af
Subcatchment B5.3: Subcat B5.3	Runoff Area=1,377 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=0.28 cfs 0.016 af
Subcatchment B5.4: Subcat B5.4	Runoff Area=2,779 sf 87.19% Impervious Runoff Depth=5.04" Tc=6.0 min CN=90 Runoff=0.53 cfs 0.027 af
Subcatchment B6.1: Subcat B6.1	Runoff Area=11,712 sf 99.96% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=2.38 cfs 0.134 af
Subcatchment B6.2: Subcat B6.2	Runoff Area=2,336 sf 0.14% Impervious Runoff Depth=0.50" Tc=6.0 min CN=39 Runoff=0.02 cfs 0.002 af
Pond 1P: Underground Detention #2	Peak Elev=276.71' Storage=1,945 cf Inflow=3.42 cfs 0.078 af Outflow=1.29 cfs 0.078 af
Pond 3P: EX CB	Peak Elev=265.60' Inflow=0.04 cfs 0.011 af 24.0" Round Culvert n=0.013 L=216.0' S=0.0050 '/' Outflow=0.04 cfs 0.011 af
Pond 4P: EX CB2	Peak Elev=262.20' Inflow=3.94 cfs 0.538 af 24.0" Round Culvert n=0.013 L=50.0' S=0.0050 '/' Outflow=3.94 cfs 0.538 af
Pond 5P: Frozen Planter 4.1	Peak Elev=266.40' Storage=569 cf Inflow=0.69 cfs 0.036 af Outflow=0.61 cfs 0.026 af
Pond 6P: Frozen Planter 4.2	Peak Elev=266.31' Storage=77 cf Inflow=0.16 cfs 0.008 af Outflow=0.16 cfs 0.007 af
Pond 7P: Frozen Planter 4.3	Peak Elev=266.31' Storage=84 cf Inflow=0.15 cfs 0.008 af Outflow=0.15 cfs 0.006 af
Pond 8P: Frozen Planter 4.4	Peak Elev=266.33' Storage=107 cf Inflow=0.24 cfs 0.012 af Outflow=0.23 cfs 0.010 af
Pond 9P: Frozen Planter 5.1	Peak Elev=280.60' Storage=69 cf Inflow=0.34 cfs 0.019 af Outflow=0.34 cfs 0.018 af
Pond 10P: Frozen Planter 6.1	Peak Elev=295.61' Storage=1,154 cf Inflow=2.39 cfs 0.136 af Outflow=2.20 cfs 0.120 af
Pond 12P: CB-20	Peak Elev=261.46' Inflow=1.53 cfs 0.074 af 12.0" Round Culvert n=0.013 L=50.0' S=0.0300 '/' Outflow=1.53 cfs 0.074 af
Pond 16P: Underground Detention #1	Peak Elev=276.72' Storage=11,033 cf Inflow=8.56 cfs 0.429 af Outflow=1.42 cfs 0.294 af
Pond EXCB-1: EX-CB1	Peak Elev=264.95' Inflow=1.64 cfs 0.409 af 24.0" Round Culvert n=0.013 L=250.0' S=0.0122 '/' Outflow=1.64 cfs 0.409 af
Pond HS-A: Hydrodynamic Separator	Peak Elev=280.17' Inflow=3.37 cfs 0.188 af 12.0" Round Culvert n=0.013 L=5.0' S=0.0100 '/' Outflow=3.37 cfs 0.188 af

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Pond HS-B: Hydrodynamic Separator Peak Elev=277.93' Inflow=6.41 cfs 0.344 af
15.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/ Outflow=6.41 cfs 0.344 af

Pond MH-2: MH-2 Peak Elev=265.38' Inflow=1.43 cfs 0.329 af
24.0" Round Culvert n=0.013 L=83.0' S=0.0047 '/ Outflow=1.43 cfs 0.329 af

Pond SMP-1: Infiltration Tanks Peak Elev=279.53' Storage=1,066 cf Inflow=3.37 cfs 0.188 af
Discarded=0.34 cfs 0.134 af Primary=2.94 cfs 0.053 af Outflow=3.28 cfs 0.188 af

Pond SMP-2: Underground Sand Filter Peak Elev=277.54' Storage=972 cf Inflow=6.41 cfs 0.344 af
Primary=0.01 cfs 0.035 af Secondary=6.46 cfs 0.308 af Outflow=6.48 cfs 0.344 af

Link AP-1: AP-1 Inflow=2.68 cfs 0.200 af
Primary=2.68 cfs 0.200 af

Link AP-2: AP-2 Inflow=0.01 cfs 0.002 af
Primary=0.01 cfs 0.002 af

Link AP-3: AP-3 Inflow=3.94 cfs 0.538 af
Primary=3.94 cfs 0.538 af

Total Runoff Area = 2.978 ac Runoff Volume = 1.042 af Average Runoff Depth = 4.20"
29.73% Pervious = 0.885 ac 70.27% Impervious = 2.092 ac

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Summary for Subcatchment 1: Subcat 1

Runoff = 5.60 cfs @ 11.97 hrs, Volume= 0.301 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
26,522	98	Paved parking, HSG A
1,553	39	>75% Grass cover, Good, HSG A
28,075	95	Weighted Average
1,553		5.53% Pervious Area
26,522		94.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 0.95 cfs @ 11.97 hrs, Volume= 0.052 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4,592	98	Paved parking, HSG A
133	39	>75% Grass cover, Good, HSG A
4,724	96	Weighted Average
133		2.81% Pervious Area
4,592		97.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 2.2: Subcat 2.2

Runoff = 0.25 cfs @ 11.98 hrs, Volume= 0.012 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,042	98	Paved parking, HSG A
1,780	39	>75% Grass cover, Good, HSG A
2,822	61	Weighted Average
1,780		63.08% Pervious Area
1,042		36.92% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 3.1: Subcat 3.1

Runoff = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,798	39	>75% Grass cover, Good, HSG A
698	30	Woods, Good, HSG A
0	98	Paved parking, HSG A
2,496	36	Weighted Average
2,496		100.00% Pervious Area
0		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	67	0.1400	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"

Summary for Subcatchment 3.2: Subcat 3.2

Runoff = 0.14 cfs @ 11.98 hrs, Volume= 0.007 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
618	98	Paved parking, HSG A
1,191	39	>75% Grass cover, Good, HSG A
1,809	59	Weighted Average
1,191		65.83% Pervious Area
618		34.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	60	0.2300	0.17		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"

Summary for Subcatchment 4: Subcat 4

Runoff = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Area (sf)	CN	Description
7,347	30	Woods, Good, HSG A
325	98	Paved parking, HSG A
9,737	39	>75% Grass cover, Good, HSG A
17,409	36	Weighted Average
17,084		98.13% Pervious Area
325		1.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	100	0.1450	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.60"
0.1	19	0.0520	3.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
10.9	119	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
6,750	98	Paved parking, HSG A
2,704	39	>75% Grass cover, Good, HSG A
9,454	81	Weighted Average
2,704		28.60% Pervious Area
6,750		71.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 6: Subcat 6

Runoff = 0.05 cfs @ 12.02 hrs, Volume= 0.005 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4,850	39	>75% Grass cover, Good, HSG A
13	98	Paved parking, HSG A
4,863	39	Weighted Average
4,850		99.73% Pervious Area
13		0.27% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 7: Subcat 7

Runoff = 1.20 cfs @ 11.97 hrs, Volume= 0.064 af, Depth= 5.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
365	39	>75% Grass cover, Good, HSG A
5,710	98	Paved parking, HSG A
6,076	94	Weighted Average
365		6.01% Pervious Area
5,710		93.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 8: Subcat 8

Runoff = 2.63 cfs @ 11.97 hrs, Volume= 0.129 af, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
11,804	98	Paved parking, HSG A
3,224	39	>75% Grass cover, Good, HSG A
15,027	85	Weighted Average
3,224		21.45% Pervious Area
11,804		78.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.1: Subcat B4.1

Runoff = 0.44 cfs @ 11.97 hrs, Volume= 0.025 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Area (sf)	CN	Description
2,170	98	Paved parking, HSG A
0	39	>75% Grass cover, Good, HSG A
2,170	98	Weighted Average
0		0.00% Pervious Area
2,170		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.2: Subcat B4.2

Runoff = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
749	98	Paved parking, HSG A
134	39	>75% Grass cover, Good, HSG A
883	89	Weighted Average
134		15.18% Pervious Area
749		84.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.3: Subcat B4.3

Runoff = 0.15 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
692	98	Paved parking, HSG A
153	39	>75% Grass cover, Good, HSG A
845	87	Weighted Average
153		18.15% Pervious Area
692		81.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment B4.4: Subcat B4.4

Runoff = 0.24 cfs @ 11.97 hrs, Volume= 0.012 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
198	39	>75% Grass cover, Good, HSG A
1,075	98	Paved parking, HSG A
1,273	89	Weighted Average
198		15.56% Pervious Area
1,075		84.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B4.5: Subcat B4.5

Runoff = 1.45 cfs @ 11.97 hrs, Volume= 0.081 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
3	39	>75% Grass cover, Good, HSG A
7,134	98	Paved parking, HSG A
7,137	98	Weighted Average
3		0.04% Pervious Area
7,134		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.1: Subcat B5.1

Runoff = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,664	98	Paved parking, HSG A
1,664		100.00% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.2: Subcat B5.2

Runoff = 0.97 cfs @ 11.97 hrs, Volume= 0.054 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
0	39	>75% Grass cover, Good, HSG A
4,778	98	Paved parking, HSG A
4,778	98	Weighted Average
0		0.00% Pervious Area
4,778		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.3: Subcat B5.3

Runoff = 0.28 cfs @ 11.97 hrs, Volume= 0.016 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
1,377	98	Paved parking, HSG A
1,377		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B5.4: Subcat B5.4

Runoff = 0.53 cfs @ 11.97 hrs, Volume= 0.027 af, Depth= 5.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
2,423	98	Paved parking, HSG A
356	39	>75% Grass cover, Good, HSG A
2,779	90	Weighted Average
356		12.81% Pervious Area
2,423		87.19% Impervious Area

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B6.1: Subcat B6.1

Runoff = 2.38 cfs @ 11.97 hrs, Volume= 0.134 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
4	39	>75% Grass cover, Good, HSG A
11,708	98	Paved parking, HSG A
11,712	98	Weighted Average
4		0.04% Pervious Area
11,708		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B6.2: Subcat B6.2

Runoff = 0.02 cfs @ 12.02 hrs, Volume= 0.002 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=6.20"

Area (sf)	CN	Description
7	30	Woods, Good, HSG A
3	98	Paved parking, HSG A
2,326	39	>75% Grass cover, Good, HSG A
2,336	39	Weighted Average
2,333		99.86% Pervious Area
3		0.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Underground Detention #2

Inflow Area = 0.462 ac, 93.40% Impervious, Inflow Depth = 2.02" for 100-YEAR event
 Inflow = 3.42 cfs @ 11.98 hrs, Volume= 0.078 af
 Outflow = 1.29 cfs @ 12.09 hrs, Volume= 0.078 af, Atten= 62%, Lag= 6.5 min
 Primary = 1.29 cfs @ 12.09 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

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Peak Elev= 276.71' @ 12.09 hrs Surf.Area= 332 sf Storage= 1,945 cf

Plug-Flow detention time= 309.1 min calculated for 0.078 af (100% of inflow)

Center-of-Mass det. time= 309.2 min (1,056.5 - 747.3)

Volume	Invert	Avail.Storage	Storage Description
#1	273.00'	2,011 cf	48.0" Round Pipe Storage L= 160.0'

Device	Routing	Invert	Outlet Devices
#1	Device 3	273.00'	1.0" Vert. Orifice/Grate C= 0.600
#2	Device 3	276.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	263.90'	12.0" Round Culvert L= 113.0' Ke= 0.500 Inlet / Outlet Invert= 263.90' / 261.64' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.27 cfs @ 12.09 hrs HW=276.71' (Free Discharge)↑ **3=Culvert** (Passes 1.27 cfs of 10.52 cfs potential flow)↑ **1=Orifice/Grate** (Orifice Controls 0.05 cfs @ 9.22 fps)↑ **2=Sharp-Crested Rectangular Weir** (Weir Controls 1.22 cfs @ 1.49 fps)**Summary for Pond 3P: EX CB**

Inflow Area = 0.400 ac, 1.87% Impervious, Inflow Depth = 0.34" for 100-YEAR event
 Inflow = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af
 Outflow = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.04 cfs @ 12.11 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 265.60' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	265.50'	24.0" Round Culvert L= 216.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 265.50' / 264.42' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.04 cfs @ 12.11 hrs HW=265.60' (Free Discharge)↑ **1=Culvert** (Barrel Controls 0.04 cfs @ 1.10 fps)**Summary for Pond 4P: EX CB2**

Inflow Area = 2.058 ac, 66.80% Impervious, Inflow Depth > 3.14" for 100-YEAR event
 Inflow = 3.94 cfs @ 11.97 hrs, Volume= 0.538 af
 Outflow = 3.94 cfs @ 11.97 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.94 cfs @ 11.97 hrs, Volume= 0.538 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 262.20' @ 11.97 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	261.21'	24.0" Round Culvert L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 261.21' / 260.96' S= 0.0050 '/ Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=3.94 cfs @ 11.97 hrs HW=262.20' (Free Discharge)↑**1=Culvert** (Barrel Controls 3.94 cfs @ 3.71 fps)**Summary for Pond 5P: Frozen Planter 4.1**

Inflow Area = 0.115 ac, 64.34% Impervious, Inflow Depth = 3.80" for 100-YEAR event
 Inflow = 0.69 cfs @ 11.97 hrs, Volume= 0.036 af
 Outflow = 0.61 cfs @ 12.01 hrs, Volume= 0.026 af, Atten= 11%, Lag= 2.2 min
 Primary = 0.61 cfs @ 12.01 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 266.40' @ 12.01 hrs Surf.Area= 873 sf Storage= 569 cf

Plug-Flow detention time= 184.7 min calculated for 0.026 af (72% of inflow)

Center-of-Mass det. time= 82.2 min (859.1 - 776.9)

Volume	Invert	Avail.Storage	Storage Description		
#1	265.75'	873 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
265.75	873	252.0	0	0	873
266.75	873	252.0	873	873	1,125

Device	Routing	Invert	Outlet Devices
#1	Device 2	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	263.62'	12.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 263.62' / 261.64' S= 0.0413 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.61 cfs @ 12.01 hrs HW=266.40' (Free Discharge)↑**2=Culvert** (Passes 0.61 cfs of 5.71 cfs potential flow)↑**1=Orifice/Grate** (Weir Controls 0.61 cfs @ 1.27 fps)**Summary for Pond 6P: Frozen Planter 4.2**

Inflow Area = 0.020 ac, 84.82% Impervious, Inflow Depth = 4.93" for 100-YEAR event
 Inflow = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af
 Outflow = 0.16 cfs @ 11.98 hrs, Volume= 0.007 af, Atten= 1%, Lag= 0.5 min
 Primary = 0.16 cfs @ 11.98 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 266.31' @ 11.98 hrs Surf.Area= 137 sf Storage= 77 cf

Plug-Flow detention time= 122.3 min calculated for 0.007 af (81% of inflow)

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Center-of-Mass det. time= 44.6 min (828.4 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	265.75'	137 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
265.75	137	60.0	0	0	137
266.75	137	60.0	137	137	197

Device	Routing	Invert	Outlet Devices
#1	Device 2	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	262.52'	12.0" Round Culvert L= 57.0' Ke= 0.500 Inlet / Outlet Invert= 262.52' / 260.83' S= 0.0296 1/ S Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.16 cfs @ 11.98 hrs HW=266.31' (Free Discharge)

↑ **2=Culvert** (Passes 0.16 cfs of 6.86 cfs potential flow)

↑ **1=Orifice/Grate** (Weir Controls 0.16 cfs @ 0.82 fps)

Summary for Pond 7P: Frozen Planter 4.3

Inflow Area = 0.019 ac, 81.85% Impervious, Inflow Depth = 4.71" for 100-YEAR event
 Inflow = 0.15 cfs @ 11.97 hrs, Volume= 0.008 af
 Outflow = 0.15 cfs @ 11.98 hrs, Volume= 0.006 af, Atten= 1%, Lag= 0.6 min
 Primary = 0.15 cfs @ 11.98 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 266.31' @ 11.98 hrs Surf.Area= 150 sf Storage= 84 cf

Plug-Flow detention time= 133.8 min calculated for 0.006 af (77% of inflow)
 Center-of-Mass det. time= 48.3 min (838.6 - 790.3)

Volume	Invert	Avail.Storage	Storage Description
#1	265.75'	150 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
265.75	150	65.0	0	0	150
266.75	150	65.0	150	150	215

Device	Routing	Invert	Outlet Devices
#1	Device 2	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	262.97'	12.0" Round Culvert L= 35.0' Ke= 0.500 Inlet / Outlet Invert= 262.97' / 262.62' S= 0.0100 1/ S Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

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Type II 24-hr 100-YEAR Rainfall=6.20"

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Primary OutFlow Max=0.15 cfs @ 11.98 hrs HW=266.31' (Free Discharge)↳ **2=Culvert** (Passes 0.15 cfs of 6.37 cfs potential flow)↳ **1=Orifice/Grate** (Weir Controls 0.15 cfs @ 0.80 fps)**Summary for Pond 8P: Frozen Planter 4.4**

Inflow Area = 0.029 ac, 84.44% Impervious, Inflow Depth = 4.93" for 100-YEAR event
 Inflow = 0.24 cfs @ 11.97 hrs, Volume= 0.012 af
 Outflow = 0.23 cfs @ 11.98 hrs, Volume= 0.010 af, Atten= 1%, Lag= 0.7 min
 Primary = 0.23 cfs @ 11.98 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 266.33' @ 11.98 hrs Surf.Area= 185 sf Storage= 107 cf

Plug-Flow detention time= 117.9 min calculated for 0.010 af (82% of inflow)

Center-of-Mass det. time= 43.2 min (827.0 - 783.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	265.75'	185 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
265.75	185	93.0	0	0	185	
266.75	185	93.0	185	185	278	

Device	Routing	Invert	Outlet Devices	
#1	Device 2	266.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#2	Primary	263.25'	12.0" Round Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 263.25' / 263.07' S= 0.0106 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	

Primary OutFlow Max=0.23 cfs @ 11.98 hrs HW=266.33' (Free Discharge)↳ **2=Culvert** (Passes 0.23 cfs of 6.07 cfs potential flow)↳ **1=Orifice/Grate** (Weir Controls 0.23 cfs @ 0.93 fps)**Summary for Pond 9P: Frozen Planter 5.1**

Inflow Area = 0.038 ac, 100.00% Impervious, Inflow Depth = 5.96" for 100-YEAR event
 Inflow = 0.34 cfs @ 11.97 hrs, Volume= 0.019 af
 Outflow = 0.34 cfs @ 11.97 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.4 min
 Primary = 0.34 cfs @ 11.97 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 280.60' @ 11.97 hrs Surf.Area= 115 sf Storage= 69 cf

Plug-Flow detention time= 75.7 min calculated for 0.018 af (93% of inflow)

Center-of-Mass det. time= 35.5 min (776.0 - 740.5)

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Volume	Invert	Avail.Storage	Storage Description
#1	280.00'	115 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
280.00	115	59.0	0	0	115
281.00	115	59.0	115	115	174

Device	Routing	Invert	Outlet Devices
#1	Device 2	280.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	277.00'	12.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 277.00' / 276.80' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.34 cfs @ 11.97 hrs HW=280.60' (Free Discharge)

↑**2=Culvert** (Passes 0.34 cfs of 6.66 cfs potential flow)
 ↑**1=Orifice/Grate** (Weir Controls 0.34 cfs @ 1.05 fps)

Summary for Pond 10P: Frozen Planter 6.1

Inflow Area = 0.323 ac, 83.36% Impervious, Inflow Depth = 5.05" for 100-YEAR event
 Inflow = 2.39 cfs @ 11.97 hrs, Volume= 0.136 af
 Outflow = 2.20 cfs @ 12.00 hrs, Volume= 0.120 af, Atten= 8%, Lag= 1.8 min
 Primary = 2.20 cfs @ 12.00 hrs, Volume= 0.120 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 295.61' @ 12.00 hrs Surf.Area= 1,345 sf Storage= 1,154 cf

Plug-Flow detention time= 115.6 min calculated for 0.120 af (89% of inflow)
 Center-of-Mass det. time= 57.3 min (801.3 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,345 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
294.75	1,345	387.0	0	0	1,345
295.75	1,345	387.0	1,345	1,345	1,732

Device	Routing	Invert	Outlet Devices
#1	Device 2	295.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	278.05'	12.0" Round Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 278.05' / 276.35' S= 0.0773 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.20 cfs @ 12.00 hrs HW=295.61' (Free Discharge)

↑**2=Culvert** (Passes 2.20 cfs of 15.62 cfs potential flow)
 ↑**1=Orifice/Grate** (Weir Controls 2.20 cfs @ 1.96 fps)

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Summary for Pond 12P: CB-20

Inflow Area = 0.217 ac, 71.40% Impervious, Inflow Depth = 4.07" for 100-YEAR event
 Inflow = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af
 Outflow = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.53 cfs @ 11.97 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 261.46' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	260.80'	12.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 260.80' / 259.30' S= 0.0300 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.53 cfs @ 11.97 hrs HW=261.46' (Free Discharge)

↑**1=Culvert** (Inlet Controls 1.53 cfs @ 2.77 fps)

Summary for Pond 16P: Underground Detention #1

Inflow Area = 0.323 ac, 83.36% Impervious, Inflow Depth = 15.95" for 100-YEAR event
 Inflow = 8.56 cfs @ 11.98 hrs, Volume= 0.429 af
 Outflow = 1.42 cfs @ 12.22 hrs, Volume= 0.294 af, Atten= 83%, Lag= 14.2 min
 Primary = 1.42 cfs @ 12.22 hrs, Volume= 0.294 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 276.72' @ 12.22 hrs Surf.Area= 1,200 sf Storage= 11,033 cf

Plug-Flow detention time= 677.6 min calculated for 0.294 af (69% of inflow)
 Center-of-Mass det. time= 590.9 min (1,374.5 - 783.6)

Volume	Invert	Avail.Storage	Storage Description
#1	270.35'	11,545 cf	84.0" Round Pipe Storage L= 300.0'

Device	Routing	Invert	Outlet Devices
#1	Device 3	270.35'	1.0" Vert. Orifice/Grate C= 0.600
#2	Device 3	276.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	269.90'	12.0" Round Culvert L= 117.0' Ke= 0.500 Inlet / Outlet Invert= 269.90' / 268.73' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.42 cfs @ 12.22 hrs HW=276.72' (Free Discharge)

↑**3=Culvert** (Passes 1.42 cfs of 7.33 cfs potential flow)

↑**1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 12.11 fps)

↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.35 cfs @ 1.54 fps)

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Summary for Pond EXCB-1: EX-CB1

Inflow Area = 1.713 ac, 64.43% Impervious, Inflow Depth > 2.87" for 100-YEAR event
 Inflow = 1.64 cfs @ 12.21 hrs, Volume= 0.409 af
 Outflow = 1.64 cfs @ 12.21 hrs, Volume= 0.409 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.64 cfs @ 12.21 hrs, Volume= 0.409 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 264.95' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.42'	24.0" Round Culvert L= 250.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 264.42' / 261.36' S= 0.0122 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.64 cfs @ 12.21 hrs HW=264.95' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 1.64 cfs @ 2.47 fps)

Summary for Pond HS-A: Hydrodynamic Separator

Inflow Area = 0.382 ac, 99.18% Impervious, Inflow Depth = 5.89" for 100-YEAR event
 Inflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af
 Outflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 280.17' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	278.75'	12.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 278.75' / 278.70' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.36 cfs @ 11.97 hrs HW=280.17' (Free Discharge)
 ↑**1=Culvert** (Barrel Controls 3.36 cfs @ 4.28 fps)

Summary for Pond HS-B: Hydrodynamic Separator

Inflow Area = 0.740 ac, 94.08% Impervious, Inflow Depth = 5.58" for 100-YEAR event
 Inflow = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af
 Outflow = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.41 cfs @ 11.97 hrs, Volume= 0.344 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 277.93' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	276.10'	15.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 276.10' / 276.00' S= 0.0200 '/ Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

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Primary OutFlow Max=6.40 cfs @ 11.97 hrs HW=277.93' (Free Discharge)↑**1=Culvert** (Barrel Controls 6.40 cfs @ 5.21 fps)**Summary for Pond MH-2: MH-2**

Inflow Area = 1.062 ac, 90.83% Impervious, Inflow Depth > 3.72" for 100-YEAR event
 Inflow = 1.43 cfs @ 12.22 hrs, Volume= 0.329 af
 Outflow = 1.43 cfs @ 12.22 hrs, Volume= 0.329 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.43 cfs @ 12.22 hrs, Volume= 0.329 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 265.38' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.81'	24.0" Round Culvert L= 83.0' Ke= 0.500 Inlet / Outlet Invert= 264.81' / 264.42' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.43 cfs @ 12.22 hrs HW=265.38' (Free Discharge)↑**1=Culvert** (Barrel Controls 1.43 cfs @ 2.92 fps)**Summary for Pond SMP-1: Infiltration Tanks**

Inflow Area = 0.382 ac, 99.18% Impervious, Inflow Depth = 5.89" for 100-YEAR event
 Inflow = 3.37 cfs @ 11.97 hrs, Volume= 0.188 af
 Outflow = 3.28 cfs @ 11.98 hrs, Volume= 0.188 af, Atten= 3%, Lag= 1.0 min
 Discarded = 0.34 cfs @ 11.59 hrs, Volume= 0.134 af
 Primary = 2.94 cfs @ 11.98 hrs, Volume= 0.053 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 279.53' @ 11.98 hrs Surf.Area= 650 sf Storage= 1,066 cf

Plug-Flow detention time= 4.9 min calculated for 0.188 af (100% of inflow)
 Center-of-Mass det. time= 4.9 min (749.0 - 744.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	277.33'	489 cf	23.69'W x 27.46'L x 3.42'H Field A 2,221 cf Overall - 1,000 cf Embedded = 1,221 cf x 40.0% Voids
#2A	277.58'	950 cf	ACF R-Tank HD 1.5 x 150 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 15 Rows of 10 Chambers
		1,438 cf	Total Available Storage

Storage Group A created with Chamber Wizard

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Device	Routing	Invert	Outlet Devices
#1	Discarded	277.33'	22.500 in/hr Exfiltration over Surface area
#2	Primary	276.10'	12.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 276.10' / 276.00' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	279.25'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Device 2	278.00'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.34 cfs @ 11.59 hrs HW=277.36' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.34 cfs)

Primary OutFlow Max=2.93 cfs @ 11.98 hrs HW=279.53' (Free Discharge)

↳ **2=Culvert** (Passes 2.93 cfs of 6.47 cfs potential flow)

↳ **3=Sharp-Crested Rectangular Weir** (Weir Controls 1.86 cfs @ 1.72 fps)

↳ **4=Orifice/Grate** (Orifice Controls 1.07 cfs @ 5.44 fps)

Summary for Pond SMP-2: Underground Sand Filter

Inflow Area =	0.740 ac, 94.08% Impervious, Inflow Depth = 5.58" for 100-YEAR event
Inflow =	6.41 cfs @ 11.97 hrs, Volume= 0.344 af
Outflow =	6.48 cfs @ 11.96 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
Primary =	0.01 cfs @ 2.85 hrs, Volume= 0.035 af
Secondary =	6.46 cfs @ 11.96 hrs, Volume= 0.308 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 277.54' @ 11.96 hrs Surf.Area= 324 sf Storage= 972 cf

Plug-Flow detention time= 51.7 min calculated for 0.344 af (100% of inflow)

Center-of-Mass det. time= 51.8 min (811.7 - 759.9)

Volume	Invert	Avail.Storage	Storage Description
#1	274.35'	972 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
274.35	324	0	0
277.35	324	972	972

Device	Routing	Invert	Outlet Devices
#1	Device 2	274.35'	1.750 in/hr Exfiltration over Surface area
#2	Primary	271.35'	6.0" Round Culvert L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 271.35' / 271.19' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Secondary	275.85'	18.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 275.85' / 275.85' S= 0.0000 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

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Primary OutFlow Max=0.01 cfs @ 2.85 hrs HW=274.38' (Free Discharge)

↳ **2=Culvert** (Passes 0.01 cfs of 1.58 cfs potential flow)

↳ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=6.43 cfs @ 11.96 hrs HW=277.53' (Free Discharge)

↳ **3=Culvert** (Barrel Controls 6.43 cfs @ 4.06 fps)

Summary for Link AP-1: AP-1

Inflow Area = 0.862 ac, 83.24% Impervious, Inflow Depth = 2.79" for 100-YEAR event
Inflow = 2.68 cfs @ 11.98 hrs, Volume= 0.200 af
Primary = 2.68 cfs @ 11.98 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link AP-2: AP-2

Inflow Area = 0.057 ac, 0.00% Impervious, Inflow Depth = 0.34" for 100-YEAR event
Inflow = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af
Primary = 0.01 cfs @ 12.06 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link AP-3: AP-3

Inflow Area = 2.058 ac, 66.80% Impervious, Inflow Depth > 3.14" for 100-YEAR event
Inflow = 3.94 cfs @ 11.97 hrs, Volume= 0.538 af
Primary = 3.94 cfs @ 11.97 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Attachment E

Storm Data

Stormwater Practice Sizing

Job Name and # 77 Excelsior Avenue Mixed Use Development

Water Quality Volume Calculation

6/30/2016

$$WQv = [(P)(Rv)(A)]/12$$

Where:

$$Rv = 0.05 + 0.009(I)$$

I = impervious cover in percent

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

A = Area in acres

SMP-1: Infiltration Tanks

% Impervious	99.18%		
Rv	0.94		
90% Rainfall	1.15		
Area in Square Feet	16640		
WQv Required =	1503 ft³	0.035 ac-ft	

SMP-2: Sand Filter

% Impervious	94.08%		
Rv	0.90		
90% Rainfall	1.15		
Area in Square Feet	32234		
WQv Required=	2770 ft³	0.064 ac-ft	

SMP-4.1: Stormwater Planter

% Impervious	64.34%		
Rv	0.63		
90% Rainfall	1.15		
Area in Square Feet	5009		
WQv Required =	302 ft³	0.007 ac-ft	

SMP-4.2: Stormwater Planter

% Impervious	84.82%	
Rv	0.81	
90% Rainfall	1.15	
Area in Square Feet	871	
WQv Required =	68 ft³	0.002 ac-ft

SMP-4.3: Stormwater Planter

% Impervious	81.85%	
Rv	0.79	
90% Rainfall	1.15	
Area in Square Feet	827	
WQv Required =	62 ft³	0.001 ac-ft

SMP-4.4: Stormwater Planter

% Impervious	84.44%	
Rv	0.81	
90% Rainfall	1.15	
Area in Square Feet	1263	
WQv Required =	98 ft³	0.002 ac-ft

SMP-5.1: Stormwater Planter

% Impervious	100.00%		
Rv	0.95		
90% Rainfall	1.15		
Area in Square Feet	1655		
WQv Required =	151 ft ³	0.003 ac-ft	

SMP-6.1: Stormwater Planter

% Impervious	83.36%		
Rv	0.80		
90% Rainfall	1.15		
Area in Square Feet	14070		
WQv Required =	1079 ft ³	0.025 ac-ft	

Job Name and # 77 Excelsior Avenue Mixed Use Development

Minimum Runoff Reduction Volume

11/4/2015

$$RR_v = [(P)(R_v^*)(A_i)]/12$$

Where:

$$A_i = (S)(A_{ic})$$

$R_v = 0.05 + 0.009(I)$ where I is 100% impervious

A_i = impervious cover targeted for runoff reduction

A_{ic} = Total area of new impervious cover

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

S = Hydrologic Soil Group (HSG) Specific Reduction Factor (S)

A=0.55, B=0.40, C=0.30, D=0.20

S (HSG A)	0.55
A_{ic}	1.39 acres
R_v (Minimum 0.2)	0.95
90% Rainfall	1.15
A_i	0.767

$$RR_v = 0.070 \text{ acre feet} = 3,041 \text{ ft}^3$$

Job Name

77 Excelsior Avenue Mixed Use Development

Channel Protection Volume Calculation

4/5/2016

Step 1: Determine Qu

P = 2.15 in. (1-yr. storm)

Area = 2.978 acres

CN = 80

Ia = 0.500

Ia/P = 0.23

Tc = 0.1 Hrs.

Using Figure 4-II, TR-55 and Tc, determine Qu (csm/in)

Qu = 550 csm/in

Step 2: Determine Qo/Qi

Using Figure B-1, DEC Manual Appendix B for T = 24 hrs. and Qu, determine Qo/Qi

Qo/Qi = 0.035

Step 3: Determine Vs/Vr

$$Vs/Vr = 0.682 - 1.43(Qo/Qi) + 1.64 (Qo/Qi)^2 - 0.804 (Qo/Qi)^3$$

Vs/Vr = 0.634

Step 4: Determine Qd

Using Figure 2.1, TR-55 or SCS TR-16 and P, determine Qd (in of runoff)

Qd = 0.6 in

Step 5: Determine Cpv

Area = 2.98 acres

$$Cpv = Vs = (Vs/Vr) * Qd * A/12$$

Cpv = 0.094 ac-ft

Cpv = 4112 ft³

Volume reduction achieved through green infrastructure

SMP 1 1503 ft³

SMP4.1 302 ft³

SMP4.2 67 ft³

SMP4.3 63 ft³

SMP4.4 101 ft³

SMP5.1 151 ft³

SMP6.1 1078 ft³

Cpv Req.= 847 ft³

Stormwater Planter Worksheet

Building 4 Stormwater Planters

$$\text{Af} = \text{WQv} * (\text{df}) / [\text{k} * (\text{hf} + \text{df})(\text{tf})]$$

Planter 4.1

where

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the planter, but can be varied depending on the properties of the soil media.
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*
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

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	0.12	0.07	64%	0.63	302	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	302	ft ³	WQv				
Depth of Soil Media	1.5	ft	df				
Hydraulic Conductivity	4	ft/d	k				
Average Height of Ponding	0.5	ft	hf				
Filter Time	0.17	d	tf				
Required Area of Filter	333	ft ²	Af				
Area of Filter							
Width	5	ft					
Length	175	ft					
Area Provided	875	ft ²					
Volume Provided	793.333333						
Runoff Reduction							
Soil Type	A						
Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	302	ft ³					
RRv Applied	302	ft ³					

Stormwater Planter Worksheet

Building 4 Stormwater Planters
 $Af = WQv * (df) / [k * (hf + df)(tf)]$

Planter 4.2

where

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the
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**
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area <i>(Acres)</i>	Impervious Area <i>(Acres)</i>	Percent Impervious %	Rv	WQv <i>(ft³)</i>	Precipitation <i>(in)</i>	Description
2	0.02	0.02	84%	0.81	67	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	67	<i>ft³</i>	<i>WQv</i>				
Depth of Soil Media	1.5	<i>ft</i>	<i>df</i>				
Hydraulic Conductivity	4	<i>ft/d</i>	<i>k</i>				
Average Height of Ponding	0.5	<i>ft</i>	<i>hf</i>				
Filter Time	0.17	<i>d</i>	<i>tf</i>				
Required Area of Filter	74	<i>ft²</i>	<i>Af</i>				
Area of Filter							
Width	5.2	<i>ft</i>					
Length	26.5	<i>ft</i>					
Area Provided	137.8	<i>ft²</i>					
Volume Provided	124.938667						
Runoff Reduction							
Soil Type	A						
Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	67	<i>ft³</i>					
RRv Applied	67	<i>ft³</i>					

Stormwater Planter Worksheet

Building 4 Stormwater Planters
 $Af = WQv * (df) / [k * (hf + df)(tf)]$

where

Planter 4.3

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the
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**
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area <i>(Acres)</i>	Impervious Area <i>(Acres)</i>	Percent Impervious <i>%</i>	Rv	WQv <i>(ft³)</i>	Precipitation <i>(in)</i>	Description
3	0.02	0.02	82%	0.79	63	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	63	<i>ft³</i>	<i>WQv</i>				
Depth of Soil Media	1.5	<i>ft</i>	<i>df</i>				
Hydraulic Conductivity	4	<i>ft/d</i>	<i>k</i>				
Average Height of Ponding	0.5	<i>ft</i>	<i>hf</i>				
Filter Time	0.17	<i>d</i>	<i>tf</i>				
Required Area of Filter	69	<i>ft²</i>	<i>Af</i>				
Area of Filter							
Width	6	<i>ft</i>					
Length	25	<i>ft</i>					
Area Provided	150	<i>ft²</i>					
Volume Provided	136						
Runoff Reduction							
Soil Type	A						
Flow Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	63	<i>ft³</i>					
RRv Applied	63	<i>ft³</i>					

Stormwater Planter Worksheet

Building 4 Stormwater Planters
 $Af = WQv * (df) / [k * (hf + df)(tf)]$

where

Planter 4.4

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the
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**
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area	Impervious Area	Percent Impervious	Rv	WQv	Precipitation	Description
	(Acres)	(Acres)	%		(ft ³)	(in)	
4	0.03	0.03	84%	0.81	101	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	101	ft ³	WQv				
Depth of Soil Media	1.5	ft	df				
Hydraulic Conductivity	4	ft/d	k				
Average Height of Ponding	0.5	ft	hf				
Filter Time	0.17	d	tf				
Required Area of Filter	112	ft ²	Af				
Area of Filter							
Width	3.7	ft					
Length	50	ft					
Area Provided	185	ft ²					
Volume Provided	167.733333						
Runoff Reduction							
Soil Type	A						
Flow Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	101	ft³					
RRv Applied	101	ft³					

Stormwater Planter Worksheet

Building 5 and 6 Stormwater Planters

$$\text{Af} = \text{WQv} * (\text{df}) / [\text{k} * (\text{hf} + \text{df})(\text{tf})]$$

where

Planter 5.1

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the planter, but can be varied depending on the properties of the soil media.
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*
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

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	0.04	0.04	100%	0.95	151	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	151	ft ³	WQv				
Depth of Soil Media	1.5	ft	df				
Hydraulic Conductivity	4	ft/d	k				
Average Height of Ponding	0.5	ft	hf				
Filter Time	0.17	d	tf				
Required Area of Filter	166	ft ²	Af				
Area of Filter							
Width	5	ft					
Length	23	ft					
Area Provided	115	ft ²					
Volume Provided	104.266667						
Runoff Reduction							
Soil Type	A						
Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	151	ft³					
RRv Applied	151	ft³					

Stormwater Planter Worksheet

Building 5 and 6 Stormwater Planters

$$\text{Af} = \text{WQv} * (\text{df}) / [\text{k} * (\text{hf} + \text{df})(\text{tf})]$$

where

Planter 6.1

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (ft)
- k* The Hydraulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely placed in the
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**
- hf* Average Height of Water above planter bed (ft)
- tf* The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area <i>(Acres)</i>	Impervious Area <i>(Acres)</i>	Percent Impervious %	Rv	WQv <i>(ft³)</i>	Precipitation <i>(in)</i>	Description
2	0.32	0.27	83%	0.80	1,078	1.15	0
Calculate the Mimimum Filter Area							
	Value	Units					
WQv	1,078	<i>ft³</i>	<i>WQv</i>				
Depth of Soil Media	1.5	<i>ft</i>	<i>df</i>				
Hydraulic Conductivity	4	<i>ft/d</i>	<i>k</i>				
Average Height of Ponding	0.5	<i>ft</i>	<i>hf</i>				
Filter Time	0.17	<i>d</i>	<i>tf</i>				
Required Area of Filter	1189	<i>ft²</i>	<i>Af</i>				
Area of Filter							
Width	9	<i>ft</i>					
Length	149.5	<i>ft</i>					
Area Provided	1345.5	<i>ft²</i>					
Volume Provided	1219.92						
Runoff Reduction							
Soil Type	A						
Through Planter?	Yes						
Determine the Runoff Reduction							
RRv	1,078	<i>ft³</i>					
RRv Applied	1,078	<i>ft³</i>					



Sand Filter Sizing Calculations

Calculate WQv:

% Impervious	94.08%
Rv	0.90
90% Rainfall	1.15
Watershed Area in Square Feet	32234
WQv Required=	2770 ft³

Inputs:

Width of Sand Filter: **12 ft**
Length of Filter Bed: **27 ft**

Filter Bed:

$$A_f = \frac{WQ_v d_f}{k(h_f + d_f)t_f}$$

Where:

- A_f = Surface area of filter bed (ft²)
- WQ_v = Water Quality Volume(cf)
- d_f = Filter bed depth (ft)
- k = Coefficient of permeability of filter media (ft/day)
- h_f = Average height of water above filter bed (ft)
- t_f = Design filter bed drain time (days) (1.67 days or 40 hours is recommended maximum t_f for sand filters, two days for bioretention)

WQ _v *	2770	ft ³	*WQV remaining after sedimentation basin
h _f	1.5	ft	-height above filter bed to overflow invert
d _f	3	ft	
k	3.5	ft/day	
t _f	1.67	days	

Surface Area Required:		
A_f=	315.95	ft²
Surface Area Provided:		
A_f=	324.00	ft²

201391 PROPOSED CONDITIONS

Type II 24-hr WQV Rainfall=1.15"

Prepared by The LA Group

Printed 7/7/2016

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Page 1

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Pond SMP-1: Infiltration Tanks

Peak Elev=277.64' Storage=94 cf Inflow=0.56 cfs 0.028 af
Discarded=0.34 cfs 0.028 af Primary=0.00 cfs 0.000 af Outflow=0.34 cfs 0.028 af

201391 PROPOSED CONDITIONS

Type II 24-hr WQV Rainfall=1.15"

Prepared by The LA Group

Printed 7/7/2016

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Summary for Pond SMP-1: Infiltration Tanks

Inflow Area = 0.382 ac, 99.18% Impervious, Inflow Depth = 0.89" for WQV event
 Inflow = 0.56 cfs @ 11.97 hrs, Volume= 0.028 af
 Outflow = 0.34 cfs @ 11.88 hrs, Volume= 0.028 af, Atten= 40%, Lag= 0.0 min
 Discarded = 0.34 cfs @ 11.88 hrs, Volume= 0.028 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 277.64' @ 12.04 hrs Surf.Area= 650 sf Storage= 94 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 1.1 min (787.4 - 786.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	277.33'	489 cf	23.69'W x 27.46'L x 3.42'H Field A 2,221 cf Overall - 1,000 cf Embedded = 1,221 cf x 40.0% Voids
#2A	277.58'	950 cf	ACF R-Tank HD 1.5 x 150 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 15 Rows of 10 Chambers
		1,438 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	277.33'	22.500 in/hr Exfiltration over Surface area
#2	Primary	276.10'	12.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 276.10' / 276.00' S= 0.0200 1' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	279.25'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Device 2	278.00'	6.0" Vert. Orifice/Gate C= 0.600

Discarded OutFlow Max=0.34 cfs @ 11.88 hrs HW=277.37' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.34 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=277.33' (Free Discharge)

↑ **2=Culvert** (Passes 0.00 cfs of 3.04 cfs potential flow)

↑ **3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

↑ **4=Orifice/Gate** (Controls 0.00 cfs)

Appendix C

Map Set

Appendix D

SWPPP Inspection Form

**77 Excelsior Avenue Mixed Use Development
WEEKLY SWPPP INSPECTION REPORT**

Inspector Name:	Date:
Signature (required):	Time:
Weather:	Inspection #:
Soil Conditions (dry, saturated, etc.):	

Note: Digital photos, with date stamp required for all practices requiring corrective action, before and after, to be attached to the inspection report.

YES NO N/A					
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Routine Inspection.	Date of last inspection: _____
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inspection following rain event.	Date/time of storm ending: _____ Rainfall amount: _____ Recorded by: _____
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is this a final site inspection?	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has site undergone final stabilization?	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If so, have all temporary erosion and sediment controls been removed?	

Site Disturbance (Indicate Locations on Plan)

YES NO N/A				
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas previously disturbed, but have not undergone active site work in the last 14 days?
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas disturbed within last 14 days?
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas expected to be disturbed in next 14 days?
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Do areas of steep slopes or complex stabilization issues exist? If "YES" explain:
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are there currently more than 5 acres of disturbed soil at the site? If so make sure there is an approval letter from NYS DEC.

Additional Comments: _____

Inspection of Erosion and Sediment Control Devices

Type of Control Device	Accumulation (if any) in %	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		
5.		
6.		

Stabilization/Runoff

YES NO N/A				
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all existing disturbed areas contained by control devices? Type of devices:
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are there areas that require stabilization within the next 14 days? Specify Area:
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have stabilization measures been initiated in inactive areas?
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there current snow cover or frozen ground conditions?
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rills or gullies?
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slumping/deposition?
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of vegetation?
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lack of germination?
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of mulching?

Receiving Structures/Water Bodies (Indicate locations where runoff leaves the project site on the site plan)

YES NO N/A

1. Surface water swale or natural surface waterbody?

If natural waterbody:

Is waterbody located onsite, or adjacent to property boundary?

Description of condition: _____

2. Municipal or community system?

Inspect locations where runoff from project site enters the receiving waters and indicate if there is evidence of:

- a. Rills or gullies?
- b. Slumping/deposition?
- c. Loss of vegetation?
- d. Undermining of structures?
- e. Was there a discharge into the receiving water on the day of inspection?
- f. Is there evidence of turbidity, sedimentation, or oil in the receiving waters?

Additional Comments: _____

Inspection of Post-Construction Stormwater Management Control Devices

Type of Control Device	Phase of Construction	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		

General Site Condition

YES NO N/A

- 1. Have action items from previous reports been addressed?
- 2. Does routine maintenance of protection components occur on a regular basis?
- 3. Does cleaning and/or sweeping affected roadways occur, at minimum, daily?
- 4. Is debris and litter removed on a monthly basis, or as necessary?
- 5. Is the site maintained in an orderly manner?

Describe the condition of all natural waterbodies within or adjacent to the Project that receive runoff from the site: _____

Contractors progress over last 7 days: _____

Anticipated work to be begun in the next 7 days: _____

Additional Comments: _____

Visual Observations

YES NO N/A

- 1. All erosion and sediment control measures have been installed/constructed?
- 2. All erosion and sediment control measures are being maintained properly?

SUMMARY OF ACTION ITEMS TO REPAIR/REPLACE/MAINTAIN/CORRECT DEFICIENCIES

Action Reported To (no signature required): _____

Company: _____

Appendix E

Other SWPPP Forms

Construction Sequence
SWPPP Plan Changes
Spill Response Form
Stormwater Management Practice Maintenance Log

The operator shall prepare a summary of construction status using the Construction Sequence Form below once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated in addition to the individual Inspection Reports completed for each inspection.

Construction Sequence Form

Construction Activities (Identify name of planned practices)	Date Complete
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	

**STORM WATER POLLUTION PREVENTION PLAN
PLAN CHANGES, AUTHORIZATION, AND CHANGE CERTIFICATION**

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

REQUESTED BY: _____

DATE: _____

AUTHORIZED BY: _____

DATE: _____

CERTIFICATION OF CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the penal code.

SIGNATURE: _____

DATE: _____

SPILL RESPONSE REPORT

Within 1 hour of a spill discovery less than 2 gallons in volume the following must be notified:

Andre Schmid
(518) 577-2005

Within 1 hour of a spill discovery greater than 2 gallons the following must be notified:

Andre Schmid
NYSDEC Spill Response Hotline 1-800-457-7362
Spill Response Contractor

Material Spilled: _____

Approximate Volume: _____

Location: _____

Distance to nearest down gradient drainage: _____

Distance to nearest down gradient open water: _____

Temporary control measures in place: _____

Appendix F

SPDES General Permit GP-0-15-002



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

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-15-002

Issued Pursuant to Article 17, Titles 7, 8 and Article 70 of the Environmental Conservation Law

Effective Date: January 29, 2015

Expiration Date: January 28, 2020

John J. Ferguson Chief Permit Administrator

Authorized Signature

1 / 12 / 15

Date

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

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.

This general permit ("permit") is issued pursuant to Article 17, Titles 7, 8 and Article 70 of the ECL. An owner or operator may obtain coverage under this permit by submitting a Notice of Intent ("NOI") to the Department.

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 Article 17-0505 of the ECL, the owner or operator must have coverage under a SPDES permit prior to commencing construction activity.

*Note: The italicized words/phrases within this permit are defined in Appendix A.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. Part I. PERMIT COVERAGE AND LIMITATIONS... Part II. OBTAINING PERMIT COVERAGE... Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)... Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS... Part V. TERMINATION OF PERMIT COVERAGE... Part VI. REPORTING AND RETENTION OF RECORDS... Part VII. STANDARD PERMIT CONDITIONS...

Q. Penalties for Falsification of Forms and Reports... R. Other Permits... APPENDIX A... APPENDIX B... APPENDIX C... APPENDIX D... APPENDIX E... APPENDIX F...

(Part I)

Part I. 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 August 2005, 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 deviation or alternative design and provide information

(Part I.B.1)

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 discharges;
- (ii) Control stormwater discharges 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 discharges from the site;
- (vi) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, 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; and
- (viii) Unless infeasible, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover.

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

c. **Dewatering.** Discharges from dewatering activities, including discharges

(Part I.B.1.c)

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 and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use); and
- (iii) Prevent the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

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

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

(Part I.B.1.f)

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 RRV 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 RRV 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 RRV 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

(Part I.C.2.a.ii)

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 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

(Part I.C.2.b.ii)

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 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.

c. Sizing Criteria for Redevelopment Activity

(Part I.C.2.c.i)

- (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.

(Part I.C.2.c.ii)

- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the discharge rate from the project site.

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both *New Development* and *Redevelopment Activity* 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 discharges necessary to meet applicable water quality standards. It shall be a violation of the ECL for any discharge to either cause or contribute to a violation of 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 discharges 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 discharges authorized by this permit are causing or contributing to a violation of water quality standards, or

(Part I.D)

if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* 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.

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 *discharges* from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater *discharges* may be authorized by this permit: *discharges* from firefighting activities; fire hydrant flushings; waters to which cleansers or other components have not been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated *groundwater* or spring water; uncontaminated *discharges* from construction site de-watering operations; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this permit, and who *discharge* as noted in this paragraph, and with the exception of flows from firefighting activities, these *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:

(Part I.F)

1. *Discharges* 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 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.C.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 *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which disturb one or more acres of land with no existing *impervious cover*; and
 - c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture ("USDA") Soil Survey for the County where the disturbance will occur.
7. *Construction activities* for linear transportation projects and linear utility projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which disturb two or more acres of land with no existing *impervious cover*; and
 - c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the USDA Soil Survey for the County where the disturbance will occur.

(Part I.F.8)

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.C.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:
 - (i) No Affect
 - (ii) No Adverse Affect

(Part I.F.8.c.iii)

(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. *Discharges* 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. OBTAINING PERMIT COVERAGE

A. Notice of Intent (NOI) Submittal

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 NOI form to the Department in order to be authorized to *discharge* under this permit. 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. 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 its 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. An *owner or operator* shall use either the electronic (eNOI) or paper version of the NOI.

The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the address in Part II.A.1.

(Part II.A.2)

The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *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.E. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*.

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.

B. 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) 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 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.B.2 above

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(Part II.B.3)

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;
 - (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.
- 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. The Department may suspend or deny an *owner's or operator's* coverage

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(Part II.B.4)

under this permit if the Department determines that the SWPPP does not meet the permit requirements. In accordance with statute, regulation, and the terms and conditions of this permit, the Department may deny coverage under this permit and require submittal of an application for an individual SPDES permit based on a review of the NOI or other information pursuant to Part II.

5. 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.B. of this permit.

C. 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-0-15-002), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, 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 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

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(Part II.C.3.a)

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 August 2005.
- 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. 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*.
5. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the *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

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(Part II.D)

D. Permit Coverage for Discharges Authorized Under GP-0-10-001

1. Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001), an *owner or operator* of a construction activity with coverage under GP-0-10-001, as of the effective date of GP-0-15-002, shall be authorized to discharge in accordance with GP-0-15-002, 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-0-15-002.

E. Change of Owner or Operator

2. 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. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOI with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.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.

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 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)

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:
 - a. whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site;
 - b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority.
5. The Department may notify the *owner or operator* at any time that the

(Part III.A.5)

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.C.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 the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature, the name and title of the

(Part III.A.6)

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 all so 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 August 2005. 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;
 - 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

(Part III.B.1.d)

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 August 2005, 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 schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005;
- 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 August 2005. Include the reason for the deviation or alternative design

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(Part III.B.1.I)

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;
- 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

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(Part III.B.2.c.iv)

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.
- 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.

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(Part IV)

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 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

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(Part IV.C)

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),
- 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 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

(Part IV.C.2.b)

the owner or operator has received authorization in accordance with Part II.C.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.
- 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.A.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

(Part IV.C.2.e)

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:
 - 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;

(Part IV.C.4.i)

- 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
- 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.C.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.A.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.

(Part V.A.2)

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;
 - 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.E. 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.

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(Part V.A.5)

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,
 - 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 OF 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.A.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.

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(Part VII)

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 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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(Part VII.E)

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:
 - (i) a president, secretary, treasurer, or vice-president of the

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(Part VII.H.1.a.i)

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, 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

(Part VII.H.2.b)

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 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

(Part VII.K.1)

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 an d copy at reasonable times, any records that must be kept under the conditions of this permit; and
- 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.

(Part VII.N)

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.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

Definitions

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.

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 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.

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

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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).

New Development – means any land disturbance that does meet the definition of Redevelopment Activity included in this appendix.

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*.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

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.

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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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.

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,

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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, 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 required to gain coverage under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

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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,
- Stream bank restoration projects (does not include the placement of spoil material),
- 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 makes 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.

Steep Slope – means land area with a Soil Slope Phase that is identified as an E or F, or

the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture ("USDA") Soil Survey for the County where the disturbance will occur.

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 sources. 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 sources, 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 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, 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.

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**

<p>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</p> <ul style="list-style-type: none"> • Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not</u> 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 <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> 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.
<p>The following construction activities that involve soil disturbances of one (1) or more acres of land:</p> <ul style="list-style-type: none"> • 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 • Bike paths and trails • Sidewalk construction projects that are not part of a road/ highway construction or reconstruction project • Slope stabilization projects • Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics • Spoil areas that will be covered with vegetation • Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that <i>alter hydrology from pre to post development</i> conditions • Athletic fields (natural grass) that do not include the construction or reconstruction of <i>impervious area</i> and do not <i>alter hydrology from pre to post development</i> 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 <i>impervious cover</i> • 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 less than five acres and construction activities that include the construction or reconstruction of impervious area
<p>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</p> <ul style="list-style-type: none"> • 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.

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 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 townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- 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, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- 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
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development conditions*, and are not listed in Table 1

APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Standards Are Required

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

Figure 1 - New York City Watershed East of the Hudson

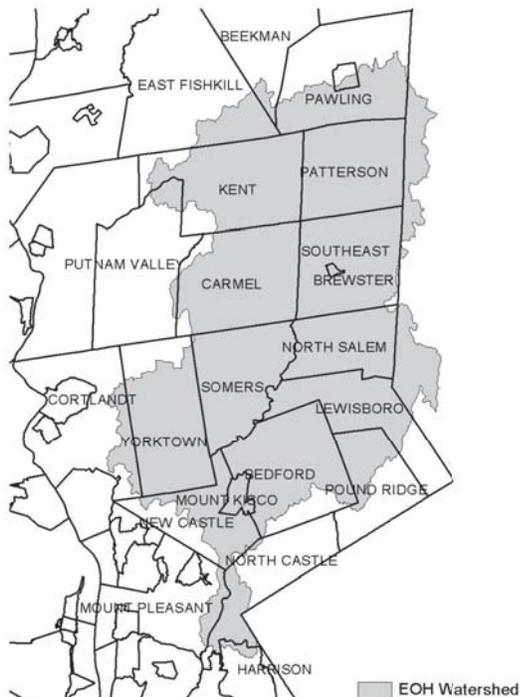


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

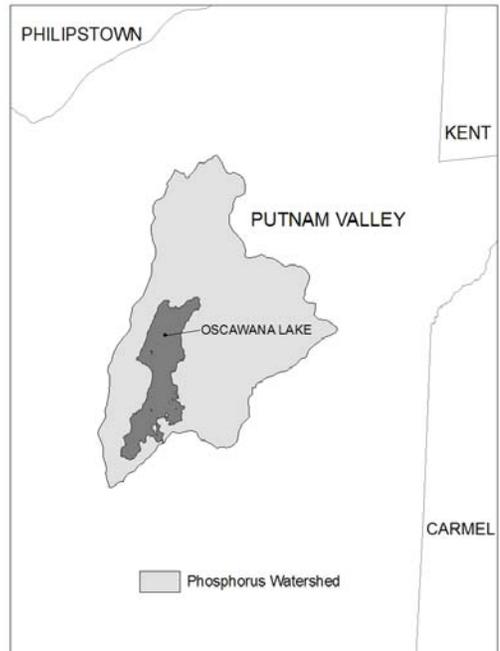
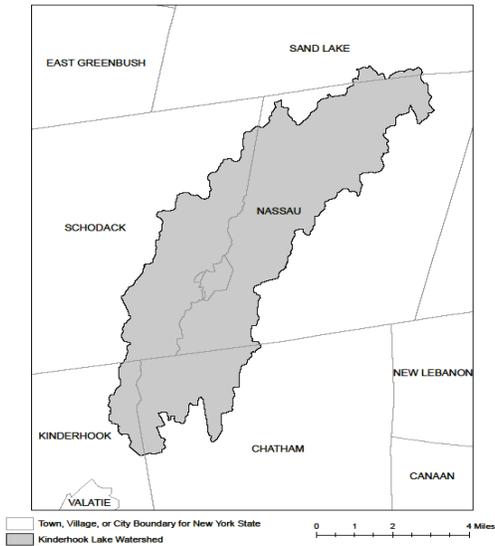


Figure 5: Kinderhook Lake Watershed



APPENDIX D

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

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity (e.g. silt, sediment or nutrients). 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	COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond	Greene	Sleepy Hollow Lake
Albany	Basic Creek Reservoir	Herkimer	Steele Creek tribs
Allegheny	Amity Lake, Saunders Pond	Kings	Hendrix Creek
Bronx	Van Cortlandt Lake	Lewis	Mill Creek/South Branch and tribs
Broome	Whitney Point Lake/Reservoir	Livingston	Conesus Lake
Broome	Fly Pond, Deer Lake	Livingston	Jaycox Creek and tribs
Broome	Minor Tribs to Lower Susquehanna (north)	Livingston	Mill Creek and minor tribs
Cattaraugus	Allegheny River/Reservoir	Livingston	Bradner Creek and tribs
Cattaraugus	Case Lake	Livingston	Christie Creek and tribs
Cattaraugus	Linyoo/Club Pond	Monroe	Lake Ontario Shoreline, Western
Cayuga	Duck Lake	Monroe	Mill Creek/Blue Pond Outlet and tribs
Chautauqua	Chautauqua Lake, North	Monroe	Rochester Embayment - East
Chautauqua	Chautauqua Lake, South	Monroe	Rochester Embayment - West
Chautauqua	Bear Lake	Monroe	Unnamed Trib to Honeoye Creek
Chautauqua	Chadakoin River and tribs	Monroe	Genesee River, Lower, Main Stem
Chautauqua	Lower Cassadaga Lake	Monroe	Genesee River, Middle, Main Stem
Chautauqua	Middle Cassadaga Lake	Monroe	Black Creek, Lower, and minor tribs
Clinton	Findley Lake	Monroe	Buck Pond
Clinton	Great Chazy River, Lower, Main Stem	Monroe	Long Pond
Columbia	Kinderhook Lake	Monroe	Cranberry Pond
Columbia	Robinson Pond	Monroe	Mill Creek and tribs
Dutchess	Hillside Lake	Monroe	Shipbuilders Creek and tribs
Dutchess	Wallpaper Lakes	Monroe	Minor tribs to Irondequoit Bay
Dutchess	Fall Kill and tribs	Monroe	Thomas Creek/White Brook and tribs
Erie	Green Lake	Nassau	Glen Cove Creek, Lower, and tribs
Erie	Scajaquada Creek, Lower, and tribs	Nassau	LI Tribs (fresh) to East Bay
Erie	Scajaquada Creek, Middle, and tribs	Nassau	East Meadow Brook, Upper, and tribs
Erie	Scajaquada Creek, Upper, and tribs	Nassau	Hempstead Bay
Erie	Rush Creek and tribs	Nassau	Hempstead Lake
Erie	Ellicott Creek, Lower, and tribs	Nassau	Grant Park Pond
Erie	Beeman Creek and tribs	Nassau	Beaver Lake
Erie	Murder Creek, Lower, and tribs	Nassau	Camaans Pond
Erie	South Branch Smoke Cr, Lower, and tribs	Nassau	Halls Pond
Erie	Little Sister Creek, Lower, and tribs	Nassau	LI Tidal Tribs to Hempstead Bay
Essex	Lake George (primary county: Warren)	Nassau	Massapequa Creek and tribs
Genesee	Black Creek, Upper, and minor tribs	Nassau	Reynolds Channel, east
Genesee	Tonawanda Creek, Middle, Main Stem	Nassau	Reynolds Channel, west
Genesee	Oak Orchard Creek, Upper, and tribs	Nassau	Silver Lake, Lofts Pond
Genesee	Bowen Brook and tribs	Nassau	Woodmere Channel
Genesee	Bigelow Creek and tribs	Niagara	Hyde Park Lake
Genesee	Black Creek, Middle, and minor tribs	Niagara	Lake Ontario Shoreline, Western
Genesee	LeRoy Reservoir	Niagara	Bergholtz Creek and tribs
Greene	Schoharie Reservoir	Oneida	Ballou, Nail Creeks
		Onondaga	Ley Creek and tribs
		Onondaga	Onondaga Creek, Lower and tribs

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Onondaga	Onondaga Creek, Middle and tribs	Suffolk	Great South Bay, West
Onondaga	Onondaga Creek, Upper, and minor tribs	Suffolk	Mill and Seven Ponds
Onondaga	Harbor Brook, Lower, and tribs	Suffolk	Moniches Bay, East
Onondaga	Ninemile Creek, Lower, and tribs	Suffolk	Moniches Bay, West
Onondaga	Minor tribs to Onondaga Lake	Suffolk	Quantuck Bay
Onondaga	Onondaga Creek, Lower, and tribs	Suffolk	Shinneck Bay (and Inlet)
Ontario	Honeoye Lake	Sullivan	Bodine, Montgomery Lakes
Ontario	Hemlock Lake Outlet and minor tribs	Sullivan	Davies Lake
Ontario	Great Brook and minor tribs	Sullivan	Pleasure Lake
Orange	Monhagen Brook and tribs	Sullivan	Swan Lake
Orange	Orange Lake	Tompkins	Cayuga Lake, Southern End
Orleans	Lake Ontario Shoreline, Western	Tompkins	Owasco Inlet, Upper, and tribs
Oswego	Pleasant Lake	Ulster	Ashokan Reservoir
Putnam	Lake Neatahwanta	Ulster	Esopus Creek, Upper, and minor tribs
Putnam	Oscawana Lake	Ulster	Esopus Creek, Lower, Main Stem
Putnam	Palmer Lake	Ulster	Esopus Creek, Middle, and minor tribs
Putnam	Lake Carmel	Warren	Lake George
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Warren	Tribs to L. George, Village of L. George
Queens	Bergen Basin	Warren	Huddle/Finkle Brooks and tribs
Queens	Shelbank Basin	Warren	Indian Brook and tribs
Rensselaer	Nassau Lake	Warren	Hague Brook and tribs
Rensselaer	Snyders Lake	Washington	Tribs to L. George, East Shr Lk George
Richmond	Grasmere, Arbutus and Wolfes Lakes	Washington	Cossayuna Lake
Rockland	Congers Lake, Swartout Lake	Washington	Wood Cr/Champlain Canal, minor tribs
Rockland	Rockland Lake	Wayne	Port Bay
Saratoga	Ballston Lake	Wayne	Marbletown Creek and tribs
Saratoga	Round Lake	Westchester	Lake Katonah
Saratoga	Dwaas Kill and tribs	Westchester	Lake Mohegan
Saratoga	Tribs to Lake Lonely	Westchester	Lake Shenorock
Saratoga	Lake Lonely	Westchester	Reservoir No.1 (Lake Isle)
Schenectady	Collins Lake	Westchester	Saw Mill River, Middle, and tribs
Schenectady	Duane Lake	Westchester	Silver Lake
Schenectady	Mariaville Lake	Westchester	Teatown Lake
Schoharie	Summit Lake	Westchester	Truesdale Lake
Schoharie	Engleville Pond	Westchester	Wallace Pond
Schuyler	Cayuta Lake	Westchester	Peach Lake
St. Lawrence	Fish Creek and minor tribs	Westchester	Mamaroneck River, Lower
St. Lawrence	Black Lake Outlet/Black Lake	Westchester	Mamaroneck River, Upper, and tribs
Steuben	Lake Salubria	Westchester	Sheldrake River and tribs
Steuben	Smith Pond	Westchester	Blind Brook, Lower
Suffolk	Millers Pond	Westchester	Blind Brook, Upper, and tribs
Suffolk	Mattituck (Marratooka) Pond	Westchester	Lake Lincolnale
Suffolk	Tidal tribs to West Moriches Bay	Westchester	Lake Meahaugh
Suffolk	Canaan Lake	Wyoming	Java Lake
Suffolk	Lake Ronkonkoma	Wyoming	Silver Lake
Suffolk	Beaverdam Creek and tribs		
Suffolk	Big/Little Fresh Ponds		
Suffolk	Fresh Pond		
Suffolk	Great South Bay, East		
Suffolk	Great South Bay, Middle		

Note: The list above identifies those waters from the final New York State 2014 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy, dated January 2015, that are impaired by silt, sediment or nutrients.

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) 426 - 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 307 GENESSEE 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, GENESSEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, 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 AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Appendix G

Historic Preservation/Endangered Species Documentation



Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

October 29, 2014

Mr. Todd Curley
Prime Companies
621 Columbia Street
Cohoes, NY 12047

Re: SEQRA
77 Excelsior Avenue Redevelopment
77 Excelsior Ave, Saratoga Springs, NY
14PR04391

Dear Mr. Curley:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617). Please note that, under the State Environmental Quality Review Act (SEQRA), our office reviews potential impacts when the proposed action occurs wholly or partially within, or substantially contiguous to, any historic building, structure, facility, site or district:

- that is listed on the National Register of Historic Places, or
- that has been nominated to the National Register and is under review by the New York State Board on Historic Preservation, or
- that is listed on the State Register of Historic Places.

This review does not include potential impacts to resources that have already been determined as eligible or may be determined as eligible to be listed on the State and National Registers. Review of eligible resources would be a part of any project review that is initiated due to federal or state funding, permits or licenses involved.

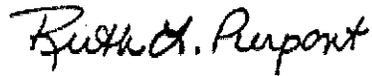
As there are no National Register-listed properties in the project area, under SEQRA we have no concerns regarding historic resources.

These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources as pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617). This review does not constitute approval or satisfaction of review under Section 106 of the National Historic Preservation Act of 1966, *as amended*, and its implementing regulations 36 CFR Part 800 – *Protection of Historic Properties* or the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law).

Please be aware that, should federal permits be required, the project will need to be submitted to our office for review as per Section 106 of the National Historic Preservation Act of 1966. Should the project require permits only from state agencies, similar requirements will need to be met in accordance with Section 14.09 of the New York State Historic Preservation Act of 1980. As such we will be required to undertake a separate and more rigorous review, which may result in a request for additional information in order to assess potential impacts to listed, eligible and potentially eligible historic resources.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

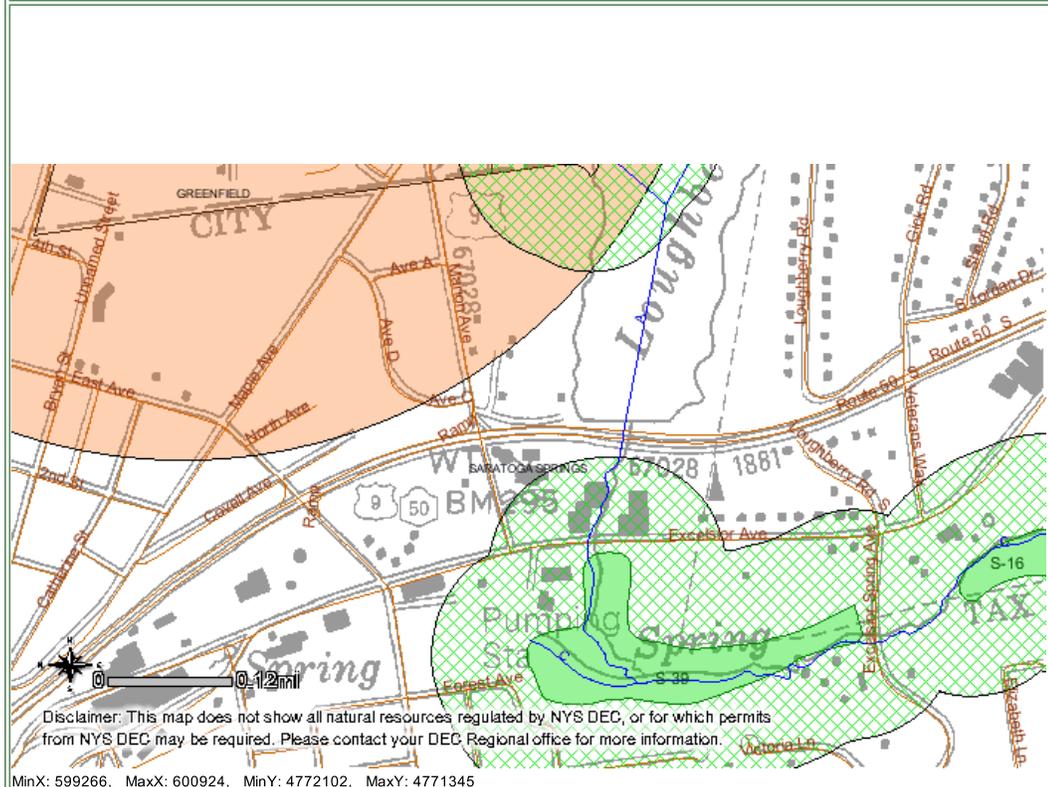
Sincerely,

A handwritten signature in cursive script that reads "Ruth L. Pierpont".

Ruth L. Pierpont
Deputy Commissioner for Historic Preservation

Please set your printer orientation to "Landscape".

77 Excelsior Avenue- Mixed Use Development



Visible Layers

-  Classified Streams
-  Classified Ponds
-  State-Regulated Freshwater Wetlands
-  Wetland Checkzone
-  State-Regulated Freshwater Wetlands
-  Rare Plants and Rare Animals
-  Significant Natural Communities Buffered
-  Natural Communities Nearby
-  Significant Natural Communities
-  Interstate Highways
-  Adirondack Park Boundary
-  Counties

Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

Appendix H

Deep Ripping and De-compaction (DEC, 2008)



New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

Document Prepared by:

John E. Lacey,
Land Resource Consultant and Environmental Compliance Monitor
(Formerly with the Division of Agricultural Protection and Development Services,
NYS Dept. of Agriculture & Markets)

New York State
Department of Environmental Conservation

Alternative Stormwater Management
Deep-Ripping and Decomaction

Description

The two-phase practice of 1) “Deep Ripping,” and 2) “Decomaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decomaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decomaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor’s densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

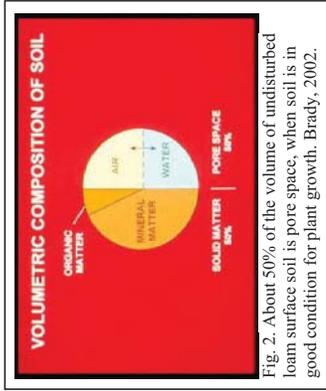


Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decomaction is to effectively fracture (vertically and laterally) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the “two-phase” practice of Deep Ripping and Decomaction first became established as a “best management practice” through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decomaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.



Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Benefits

Aggressive “deep ripping” through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by “decompaction,” i.e.: “sub-soiling,” through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area’s direct surface infiltration of rainfall by providing the open site’s mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility/Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implementation maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil

In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

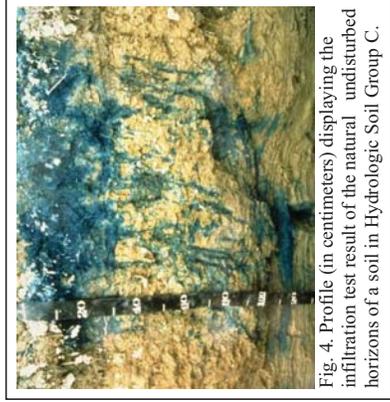


Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompaction (subsoiling), and other measures may be more practical.

Slope

The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture

Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a “plastic” or “liquid” state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the “slicing and smearing” of the material or added “squeezing and compression” instead of the necessary fracturing. Ample drying time is needed for a “rippable” soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The “poor man’s Atterberg field test” for soil plasticity is a simple “hand-roll” method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a “plastic” state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.

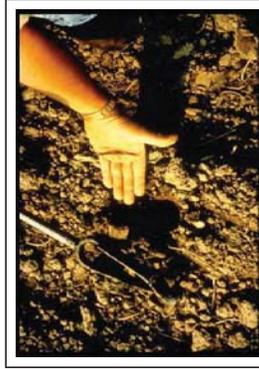


Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistency, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

- 1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and
- 2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, “decompaction,” mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area’s soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only “scarify” the uppermost surface portion of the mass of compacted subsoil material. The term “chisel plow” is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).

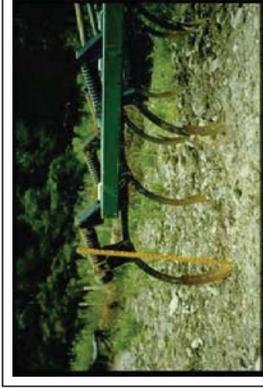


Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.



Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a “heavy duty” agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like “lifting and shattering” action up through the soil layers as it is pulled.

Pulling-Power of Equipment

Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompaction a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are “chained up” so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp. (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or “teeth,” of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.



Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.

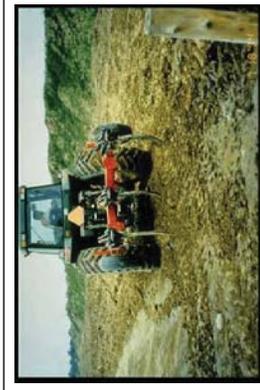


Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Depth and Patterns of Movement

As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a “normal” maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a 3/4 inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally “pieced” and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompaction (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.

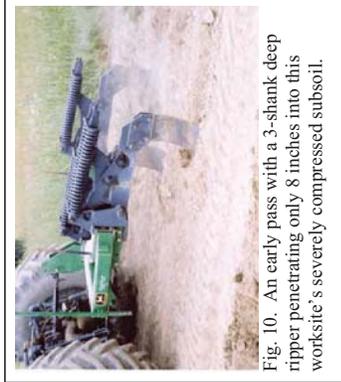


Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.



Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompaction (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas

For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.
- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.
- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a 3/4-inch cone penetrometer.)



Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.



Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors

In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

- A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor.

- The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompaction is completed, two items are essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e.: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.

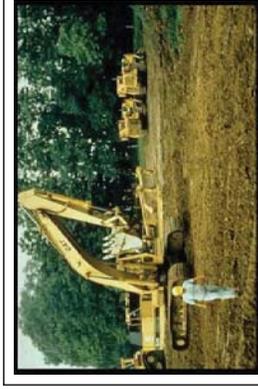


Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months, shown before deep ripping, topsoil replacement, and decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland. The cost of deep ripping and decompaction (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at \$1800 per day, the net cost is \$900 per acre. If the Phase 2) Decompaction or deep subsoiling takes 3/4 the time as Phase 1, it costs \$675 per acre for a combined total of \$1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

Resources

Publications:

- American Society of Agricultural Engineers. 1971. *Compaction of Agricultural Soils*. ASAE.
- Brady, N.C., and R.R. Weil. 2002. *The Nature and Properties of Soils*. 13th ed. Pearson Education, Inc.
- Baver, L.D. 1948. *Soil Physics*. John Wiley & Sons.
- Carpachi, N. 1987 (1995 fifth printing). *Excavation and Grading Handbook, Revised*. 2nd ed. Craftsman Book Company
- Ellis, B. (Editor). 1997. *Safe & Easy Lawn Care: The Complete Guide to Organic Low Maintenance Lawn*. Houghton Mifflin.
- Harpstead, M.I., T.J. Sauer, and W.F. Bennett. 2001. *Soil Science Simplified*. 4th ed. Iowa State University Press.
- Magdoff, F., and H. van Es. 2000. *Building Soils for Better Crops*. 2nd ed. Sustainable Agricultural Networks
- McCarthy, D.F. 1993. *Essentials of Soil Mechanics and Foundations, Basic Geotechnics* 4th ed. Regents/Prentice Hall.
- Plaster, E.J. 1992. *Soil Science & Management*. 3rd ed. Delmar Publishers.
- Union Gas Limited, Ontario, Canada. 1984. *Rehabilitation of Agricultural Lands, Dawn-Kerwood Loop Pipeline; Technical Report*. Ecological Services for Planning, Ltd.; Robinson, Merritt & Devries, Ltd. and Smith, Hoffman Associates, Ltd.
- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. *Soil Survey of (various names) County, New York*. USDA.

Internet Access:

- Examples of implements:
V-Rippers. Access by internet search of [John Deere Ag-New Equipment for 915 \(larger-frame model\) V-Ripper](#) and [for 913 \(smaller-frame model\) V-Ripper](#). [Deep angled-leg subsoiler](#). Access by internet search of: [Biglram Brothers Shear Bolt Paratill-Subsoiler](#).
http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_billage/2008/feature/rippers/915v_pattern_frame.html?suba_g&link=modcat Last visited March 08.
- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey*. <http://websoilsurvey.nrcs.usda.gov/app/> and *USDA-NRCS Official Soil Series Descriptions; View by Name*. <http://ortho.fv.usda.gov/cgi-bin/osd/osdname.cgi>. Last visited Jan. 08.
- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester)*, *PSU Extension*; as well as *Dickey-John Soil Compaction Tester*. <http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf> and <http://cropsoil.psu.edu/Extension/Facts/uct128.pdf> Last visited Sept. 07

Appendix I

Restrictive Covenant for Maintenance of Post-Construction Stormwater Management Practices

SAMPLE DEED COVENANT

**DECLARATION OF RESTRICTIVE COVENANT
REGARDING STORMWATER MAINTENANCE**

This Declaration of Restrictive Covenant regarding Stormwater Maintenance is entered into effective the ____ day of _____, _____ by _____ (the “Owner”), as owner of the real property located at _____ And more particularly described in Exhibit A attached hereto and made a part hereof (the “Property”). The Owner hereby acknowledges and agrees that the Property shall be operated and maintained in accordance with the operation and maintenance plan set forth in Schedule A and Schedule B attached hereto and made a part hereof.

This restrictive covenant shall run with the land and be binding on the successors and assigns of the owner.

DATED EFFECTIVE the day and year written above.

Exhibit A

LEGAL DESCRIPTION

(Insert Legal Description of property (e.g., All that certain plot, piece or parcel of land situate, lying...)

Schedule B

STORMWATER CONTROL FACILITY
MAINTENANCE AGREEMENT

The facility owner desires that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, and replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, facility owner agrees as follows:

1. This document binds the facility owner, its successors and assigns, to the maintenance provisions depicted in the approved project plan which is attached as Schedule A of this agreement.
2. The facility owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, infiltrators, drain inlets, pipes, and culverts.
3. The facility owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
4. The facility owner shall provide for the periodic inspection of the stormwater control measures, not less than once every five-year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the facility owner within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.
5. The facility owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the agencies having jurisdiction.
6. The facility owner shall undertake necessary repairs and replacement of the stormwater control measures in accordance with the recommendations of the inspecting engineer.
7. This agreement shall be recorded in the Office of the County Clerk, County of Saratoga, together with the deed for the common property.
8. This agreement is effective _____.

July 7, 2016

Mr. Tim Wales, PE City Engineer
City of Saratoga Springs
474 Broadway
Saratoga Springs, NY 12866
Timothy.wales@saratoga-springs.org

**Re: *Technical Review of Documents-1st submittal
77 Excelsior Avenue Mixed Use Development
City of Saratoga Springs, Saratoga County, New York
City Project # 15.041
Chazen Project # 31504.11***

Dear Mr. Wales,

The LA Group is in receipt of the comment letter provided by the Chazen Companies, dated October 23, 2015. The following are responses to the comments.

GENERAL

Comment 1: The Engineering Report should clearly reference the City's project number as 15.041.

Response 1: **The engineering report has been updated to reference the City's project number.**

Comment 2: The tax map number for the project identified on the survey (166.05-5-4.1) and site plans (166.5-5-4.1) is not consistent with the tax map number identified in the application and water service connection agreement (166.5-5-5.41). Please confirm which is correct and revise accordingly.

Response 2: **The water service connection agreement and application have been revised to indicate the correct Tax Map number 166.5-5-4.1.**

SITE PLANS

Comment 3: Please submit a fire apparatus maneuvering plan for the site, including entering and exiting the site from Excelsior Avenue.

Response 3: **A fire apparatus maneuvering plan for the site has been added to the Parking & Lighting Plan (L-2.1).**

Comment 4: How tall are the buildings and what material are they to be constructed of? They are in close proximity to existing buildings and we are concerned with the fire rating of both the new and existing buildings. Please confirm.

Response 4: **The following is the response from the Architect. Building code takes into account distance from the lot line and construction type when determining the required exterior wall fire rating and allowable openings. In the instance of the west walls of building 4, the key code factors are that we are type VB construction and the walls are each**

located greater than 10' from the property line.

Per Section 602, Tables 601 and 602, exterior bearing walls and nonbearing Type VB walls 10' x <30' from the property line have a 0 hour fire rating requirement.

Per Section 704, Table 704.8, exception i, the exterior walls are unlimited in their openings because they are not required to be fire rated.

Comment 5: The proposed building dimensions should be shown on the Layout Plan.

Response 5: **Proposed building dimensions have been added to the Parking and Lighting Plan (L-2.1).**

Comment 6: It is noted within the SWPPP that the home shown on the survey and some pavement were removed in 2014 in preparation for this project. The survey and/or Site Preparation, Erosion & Sediment Control Plan should clearly indicate those removals that have been completed since the preparation of the survey.

Response 6: **The home and pavement that were removed in preparation for this project have been added to the Site Preparation, Erosion & Sediment Control Plan. Notes have been added clearly indicating their prior removal.**

Comment 7: Please show and quantify the grading limits and limit of disturbance on the site plans.

Response 7: **The limit of grading has been added to the Grading & Drainage Plan (L-3).**

Comment 8: Please explain the function of the double-stacked parking shown in the parking garage, including how vehicles in the rear row will be accessed.

Response 8: **Parking spaces will be assigned to individual apartment units. Each double-stacked parking space will be assigned to one unit, which will require coordination between the users, as is the case with Building 3 on the adjoining site.**

Comment 9: It is unclear how the exterior handicap parking spaces will be accessed from the building-accessible ramps and grades are not properly depicted.

Response 9: **The accessible parking spaces have been relocated to accommodate more intuitive routes to the buildings. Accessible routes have been more clearly defined and additional grading information has been included for clarity.**

Comment 10: A light pole near the existing exterior HC spaces is located in the middle of the sidewalk – please adjust accordingly.

Response 10: **This light pole has been relocated out of the path.**

Comment 11: It is assumed that the HC parking spaces within the garages will have an ADA compliant accessible route that leads to an elevator. Please confirm.

Response 11: **HC parking spaces inside the parking garages will have an ADA compliant accessible route.**

Comment 12: Please include the appropriate signage for Van Accessible handicap parking spaces.

Response 12: **Van Accessible signage has been added to the Sign Detail / Sign Schedule (L-6.2-1) and the Accessible Parking Detail (L-6.2-5).**

Comment 13: Per the Saratoga Required Site Plan Submittal Check List, the lighting plan should show the type, location, and intensity of all existing and proposed exterior lighting fixtures. The lighting

plan as submitted only covers the north portion of the site in vicinity of building 5 and 6. Please revise accordingly.

Response 13: Street lights are proposed along Excelsior Avenue. Existing and proposed street lights are shown and noted on the Parking & Lighting Plan (L-2.1). Light fixtures and spacing along the streetscape are of the per the city standard, therefore lighting contours are not provided. Type and intensity of street lights are noted in Decorative Street Light Detail (L-6.2-2). Lighting for the pool deck will be building lights and the photo metrics will be reviewed by the DRc.

Comment 14: Please clarify how trash pickup is proposed for the site. There are no dumpsters or recycling bins indicated on the site plans.

Response 14: Trash/recycle rooms are provided in each of the garages. For pickup, the trash truck will pull along the garages and the contractor will enter the garage and pull out the internal dumpsters to be emptied. This is a similar approach as the previous phase of the project.

Comment 15: It appears as if a retaining wall is needed between the proposed transformers and the neighboring parking lot. Please confirm and revise accordingly.

Response 15: Grading has been revised in this area. A retaining wall will not be required at this location.

Comment 16: It appears as if grading on the adjacent property will be needed between building 4 and the existing building. A temporary easement will need to be secured from East Avenue Properties LLC to allow this. Please provide documentation that this can be secured.

Response 16: The project proposes a retaining wall/stormwater planter adjacent to building 4. No disturbance or grading on the neighboring property will be necessary.

Comment 17: Also the grading in this area is not depicted and it appears as if water will pond along the neighbors foundation owned by East Avenue Properties LLC. Please provide more detailed grading in this area to ensure the stormwater will continue for flow into the existing catch basin located at the front corner of the building. It also appears as if the HydroCAD model has this area draining into the planter but the grades do not reflect this. Please clarify.

Response 17: As mentioned in the previous comment, we are proposing a retaining wall for the planter along this portion of the site. The bottom of the retaining wall will be at existing grade, therefore it will not direct additional stormwater runoff to the adjacent property. Furthermore there is a stone drip strip around the adjacent existing building, therefore water will not pond along their foundation.

Comment 18: A detail for a swale is included on sheet L-6.3 but there does not appear to be a swale proposed for the site. Please clarify.

Response 18: The swale detail has been removed from sheet L-6.3.

Comment 19: There appears to be a typo on the detail for OCS #2 on sheet L-6.3. This detail indicates that the overflow weir is proposed at 289.25', which is above the rim of the structure as indicated on the grading plan. Please confirm consistency with HydroCAD model.

Response 19: The overflow weir is proposed at 279.25'. This has been updated on sheet L-6.3.

ENGINEERING REPORT

Comment 20: Sewer service is proposed to connect to the existing 6" sanitary sewer that currently serves the Fresh Market site. If this project ties into this line, it would be considered a public sewer

main that would need NYSDEC approval. Please provide the City with documentation of such approval.

Response 20: The Fresh Market site was approved with the understanding that utilities for the parcel to the west would tie into the utilities installed with the Fresh Market project. The sanitary sewer lateral installed with the Fresh Market is a private line and will remain private with this new project. As such, all sanitary sewer infrastructure associated with the project is not considered public and should not need NYSDEC review and approval. Since the existing lateral connects directly to a Saratoga County Sewer District No. 1 sewer main, we are coordinating with the SCSD for sign off on the design and will provide to the city once received.

Comment 21: According to 10 State Standards the minimum size of a public sewer main is 8" – please confirm with NYSDEC if this will be allowed. If allowed who will own the existing sewer main?

Response 21: See response 20 above. This sanitary service will be a private lateral and not a public sewer main. Prime Beechwood, LLC will be the owner of the sewer and will be responsible for maintenance. If a property transaction occurs in the future resulting in multiple owners, easements will be granted as part of that transaction. We are currently coordinating with the SCSD for sign off on the design and will provide to the city once received.

Comment 22: Water service to buildings 5 and 6 are proposed to connect to the existing water main that extends onto the site through the Fresh Market property. If the project ties into this line, it would be considered a public water main that would need NYSDOH approval. Please provide the City with documentation of such approval.

Response 22: See response 20 above. The water service installed with the Fresh Market project was stubbed out to the west for a future connection. This waterline will be privately owned and maintained. As such, all water infrastructure associated with the project is not considered public. Maria O'Connell from NYSDOH was contacted on October 30, 2015 and confirmed that a private system such as this one is not jurisdictional.

Comment 23: There are no easements depicted through the Fresh Market property for the water main. Please provide.

Response 23: Easements are not needed since the properties are owned by the same entity. If a property transaction occurs in the future, easements will be granted as part of that transaction.

Comment 24: A review of the Saratoga Springs water model indicates that the City's water system has sufficient capacity to accept the estimated water demands presented in the Engineering Report. However, the water mains depicted on Attachment B indicate the water main on Marion Avenue is an 8" DIP and the water mains on East Avenue are 10" and 6" mains which conflicts with our records. Please confirm.

Response 24: The existing water mains have been verified with the City Engineer's office and the pipe sizes are correct as depicted. See the attached e-mail correspondence with Al Flick.

SWPPP

Comment 25: Inlet protection should be indicated as a proposed erosion control measure in the SWPPP and NOI, as shown on the site plans.

Response 25: Inlet protection has been added as an erosion control measure to the SWPPP and NOI.

Comment 26: There are several discrepancies or typos between the NOI and the SWPPP report. Please

address the following:

Comment a: The SWPPP report lists the RRv provided as 0.74 ac-ft., while the NOI lists 0.074 ac-ft.

Response a: **Both the SWPPP and NOI have been updated to show the revised RRv provided value of 0.073 ac-ft.**

Comment b: The SWPPP report lists the minimum RRv required as 0.063 ac-ft., while the NOI lists 0.63 ac-ft.

Response b: **Both the SWPPP and NOI have been updated to show the revised minimum RRv value of 0.070 ac-ft.**

Comment c: The WQv required listed in Question 28 of the NOI (0.151) does not match that listed in the SWPPP (0.140).

Response c: **Both the SWPPP and NOI have been updated to show the revised WQv required value of 0.139 ac-ft.**

Comment d: The post-developed Qp listed in the NOI (2.55) does not match that listed in the SWPPP (2.73).

Response d: **Both the SWPPP and NOI have been updated to show the revised post development Qp value 2.89 CFS.**

Comment e: Please confirm all other data for consistency.

Response e: **All data has been checked for consistency.**

Comment 27: Please provide a complete answer to Question 38 in the NOI - need to identify the responsible entity for operation and maintenance of post construction SWM facilities.

Response 27: **Prime Beechwood, LLC has been added as the responsible entity for O & M.**

Comment 28: The SWPPP examines runoff rates at three analysis points for the project site. While the overall 10-year (Qp) and 100-year (Qf) rates are not increased, they are increased at individual off-site analysis points. There is an increase in runoff between existing conditions and post- development conditions for the 10-year storm at AP-1 (see comment #17), and for the 100-year storm at AP-2 (into the parking lot owned by East Avenue Properties LLC). Please revise the stormwater management system to maintain pre-development 10-year and 100-year discharge rates for each analysis point.

Response 28: **Grading and drainage design has been revised to not increase flow rates to the individual analysis points.**

Comment 29: We do not understand why E-2 and E-5 are not just one subcatchment. Same goes for E-6 and E-7. Please clarify.

Response 29: **The pre-development and post development subcatchment boundaries have been updated.**

Comment 30: The tributary drainage area to design point AP-1 (E-2 and E-5) does not include the existing East Avenue Properties LLC building or side yard. Please clarify and revise accordingly.

Response 30: **Roof drainage from the adjacent property drains via a drip strip. The side yard of the East Avenue Properties LLC building is included in subcatchment 2.2 which has been revised in the post-development HydroCAD model.**

Comment 31: There is an existing catch basin located to the west of the existing common drive near Excelsior Ave that is to be removed. Where this existing catch basin discharges in not indicated on any plan. If this catch basin discharges to the existing collection system within the common drive, it will significantly affect the HydroCAD model. Please confirm where it discharges and revise the watershed delineation and model accordingly.

Response 31: **The catch basin that is to be removed drains to the catch basin on the west side of the common drive entrance. The pre development HydroCAD has been updated to show the watershed contributing to this catch basin. In post development conditions this watershed is captured by alternate stormwater controls.**

Comment 32: There is another existing catch basin that is also to be removed whose tributary area is understated (E-1). Please revise the watershed delineation and model accordingly.

Response 32: **Subcatchment E-1 has been revised and the HydroCAD has been updated accordingly.**

Comment 33: Although the SWPPP includes operation and maintenance requirements for the sedimentation chamber of the sand filter bed, it does not include operation and maintenance requirements for the filter bed portion of the sand filter (i.e. clean sediment from filter bed when sediment level exceeds one inch, replace top few inches of material if filtering capacity diminishes substantially). Please revise accordingly.

Response 33: **Filter bed operation and maintenance requirements have been added to the SWPPP.**

Comment 34: Soil testing for the site indicates that groundwater varies between 64" to greater than 166" below existing grade, however, seasonal high water table is reported at 8" to 84" below existing grade. Please clarify.

Response 34: **Seasonal high water table was determined by soil mottling. Groundwater was determined by seeps observed during excavation of the test pits.**

Comment 35: The DEC Stormwater Management Design Manual (SWMDM) requires a 2-foot separation between sand filters and groundwater. The proposed sand filter bottom will be more than 120" below existing grade in an area where seasonal high groundwater is reported at 8" below existing grade and groundwater is reported at greater than 120". Please confirm that the groundwater separation requirement will be met.

Response 35: **The underground sand filter is an impermeable concrete vault that will have watertight inlet and outlets. Groundwater will not affect the performance of the underground sand filter.**

Comment 36: The SWMDM requires a 3-foot separation to groundwater for infiltration practices. The proposed underground infiltration tank is located with a bottom depth of 277.5'. Soil testing in this vicinity indicated a seasonally high water table at 276', providing only 1.5 feet of separation. Please clarify how groundwater separation requirements are to be met.

Response 36: **An additional test pit was completed outside of the footprint of the filled house excavation. The test pit yielded good sandy soil with no evidence of seasonal high ground water within 9 feet of the surface (test stopped at 9 feet). The elevation of the test pit was approximately 283' making seasonal high below 274.0'. The proposed elevation of the bottom of the chamber stone base is 277.58' and therefore the 3 foot separation requirement is met. Since the mottling observed in Test Pit 2 is non-native material this mottling is likely not indicative of seasonal high groundwater.**

Comment 37: Considering the seasonal high groundwater elevations reported, where will building foundation drains and elevator pit sumps be discharged?

Response 37: **Building foundation drains and elevator pit sumps will be discharged to existing storm infrastructure.**

Comment 38: There are numerous discrepancies between the labeling of the proposed stormwater planters on the grading plan, the watershed map, and in the HydroCAD model. These discrepancies make these practices very difficult to review, however, it appears that there are numerous inconsistencies with outlet sizes and various elevations between the model and the site plans. Please revise the labeling so that it is consistent between the site plans, model, and watershed map and check the sizes and elevations between the model and site plans.

Response 38: **Stormwater planters have been updated on the grading plan, watershed map and HydroCAD model to ensure consistency.**

Comment 39: Please confirm the watershed areas tributary to each SWM practices – see site plan comment #17 as an example of this discrepancy.

Response 39: **Pre development and post development watershed maps have been revised.**

Comment 40: Please clarify the size of the sand filter bed outlet to Detention Piping #1. The grading plan indicates an 18-inch outlet, while the detail and model indicate a 24-inch outlet.

Response 40: **The sand filter outlet to detention piping #1 is a 18-inch HDPE pipe.**

Comment 41: Please clarify the intent of the 4-inch underdrain installed alongside Detention Piping #1. This underdrain is not included in the HydroCAD model and its purpose is unclear.

Response 41: **The underdrain is proposed to prevent the floatation of the underground detention pipes.**

Comment 42: The SWPPP includes calculations for the required WQv and the minimum required RRv. however calculations for the actual WQv and RRv provided by each stormwater practice is not. Please provide these calculations in a format consistent with the Runoff Reduction Worksheets provided by the DEC.

Response 42: **WQv and RRv calculations have been added to appendix “D” of the SWPPP.**

Comment 43: Please clarify how pretreatment requirements for the proposed infiltration chamber will be met. The SWMDM requires that 100% of the WQv be pretreated for infiltration devices with infiltration rates greater than 5 in/hr. (30 in/hr. reported). The SWPPP indicates that pretreatment will be provided by an isolator row, however, this is not reflected in the site plans, details or the model.

Response 43: **Roof runoff from buildings 4 and 5 contributing to the infiltration tanks will be pretreated via a hydrodynamic separator. The hydrodynamic separator has been added to the plans and details.**

Comment 44: The falling head permeability test for the infiltration system was conducted above the bottom of the proposed system – the SWMDM requires these tests to be performed at the bottom of the proposed system. Please provide appropriate testing at the required elevation.

Response 44: **The falling head permeability test for test pit 6 was completed at a depth of 66 inches (277.50’). The results of the test pit and falling head permeability test have been added to SWPPP and the infiltration rate observed has been modeled in HydroCAD for the infiltration chambers.**

Comment 45: The falling permeability test was performed within the foot print of the home that was previously removed from the site. This area was backfilled with sand and gravel within which the testing was performed. Other testing at the site indicates mottled clay at relatively shallow depths. Additional testing should be performed around the infiltration system to verify that the proposed infiltration practice will freely drain.

Response 45: An additional test pit was completed for the infiltration system that was not within the footprint of the removed home. A falling head permeability test showed the soil draining at a rate of 22.5 inches per hour. The exfiltration rate for the infiltration system has been updated in HydroCAD. The test pit was stopped at 9 feet with no evidence of seasonal high ground water giving the chambers necessary separation distance from seasonal high. The results have been added to the SWPPP and site plans. Note that approximately 10' of sand was removed from the northern portion of the site that was used as backfill for the adjacent project. Therefore the presence of sand in TP-6 is not abnormal.

Comment 46: An analysis of runoff during frozen conditions should be included in the SWPPP. As the infiltration practice is installed above frost level, the winter model should not include infiltration through this practice. Please provide a winter condition model.

Response 46: An analysis of the frozen conditions has been completed and the results have been added to the SWPPP.

Sincerely,

A handwritten signature in black ink that reads "Doug Heller". The signature is written in a cursive, flowing style.

Doug Heller, PE
Civil Engineer
dheller@thelagroup.com

From: [Al Flick](#)
To: [Daniel Desjardins](#)
Cc: [Timothy Wales](#)
Subject: Re: 77 Excelsior Waterlines
Date: Monday, November 02, 2015 1:37:15 PM

Dan-

The size of the mains as shown are correct, however, the locations of the mains may not accurate. I will gather up some historical mapping to clarify and get to you in a few days. As you may recall, the 12" main was rerouted to avoid SE corner of Phase 3 building. You're office (Doug?) should have design and as-built info for this relocation.

Al

----- Original Message -----

From: "Daniel Desjardins" <d-desjardins@thelagroup.com>
To: "Al Flick (al.flick@saratoga-springs.org)" <al.flick@saratoga-springs.org>
Cc: "Tim Wales (tim.wales@saratoga-springs.org)" <tim.wales@saratoga-springs.org>
Sent: Friday, October 30, 2015 11:00:18 AM
Subject: 77 Excelsior Waterlines

Al,

We have a comment letter from Chazen that questions the accuracy of our water mapping for the Marion Avenue and East Avenue water mains. Could you please look at this plan and advise as to the size and location of these existing water mains?

Thanks for your help.

Dan D.

Daniel P. Desjardins, PE
Senior Civil Engineer
The LA GROUP
Landscape Architecture
and Engineering, P.C.
People. Purpose. Place.
40 Long Alley
Saratoga Springs, NY
12866
P: 518/587-8100, x235
F: 518/587-0180
d-desjardins@thelagroup.com <<mailto:d-desjardins@thelagroup.com>>
Check out new website!
<http://www.thelagroup.com> <<http://www.thelagroup.com>>

Twitter <<https://twitter.com/LAGroupNY>> |
Facebook <<https://www.facebook.com/LAGroupNY>> |
LinkedIn <<http://www.linkedin.com/company/the-la-group>>

--

Albert Flick
Sr. Engineering Technician
City of Saratoga Springs
(518) 587-3550 ext. 2573

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Total Control Panel

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To: ddesjardins@thelagroup.com [Remove](#) this sender from my allow list

From: al.flick@saratoga-springs.org

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North Country Office (518) 812-0513

Mr. Tim Wales, PE
City Engineer
City of Saratoga Springs
474 Broadway
Saratoga Springs, New York 12866

November 16, 2015

*Re: Technical Review of Documents -2nd submittal
77 Excelsior Avenue Mixed Use Development
City of Saratoga Springs, Saratoga County, New York
City Project # 15.041
Chazen Project # 31504.11*

Dear Mr. Wales,

The Chazen Companies (Chazen) have completed our review of the following materials received:

- Stormwater Pollution Prevention Plan, dated September 9, 2015 and revised November 4, 2015, prepared by The LA Group, P.C.
- Water and Sanitary Sewer Engineering Report, dated November 4, 2015, prepared by The LA Group, P.C.
- Site Plans dated September 9, 2015 and revised November 4, 2015, entitled "77 Excelsior Avenue Mixed Use Development" prepared by The LA Group, P.C. consisting of the following 15 sheets:
 - Cover Sheet
 - S-01 Survey
 - L-1.0 Site Preparation, Erosion & Sediment Control Plan
 - L-2.0 Layout Plan
 - L-2.1 Parking and Lighting Plan
 - L-3.0 Grading and Drainage Plan
 - L-4.0 Utility Plan
 - L-5.0 Landscape Plan
 - L-6.0 Site Details
 - L-6.1 Site Details
 - L-6.2 Site Details
 - L-6.3 Stormwater Details
 - L-6.4 Stormwater Details
 - L-6.5 Stormwater Details
 - L-6.6 Utility Details

Our comments are below. Numbering corresponds to our previous letter issued on October 23, 2015. Comments that have been satisfactorily addressed are not repeated; new comments/clarifications are presented in bold.

Engineering Report:

20. Sewer service is proposed to connect to the existing 6" sanitary sewer that currently serves the Fresh Market site. If this project ties into this line, it would be considered a public sewer main that would need NYSDEC approval. Please provide the City with documentation of such approval.

The applicant has indicated that the project will tie into the sanitary sewer lateral installed with the Fresh Market site and that this service will remain a private line. The City has notified the applicant that this project will have to make its own separate utility connections to city/county infrastructure in Excelsior Avenue (see email from Tim Wales dated October 30, 2015). Please revise the plans and Engineering Report accordingly.

21. According to 10 State Standards the minimum size of a public sewer main is 8" – please confirm with NYSDEC if this will be allowed. If allowed who will own the existing sewer main?

See Comment 20. The applicant will need to make separate utility connections for this project to infrastructure in Excelsior Ave.

22. Water service to buildings 5 and 6 are proposed to connect to the existing water main that extends onto the site through the Fresh Market property. If the project ties into this line, it would be considered a public water main that would need NYSDOH approval. Please provide the City with documentation of such approval.

See Comment 20. The applicant will need to make separate utility connections for this project to infrastructure in Excelsior Ave.

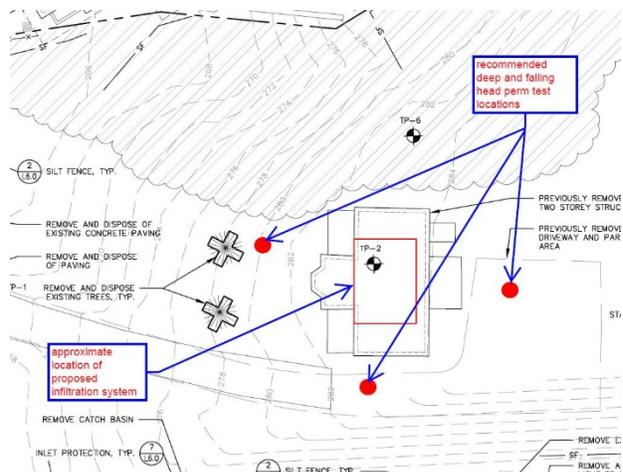
SWPPP:

29. We do not understand why E-2 and E-5 are not just one subcatchment. Same goes for E-6 and E-7. Please clarify.

The applicant has revised subcatchment boundaries. We still do not understand why E-2 and E-8 (formerly E-5) are not just one subcatchment. Please explain why they are not one subcatchment.

36. The SWMDM requires a 3-foot separation to groundwater for infiltration practices. The proposed underground infiltration tank is located with a bottom depth of 277.5'. Soil testing in this vicinity indicated a seasonally high water table at 276', providing only 1.5 feet of separation. Please clarify how groundwater separation requirements are to be met.

The applicant has completed an additional test pit outside of the footprint of the filled house excavation (labeled TP-6 on image to right). In this location, there was no evidence of seasonal high groundwater within 9 feet of the surface (to 274'). Onsite soil testing indicated soil and



seasonal high groundwater varies significantly from one location to another. Additional deep and falling head permeability testing should be completed in at least the 3 locations depicted in the image to the right to verify soil consistency and depth to seasonal high ground water surrounding the proposed infiltration system.

38. There are numerous discrepancies between the labeling of the proposed stormwater planters on the grading plan, the watershed map, and in the HydroCAD model. These discrepancies make these practices very difficult to review, however, it appears that there are numerous inconsistencies with outlet sizes and various elevations between the model and the site plans. Please revise the labeling so that it is consistent between the site plans, model, and watershed map and check the sizes and elevations between the model and site plans.

The applicant has updated the stormwater planters on the grading plan, watershed map, and HydroCAD model for consistency. However, there still appear to be multiple inconsistencies in the outlet inverts, yard drain connections, and inlet/outlet sizes and lengths between the HydroCAD model, grading plan, and stormwater planter detail. Please revise accordingly.

42. The SWPPP includes calculations for the required WQv and the minimum required RRV, however, calculations for the actual WQv and RRV provided by each stormwater practice is not included. Please provide these calculations in a format consistent with the Runoff Reduction Worksheets provided by the DEC.

The applicant has included calculations for the actual WQv and RRV provided by the stormwater planters. The applicant should also provide these calculations and sizing calculations for the proposed infiltration basin and sand filter bed.

43. Please clarify how pretreatment requirements for the proposed infiltration chamber will be met. The SWMDM requires that 100% of the WQv be pretreated for infiltration devices with infiltration rates greater than 5 in/hr. (30 in/hr. reported). The SWPPP indicates that pretreatment will be provided by an isolator row, however, this is not reflected in the site plans, details or the model.

The applicant has added two deep sump catch basins to the plans and details. Please provide calculations showing how these catch basins can provide pretreatment of 100% of the WQv for the infiltration practice.

44. The falling head permeability test for the infiltration system was conducted above the bottom of the proposed system – the SWMDM requires these tests to be performed at the bottom of the proposed system. Please provide appropriate testing at the required elevation.

The applicant has completed an additional test pit outside of the footprint of the filled house excavation. Please provide falling head permeability testing in the additional locations discussed in comment 34 at the required elevation. In addition, the SWMDM requires infiltration rates to be reported in inches per hour. Please report these rates in the correct format.

45. The falling permeability test was performed within the foot print of the home that was previously removed from the site. This area was backfilled with sand and gravel within which the testing was performed. Other testing at the site indicates mottled clay at relatively shallow depths. Additional testing should be performed around the infiltration system to verify that the proposed infiltration practice will freely drain.

The applicant has completed one additional test pit in the vicinity of the infiltration system. It is our opinion that this is not sufficient to verify that the proposed infiltration system will freely drain. We recommend that additional testing be performed as noted in comment 34 above.

Additional Comments:

Now that the plans have been revised per the previous comments, the following additional comments became apparent:

- 47. The grading plan shows three connections to most of the yard drains in the proposed stormwater planters: an inlet, an outlet, and the underdrain. These do not correspond with the yard drain detail or the stormwater planter detail. Please clarify how the underdrains will connect to the yard drains and how stormwater is conveyed between planters and ultimately offsite, update the grading plan and details for consistency, and accurately model these inverts in the HydroCAD model.**
- 48. The infiltration practice detail on Sheet L6.5 includes a note that this practice will sit on compacted subgrade. The DEC SWMDM requires that infiltration practices be located on undisturbed soil. Also it is not clear if there is a filter fabric surrounding the stone bedding and backfill material. Please revise the detail accordingly.**
- 49. CB-7 is modeled with a 15" opening, but the catch basin detail shows a standard 24" opening. The size of each yard drain and catch basin should be shown on the plans and details and should correspond with the HydroCAD model. Please check for consistency and update the plans/model accordingly.**
- 50. The sand filter bed pretreatment area is overstated in the HydroCAD model. The model shows 160 SF of surface area, but only 108 SF are available. Please revise accordingly.**
- 51. There appears to be an error in the calculations for WQv provided by Stormwater Planter 6.1. The WQv provided does not meet the WQv required for this planter. Please revise accordingly.**
- 52. The City Engineer has informed the applicant that Excelsior Ave is in poor condition and will need to be improved as part of this project (see email from Tim Wales dated October 30, 2015). The applicant has not proposed any improvements to Excelsior Ave. Please revise the plans accordingly.**

In order to expedite and simplify the review of revised materials we would appreciate if the next submission be accompanied by a response letter that describes the revised materials and how our comments were/were not integrated.

Sincerely,

A handwritten signature in black ink, appearing to read 'James J. Connors', written in a cursive style.

James J. Connors, P.E., Associate
Senior Director, Engineering Services

Tim Wales, P.E.
77 Excelsior Avenue Mixed Use Development
November 16, 2015, Page 5

cc: File

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The LA GROUP

Landscape Architecture & Engineering P.C.

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November 4, 2015

Kate Maynard, AICP
Principal Planner
City of Saratoga Springs
474 Broadway
Saratoga Springs, NY 12866
kate.maynard@saratoga-springs.org

REC'D NOV 4 2015

**RE: 77 Excelsior Comments and Responses
City Project # 15.041**

Dear Ms. Maynard:

The following are The LA Group's responses to your comments in an email dated October 23, 2015.

Site Layout

Comment: Number of units noted as 73, while SUP permits 101. Confirmation of correct amount needed.

Response: Project proposes 90 units. Plans and Site Plan application have been revised.

Comment: Uses determined for 1,300 s.f. of commercial space?

Response: Proposed use of the commercial space is unknown at this time.

Comment: 1,440 s.f. shown on DRC application, confirmation of which is correct.

Response: Plans and Site Plan application have been revised to indicate 1,440 s.f. of commercial use.

Comment: Walk in office portion of 3 live/work units – present at grade. Note should be added to plans that require ground level space to remain commercial.

Response: A note has been added to Layout & Materials Plan indicating ground level spaces shall remain commercial.

Comment: Is flexibility for adapting units possible? Example: second story of residential unit able to be sealed off from lower level to allow for commercial space to be rented separately.

Response: Second story units could be sealed off if necessary, but not currently proposed.

Comment: Overhang from existing site to west appears to encroach on subject parcel- is this accurate? If so, how resolved?

Response: The dashed line on the adjacent property is depicting a stone drip strip. The

stone drip strip will be reconstructed along the property line as part of the project. Per a site visit, it does not appear that water from the adjacent roof will drip onto the subject parcel.

Comment: Building 6 (third building) does not appear to tie in well with remainder of site-suburban style with parking on both sides. Ability to break down mass of building, create two buildings.

Response: Due to the existing City drainage easement through the northeast portion of the site, there is no ability to break down the mass of the building and create two buildings. Building 6 will be smaller in mass than Phase 1 Building 3, which is directly adjacent to the project.

Comment: What is the small structure at west side of parking lot?

Response: Transformer. The location has been discussed with National Grid.

Comment: Access ramp- is there enough clearance to turn wheelchair on ramp?

Response: Access ramp has been revised due to building changes. Access ramp meets ADA guidelines.

Comment: Left turn lane at East/Excelsior Avenue installed with Fresh Market site project. Additional pedestrian crosswalks, landing pads and pedestrian signals needed for at north, west, and southern legs of intersection.

Response: This will be discussed with the Planning Board.

Comment: Bike lanes need to be shown on plan.

Response: Bike lanes are depicted on Sheet L-2.0, Layout & Materials Plan.

Comment: Excelsior Avenue street condition – condition is fair to poor with construction still remaining for subject project. Applicant should provide how street will be repaired once construction is complete.

Response: This will be discussed with the Planning Board.

Comment: Cross access connection desirable to continue through to west?

Response: Easement has been added to allow for future cross connection.

Comment: Building 4 – how is parking provided for commercial uses versus residential? Tandem parking appears to be for residential only?

Response: Tandem parking has been removed from Building 4. Garage will have a door that will only be accessible by residents. Parking for commercial uses will be along the street and rear parking lot.

Comment: Proposed parking only addresses office use. Eating and drinking #'s need to be provided for comparison of parking needs.

Response: Parking calculations have been revised to depict parking needs for a restaurant which would be the use that requires the maximum amount of parking.

Comment: Building 3 and 4 are creating commercial destinations along Excelsior. This is desirable for the neighborhood. On street parking has been deemed critical for success of commercial uses in Transect districts. Is current proposed and existing sufficient? More on-street parking desirable? Ability to create on shared access drive,

or along south side of Excelsior (National Grid former ice rink site)?

Response: Access drive was investigated and determined to not be feasible. Existing utility poles along the south side of Excelsior along with the need for additional sidewalk make parking along the south side of Excelsior problematic.

Comment: 101 units proposed on site- public civic space is required for project. Proposed on private property, public access easement or other means required to ensure public able to access.

Response: Public access easement is proposed over the civic space.

Comment: Courtyard- water feature wall still has height of over 12', ability to break down wall through materials, articulation, potentially a clear fence at top? Bench placement from illustration needs to be clarified.

Response: A fence is proposed on either side of the water feature. A rendering will be shown at the Planning Board meeting of this wall. The seat wall will be used for seating.

Comment: No dumpster appears to be provided. Details required.

Response: A trash/recycle room is proposed in the garages of each unit. For pickup, the trash truck will pull along the garages and the contractor will enter the garage and pull out the internal dumpsters to be emptied. This is a similar approach as the previous phase, Building 3.

Comment: Condition of Planning Board approval of land disturbance permit was 20' buffer and retaining number of large trees within Route 50 facing portion. Plan proposes to remove all remaining trees on property. Mature, taller trees can assist with softening perspective of new 50' building being constructed. No new trees appear to be proposed currently.

Response: A few of the trees along Rte. 50 are outside of the property and will remain. A rendering of the Rte 50 view will be provided at the Planning Board meeting.

Comment: 67' in diameter oak tree identified as potentially largest Oak tree in City by Urban Forestry Plan. Opportunity to preserve should be considered.

Response: The large oak tree along the north western portion of the site appears to be in poor condition. Tree will be removed to prevent an unsafe situation.

Comment: Illustration of remaining vegetation for view from west (and East Ave) be provided?

Response: Renderings will be presented at the Planning Board meeting.

Comment: Fencing- Chainlink fence proposed to remain along Route 50. Recommend upgrading to match black wrought iron look fence along Fresh Market Route 50 frontage.

Response: Fence along Rte 50 will be upgraded to match Fresh Market site.

Comment: Utility- Confirmation cross-access, utility easements signed for infrastructure crossing property lines?

Response: Utility easements will be provided as necessary.

Comment: National Grid approval for proposed transformer location provided on plans?

Response:

National Grid will not approve the transformer location until the project is approved. LA Group has met with NG to discuss the anticipated location and have received positive feedback.

Sincerely,



Douglas B. Heller, PE
Civil Engineer
dheller@thelagroup.com



City of Saratoga Springs
OFFICE OF PUBLIC WORKS
5 Lake Avenue
Saratoga Springs, New York 12866

ANTHONY J. SCIROCCO
COMMISSIONER
TIMOTHY J. COGAN
DEPUTY COMMISSIONER

Phone 518-587-3550 ** Fax 518-587-2417
www.saratoga-springs.org

NEW WATER SERVICE CONNECTION
AGREEMENT & APPLICATION FORM

Property Owner's Name: Prime Beechwood³ LLC

Project Name (if applicable): 77 Excelsior Mixed Use Development

Property Address: Excelsior Avenue

Tax Map#: 166.5-5-5.41

Size of Tap (check one below):

3/4" 1"

Greater than 1": _____

~~RESIDENTIAL
Minimum fee is \$3,000 for the 1st dwelling
and \$2,000 for each additional dwelling~~

NON-RESIDENTIAL
Minimum fee is \$3,000 for the 1st unit of water
and \$2,000 for each additional unit of water. A
unit of water is 14,000 cubic feet of water per year.

N/A

~~Number of Dwellings: 101~~

Estimated Cubic Feet of Water per Year:

~~Appraised Value: _____
If \$120,000 or less please provide copy of
certified appraisal~~

Permit Fee: \$0 - N/A (with circled 'P')

To be paid in full without any contingencies or protest, on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.

The undersigned acknowledges the fees as estimated above and outlined in the City of Saratoga Springs Water Ordinance and Resolution, section 12, printed on the reverse side of this document.

The undersigned represents to the City that they have full and complete authority to execute this document and find and commit the developer to pay fee(s) as required by the City Water Ordinance. This agreement shall be binding on all of the undersigned transferees.

The undersigned acknowledges that a copy of this document will be delivered to all appropriate and necessary governmental entities, and the undersigned further acknowledges that it shall pay as provided herein.

Authorized Signature: [Signature] - Member
Company Address: 621 Columbia Street, Cohoes, NY 12047
Phone Number: (518) 577-2005 785-9006

Company Name: Prime Beechwood³ LLC
Date: 9/9/2015

Department of Public Works Approval: _____ Date: _____
Rev Account – WATCON

12.

...

There shall also be a service connection fee with the following provisions:

- A. Any new service connections (3/4 inch and 1 inch taps) to the City's water system shall be a minimum of \$3,000.00 (three thousand dollars) per unit. Unless waived, the service connection fee must be paid in full on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.
- B. Any new service connection for either:
 1. Non-residential use (greater than a 1 inch tap) shall be estimated to use more than one (1) unit of water per year shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first unit of water and *two thousand dollars (\$2000)* for each additional unit of water or part thereof; or
 2. Residential use where more than one residential dwelling per parcel is served by a single service connection shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first dwelling and *two thousand dollars (\$2,000)* for each additional dwelling unit.
- C. A unit of water shall be defined as fourteen thousand (14,000) cubic feet of water per year.
- D. Any project that improves the City's water distribution system at the sole cost of a developer, the cost of the improvement by the developer will be deducted from the cost of the service connection fee. If the cost of the improvement is greater than the cost of the service connection, then no service connection fee will be charged. To be considered for eligibility, the diameter of the watermain installed must be 12" or greater.
- E. Exemptions to these new service connection fees will be all properties within Water's Edge at Saratoga Lake Planned Unit Development District not to exceed 304 units (amended June 6, 1998), Phase I and II of the Meadowbrook subdivision and existing homes in the Knoll Spring Park water district. Also, credit for 69 taps will be credited to Interlaken Phase "B" (Regatta View). The exemptions for these projects will be granted due to the fact that the cost to extend the infrastructure of the City to these projects was not borne by the City and are of greater cost than the service connection fee. Also exempt shall be all connections made to that portion of the Doten Avenue and East Broadway water line financed by federal funds because federal regulations prohibit the imposition of a service connection fee. Also exempt shall be the pre-existing homes defined in the Gilbert Road/Meadowbrook Road Special Assessment District.
- F. Taps that are to be used solely for sprinkler system and fire protection will not be affected.
- G.
 - 1.) A Low Income House shall be defined as any new residential house and lot whose agreed to selling price is \$120,000 or less or any existing residential house and lot whose appraised value is \$120,000 or less. Proof of price or value has to be provided by documents from the lending institution or a certified appraiser.
 - 2.) All dwellings meeting the above stated requirements shall be considered Low Income Housing and subject to a service connection fee of \$500 (five hundred dollars) per house. All other conditions remain the same. Low Income Housing price will be determined on an annual basis by increasing rate of Consumer Price Index for this region.
 - 3.) If a Low Income House is sold within five (5) years of the installation of a new service connection at a price that is greater than the definition of a Low Income House at that time, the seller will be responsible to pay the City the full cost of a service connection fee.
- H. Anyone constructing a house on speculation will be charged the full service connection fee that is applicable at the time. When proof of price is submitted, a rebate will be issued if warranted, to be determined by the Commissioner of Public Works.
- I. All monies raised by the new service connection fees are to be maintained in a dedicated fund for capital improvements under the control of the Commissioner of Public Works. The monies are not to be used for maintenance, or the reduction of water rates.



SARATOGA COUNTY PLANNING BOARD

TOM L. LEWIS
CHAIRMAN

JASON KEMPER
DIRECTOR

November 20, 2015

Kate Maynard, Principal Planner
City of Saratoga Springs
City Hall 474 Broadway
Saratoga Springs, NY 12866

**RE: SCPB Referral Review#14-208—Site Plan Review-Prime Beechwood/77
Excelsior**

Construction of a mixed-use development with 101 units and 1,300 square foot
of commercial space.

Excelsior Ave, north side, east of East Avenue Intersection

Received from the City of Saratoga Springs Planning Board on September 25, 2015.

Reviewed by the Saratoga County Planning Board on November 19, 2015.

Decision: No Significant County Wide or Inter Community Impact

Comment: A review of the special use permit application for 77 Excelsior Avenue was conducted as a referral one year ago and the Saratoga County Planning Board provided comments respective to both the SUP and the site plan to be later referred. We then recognized the uses to be compatible with the defined city land use and ongoing development within the Rt. 50/Excelsior Ave/Marion Ave areas and that is even more the case a year later. The site plan proposes no new curb cuts, using the existing (new) curb cuts on Excelsior and Marion avenues for the existing mixed use development (Fresh Market) development on Excelsior and Marion avenues. We note that the traffic analysis for this project recognizes no mitigation necessary as a result of this development and an inquiry into any accident history resulting from the new driveway yielded none to report.

A handwritten signature in purple ink that reads "Michael Valentine".

Michael Valentine, Senior Planner
Authorized Agent for Saratoga County

DISCLAIMER: Recommendations made by the Saratoga County Planning Board on referrals and subdivisions are based upon the receipt and review of a "full statement of such proposed action" provided directly to SCPB by the municipal referring agency as stated under General Municipal Law section 239. A determination of action is rendered by the SCPB based upon the completeness and accuracy of information presented by its staff. The SCPB cannot be accountable for a decision rendered through incomplete or inaccurate information received as part of the complete statement.



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR: SPECIAL USE PERMIT

(Rev: 05/2016)

Project Name: _____

Property Address/Location: _____

Tax Parcel #: _____ Zoning District: _____
(for example: 165.52-4-37)

Proposed Use: _____

Type of Special Use Permit: Permanent Temporary Renewable

APPLICANT(S)*

OWNER(S) (If not applicant)

ATTORNEY/AGENT

Name _____

Address _____

Pho _____

Ema _____

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Please check the following to affirm information is included with submission.

Sketch Plan Attached:

Applicant is encouraged to submit sketch plans showing features of the site and /or neighborhood and illustrate proposed use.

Environmental Assessment Form:

All applications must include a completed SEQR Short or Long Form. SEQR Forms can be completed at <http://www.dec.ny.gov/permits/6191.html>.

Water Service Connection Agreement- For all projects including new water connections to the City system, a copy of a signed water service connection fee agreement with the City Department of Public Works is required and **MUST** be submitted with this application.

Application Fee: \$750.00 (check box)

A check for the total amount made payable to: "Commissioner of Finance" **MUST** accompany this application.

3 hard copies (*1 signed original) and one electronic copy (PDF) of complete application and ALL attachments.

Submission Deadline - Check City's website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES _____ NO _____. If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Special Use Permit approval by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.1 of the Zoning Code of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

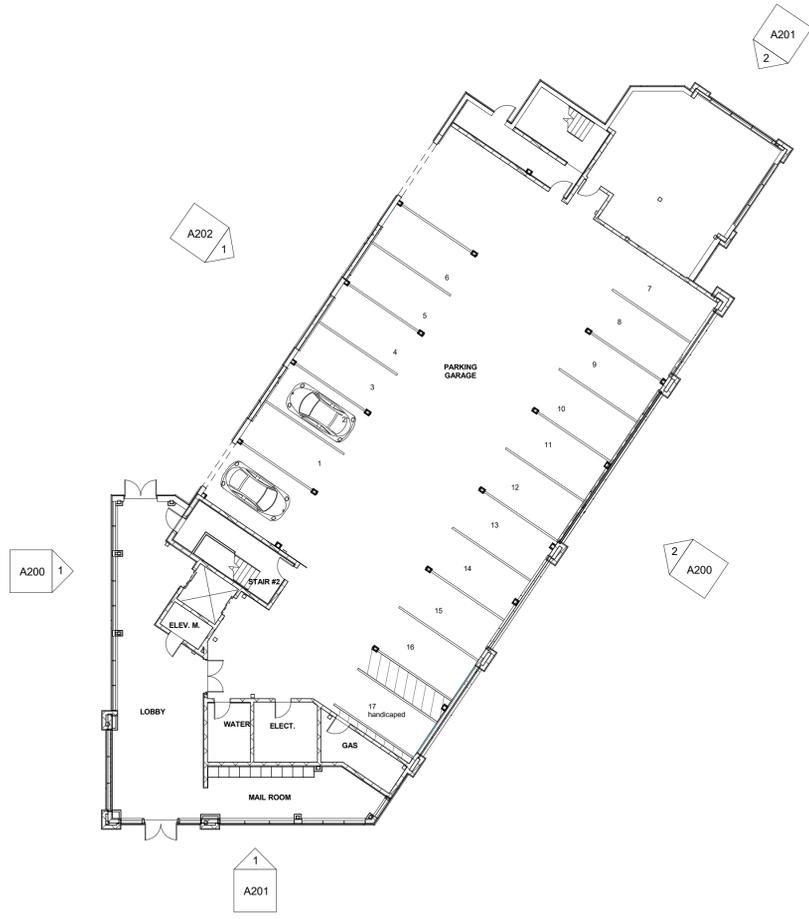
Applicant Signature: _____

Date: _____

If applicant is not current owner, owner must also sign.

Owner Signature: _____

Date: _____



① Level 1 (GROUND LEVEL PARKING)
1/16" = 1'-0"



② LEVEL 2
1/16" = 1'-0"



③ LEVEL 3
1/16" = 1'-0"

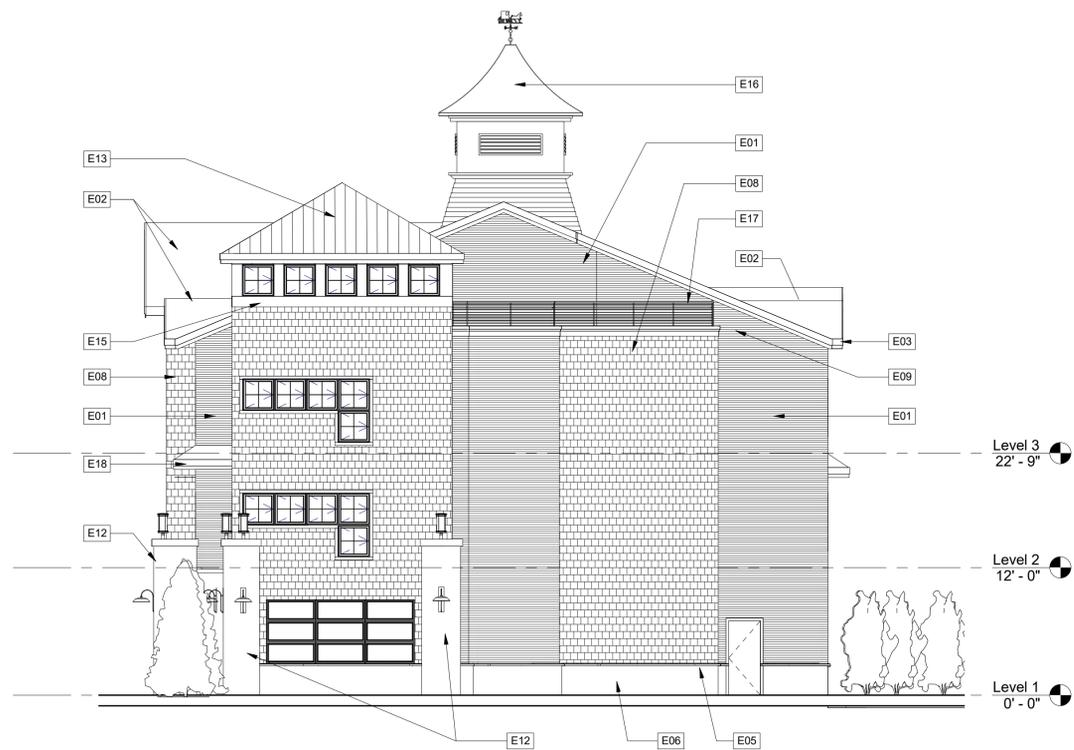


1 NORTH ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
E15	"SMARTSIDE" ENGINEERED WOOD TRIM BOARDS FACTORY FINISHED COLOR TBD
E16	CUPOLA (CONTRACTORS OPTION TO BUILD IN PLACE OR INSTALL PREMANUFACTURED UNIT)
E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS



2 SOUTH (BIKE PATH) ELEVATION
1/8" = 1'-0"



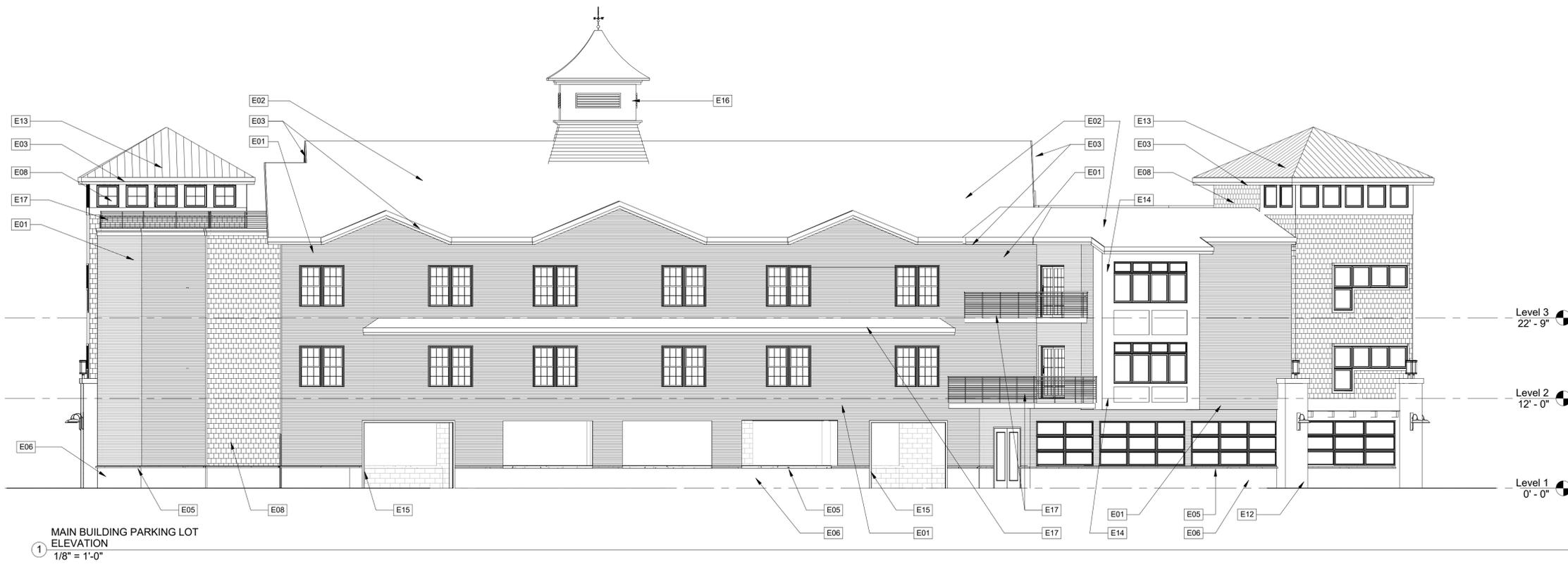
② EAST ELEVATION
1/8" = 1'-0"



① WEST ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
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E06	CULTURED STONE VENEER TBD
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246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



Site Plan

246 West Avenue Apartments

City of Saratoga Springs, New York

City PB#

June 23, 2016



Vicinity Map:

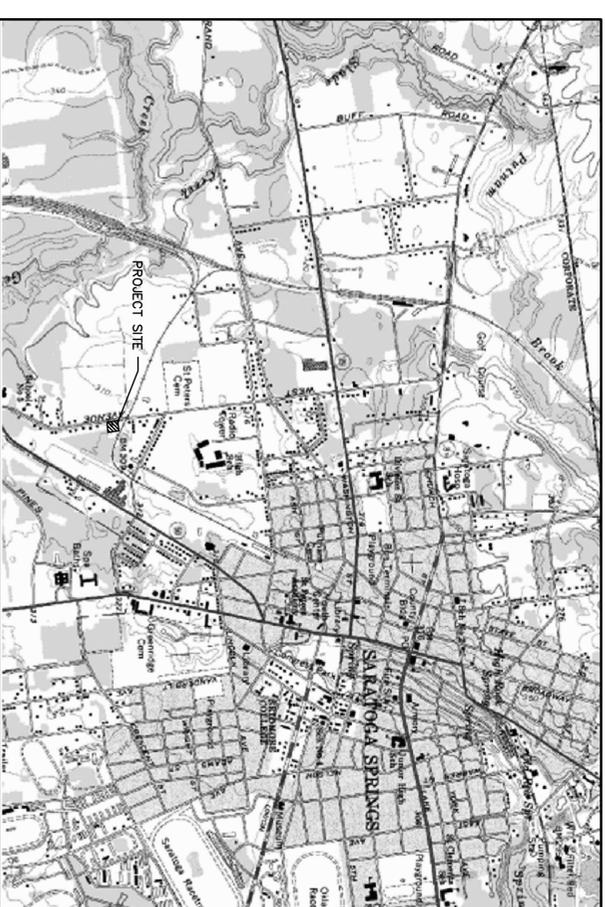
SCALE: NTS



CITY OF SARATOGA SPRINGS STANDARD NOTES

1. All work must conform to all Federal, State and City Codes, specifications, ordinances, rules and regulations.
2. The elevation base for the contours and benchmarks are based on the National Geodetic Vertical Datum, 1929.
3. All refuse, debris and miscellaneous items to be removed shall be legally disposed of off-site by the Contractor to a location approved by the City Engineer.
4. The Contractor must set up a pre-construction meeting with the City Engineer prior to any construction. Construction inspections by the a designated representative of design professional are required. The cost of the construction inspection is the responsibility of the Applicant/Developer.
5. The contractor must obtain a blasting permit from the Building Inspector if any blasting is required for the project.
6. The contractor must obtain a street opening permit issued by the Department of Public Works for any work in the street or right-of-way of any City street, road or alley.
7. All points of construction ingress or egress shall be maintained to prevent tracking or flowing of sediment or debris onto a public road.
8. No Certificate of Occupancy will be issued until all site work has been completed in accordance with the approved plans; and an as-built drawing has been prepared in accordance with the requirements of the City Engineer.
9. The applicant must verify that the proposed project can accommodate the turning movements of any fire truck that the fire department so designates.

SITE STATISTICS	
PROPOSED USE:	16 Apartments
TAX MAP PARCEL NUMBER	178.33-1-20&21
LEASE LOT SIZE	.51 ACRES
EXISTING ZONING	T-4 Urban Neighborhood
BUILDING SETBACKS	REQUIRED
BUILD-TO-LINE	12'-18"
FRONTAGE BUILDOUT	50% MIN.
SIDE SETBACK	12' AVERAGE PRINCIPAL BLDG
REAR SETBACK	6' MIN OUTBUILDING
	24' PRINCIPAL BLDG
	5' MIN OUTBUILDING
BUILDING HEIGHT	2 STORY MIN, 40' MAX HT.
PARKING REQUIREMENTS	24 SPACES
RESIDENCES WITHIN T-4 ZONE	24 SPACES
1.5 PER DWELLING UNIT	7 SPACES OUTSIDE BUILDINGS 17 SPACES WITHIN THE BUILDINGS
	PROPOSED
	12.5'
	63%
	15.5'
	8.02'
	27.07'
	9.34'
	3 STORY, 40'-0"



Project Location Map:

SCALE: NTS



SHEET INDEX:

- COVER SHEET
- BOUNDARY AND TOPOGRAPHIC SURVEY
- SITE DEMOLITION AND PREPARATION PLAN
- L-1 SITE LAYOUT AND MATERIALS PLAN
- L-2 SITE GRADING AND DRAINAGE PLAN
- L-3 SITE UTILITY PLAN
- L-4 OFF-SITE WATERLINE CONNECTION
- L-4.1 SITE LANDSCAPE PLAN
- L-5 SITE LIGHTING PLAN
- L-6 SITE DETAILS
- L-7 SITE DETAILS
- L-8 SITE DETAILS
- L-9 SITE DETAILS
- L-10 SITE DETAILS
- L-11 STORMWATER DETAILS
- L-12 SITE DETAILS

Applicant:

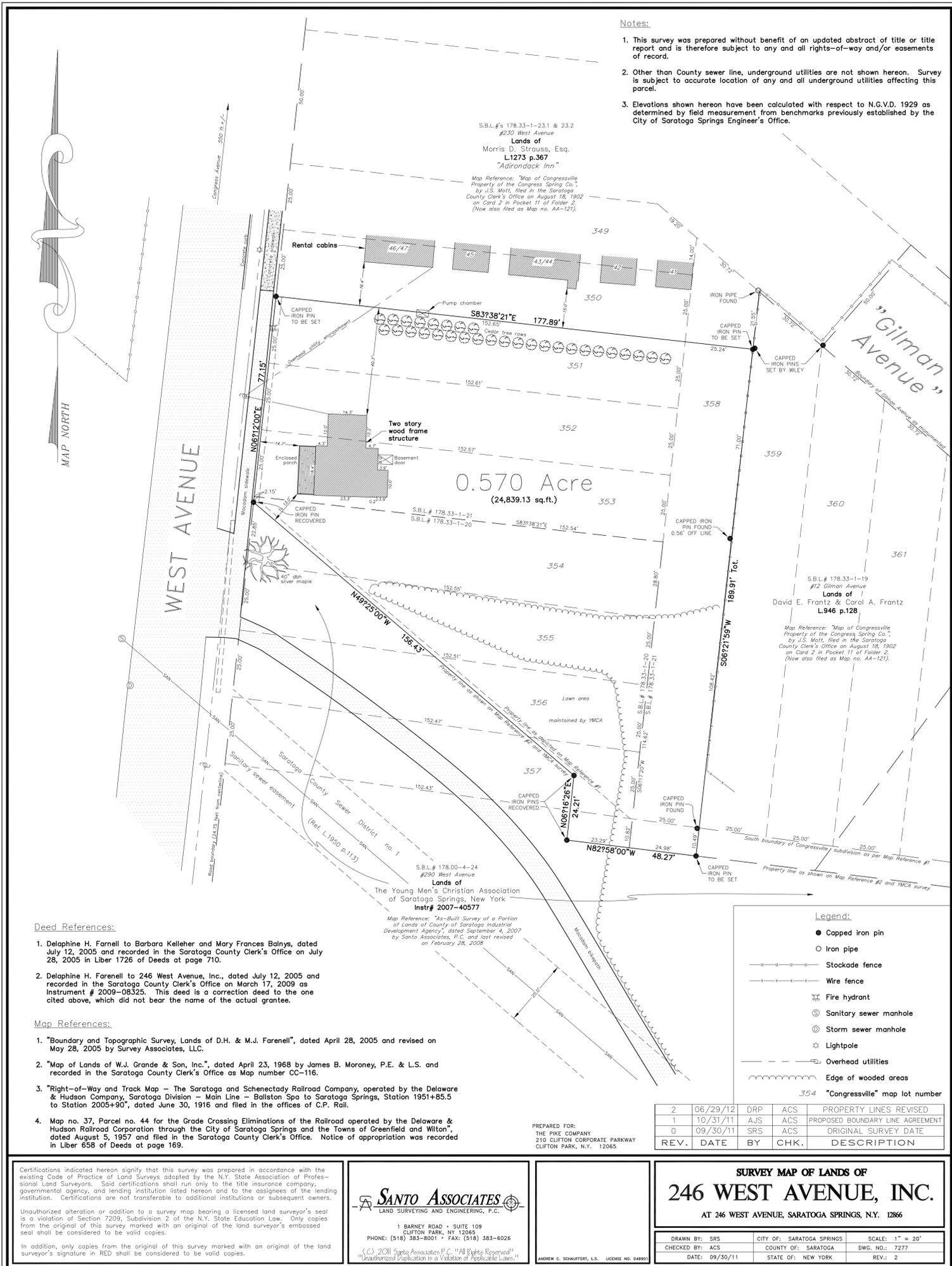
John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306

Prepared By:

the LA group
Landscape Architecture
and Engineering, P.C.

40 Long Alley
Saratoga Springs
New York 12866
518/567-8100
Telefax 518/567-0180

Approval _____
Approved under authority of a resolution adopted
by the Planning Board of the City of Saratoga Springs
Chairperson _____
Date Signed _____



- Notes:**
1. This survey was prepared without benefit of an updated abstract of title or title report and is therefore subject to any and all rights-of-way and/or easements of record.
 2. Other than County sewer line, underground utilities are not shown hereon. Survey is subject to accurate location of any and all underground utilities affecting this parcel.
 3. Elevations shown hereon have been calculated with respect to N.G.V.D. 1929 as determined by field measurement from benchmarks previously established by the City of Saratoga Springs Engineer's Office.

S.B.L.#s 178.33-1-23.1 & 23.2
 #230 West Avenue
Lands of
 Morris D. Strauss, Esq.
 L.1273 p.367
 "Adirondack Inn"
 Map Reference: "Map of Congressville Property of the Congress Spring Co.", by J.S. Mott, filed in the Saratoga County Clerk's Office on August 18, 1902 on Card 2 in Pocket 11 of Folder 2. (Now also filed as Map no. 44-121).

S.B.L.# 178.33-1-19
 #12 Gilman Avenue
Lands of
 David E. Frantz & Carol A. Frantz
 L.946 p.128
 Map Reference: "Map of Congressville Property of the Congress Spring Co.", by J.S. Mott, filed in the Saratoga County Clerk's Office on August 18, 1902 on Card 2 in Pocket 11 of Folder 2. (Now also filed as Map no. 44-121).

S.B.L.# 178.00-4-24
 #290 West Avenue
Lands of
 The Young Men's Christian Association of Saratoga Springs, New York
 Instr# 2007-40577
 Map Reference: "As-Built Survey of a Portion of Lands of County of Saratoga Industrial Development Agency," dated September 4, 2007 by Santo Associates, P.C. and last revised on February 28, 2008

Deed References:

1. Delaphine H. Farnell to Barbara Kelleher and Mary Frances Balnys, dated July 12, 2005 and recorded in the Saratoga County Clerk's Office on July 28, 2005 in Liber 1726 of Deeds at page 710.
2. Delaphine H. Farnell to 246 West Avenue, Inc., dated July 12, 2005 and recorded in the Saratoga County Clerk's Office on March 17, 2009 as Instrument # 2009-08325. This deed is a correction deed to the one cited above, which did not bear the name of the actual grantee.

Map References:

1. "Boundary and Topographic Survey, Lands of D.H. & M.J. Farnell", dated April 28, 2005 and revised on May 28, 2005 by Survey Associates, LLC.
2. "Map of Lands of W.J. Grande & Son, Inc.", dated April 23, 1968 by James B. Moroney, P.E. & L.S. and recorded in the Saratoga County Clerk's Office as Map number CC-116.
3. "Right-of-Way and Track Map - The Saratoga and Schenectady Railroad Company, operated by the Delaware & Hudson Company, Saratoga Division - Main Line - Ballston Spa to Saratoga Springs, Station 1951+85.5 to Station 2005+90", dated June 30, 1916 and filed in the offices of C.P. Rail.
4. Map no. 37, Parcel no. 44 for the Grade Crossing Eliminations of the Railroad operated by the Delaware & Hudson Railroad Corporation through the City of Saratoga Springs and the Towns of Greenfield and Wilton", dated August 5, 1957 and filed in the Saratoga County Clerk's Office. Notice of appropriation was recorded in Liber 658 of Deeds at page 169.

Legend:

- Capped iron pin
- Iron pipe
- Stockade fence
- - - Wire fence
- ⊕ Fire hydrant
- ⊙ Sanitary sewer manhole
- ⊕ Storm sewer manhole
- ☆ Lightpole
- - - Overhead utilities
- ⌋ Edge of wooded areas

354 "Congressville" map lot number

REV.	DATE	BY	CHK.	DESCRIPTION
2	06/29/12	DRP	ACS	PROPERTY LINES REVISED
1	10/31/11	AJS	ACS	PROPOSED BOUNDARY LINE AGREEMENT
0	09/30/11	SRS	ACS	ORIGINAL SURVEY DATE

PREPARED FOR:
 THE PIKE COMPANY
 210 CLIFTON CORPORATE PARKWAY
 CLIFTON PARK, N.Y. 12065

Certifications indicated hereon signify that this survey was prepared in accordance with the existing Code of Practice of Land Surveys adopted by the N.Y. State Association of Professional Land Surveyors. Said certifications shall run only to the title insurance company, governmental agency, and lending institution listed hereon and to the assignees of the lending institution. Certifications are not transferable to additional institutions or subsequent owners.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of Section 7209, Subdivision 2 of the N.Y. State Education Law. Only copies from the original of this survey marked with an original of the land surveyor's embossed seal shall be considered to be valid copies.

In addition, only copies from the original of this survey marked with an original of the land surveyor's signature in RED shall be considered to be valid copies.

SANTO ASSOCIATES
 LAND SURVEYING AND ENGINEERING, P.C.
 1 BARNEY ROAD - SUITE 109
 CLIFTON PARK, NY 12065
 PHONE: (518) 383-8001 • FAX: (518) 383-6026
 © 2011 Santo Associates, P.C. All Rights Reserved
 Unauthorized Duplication is a Violation of Applicable Laws.

ANDREW C. SCHAUFFERT, L.S. LICENSE NO. 04890

SURVEY MAP OF LANDS OF
246 WEST AVENUE, INC.
 AT 246 WEST AVENUE, SARATOGA SPRINGS, N.Y. 12866

DRAWN BY: SRS	CITY OF: SARATOGA SPRINGS	SCALE: 1" = 20'
CHECKED BY: ACS	COUNTY OF: SARATOGA	DWG. NO.: 7277
DATE: 09/30/11	STATE OF: NEW YORK	REV.: 2

**SITE PREPARATION &
DEMOLITION NOTES:**

- ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED, THAT ARE NOT TO BE STOCKPILED FOR LATER USE ON THE PROJECT OR DELIVERED TO THE OWNER, SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND REUSED AS DIRECTED BY THE OWNER OR LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
- CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL TO FULL DEPTH WITHIN LIMIT OF GRADING BEFORE COMMENCING EXCAVATION AND GRADING OPERATIONS. TOPSOIL SHALL NOT BE REMOVED FROM THE SITE, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE OUTSIDE THE LIMIT OF WORK.
- THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY AND PAY ALL ASSOCIATED COSTS.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS. ANY MUD ON PUBLIC WAYS ORIGINATING FROM THE JOB SITE SHALL BE CLEANED BY THE CONTRACTOR DAILY.
- CONTRACTOR SHALL SECURE ALL PERMITS THAT MAY BE REQUIRED FROM ALL JURISDICTIONS AFFECTED BY THIS WORK.
- ANY TREE AND SHRUB REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOT SYSTEM AND SATISFACTORY OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED THROUGH THE REMOVAL OPERATIONS.
- CONTRACTOR SHALL APPLY FOR AND OBTAIN DEMOLITION PERMIT FROM CITY PRIOR TO ANY DEMOLITION WORK ON-SITE. EXISTING WATER AND SEWER CONNECTIONS MUST BE DEMONSTRATED TO CITY ENGINEER.



the LA group
Landscape Architecture
and Engineering, PC
40 Long Alley
Saratoga Springs
New York 12866
P 518/587-8100
F 518/587-0180
www.thelagroup.com

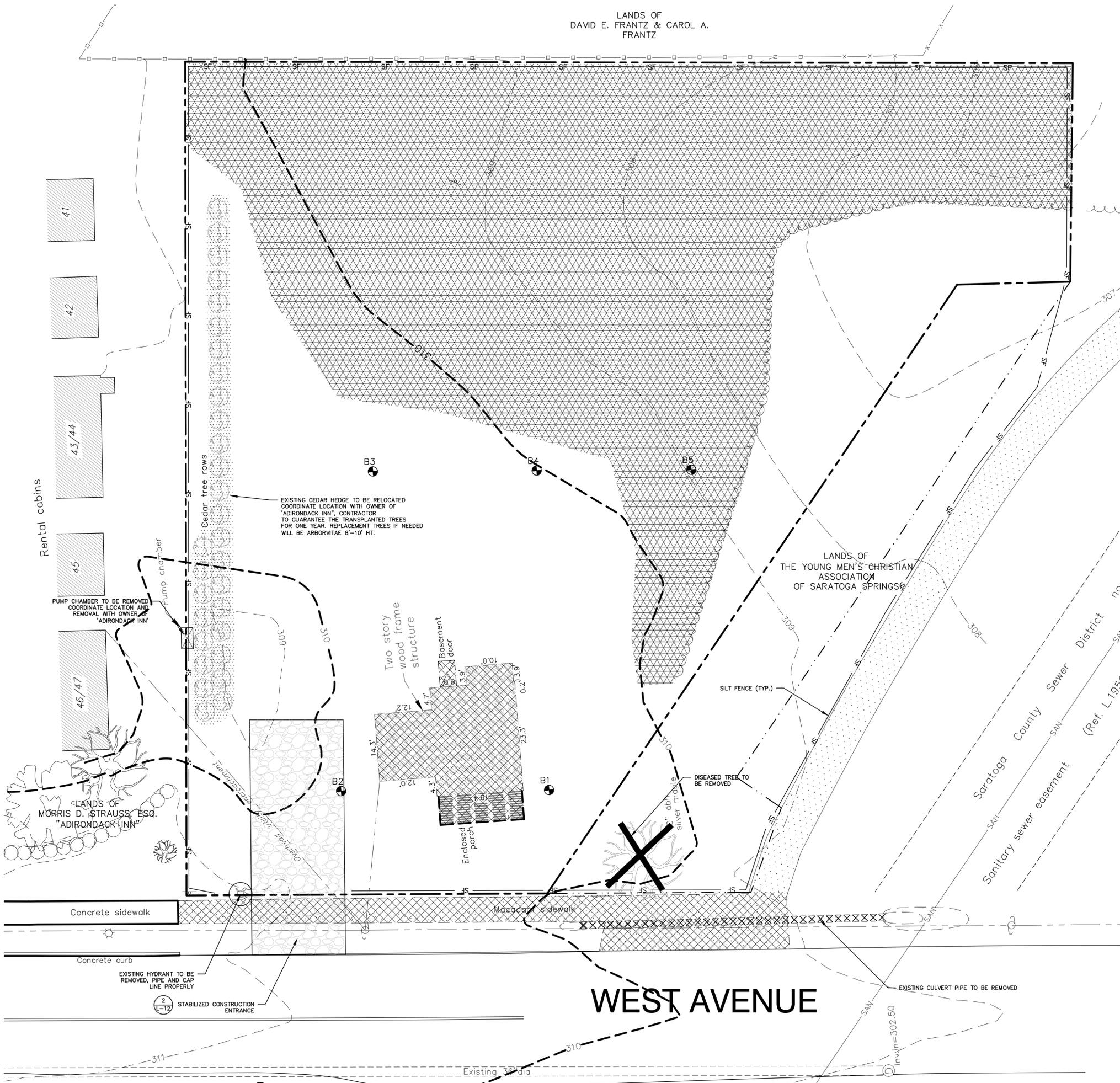
Unauthorized alteration or addition to this document is a violation of Section 7209 of the New York State Education Law

© the LA Group 2008
Design MCB
Drawn MCB
Checked CMI

PREPARED FOR:
John-Paul Builders, LLC
796 Burdick Street
Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
SARATOGA SPRINGS, NY
Title
SITE DEMOLITION AND PREPERATION PLAN

Revisions
City #: 201178
Project: 6/23/2016
Date: 6/23/2016
Drawing
L-1



BORING RESULTS FROM GEOTECHNICAL EVALUATION FOR PROPOSED OFFICE COMPLEX: PREPARED BY, DENTE ENGINEERING: APRIL 2005

BORING 1:
0-8" TOPSOIL
8"-96" BROWN F-M SAND, TRACE SILT: WET AT 84"
96"-21' GRADES F-C SAND, LITTLE FINE GRAVEL, TRACE SILT
21"-26' GRADES DARK GRAY
26"-31' GRADES GRAY FINE SAND, TRACE SILT
31"-46' GRAY F-M SAND, SOME SILT
46"-51' GRADES SILT, TRACE FINE SAND
51"-52' GRADES FINE SAND, TRACE SILT

BORING 2:
0-10" TOPSOIL
10"-60" BROWN F-M SAND, TRACE SILT
60"-84" BROWN FINE SAND & SILT WITH PARTINGS FINE SAND, TRACE SILT
84"-17' FROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT: WET AT 84"

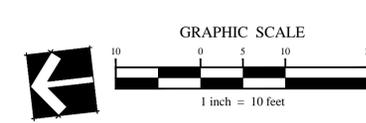
BORING 3:
0-12" TOPSOIL BECOMES BROWN F-M SAND TRACE SILT
12"-9" DARK BROWN F-M SAND, TRACE SILT: WET AT 9'
9"-16' BROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT
16"-17' BECOMES GRAY SAND

BORING 4:
0-12" TOPSOIL BECOMES BROWN F-M SAND, TRACE SILT
12"-96" BROWN F-M SAND, TRACE SILT
96"-10' MOTTLED SILT, SOME FINE SAND: WET AT 10'
10"-16' BROWN F-C SAND, TRACE SILT
16"-17' GRADES TRACE FINE GRAVEL

BORING 5:
0-8" TOPSOIL
8"-84" BROWN F-M SAND, SOME SILT TRACE GRAVEL: POSSIBLE FILL: WET AT 60"
84"-16' BROWN F-C SAND TRACE GRAVEL & SILT
16"-17' BECOMES GRAY/BROWN SAND

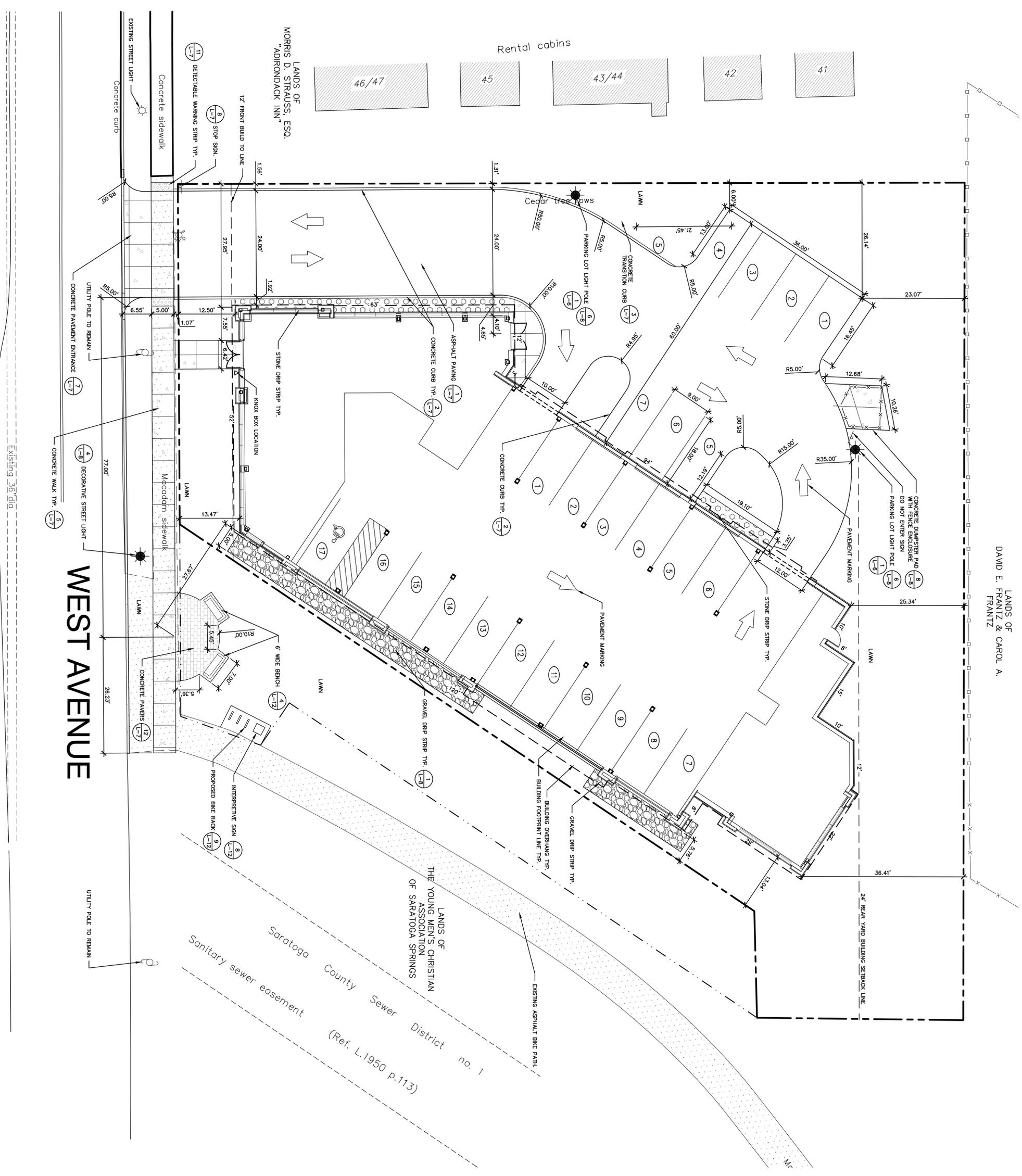
LEGEND

- EXISTING BUILDING OR PAVEMENT TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- SILT FENCE TYP. (3 L-17)



Approval
Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson

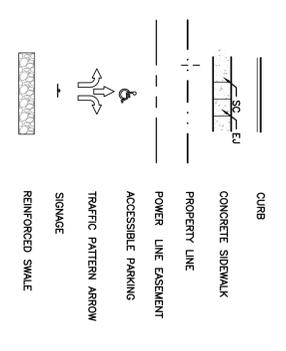
Prepared By: ANDREW LONGACKE
Date: 6/23/2016 11:58 AM
Drawing: 06/23/2016 11:58 AM, West_Ave_2462017180001.dwg



LAYOUT NOTES

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. ALL LINE AND GRADE PER DIMENSIONS SHALL BE Laid OUT BY A NEW YORK STATE REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE ARCHITECT. ALL DIMENSIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE ON AND WITHIN LIMITS OF WORK AS SHOWN ON THE PLANS AND AS APPROVED BY THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES IN THE SITE STAKING TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
5. AT ALL LOCATIONS WHERE EXISTING CURBS, BITUMINOUS CONCRETE ROADWAY OR CONCRETE SIDEWALK ADJUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SHOWN TO A DETAIL. TACK COAT EXPOSED EDGES OF EXISTING BITUMINOUS CONCRETE PAVEMENT.
6. BITUMINOUS PAVEMENT SHALL NOT BE Laid WHEN AIR TEMPERATURE IS LESS THAN 40° F., AND AIR TEMPERATURE IS LESS THAN 50° F.
7. ALL LIGHT STAKES SHALL BE LOCATED AT A MINIMUM OF 10 FEET FROM THE FACE OF CURB OR PAVEMENT PRIOR TO INSTALLATION.
8. DIMENSIONS ON PARKING LOTS AND ROWWAYS ARE FROM FACE OR BOTTOM OF CURB TO FACE OR BOTTOM OF CURB.
9. ALL NEW WORK SHALL BE STAKED-OUT PRIOR TO CONSTRUCTION. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCIES.
10. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE AND CITY ENGINEER WITHOUT EXCEPTION.
11. ALL EXISTING UTILITIES SHOWN IN THEIR RELATIVE POSITION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

LEGEND



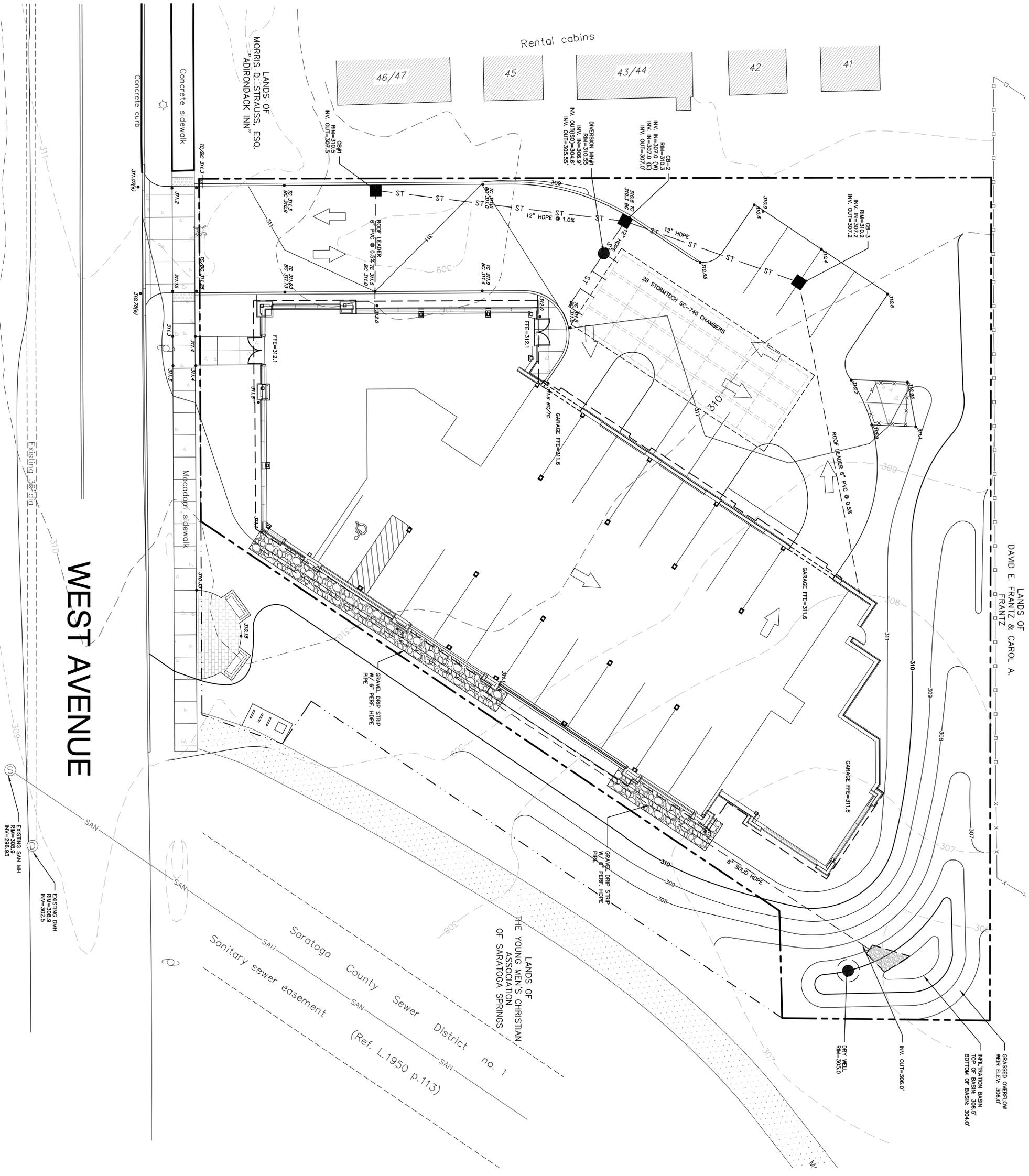
WEST AVENUE

LANDS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF SARATOGA SPRINGS

Saratoga County Sewer District no. 1
 Sanitary sewer easement (Ref. L.1950 p.113)



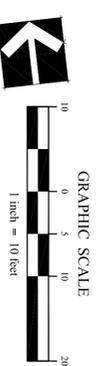
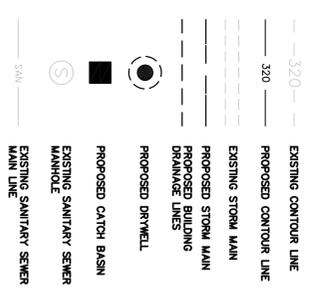
Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson



LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ

WEST AVENUE

- GRADING NOTES**
1. SURVEY INFORMATION PROVIDED BY SAITO DESIGN AND ENGINEERING, P.C. IS TO BE USED AS A FIELD CHECK ONLY. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE.
 2. ALL GRADES SET IN THE FIELD SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
 3. THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE.
 4. THE CONTRACTOR SHALL VERIFY PROPOSED GRADES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
 5. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 6. ALL TILT SLOPES 3:1 OR GREATER SHALL RECEIVE BIO-ERODIBLE FABRIC OR APPROVED EQUAL FOR EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 7. THE CONTRACTOR SHALL BLEND ALL NEW EXISTING EXISTING SMOOTH ROUNDED TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPES.



Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson: _____



the LA Group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
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 www.laingroup.com

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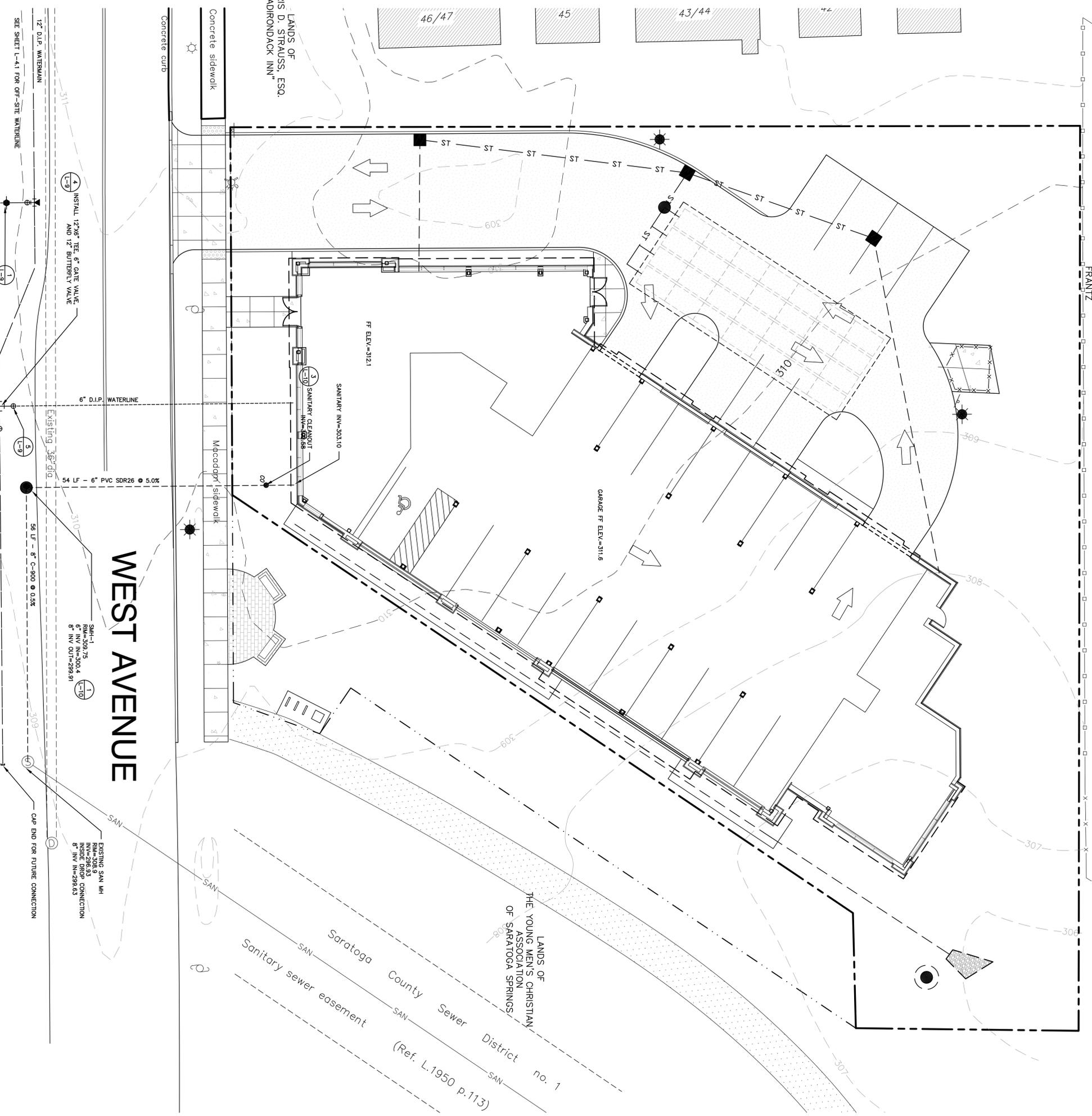
Design: MCB
 Drawn: MCB
 Checked: CMI

PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY

Title: **SITE GRADING AND DRAINAGE PLAN**

Revisions: _____
 Date: 6/23/2016
 Project #: 201178
 Drawing: L-3



WATER SYSTEM NOTES

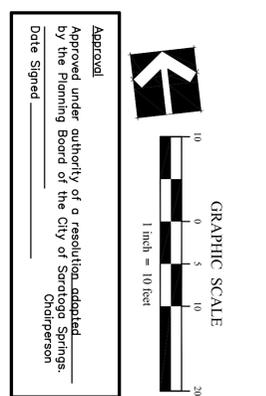
- A. The location of underground utilities shown on this plan are for informational purposes only and should not be shown. The Contractor shall contact U.F.P.O. (1-800-982-7962) and the proper local authorities or respective utility company having jurisdiction to field verify the location of all underground utilities prior to any work. Any costs incurred by the Contractor due to failure to contact the proper authorities shall become the responsibility of the Contractor.
- B. Extend designated limit of work as necessary to accomplish site utility work as required by these Drawings and Specifications.
- C. Water Service lines 4-inch and larger:
 1. Pipe and Fittings
 - a. Ductile Iron Pipe: Class 52, ANSI/AWWA C151/A21.51
 - b. Mechanical joint fittings: ANSI standard A21.10 and A21.11 (AWWA C10 and C11) Class 350.
 2. Couplings
 - a. Double cement mortar lining on interior and coal tar seal ANSI/AWWA C10/A21.11
 3. Joints
 - a. Conforming with ANSI/AWWA C111/A21.11
 - b. Pipe - push on joint
 - c. fitting - mechanical joint, plain rubber
 - d. fittings - mechanical joint, resilient rubber set screws.
 4. Valve Boxes
 - a. Cast from two piece valve box as manufactured by Clay (Model F2451), or approved equal.
 - b. Cast from one piece valve box as manufactured (F2460), or approved equal, and be clearly marked "Water".
 5. Anchorage
 - a. Concrete thrust blocks must be used at all changes in direction of line or greater, and at all tees, caps, fittings, hydrants and plugs.
- D. Water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch):
 1. Pipe
 - a. Copper water tube, type K, soft temper for underground service.
 2. Corporation Stops
 - a. Mueller H-15008 with AWWA inlet threads or approved equal. 1 1/2-inch and larger must be used with topping sleeve.
 3. Cap-stop
 - a. Mueller H-15209 or H-15219 curb-stops, non-draining or approved equal.
- E. Fire hydrants shall be Mueller A-423 compression-type hydrant, or approved equal having the following features:
 1. Valves - Mueller A-2380-20
 - a. All valves under 12-inches in diameter shall be mechanical joint resilient wedge (R/W).
 - b. R/W valves, 3-inches and larger shall be AWWA C509. Gland bolts shall be zinc coated steel.
 - c. All valves shall have a maximum working pressure of 200 psi.
 - d. All valves shall have mechanical joint ends conforming to ANSI A21.10/A21.11
 - e. Valves shall open right (clockwise) with a quarter turn.
 - f. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets.
 2. Butterfly Valves - Mueller Lineval III
 - a. With the exception of tapping valves, all valves 12-inches in diameter and larger shall be Mueller, or approved equal, butterfly valves.
 - b. Butterfly valves shall be furnished with a cast iron body, bronze mounted, 360-degree rubber seat with stainless steel shaft conforming to AWWA C504. Gland bolts shall be zinc coated steel.
 - c. All valves shall have a minimum working pressure rating of 200 psi.
 - d. All valves shall have mechanical joint ends conforming to ANSI A21.10, A21.11 with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. The valve shall be furnished complete with necessary nuts, bolts, studs, and gaskets which conform to AWWA C-110, AWWA C-111.
 3. Fire hydrants shall be Mueller A-423 compression-type hydrant, or approved equal having the following features:
 - a. 5 1/4-inch valve opening with a 6-inch inlet.
 - b. Two (2) 2 1/2-inch hose nozzles and one (1) 4" operating nut shall be national standard.
 - c. Pentagon shaped, 1/8-inch point to flat.
 - d. Break flange - traffic type construction.
 - e. Hydrants one to be painted a minimum of one industrial enamel as per point schedule.
 - f. Hydrants cover depth below finished grade of 5'-0".
 4. Chlorination pressure and leakage tests of water mains shall be in conformance with the specifications, NYSOEH regulations, and AWWA Standards and shall be performed under the supervision of a NYSOEH approved laboratory or a NYSOEH approved laboratory will take place prior to turning water main over to the Owner.

LEGEND

- 320- EXISTING CONTOUR LINE
- 320- PROPOSED CONTOUR LINE
- - - EXISTING STORM MAIN
- - - PROPOSED STORM MAIN
- - - EXISTING BUILDING DRAINAGE LINES
- - - PROPOSED DRYWELL
- PROPOSED CATCH BASIN
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN LINE
- PROPOSED SANITARY SEWER MAIN LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE

SEWER SYSTEM NOTES

1. Installation of polypropylene plastic (PP) sewer pipe shall be in accordance with manufacturer's installation recommendations, and in accordance with ASTM D 2321.
2. Manhole frames and covers shall be Campbell Foundry Co. pattern No. 12023 or approved equal. The cover shall be 24" diameter with a 12" curb. Provide (4) 7/8" dia. vent holes in cover. Sanitary sewer.
3. Sanitary sewer manholes shall be precast reinforced concrete with a 12" curb. The cover shall be pre-cast with integral floor. Top section shall be required. Steps of composite pipe for manhole connection shall be "Press-Wedge II" seat, or approved equivalent.
4. All sewer piping and fittings shall conform to the Standard Specifications for PVC pipe, ASTM designation D-3034-79 or latest revision and to the dimensions and push-on joints.
5. Product data, information and shop drawings for materials to be used shall be submitted to the Architect prior to the placement of any orders for solid materials.
6. Leaksage outward or inward shall not exceed 200 gallons per inch of pipe diameter per mile per day for any section of the system. Leakage test shall be performed with a minimum positive head of 2 feet.



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Date Signed: _____
Chairperson



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Drawn: MCB
Checked: CMI

PREPARED FOR:
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796 Burdeck Street
Schenectady, NY 12306

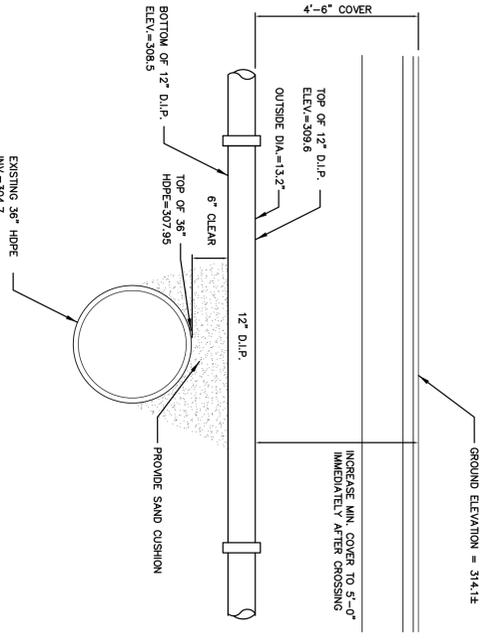
246 WEST AVENUE APARTMENTS
SARATOGA SPRINGS, NY

Title: **SITE UTILITY PLAN**

City #: 201178
Project #: 623/2016
Drawing: L-4

WATER SYSTEM NOTES

- A. The location of underground utilities shown on this plan shall be as shown. The Contractor shall contact U.P.O. (1-800-982-7892) and the proper local authorities or the utility company having jurisdiction to help verify the location and depth of all existing underground utilities. Any coats required by the Contractor due to failure to contact the proper authorities shall become the responsibility of the Contractor.
- B. Extend designated limit of work as necessary to accomplish site utility work as required by stress drawings and specifications.
- C. Water service lines 4-inch and larger:
 1. Pipe and fittings
 - a. Ductile Iron Pipe: Class 52, ANSI/AWWA C151/A21.51
 - b. Mechanical Joint fittings: ANSI standard A21.10 and A21.11 (AWWA C110 and C111) Class 350.
 2. Coatings
 - a. Double cement mortar lining on interior and coal tar epoxy on exterior of pipe in accordance with ANSI/AWWA C104/A21.11
 3. Joints
 - a. Conforming with ANSI/AWWA C111/A21.11
 - b. Pipe – push on joint.
 - c. Fittings – mechanical joint, plain rubber gaskets.
 - d. Fittings – mechanical joint, plain rubber gaskets, fitted together with stainless galvanized locking steel set screws.
 4. Valve Boxes
 - a. Cast Iron Two piece valve box as manufactured by Clay (Model F2451), or approved equal.
 - b. Cast Iron Two piece valve box as manufactured by F2490), or approved equal, and be clearly marked "Water".
 5. Anchorage
 - a. Concrete thrust blocks must be used at all pipe and fitting joints.
 - b. All valves, caps, fittings, hydrants and plugs, and at all water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch).
- D. Water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch):
 1. Pipe
 - a. Copper water tube, Type K, soft temper for underground service.
 2. Cooperation Slope
 - a. Mueller H-1500B with AWWA inlet threads or approved equal.
 - b. Valve: 1 1/2-inch and larger must be used with tapping sleeve.
 3. Curb-stop
 - a. Mueller H-1520S or H-1521S curb-stops, non-draining or approved equal.
 2. Hydrants
 - a. Hydrants shall be Mueller A-403 compression-type hydrants or approved equal having the following features:
 1. Each valve shall be furnished complete with operating nut, handle, and gaskets, which conform to AWWA C-110, AWWA C-111.
 2. Butteryfly Valves – Mueller Unseal III
 - a. With the exception of tapping valves, all valves shall be Mueller, or approved equal, butterfly valves.
 - b. Butterfly valves, 12-inches and larger, shall be iron body, bronze mounted, 360-degree rubber lined, and shall conform to AWWA C554. gland bolts shall be zinc coated steel.
 - c. All valves shall have a minimum working pressure rating of 200 psig.
 - d. Conforming to ANSI A21.10, A21.11.
 - e. Valves shall open right (clockwise) with a arrow pointing in the direction of opening.
 - f. Valve shall operate using traveling nut.
 - g. The valve dash shall hold at any position.
 - h. The valve shall be equipped with a mechanical stop to prevent overtravel.
 - i. Each valve shall be furnished complete with operating nut, handle, and gaskets, which conform to AWWA C-110, AWWA C-111.
 3. Fire hydrants shall be Mueller A-403 compression-type hydrants or approved equal having the following features:
 - a. 5 1/4-inch valve opening with a 6-inch inlet.
 - b. Two (2) 2 1/2-inch hose nozzle and one (1) 4" Storz pumper nozzle, national standard thread.
 - c. Operating nut shall be national standard.
 - d. Break tongue – traffic type construction.
 - e. Open right (clockwise).
 - f. Hydrants are to be painted a minimum of one (1) coat of red primer and one (1) coat of white industrial enamel as per paint schedule.
 - F. Water mains and services shall be installed at 5'-0" minimum cover depth below finished grade of 5'-0".
 - G. Obstruction, pressure and leakage tests of water mains shall be performed in accordance with applicable regulations, and AWWA Standards and shall be performed under the supervision of the Owner's Representative and City Engineer. Bacteria examination and distribution of a NTS/SDH approved laboratory will be done prior to turning water main over to the Owner.
 - H. Water valve boxes, including structure fire, new structure fire, etc., shall be adjusted to conform to new finished pavement grades unless otherwise noted and/or directed by Owner's Representative.



1 WATER AND STORM DRAIN CROSSING DETAIL
SCALE: 1/4" = 1'-0"

SEWER SYSTEM NOTES

1. Installation of polyvinyl chloride plastic (PVC) sewer pipe shall be in accordance with manufacturer's recommendations, and in accordance with ASTM D 2221.
2. Manhole frames and covers shall be Compulux Roundtop Co. (Model 2023) or approved equal. Manhole frames shall be embossed with "City of Saratoga Springs Sanitary Sewer" Provide (4) 7/8" dia. vent holes in cover.
3. Sanitary sewer manholes shall be precast reinforced concrete, complying with ASTM C 478. Base section to be pre-cast with integral floor. Top section shall be required steps of co-polymer polypropylene integrally cast into the manhole sidewalls. Pipes to manhole connection shall be Press-Wedge II steel, or approved equivalent.
4. All sewer piping and fittings shall conform to the Standard Specifications for PVC pipe, ASTM designation D 3034, with a minimum cover depth of 2 feet.
5. Product data information and shop drawings for materials proposed for use by the contractor shall be submitted to and approved by the Architect prior to the placement of materials. Copy City Engineer on shop drawings/submitals.
6. Leverage outward or inward shall not exceed 200 gallons per square foot of the system. Leverage test shall be performed with a minimum positive head of 2 feet.

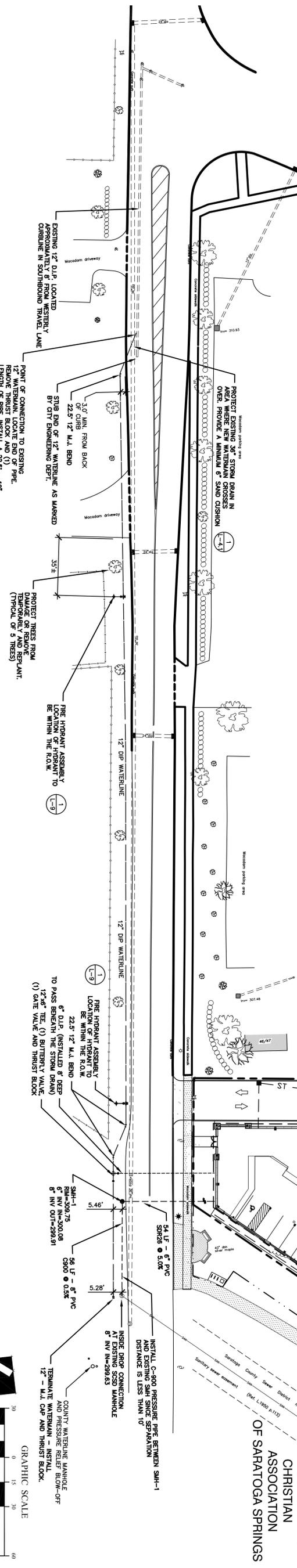
NOTES PER SARATOGA COUNTY SEWER DISTRICT

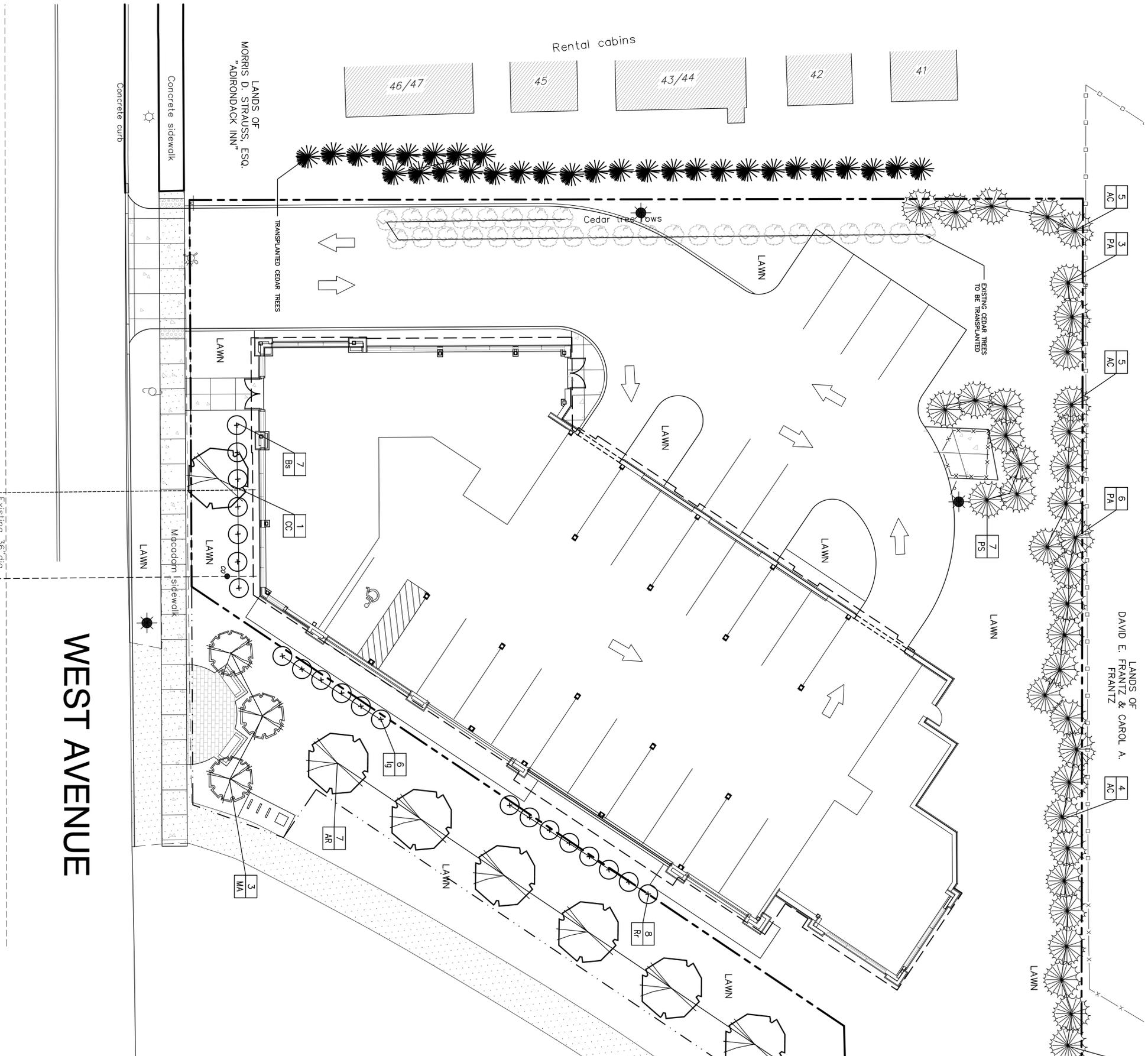
1. SOR 26 PIPE WITH SDR 26/35 FITTINGS WILL BE USED FOR SERVICE LATERALS.
2. THE CONTRACTOR WILL CONTACT SDR 26/35 AT LEAST 48 HOURS BEFORE CONSTRUCTION BEGINS.
3. NO DISCHARGE OF FLOWS WILL BE ALLOWED UNTIL FINAL APPROVAL OF THE PROJECT HAS BEEN GRANTED.

LANDS OF
DAVID E. FRANTZ &
CAROL A. FRANTZ

LANDS OF
MORRIS D. STRAUSS,
ESQ.
"ADIRONDACK INN"

LANDS OF
THE YOUNG MEN'S
CHRISTIAN
ASSOCIATION
OF SARATOGA SPRINGS





WEST AVENUE

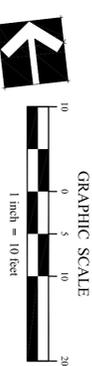
PLANTING SCHEDULE

SYMBOL/ACCT	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES						
AR	7	Acer rubrum Red Sunset	Red Sunset Red Maple	2 1/2" - 3" cal	B & B	
CC	3	Cornus fragilis Inermis	Hamamelis, cockspur hawthorn	2 1/2" - 3" cal	B & B	Use small tree from zoning because of fragrant white
MA	3	Malus baccata	Crabapple	2 1/2" - 3" cal	B & B	
EVERGREEN TREES						
AC	14	Abies concolor	White Fir	6 - 7' ht	B & B	
PA	16	Picea Abies	Norway Spruce	6 - 7' ht	B & B	
FS	7	Pinus Strobus	White Pine	6 - 7' ht	B & B	
SHRUBS						
Ba	7	Buxus sempervirens	Common Boxwood	30 - 36"	B & B	
Ig	6	Ilex obtusifolia	Inhberry	18 - 24"	C.C.	
Rt	8	Rosa rugosa	Rose bush	24 - 30"	C.C.	

LANDS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF SARATOGA SPRINGS

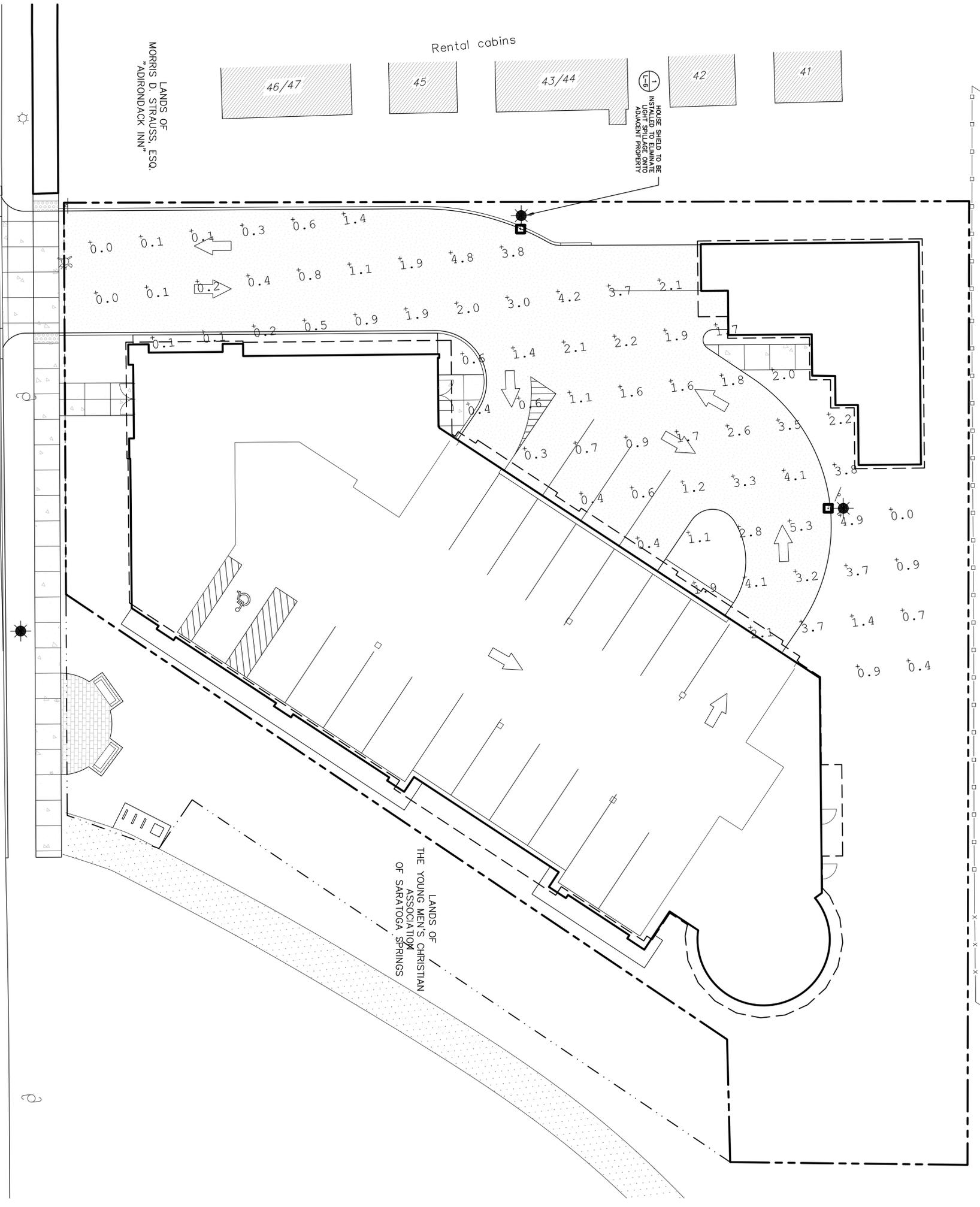
- PLANTING NOTES**
- All new plant material shall conform to the minimum guidelines established by the American Standard Nurserymen, Inc.
 - All new plants to be balled and burlapped or container-grown unless otherwise noted on plant list.
 - Any proposed substitutions of plant species shall be provided with equivalent overall height, branching habit, flower color, and soil requirements, and only as approved by the Owner's Representative.
 - All new plant material for the project shall be of specimen quality unless approved otherwise by the Owner's Representative.
 - Where plants size is indicated as a range, the plants provided shall be a fair representation of that range.
 - The Contractor shall supply all new plant material in the Drawings, except to complete the planting shown on the Drawings.
 - Contractor shall obtain plant approval from Owner's Representative after delivery and prior to installation. **Lawn Mix:**
 - % BY WEIGHT SPECIES**

50%	Tall Fescue	90%	GERMINATION
30%	Perennial Ryegrass	50%	Soil Fertility Rate
20%	Turf-Type Perennial Ryegrass	50%	Soil Phosphorus
 - Contractor shall locate and verify all existing utility lines prior to planting and shall report any conflicts to the Owner's Representative.
 - Stake location of all proposed planting for approval by the Owner's Representative prior to the commencement of planting.
 - New plant material shall bear some relationship to finished grade as it sits to previous grade in the nursery.
 - All plant boxes to receive three inches (3") of bark mulch and shall be watered daily or as per specifications.
 - Prepare all planting areas to minimum overall depths shown on drawings.
 - Amended topsoil backfill shall consist of (1) part to 4 cu. yds. topsoil.
 - All disturbed areas not scheduled for other work shall receive four inches (4") of suitable on-site or imported topsoil prior to seeding or sodding as specified.
 - Contractor shall guarantee all planted materials a minimum of 1 year time.
 - Contractor shall maintain all work including watering, mowing, and protection from traffic until final completion of the project.
 - Contractor is responsible to repair or replace all items damaged outside construction limits or disturbed on site which are not part of the identified work of this Contract.
 - Contractor to provide and maintain erosion control in the field. Remove upon stabilization of ground cover.



Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson

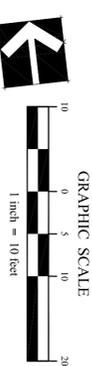
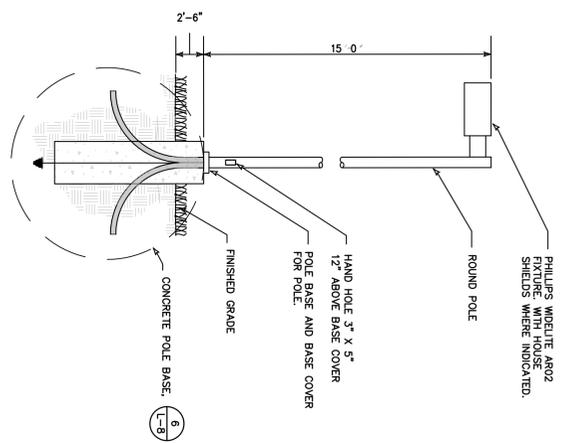
LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ



WEST AVENUE

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Total Lamp Lumens/ Life
⊕	2	AR02	SINGLE	13000
				0.880
				AR02-150H Type 2

1 PARKING LOT LIGHT POLE DETAIL



Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 Title
SITE LIGHTING PLAN

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

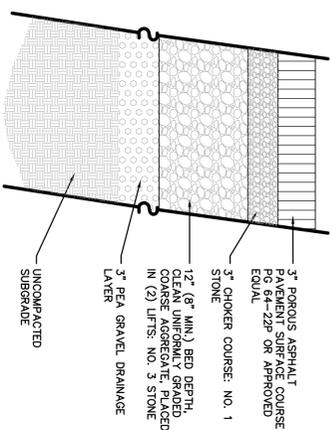
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 New York 12866
 P 518/587-4100
 F 518/587-0180
 www.thelagroup.com
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 Checked: CMI



Drawing
L-6

Revisions:
 MYLAR CHECK SET
 9/28/2012
 MYLAR SET
 NOVEMBER 2012
 MAY 2014

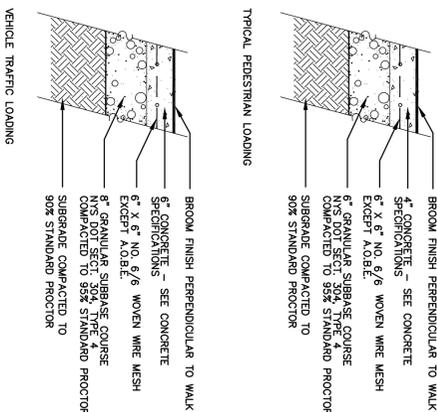
City #: 12.006.1
 Project: 201178
 Date: 1/25/2012



1 POROUS PAVEMENT

N.T.S.

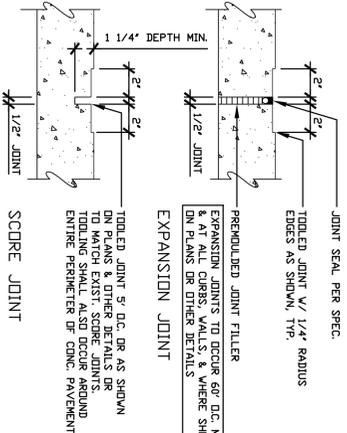
NOTES:
 EXPANSION JOINT SPACING - 20'-25'
 O.C.
 CONTROL JOINT SPACING - 5' O.C.
 NOMINAL CROSS SLOPE 1/8" TO 1/4" TYP. TOWARDS STREET OR A.O.B.E.
 MAX. SLOPE ALONG THE LENGTH OF THE WALK SHOULD NOT EXCEED 1:12
 CONSTRUCTION JOINT DETAILS TO BE SUBMITTED AND APPROVED BY CITY ENGINEER. SIDEWALKS WITH NO. 5 SUBGRADE SHOULD BE 5' CITY ENGINEER.



GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA SPRINGS RIGHT OF WAY:
 1.) SIDEWALKS MUST BE PLACED IN THE PUBLIC RIGHT OF WAY AT THE PROPERTY LINE.
 2.) SIDEWALKS MUST NOT DROP DOWN WHEN CROSSING A DRIVEWAY.
 3.) SIDEWALKS MUST NOT EXTEND ACROSS PUBLIC STREETS OR ALLEYS.
 GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA COUNTY RIGHT OF WAYS WITHIN SARATOGA SPRINGS:
 1.) ALL SIDEWALK INSTALLATIONS MUST BE DESIGNED BY A PROFESSIONAL ENGINEER. PLANS MUST BE APPROVED BY THE COUNTY COMM. OR PUBLIC WORKS.
 2.) SIDEWALKS MUST BE PLACED ON THE BACK SIDE OF DITCHES OR 8'(MIN.) FROM THE EDGE OF SHOULDER.
 3.) SIDEWALKS MUST BE CONSTRUCTED SO AS NOT TO INTERFERE WITH DRAINAGE.

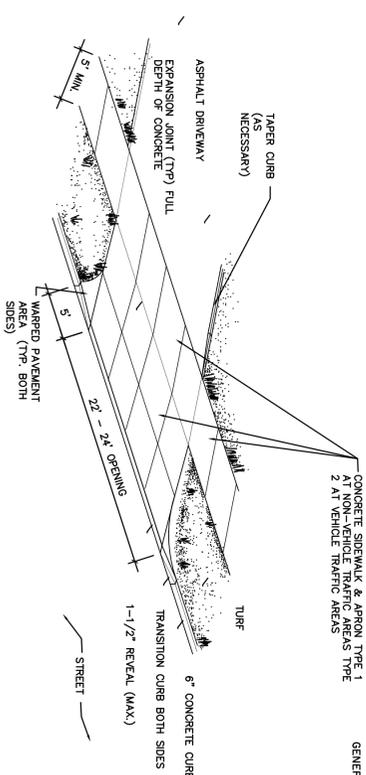
5 CONCRETE PAVEMENT DETAIL

N.T.S.



6 CONCRETE PAVT. EXPANSION SCORE JOINT DETAIL

N.T.S.

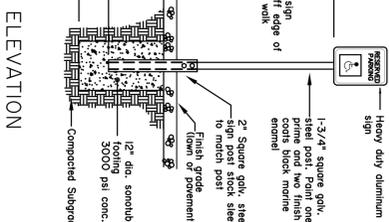


8 TRAFFIC SIGN DETAIL / SIGN SCHEDULE

N.T.S.

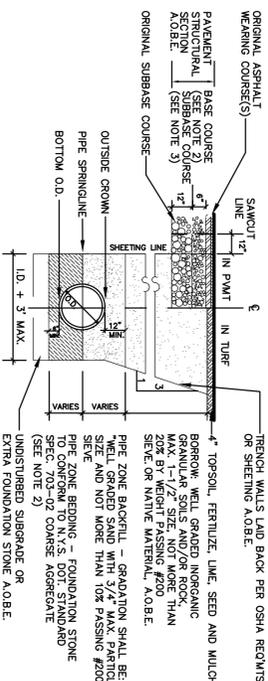
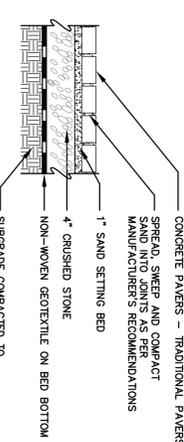
TEXT	LETTER	APPROX. SIZE OF SIGN	MULT. C.D. NO.
STOP	MULT.C.D.	30x30"	R1-C

NOTE: OWNER TO APPROVE LOCATIONS PRIOR TO INSTALLATION.
 SCHEDULE



12 UNIT PAVER WALKS

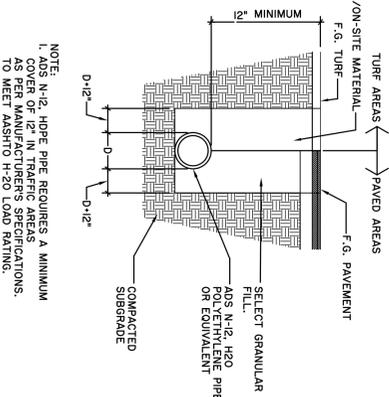
N.T.S.



NOTES:
 1. STREET OPENING PERMIT IS REQUIRED
 2. FOUNDATION STONE - N.Y.S. DOT STD. SPEC. 703-02
 SIZE DETERMINATION #1: 100% PASSING 1" SEIVE, 90-100% PASSING 1/2" SEIVE, 0-15% PASSING 1/4" SEIVE
 OR
 SIZE DETERMINATION #2: 100% PASSING 1-1/2" SEIVE, 90-100% PASSING 1" SEIVE, 0-15% PASSING 1/2" SEIVE
 GRADATION/SIZE DESIGNATION TO BE DETERMINED BY ENGINEER BASED ON FIELD CONDITIONS.
 3. SUBBASE COURSE FOR PAVEMENT: CONFORM TO N.Y.S. DOT STD. 304-2, TYPE 4.
 STRUCTURAL PAVEMENT SECTION SHOWN SHALL BE CONSTRUCTED IN DEPTH OF PAVEMENT SECTION SHOWN ON DRAWING NO. 1-4, A.O.B.E.
 4. TRENCH WALLS Laid BACK PER OSHA REQUIRES OR SHEETING A.O.B.E.
 5. TOPSOIL, FERTILIZE, LIME, SEED AND MULCH BORROW WELL GRADED INORGANIC GRANULAR SOILS AND/OR ROCK MATERIALS SHALL BE PLACED ON TOP OF TRENCH WALLS. 20% BY WEIGHT PASSING #20 SEIVE OR NATIVE MATERIAL, A.O.B.E.
 6. PIPE ZONE BACKFILL - GRADATION SHALL BE: "WELL GRADED SAND WITH 3/4" MAX. PARTICLE SIZE AND NOT MORE THAN 10% PASSING #20 SEIVE. 20% BY WEIGHT PASSING #20 SEIVE OR NATIVE MATERIAL, A.O.B.E.
 7. PIPE ZONE BEDDING - FOUNDATION STONE TO CONFORM TO N.Y.S. DOT STANDARD TO SPEC. 703-02 COARSE AGGREGATE (SEE NOTE 2)
 8. UNDISTURBED SUBGRADE OR EXTRA FOUNDATION STONE A.O.B.E.

9 SANITARY PIPE TRENCH DETAIL

N.T.S.



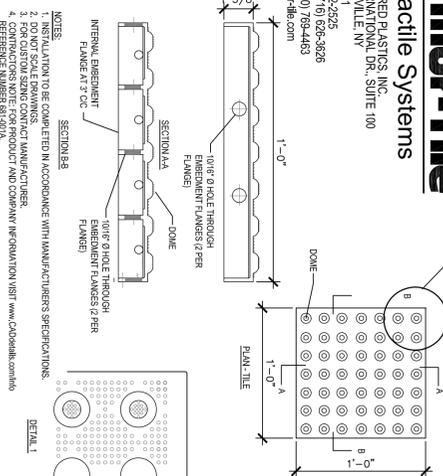
NOTE:
 1. AOS N-12, HOPE PIPE REQUIRES A MINIMUM COVER OF 12" IN TRAFFIC AREAS AS PER MANUFACTURER'S SPECIFICATIONS TO MEET ASHTO H-20 LOAD RATING.

10 PIPE TRENCH (STORM SYSTEM)

N.T.S.

11 TACTILE WARNING STRIP

N.T.S.



Armor-Tile
 Tactile Systems
 ENGINEERED PLASTICS, INC.
 300 INTERNATIONAL DR., SUITE 100
 WESTFIELD, NY 12145
 USA 44221
 PHONE: (716) 626-9226
 FAX: 1 (800) 759-4463
 www.armor-tile.com

NOTES:
 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. DO NOT SCALE DRAWINGS. CONTACT MANUFACTURER.
 3. CONTACT MANUFACTURER FOR PRODUCT AND COMPANY INFORMATION VISIT: www.ArmorTile.com
 4. REFERENCE NUMBER 681-001A.

Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher _____

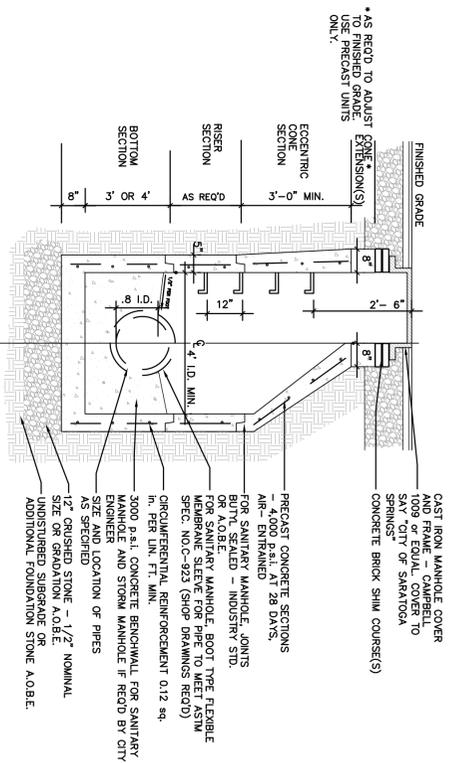
246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 Title _____
 SITE DETAILS

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-9100
 F 518/587-9180
 www.thelagroup.com
 © the LA Group 2008

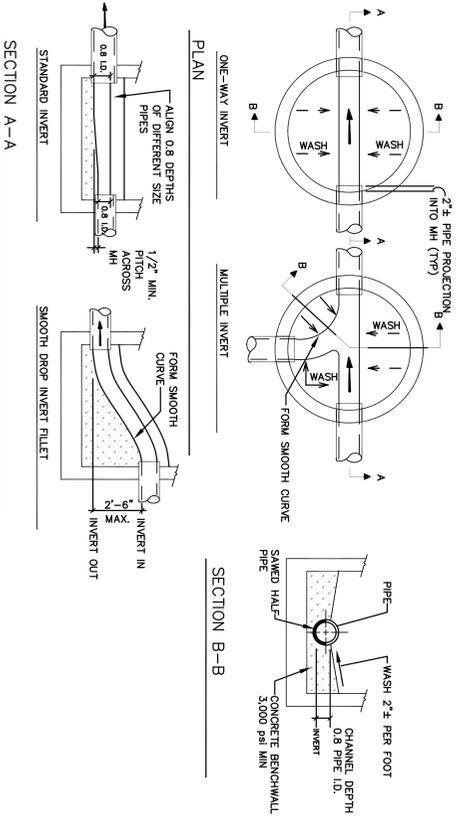
Revisions
 MYLAR CHECK SET
 9/28/2012
 MYLAR SET
 NOVEMBER 2012
 MAY 2014

City #: 12,006.1
 Project: 201178
 Date: 1/25/2012
 Drawing: L-7



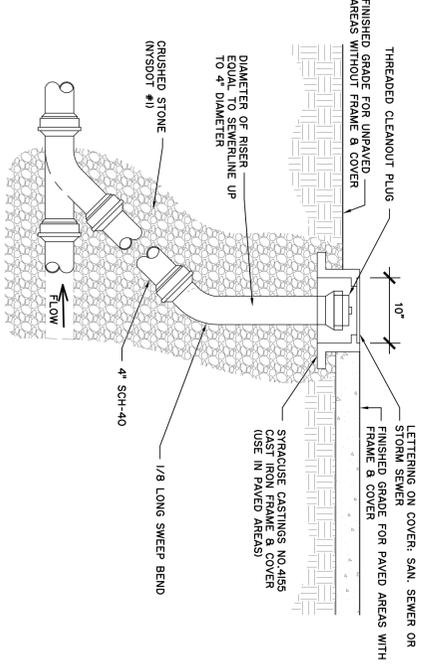
1 SANITARY SEWER MANHOLE DETAIL

N.T.S.



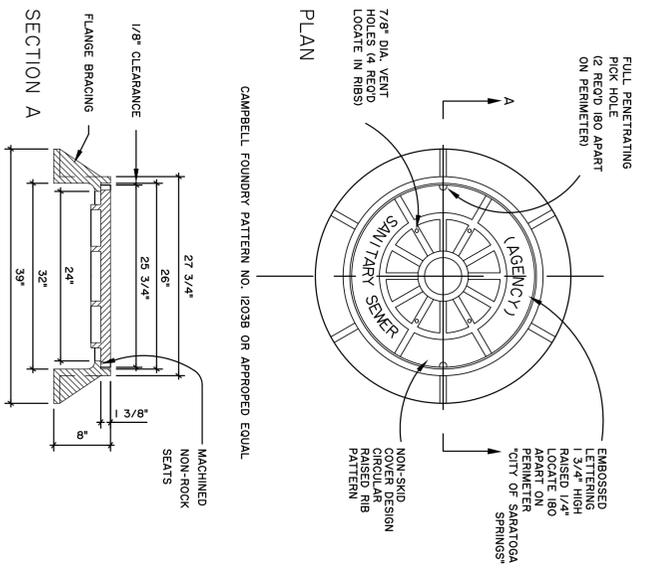
2 MANHOLE BENCH DETAIL

N.T.S.



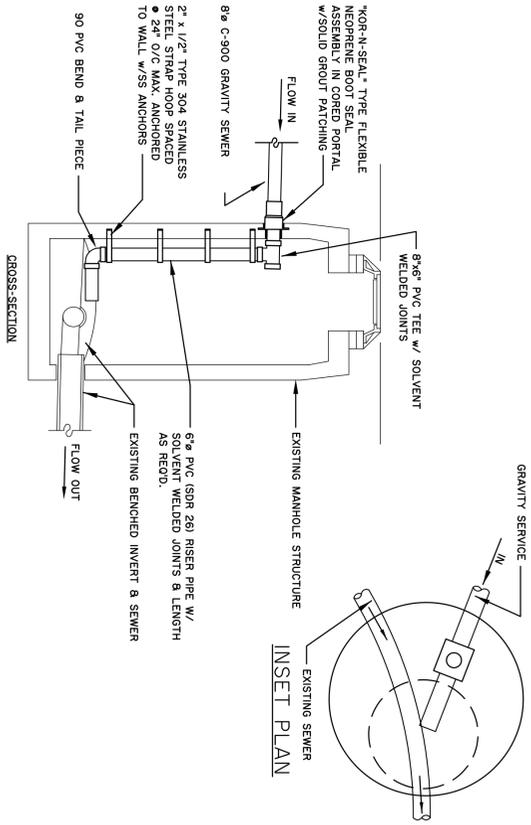
3 SANITARY SEWER CLEANOUT DETAIL

N.T.S.



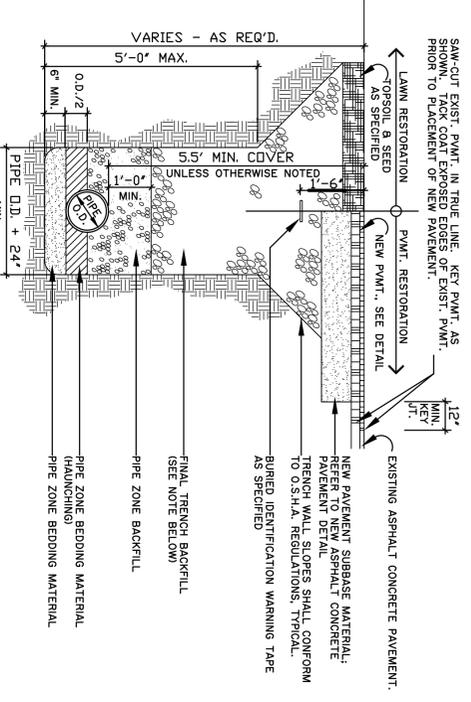
4 SANITARY MANHOLE FRAME AND COVER DETAIL

N.T.S.



5 SANITARY DROP @ EXISTING MANHOLE

N.T.S.

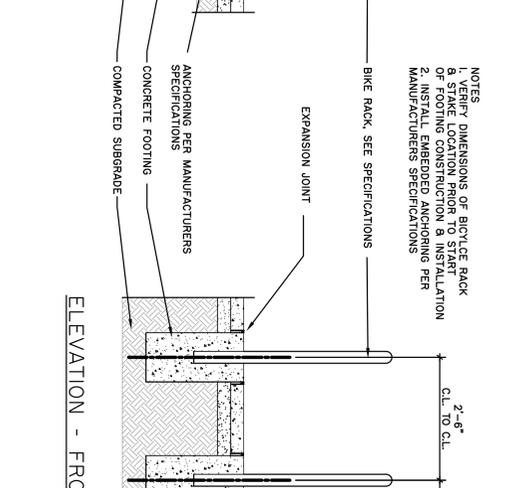
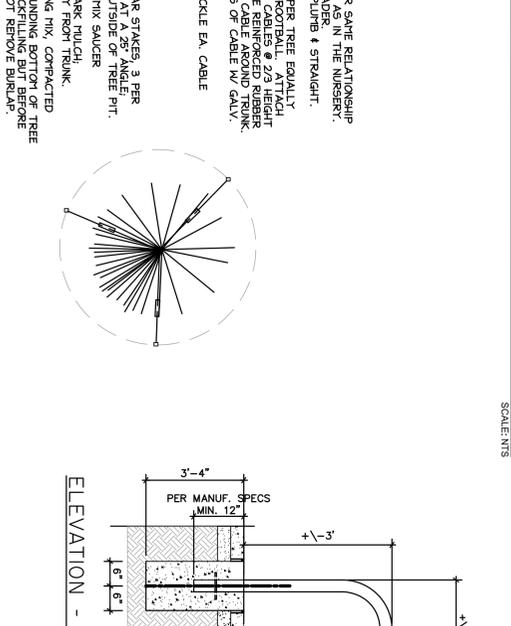
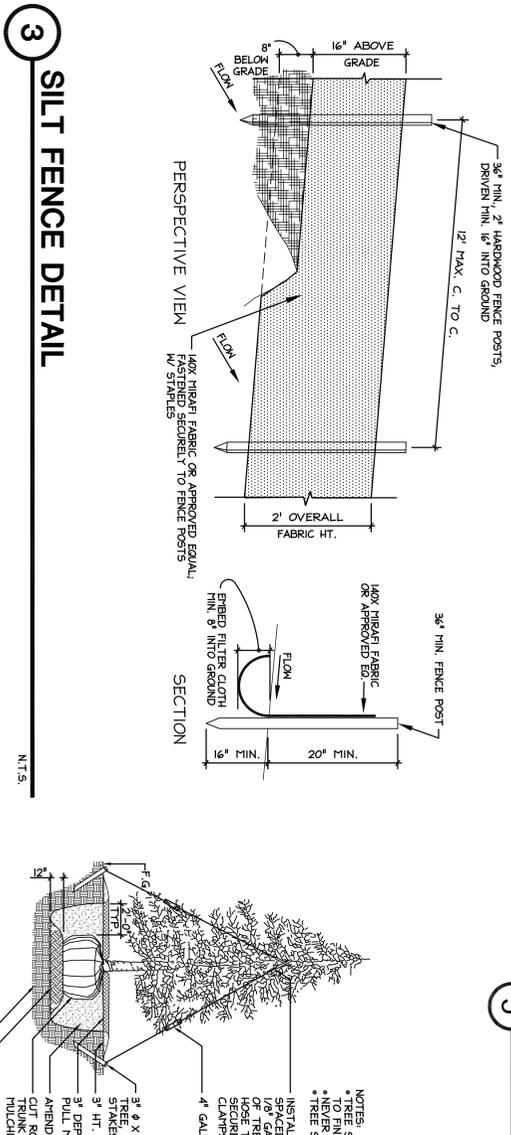
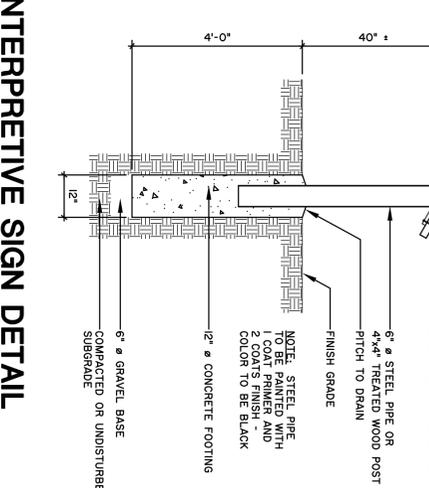
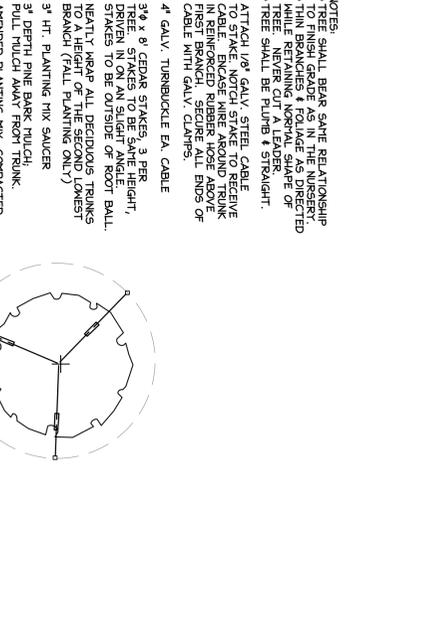
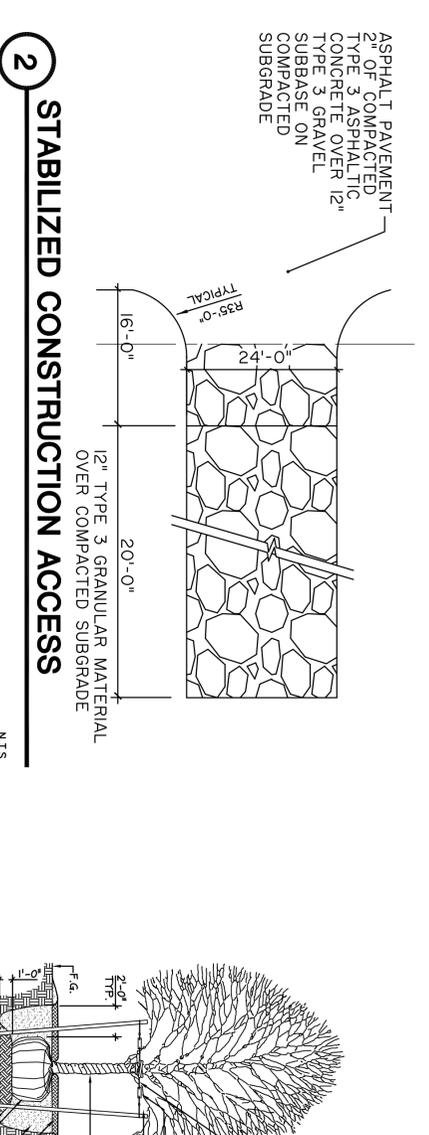
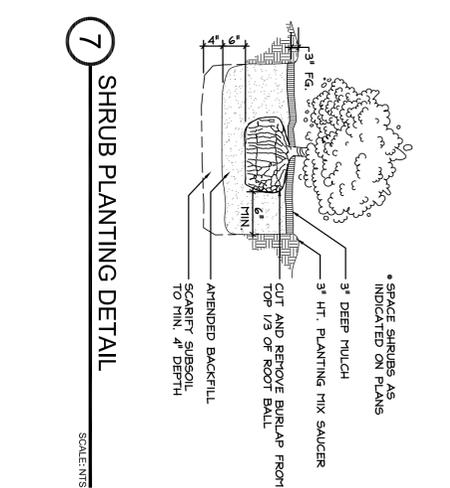
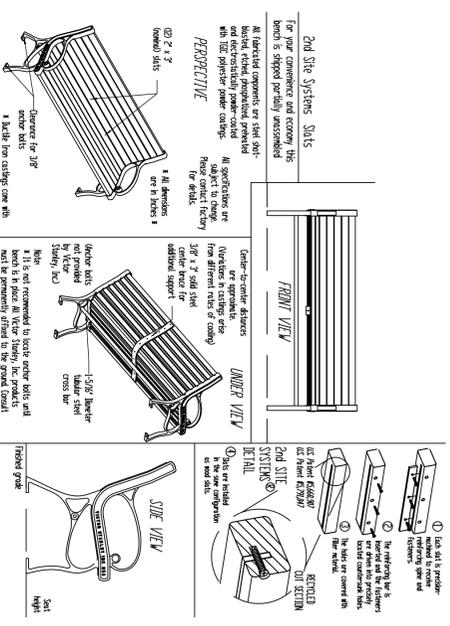
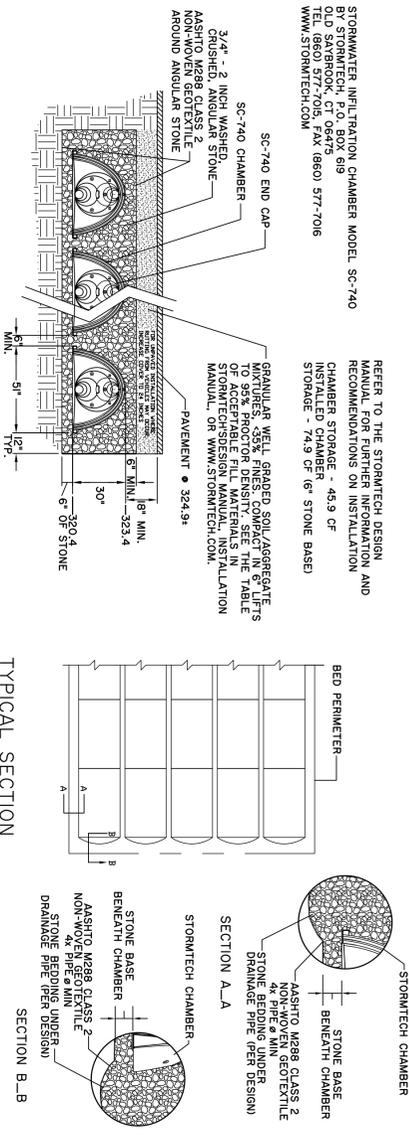


6 TYPICAL WATER PIPE TRENCH DETAIL

N.T.S.

- NOTES:
 1) WORK EXCAVATION SHALL BE KEPT DRY AND DEWATERED AT ALL TIMES
 2) EXCAVATION, BACKFILL, AND RESTORATION WITHIN HIGHWAY R.O.W. IN ACCORDANCE WITH NYSOT SPECIFICATIONS
 3) CONNECTION MATERIALS & METHODS IN ACCORDANCE WITH S.C.S.D. #1 SPECIFICATIONS.

Approval
 Approved under authority of a resolution adopted
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher _____



Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher

City #: 12.006.1
 Project: 201178
 Date: 1/25/2012
 Drawing: L-11

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY

Revisions:
 MYLAR CHECK SET 9/28/2012
 MYLAR SET NOVEMBER 2012
 MAY 2014

Site Details

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 www.thelagroup.com

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Design: MCB
 Drawn: MCB
 Checked: CMI

Unauthorized alteration or addition to this document is a violation of Section 239 of the New York State Education Law.

LETTER OF TRANSMITTAL

TO: Saratoga Springs Planning Department
City Hall
Saratoga Springs, NY 12866

DATE: 6/23/2016 JOB NO.: 201178

RE: 246 West Avenue Apartments

WE ARE SENDING YOU Attached Under separate cover via _____ the following items

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
3			Full size Site Plan Application Plan Sets
1			Site Plan Application fee check for \$2,650
3			Site plan application form
3			Site plan application check lists
3			Cost Estimate for Letter of Credit
3			Stormwater Management Report (within SWPPP)
3			Draft SWPPP
3			Engineer's Utility Report
3			11 x 17 Architectural plans (elevations and floor plans)
3			Complete Streets Checklist
3			Water Service Agreement
3			Short EAF
3			Special use permit application form
1			Special use permit fee \$750
1			CD of application materials

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your records Approved as noted Submit _____ copies for distribution
 As requested Return for corrections Return _____ corrected prints
 For review and comments _____
 FOR BIDS DUE _____ 20____ PRINTS RETURNED AFTER LOAN TO US

REMARKS:

cc:

SIGNED: _____



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

<p>APPLICATION FOR: SITE PLAN REVIEW (INCLUDING PUD)</p>

(Rev: 12/2015)

*****Application Check List - All submissions must include completed application check list and all required items.**

Project Name: _____

Property Address/Location: _____

Tax Parcel #: _____ Zoning District: _____
(for example: 165.52-4-37)

Proposed Use: _____

Date special use permit granted (if any): _____ Date zoning variance granted (if any): _____

Is property located within (check all that apply)?: Historic District Architectural Review District
 500' of a State Park, city boundary, or county/state highway

	<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name	_____	_____	_____
Address	_____	_____	_____
Phone	_____	_____	_____
Email	_____	_____	_____

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Application Fee: A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

<input type="checkbox"/>	<u>Sketch Plan</u> -	\$250	\$ _____
<input type="checkbox"/>	<u>Final Site Plan Approval</u>		
	Residential -	\$250 plus \$150/unit	\$ _____
	Non-Residential -	\$500 plus \$100/1,000 SQ. FT.	\$ _____
<input type="checkbox"/>	<u>Modification</u>		
	Residential -	\$250	\$ _____
	Non-Residential -	\$500	\$ _____
			Total \$ _____

Submission Deadline – Check City’s website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES ____ NO ____ . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Site Plan Review by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.2 of the Zoning Ordinance of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: _____ Date: _____

If applicant is not current owner, owner must also sign.

Owner Signature: _____ Date: _____



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
 Saratoga Springs, New York 12866-2296
 Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

 (Application #)

 (Date received)

Rev.12/2015

SITE PLAN REVIEW SUBMITTAL CHECKLIST

Project Name: _____

Listed below are the minimum submittal requirements for site plan review as set forth in The City of Saratoga Springs' Zoning Ordinance Appendix B. The Planning Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimum requirements are not met. Please complete the checklist below and provide with your submission.

REQUIRED ITEMS: *3 hard copies and 1 digital copy of ALL materials are required.

CHECK EACH ITEM	
<input type="checkbox"/>	1. Completed Site Plan Application (3 hard copies - *1 w/original signature - and 1 digital) and Fee
<input type="checkbox"/>	2. SEQR Environmental Assessment Form- short or long form as required by action.
<input type="checkbox"/>	3. Set of plans including: (3) large scale plans (sheets must be 24" x 36", drawn to a scale of not more than 1"=50 feet). One digital version of all submittal items (pdf) shall be provided.
<input type="checkbox"/>	4. Basic or Full Storm Water Pollution Prevention Plan as required per City Code Chapter 242.
<input type="checkbox"/>	5. Copy of signed DPW water connection agreement for all projects involving new water connections to the City system
<input type="checkbox"/>	6. Engineering Report for Water and Sanitary
<input type="checkbox"/>	7. Complete Streets Checklist
<input type="checkbox"/>	8. Project Cost Estimate-Quantities of work items and estimate of costs

REQUIRED ITEMS ON SITE PLAN, AS APPLICABLE:

<input type="checkbox"/>	1. Property line survey prepared by a licensed land surveyor. Site plan must reference such survey with all corners set and marked on plan. A copy of the original property survey must also be included.
<input type="checkbox"/>	2. North arrow and map scale
<input type="checkbox"/>	3. Parcel tax map number
<input type="checkbox"/>	4. Site location map
<input type="checkbox"/>	5. Site vicinity map (all features within 300 feet of property)
<input type="checkbox"/>	6. Identification of zoning district with corresponding area requirements

<input type="checkbox"/>	7. Building setback lines, either listed or shown on plans.
<input type="checkbox"/>	8. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input type="checkbox"/>	9. Topography data tied to NGVD 1929 datum
<input type="checkbox"/>	10. Name of all adjacent property owners
<input type="checkbox"/>	11. Parcel street address (existing and any proposed postal addresses)
Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	12. Identification of all existing or proposed easements, covenants or legal rights-of-way on this property
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. References to all prior variances or special use permits
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Existing and proposed contours and spot grades (at 2 foot intervals)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Identification of all spoil or borrow areas
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all watercourses, designated State wetlands, buffers, Federal wetlands, floodplains, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Location of proposed storage
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location and distance to fire hydrant
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location, size, and material of all existing and proposed utility services
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Parking lot layout plan and identification of all loading areas (number all spaces)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking demand calculations
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Location and screening plan for dumpster or recycling bins
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	26. Location, design, type of construction and materials, proposed use and exterior dimensions of all buildings (existing and proposed) on site
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. Identification of storage of any potentially hazardous materials
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	28. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	29. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Erosion and sediment control plan – including designated concrete truck washout area

Checklist prepared by: _____ Date: _____

City of Saratoga Springs Complete Streets Checklist

Saratoga Springs Complete Street Policy Vision (May 2012)

The City of Saratoga Springs Complete Streets Policy will encourage the development of a complete streets network throughout the City to create a more balanced transportation system. The Policy shall be consistent with and assist in achieving the goals and recommendations set forth in the City's Comprehensive Plan and other policy documents. The Policy shall ensure new and updated public and private projects are planned, designed, maintained and operated to enable safer, comfortable and convenient travel to the greatest extent possible for users of all abilities including pedestrians, bicyclists, motorists and transit riders.

This checklist is intended to assist the City in achieving its vision for complete streets.

Project Name: _____ **Date:** _____

Project Location / Limits: _____

Project Description: _____

Instructions: For each box checked, please provide a brief description for how the item is addressed, not addressed, or not applicable and include supporting documentation.

Street Classification (identify street or streets within the project area)							
Principal arterial	<input type="checkbox"/>	Minor arterial	<input type="checkbox"/>	Mixed use collector	<input type="checkbox"/>	Mixed use local	<input type="checkbox"/>
Residential collector	<input type="checkbox"/>	Residential local	<input type="checkbox"/>	Special use street	<input type="checkbox"/>		

EXISTING CONDITIONS				
Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Existing Bicycle & Pedestrian Operations				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Existing Transit Operations				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the project area on a transit route? (CDTA Service Routes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Existing Access and Mobility				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there gaps inhibiting continuous access between schools, hospitals, senior care, or community centers or persons with disabilities within project area?"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Area Context				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: City of Saratoga Springs Comprehensive Plan , City of Saratoga Springs Open Space Plan , Capital District Transportation Committee Bicycle/ Pedestrian Priority Network , City Standard Details , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pedestrian accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access and Mobility accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Streetscape elements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable actuated traffic signal bike detection, including turn lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable consideration/provision for accessible pedestrian traffic signal features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Pedestrian Facilities:	
Sidewalks on both sides of the street	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Geometric modifications to reduce crossing distances such as curb extensions (e.g. bulb-outs)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable provision for pedestrian traffic signal features (e.g. ped. buttons)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Safety islands/medians on roadways with two or more traffic lanes in each direction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to any key destinations listed on page 1?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to neighborhoods?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Design Standards and Guidelines

Design meets guidelines such as described below for bicycle/pedestrian/bus/transit facilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Describe
--	------------------------------	-----------------------------	-----------------------------	----------

**American Association of State Highway and Transportation Officials (AASHTO) - A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities and AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities; [Public Right-of-Way Accessibility Guide \(PROWAG\)](#); [Manual on Uniform Traffic Control Devices \(MUTCD\)](#); [Americans with Disabilities Act Accessibility Guidelines \(ADAAG\)](#); National Association of City Transportation Officials (NACTO) - [Urban Bikeway Design Guide](#). New York State Department of Transportation – [Highway Design Manual](#)*

617.20
Appendix B
Short Environmental Assessment Form

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: 246 West Avenue Apartments				
Project Location (describe, and attach a location map): 246 West Avenue				
Brief Description of Proposed Action: 16 residential units with associated parking. Watermain extension along West Ave.				
Name of Applicant or Sponsor:		Telephone:		
		E-Mail:		
Address:				
City/PO:		State:	Zip Code:	
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.			NO	YES
			X	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Site plan and Special use permit(Saratoga Springs Planning Board) Saratoga Springs Design review commission approval			NO	YES
				X
3.a. Total acreage of the site of the proposed action?		.51	acres	
b. Total acreage to be physically disturbed?		.51	acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		.51	acres	
4. Check all land uses that occur on, adjoining and near the proposed action.				
<input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other (specify): <u>YMCA</u> <input type="checkbox"/> Parkland				

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____	NO	YES
	X	
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: _____ _____ _____	NO	YES
	X	
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: _____ _____ _____	NO	YES
	X	
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: _____ Date: _____		
Signature: _____		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept “Have my responses been reasonable considering the scale and context of the proposed action?”

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing: a. public / private water supplies? b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?		
11. Will the proposed action create a hazard to environmental resources or human health?		

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

**Engineering Report
Water and Sanitary Sewer**

For

**246 West Avenue
Residential Apartment Building
SARATOGA SPRINGS, NEW YORK**

Planning Board #16.XXX

Prepared For

**John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306
Contact: John Luke Hodorowski**

Prepared By

**The LA Group, P.C.
40 Long Alley
Saratoga Springs, New York 12866**



June 23, 2016

I. Introduction

John-Paul Builders, LLC is proposing to construct a sixteen-unit apartment building at 246 West Avenue (Tax Map Parcels 178.33-1-20 & 21) in the city of Saratoga Springs, NY. Currently, the site is developed as residence with a single home onsite. There are grassed and forested cover types on the property. The site is generally flat. The surrounding area is developed with a small hotel to the north, the Saratoga Springs YMCA to the south and residential housing to the east. This project is for the construction of a new apartment building.

II. Project Description

The proposed sixteen-unit apartment project will consist of one building. The project is proposing a total of 16 residential units, totaling 18 bedrooms. The units will have internal fire sprinklers, and fire hydrants will be located on West Avenue.

III. Existing Water and Sanitary Sewer Utilities

Water Distribution – A 6-inch cast-iron water line is present on West Avenue, immediately adjacent to the parcel. According to the City of Saratoga Springs DPW, this line is very old and fragile and will not likely support the design flows and pressures required by this project.

Several years ago, the YMCA agreed to and installed a new 12-inch ductile iron water line from the Ballston Avenue intersection up to their new facility. This 12-inch water main is located on the west side of West Avenue and ends approximately 800 feet south of the project.

There is a 12-inch ductile iron water main located on the west side of West Avenue terminating approximately 500 feet north of the project.

Sanitary Sewer – An existing 16-inch sanitary sewer main owned and maintained by the Saratoga County Sewer District No. 1 (SCSD #1) runs in a southeasterly direction past the property in an easement from the YMCA of Saratoga Springs. The nearest access manhole is located on the west side of West Avenue approximately 50 feet south of the southwest property corner.

IV. Projected Water and Wastewater Flows

The table below provides information on the anticipated wastewater flow rates for the project:

Description	Use Rate	Total Use
(18) bedrooms	110 gpd/bedroom ¹	1,980 gpd

Average daily flow for wastewater is estimated to be 1.4 gallons per minute (gpm) based on a 24 hour day. Estimated peak hourly flow is 5.9 gpm (4.2 x average).²

Average daily demand for water is estimated to be approximately equal to the wastewater flow or 1.4 gpm. Instantaneous peak demand is estimated to be 80 gpm.³

For the purposes of input into the City of Saratoga Springs water model, we offer the following estimated water demands for the project:

- Average Day Demand is 1.4 gallons per minute (GPM) over the 24 hour period.
- Max Day Demand is 2.8 gallons per minute (GPM) based on twice the average.
- Peak Hourly Flow is 5.9 gallons per minute (GPM) based on 4.2 times the average.
- Fire Flow Demand is 1,000 gallons per minute (GPM) per ISO guidelines.

V. Proposed Water and Wastewater Utilities

Proposed Water Utilities

To service the project, it was initially proposed to tap the existing 6-inch water main on West Avenue. Following discussions with the City, it was agreed to extend the existing 12-inch water main from the north up to the southerly property line. The line will be extended in a southerly direction, approximately 500 feet terminating with a new hydrant, valve and end cap for future connection. New fire hydrants will be installed to maintain a spacing of 400 feet. This arrangement will benefit the municipality in providing another link in the ultimate connection to the existing 12-inch water main brought up from Ballston Avenue by the YMCA.

The units will receive water service via a six-inch ductile iron water line. Once inside the main

building, the water service will be divided to individual meters to serve the units.

Needed Fire Flow (NFF) for residential occupancies such as apartment buildings protected by an automatic sprinkler system installed in accordance with NFPA 13R is the demand at the base of the automatic sprinkler riser. The minimum NFF is 1,000 gpm at 20 psi for a duration of 2 hours.⁴

Connections and appurtenances, including mechanical joints, tees, isolation valves, thrust blocks, trenching, bedding, service connections, as well as testing and disinfection will all be specified in accordance with City of Saratoga Springs standards.

Proposed Wastewater Utilities

From the main building, sanitary wastewater will be piped in a six-inch PVC lateral installed at a slope of approximately 1.0% across West Avenue to a new sanitary sewer manhole. From this manhole the sewerline will be run adjacent to the westerly line of West Avenue to an existing SCSD #1 manhole.

All sanitary sewer lines and manhole connections will be furnished and installed according to Saratoga County Sewer District No. 1 standards.

Notes

1. *From Table 1, Appendix 75-A Wastewater Treatment Standards - Residential Onsite Systems (110 gallons per day per bedroom)*
2. *From Figure 1, GLUMRB Recommended Standards for Wastewater Facilities*
 $Q = (18 + P \frac{1}{2}) \div (4 + P \frac{1}{2})$ where P = population in thousands
3. *From Table XIV Community Water Systems Source Book, Ameen (5.0 gpm/residence)*
4. *Insurance Services Office, Inc. "Guide for Determination of Needed Fire Flow" (Chapter 1, Note 2)*

Stormwater Pollution Prevention Plan

for:

246 West Avenue Apartments

Owner/Operator(s):

John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306
Contact: John Luke Hodorowski
518-356-1435

SWPPP Contact(s):

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SWPPP Preparation Date:

June 23, 2016

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Appendices

- A HydroCAD Calculations and Storm Data**
- B Soil Survey and Map Set** – Location Map, Site Preparation and Demolition, Grading and Utility Plan
- C SWPPP Inspection Forms** –SWPPP Inspection Report
- D Other SWPPP Forms** – Construction Sequence, SWPPP Plan Changes, Spill Response Form, Stormwater Management Practice Maintenance Log

1.0 PERMIT OVERVIEW AND REQUIREMENTS

1.1 Permit Overview

This Stormwater Pollution Prevention Plan (SWPPP) is prepared to inform the landowner and construction personnel of the measures to be implemented for controlling runoff and pollutants from the site during and after construction activities.

The operator is responsible to maintain onsite in a secure location that is accessible during normal working hours to an individual performing a compliance inspection, the following information:

- ✓ the SWPPP,
- ✓ All inspection reports.

Technical standards are detailed in the “New York State Standards and Specifications for Sediment and Erosion and Sediment Control (August 2010)”, as well as illustrated on the Grading and Utility Plan included in **Appendix B**.

2.0 SWPPP REVIEW, UPDATE

2.1 SWPPP Review

City of Saratoga Springs requires preparation of a SWPPP for non-residential activities disturbing 0.1 acres or more. The project is proposed to disturb 0.51 acres. Project review will be conducted by the City of Saratoga Springs.

2.2 SWPPP Update

The permittee identified in this SWPPP shall amend the SWPPP under the following conditions:

- ✓ Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharge from the site
- ✓ Whenever there is a change in design, construction or operation that could have an effect on the discharge of pollutants
- ✓ To address issues or deficiencies identified during an inspection by the qualified inspector, the Department or other regulatory authority
- ✓ To identify a new subcontractor or owner that will implement any part of the SWPPP.

If modifications are required to the post-stormwater management practices the City of Saratoga Springs must be notified in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP.

3.0 SITE ASSESSMENT, EVALUATION AND PLANNING

3.1 Project Location

The project is located at 246 West Avenue in the City of Saratoga Springs, Saratoga County, NY 12866.

See **Appendix B** for a general site location map.

3.2 Pre-Development Conditions

Currently, the site is developed as residential with a single home onsite. There are grassed and forested cover types on the property. The site is generally flat. The surrounding area is developed with a small hotel to the north, the Saratoga Springs YMCA to the south and residential housing to the east.

3.3 Project Scope

Specifically, this project is for the construction of a three-story apartment building with a total of 16 units. The total building footprint will be 9,800 square feet. There will be 24 parking spaces provided for the occupants of the apartments, 17 of which will be at the ground level of the three-story building. The Project will disturb approximately +/-0.51 acres.

3.4 Receiving Waters

The closest NYSDEC mapped stream located in the project vicinity that the site drains to is an unnamed tributary to Geysers Creek (NYSDEC # 841-137.) This stream is located approximately 2,000 feet to the west of the site, in an agricultural field. This stream is classified as a C stream by NYSDEC.

3.5 Historic Preservation Determination/Endangered Species

The project received SEQRA and planning board approval on December 9, 2011 at which time it was determined that there were no archeological or endangered species concerns within the project area.

3.6 Soils

The USDA/NRCS soil survey map for this site shows Deerfield loamy fine sand and Windsor loamy sand series mapped in the project vicinity. These soils are classified in the hydrologic soil group 'A'. Soil borings were completed by Dente Engineering in April of 2005 that found the project area to have deep sands. Falling head permeability tests are to be completed to confirm infiltration rates. Soil survey and boring results can be found in **Appendix B**.

4.0 EROSION AND SEDIMENT CONTROL

4.1 Erosion and Sediment Control Practices

Temporary Structural Practices

- ✓ Silt Fence
- ✓ Dust Control
- ✓ Construction Entrance

Permanent Structural Controls

- ✓ Asphalt pavement/concrete walks

Temporary Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch bare soil areas within 14 days of disturbance unless construction will resume in that area within 21 days.

Permanent Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch all disturbed areas. Slopes that are 3:1 or steeper should receive a Rolled Erosion Control Product (RECP), sodding, and or hydro-seeding a homogenous mixture of wood fiber mulch with tackifying agent.

Refer to Construction Drawings attached in **Appendix B** for detailed information on each practice.

4.2 Erosion and Sediment Control Drawings

Erosion and Sediment Control practices are shown on the Construction Drawings included in **Appendix B**.

4.3 Construction Sequence of Operations

- ✓ Temporary structural erosion controls will be installed prior to earthwork as per the attached plans.
- ✓ Areas to be undisturbed for more than 14 days will be temporarily stabilized by seeding.
- ✓ Disturbed areas will be reseeded and mulched immediately after final contours are re-established and no more than 14 days after the completion of construction at that site.
- ✓ Temporary erosion control devices will not be removed until the area served is stabilized by the growth of vegetation and the area is certified as being stabilized by the Erosion Control Inspector.

Construction Activities	Start → Stop
Sequence must include major items such as, but not limited to, clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity resulting in soil disturbance. Include installation of erosion and sediment control practices and timing of installation.	
Install silt fence and construction fence prior to any site disturbance. Maintain erosion control measures for duration of site disturbances.	Week 1
Excavate and install underground utilities.	Weeks 1-3
Parking Lot Construction	Weeks 3-6
Building construction	Week 3- completion
Fine grade and landscape	After completion of building
Remove erosion and sediment control measures upon stabilization of contributing areas.	At completion 80% Germination

4.4 Erosion and Sediment Control Practice Maintenance

Temporary erosion and sediment control practices will need to be maintained frequently during construction. It is the responsibility of the operator to inspect, and maintain the temporary controls so that they are working efficiently. The operator needs to pay close attention to SWPPP Inspection Reports that will advise of needed maintenance. Captured sediment will have to be removed periodically from each practice in order for the control to function properly. Temporary erosion and sediment control practice maintenance needs are listed below:

- ✓ Silt fence – maintenance shall be performed as needed and material removed when “bulges” develop in the silt fence.
- ✓ Stabilized construction entrance – entrance shall be maintained in a condition which shall prevent tracking. This may require periodic top dressing with additional aggregate. All sediment tracked onto or spilled on public rights of way shall be removed immediately. When necessary, wheels must be cleaned to remove sediment prior to entrance on public rights of way. When washing is required, it shall be done in an area stabilized with aggregate.

4.5 Erosion and Sediment Control Inspection

- A qualified inspector shall conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed to ensure overall preparedness of the site for commencement of construction.
- This qualified inspector must be a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 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 qualified inspector shall receive 4 hours of training every 3 years.
- The day-to-day erosion control activities on the site will be monitored by the construction manager. The qualified inspector and his crews will make **at least one inspection every seven (7) days** of erosion control devices, and non-stabilized areas during construction. A maintenance inspection report will be completed by the qualified inspector after each inspection. The report form to be completed by the inspector is attached in **Appendix C**. Reports should be compiled and maintained on-site in the SWPPP 3-ring binder.
- All measures will be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of report. The qualified inspector shall take photographs of any needed repairs and also photograph when the repairs are completed. These photographs will be time and date stamped and attached to the weekly inspection report.
- Seeded and planted areas will be inspected for bare spots, washouts, and healthy growth. If necessary, spot reseeding or sodding will be implemented.
- A trained contractor will be an employee from the contracting company responsible for the implementation of the SWPPP. This person will be onsite when any soil disturbing activities are being conducted. The trained contractor must have received 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 qualified inspector shall receive 4 hours of training every 3 years. This trained contractor cannot conduct the regular SWPPP compliance inspections unless they meet the qualified inspector qualifications.

4.6 Contractor Sequence Form

The operator shall prepare a summary of construction status using the Construction Sequence Form (included in **Appendix D**) once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated.

5.0 POST CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

5.1 Stormwater Management Controls

The project is proposing the use of underground infiltration chambers and an infiltration basin to capture and treat site runoff.

Stormwater runoff from the roof will discharge to the underground infiltration chambers. Runoff will be pretreated via an isolator row.

5.2 Post Construction Stormwater Management Drawings

Post construction stormwater management controls are shown on the Construction Drawings included in **Appendix B**.

5.3 Hydraulic and Hydrologic Analysis

The program utilized for quantifying stormwater runoff rates and volumes was **HydroCAD** software, produced by Applied Microcomputer Systems of Chocorua, NH. The SCS 24-hour Type II design storms for 1, 10, and 100-year frequency rainfall were analyzed (**Appendix A**).

- ✓ Hydrologic/hydraulic analysis for all structural components of the stormwater control system for the applicable design storms.
- ✓ Comparison of post-development stormwater runoff conditions with pre-development conditions.
- ✓ Dimensions, material specifications and installation details for each post-construction stormwater control practice.

5.4 Comparison of Pre and Post Construction Stormwater Runoff

Stormwater Quantity. These calculations are based on the HydroCAD analysis.

The design storms used for the pre-development versus post-development comparison were the 1, 10, and 100-year, 24-hour duration, SCS Type II events.

The rainfall amounts for these storms are 2.15, 3.75, and 6.20 inches, respectively.

Under pre-development conditions the majority of the site drains to the south east where runoff flows off site to lands owned by the Saratoga YMCA (AP-2) while the north western portion of the site flows to West Avenue (AP-1).

Post-development stormwater runoff will be directed to a proposed underground infiltration chamber gallery, infiltration trench and an infiltration basin ultimately entering the underlying soils.

The project proposes no increase in flow offsite to the south east or to West Avenue.

	Pre-Development	Post-Development
10 year, 24 hour storm (Qp)	0.28 CFS	0.11 CFS
100 year, 24 hour storm (Qf)	0.57 CFS	0.20 CFS

5.5 Water Quality Volume

The following formula was utilized to determine water quality volume:

$$WQ_v = \frac{(P)(R_v)(A)}{12}$$

Where:

WQ_v = Water Quality Volume (acre/feet)

P = 90% Rainfall Event

R_v = $0.05 + 0.009(I)$ where I is impervious cover in percent

A = Subcatchment area in acres

Water quality volume at the site will be managed through the use of underground infiltration chambers and an infiltration pond.

SMP	Type	Provided
		(ac-ft)
SMP-1	Underground Infiltration Chambers	0.025
SMP-2	Infiltration Basin/Trench	0.011
Total		0.036

Stormwater runoff from the proposed parking lot and entrance drive will be piped to the underground infiltration chambers (SMP-1). The northern half of the roof will also be directed to the underground infiltration chambers while the southern portion will be directed into gravel drip strips (SMP-2). The remainder of the site and overflow from the gravel drip strips will be directed to the infiltration basin located in

the south east corner of the site (SMP-2). All practices provide WQv/RRv through infiltration. The required WQv for the project site is 0.036 ac-ft which equals the WQv provided (0.036 ac-ft).

5.6 Runoff Reduction Volume

The total Runoff Reduction for this project is 0.036 ac-ft provided by SMP-1 and SMP-2. This is equal to 100% of the WQv.

5.7 Channel Protection Volume (CPv)

Channel protection volume is not required as the entire CPv is reduced through infiltration.

6.0 POST CONSTRUCTION STORMWATER MAINTENANCE

6.1 Mechanism of Operation and Maintenance

John-Paul Construction, Inc. will be responsible for the long term operation and maintenance of the stormwater management practices for the life of the site.

6.2 Maintenance to be Performed

Post-construction maintenance for this project will consist of regular inspections of permanent stormwater management facilities. These maintenance procedures are essential to assure continual performance of the stormwater management practices on your site. During the inspection and any maintenance activity to the stormwater management practices, the responsible party should fill out an inspection and maintenance log (**Appendix C**) to record that it was done.

The operator shall retain a qualified professional to: 1) summarize the inspections conducted, maintenance activities performed and repairs made throughout the year, and 2) certify to the City that the specific stormwater management facilities installed at the site are being properly maintained, are in good operation condition and functioning as intended.

Underground Pipe Storage/Infiltration System

- The systems should be inspected quarterly for the first year and if there are no problems, the system can be inspected annually after the first year.
- If sediment is accumulating on the bottom of the system, pump in water via a flushing port or observation well and then pump the sediment laden water out via the flushing port or the inlet. This can be done with a vacuum truck. The system may have to be flushed multiple times until it is clean of sediment.

- Also, the manifold feeding the pipe storage should be flushed by pumping water in the manhole access and out the flushing port. This should be done during the routine inspection.

Infiltration Basin

- The systems should be inspected quarterly for the first year and if there are no problems, the system can be inspected semi-annually after the first year.
- Periodically mow infiltration basin embankments and remove woody vegetation. Stabilize eroded banks and repair undercut and eroded areas at inflow location, as needed.
- If infiltration system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the system to determine measures required to restore infiltration function, including but not limited to removal of accumulated sediments or reconstruction of the system.
- Every year disc aerate bottom of ponds.
- Every 5-years scrape bottom of ponds to remove sediment and restore to original cross-section and infiltration rate. Seed or sod to restore ground cover.

Drip Strip (Infiltration Trench)

- Ensure strip is clear of debris and dewatering between storms.
- Replace stone as necessary if strip does not dewater between storms.

Catch Basins

- Sediment removal with a vacuum truck should be done at least once a year, preferably after spring runoff and then in early fall, or when they are at 50% capacity, whichever comes first.
- Any mechanical valves should be operated for inspection every two months.

7.0 CONSTRUCTION WASTE

Waste Materials: All waste materials generated during construction will be disposed at a suitable landfill or transfer station.

Hazardous Waste: The project will not be a generator of hazardous waste and it is not anticipated that any hazardous waste will be generated during construction. If there are any materials generated, a licensed hazardous waste carrier will be contracted to dispose the hazardous material at a suitable disposal site. If hazardous materials are discovered during construction, the work will be stopped until the issue is resolved.

Waste: Portable sanitary facilities will be made available to construction personnel and will be serviced regularly.

8.0 TEMPORARY STABILIZATION FOR FROZEN CONDITIONS

The following temporary stabilization measures **MUST** be performed when construction is occurring during winter/frozen ground conditions. The following requirements do not supersede any other requirements of this SWPPP as they apply to non-frozen ground conditions.

- Perimeter erosion control **MUST** still be installed prior to earthwork disturbance as per this SWPPP.
- Any areas that cannot be seeded to turf by October 1st or earlier will receive a temporary seeding. The temporary seeding will consist of winter rye seeded at the rate of 120 pounds per acre (2.5 pounds per 1,000 square feet) or stabilized as per the temporary stabilization for winter construction/frozen conditions.
- Any area of disturbance that will remain inactive for a period of 14 consecutive days **MUST** be mulched. This includes any previously disturbed areas that are covered with snow.
- Mulch **MUST** consist of loose straw applied at the rate of 2 to 3 bales (90 to 100 pounds) per thousand square feet.
- Mulch **MUST** be applied uniformly over the area of bare soil or bare soil that is covered with snow. For the latter condition, mulch **MUST** be applied on top of snow.
- Using a tracked vehicle, mulch **MUST** be crimped into the bare soil/snow. The tracked vehicle **MUST** be driven across the mulched areas in at least two directions to maximize crimping of mulch into the soil/snow.
- If mulch gets blown off an area to a significant degree, the site inspector **WILL** require that an area be re-mulched in accordance with Items 2 through 5 above, and this area **WILL** be included on the inspection checklist for the next inspection.
- If a particular area repeatedly experiences loss of mulch due to wind, then the inspector **WILL** require that an alternative method be used to secure the mulch in place. Such alternatives may include the use of netting, tackifier or other methods deemed appropriate by the inspector.
- During periods when snow is melting and/or surface soils are thawing during daytime hours, mulched areas **MUST** be re-tracked (crimped) as per Item 5 above at least once every seven days, more frequently if directed by the inspector. Additional mulch may be required to obtain complete coverage of an area. Biodegradable erosion control matting may be required on steeper slopes.
- Additional stabilization measures for non-frozen ground conditions described in this SWPPP **WILL** be implemented at the time deemed appropriate by the inspector.

During the winter season, if a site has been stabilized and soil disturbing activities have been suspended for the winter, weekly inspections can be suspended. However, monthly inspections must still be conducted. All normal weekly inspections must resume when soil disturbing activities resume.

9.0 SPILL PREVENTION PRACTICES

Good Housekeeping and Material Management Practices

The following good housekeeping and material management practices will be followed on site during the construction project to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- Materials will be brought on site in the minimum quantities required.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposal.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The construction manager or his designee will inspect regularly to ensure proper use and disposal of materials on site.
- The contractor shall prohibit washing of tools, equipment, and machinery in or within 100 feet of any watercourse or wetland.
- All above grade storage tanks are to be protected from vehicle damage by temporary barriers.

Inventory for Pollution Prevention Plan

The materials and substances listed below are expected to be on-site during construction.

- Petroleum for fueling vehicles will be stored in above ground storage tanks. Tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or of a Con-Store, concrete encased type typically employed by NYSDOT. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.

- Paints and other similar materials will be stored in their original containers and all empty containers will be disposed of in accordance with label directions.
- Portable sanitary facilities, which contain chemical disinfectants (deodorants) will be located on-site, with the disinfectants held in the tank of the toilet.

Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Spill Prevention

The following product specific practices will be followed on site.

Petroleum Products:

- Construction personnel should be made aware that emergency telephone numbers are located in this SWPPP.
- The contractor shall immediately contact NYSDEC in the event of a spill, and shall take all appropriate steps to contain the spill, including construction of a dike around the spill and placing absorbent material over this spill.
- The contractor shall instruct personnel that spillage of fuels, oils, and similar chemicals must be avoided and will have arranged with a qualified spill remediation company to serve the site.
- Fuels, oils, and chemicals will be stored in appropriate and tightly capped containers. Containers shall not be disposed of on the project site.
- Fuels, oils, chemicals, material, equipment, and sanitary facilities will be stored/located away from trees and at least 100 feet from streams, wells, wet areas, and other environmentally sensitive sites.
- Dispose of chemical containers and surplus chemicals off the project site in accordance with label directions.
- Use tight connections and hoses with appropriate nozzles in all operations involving fuels, lubricating materials or chemicals.
- Use funnels when pouring fuels, lubricating materials or chemicals.
- Refueling and cleaning of construction equipment will take place in parking areas to provide rapid response to emergency situations.

- All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Any vehicle leaking fuel or hydraulic fuel will be immediately scheduled for repairs and use will be discontinued until repairs are made.

Fertilizers:

- Fertilizer will be stored in its original containers on pallets with water resistant coverings.
- Proper delivery scheduling will minimize storage time.
- Any damaged containers will be repaired immediately upon discovery and any released fertilizer recovered to the fullest extent practicable.

Paints:

- All containers will be tightly sealed and stored when not required for use.
- Excess paint will not be discharged to the storm water system or wastewater system, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

- Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water only at designated locations on site.

Asphalt Trucks:

- Asphalt trucks shall not discharge surplus asphalt on the site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup. The construction manager or site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the onsite construction office or trailer.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two gallons will be reported to the NYSDEC Regional Spill Response Unit. Notification to the

NYSDEC (1-800-457-7362) must be completed within two hours of the discovery of the spill.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activated clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size

10.0 CERTIFICATIONS

Preparer Certification of Compliance with Federal, State, and Local Regulations

This Stormwater Pollution Prevention Plan was prepared in accordance with the City of Saratoga Springs regulations.

Name: Douglas Heller Title: Professional Engineer

Signature: _____ Date: _____

Company Name: The LA Group, PC

Owner Pollution Prevention Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

I understand that SWPPP requires site inspections be conducted by a qualified professional once every seven (7) days. These inspections shall be performed by a qualified professional as defined in the SWPPP.

The Owner/Operator will be held financially responsible for any and all fines related to work tasks that are not specified by the Contractor(s)/Subcontractor(s) below.

Name: John Luke Hodorowski Title: Owner

Signature: _____ Date: _____

Company Name: John-Paul Builders, Inc.

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____
Address _____
City, State, Zip _____
Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____
Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify 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 the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I 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 proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

- 1. _____
- 2. _____
- SWPPP Components You Are Responsible For 3. _____
- 4. _____
- 5. _____
- 6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

11.0 DEFINITIONS

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, tree removal, stump removal and/or brush 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 Phasing Plan - a plan designed to construct particular portions of an individual project at different times. Phasing is often used when a project is very large to limit the disturbance at a single time to 5 acres per phase.

Erosion and Sediment Control Practices – temporary measures installed prior to construction and maintained during construction to temporarily treat any stormwater runoff. Once construction is completed and post-construction stormwater management practices are installed and the site is stabilized, the erosion and sediment control practices are removed from the site.

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 pavement.

Green Infrastructure – in the context of stormwater management, the term green infrastructure includes a wide array of practices at multiple scales to manage and treat stormwater, maintain and restore natural hydrology and ecological function by infiltration, evapotranspiration, capture and reuse of stormwater, and establishment of natural vegetative features. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed or ecoregion. On the local scale green infrastructure consist of site and neighborhood specific practices and runoff reduction techniques. Such practices essentially result in runoff reduction and or establishment of habitat areas with significant utilization of soils, vegetation, and engineered media rather than traditional hardscape collection, conveyance and storage structures. Some examples include green roofs, trees and tree boxes, pervious pavement, rain gardens, vegetated swales, planters, reforestation and protection and enhancement of riparian buffers and floodplains.

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.

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
- iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Notice of Intent – a standardized format notification sent to the NYSDEC to inform them of the proposed activity to be sent after the SWPPP has been completed.

Owner or Operator – means the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Post-Construction Stormwater Management Practices – permanent devices constructed or installed onsite to treat stormwater from a site when construction is completed.

Qualified Inspector - a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 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 qualified inspector shall receive 4 hours of training every 3 years.

Regulated, Traditional Land Use Control MS4 - means a city, town, or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Sequence of Operations – the individual steps and their specific order which are undertaken in order to construct a project or a given phase of a project from beginning to end. (i.e. clearing, grading, foundation work, landscaping, etc.)

State Pollutant Discharge Elimination System (SPDES) – means the system established pursuant to Article 17 of the Environmental Conservation Law (ECL) and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Stormwater Pollution Prevention Plan (SWPPP) - a report that is compiled providing detailed information about the proposed activity and the specifics to how the stormwater will be managed during construction and after construction is completed.

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 or underground 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 800-941.

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).

Trained Contractor – means an employee from a contracting (construction) company responsible for the day to day implementation of the SWPPP. The trained contractor must have received 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 qualified inspector shall receive 4 hours of training every 3 years.

It can also mean an employee from the contracting (construction) company that meets the qualified inspector qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, 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 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.

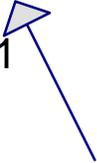
Appendix A

HydroCAD Calculations and Storm Data

**HYDROCAD CALCULATIONS
PRE DEVELOPMENT**



AP-1



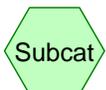
Subcat E1



Subcat E2



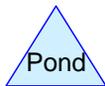
AP-2



Subcat



Reach



Pond



Link

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
19,423	39	>75% Grass cover, Good, HSG A (E1, E2)
2,705	98	Paved parking, HSG A (E1, E2)
9,702	30	Woods, Good, HSG A (E2)
31,830	41	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
31,830	HSG A	E1, E2
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
31,830		TOTAL AREA

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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	Sub Num
19,423	0	0	0	0	19,423	>75% Grass cover, Good	
2,705	0	0	0	0	2,705	Paved parking	
9,702	0	0	0	0	9,702	Woods, Good	
31,830	0	0	0	0	31,830	TOTAL AREA	

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Type II 24-hr 1 Year Rainfall=2.15"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>0.43"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.09 cfs 235 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.09"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.07 cfs 198 cf

Link AP-1: AP-1 Inflow=0.09 cfs 235 cf
Primary=0.09 cfs 235 cf

Link AP-2: AP-2 Inflow=0.07 cfs 198 cf
Primary=0.07 cfs 198 cf

Total Runoff Area = 31,830 sf Runoff Volume = 433 cf Average Runoff Depth = 0.16"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

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Type II 24-hr 10 Year Rainfall=3.75"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>0.80"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.16 cfs 439 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.19"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.12 cfs 390 cf

Link AP-1: AP-1 Inflow=0.16 cfs 439 cf
Primary=0.16 cfs 439 cf

Link AP-2: AP-2 Inflow=0.12 cfs 390 cf
Primary=0.12 cfs 390 cf

Total Runoff Area = 31,830 sf Runoff Volume = 829 cf Average Runoff Depth = 0.31"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

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Type II 24-hr 100 Year Rainfall=6.20"

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Page 1

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>1.71"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.29 cfs 943 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.61"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.28 cfs 1,286 cf

Link AP-1: AP-1 Inflow=0.29 cfs 943 cf
Primary=0.29 cfs 943 cf

Link AP-2: AP-2 Inflow=0.28 cfs 1,286 cf
Primary=0.28 cfs 1,286 cf

Total Runoff Area = 31,830 sf Runoff Volume = 2,228 cf Average Runoff Depth = 0.84"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

Summary for Subcatchment E1: Subcat E1

Runoff = 0.29 cfs @ 12.01 hrs, Volume= 943 cf, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
5,132	39	>75% Grass cover, Good, HSG A
1,468	98	Paved parking, HSG A
6,599		Weighted Average
5,132		77.76% Pervious Area
1,468		22.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	80	0.0190	0.14		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"

Summary for Subcatchment E2: Subcat E2

Runoff = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
14,291	39	>75% Grass cover, Good, HSG A
1,238	98	Paved parking, HSG A
9,702	30	Woods, Good, HSG A
25,231		Weighted Average
23,993		95.09% Pervious Area
1,238		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0300	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
3.1	115	0.0150	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
12.3	215	Total			

Summary for Link AP-1: AP-1

Inflow Area = 6,599 sf, 22.24% Impervious, Inflow Depth > 1.71" for 100 Year event
Inflow = 0.29 cfs @ 12.01 hrs, Volume= 943 cf
Primary = 0.29 cfs @ 12.01 hrs, Volume= 943 cf, Atten= 0%, Lag= 0.0 min

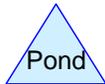
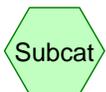
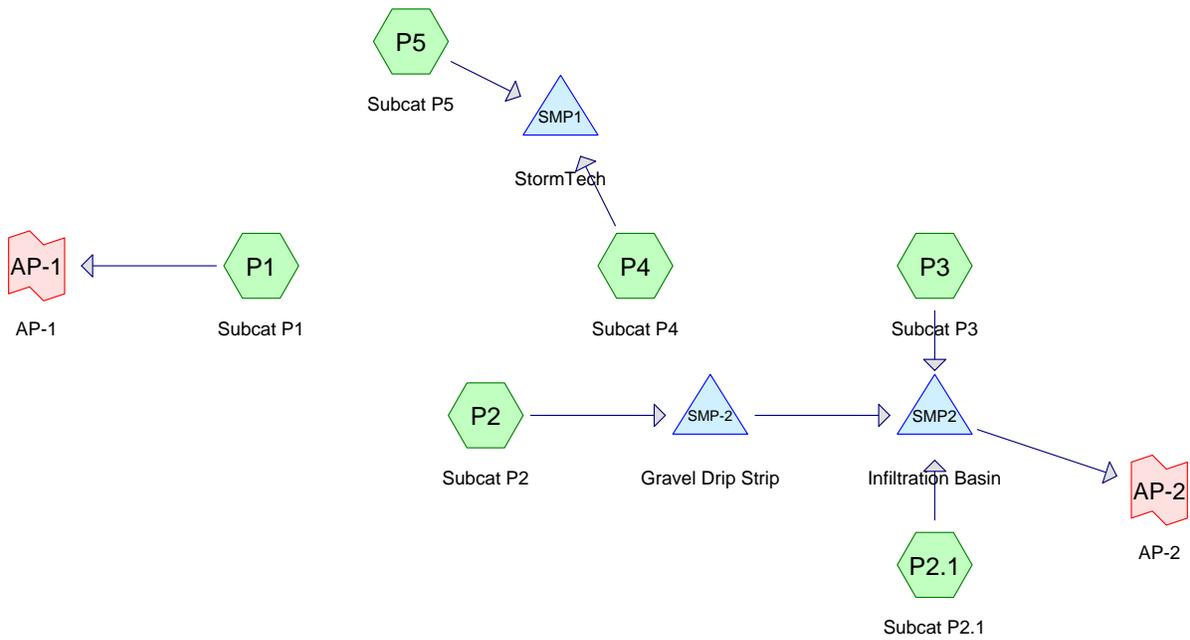
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 25,231 sf, 4.91% Impervious, Inflow Depth > 0.61" for 100 Year event
Inflow = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf
Primary = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

**HYDROCAD CALCULATIONS
POST DEVELOPMENT**



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Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
14,181	39	>75% Grass cover, Good, HSG A (P1, P2, P2.1, P3, P4, P5)
17,663	98	Paved parking, HSG A (P1, P2, P2.1, P3, P4, P5)
31,844	72	TOTAL AREA

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Soil Listing (selected nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
31,844	HSG A	P1, P2, P2.1, P3, P4, P5
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
31,844		TOTAL AREA

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Ground Covers (selected 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	Sub Num
14,181	0	0	0	0	14,181	>75% Grass cover, Good	
17,663	0	0	0	0	17,663	Paved parking	
31,844	0	0	0	0	31,844	TOTAL AREA	

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Type II 24-hr 1 Year Rainfall=2.15"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1 Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>0.78"
Tc=6.0 min CN=WQ Runoff=0.06 cfs 153 cf

Subcatchment P2: Subcat P2 Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>1.63"
Tc=6.0 min CN=WQ Runoff=0.23 cfs 554 cf

Subcatchment P2.1: Subcat P2.1 Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>0.32"
Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.07 cfs 188 cf

Subcatchment P3: Subcat P3 Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.02"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 7 cf

Subcatchment P4: Subcat P4 Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>1.92"
Tc=6.0 min CN=WQ Runoff=0.41 cfs 984 cf

Subcatchment P5: Subcat P5 Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>1.38"
Tc=6.0 min CN=WQ Runoff=0.39 cfs 942 cf

Pond SMP-2: Gravel Drip Strip Peak Elev=309.55' Storage=63 cf Inflow=0.23 cfs 554 cf
Discarded=0.08 cfs 506 cf Primary=0.11 cfs 48 cf Outflow=0.19 cfs 554 cf

Pond SMP1: StormTech Peak Elev=304.84' Storage=521 cf Inflow=0.81 cfs 1,926 cf
Outflow=0.16 cfs 1,925 cf

Pond SMP2: Infiltration Basin Peak Elev=304.27' Storage=104 cf Inflow=0.18 cfs 243 cf
Discarded=0.03 cfs 241 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 241 cf

Link AP-1: AP-1 Inflow=0.06 cfs 153 cf
Primary=0.06 cfs 153 cf

Link AP-2: AP-2 Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 2,828 cf Average Runoff Depth = 1.07"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

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Type II 24-hr 10 Year Rainfall=3.75"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1	Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>1.44" Tc=6.0 min CN=WQ Runoff=0.11 cfs 282 cf
Subcatchment P2: Subcat P2	Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>2.99" Tc=6.0 min CN=WQ Runoff=0.41 cfs 1,015 cf
Subcatchment P2.1: Subcat P2.1	Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>0.61" Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.12 cfs 356 cf
Subcatchment P3: Subcat P3	Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.06" Tc=6.0 min CN=WQ Runoff=0.01 cfs 21 cf
Subcatchment P4: Subcat P4	Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>3.51" Tc=6.0 min CN=WQ Runoff=0.73 cfs 1,799 cf
Subcatchment P5: Subcat P5	Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>2.53" Tc=6.0 min CN=WQ Runoff=0.70 cfs 1,727 cf
Pond SMP-2: Gravel Drip Strip	Peak Elev=309.71' Storage=86 cf Inflow=0.41 cfs 1,015 cf Discarded=0.08 cfs 802 cf Primary=0.31 cfs 213 cf Outflow=0.39 cfs 1,015 cf
Pond SMP1: StormTech	Peak Elev=305.56' Storage=1,153 cf Inflow=1.43 cfs 3,525 cf Outflow=0.17 cfs 3,524 cf
Pond SMP2: Infiltration Basin	Peak Elev=305.15' Storage=290 cf Inflow=0.44 cfs 589 cf Discarded=0.08 cfs 590 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 590 cf
Link AP-1: AP-1	Inflow=0.11 cfs 282 cf Primary=0.11 cfs 282 cf
Link AP-2: AP-2	Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 5,198 cf Average Runoff Depth = 1.96"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

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Type II 24-hr 100 Year Rainfall=6.20"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1	Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>2.71" Tc=6.0 min CN=WQ Runoff=0.20 cfs 533 cf
Subcatchment P2: Subcat P2	Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>5.14" Tc=6.0 min CN=WQ Runoff=0.69 cfs 1,744 cf
Subcatchment P2.1: Subcat P2.1	Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>1.41" Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.24 cfs 828 cf
Subcatchment P3: Subcat P3	Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.56" Tc=6.0 min CN=WQ Runoff=0.05 cfs 189 cf
Subcatchment P4: Subcat P4	Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>5.95" Tc=6.0 min CN=WQ Runoff=1.21 cfs 3,050 cf
Subcatchment P5: Subcat P5	Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>4.42" Tc=6.0 min CN=WQ Runoff=1.17 cfs 3,017 cf
Pond SMP-2: Gravel Drip Strip	Peak Elev=309.95' Storage=118 cf Inflow=0.69 cfs 1,744 cf Discarded=0.08 cfs 1,246 cf Primary=0.56 cfs 499 cf Outflow=0.64 cfs 1,744 cf
Pond SMP1: StormTech	Peak Elev=307.10' Storage=2,253 cf Inflow=2.39 cfs 6,067 cf Outflow=0.18 cfs 6,065 cf
Pond SMP2: Infiltration Basin	Peak Elev=305.97' Storage=662 cf Inflow=0.83 cfs 1,516 cf Discarded=0.14 cfs 1,435 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 1,435 cf
Link AP-1: AP-1	Inflow=0.20 cfs 533 cf Primary=0.20 cfs 533 cf
Link AP-2: AP-2	Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 9,361 cf Average Runoff Depth = 3.53"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

Summary for Subcatchment P1: Subcat P1

Runoff = 0.20 cfs @ 11.97 hrs, Volume= 533 cf, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
1,403	39	>75% Grass cover, Good, HSG A
954	98	Paved parking, HSG A
2,357		Weighted Average
1,403		59.52% Pervious Area
954		40.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P2: Subcat P2

Runoff = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf, Depth> 5.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
614	39	>75% Grass cover, Good, HSG A
3,462	98	Paved parking, HSG A
4,076		Weighted Average
614		15.06% Pervious Area
3,462		84.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P2.1: Subcat P2.1

Runoff = 0.24 cfs @ 12.03 hrs, Volume= 828 cf, Depth> 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
5,851	39	>75% Grass cover, Good, HSG A
1,177	98	Paved parking, HSG A
7,028		Weighted Average
5,851		83.25% Pervious Area
1,177		16.75% Impervious Area

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Type II 24-hr 100 Year Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0250	0.17		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.4	60	0.0250	2.37		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
10.3	160	Total			

Summary for Subcatchment P3: Subcat P3

Runoff = 0.05 cfs @ 12.01 hrs, Volume= 189 cf, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
4,004	39	>75% Grass cover, Good, HSG A
43	98	Paved parking, HSG A
4,048		Weighted Average
4,004		98.93% Pervious Area
43		1.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P4: Subcat P4

Runoff = 1.21 cfs @ 11.96 hrs, Volume= 3,050 cf, Depth> 5.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
3	39	>75% Grass cover, Good, HSG A
6,144	98	Paved parking, HSG A
6,146		Weighted Average
3		0.04% Pervious Area
6,144		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P5: Subcat P5

Runoff = 1.17 cfs @ 11.96 hrs, Volume= 3,017 cf, Depth> 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

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Area (sf)	CN	Description
2,306	39	>75% Grass cover, Good, HSG A
5,883	98	Paved parking, HSG A
8,189		Weighted Average
2,306		28.16% Pervious Area
5,883		71.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond SMP-2: Gravel Drip Strip

Inflow Area = 4,076 sf, 84.94% Impervious, Inflow Depth > 5.14" for 100 Year event
 Inflow = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf
 Outflow = 0.64 cfs @ 11.99 hrs, Volume= 1,744 cf, Atten= 7%, Lag= 1.9 min
 Discarded = 0.08 cfs @ 11.65 hrs, Volume= 1,246 cf
 Primary = 0.56 cfs @ 11.99 hrs, Volume= 499 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 309.95' @ 11.99 hrs Surf.Area= 350 sf Storage= 118 cf

Plug-Flow detention time= 2.3 min calculated for 1,744 cf (100% of inflow)
 Center-of-Mass det. time= 2.2 min (745.3 - 743.1)

Volume	Invert	Avail.Storage	Storage Description
#1	309.10'	196 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 490 cf Overall x 40.0% Voids
#2	309.10'	84 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 210 cf Overall x 40.0% Voids
		280 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	245	0	0
311.10	245	490	490

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	105	0	0
311.10	105	210	210

Device	Routing	Invert	Outlet Devices
#1	Discarded	309.10'	10.000 in/hr Exfiltration over Surface area
#2	Primary	309.35'	6.0" Round Culvert L= 43.0' Ke= 0.500 Inlet / Outlet Invert= 309.35' / 306.00' S= 0.0779 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Discarded OutFlow Max=0.08 cfs @ 11.65 hrs HW=309.15' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.55 cfs @ 11.99 hrs HW=309.94' (Free Discharge)

↳ **2=Culvert** (Inlet Controls 0.55 cfs @ 2.80 fps)

Summary for Pond SMP1: StormTech

Inflow Area = 14,335 sf, 83.89% Impervious, Inflow Depth > 5.08" for 100 Year event
 Inflow = 2.39 cfs @ 11.96 hrs, Volume= 6,067 cf
 Outflow = 0.18 cfs @ 12.53 hrs, Volume= 6,065 cf, Atten= 92%, Lag= 33.9 min
 Discarded = 0.18 cfs @ 12.53 hrs, Volume= 6,065 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 307.10' @ 12.53 hrs Surf.Area= 1,307 sf Storage= 2,253 cf

Plug-Flow detention time= 86.2 min calculated for 6,065 cf (100% of inflow)
 Center-of-Mass det. time= 86.0 min (829.3 - 743.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	304.00'	1,165 cf	20.50'W x 52.28'L x 3.50'H Field A Z=0.5 4,211 cf Overall - 1,298 cf Embedded = 2,913 cf x 40.0% Voids
#2A	304.50'	1,298 cf	StormTech SC-740 x 28 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
		2,463 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	304.00'	6.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.18 cfs @ 12.53 hrs HW=307.10' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.18 cfs)

Summary for Pond SMP2: Infiltration Basin

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth > 1.20" for 100 Year event
 Inflow = 0.83 cfs @ 12.00 hrs, Volume= 1,516 cf
 Outflow = 0.14 cfs @ 12.21 hrs, Volume= 1,435 cf, Atten= 83%, Lag= 12.6 min
 Discarded = 0.14 cfs @ 12.21 hrs, Volume= 1,435 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 305.97' @ 12.21 hrs Surf.Area= 623 sf Storage= 662 cf

Plug-Flow detention time= 71.1 min calculated for 1,435 cf (95% of inflow)
 Center-of-Mass det. time= 40.0 min (832.5 - 792.5)

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Volume	Invert	Avail.Storage	Storage Description
#1	299.50'	31 cf	6.00'D x 4.50'H Vertical Cone/Cylinder 127 cf Overall - 50 cf Embedded = 77 cf x 40.0% Voids
#2	300.00'	50 cf	4.00'D x 4.00'H Vertical Cone/Cylinder Inside #1
#3	304.00'	958 cf	Custom Stage Data (Irregular) Listed below (Recalc)
		1,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
304.00	65	45.0	0	0	65
305.00	285	95.0	162	162	626
306.00	605	115.0	435	597	977
306.50	845	130.0	361	958	1,276

Device	Routing	Invert	Outlet Devices
#1	Discarded	299.50'	10.000 in/hr Exfiltration over Horizontal area
#2	Primary	306.00'	30.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.14 cfs @ 12.21 hrs HW=305.97' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=299.50' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link AP-1: AP-1

Inflow Area = 2,357 sf, 40.48% Impervious, Inflow Depth > 2.71" for 100 Year event
 Inflow = 0.20 cfs @ 11.97 hrs, Volume= 533 cf
 Primary = 0.20 cfs @ 11.97 hrs, Volume= 533 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth = 0.00" for 100 Year event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

**HYDROCAD CALCULATIONS
POST DEVELOPMENT
FROZEN CONDITIONS**

Summary for Pond 1P: Frozen Infiltration Basin

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth > 2.16" for 100 Year event
 Inflow = 0.91 cfs @ 12.01 hrs, Volume= 2,721 cf
 Outflow = 0.89 cfs @ 12.01 hrs, Volume= 2,030 cf, Atten= 2%, Lag= 0.4 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Primary = 0.89 cfs @ 12.01 hrs, Volume= 2,030 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 306.05' @ 12.01 hrs Surf.Area= 654 sf Storage= 708 cf

Plug-Flow detention time= 173.5 min calculated for 2,026 cf (74% of inflow)
 Center-of-Mass det. time= 72.7 min (858.3 - 785.6)

Volume	Invert	Avail.Storage	Storage Description
#1	299.50'	31 cf	6.00'D x 4.50'H Vertical Cone/Cylinder 127 cf Overall - 50 cf Embedded = 77 cf x 40.0% Voids
#2	300.00'	50 cf	4.00'D x 4.00'H Vertical Cone/Cylinder Inside #1
#3	304.00'	958 cf	Custom Stage Data (Irregular) Listed below (Recalc)
		1,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
304.00	65	45.0	0	0	65
305.00	285	95.0	162	162	626
306.00	605	115.0	435	597	977
306.50	845	130.0	361	958	1,276

Device	Routing	Invert	Outlet Devices
#1	Primary	306.00'	30.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Discarded	299.50'	10.000 in/hr Exfiltration over Surface area from 299.50' - 300.00' Excluded Surface area = 28 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=299.50' (Free Discharge)
 ↳2=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=0.71 cfs @ 12.01 hrs HW=306.05' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 0.71 cfs @ 0.51 fps)

Summary for Pond 2P: Frozen Gravel Drip Strip

Inflow Area = 4,076 sf, 84.94% Impervious, Inflow Depth > 5.14" for 100 Year event
 Inflow = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf
 Outflow = 0.63 cfs @ 12.00 hrs, Volume= 1,703 cf, Atten= 9%, Lag= 2.1 min
 Primary = 0.63 cfs @ 12.00 hrs, Volume= 1,703 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Type II 24-hr 100 Year Rainfall=6.20"

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Peak Elev= 310.04' @ 12.00 hrs Surf.Area= 350 sf Storage= 132 cf

Plug-Flow detention time= 32.0 min calculated for 1,703 cf (98% of inflow)
 Center-of-Mass det. time= 16.8 min (759.9 - 743.1)

Volume	Invert	Avail.Storage	Storage Description
#1	309.10'	196 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 490 cf Overall x 40.0% Voids
#2	309.10'	84 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 210 cf Overall x 40.0% Voids
		280 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	245	0	0
311.10	245	490	490

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	105	0	0
311.10	105	210	210

Device	Routing	Invert	Outlet Devices
#1	Primary	309.35'	6.0" Round Culvert L= 43.0' Ke= 0.500 Inlet / Outlet Invert= 309.35' / 306.00' S= 0.0779 1/'' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.62 cfs @ 12.00 hrs HW=310.04' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 0.62 cfs @ 3.18 fps)

Stormwater Practice Sizing

Job Name and # 246 West Avenue Apartments

Water Quality Volume Calculation

6/23/2016

$$WQv = [(P)(Rv)(A)]/12$$

Where:

$$Rv = 0.05 + 0.009(I)$$

I = impervious cover in percent

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

A = Area in acres

SMP-1: Underground Infiltration Chambers

% Impervious 83.89%

Rv 0.81

90% Rainfall 1.15

Area in Square Feet 14335

$$WQv \text{ Required} = 1106 \text{ ft}^3 \quad 0.025 \text{ ac-ft}$$

SMP-2: Infiltration Basin/Trench

% Impervious 30.90%

Rv 0.33

90% Rainfall 1.15

Area in Square Feet 15151

$$WQv \text{ Required} = 476 \text{ ft}^3 \quad 0.011 \text{ ac-ft}$$

Job Name and # 246 West Avenue Apartments

Minimum Runoff Reduction Volume

6/23/2016

$$RR_v = [(P)(R_v^*)(A_i)]/12$$

Where:

$$A_i = (S)(A_{ic})$$

$R_v = 0.05 + 0.009(I)$ where I is 100% impervious

A_i = impervious cover targeted for runoff reduction

A_{ic} = Total area of new impervious cover

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

S = Hydrologic Soil Group (HSG) Specific Reduction Factor (S)

A=0.55, B=0.40, C=0.30, D=0.20

S (HSG A)	0.55
A_{ic}	0.34 acres
R_v	0.95
90% Rainfall	1.15
A_i	0.187

$$RR_v = 0.017 \text{ acre feet} = 742 \text{ ft}^3$$

Appendix B

Soil Survey and Map Set

Custom Soil Resource Report for Saratoga County, New York



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

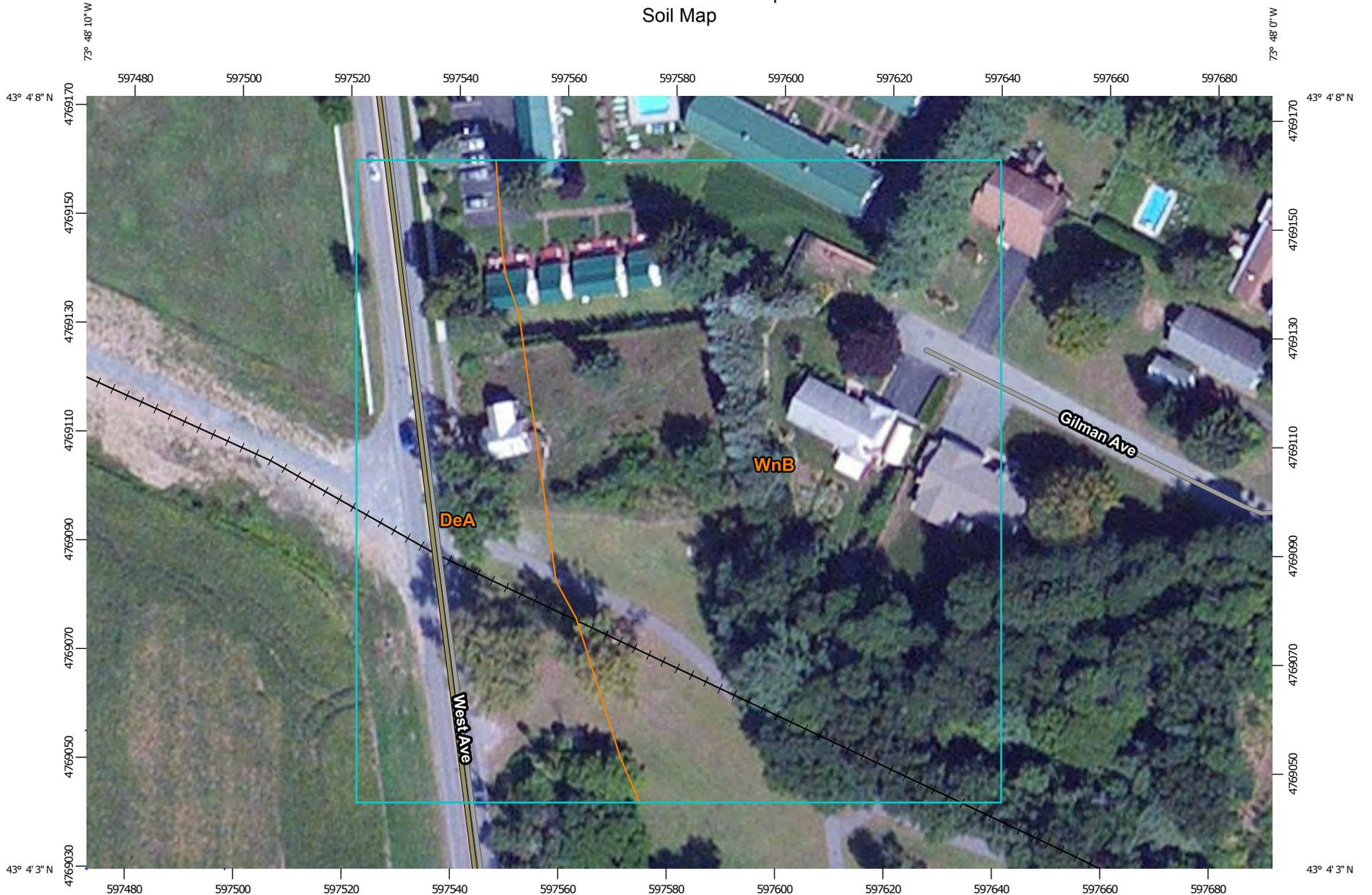
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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Saratoga County, New York
 Survey Area Data: Version 15, Sep 24, 2015

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

Date(s) aerial images were photographed: Jun 19, 2010—Oct 11, 2010

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

Map Unit Legend

Saratoga County, New York (NY091)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeA	Deerfield loamy fine sand, nearly level	1.1	30.1%
WnB	Windsor loamy sand, 3 to 8 percent slopes	2.4	69.9%
Totals for Area of Interest		3.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

Custom Soil Resource Report

intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Saratoga County, New York

DeA—Deerfield loamy fine sand, nearly level

Map Unit Setting

National map unit symbol: 9w9t

Elevation: 0 to 1,000 feet

Mean annual precipitation: 36 to 48 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 125 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Deltas, outwash plains, terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciofluvial or deltaic deposits derived mainly from granite, gneiss, or sandstone

Typical profile

H1 - 0 to 10 inches: loamy fine sand

H2 - 10 to 26 inches: loamy fine sand

H3 - 26 to 72 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: A

Minor Components

Oakville

Percent of map unit: 10 percent

Claverack

Percent of map unit: 7 percent

Wareham

Percent of map unit: 4 percent

Wareham

Percent of map unit: 4 percent

WnB—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf

Elevation: 0 to 1,210 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Deltas, dunes, outwash plains, outwash terraces

Landform position (three-dimensional): Riser, tread

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loamy sand

Bw - 3 to 25 inches: loamy sand

C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 4.5 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent

Landform: Deltas, eskers, kames, outwash plains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise

Down-slope shape: Convex

Across-slope shape: Convex, linear

Deerfield, loamy sand

Percent of map unit: 5 percent

Landform: Deltas, outwash plains, terraces

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Linear

Appendix C

SWPPP Inspection Form

**246 West Ave. Apartments
WEEKLY SWPPP INSPECTION REPORT**

Inspector Name:	Date:
Signature (required):	Time:
Weather:	Inspection #:
Soil Conditions (dry, saturated, etc):	

Note: Digital photos, with date stamp required for all practices requiring corrective action, before and after, to be attached to the inspection report.

YES NO N/A				
1.	<input type="checkbox"/>	<input type="checkbox"/>	Routine Inspection.	Date of last inspection: _____
2.	<input type="checkbox"/>	<input type="checkbox"/>	Inspection following rain event.	Date/time of storm ending: _____
	<input type="checkbox"/>	<input type="checkbox"/>		Rainfall amount: _____
	<input type="checkbox"/>	<input type="checkbox"/>		Recorded by: _____
3.	<input type="checkbox"/>	<input type="checkbox"/>	Is this a final site inspection?	
4.	<input type="checkbox"/>	<input type="checkbox"/>	Has site undergone final stabilization?	
	<input type="checkbox"/>	<input type="checkbox"/>	If so, have all temporary erosion and sediment controls been removed?	

Site Disturbance (Indicate Locations on Plan)

YES NO N/A			
1.	<input type="checkbox"/>	<input type="checkbox"/>	Areas previously disturbed, but have not undergone active site work in the last 14 days?
2.	<input type="checkbox"/>	<input type="checkbox"/>	Areas disturbed within last 14 days?
3.	<input type="checkbox"/>	<input type="checkbox"/>	Areas expected to be disturbed in next 14 days?
4.	<input type="checkbox"/>	<input type="checkbox"/>	Do areas of steep slopes or complex stabilization issues exist? If "YES" explain:
5.	<input type="checkbox"/>	<input type="checkbox"/>	Are there currently more than 5 acres of disturbed soil at the site? If so make sure there is an approval letter from NYS DEC.

Additional Comments: _____

Inspection of Erosion and Sediment Control Devices

Type of Control Device	Accumulation (if any) in %	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		
5.		
6.		

Stabilization/Runoff

YES NO N/A			
1.	<input type="checkbox"/>	<input type="checkbox"/>	Are all existing disturbed areas contained by control devices? Type of devices:
2.	<input type="checkbox"/>	<input type="checkbox"/>	Are there areas that require stabilization within the next 14 days? Specify Area:
3.	<input type="checkbox"/>	<input type="checkbox"/>	Have stabilization measures been initiated in inactive areas?
4.	<input type="checkbox"/>	<input type="checkbox"/>	Is there current snow cover or frozen ground conditions?
5.	<input type="checkbox"/>	<input type="checkbox"/>	Rills or gullies?
6.	<input type="checkbox"/>	<input type="checkbox"/>	Slumping/deposition?
7.	<input type="checkbox"/>	<input type="checkbox"/>	Loss of vegetation?
8.	<input type="checkbox"/>	<input type="checkbox"/>	Lack of germination?
9.	<input type="checkbox"/>	<input type="checkbox"/>	Loss of mulching?

Receiving Structures/Water Bodies (Indicate locations where runoff leaves the project site on the site plan)

YES NO N/A

1. Surface water swale or natural surface waterbody?

If natural waterbody:

Is waterbody located onsite, or adjacent to property boundary?

Description of condition: _____

2. Municipal or community system?

Inspect locations where runoff from project site enters the receiving waters and indicate if there is evidence of:

- a. Rills or gullies?
- b. Slumping/deposition?
- c. Loss of vegetation?
- d. Undermining of structures?
- e. Was there a discharge into the receiving water on the day of inspection?
- f. Is there evidence of turbidity, sedimentation, or oil in the receiving waters?

Additional Comments: _____

Inspection of Post-Construction Stormwater Management Control Devices

Type of Control Device	Phase of Construction	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		

General Site Condition

YES NO N/A

- 1. Have action items from previous reports been addressed?
- 2. Does routine maintenance of protection components occur on a regular basis?
- 3. Does cleaning and/or sweeping affected roadways occur, at minimum, daily?
- 4. Is debris and litter removed on a monthly basis, or as necessary?
- 5. Is the site maintained in an orderly manner?

Describe the condition of all natural waterbodies within or adjacent to the project that receive runoff from the site:

Contractors progress over last 7 days: _____

Anticipated work to be begun in the next 7 days: _____

Additional Comments: _____

Visual Observations

YES NO N/A

- 1. All erosion and sediment control measures have been installed/constructed?
- 2. All erosion and sediment control measures are being maintained properly?

SUMMARY OF ACTION ITEMS TO REPAIR/REPLACE/MAINTAIN/CORRECT DEFICIENCIES

Action Reported To (no signature required): _____

Company: _____

Appendix D

Other SWPPP Forms

Construction Sequence
SWPPP Plan Changes
Spill Response Form
Stormwater Management Practice Maintenance Log

The operator shall prepare a summary of construction status using the Construction Sequence Form below once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated in addition to the individual Inspection Reports completed for each inspection.

Construction Sequence Form

Construction Activities (Identify name of planned practices)	Date Complete
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	

**STORM WATER POLLUTION PREVENTION PLAN
PLAN CHANGES, AUTHORIZATION, AND CHANGE CERTIFICATION**

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

REQUESTED BY: _____

DATE: _____

AUTHORIZED BY: _____

DATE: _____

CERTIFICATION OF CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the penal code.

SIGNATURE: _____

DATE: _____

SPILL RESPONSE REPORT

Within 1 hour of a spill discovery less than 2 gallons in volume the following must be notified:

John Luke Hodorowski, John-Paul Builders, LLC
(518)356-1435

Within 1 hour of a spill discovery greater than 2 gallons the following must be notified:

John Luke Hodorowski
NYSDEC Spill Response Hotline 1-800-457-7362
Spill Response Contractor

Material Spilled: _____

Approximate Volume: _____

Location: _____

Distance to nearest down gradient drainage: _____

Distance to nearest down gradient open water: _____

Temporary control measures in place: _____

Cost Estimate for Letter of Credit				PB #
Project No:	201178			
Project:	246 West Ave			
Location:	246 West Avenue			
	Saratoga Springs, New York			
Date:	6/23/2016			
ON-SITE WORK				
Item	Quantity	Unit	Unit Cost	Subtotal
<u>Site Preparation and Grading</u>				
Erosion Control (including silt fence & construction acc	1	LS	\$2,000.00	\$2,000.00
Remove Bituminous Asphalt Pament	110	SY	\$3.00	\$330.00
Tree Removal and grubbing	1	LS	\$2,000.00	\$2,000.00
Rough Grading	1	LS	\$1,500.00	\$1,500.00
Pump station removal	1	LS	\$500.00	\$500.00
<u>Hardscape</u>				
Porous Pavement and base	5,360	SF	\$4.50	\$24,120.00
Concrete Walk	460	SF	\$5.25	\$2,415.00
Cast in Place Concrete Curb	206	LF	\$18.00	\$3,708.00
<u>Site Amenities</u>				
Parking lot light pole	2	EA	\$2,200.00	\$4,400.00
Traffic signs	1	LS	\$3,500.00	\$3,500.00
Striping	1	LS	\$1,000.00	\$1,000.00
<u>Site Utilities</u>				
Catch Basins/ Drain Inlets	3	EA	\$1,200.00	\$3,600.00
Clean Outs	3	EA	\$1,200.00	\$3,600.00
Storm Drywell	1	EA	\$2,300.00	\$2,300.00
Stormtech infiltrator basin	1	LS	\$9,000.00	\$9,000.00
6" HDPE Roof Leader	74	LF	\$12.00	\$888.00
8" HDPE Storm Line - perf	166	LF	\$20.00	\$3,320.00
12" HDPE Storm Line	100	LF	\$20.00	\$2,000.00
8" PVC Storm line	39	LF	\$22.00	\$858.00
6" PVC Sanitary Line	52	LF	\$20.00	\$1,040.00
2" DIP Waterline	45	LF	\$12.00	\$540.00
6" DIP Water Line	12	LF	\$28.00	\$336.00
Nyloplast yard drain	5	EA	\$600.00	\$3,000.00
<u>Landscaping</u>				
Deciduous Trees	1	EA	\$700.00	\$700.00
Evergreen Trees	30	EA	\$350.00	\$10,500.00
Shrubs	25	EA	\$220.00	\$5,500.00
On-Site Total				\$92,655.00
On-Site Total X .25				\$23,163.75
<u>OFF-SITE WORK</u>				
Concrete Sidewalk	800	SF	\$5.25	\$4,200.00
Cast in Place Concrete Curb	130	LF	\$18.00	\$2,340.00
Bike Rack	1	EA	\$600.00	\$600.00

Interprative signage	1	EA	\$350.00	\$350.00
Concrete Pavers	171	SF	\$8.00	\$1,368.00
6" PVC Sanitary line	43	LF	\$20.00	\$860.00
8" PVC Sanitary Line	56	LF	\$22.00	\$1,232.00
8" PVC Storm Line	37	LF	\$22.00	\$814.00
12"x6" Sleeve / valve	1	EA	\$3,200.00	\$3,200.00
12" Ductile Iron Pipe (Water)	585	LF	\$100.00	\$58,500.00
12" Gate Valve components	1	EA	\$750.00	\$750.00
12" DIP termination and cap on new waterline	1	EA	\$200.00	\$200.00
Fire Hydrant and Valve Assembly	2	EA	\$4,500.00	\$9,000.00
6" DIP Waterline	48	LF	\$28.00	\$1,344.00
Sanitary Manholes	1	EA	\$3,500.00	\$3,500.00
Decorative Street Lights	1	EA	\$3,000.00	\$3,000.00
Deciduous Trees	10	EA	\$700.00	\$7,000.00
Connection to SAN MH @ West Ave w/ drop	1	LS	\$3,000.00	\$3,000.00
Connection to existing 12" DIP line on West	1	EA	\$500.00	\$500.00
As Built Drawings	1	LS	\$3,500.00	\$3,500.00
Off-Site Total				\$105,258.00
Total Site Work				\$197,913.00
Letter of Credit Amounts				
Total off-site work				\$105,258.00
Total on-site work x .25				\$23,163.75
Total				\$128,421.75
L.O.C. amount				\$128,500.00



City of Saratoga Springs
OFFICE OF PUBLIC WORKS
5 Lake Avenue
Saratoga Springs, New York 12866

ANTHONY J. SCIROCCO
COMMISSIONER
TIMOTHY J. COGAN
DEPUTY COMMISSIONER

Phone 518-587-3550 ** Fax 518-587-2417
www.saratoga-springs.org

**NEW WATER SERVICE CONNECTION
AGREEMENT & APPLICATION FORM**

Property Owner's Name: John-Paul Builders, LLC

Project Name (if applicable): 246 West Ave Apartments

Property Address: 246 West Ave

Tax Map#: 178.33-1-20 & 21

Size of Tap (check one below):
 3/4" 1"

Greater than 1": _____

RESIDENTIAL

Minimum fee is \$3,000 for the 1st dwelling
and \$2,000 for each additional dwelling

NON-RESIDENTIAL

Minimum fee is \$3,000 for the 1st unit of water
and \$2,000 for each additional unit of water. A
unit of water is 14,000 cubic feet of water per year.

Number of Dwellings: 16

Estimated Cubic Feet of Water per Year:

Appraised Value: _____
If \$120,000 or less please provide copy of
certified appraisal

Permit Fee: 33,000

To be paid in full without any contingencies or protest, on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.

The undersigned acknowledges the fees as estimated above and outlined in the City of Saratoga Springs Water Ordinance and Resolution, section 12, printed on the reverse side of this document.

The undersigned represents to the City that they have full and complete authority to execute this document and find and commit the developer to pay fee(s) as required by the City Water Ordinance. This agreement shall be binding on all of the undersigned transferees.

The undersigned acknowledges that a copy of this document will be delivered to all appropriate and necessary governmental entities, and the undersigned further acknowledges that it shall pay as provided herein.

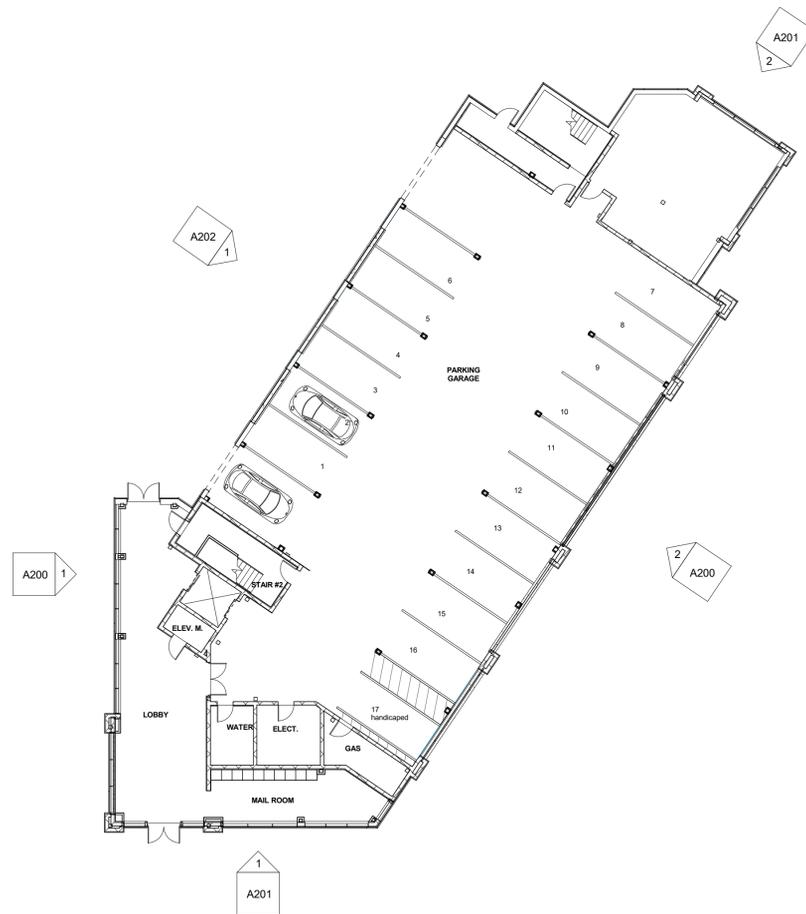
Authorized Signature: _____ Company Name: John-Paul Builders, LLC
Company Address: 796 Burdeck Street, Schenectady, NY 12306
Phone Number: 518-356-1435 Date: 06-23-2016

Department of Public Works Approval: _____ Date: _____
Rev Account – WATCON

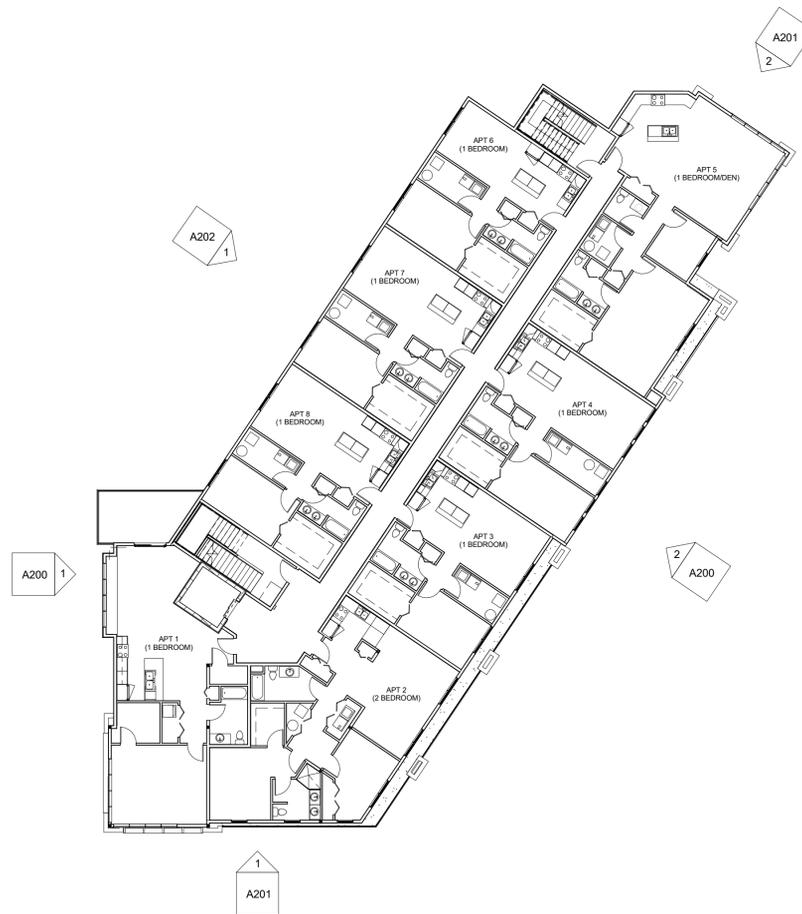
12. ...

There shall also be a service connection fee with the following provisions:

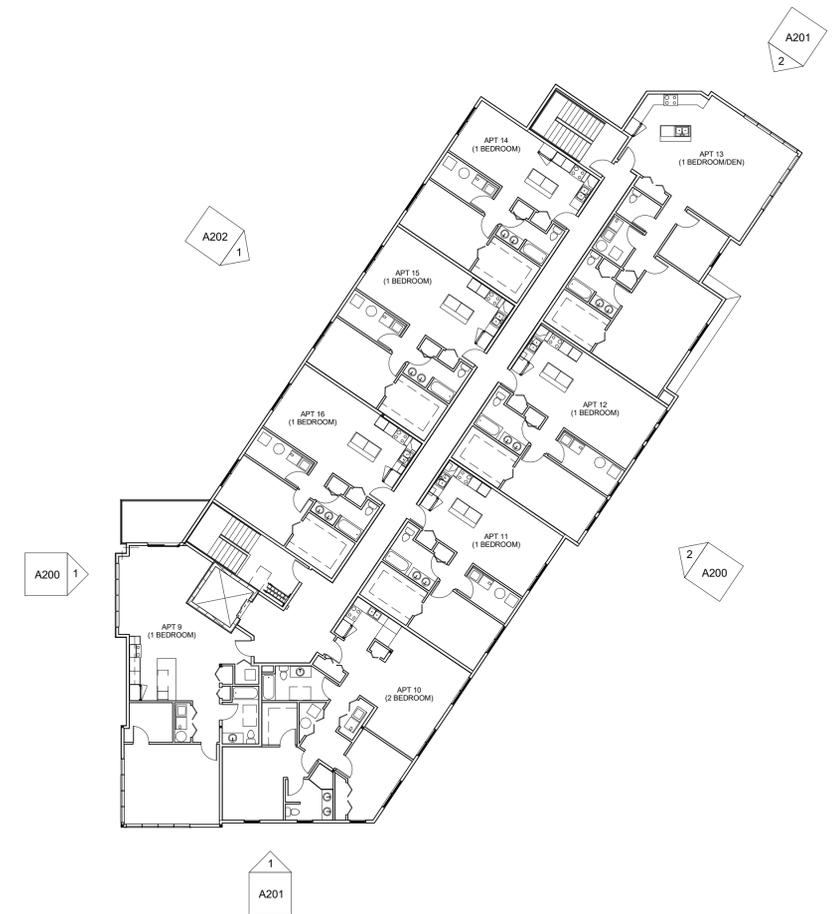
- A. Any new service connections (3/4 inch and 1 inch taps) to the City's water system shall be a minimum of \$3,000.00 (three thousand dollars) per unit. Unless waived, the service connection fee must be paid in full on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.
- B. Any new service connection for either:
 - 1. Non-residential use (greater than a 1 inch tap) shall be estimated to use more than one (1) unit of water per year shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first unit of water and **two thousand dollars (\$2000)** for each additional unit of water or part thereof; or
 - 2. Residential use where more than one residential dwelling per parcel is served by a single service connection shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first dwelling and **two thousand dollars (\$2,000)** for each additional dwelling unit.
- C. A unit of water shall be defined as fourteen thousand (14,000) cubic feet of water per year.
- D. Any project that improves the City's water distribution system at the sole cost of a developer, the cost of the improvement by the developer will be deducted from the cost of the service connection fee. If the cost of the improvement is greater than the cost of the service connection, then no service connection fee will be charged. To be considered for eligibility, the diameter of the watermain installed must be 12" or greater.
- E. Exemptions to these new service connection fees will be all properties within Water's Edge at Saratoga Lake Planned Unit Development District not to exceed 304 units (amended June 6, 1998), Phase I and II of the Meadowbrook subdivision and existing homes in the Knoll Spring Park water district. Also, credit for 69 taps will be credited to Interlaken Phase "B" (Regatta View). The exemptions for these projects will be granted due to the fact that the cost to extend the infrastructure of the City to these projects was not borne by the City and are of greater cost than the service connection fee. Also exempt shall be all connections made to that portion of the Doten Avenue and East Broadway water line financed by federal funds because federal regulations prohibit the imposition of a service connection fee. Also exempt shall be the pre-existing homes defined in the Gilbert Road/Meadowbrook Road Special Assessment District.
- F. Taps that are to be used solely for sprinkler system and fire protection will not be affected.
- G. 1.) A Low Income House shall be defined as any new residential house and lot whose agreed to selling price is \$120,000 or less or any existing residential house and lot whose appraised value is \$120,000 or less. Proof of price or value has to be provided by documents from the lending institution or a certified appraiser.
2.) All dwellings meeting the above stated requirements shall be considered Low Income Housing and subject to a service connection fee of \$500 (five hundred dollars) per house. All other conditions remain the same. Low Income Housing price will be determined on an annual basis by increasing rate of Consumer Price Index for this region.
3.) If a Low Income House is sold within five (5) years of the installation of a new service connection at a price that is greater than the definition of a Low Income House at that time, the seller will be responsible to pay the City the full cost of a service connection fee.
- H. Anyone constructing a house on speculation will be charged the full service connection fee that is applicable at the time. When proof of price is submitted, a rebate will be issued if warranted, to be determined by the Commissioner of Public Works.
- I. All monies raised by the new service connection fees are to be maintained in a dedicated fund for capital improvements under the control of the Commissioner of Public Works. The monies are not to be used for maintenance, or the reduction of water rates.



① Level 1 (GROUND LEVEL PARKING)
1/16" = 1'-0"



② LEVEL 2
1/16" = 1'-0"



③ LEVEL 3
1/16" = 1'-0"

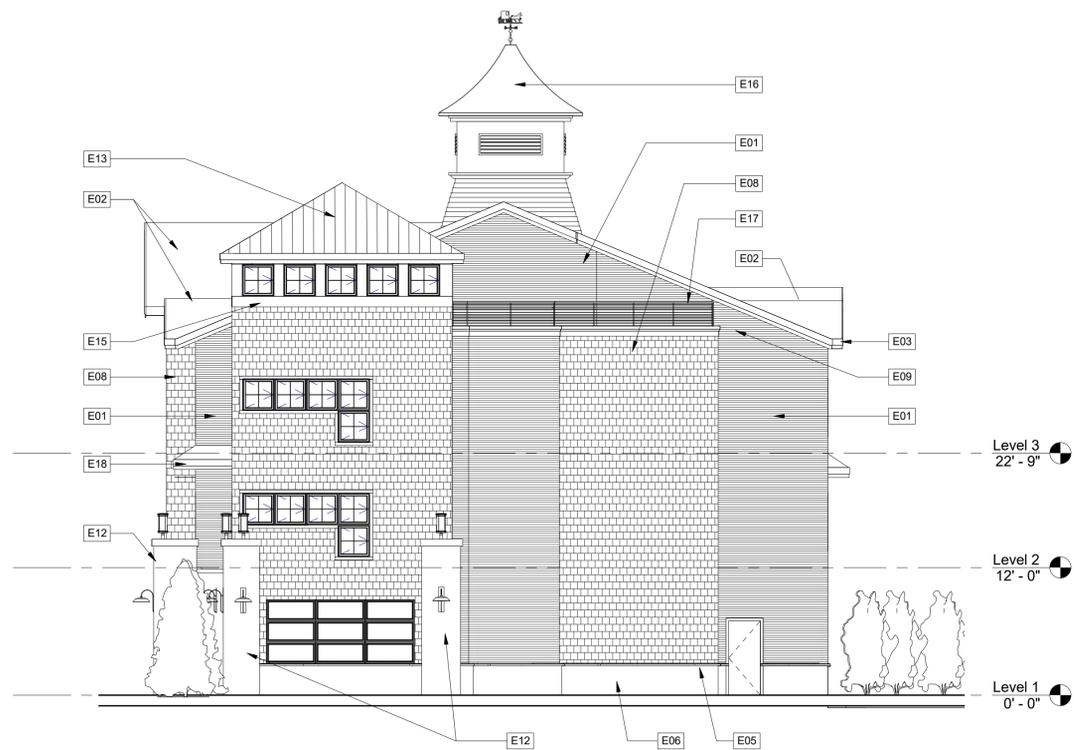


1 NORTH ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
E15	"SMARTSIDE" ENGINEERED WOOD TRIM BOARDS FACTORY FINISHED COLOR TBD
E16	CUPOLA (CONTRACTORS OPTION TO BUILD IN PLACE OR INSTALL PREMANUFACTURED UNIT)
E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS



2 SOUTH (BIKE PATH) ELEVATION
1/8" = 1'-0"



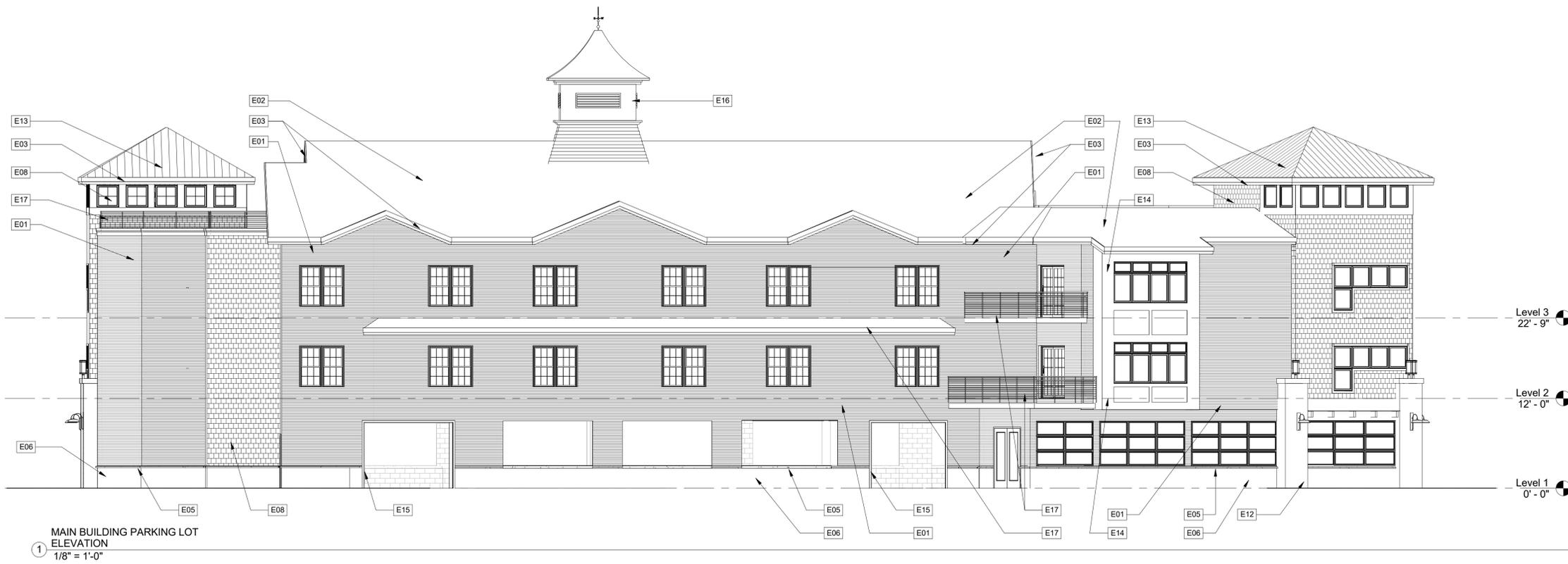
② EAST ELEVATION
1/8" = 1'-0"



① WEST ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
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E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
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E06	CULTURED STONE VENEER TBD
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E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS



Site Plan

246 West Avenue Apartments

City of Saratoga Springs, New York

City PB#

June 23, 2016



Vicinity Map:

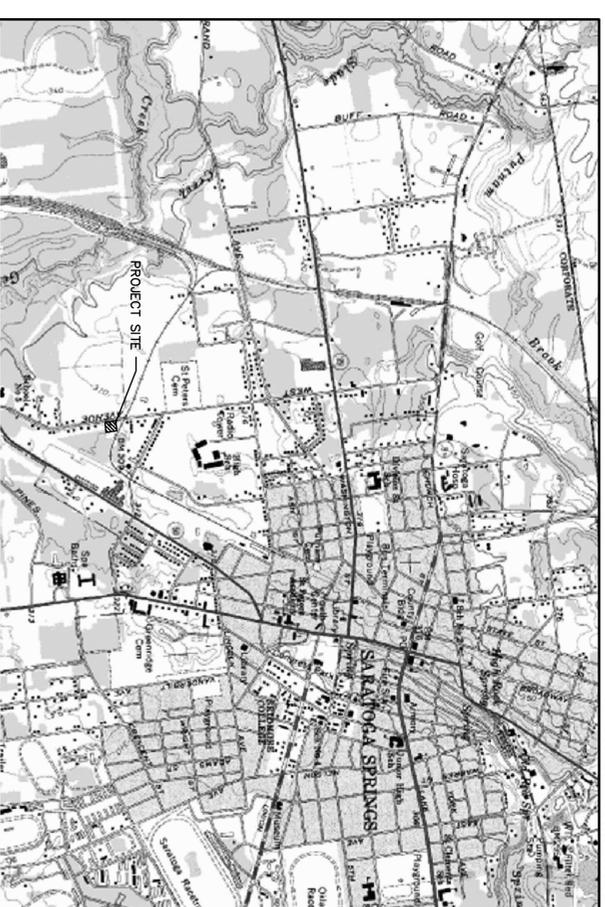
SCALE: NTS



CITY OF SARATOGA SPRINGS STANDARD NOTES

1. All work must conform to all Federal, State and City Codes, specifications, ordinances, rules and regulations.
2. The elevation base for the contours and benchmarks are based on the National Geodetic Vertical Datum, 1929.
3. All refuse, debris and miscellaneous items to be removed shall be legally disposed of off-site by the Contractor to a location approved by the City Engineer.
4. The Contractor must set up a pre-construction meeting with the City Engineer prior to any construction. Construction inspections by the a designated representative of design professional are required. The cost of the construction inspection is the responsibility of the Applicant/Developer.
5. The contractor must obtain a blasting permit from the Building Inspector if any blasting is required for the project.
6. The contractor must obtain a street opening permit issued by the Department of Public Works for any work in the street or right-of-way of any City street, road or alley.
7. All points of construction ingress or egress shall be maintained to prevent tracking or flowing of sediment or debris onto a public road.
8. No Certificate of Occupancy will be issued until all site work has been completed in accordance with the approved plans; and an as-built drawing has been prepared in accordance with the requirements of the City Engineer.
9. The applicant must verify that the proposed project can accommodate the turning movements of any fire truck that the fire department so designates.

SITE STATISTICS	
PROPOSED USE:	16 Apartments
TAX MAP PARCEL NUMBER	178.33-1-20&21
LEASE LOT SIZE	.51 ACRES
EXISTING ZONING	T-4 Urban Neighborhood
BUILDING SETBACKS	REQUIRED
BUILD-TO-LINE	12'-18"
FRONTAGE BUILDOUT	50% MIN.
SIDE SETBACK	12' AVERAGE PRINCIPAL BLDG
REAR SETBACK	6' MIN OUTBUILDING
	24' PRINCIPAL BLDG
	5' MIN OUTBUILDING
BUILDING HEIGHT	2 STORY MIN, 40' MAX HT.
	3 STORY, 40'-0"
PARKING REQUIREMENTS	24 SPACES
RESIDENCES WITHIN T-4 ZONE	24 SPACES
1.5 PER DWELLING UNIT	7 SPACES OUTSIDE BUILDINGS 17 SPACES WITHIN THE BUILDINGS
	PROPOSED
	12.5'
	63%
	15.5'
	8.02'
	27.07"
	9.34'



Project Location Map:

SCALE: NTS



SHEET INDEX:

- L-1 COVER SHEET
- L-1 BOUNDARY AND TOPOGRAPHIC SURVEY
- L-2 SITE DEMOLITION AND PREPARATION PLAN
- L-2 SITE LAYOUT AND MATERIALS PLAN
- L-3 SITE GRADING AND DRAINAGE PLAN
- L-4 SITE UTILITY PLAN
- L-4.1 OFF-SITE WATERLINE CONNECTION
- L-5 SITE LANDSCAPE PLAN
- L-6 SITE LIGHTING PLAN
- L-7 SITE DETAILS
- L-8 SITE DETAILS
- L-9 SITE DETAILS
- L-10 SITE DETAILS
- L-11 STORMWATER DETAILS
- L-12 SITE DETAILS

Applicant:

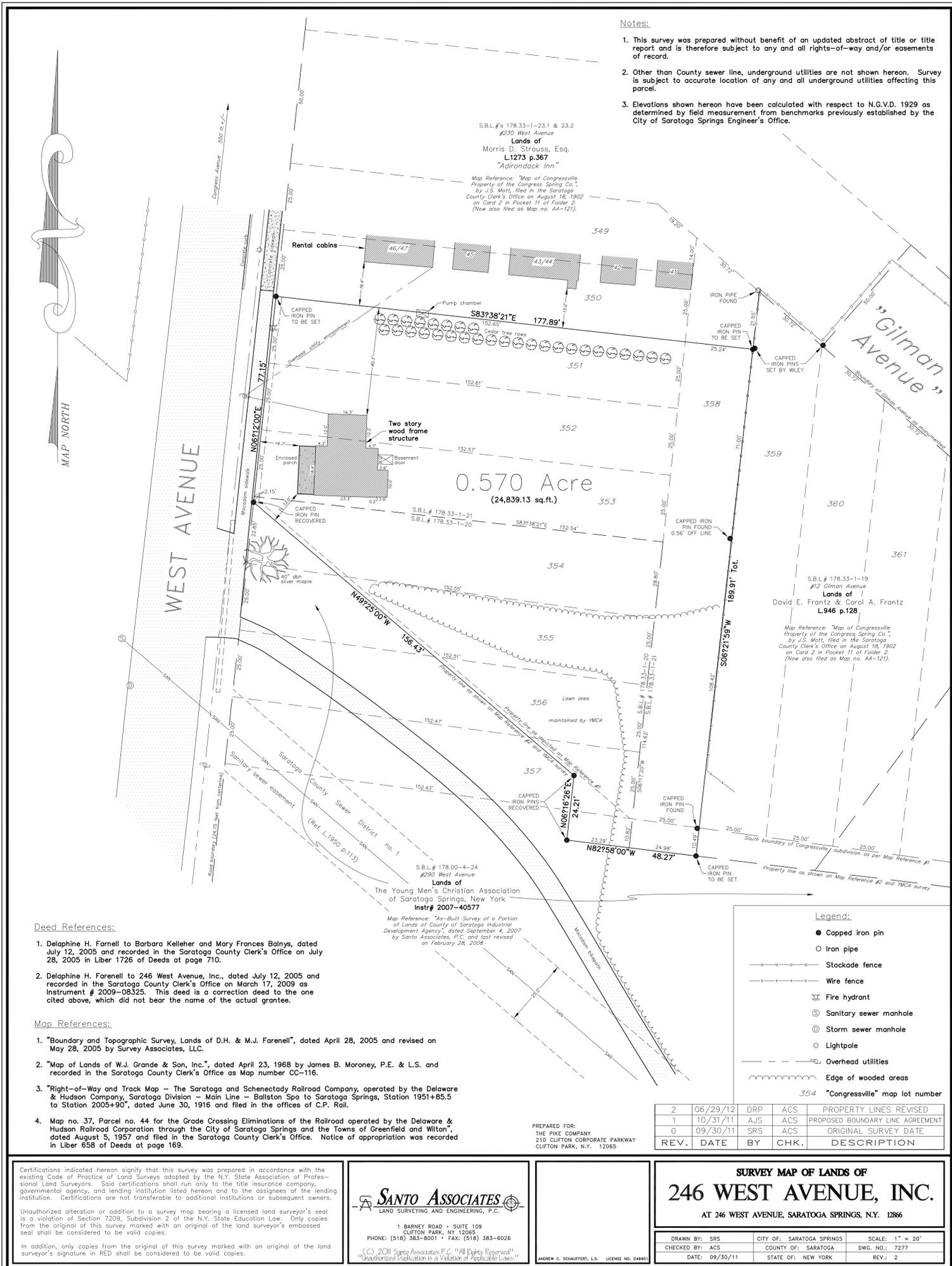
John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306

Prepared By:

the LA group
Landscape Architecture
and Engineering, P.C.

40 Long Alley
Saratoga Springs
New York 12866
518/567-8100
Telefax 518/567-0180

Approval _____
Approved under authority of a resolution adopted
by the Planning Board of the City of Saratoga Springs
Chairperson _____
Date Signed _____



Certifications indicated hereon signify that this survey was prepared in accordance with the existing Code of Practice of Land Surveys adopted by the N.Y. State Association of Professional Land Surveyors. Said certifications shall run only to the title insurance company, governmental agency, and lending institution listed hereon and to the assignees of the lending institution. Certifications are not transferable to additional institutions or subsequent owners.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of Section 7209, Subdivision 2 of the N.Y. State Education Law. Only copies from the original of this survey marked with an original of the land surveyor's embossed seal shall be considered to be valid copies.

In addition, only copies from the original of this survey marked with an original of the land surveyor's signature in RED shall be considered to be valid copies.

SANTO ASSOCIATES
LAND SURVEYING AND ENGINEERING, P.C.

1 BARNEY ROAD • SUITE 109
CLIFTON PARK, NY 12065
PHONE: (518) 383-8001 • FAX: (518) 383-6026

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PREPARED FOR:
THE PIKE COMPANY
210 CLIFTON CORPORATE PARKWAY
CLIFTON PARK, N.Y. 12065

ANDREW C. SCHAUFFERT, L.S. LICENSE NO. 048901

SURVEY MAP OF LANDS OF
246 WEST AVENUE, INC.
AT 246 WEST AVENUE, SARATOGA SPRINGS, N.Y. 12866

DRAWN BY: SRS	CITY OF: SARATOGA SPRINGS	SCALE: 1" = 20'
CHECKED BY: ACS	COUNTY OF: SARATOGA	DWG. NO.: 7277
DATE: 09/30/11	STATE OF: NEW YORK	REV.: 2

**SITE PREPARATION &
DEMOLITION NOTES:**

- ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED, THAT ARE NOT TO BE STOCKPILED FOR LATER USE ON THE PROJECT OR DELIVERED TO THE OWNER, SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND REUSED AS DIRECTED BY THE OWNER OR LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
- CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL TO FULL DEPTH WITHIN LIMIT OF GRADING BEFORE COMMENCING EXCAVATION AND GRADING OPERATIONS. TOPSOIL SHALL NOT BE REMOVED FROM THE SITE, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE OUTSIDE THE LIMIT OF WORK.
- THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY AND PAY ALL ASSOCIATED COSTS.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS. ANY MUD ON PUBLIC WAYS ORIGINATING FROM THE JOB SITE SHALL BE CLEANED BY THE CONTRACTOR DAILY.
- CONTRACTOR SHALL SECURE ALL PERMITS THAT MAY BE REQUIRED FROM ALL JURISDICTIONS AFFECTED BY THIS WORK.
- ANY TREE AND SHRUB REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOT SYSTEM AND SATISFACTORY OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED THROUGH THE REMOVAL OPERATIONS.
- CONTRACTOR SHALL APPLY FOR AND OBTAIN DEMOLITION PERMIT FROM CITY PRIOR TO ANY DEMOLITION WORK ON-SITE. EXISTING WATER AND SEWER CONNECTIONS MUST BE DEMONSTRATED TO CITY ENGINEER.

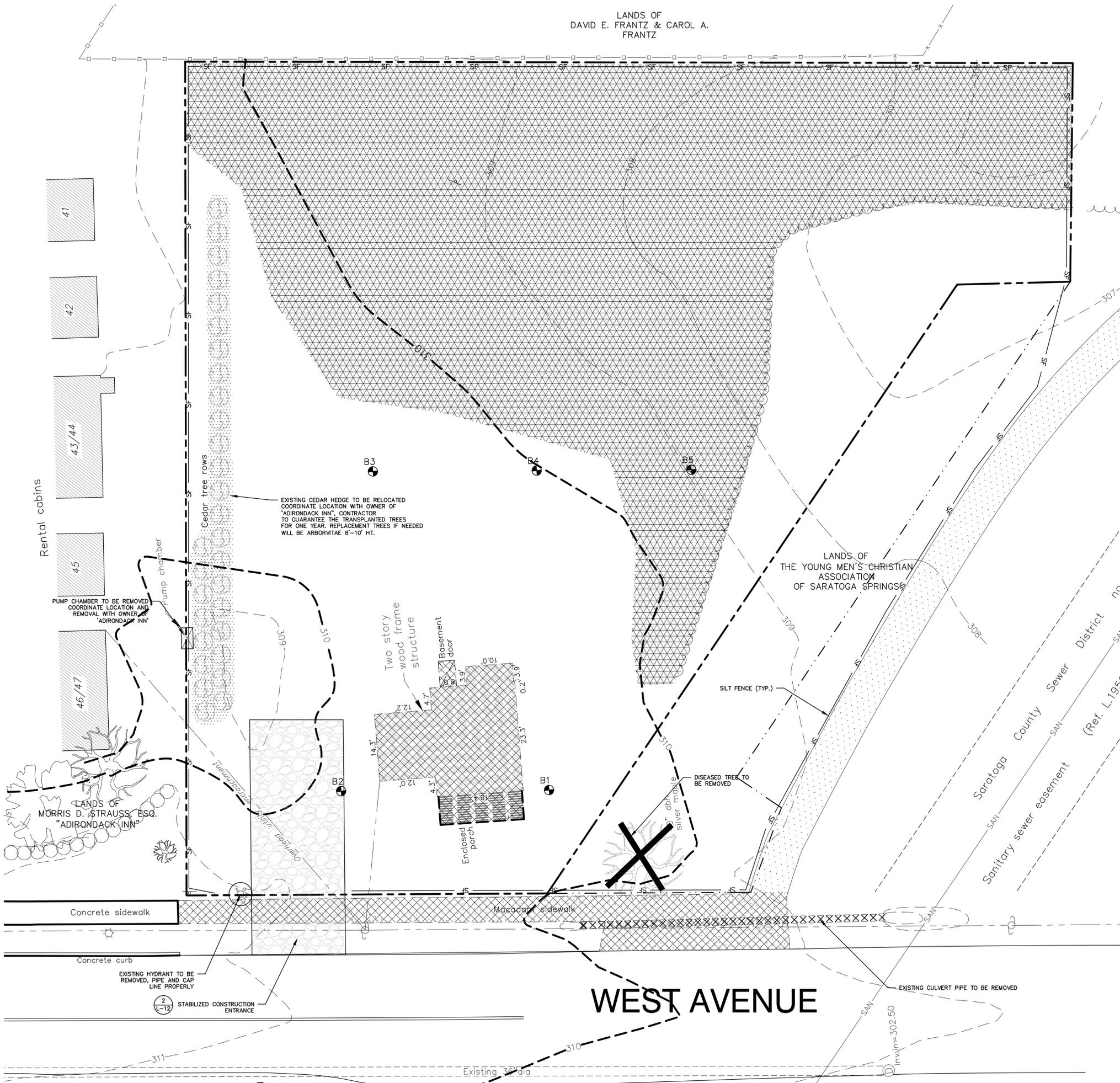
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Design MCB
Drawn MCB
Checked CMI

PREPARED FOR:
John-Paul Builders, LLC
796 Burdett Street
Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
SARATOGA SPRINGS, NY
Title
SITE DEMOLITION AND PREPERATION PLAN

Revisions
City #: 201178
Project: 201178
Date: 6/23/2016
Drawing
L-1



BORING RESULTS FROM GEOTECHNICAL EVALUATION FOR PROPOSED OFFICE COMPLEX: PREPARED BY, DENTE ENGINEERING: APRIL 2005

BORING 1:
0-8" TOPSOIL
8"-96" BROWN F-M SAND, TRACE SILT; WET AT 84"
96"-21' GRADES F-C SAND, LITTLE FINE GRAVEL, TRACE SILT
21"-26' GRADES DARK GRAY
26"-31' GRADES GRAY FINE SAND, TRACE SILT
31"-46' GRAY F-M SAND, SOME SILT
46"-51' GRADES SILT, TRACE FINE SAND
51"-52' GRADES FINE SAND, TRACE SILT

BORING 2:
0-10" TOPSOIL
10"-60" BROWN F-M SAND, TRACE SILT
60"-84" BROWN FINE SAND & SILT WITH PARTINGS FINE SAND, TRACE SILT
84"-17' FROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT; WET AT 84"

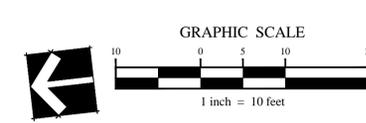
BORING 3:
0-12" TOPSOIL BECOMES BROWN F-M SAND TRACE SILT
12"-9" DARK BROWN F-M SAND, TRACE SILT; WET AT 9"
9"-16' BROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT
16'-17' BECOMES GRAY SAND

BORING 4:
0-12" TOPSOIL BECOMES BROWN F-M SAND, TRACE SILT
12"-96" BROWN F-M SAND, TRACE SILT
96"-10' MOTTLED SILT, SOME FINE SAND; WET AT 10'
10"-16' BROWN F-C SAND, TRACE SILT
16'-17' GRADES TRACE FINE GRAVEL

BORING 5:
0-8" TOPSOIL
8"-84" BROWN F-M SAND, SOME SILT TRACE GRAVEL; POSSIBLE FILL; WET AT 60"
84"-16' BROWN F-C SAND TRACE GRAVEL & SILT
16'-17' BECOMES GRAY/BROWN SAND

LEGEND

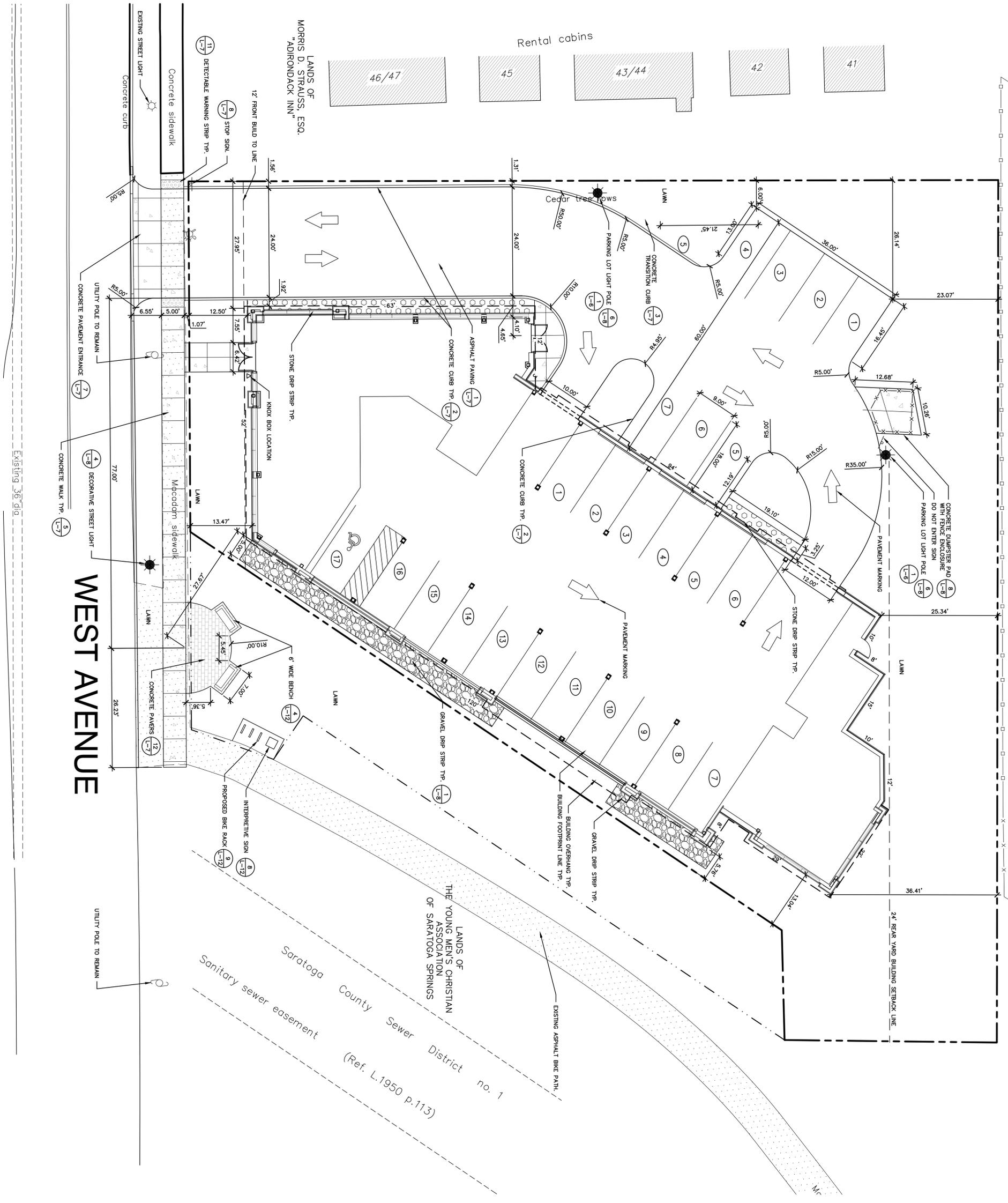
- EXISTING BUILDING OR PAVEMENT TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- SILT FENCE TYP. (L-17)



Approval
Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
Date Signed _____
Chairperson

Prepared By: ANDREW LONGACKE
Date: 6/23/2016 11:58 AM
Drawing: 06/23/2016 11:58 AM, West_Ave_2462017180001.dwg

LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ

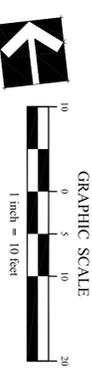
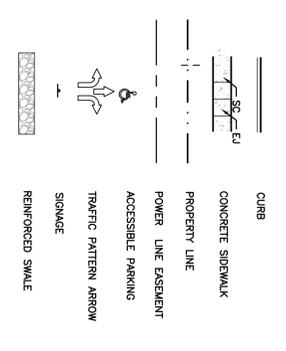


WEST AVENUE

LAYOUT NOTES

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. ALL LINE AND GRADE PER DRAWINGS SHALL BE Laid OUT BY A NEW YORK STATE REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE ENGINEER. ALL SITE IMPROVEMENTS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE ON AND WITHIN LIMITS OF WORK AS SHOWN ON THE PLANS AND AS APPROVED BY THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE FIELD PRIOR TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
5. AT ALL LOCATIONS WHERE EXISTING CURBS, BITUMINOUS CONCRETE ROADWAY OR CONCRETE SIDEWALK ADJUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE FINISHED TO A DETAIL. TACK COAT EXPOSED EDGES OF EXISTING BITUMINOUS CONCRETE PAVEMENT.
6. BITUMINOUS PAVEMENT SHALL NOT BE Laid WHEN AIR TEMPERATURE IS LESS THAN 40° F., AND AIR TEMPERATURE IS LESS THAN 50° F.
7. ALL LIGHT STANDARDS SHALL BE LOCATED AT A MINIMUM OF 10 FEET FROM THE BACK OF CURB TO INSTALLATION.
8. DIMENSIONS ON PARKING LOTS AND ROWWAYS ARE FROM FACE OR BOTTOM OF CURB TO FACE OR BOTTOM OF CURB.
9. ALL NEW WORK SHALL BE STAKED-OUT PRIOR TO CONSTRUCTION. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCIES.
10. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE AND CITY ENGINEER WITHOUT EXCEPTION.
11. ALL EXISTING UTILITIES SHOWN IN THEIR RELATIVE POSITION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

LEGEND



Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson



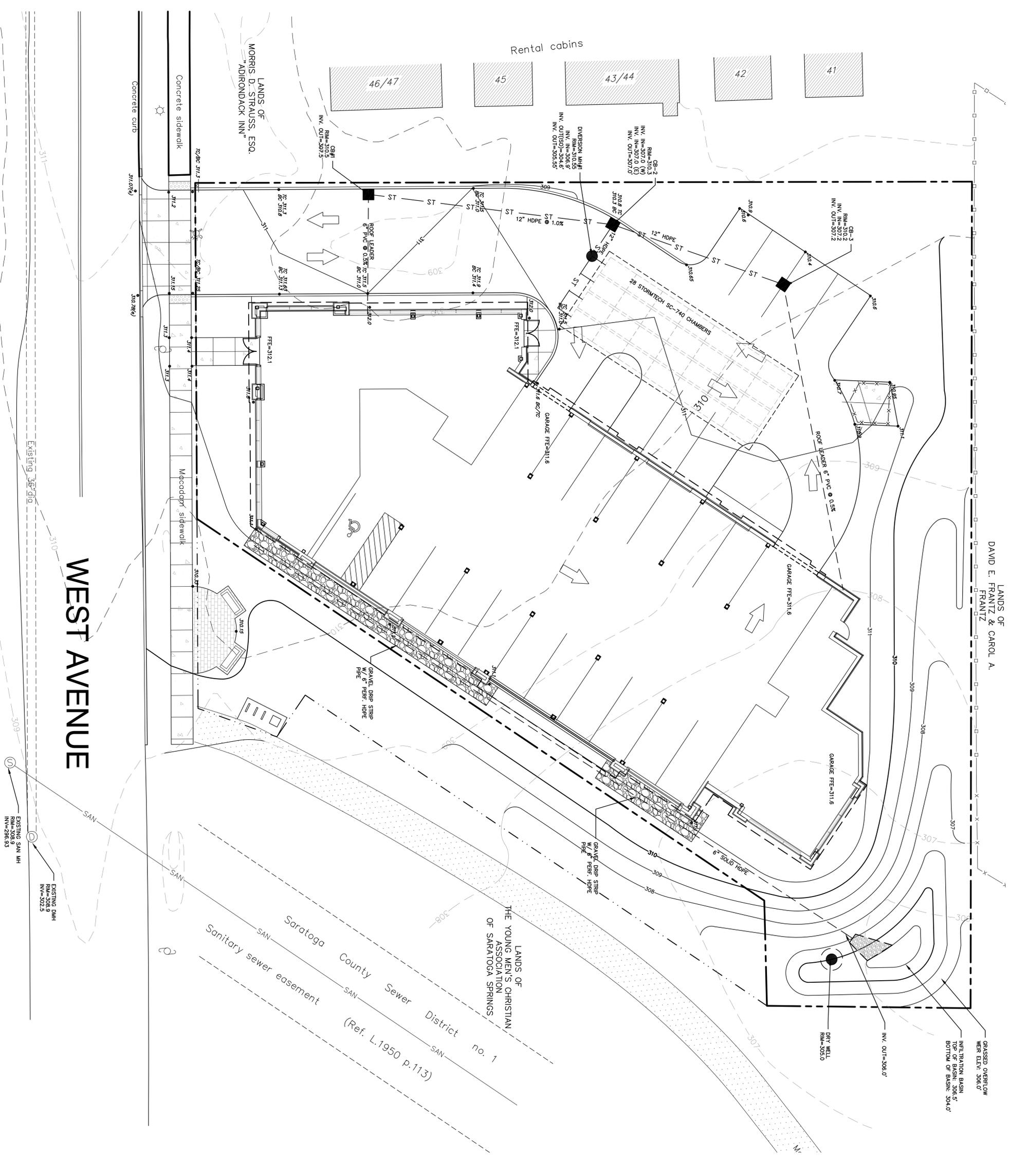
the LA Group
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 and Engineering, PC
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 F 518/597-4180
 www.thelagroup.com

Checked	CMH
Drawn	MCB
Design	MCB
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PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY
 Title
 SITE LAYOUT AND MATERIALS PLAN

Revisions:
 CNY #: 201178
 Project: 623/2016
 Date: 6/23/2016
 Drawing
 L-2



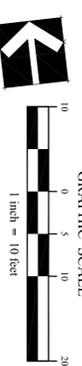
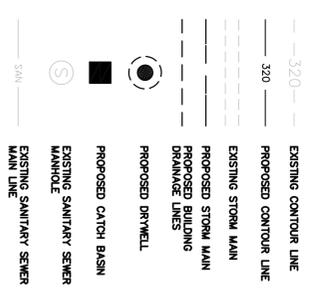
LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ

WEST AVENUE

GRADING NOTES

1. SURVEY INFORMATION PROVIDED BY SAITO ASSOCIATES LAND SURVEYING AND ENGINEERING, P.C. HAS BEEN USED IN FIELD SURVEY CONDUCTED SEPTEMBER 30, 2011.
2. ALL GRADES SET IN THE FIELD SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
3. THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL VERIFY PROPOSED GRADES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
5. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
6. ALL TILT SLOPES 3:1 OR GREATER SHALL RECEIVE BIO-DEGRADABLE FABRIC OR APPROVED EQUAL FOR EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL BLEND ALL NEW EXISTING EXISTING SANITARY SEWER TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPES.

LEGEND



Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson



the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
 F 518/587-4180
 www.thelagroup.com

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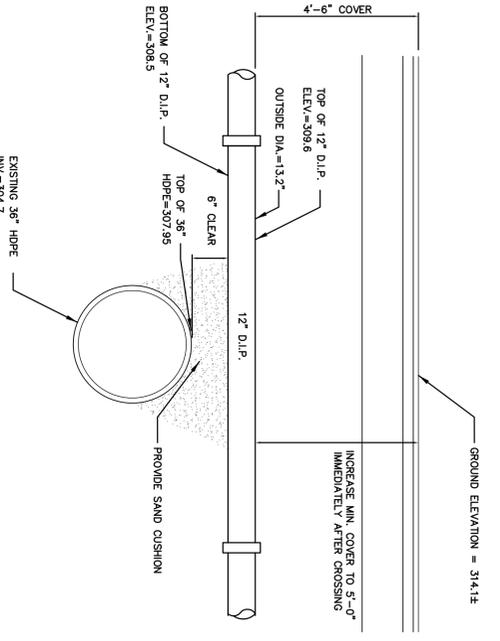
PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY
 Title: **SITE GRADING AND DRAINAGE PLAN**

Revisions: _____
 City #: 201178
 Project #: 623/2016
 Date: _____
 Drawing: **L-3**

WATER SYSTEM NOTES

- A. The location of underground utilities shown on this plan shall be as shown. The Contractor shall contact U.P.O. (1-800-982-7892) and the proper local authorities or the appropriate utility company having jurisdiction to verify the location and depth of all existing utilities prior to beginning work. Any costs incurred by the Contractor due to failure to contact the proper authorities shall become the responsibility of the Contractor.
- B. Extend designated limit of work as necessary to accomplish site utility work as required by stress drawings and specifications.
- C. Water Service lines 4-inch and larger:
 1. Pipe and fittings
 - a. Ductile Iron Pipe: Class 52, ANSI/AWWA C151/A21.51
 - b. Mechanical Joint fittings: ANSI standard A21.10 and A21.11 (AWWA C110 and C111) Class 350.
 2. Coatings
 - a. Double cement mortar lining on interior and coal tar epoxy on exterior of pipe in accordance with ANSI/AWWA C104/A21.11
 3. Joints
 - a. Conforming with ANSI/AWWA C111/A21.11
 - b. Pipe - push on joint.
 - c. Fittings - mechanical joint, plain rubber gaskets.
 - d. Fittings - mechanical joint, plain rubber gaskets, with rubber gaskets having steel set screws.
 4. Valve Boxes
 - a. Cast Iron Two piece valve box as manufactured by Clay (Model F2451), or approved equal.
 - b. Cast Iron Two piece valve box as manufactured by F2490), or approved equal, and be clearly marked "Water".
 5. Anchorage
 - a. Concrete thrust blocks must be used at all pipe and fitting connections, at all valves, and at all tees, caps, fittings, hydrants and plugs.
 - D. Water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch):
 1. Pipe
 - a. Copper water tube, Type K, soft temper for underground service.
 2. Cooperation Stops
 - a. Mueller H-1500B with AWWA inlet threads or approved equal.
 - b. Valve: 1 1/2-inch and larger must be used with tapping sleeve.
 3. Curb-stop
 - a. Mueller H-1920S or H-15219 curb-stops, non-draining or approved equal.
 4. Couplings
 - a. Mueller H-15403 110 compression connections or approved equal, three part union for copper-to-copper type construction.
 5. Curb-box
 - a. Mueller H-10314
 - b. Extension type with orth pattern base or approved equal.
 - c. Staircase (Mueller or approved equal).
 - d. Stationary rod
 - E. Valves, Hydrants, etc.:
 1. Valves - Mueller A-2360-20
 - a. All valves under 12-inches in diameter shall be mechanical joint water (R/W) valves.
 - b. R/W valves, 3-inches and larger, shall be iron body, non-rising stem conforming to AWWA C504. All valves shall have a minimum working pressure rating of 200 psig.
 - c. All valves shall have mechanical joint ends.
 - d. Valves shall open right (clockwise) with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. Valves shall be equipped with a mechanical stop to prevent overtravel.
 - f. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets.
 2. Butterfly Valves - Mueller Unseal III
 - a. With the exception of tapping valves, all valves shall be Mueller, or approved equal, butterfly valves.
 - b. Butterfly valves, 12-inches and larger, shall be iron body, bronze mounted, 360-degree rubber lined, full port, cast iron, conforming to AWWA C504. gland bolts shall be zinc coated steel.
 - c. All valves shall have a minimum working pressure rating of 200 psi, mechanical joint ends conforming to ANSI A21.10, A21.11.
 - d. Valves shall open right (clockwise) with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. The valve dash shall hold at any position.
 - f. The valve shall be equipped with a mechanical stop to prevent overtravel.
 - g. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets.
 - F. Hydrants shall be Mueller A-403 compression-type hydrants or approved equal having the following features:
 - a. 5 1/4-inch valve opening with a 6-inch inlet.
 - b. Two (2) 2 1/2-inch hose nozzles and one (1) 4" Storz pumper nozzle, national standard thread.
 - c. Operating nut shall be national standard.
 - d. Break frame - traffic type construction.
 - e. Open right (clockwise).
 - f. Hydrants are to be painted a minimum of one coat of red primer and one coat of white industrial enamel as per paint schedule.
 - g. Water mains and services shall be installed at 5'-0" minimum cover depth below finished grade of 5'-0".
 - h. Obstruction, pressure and leakage tests of water mains shall be performed in accordance with applicable regulations, and AWWA Standards and shall be performed under the supervision of the Owner's Representative and City Engineer. Bacteria examination and distribution of a NTS/STH approved laboratory will be done prior to turning water main over to the Owner.
 - H. Water valve boxes, including structure fire, new structure fire, etc., shall be adjusted to conform to new finished pavement grades unless otherwise noted and/or directed by Owner's Representative.



1 WATER AND STORM DRAIN CROSSING DETAIL
SCALE: NTS

SEWER SYSTEM NOTES

1. Installation of polyvinyl chloride plastic (PVC) sewer pipe shall be in accordance with manufacturer's recommendations, and in accordance with ASTM D 2221.
2. Manhole frames and covers shall be Compulac Roundtop Co. (4) 7/8" dia. vent holes in cover.
3. Sanitary sewer manholes shall be precast reinforced concrete, complying with ASTM C 478. Base section to be pre-cast with integral floor. Top section shall be required steps of co-extruded polypropylene integrally cast into the manhole sidewalls. Pipes to manhole connection shall be Press-Wedge II steel, or approved equivalent.
4. All sewer piping and fittings shall conform to the Standard Specifications for PVC pipe, ASTM designation D 3034, with a minimum wall thickness of 1/2 inch and a tolerance of classification SDR-26 with single gasket push-on joints.
5. Product data information and shop drawings for materials proposed for use by the contractor shall be submitted to and approved by the Architect prior to the placement of materials. Copy City Engineer on shop drawings/submitals.
6. Leakage outward or inward shall not exceed 200 gallons per day per linear foot of pipe for a 24-hour test section of the system. Leakage test shall be performed with a minimum positive head of 2 feet.

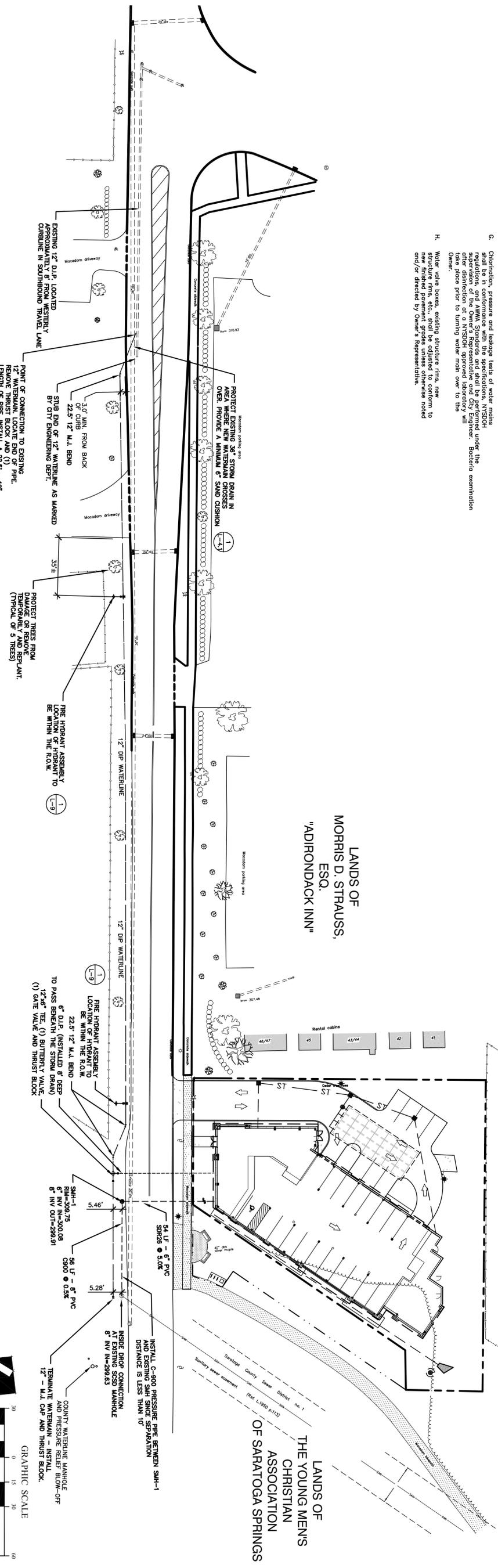
NOTES PER SARATOGA COUNTY SEWER DISTRICT

1. SDR 26 PIPE WITH SDR 26/25 FITTINGS WILL BE USED FOR SERVICE LATERALS.
2. THE CONTRACTOR WILL CONTACT SDRS 26/25 AT LEAST 48 HOURS BEFORE CONSTRUCTION BEGINS.
3. NO DISCHARGE OF FLOWS WILL BE ALLOWED UNTIL FINAL APPROVAL OF THE PROJECT HAS BEEN GRANTED.

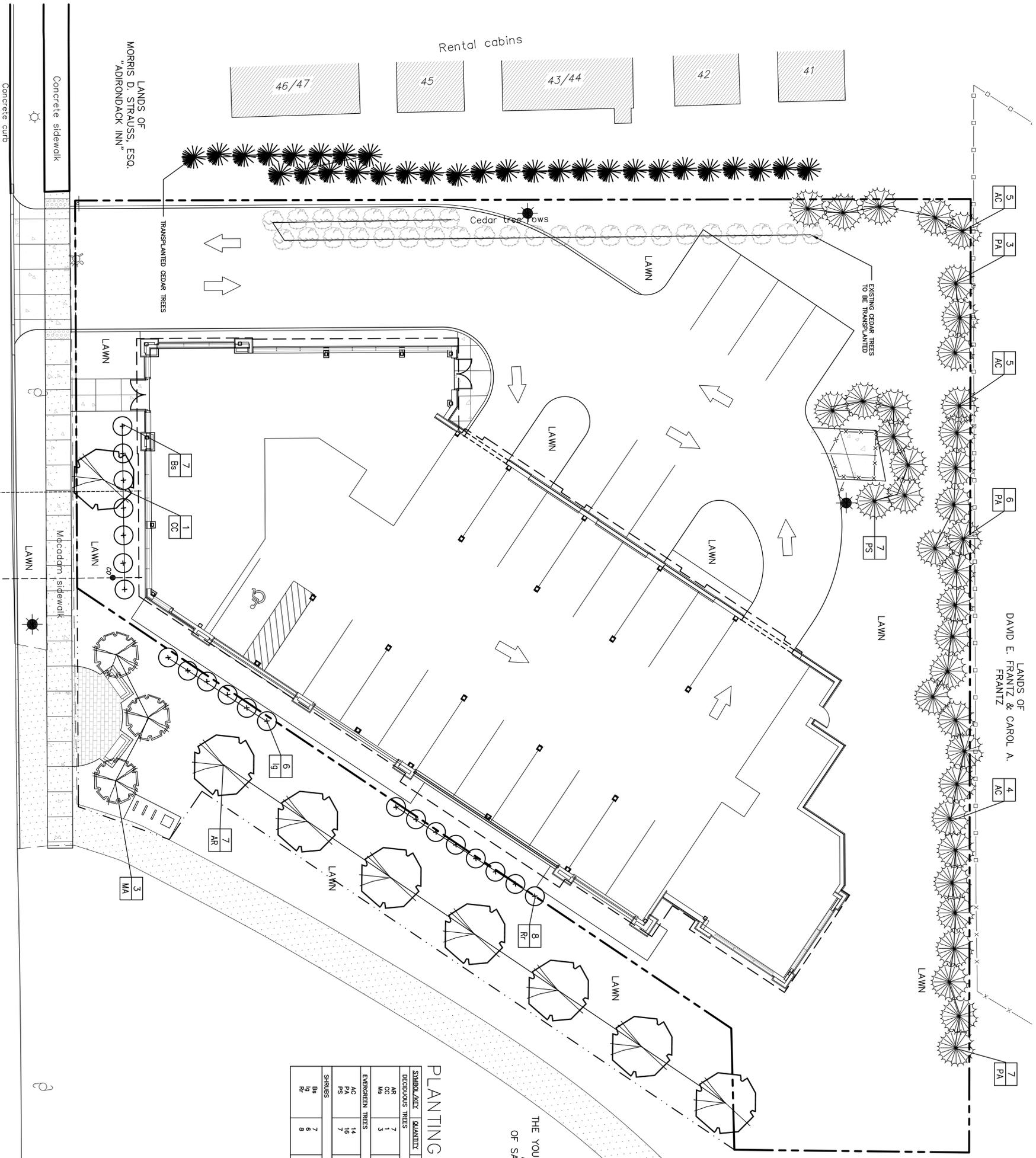
LANDS OF
DAVID E. FRANTZ &
CAROL A. FRANTZ

LANDS OF
MORRIS D. STRAUSS,
ESQ.
"ADIRONDACK INN"

LANDS OF
THE YOUNG MEN'S
CHRISTIAN
ASSOCIATION
OF SARATOGA SPRINGS



Approval _____
Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
Date Signed _____
Chairperson _____



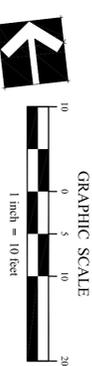
WEST AVENUE

PLANTING SCHEDULE

SYMBOL/ACFT	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES						
AR	7	Acer rubrum Red Sunset	Red Sunset Red Maple	2 1/2" - 3" cal	B & B	
CC	3	Cornus fragilis Inermis	Hamamelis, cockspur hawthorn	2 1/2" - 3" cal	B & B	Use small tree from zoning because of fragrant leaves
MA	3	Malus 'Sargento'	Crabapple	2 1/2" - 3" cal	B & B	
EVERGREEN TREES						
AC	14	Abies concolor	White Fir	6 - 7' ht	B & B	
PA	16	Picea Abies	Norway Spruce	6 - 7' ht	B & B	
FS	7	Pinus Strobus	White Pine	6 - 7' ht	B & B	
SHRUBS						
Ba	7	Buxus sempervirens	Common Boxwood	30 - 36"	B & B	
Ig	6	Ilex obtusifolia	Inhberry	18 - 24"	C.C.	
Rt	8	Rosa rugosa	Rose bush	24 - 30"	C.C.	

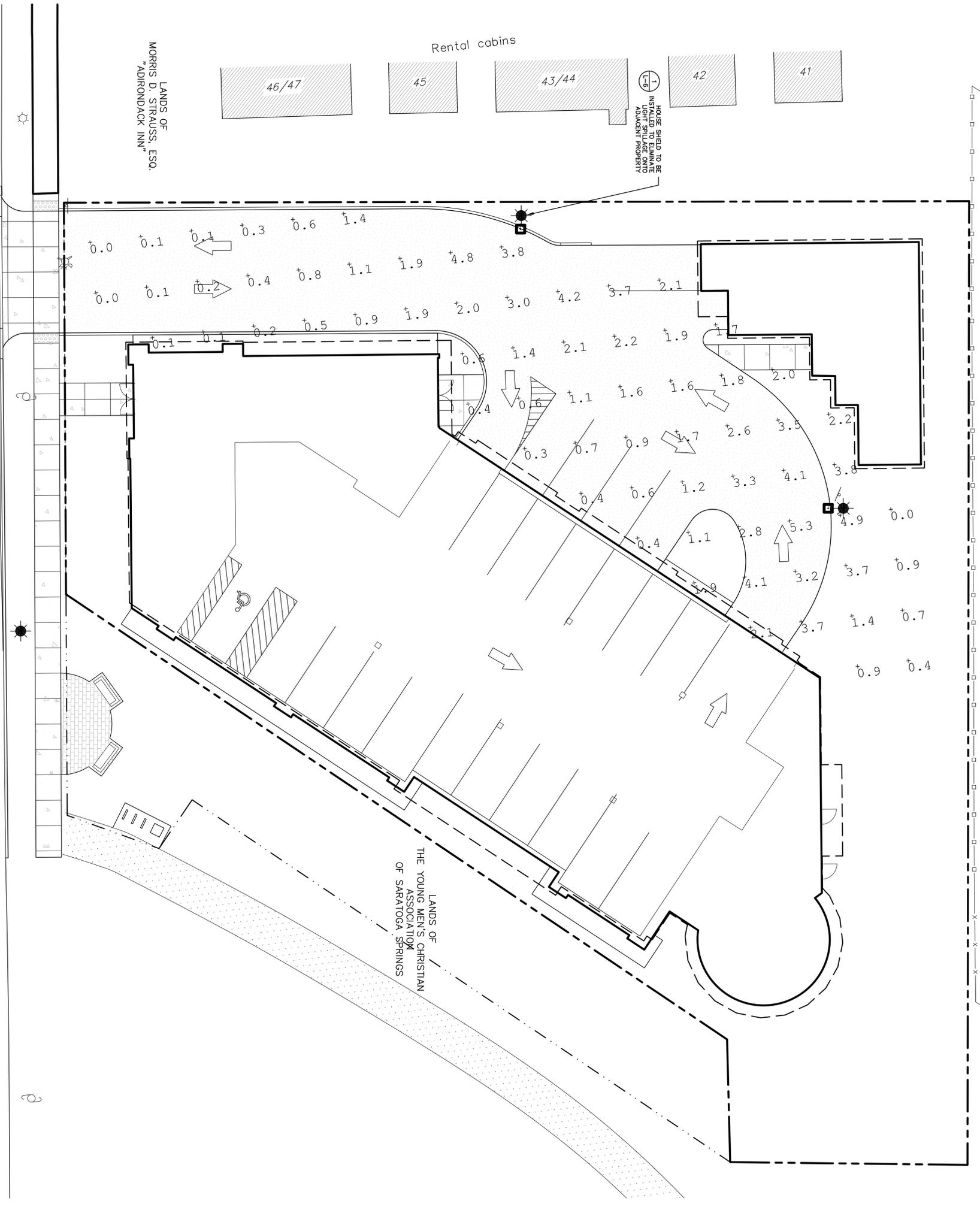
LANDS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF SARATOGA SPRINGS

- PLANTING NOTES**
- All new plant material shall conform to the minimum guidelines established by the American Standard Nurserymen, Inc. Plants shall be purchased by the American Association of Nurserymen, Inc.
 - All new plants to be balled and burlapped or container-grown unless otherwise noted on plant list.
 - Any proposed substitutions of plant species shall be provided in writing, including a justification of the plant's height, form, and only as approved by the Owner's Representative.
 - All new plant material for the project shall be of specimen quality unless approved otherwise by the Owner's Representative.
 - Where plants size is indicated as a range, the plants provided shall be a fair representation of that range.
 - The Contractor shall supply all new plant material in the Drawings, except to complete the planting shown on the Drawings, to the satisfaction of the Owner's Representative after delivery and prior to installation. **Lawn Mix:**
 - * BY WEIGHT SPECIES** GERMINATION
 - 30% Tall Fescue
 - 50% Turf-Type Perennial Ryegrass
 - 20% Tall Fescue
 - 50% Turf-Type Perennial Ryegrass
 - Contractor shall locate and verify all existing utility lines prior to planting and shall report any conflicts to the Owner's Representative.
 - Stake location of all proposed planting for approval by the Owner's Representative prior to the commencement of planting.
 - New plant material shall bear some relationship to finished grade as it sows to previous grade in the nursery.
 - All plant boxes to receive three inches (3") of bark mulch and shall be watered daily or as per specifications.
 - Prepare all planting areas to minimum overall depths of 12 inches and amend with 20 lbs. of 10-10-10 fertilizer per 100 sq. yds. topsoil.
 - Amended topsoil backfill shall consist of (1) part to 4 cu. yds. topsoil.
 - All disturbed areas not scheduled for other work shall receive four inches (4") of suitable on-site or off-site topsoil and shall be seeded or sodded as specified.
 - Contractor shall guarantee all planted materials a minimum of 1 year time.
 - Contractor shall maintain all work including watering, mowing, and protection from traffic until final completion of the project.
 - Contractor shall be responsible to repair or replace all items damaged outside construction limits or disturbed on site which are not part of the identified work of this Contract.
 - Contractor to provide and maintain erosion control in the field. Remove upon stabilization of ground cover.



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 Chairperson

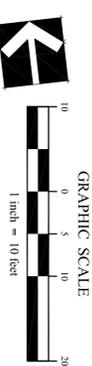
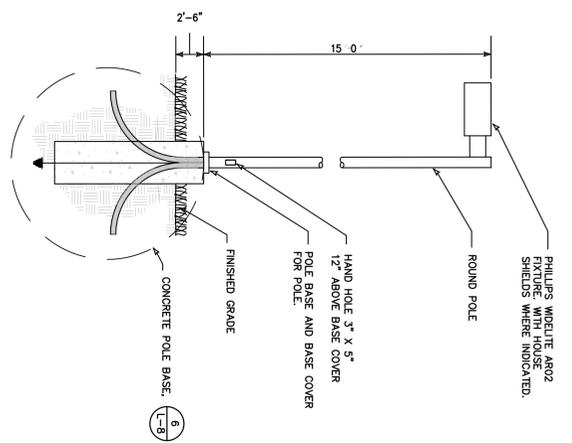
LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ



WEST AVENUE

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	Description
⊕	2	AR02	SINGLE	13000	AR02-150H Type 2

1 PARKING LOT LIGHT POLE DETAIL



Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY

Title
SITE LIGHTING PLAN

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
 F 518/587-0180
 www.thelagroup.com

Unauthorized alteration or addition to this document is a violation of Section 2309 of the New York State Education Law.

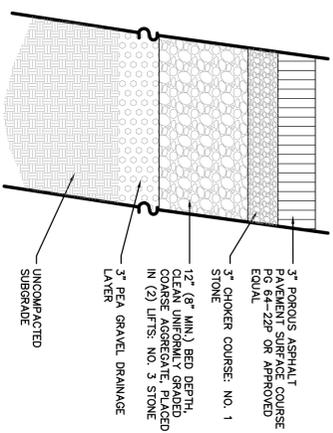
© the LA Group 2008

Design: MCB
 Drawn: MCB
 Checked: CMI

Revisions:
 MYLAR CHECK SET 9/28/2012
 MYLAR SET NOVEMBER 2012
 MAY 2014

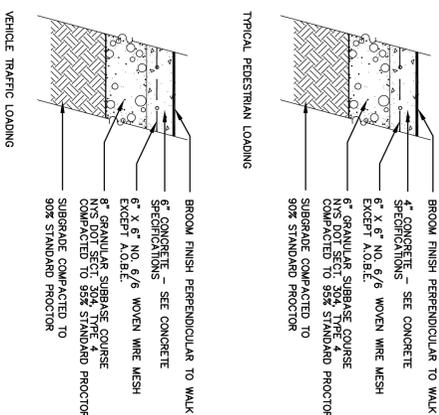
City #: 12.006.1
 Project: 201178
 Date: 1/25/2012

Drawing
L-6



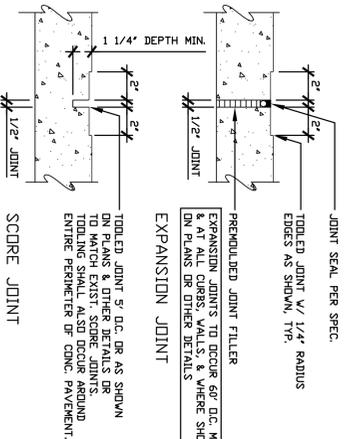
1 POROUS PAVEMENT
N.T.S.

NOTES:
 EXPANSION JOINT SPACING - 20'-25'
 O.C.
 CONTROL JOINT SPACING - 5' O.C.
 NOMINAL CROSS SLOPE 1/8" TO 1/4" TYP. TOWARDS STREET OR A.O.B.E.
 MAX. SLOPE ALONG THE LENGTH OF THE WALK SHOULD NOT EXCEED 1:12
 CONSTRUCTION AND APPROVED BY CITY ENGINEER. SIDEWALKS WITH NO BE 5' ENGINEER.

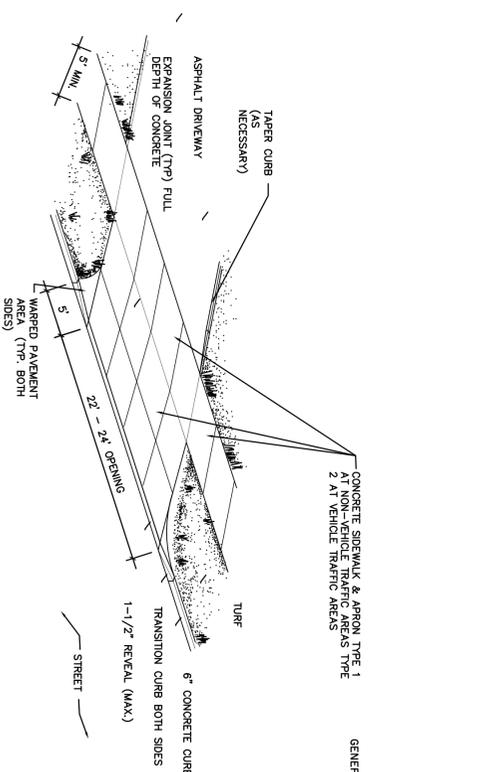


GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA SPRINGS, N.Y. RIGHT OF WAY AT THE PROPERTY LINE.
 1) SIDEWALKS MUST BE PLACED IN THE PUBLIC RIGHT OF WAY AT THE PROPERTY LINE.
 2) SIDEWALKS MUST NOT DROP DOWN WHEN CROSSING A DRIVEWAY.
 3) SIDEWALKS MUST NOT EXTEND ACROSS PUBLIC STREETS OR ALLEYS.
 GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA COUNTY RIGHT OF WAYS WITHIN SARATOGA SPRINGS:
 1) ALL SIDEWALK INSTALLATIONS MUST BE DESIGNED BY A PROFESSIONAL ENGINEER. PLANS MUST BE APPROVED BY THE COUNTY COMM. OR PUBLIC WORKS.
 2) SIDEWALKS MUST BE PLACED ON THE BACK SIDE OF DITCHES OR 8'(MIN.) FROM THE EDGE OF SHOULDER.
 3) SIDEWALKS MUST BE CONSTRUCTED SO AS NOT TO INTERFERE WITH DRAINAGE.

5 CONCRETE PAVEMENT DETAIL
N.T.S.

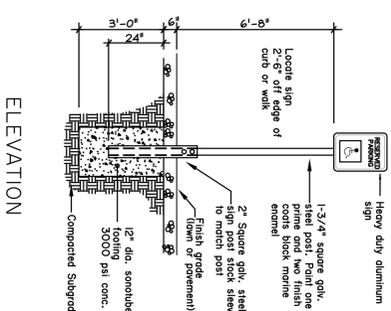


6 CONCRETE PAVT. EXPANSION SCORE JOINT DETAIL
N.T.S.

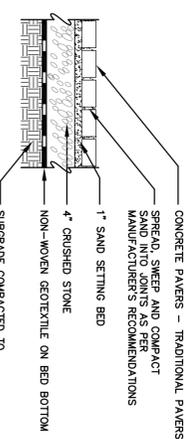


8 TRAFFIC SIGN DETAIL / SIGN SCHEDULE
N.T.S.

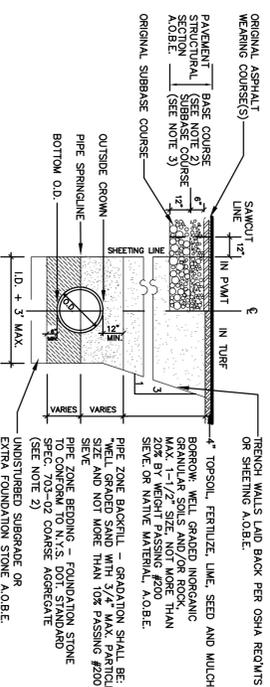
TEXT	LETTER	APPROX. SIZE OF SIGN	MULT. C.D. NO.
STOP	A	30x30"	R1-C
	SEE MULT.C.D.	6.25 S.F.	



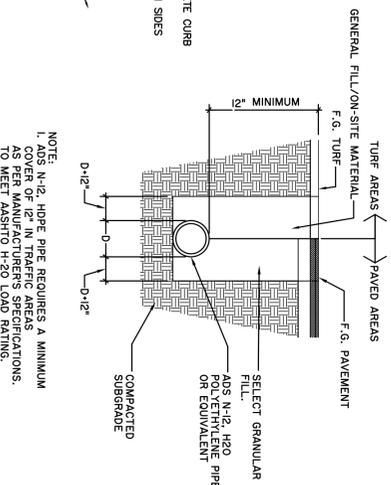
12 UNIT PAVER WALKS
N.T.S.



9 SANITARY PIPE TRENCH DETAIL
N.T.S.

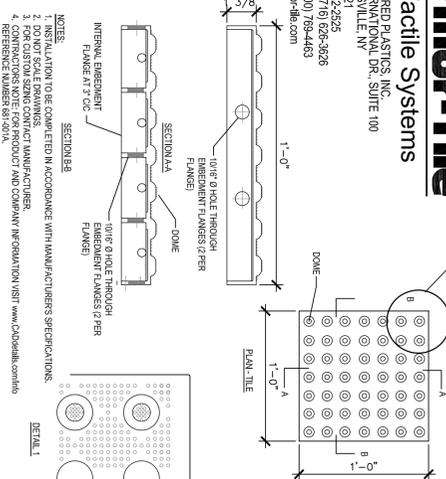


NOTES:
 1. STREET OPENING PERMIT IS REQUIRED
 2. FOUNDATION STONE - N.Y.S. DOT STD. SPEC. 703-02
 SIZE DETERMINATION #1: 100% PASSING 1\"/>



10 PIPE TRENCH (STORM SYSTEM)
N.T.S.

11 TACTILE WARNING STRIP
N.T.S.



Armor-Tile
 Tactile Systems
 ENGINEERED PLASTICS, INC.
 300 INTERNATIONAL DR., SUITE 100
 WESTVILLE, NY
 USA 44221
 PHONE: (716) 626-9226
 FAX: 1 (800) 759-4463
 www.armor-tile.com

Approval _____
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 Date Signed _____
 Christopher

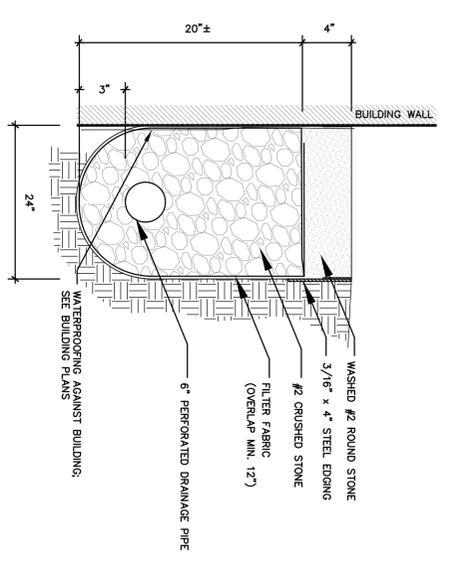
the LA group
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 P 518/587-9100
 F 518/587-9180
 www.thelagroup.com

PREPARED FOR:
 The PIKE Company, INC.
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 Clifton Park, NY 12065

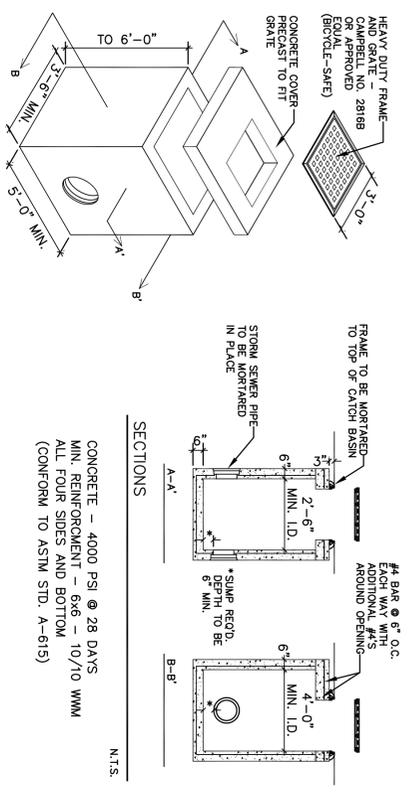
246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 SITE DETAILS

Revisions
 MYLAR CHECK SET
 MYLAR SET
 NOVEMBER 2012
 MAY 2014

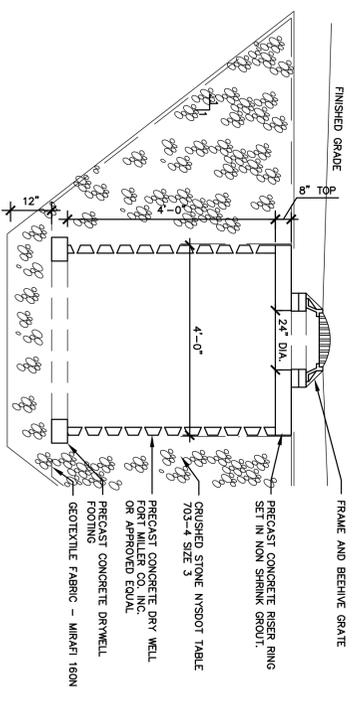
City #: 12.006.1
 Project: 201178
 Date: 1/25/2012
 Drawing: L-7



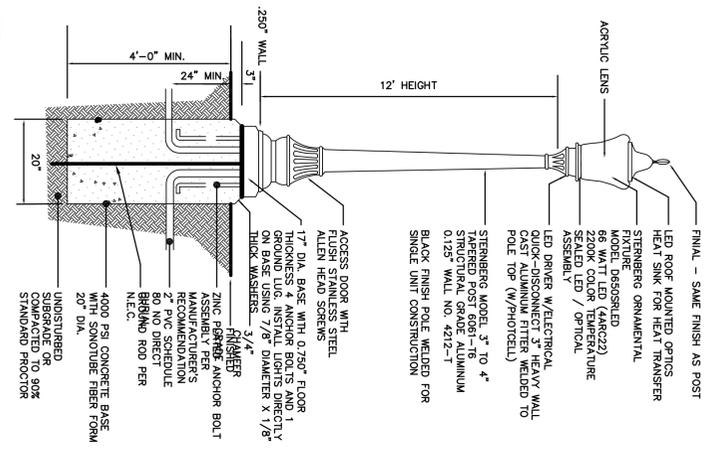
1 PERFORATED DRAINAGE TRENCH DETAIL
 N.T.S.



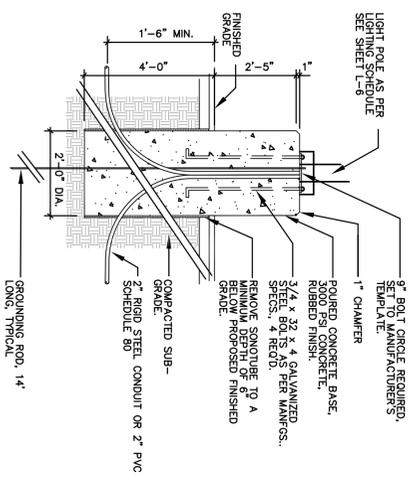
2 CATCH BASIN DETAIL
 N.T.S.



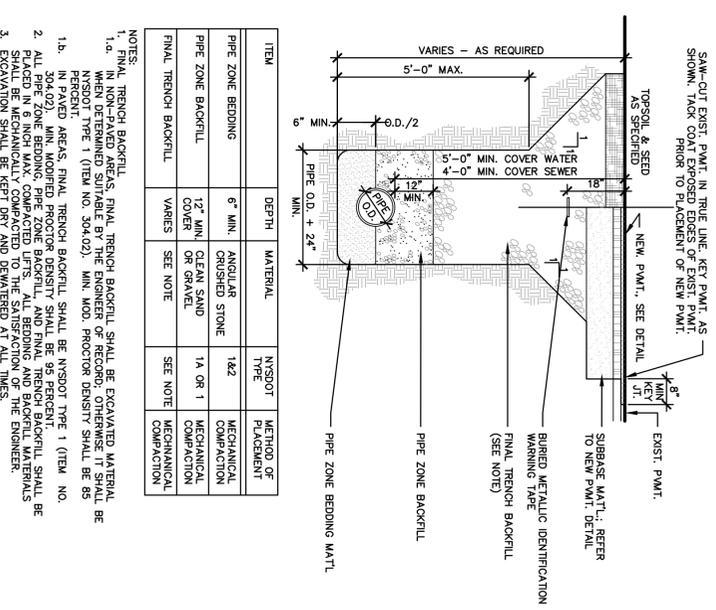
3 DRYWELL DETAIL
 N.T.S.



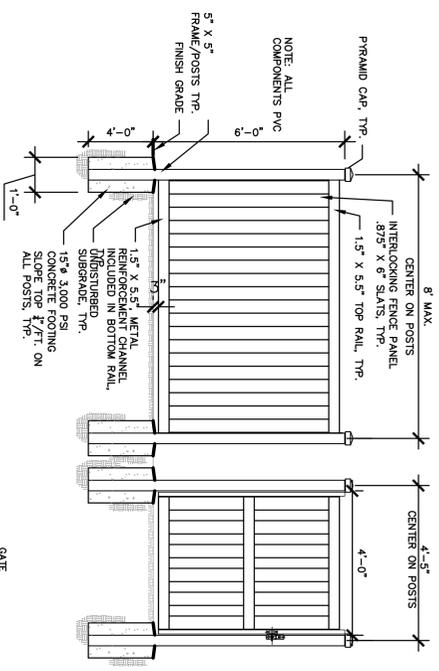
4 DECORATIVE STREET LIGHT DETAIL
 N.T.S.



6 LIGHT POLE BASE - PEDESTAL DETAIL
 N.T.S.

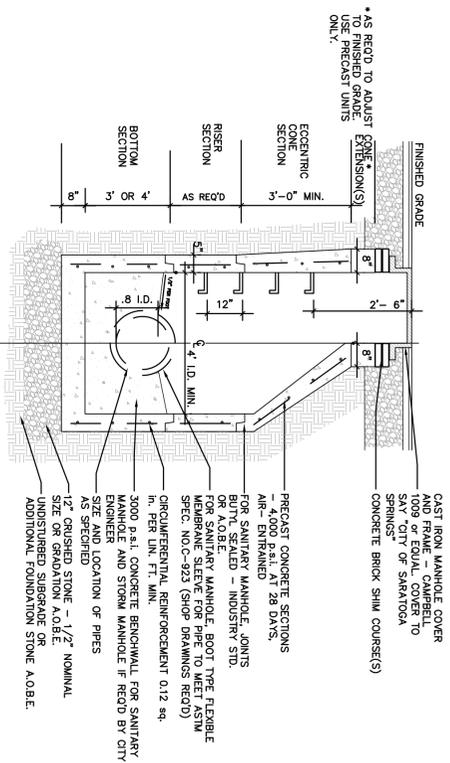


7 PIPE TRENCH-SECTION
 SCALE: 1/8" = 1'-0"



8 DUMPSTER PAD ENCLOSURE
 SCALE: 1/8" = 1'-0"

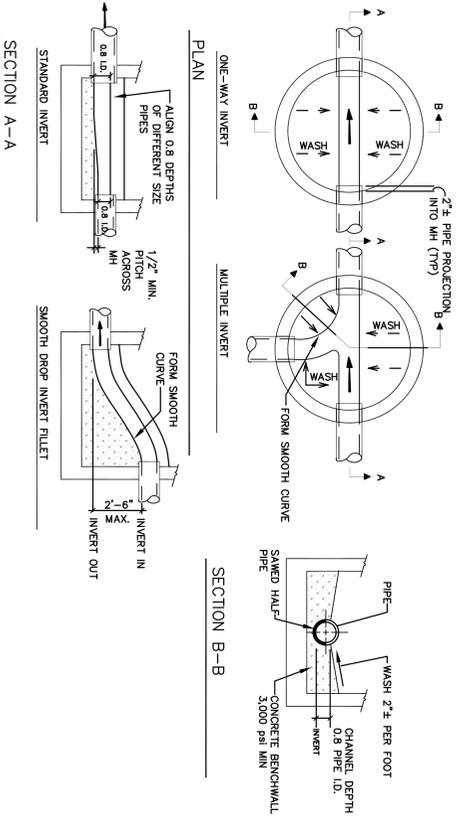
Approval _____
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 Date Signed _____
 Chairperson _____



NOTE: SHOP DRAWINGS REQUIRED TO BE SUBMITTED
 TO AND APPROVED BY CITY ENGINEER

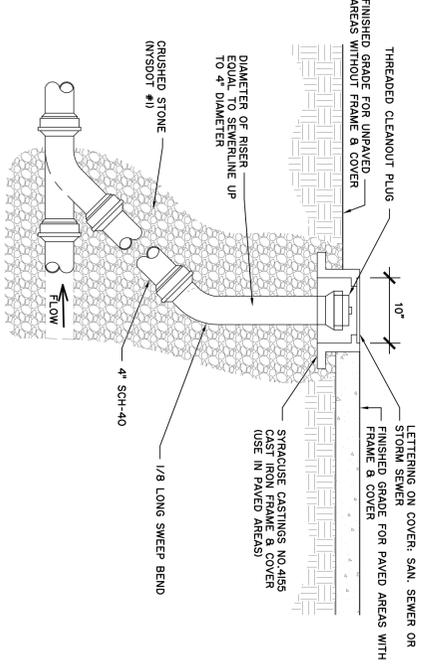
1 SANITARY SEWER MANHOLE DETAIL

N.T.S.



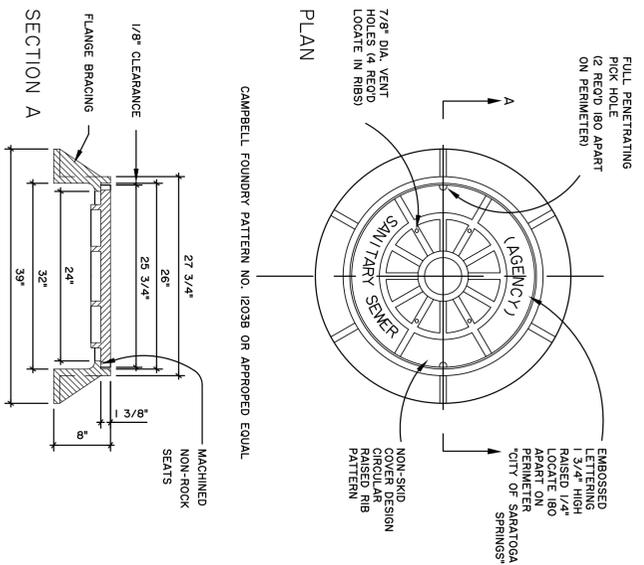
2 MANHOLE BENCH DETAIL

N.T.S.



3 SANITARY SEWER CLEANOUT DETAIL

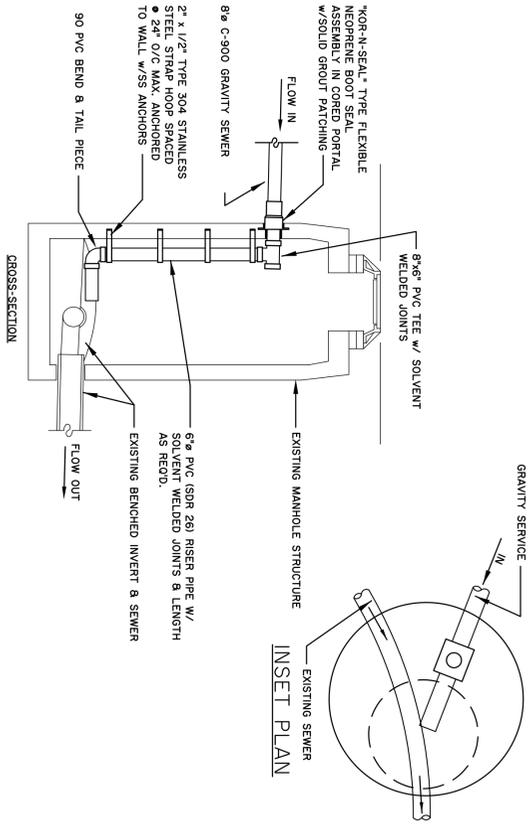
N.T.S.



NOTE:
 1) FRAME AND COVER SHALL CONFORM TO A.S.T.M. A536 (DUCTILE IRON)
 AND SAFELY WITHSTAND A.A.S.H.T.O. H920-44 HIGHWAY LOADING
 2) FRAME AND COVER SHALL RECEIVE FACTORY APPLIED BITUMASTIC COATING

4 SANITARY MANHOLE FRAME AND COVER DETAIL

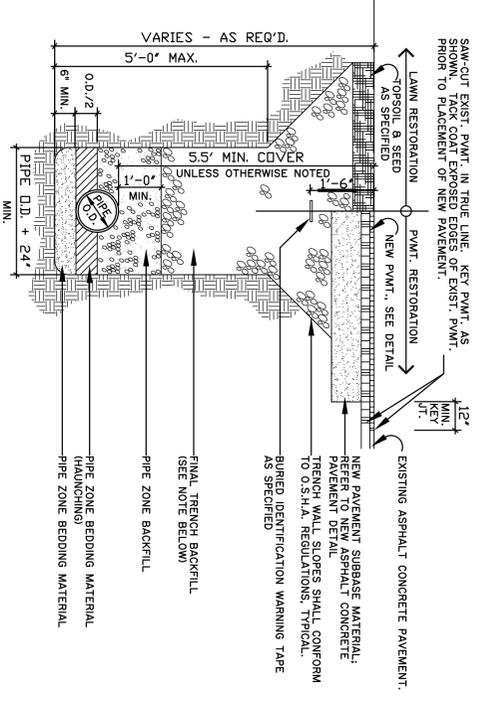
N.T.S.



NOTES:
 1) WORK EXCAVATION SHALL BE KEPT DRY AND DEMATERED AT ALL TIMES
 2) EXCAVATION, BACKFILL, AND RESTORATION WITHIN HIGHWAY R.O.W. IN ACCORDANCE WITH NYS DOT SPECIFICATIONS
 3) CONNECTION MATERIALS & METHODS IN ACCORDANCE WITH S.C.S.D. #1 SPECIFICATIONS.

5 SANITARY DROP @ EXISTING MANHOLE

N.T.S.

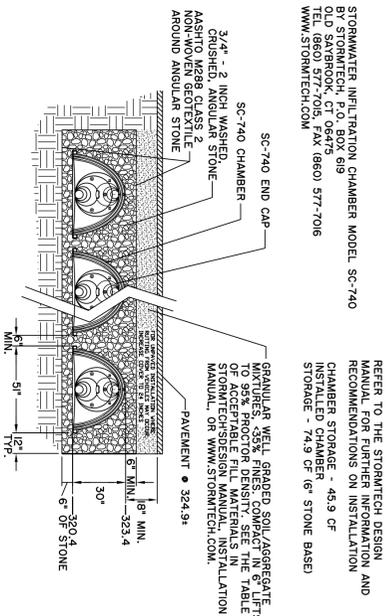


NOTE:
 1) FINAL TRENCH BACKFILL
 a) IN NON-PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE EXCAVATED MATERIAL (ENCOUNTERED DRY)
 b) IN PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE NYS DOT TYPE 2 ITEM NYS DOT TYPE 1 (CRUSHED STONE) UNLESS OTHERWISE NOTED
 c) IN PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE NYS DOT TYPE 2 ITEM NYS DOT TYPE 1 (CRUSHED STONE) UNLESS OTHERWISE NOTED
 2) ALL PIPE ZONE BEDDING, PIPE ZONE BACKFILL, AND FINAL TRENCH BACKFILL SHALL BE PLACED IN 6 INCH MAXIMUM, COMPACTED TO THE SATISFACTION OF THE ENGINEER.
 3) EXCAVATION SHALL BE KEPT DRY AND DEMATERED AT ALL TIMES DURING TRENCHING OPERATIONS.
 4) ALL PAVEMENT SAWCUTS SHALL BE IN SOUND EXISTING PAVEMENT ACCEPTABLE TO THE ENGINEER.

6 TYPICAL WATER PIPE TRENCH DETAIL

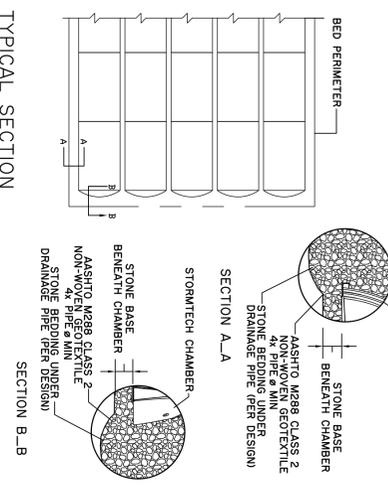
N.T.S.

Approval
 Approved under authority of a resolution adopted
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher _____



STORMWATER INFILTRATION CHAMBER MODEL SC-740
 BY STORMTECH, P.O. BOX 618
 1000 W. 10TH AVENUE, SUITE 100
 DENVER, CO 80202
 TEL: (860) 577-7015, FAX: (860) 577-7016
 WWW.STORMTECH.COM

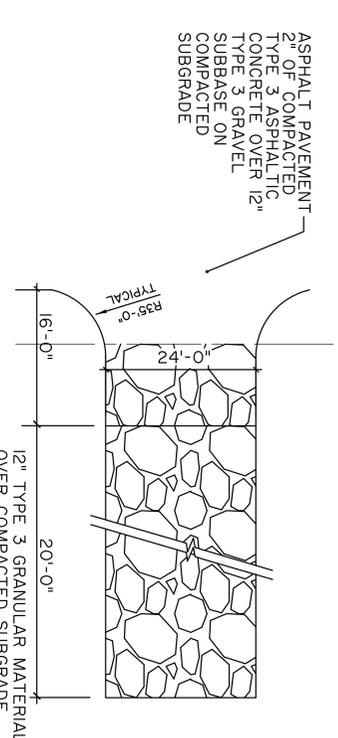
REFER TO THE STORMTECH DESIGN MANUAL FOR FURTHER INFORMATION AND RECOMMENDATIONS ON INSTALLATION AND CHAMBER STORAGE - 45.9 CF
 INSTALLED CHAMBER - 74.9 CF OF 6\"/>



TYPICAL SECTION

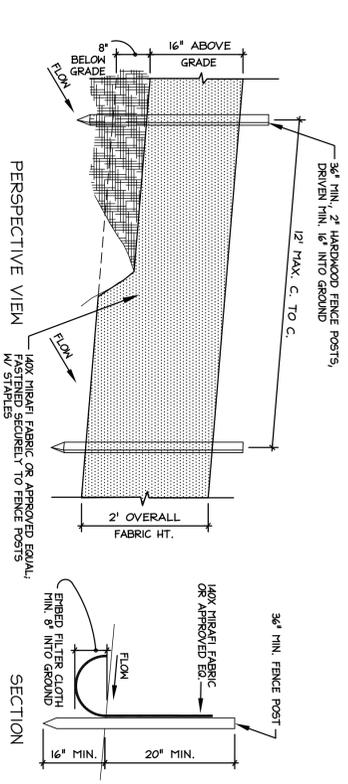
1 STORMWATER INFILTRATION CHAMBER DETAIL

N.T.S.



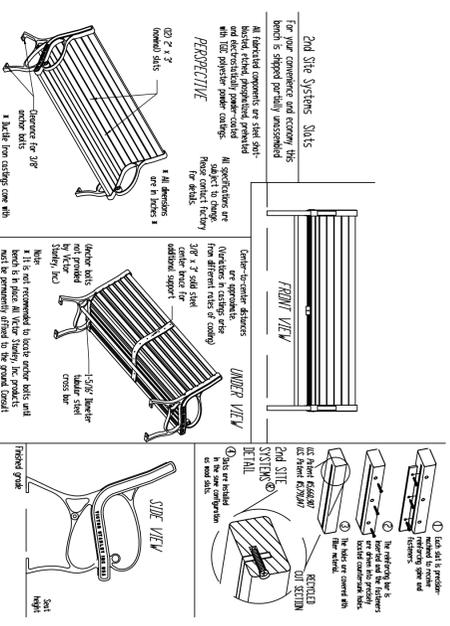
2 STABILIZED CONSTRUCTION ACCESS

N.T.S.



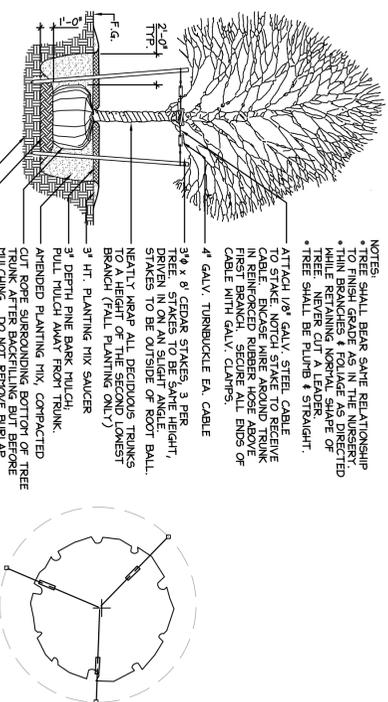
3 SILT FENCE DETAIL

N.T.S.



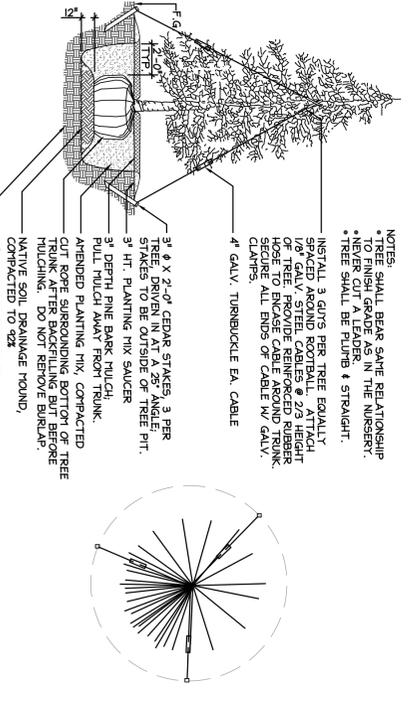
4 6' BENCH DETAIL

N.T.S.



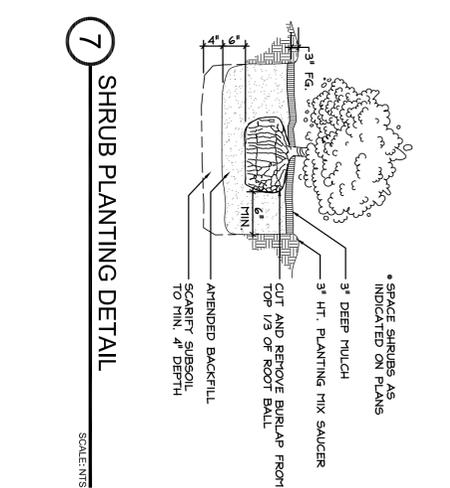
5 DECIDUOUS TREE PLANTING

SCALE N.T.S.



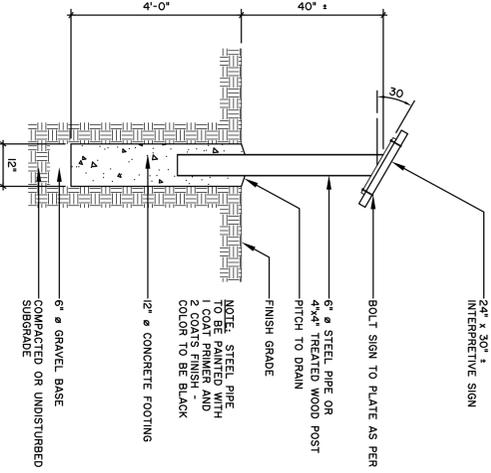
6 EVERGREEN TREE PLANTING

SCALE N.T.S.



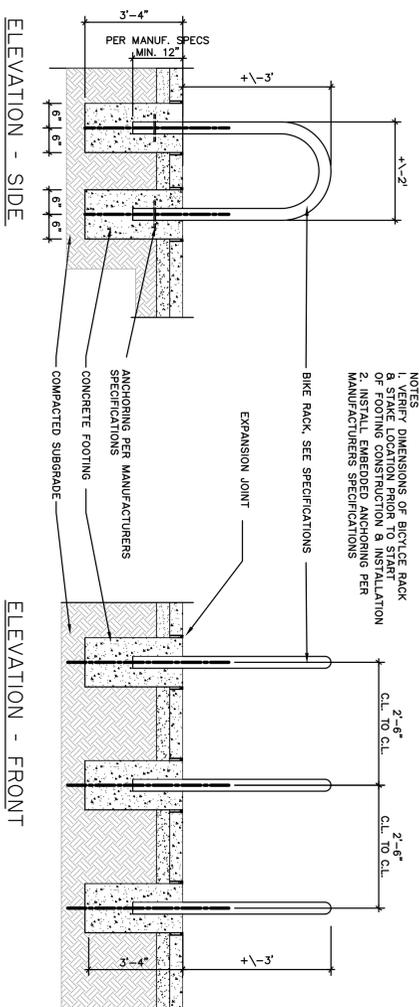
7 SHRUB PLANTING DETAIL

SCALE N.T.S.



8 INTERPRETIVE SIGN DETAIL

SCALE 1/2" = 1'-0"



9 BICYCLE RACK

N.T.S.

Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher



the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
 F 518/587-4180
 www.thelagroup.com

Design	MCB
Drawn	MCB
Checked	CMJ

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 Title
 SITE DETAILS

Revisions
 MYLAR CHECK SET
 9/28/2012
 MYLAR SET
 NOVEMBER 2012
 MAY 2014

City #: 12.006.1
 Project: 201178
 Date: 1/25/2012
 Drawing
L-11



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE

Special Use Permit Application

Fairfield Inn & Suites

176 South Broadway
Saratoga Springs, NY

CHA Project Number: 30775

Prepared for:
Saratoga Springs Hotel Associates, LLC
11751 East Corning Road
Corning, NY 14830

Submitted to:
City of Saratoga Springs
Planning Board
Ms. Kate Maynard
Principal Planner

Prepared by:



*III Winners Circle
Albany, New York 12205*

Phone: [REDACTED]

June 16, 2016



June 16, 2016

Ms. Kate Maynard
Principal Planner
City Hall - 474 Broadway
Saratoga Springs, New York 12866

**RE: Fairfield Inn & Suites – 176 South Broadway
Special Use Permit Application
CHA Project No.: 30775**

Dear Ms. Maynard,

On behalf of Saratoga Springs Hotel Associates, LLC, CHA Consulting, Inc. (CHA) is pleased to provide this Application for Special Use Permit for a proposed Fairfield Inn & Suites Hotel at 176 South Broadway in Saratoga Springs, New York.

This submission includes the following:

- Project Narrative
- Application for Special Use Permit
- Short Environmental Assessment Form
- Site Plan
- Special Use Permit application fee (\$750 check payable to Commissioner of Finance)

Thank you, and if you have any questions, please call me at [REDACTED].

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Anthony P. Stellato, Jr.', is written over a white background.

Anthony P. Stellato, Jr. PE
Vice President

Attachments

cc: Tom Sawyer, Saratoga Springs Hotel Associates, LLC
Brian Bouchard, CHA

V:\Projects\ANY\K4\30775\Corres\Applications\Site Plan and SUP App-6-16-16\SUP2 Cover Letter.docx

Fairfield Inn & Suites – 176 South Broadway

Project Narrative

Project Background

Saratoga Springs Hotel Associates, LLC (the Applicant) is the contract vendee of property currently owned by Turf and Spa Motel, Inc. at 176 South Broadway in Saratoga Springs, New York. The property is comprised of approximately 1.4 acres situated on the east side of South Broadway, at the northeast corner of its intersection with Todd Street. The site is zoned T-5 Neighborhood Center Transect, and it is also located within the Architectural Review Overlay District.



View of site from South Broadway, looking northeast



View of site from South Broadway entrance, looking east

The Turf and Spa Motel (shown above), an operating 43-room, two-story seasonal motel currently occupies the site. The site also includes a free standing, single story spa, an outdoor, in-ground pool and parking for approximately 50 vehicles.

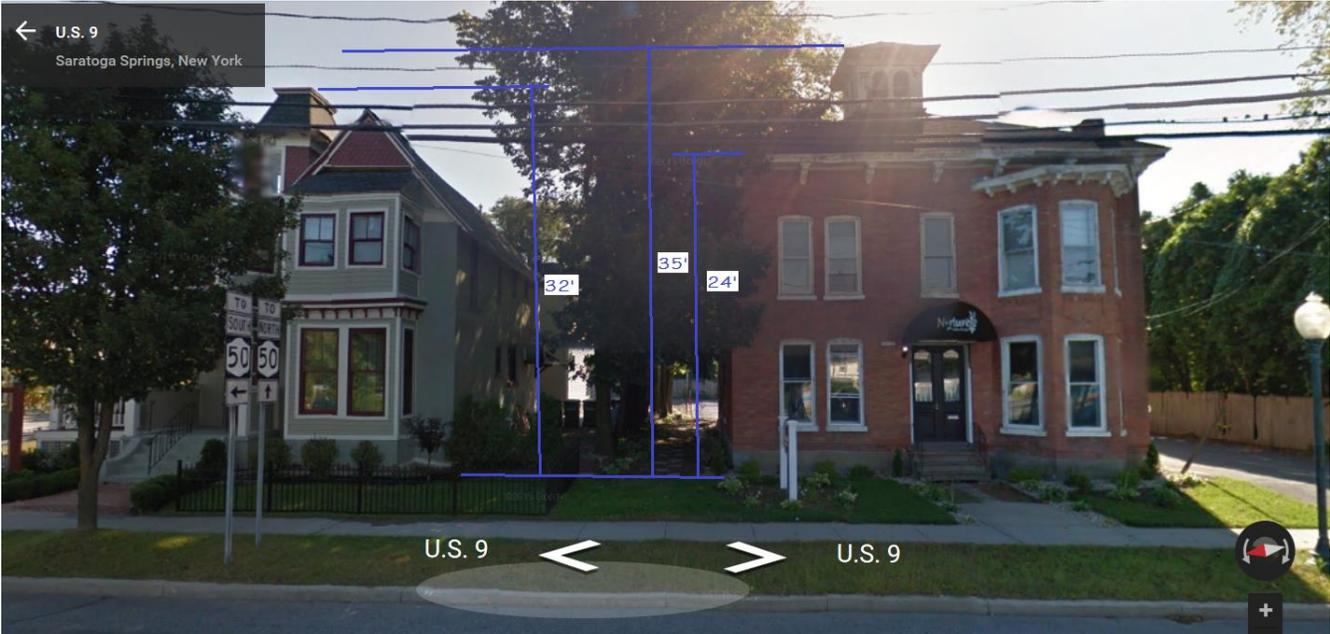
The site has approximately 172 feet of frontage and a curb cut for vehicular access on South Broadway. There is also frontage along Todd Street, Lincoln Avenue, Gurtler Lane (alley) and an unnamed alley from Lincoln Avenue running parallel with South Broadway; however, no access currently exists along any frontage other than South Broadway.

Adjacent properties on South Broadway include a retail plaza (Subway) to the south, Nurture Green Salon to the north and Duo Restaurant to the west. On Lincoln Avenue, neighboring properties include Thirsty Owl to the west and a dry cleaner on the east side of Gurtler Lane. Residential properties along Greenridge

Place back up to a shared alley (Gurtler Lane) along the east side of the site. Photos of adjacent properties are included below.



View of alley access from Lincoln Avenue, looking south



View of adjacent properties to the north on South Broadway with approximate existing building heights



View from Todd Street looking west toward South Broadway

Project Description

The Applicant proposes to construct a five-story, 50-foot high, 89-room Fairfield Inn & Suites Hotel on the site after demolition of the existing structures. The building will occupy a footprint of approximately 10,000 square feet, with a gross floor area of approximately 50,000 SF.

The building will be situated toward South Broadway, utilizing nearly all of the frontage in accordance with the City of Saratoga Springs Transect Zone Design requirements. The building design incorporates outdoor seating located adjacent to the public sidewalk, promoting connectivity to the pedestrian realm. The horizontal plane of the South Broadway building façade will vary, with the line nearest the street set back 5 feet from the back of sidewalk/property line. The front façade will step back away from the street at the north end of the building, respecting the setbacks of the neighboring buildings to the north and allowing room for an existing mature elm tree located near the street (see photo below).



View of 36” elm between curb and sidewalk at north end of South Broadway frontage

The main hotel entrance or porte-cochere will be located on the rear (east) façade, accessed from Todd Street, which will be reconstructed between South Broadway and the site entrance. Additionally, access to Lincoln Avenue will be provided via the existing unnamed alley that runs between the project site and the Thirsty Owl site.

Parking is proposed for 93 vehicles, which includes 1 space each for 89 rooms plus 0.5 spaces each for 8 employees, which is the maximum employee shift. Parking is compliant with Section 6.2.6 of the Zoning Ordinance. A dumpster enclosure will be provided in the southeast corner of the parking lot. Trash pickup will occur from the parking lot.

Site statistics are presented in the following table:

Site Coverage (Acres)

<u>Description</u>	<u>Existing</u>	<u>Proposed</u>
Buildings	0.17	0.23
Pavement/Parking Lot	0.39	0.75
Hardscape (Pool, Deck, Walks)	0.16	0.09
Green Area Total	<u>0.65</u>	<u>0.30</u>
TOTAL PROJECT AREA	1.37	1.37

Zoning Summary

The Project Site is located within the City of Saratoga Springs Transect Zone T-5, Neighborhood Center. The intent of this zone is to “to accommodate a wide variety of residential and non-residential uses, building and frontage types. This district also focuses on providing quality streetscape amenities and civic spaces to enhance pedestrian activity.” The zoning ordinance does not specifically allow any uses by right in this zone. A Special Use Permit from the Planning Board is required for this (or any) use.

The zoning ordinance requires Site Plan Approval for projects that propose more than 1,200 SF of additional impervious area. Therefore, Site Plan Approval will also be requested from the Planning Board.

The project complies with all bulk and area requirements of the zoning ordinance.

Utility Services

The water and sewer demand was calculated in accordance with NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems, dated March, 2014, as follows:

Water and Sewer Demand

<u>Description</u>	<u>Count</u>	<u>Units</u>	<u>GPD/unit</u>	<u>Demand</u>
Hotel	89	rooms	110	9,790 GPD

The Project will obtain water and sewer service from exiting public mains located on South Broadway. A new 3-inch domestic water service and 6-inch fire protection service will be extended from the existing City main. A new 6-inch sewer lateral will be provided for domestic wastewater. Existing utility services will be abandoned in accordance with City Department of Public Works standards. The building will be fully sprinklered, and there will be no kitchen in the hotel.

Existing electric and gas service is provided by National Grid from existing distribution lines located on South Broadway.

Stormwater Management

The project will require a temporary construction disturbance of 1.5 acres site plus off site disturbance for the construction of public sidewalk and utility connections. A Stormwater Pollution Prevention Plan (SWPPP) is required for the project, as Chapter 242 of the City of Saratoga Springs Code requires a SWPPP for ground disturbance of 0.1 acres or more. Likewise, coverage under State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities is required since the disturbance will be greater than 1 acre. A SWPPP will be prepared and submitted to the City MS4 Officer (City Engineer) for approval prior to construction.

Elevations on the site range from approximately elevation 320 at the southeast corner to approximately elevation 314 Along South Broadway. Runoff from the site is collected in a closed drainage system on site which connects to the municipal storm sewer on South Broadway. Post-construction storm water management measures will be incorporated into the final design to provide peak flow and water quality mitigation in accordance with the NYS Drainage Manual and the City Engineer's requirements.



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR: SPECIAL USE PERMIT

(Rev: 05/2016)

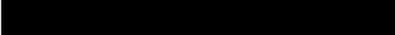
Project Name: Saratoga Fairfield Inn & Suites

Property Address/Location: 176 Broadway, Saratoga Springs, NY 12866

Tax Parcel #: 178.27-1-44, 165.83-2-35 & 36 Zoning District: T-5 - Neighborhood Center
(for example: 165.52-4-37)

Proposed Use: Hotel

Type of Special Use Permit: Permanent Temporary Renewable

<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name <u>Saratoga Springs Hotel Associates LLC</u>	<u>Turf and Spa Motel Inc</u>	<u>CHA Consulting Inc</u>
Address <u>11751 East Corning Road</u>	<u>176 Broadway</u>	<u>441 S. Salina Street</u>
<u>Corning NY 14830</u>	<u>Saratoga Springs NY 12866</u>	<u>Syracuse NY 13202</u>
Phone 		
Email 		

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Please check the following to affirm information is included with submission.

Sketch Plan Attached:
Applicant is encouraged to submit sketch plans showing features of the site and /or neighborhood and illustrate proposed use.

Environmental Assessment Form:
All applications must include a completed SEQR Short or Long Form. SEQR Forms can be completed at <http://www.dec.ny.gov/permits/6191.html>.

Water Service Connection Agreement- For all projects including new water connections to the City system, a copy of a signed water service connection fee agreement with the City Department of Public Works is required and **MUST** be submitted with this application.

Application Fee: \$750.00 (check box)
A check for the total amount made payable to: "Commissioner of Finance" **MUST** accompany this application.

3 hard copies (*1 signed original) and one electronic copy (PDF) of complete application and ALL attachments.

Submission Deadline - Check City's website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES NO . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Special Use Permit approval by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.1 of the Zoning Code of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: Thomas J. Egan
V.P. OF CONSTRUCTION

Date: 6/14/16

If applicant is not current owner, owner must also sign.

Owner Signature: Maal Ojeda

Date: 6-14-16

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.

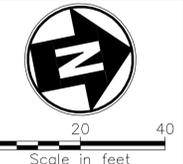
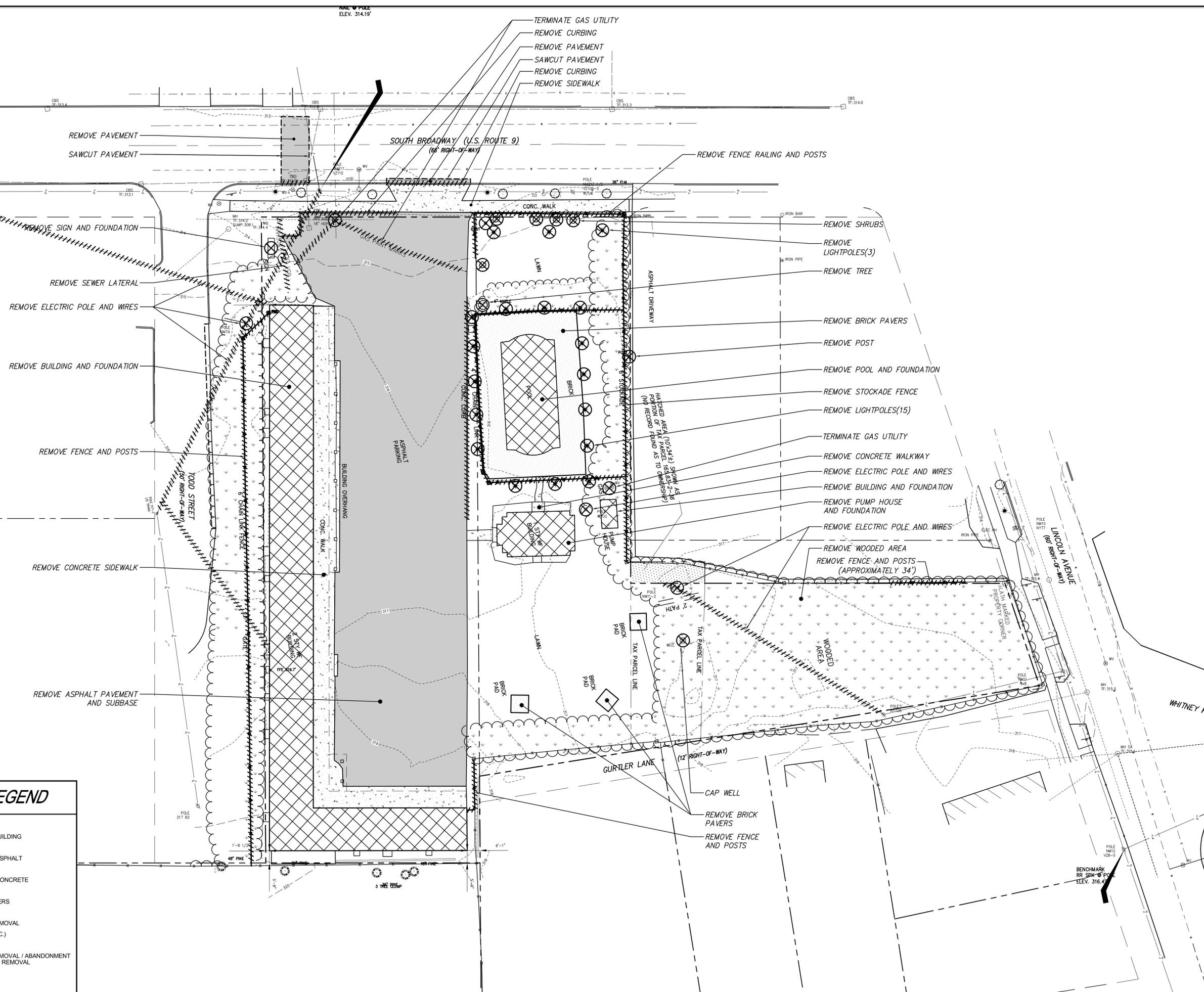
Part 1 - Project and Sponsor Information			
Name of Action or Project: Saratoga Fairfield Inn & Suites			
Project Location (describe, and attach a location map): 176 Broadway, Saratoga Springs, NY 12866			
Brief Description of Proposed Action: Construction of a 5-story hotel and related site improvements, including sidewalks, parking areas, landscaping, lighting, and site utilities.			
Name of Applicant or Sponsor: CHA Consulting Inc (c/o Brian Bouchard)		Telephone: [REDACTED]	
		E-Mail: [REDACTED]	
Address: 441 S. Salina Street			
City/PO: Syracuse		State: NY	Zip Code: 13202
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.			NO <input checked="" type="checkbox"/>
			YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: NYSDEC - SPDES, NYSDOT PERM 33-COM,			NO <input type="checkbox"/>
			YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		1.37 acres	
b. Total acreage to be physically disturbed?		1.10 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		1.37 acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____			
<input type="checkbox"/> Parkland			

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: <u>Brian Bouchard</u> Date: <u>6-16-16</u></p> <p>Signature: <u></u></p>		

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DEMOLITION LEGEND

-  - REMOVE EXISTING BUILDING
-  - REMOVE EXISTING ASPHALT
-  - REMOVE EXISTING CONCRETE
-  - REMOVE BRICK PAVERS
-  - MISCELLANEOUS REMOVAL (TREE, SIGN, ETC.)
-  - UTILITY SERVICE REMOVAL / ABANDONMENT OR LINEAR FEATURE REMOVAL



**SARATOGA SPRINGS
 HOTEL ASSOCIATES,
 LLC**
 11751 E. CORNING RD.
 CORNING, NY 14830



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION."

PROPOSED HOTEL
 176 SOUTH BROADWAY
 SARATOGA SPRINGS, NY 12866
 SARATOGA COUNTY

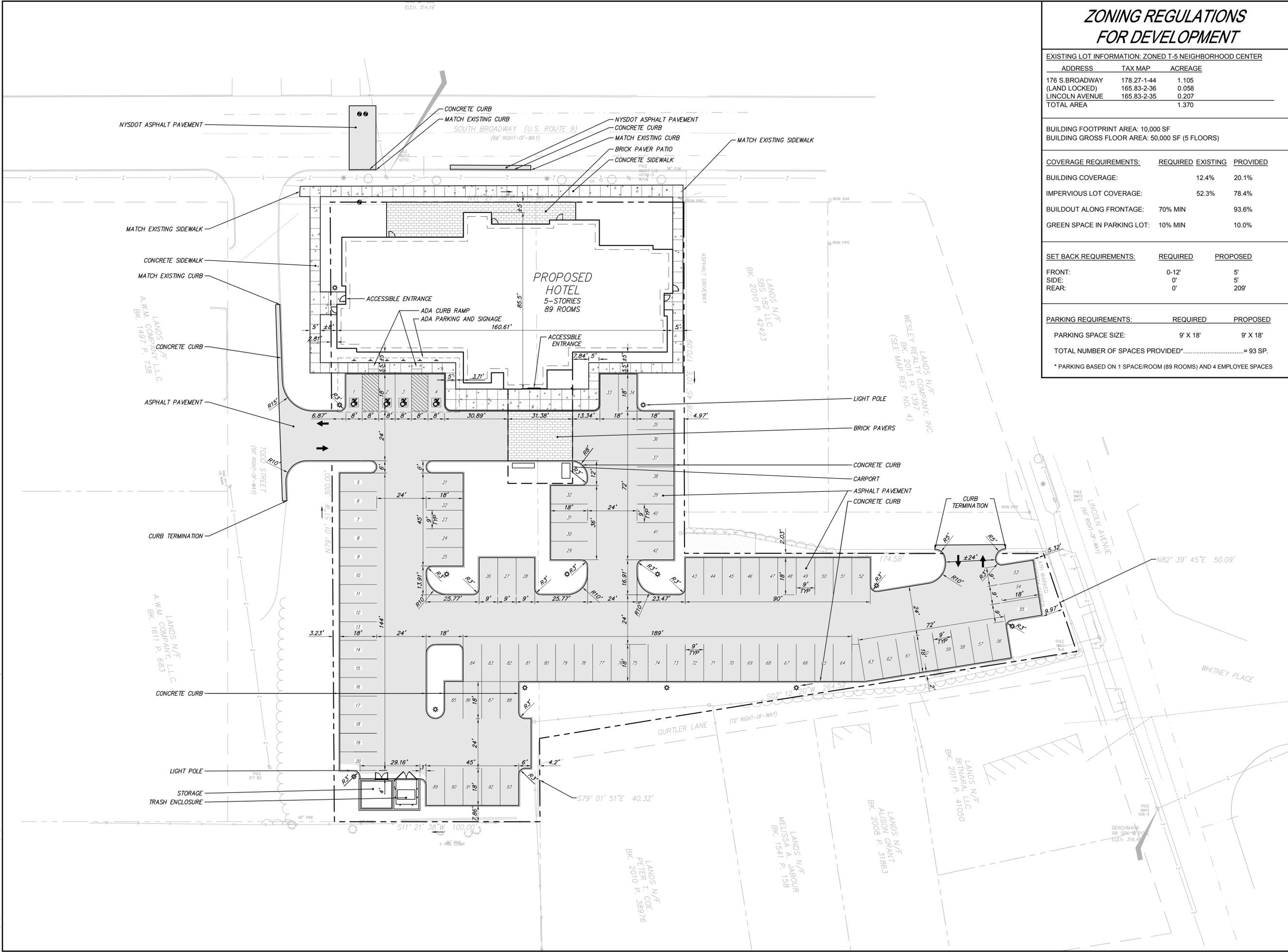
No.	Submittal/Revision	Appr. By	Date

DEMOLITION PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-004

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ZONING REGULATIONS FOR DEVELOPMENT

EXISTING LOT INFORMATION: ZONED T-5 NEIGHBORHOOD CENTER

ADDRESS	TAX MAP	ACREAGE
176 S. BROADWAY (LAND LOCKED)	178.27-1-44	1.105
LINCOLN AVENUE	165.83-2-36	0.058
	165.83-2-35	0.207
TOTAL AREA		1.370

BUILDING FOOTPRINT AREA: 10,000 SF
 BUILDING GROSS FLOOR AREA: 50,000 SF (5 FLOORS)

COVERAGE REQUIREMENTS:	REQUIRED	EXISTING	PROVIDED
BUILDING COVERAGE:		12.4%	20.1%
IMPERVIOUS LOT COVERAGE:		52.3%	78.4%
BUILDOUT ALONG FRONTAGE:	70% MIN		93.6%
GREEN SPACE IN PARKING LOT:	10% MIN		10.0%

SET BACK REQUIREMENTS:	REQUIRED	PROPOSED
FRONT:	0-12'	5'
SIDE:	0'	5'
REAR:	0'	209'

PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING SPACE SIZE:	9' X 18'	9' X 18'
TOTAL NUMBER OF SPACES PROVIDED*		= 93 SP.

* PARKING BASED ON 1 SPACE/ROOM (89 ROOMS) AND 4 EMPLOYEE SPACES



**SARATOGA SPRINGS
HOTEL ASSOCIATES,
LLC**
 11751 E. CORNING RD.
 CORNING, NY 14830



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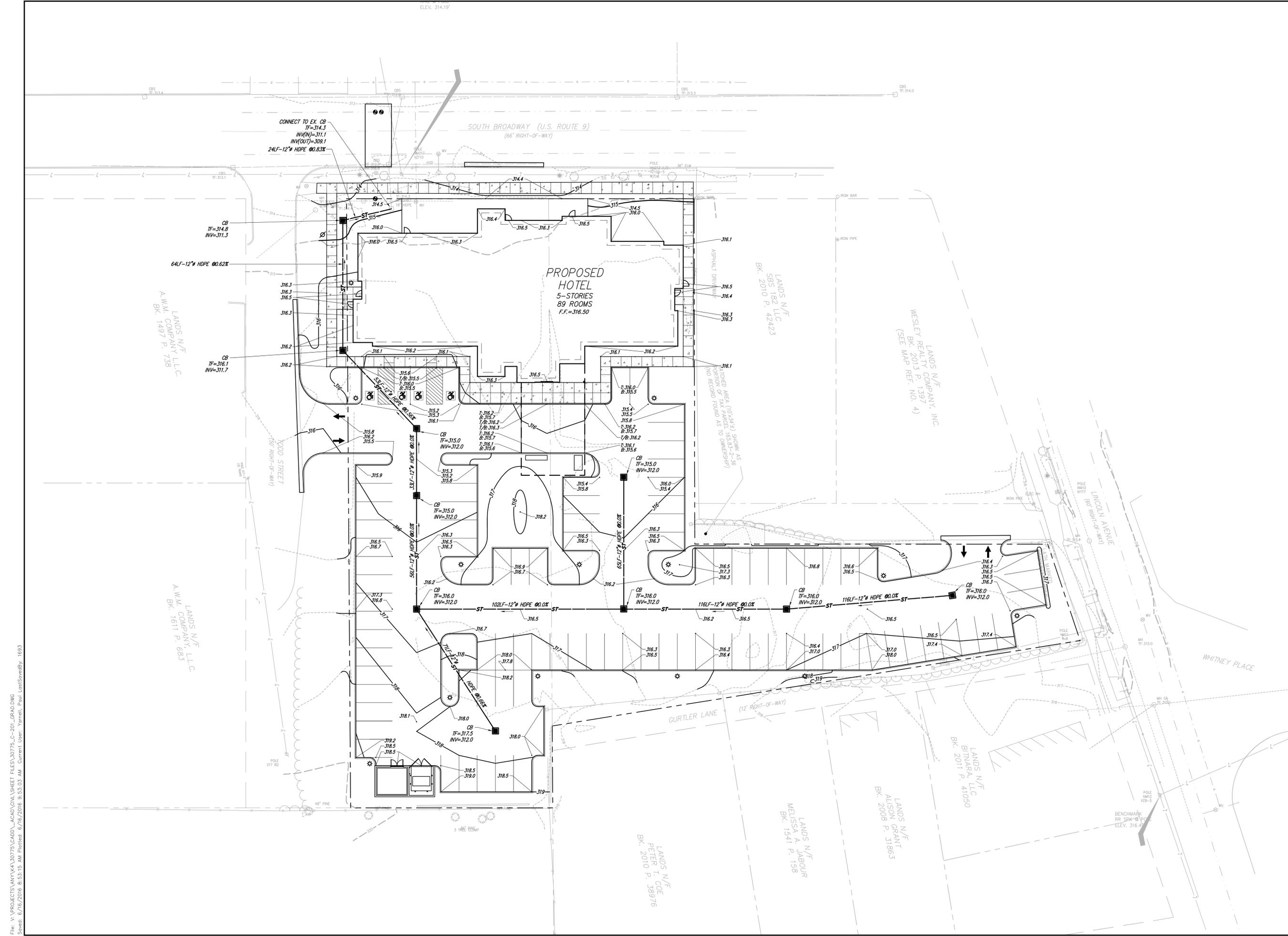
PROPOSED HOTEL
 176 SOUTH BROADWAY
 SARATOGA SPRINGS, NY 12866
 SARATOGA COUNTY

No.	Submittal / Revision	Appr'd. By	Date

SITE PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-101



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Syracuse, NY 13202-4712
315.471.9920 • www.chacompanies.com



0 20 40
Scale in feet

**SARATOGA SPRINGS
HOTEL ASSOCIATES,
HOTEL ASSOCIATES, LLC**
11751 E. CORNING RD.
CORNING, NY 14830



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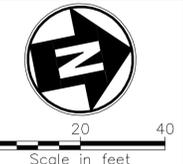
PROPOSED HOTEL
176 SOUTH BROADWAY
SARATOGA SPRINGS, NY 12866
SARATOGA COUNTY

No.	Submittal / Revision	Date	Appr. By	Date

GRADING AND DRAINAGE PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-201



**SARATOGA SPRINGS
HOTEL ASSOCIATES,
LLC**
11751 E. CORNING RD.
CORNING, NY 14830



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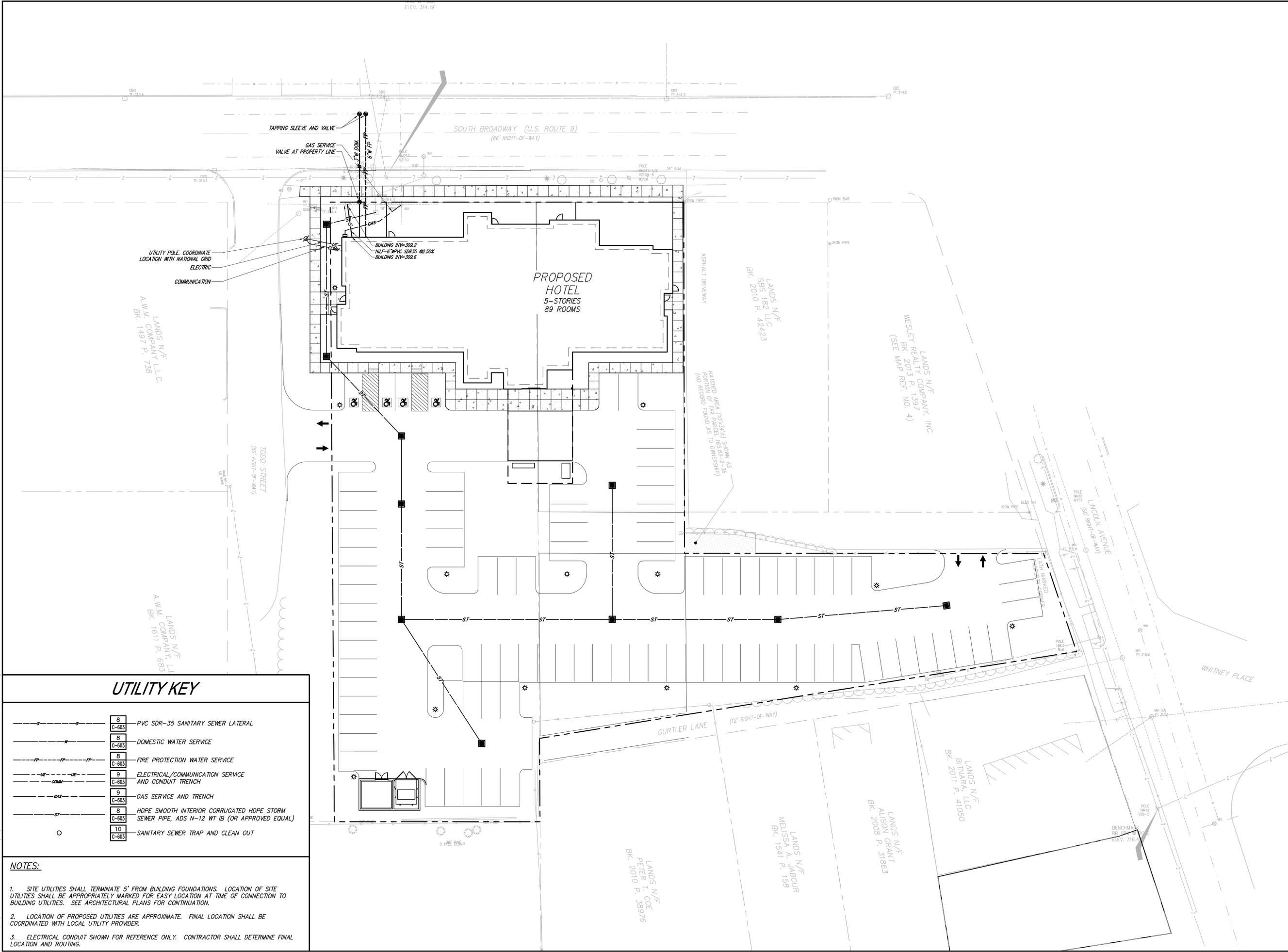
PROPOSED HOTEL
176 SOUTH BROADWAY
SARATOGA SPRINGS, NY 12866
SARATOGA COUNTY

No.	Submittal / Revision	Appr. By	Date

UTILITY PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

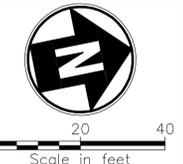
Drawing No.:
C-301



UTILITY KEY

	8 C-603	PVC SDR-35 SANITARY SEWER LATERAL
	8 C-603	DOMESTIC WATER SERVICE
	8 C-603	FIRE PROTECTION WATER SERVICE
	9 C-603	ELECTRICAL/COMMUNICATION SERVICE AND CONDUIT TRENCH
	9 C-603	GAS SERVICE AND TRENCH
	8 C-603	HDPE SMOOTH INTERIOR CORRUGATED HDPE STORM SEWER PIPE, ADS N-12 WT 18 (OR APPROVED EQUAL)
	10 C-603	SANITARY SEWER TRAP AND CLEAN OUT

- NOTES:**
1. SITE UTILITIES SHALL TERMINATE 5' FROM BUILDING FOUNDATIONS. LOCATION OF SITE UTILITIES SHALL BE APPROPRIATELY MARKED FOR EASY LOCATION AT TIME OF CONNECTION TO BUILDING UTILITIES. SEE ARCHITECTURAL PLANS FOR CONTINUATION.
 2. LOCATION OF PROPOSED UTILITIES ARE APPROXIMATE. FINAL LOCATION SHALL BE COORDINATED WITH LOCAL UTILITY PROVIDER.
 3. ELECTRICAL CONDUIT SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL DETERMINE FINAL LOCATION AND ROUTING.



SARATOGA SPRINGS HOTEL ASSOCIATES, LLC
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 CORNING, NY 14830



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 SARATOGA SPRINGS, NY 12866
 SARATOGA COUNTY

No.	Submittal / Revision	Appr. By	Date

EROSION AND SEDIMENT CONTROL PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.: **C-501**

EROSION & SEDIMENT CONTROL SPECIFICATION

ONE WEEK PRIOR TO BEGINNING EARTHWORK OPERATIONS, A PRE-CONSTRUCTION MEETING WILL BE HELD TO DISCUSS THE EROSION AND SEDIMENT CONTROL PLAN, AND TO FINALIZE THE PAPER WORK FOR THE STORM WATER POLLUTION PREVENTION PLAN AS SPECIFIED IN THE NYS DEC STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) GENERAL PERMIT FOR STORM WATER DISCHARGE FROM CONSTRUCTION ACTIVITIES (GP-0-15-002).

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED PRIOR TO BEGINNING ANY LAND DISTURBANCE ACTIVITIES. THE DEVICES PROVIDING PROTECTION TO A GIVEN AREA SHALL NOT BE REMOVED UNTIL THE LANDS IN THAT AREA ARE STABILIZED.

NO DISTURBED AREA SHALL REMAIN EXPOSED FOR MORE THAN 7 CALENDAR DAYS, EXCEPT FOR PORTIONS OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND 7 DAYS (I.E. THE BUILDING FOOTPRINT).

CONSTRUCTION SEQUENCE:

GENERAL NOTES:

- SEDIMENT TRAPS/BASINS MAY BE CONSTRUCTED AS NECESSARY PER BLUE BOOK GUIDELINES.
- SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPES WITH BUFFER AREAS PER BLUE BOOK GUIDELINES.
- BACKFILL SHALL BE PLACED ON THE UPSTREAM SIDE OF ALL TRENCHES DURING UTILITY CONSTRUCTION.
- PROTECT ALL EXISTING STORM SEWER FACILITIES/ROADWAYS ADJACENT TO THE SITE FROM SEDIMENT TRANSPORT.

SEQUENCE:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN. LIMIT ALL VEHICULAR TRAFFIC TO THIS ENTRANCE ONLY.
2. PROTECT EXISTING DRAINAGE SYSTEM ALONG ADJACENT ROADWAYS.
3. INSTALL SILT FENCE AS SHOWN. ADDITIONAL SILT FENCING MAY BE INSTALLED AS NECESSARY.
4. ROUGH GRADE PER DESIGN AND BEGIN BUILDING FOUNDATION CONSTRUCTION.
5. PROVIDE SILT FENCING AROUND PERIMETER OF STAGED/STOCKPILED TOP SOIL AND/OR TEMPORARY STAGED PILE OR FILL.
6. SWALES/DIKES SHALL BE CONSTRUCTED AS NEEDED TO PROVIDE POSITIVE DRAINAGE.
7. INSTALL STORM SEWER AND UTILITIES. TRENCHES SHALL BE BACKFILLED/COMPACTED AND STABILIZED IMMEDIATELY AFTER BACKFILL OPERATION.
8. ALL GRADED AREAS ARE TO BE SEEDED AND MULCHED FOR VEGETATIVE COVER IMMEDIATELY UPON COMPLETION OF EARTHWORK OPERATION.
9. CONSTRUCT ACCESS DRIVES AND PARKING LOTS.
10. COMPLETE FINAL GRADING AND INSTALL PERMANENT SEEDING, MULCH AND LANDSCAPING.
11. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND GROUND IS STABILIZED, REMOVE TEMPORARY EROSION CONTROL MEASURES AND RESEED ANY DISTURBED AREAS CREATED BY THEIR REMOVAL.

INSPECTION PROCEDURES & MAINTENANCE:

1. DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL FACILITIES. ALSO, AREAS THAT HAVE BEEN SEEDDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS.
2. INSPECTIONS OF ALL DEVICES SHALL BE COMPLETED WEEKLY. REPAIRS SHOULD BE COMPLETED IMMEDIATELY UPON DISCOVERY OF DEFICIENCIES.
3. THE OWNER WILL DESIGNATE A QUALIFIED PERSON(S) TO PERFORM THE FOLLOWING INSPECTIONS:
 - A. STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT.
 - B. STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN, WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UP-SLOPE SIDE OF THE FILTER FABRIC.
 - C. DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.
 - D. CONSTRUCTION ENTRANCES: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
4. ALL SEEDDED AREAS SHALL BE MAINTAINED AS FOLLOWS:
 - A. IDENTIFY SEEDDED AREAS WITH STAKES, STRING AND BRIGHTLY COLORED FLAGGING. PROTECT SEEDDED AREAS UNTIL VEGETATION HAS BEEN ESTABLISHED.
 - B. IMMEDIATELY RESEED AREAS WHICH DO NOT ESTABLISH VEGETATION.

PERMANENT EROSION CONTROL MEASURES NOTES

PERMANENT STABILIZATION NOTES: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

TOPSOIL SHALL HAVE AT LEAST TWO (2) PERCENT BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN SIX (6) PERCENT MUCK SOIL SHALL NOT BE CONSIDERED TOPSOIL. TOPSOIL SHALL NOT HAVE LESS THAN 20 PERCENT FINE TEXTURES MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15 PERCENT CLAY. TOPSOIL SHALL BE FREE OF STONES OVER 1.5 INCHES IN DIAMETER, TRASH, NOXIOUS WEEDS SUCH AS NUT SEEDS AND QUACKGRASS, AND WILL HAVE LESS THAN 10 PERCENT GRAVEL BY VOLUME. REFER TO THE NYS SDMM FOR INFORMATION ON TOPSOIL APPLICATION AND GRADING.

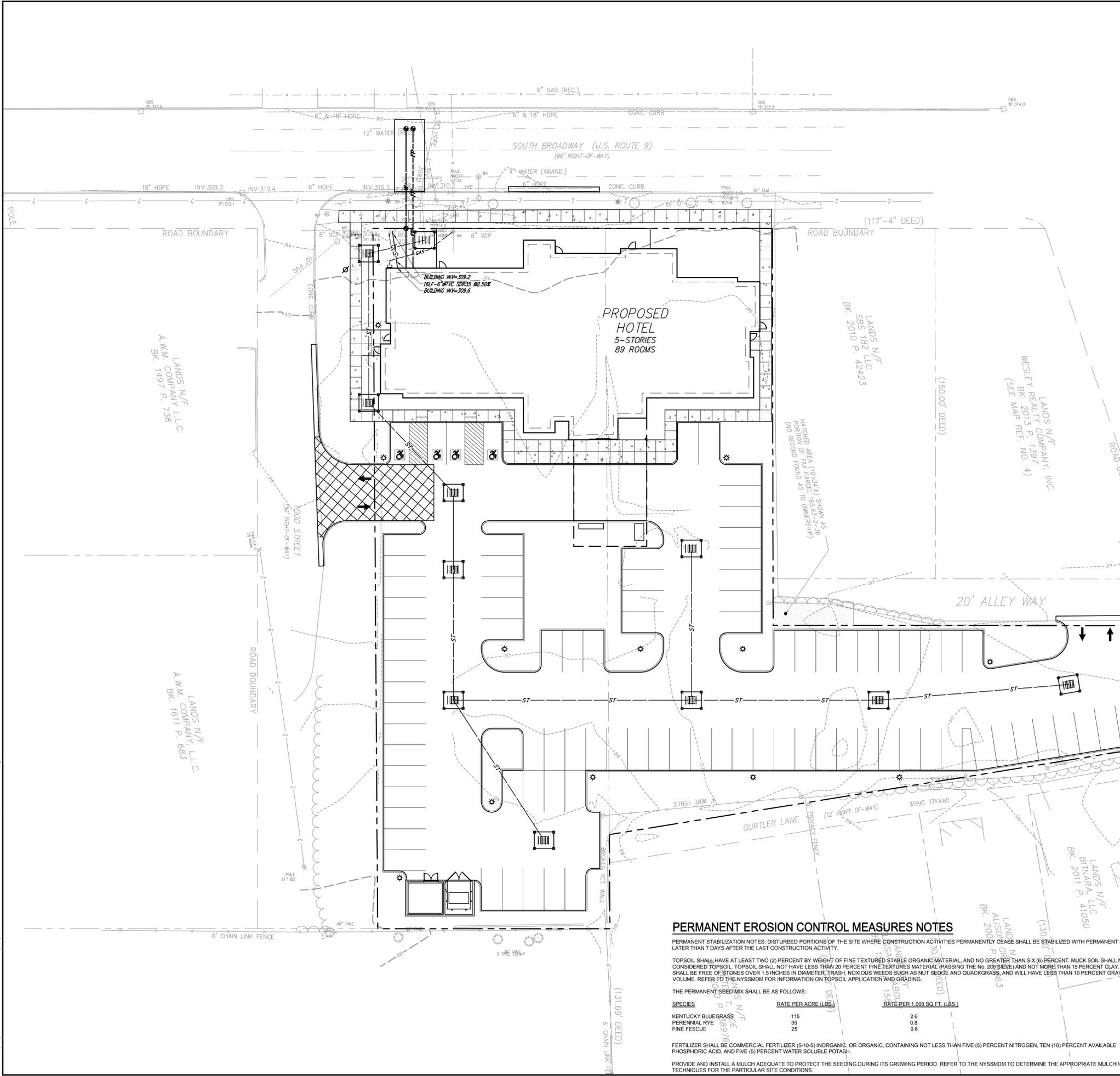
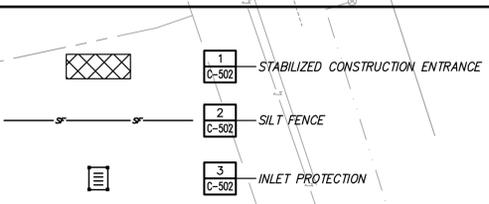
THE PERMANENT SEED MIX SHALL BE AS FOLLOWS:

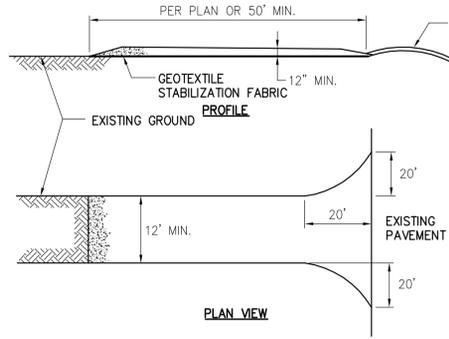
SPECIES	RATE PER ACRE (LBS)	RATE PER 1,000 SQ. FT. (LBS)
KENTUCKY BLUEGRASS	115	2.6
PERENNIAL RYE	35	0.8
FINE FESCUE	25	0.6

FERTILIZER SHALL BE COMMERCIAL FERTILIZER (5-10-5) INORGANIC, OR ORGANIC, CONTAINING NOT LESS THAN FIVE (5) PERCENT NITROGEN, TEN (10) PERCENT AVAILABLE PHOSPHORIC ACID, AND FIVE (5) PERCENT WATER SOLUBLE POTASH.

PROVIDE AND INSTALL A MULCH ADEQUATE TO PROTECT THE SEEDING DURING ITS GROWING PERIOD. REFER TO THE NYS SDMM TO DETERMINE THE APPROPRIATE MULCHING TECHNIQUES FOR THE PARTICULAR SITE CONDITIONS.

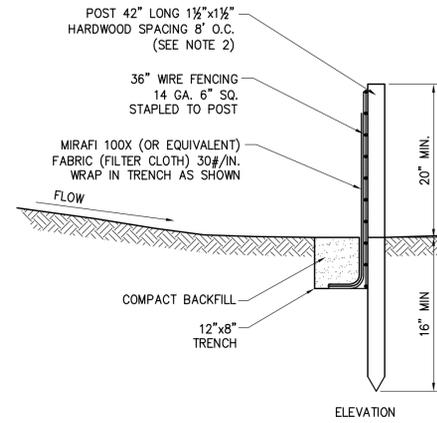
EROSION AND SEDIMENT CONTROL KEY





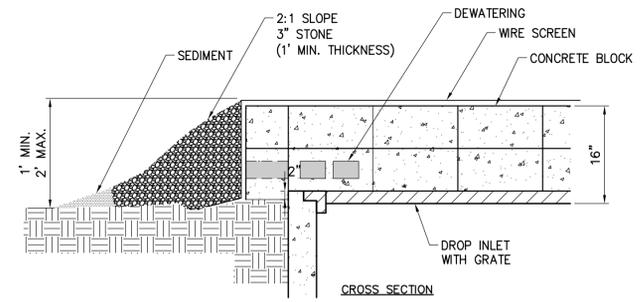
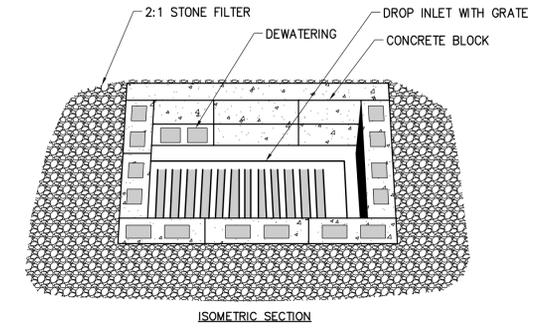
1 STABILIZED CONSTRUCTION ENTRANCE
SCALE: N.T.S.

1. STONE SIZE—USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS—NOT LESS THAN 12".
3. WOVEN GEOTEXTILE FABRIC WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. EXISTING ROAD SIDE DRAINAGE SHALL BE MAINTAINED.
5. MAINTENANCE—THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT OR STONE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



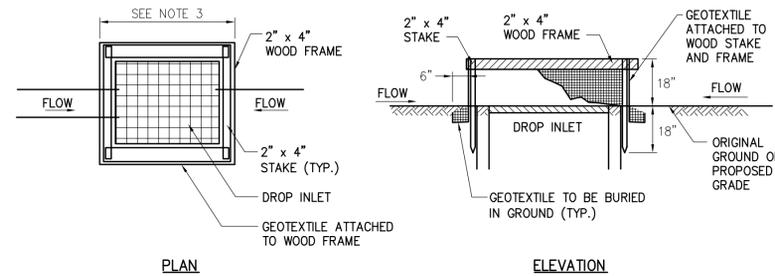
2 SILT FENCE
SCALE: N.T.S.

- NOTES:**
1. THE FABRIC TO WIRE FENCE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 2. IF EXTRA STRENGTH FABRIC (GREATER THAN 50#/INCH) IS USED, WIRE CAN BE DELETED IF POST SPACING IS REDUCED TO 6' O.C.
 3. AT THE ENDS OF THE FENCING THE FIRST 20' SHALL BE TURNED UP THE SLOPE 2'.
 4. POSTS SHOULD BE INCLINED TOWARD THE DIRECTION FLOW CAME FROM.
 5. OVERLAP FABRIC A MINIMUM OF 6" AND FOLDED AT JOINTS. ATTACH FILTER FABRICS TO STAKES ALLOWING EXTENSION INTO TRENCH AS SHOWN. SECURE TO STAKES AS NOTED.
 6. THE MAXIMUM AREA OF RUNOFF PER 100LF. OF FENCE SHALL NOT EXCEED 0.25 ACRES.
 7. MAINTENANCE SHALL BE PERFORMED AS NECESSARY. THE FENCING SHALL BE CHECKED AFTER EVERY STORM TO ENSURE THEIR PROPER FUNCTIONING.
 8. WHEN FENCE IS NO LONGER NEEDED, THE ACCUMULATED SILT, THE POSTS AND FABRIC SHALL BE REMOVED AND TRENCH BACK FILLED WITH TOPSOIL AND SEEDED.
 9. FENCING SHOULD BE PLACED AS SHOWN ON THE DRAWING OR IF NOT SHOWN, 10' BEYOND THE TOE OF THE OF THE SLOPE AND AT A SPACING IN ACCORDANCE WITH THE TABLE.
 10. EXCAVATE TRENCH AS PER DETAIL AND SET POSTS AT 10' O.C.
 11. BACKFILL WITH COMPACTED, EXCAVATED SOIL FROM TRENCH.



- NOTES:**
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE PLACED AGAINST INLET FOR SUPPORT.
 2. HARDWARE CLOTH OF 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 THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
 4. TO BE USED AT ALL INLETS WITHIN PROPOSED PAVEMENT AREAS.

3 STONE & BLOCK DROP INLET PROTECTION
SCALE: N.T.S.



- NOTES:**
1. GEOTEXTILE SHALL BE CUT FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NECESSARY THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
 2. STAKE MATERIAL WILL BE STANDARD 2"x4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
 3. SPACE STAKES EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3 FEET DRIVE STAKES 18" MINIMUM INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.
 4. GEOTEXTILE SHALL BE EMBEDDED 12" BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO STAKES AND FRAME.
 5. GEOTEXTILE FABRIC SHALL HAVE EOS OF 40-85.
 6. A 2"x 4" WOOD FRAME SHALL BE FORMED AROUND THE CREST OF FABRIC FOR OVERFLOW STABILITY.
 7. INLET PROTECTION TO REMAIN IN-PLACE UNTIL AREA IS STABILIZED.

4 FILTER FABRIC DROP INLET PROTECTION
SCALE: N.T.S.

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EROSION AND SEDIMENT CONTROL DETAILS

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
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Drawing No.:
C-502

PLANT SCHEDULE*

SYMBOL	QTY	GENUS & SPECIES	COMMON NAME	PLANTING SIZE (AS NOTED)	ROOT	MATURE SIZE (HEIGHT x WIDTH)	NOTES
TREES							
AR	5	Acer rubrum 'Frank Jr.'	Redpointe® Red Maple	2-2.3" CAL.	B&B	40' x 30'	Red in Fall
BN	3	Betula nigra 'Cully'	Heritage® River Birch Multi	10-12' HT., Clump	B&B	50' x 50'	Peeling Bark
PP	20	Picea pungens glauca	Colorado Blue Spruce	10-12' HT.	B&B	50' x 20'	Evergreen
PA	59	Picea abies 'Cupressina'	Columnar Norway Spruce	6-7' HT.	B&B	20' x 5'	Evergreen
PS	2	Prunus sargentii columnaris	Columnar Sargent Cherry	2-2.5" CAL.	B&B	20' x 15'	Pink-White Flowers in Spring
PC	4	Pyrus calleryana 'Glen's Form'	Chanticleer® Callery Pear	2-2.5" CAL.	B&B	30' x 15'	White Flowers in Spring
SHRUBS, PERENNIALS & BULBS							
AM	59	Achillea millefolium 'Summerwine'	Summerwine Yarrow	1 GAL.	CONT.	2' x 3'	Red Flowers in Summer
EP	45	Echinacea purpurea 'Tiki Torch'	Tiki Torch Coneflower	3 GAL.	CONT.	3' x 2'	Orange Flowers All Summer
HA	72	Hemerocallis x 'Alabama Jubilee'	Alabama Jubilee Daylily	2 GAL.	CONT.	3' x 2'	Orange Flowers All Summer
IV	36	Ilex verticillata 'Red Sprite' (female)-40 / 'Jim Dandy' (male)-5	Red Sprite Winterberry	5 GAL.	CONT.	4' x 4'	Evergreen, Red berries in winter
LM	96	Liriope muscari	Lily Turf	1 GAL.	CONT.	12" x 2"	Purple Flowers in Late Summer
ND	20	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	5 GAL.	CONT.	4' x 3'	Evergreen, Red Berries in Fall & Winter
PV	6	Panicum virgatum 'Heavy Metal'	Heavy Metal Blue Switch Grass	3 GAL.	CONT.	3' x 3'	Ornamental Grass
RR	20	Rosa x 'Radtko'	Red Double Knock Out® Rose	3 GAL.	CONT.	4' x 4'	Bright Red Flowers All Summer
NF	9	Nepeta faassenii 'Novanepjun'	Junior Walker™ Catmint	3 GAL.	CONT.	15" x 4"	Purple Flowers in Summer
AL	83	Allium moly	Golden Garlic Ornamental Onion	-	BULB	18"x10"	Yellow Flowers in Summer
NK	83	Narcissus 'King Alfred'	Trumpet Daffodil	-	BULB	16"x6"	Yellow Flowers in Spring

FOOTNOTES:
* ALL PLANT SPACING IS AS SHOWN ON PLAN. BULBS TO BE PLANTED 12" O.C.

LANDSCAPE NOTES

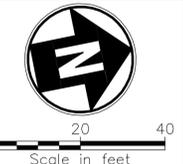
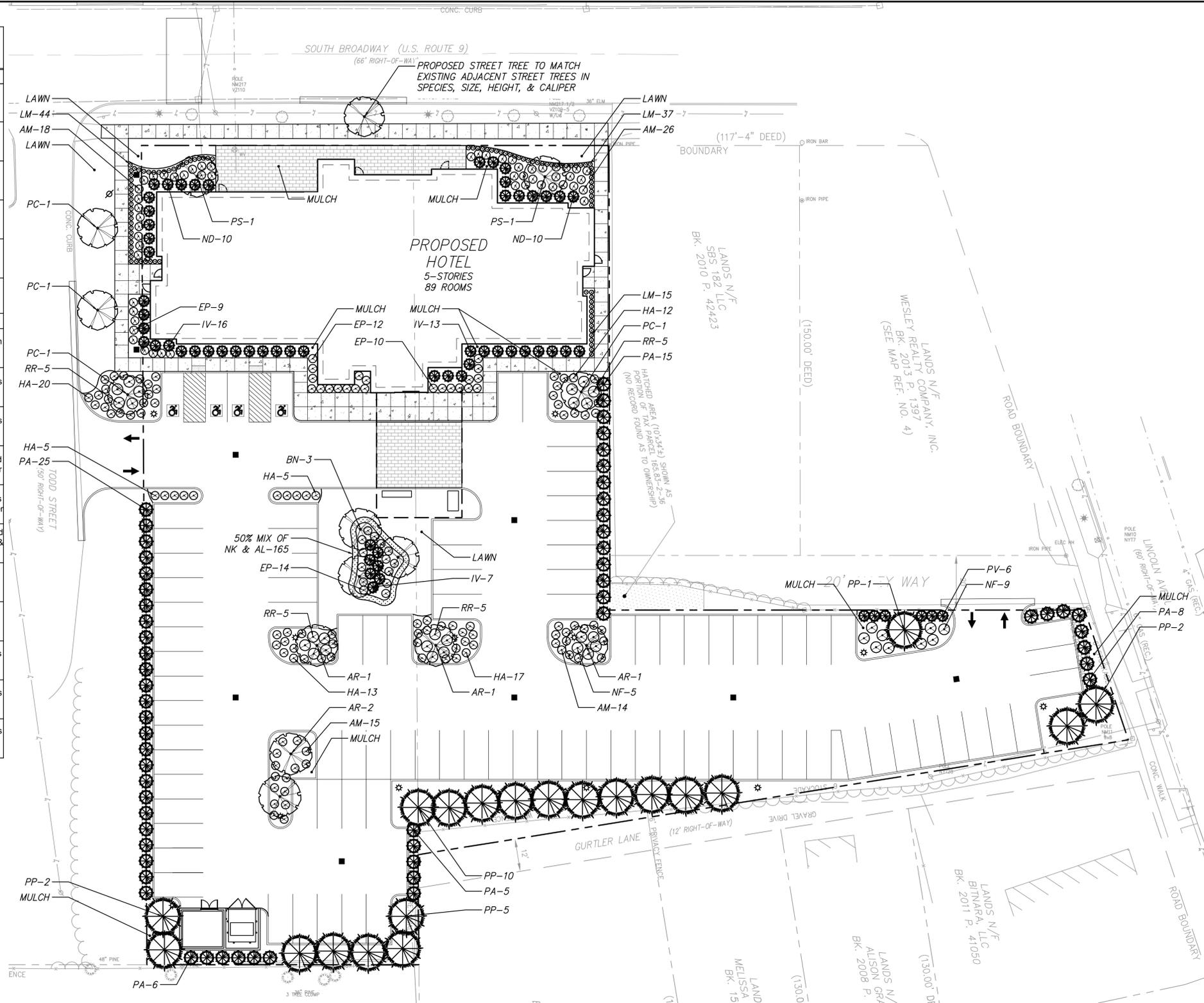
- THE CONTRACTOR SHALL SUPPLY PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN. ANY DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANT SCHEDULE AND THOSE REQUIRED BY THE CONTRACT DRAWINGS SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL REMUNERATION.
- THE CONTRACTOR SHALL VERIFY AND VISUALLY INSPECT FINAL SELECTION OF PLANT MATERIALS WITH THE OWNER PRIOR TO INSTALLATION.
- ALL PLANTING LOCATIONS SHALL BE STAKED OUT AND APPROVED IN THE FIELD BY THE OWNER PRIOR TO INSTALLATION.
- NO PLANT MATERIAL WILL BE ACCEPTED WHICH DISPLAYS MAJOR IRREGULARITIES OR MECHANICAL DAMAGE. THE OWNER RETAINS THE RIGHT TO REJECT ANY PLANT MATERIAL DEEMED UNFIT.
- CONTRACTOR MAY SUBSTITUTE ANY OF THE PLANTINGS LISTED IN THE PLANT SCHEDULE DUE TO AVAILABILITY WITH APPROVAL BY THE OWNER PRIOR TO INSTALLATION.
- EXISTING VEGETATION SHALL REMAIN UNDISTURBED IN ALL AREAS WHICH ARE NOT PART OF THE PROPOSED PROJECT.
- GUARANTEE:
A. FOR A PERIOD OF TWELVE MONTHS FROM THE DATE THAT THE WORK UNDER THIS CONTRACT IS CERTIFIED AS COMPLETE, THE CONTRACTOR SHALL: 1) GUARANTEE ALL PLANTS AND SEEDING AREAS UNDER THIS CONTRACT; 2) REMOVE AND REPLACE DURING THIS GUARANTEE PERIOD PLANTS WHICH DIE OR ARE IN A BADLY IMPAIRED CONDITION; 3) REPLANT WITH STOCK OF SAME SIZE AND QUALITY AS ORIGINALLY SPECIFIED; 4) GUY AND MAINTAIN AS SPECIFIED HEREIN AT NO ADDITIONAL COST TO THE OWNER.
B. REPLACEMENTS MADE WITHIN SIX MONTHS AFTER THE BEGINNING OF THE GUARANTEE PERIOD SHALL NOT EXTEND THE GUARANTEE PERIOD OF THESE PARTICULAR PLANTS. THOSE REPLACEMENTS MADE SIX MONTHS OR MORE AFTER THE BEGINNING OF THE GUARANTEE PERIOD SHALL BE MAINTAINED AND GUARANTEED FOR A PERIOD OF SIX MONTHS FROM THE TIME OF PLACEMENT.
- MULCH: PROVIDE MINIMUM 3" THICK LAYER OF BROWN SHREDDED BARK MULCH. MULCH SHALL BE USED ONLY AS TREE COLLARS AND IN PLANTING BED AS SHOWN ON THE PLAN.
- PRE-EMERGENT: 1) APPLY TO MULCH IN PLANTING AREAS TO PROHIBIT WEED GROWTH. IF WEEDS APPEAR IN TREATED AREAS DURING THE FIRST YEAR, LANDSCAPER SHALL RETURN TO REMOVE ALL WEEDS AT NO ADDITIONAL COST. 2) PROVIDE A MIXTURE WITH ACTIVE INGREDIENTS CONSISTING OF "A-AA-TRIFLUORO-2, 6-DINITRO-N, N-DIPROPYL-P-TOLUIDINE" (1.75% OF TOTAL MIXTURE) AND INACTIVE INGREDIENTS (98.25% OF TOTAL MIXTURE). MANUFACTURER: "GREEN GOLD" BY LEBANON CHEMICAL CORP. OR EQUAL.
- WEED BARRIER FABRIC: 1) APPLY TO PLANTING BEDS BELOW MULCH. 2) PROVIDE BLACK POLYPROPYLENE SHEET 27 MILS THICK, 4 OZ./SQ. YD., GRAB TENSILE STRENGTH PER ASTM D-4632; 90LB. (MACHINE DIRECTION) 50 LBS. (CROSS MACHINE DIRECTION). PROVIDE DEWITT "WEED BARRIER" OR APPROVAL EQUAL.
- WATER THOROUGHLY IMMEDIATELY AFTER PLANTING.

TOPSOIL NOTES

- ALL AREAS OF THE SITE WHICH ARE DISTURBED AND NOT PLANTED, MULCHED, PAVED, ETC. SHALL BE TOPSOILED AND SEEDING. TOPSOIL TO BE INSTALLED TO A MINIMUM 3" DEPTH IN AREAS OF SEED. SEED SHALL BE FRESH, CLEAN, NEW-CROP SEED MIXED IN WITH SPECIES AND VARIETY CONFORMING TO FEDERAL AND STATE STANDARDS.
 - PROVIDE AND INSTALL A MULCH ADEQUATE TO PROTECT THE SEEDING DURING ITS GROWING PERIOD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE APPROPRIATE MULCHING TECHNIQUES FOR THE PARTICULAR SITE CONDITIONS AND ACQUIRE APPROVAL OF THE SAME FROM THE OWNER.
 - TOPSOIL SHALL CONSIST OF FERTILE, FRIABLE, NATURAL LOAM FREE OF SUBSOIL, CLAY LUMPS, BRUSH, TWIGS, ENVIRONMENTAL CONTAMINANTS, STONES OR OTHER DELETERIOUS MATERIALS LARGER THAN 2" IN GREATEST DIMENSION.
 - PROPOSED TOPSOIL SHALL BE TESTED BY INDEPENDENT TESTING FACILITY WITH TEST RESULTS SUBMITTED TO THE ENGINEER FOR APPROVAL. CONTRACTOR SHALL PAY FOR ALL TESTING. ACCEPTANCE OF TOPSOIL SHALL BE BASED UPON TEST RESULTS. ONE TEST SHALL BE PERFORMED PER 100 C.Y. OF TOPSOIL.
- | SIEVE | PERCENT PASSING |
|---------|-----------------|
| 1/4" | 65-100 |
| 1" | 85-100 |
| NO. 200 | 20-60 |
- NATURAL TOPSOIL MAY BE AMENDED WITH APPROVED MATERIALS, BY APPROVED METHODS, TO MEET THE ABOVE SPECIFICATIONS.

SEEDING NOTES

- ALL AREAS TO BE SEEDING SHALL BE SOWN WITH THE FOLLOWING SEEDING MIX:
30% NASSAU KENTUCKY BLUEGRASS
25% BELMONT KENTUCKY BLUEGRASS
25% KENTUCKY BLUEGRASS
20% FINE TEXTURE RYE
- WEED SEED CONTENT SHALL NOT EXCEED 0.25%.
- THE SEED MIXTURE SHALL BE DISTRIBUTED BY MEANS OF HYDRO-SEEDING.
- THE FERTILIZER SHALL BE 5-10-5 COMMERCIAL GRADE FERTILIZER APPLIED AT THE MANUFACTURER'S RECOMMENDED APPLICATION RATE.
- SEEDING APPLICATION RATE SHALL BE 5 LBS PER 1,000 SQ. FT.
- WATER THOROUGHLY IMMEDIATELY AFTER SEEDING.



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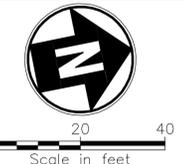
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LANDSCAPING PLAN

Designed By:	Drawn By:	Checked By:
ZTP	ZTP	BFB
Issue Date:	Project No.:	Scale:
06/15/16	30775	AS SHOWN

Drawing No.:
C-503

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**SARATOGA SPRINGS
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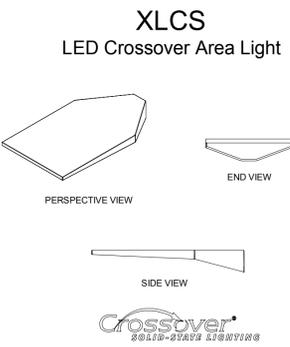
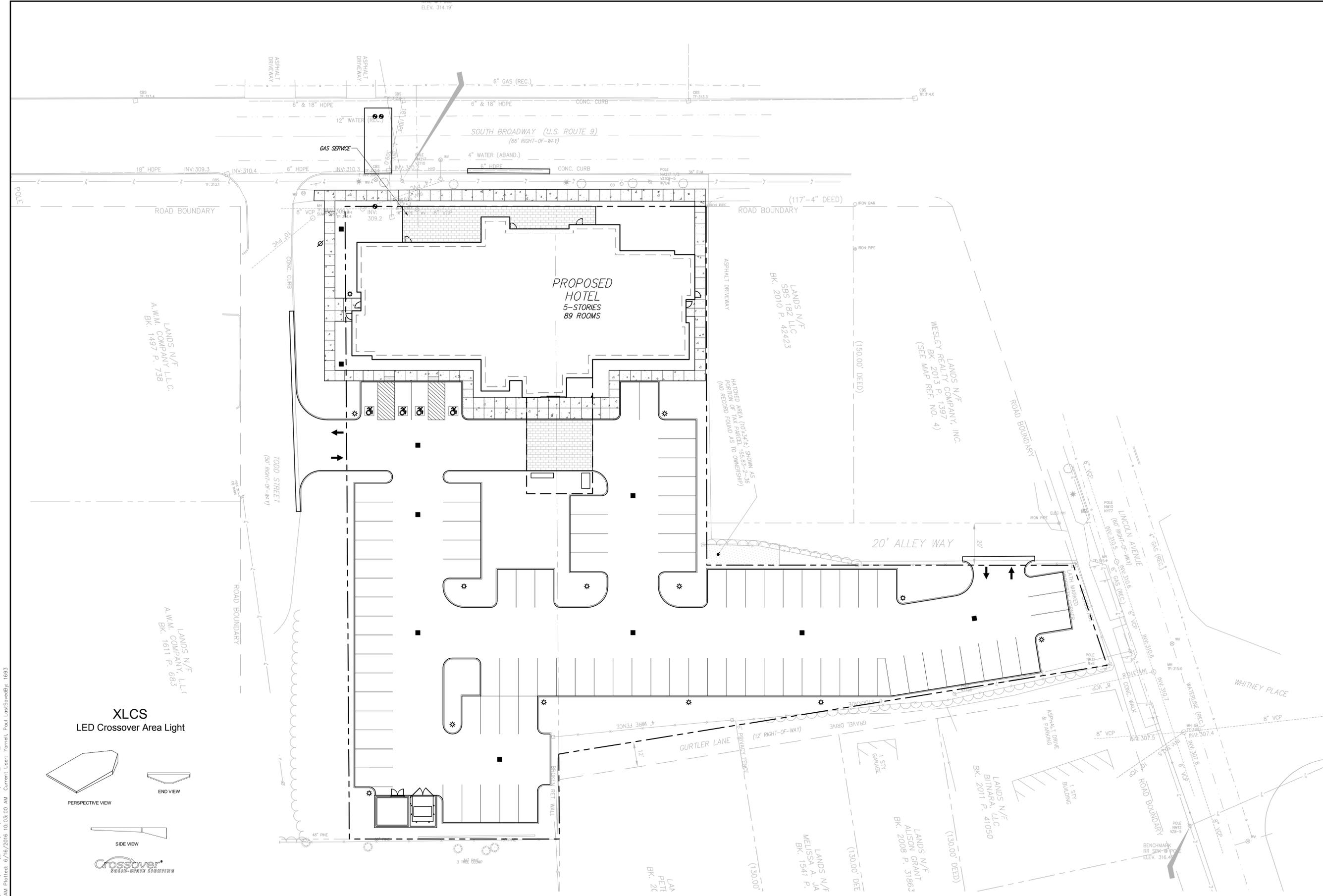
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**PHOTOMETRICS
 PLAN**

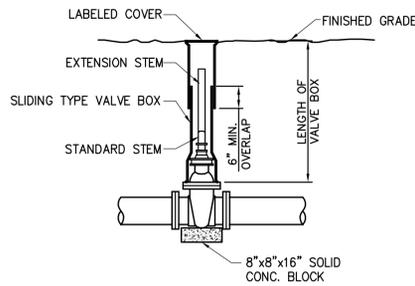
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Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-504



Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

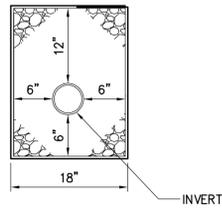
This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.



NOTES:

1. VALVE BOX COVERS SHALL BE CAST WITH AN ARROW POINTING TO THE DIRECTION OF THE OPENING AND THE WORD "OPEN". BOX AND COVER SHALL BE TAR COATED. INSTALLATION OF EXTENSION STEM REQUIRED IF STANDARD STEM IS MORE THAN FIVE (5) FEET FROM FINISHED GRADE.
2. GATE VALVE MUST MEET AWWA C509 REQUIREMENTS
3. ALL GATE VALVES 4 INCHES AND LARGER SHALL BE OPEN RIGHT (CLOCKWISE) WITH AN OPERATING NUT COLORED RED.
4. PROVIDE A MINIMUM OF ONE VALVE KEY TO UTILITY OWNER. SEE SPECIFICATIONS FOR EXACT NUMBER TO BE REQUIRED.

1 GATE VALVE
SCALE: N.T.S.



4 TYPICAL UNDERDRAIN SECTION
SCALE: N.T.S.

THRUST BLOCK NOTES

1. FOR REQUIRED BEARING AREA DIMENSIONS D & L SEE TABLE. DIMENSIONS OF D & L OTHER THAN THOSE SHOWN IN THE TABLE MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR LARGER THAN THAT REQUIRED.
2. CONCRETE NOT TO OVERLAP ANY JOINT.
3. CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.
4. APPROXIMATE VOLUME OF CONCRETE THRUST BLOCK:

$$V = \frac{LD(W+D) - ID}{81}$$

WHERE:

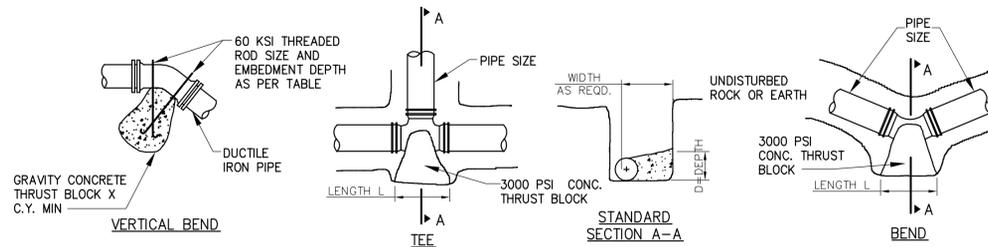
V = VOLUME IN CUBIC YARDS
L = LENGTH OF BLOCK IN FEET
D = DEPTH OF BLOCK IN FEET
W = WIDTH OF BLOCK IN FEET
ID = INSIDE DIAMETER OF PIPE IN FEET

5. VALUES FOR TEE ALSO APPLY TO END PLUGS, CAPS, AND TAPPING SLEEVES.
6. REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 150 PSI WORKING PRESSURE PLUS 50%(75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE. NORMAL PIPE DIAMETER USED.
7. REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 2000 LBS. PER SQUARE FOOT FOR SAND. DUE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE ENGINEER.
8. IN MUCK, PEAT, OR RECENTLY PLACED FILL ALL THRUST SHALL BE RESISTED BY PILES OR THE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

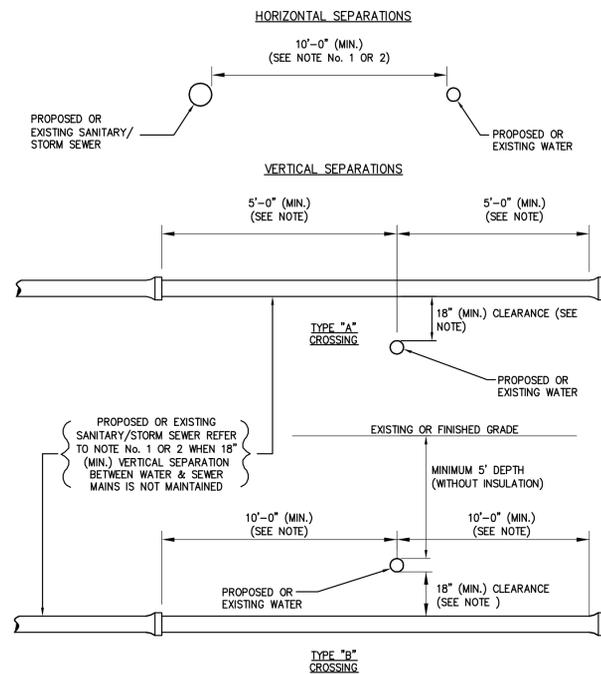
PIPE SIZE (IN.)	TEE (See Note 5)		90°(1/4)BEND		45°(1/8)BEND		22-1/2°(1/16)BEND		11-1/4°(1/32)BEND	
	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L
2,3,4	1.4	1.0 x 1.5	2.0	1.0 x 2.0	1.1	1.0 x 1.5	0.6	0.5 x 1.5	0.3	0.5 x 1.0
6	3.2	1.5 x 2.5	4.5	2.0 x 2.5	2.4	1.5 x 2.0	1.2	1.0 x 1.5	0.6	1.5 x 1.5
8	5.7	2.0 x 3.0	8.0	2.0 x 4.0	4.3	2.0 x 2.5	2.2	1.5 x 1.5	1.1	1.0 x 1.5

PIPE SIZE NOM DIA.(INCHES)	VERTICAL BEND DEGREES	NO. OF CUFF OF CONC. BLOCKING		DIA. OF SHAKKLE RODS(2")	DEPTH OF RODS IN CONC. (FEET)
		TOP	BOTTOM		
2,3,4	11 1/4'	8	2.0	3/4	1.6
	22 1/2'	16	2.5	3/4	1.6
6	11 1/4'	16	2.5	3/4	1.6
	22 1/2'	32	3.2	3/4	1.6
8	11 1/4'	28	3.0	3/4	1.6
	22 1/2'	55	3.8	3/4	1.6

PIPE SIZE NOM DIA.(INCHES)	NO. OF CUFF OF CONC. BLOCKING	SIDE OF CUBE (FEET)	DIA. OF SHAKKLE RODS(2")	DEPTH OF RODS IN CONC. (FEET)
6	59	3.9	3/4	1.6
8	102	4.7	3/4	1.6



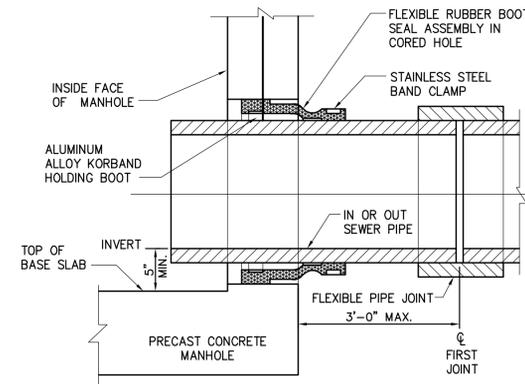
2 THRUST BLOCK DETAILS
SCALE: N.T.S.



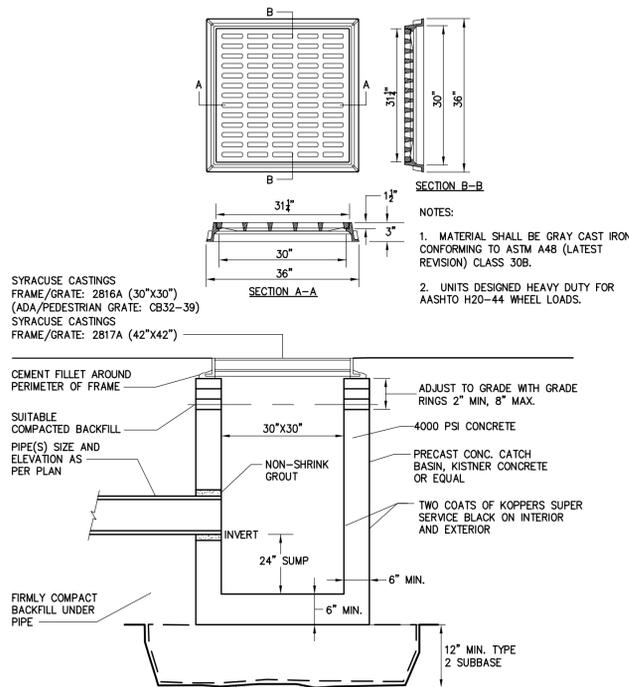
NOTE:

WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING METHOD MUST BE SPECIFIED: EITHER THE WATER OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING. MEASURED PERPENDICULAR TO THE WATER LINE. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE HEALTH DEPARTMENT FOR USE IN WATERMAIN CONSTRUCTION. STORM SEWER SYSTEM MUST ALSO MEET THESE REQUIREMENTS.

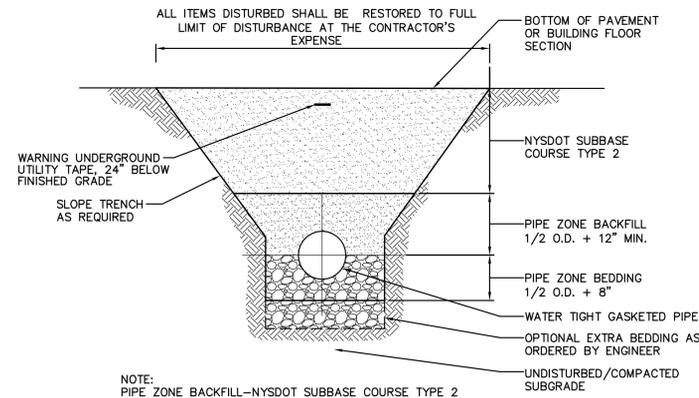
3 SEWER & WATER SEPARATION DETAIL
SCALE: N.T.S.



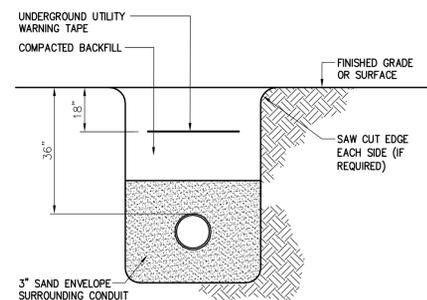
6 FLEXIBLE PIPE-TO-M.H. JOINT DETAIL FOR CONNECTION OF PROPOSED SANITARY SEWER LINE TO EXISTING MH
SCALE: N.T.S.



7 PRECAST CONCRETE KNOCKOUT CATCH BASIN DETAIL
SCALE: N.T.S.



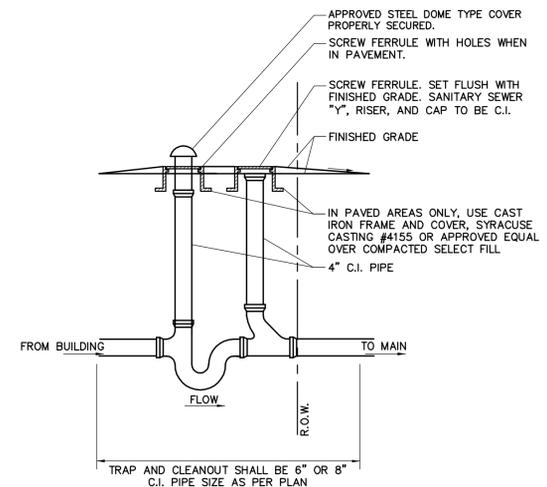
8 TYPICAL STORM, SANITARY, WATER TRENCH DETAIL
SCALE: N.T.S.



NOTES:

1. CONTRACTOR SHALL ENCASE FIBER OPTIC AND COMMUNICATION DUCT BANKS WITH 2,500 PSI CONCRETE WITHIN RIGHT OF WAY.
2. AN ADDITIONAL LINE OF WARNING TAPE SHALL BE INSTALLED JUST ABOVE DUCT WITHIN RIGHT-OF-WAY.

9 UNDERGROUND CONDUIT TRENCH
SCALE: N.T.S.



10 C.I. TRAP, VENT, AND CLEANOUT
SCALE: N.T.S.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT, ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL BE USED. THE SIGNATURE AND SEAL OF THE NOTATION ALTERED BY FOLLOWING BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

No.	Submital/Revision	Appr'd. By	Date

SITE DETAILS

Designed By:	Drawn By:	Checked By:
ZTP	ZTP	BFB
Issue Date:	Project No.:	Scale:
06/15/16	30775	AS SHOWN

Site Plan Review Application

Fairfield Inn & Suites

176 South Broadway
Saratoga Springs, NY

CHA Project Number: 30775

Prepared for:
Saratoga Springs Hotel Associates, LLC
11751 East Corning Road
Corning, NY 14830

Submitted to:
City of Saratoga Springs
Planning Board
Ms. Kate Maynard
Principal Planner

Prepared by:



*III Winners Circle
Albany, New York 12205*

Phone: [REDACTED]

June 16, 2016



June 16, 2016

Ms. Kate Maynard
Principal Planner
City Hall - 474 Broadway
Saratoga Springs, New York 12866

**RE: Fairfield Inn & Suites – 176 South Broadway
Site Plan Review Application
CHA Project No.: 30775**

Dear Ms. Maynard,

On behalf of Saratoga Springs Hotel Associates, LLC, CHA Consulting, Inc. (CHA) is pleased to provide this Application for Site Plan Review for a proposed Fairfield Inn & Suites Hotel at 176 South Broadway in Saratoga Springs, New York.

This submission includes the following:

- Project Narrative and Photographs
- Application for Site Plan Review
- Site Plan Review Submittal Checklist
- Short Environmental Assessment Form
- Complete Streets Application
- Site Plans
- Architectural Plans and Elevations
- Site Plan Review application fee (\$1,500 check payable to Commissioner of Finance)

Thank you, and if you have any questions, please call me at [REDACTED].

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Anthony P. Stellato, Jr.', is written over a white background.

Anthony P. Stellato, Jr. PE
Vice President

Attachments

cc: Tom Sawyer, Saratoga Springs Hotel Associates, LLC
Brian Bouchard, CHA

V:\Projects\ANY\K4\30775\Corres\Applications\Site Plan and SUP App-6-16-16\SPR2 Cover Letter.docx

Fairfield Inn & Suites – 176 South Broadway

Project Narrative

Project Background

Saratoga Springs Hotel Associates, LLC (the Applicant) is the contract vendee of property currently owned by Turf and Spa Motel, Inc. at 176 South Broadway in Saratoga Springs, New York. The property is comprised of approximately 1.4 acres situated on the east side of South Broadway, at the northeast corner of its intersection with Todd Street. The site is zoned T-5 Neighborhood Center Transect, and it is also located within the Architectural Review Overlay District.



View of site from South Broadway, looking northeast



View of site from South Broadway entrance, looking east

The Turf and Spa Motel (shown above), an operating 43-room, two-story seasonal motel currently occupies the site. The site also includes a free standing, single story spa, an outdoor, in-ground pool and parking for approximately 50 vehicles.

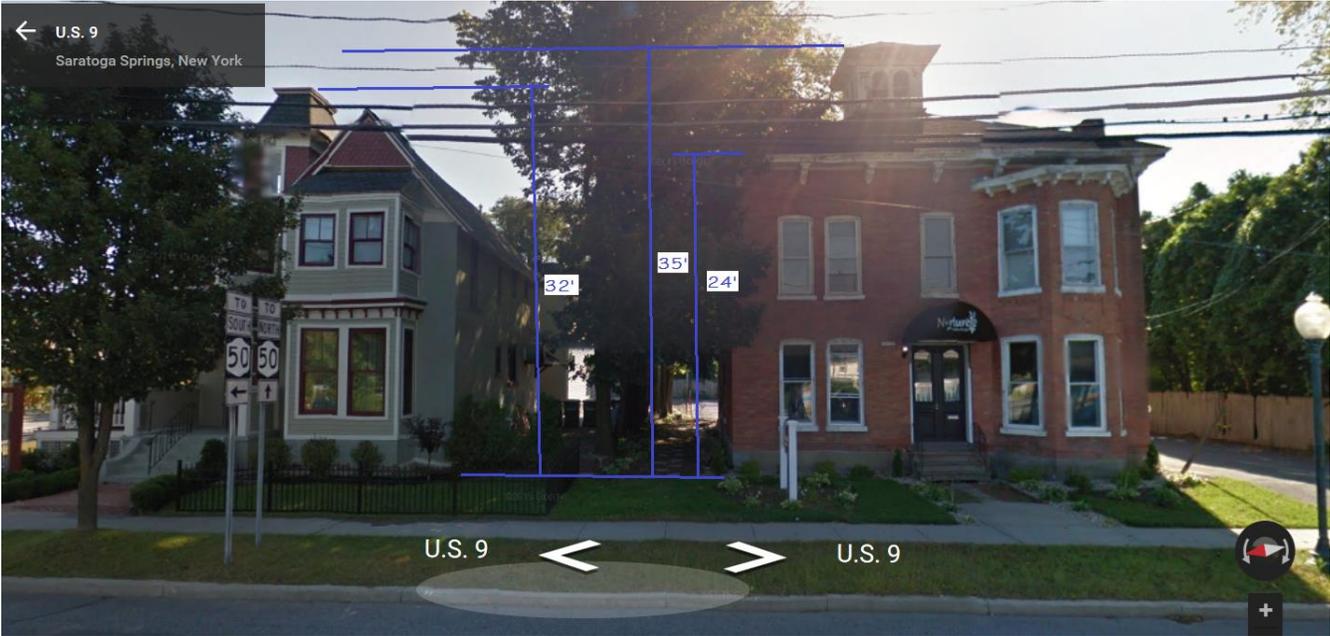
The site has approximately 172 feet of frontage and a curb cut for vehicular access on South Broadway. There is also frontage along Todd Street, Lincoln Avenue, Gurtler Lane (alley) and an unnamed alley from Lincoln Avenue running parallel with South Broadway; however, no access currently exists along any frontage other than South Broadway.

Adjacent properties on South Broadway include a retail plaza (Subway) to the south, Nurture Green Salon to the north and Duo Restaurant to the west. On Lincoln Avenue, neighboring properties include Thirsty Owl to the west and a dry cleaner on the east side of Gurtler Lane. Residential properties along Greenridge

Place back up to a shared alley (Gurtler Lane) along the east side of the site. Photos of adjacent properties are included below.



View of alley access from Lincoln Avenue, looking south



View of adjacent properties to the north on South Broadway with approximate existing building heights



View from Todd Street looking west toward South Broadway

Project Description

The Applicant proposes to construct a five-story, 50-foot high, 89-room Fairfield Inn & Suites Hotel on the site after demolition of the existing structures. The building will occupy a footprint of approximately 10,000 square feet, with a gross floor area of approximately 50,000 SF.

The building will be situated toward South Broadway, utilizing nearly all of the frontage in accordance with the City of Saratoga Springs Transect Zone Design requirements. The building design incorporates outdoor seating located adjacent to the public sidewalk, promoting connectivity to the pedestrian realm. The horizontal plane of the South Broadway building façade will vary, with the line nearest the street set back 5 feet from the back of sidewalk/property line. The front façade will step back away from the street at the north end of the building, respecting the setbacks of the neighboring buildings to the north and allowing room for an existing mature elm tree located near the street (see photo below).



View of 36” elm between curb and sidewalk at north end of South Broadway frontage

The main hotel entrance or porte-cochere will be located on the rear (east) façade, accessed from Todd Street, which will be reconstructed between South Broadway and the site entrance. Additionally, access to Lincoln Avenue will be provided via the existing unnamed alley that runs between the project site and the Thirsty Owl site.

Parking is proposed for 93 vehicles, which includes 1 space each for 89 rooms plus 0.5 spaces each for 8 employees, which is the maximum employee shift. Parking is compliant with Section 6.2.6 of the Zoning Ordinance. A dumpster enclosure will be provided in the southeast corner of the parking lot. Trash pickup will occur from the parking lot.

Site statistics are presented in the following table:

Site Coverage (Acres)

<u>Description</u>	<u>Existing</u>	<u>Proposed</u>
Buildings	0.17	0.23
Pavement/Parking Lot	0.39	0.75
Hardscape (Pool, Deck, Walks)	0.16	0.09
Green Area Total	<u>0.65</u>	<u>0.30</u>
TOTAL PROJECT AREA	1.37	1.37

Zoning Summary

The Project Site is located within the City of Saratoga Springs Transect Zone T-5, Neighborhood Center. The intent of this zone is to “to accommodate a wide variety of residential and non-residential uses, building and frontage types. This district also focuses on providing quality streetscape amenities and civic spaces to enhance pedestrian activity.” The zoning ordinance does not specifically allow any uses by right in this zone. A Special Use Permit from the Planning Board is required for this (or any) use.

The zoning ordinance requires Site Plan Approval for projects that propose more than 1,200 SF of additional impervious area. Therefore, Site Plan Approval will also be requested from the Planning Board.

The project complies with all bulk and area requirements of the zoning ordinance.

Utility Services

The water and sewer demand was calculated in accordance with NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems, dated March, 2014, as follows:

Water and Sewer Demand

<u>Description</u>	<u>Count</u>	<u>Units</u>	<u>GPD/unit</u>	<u>Demand</u>
Hotel	89	rooms	110	9,790 GPD

The Project will obtain water and sewer service from exiting public mains located on South Broadway. A new 3-inch domestic water service and 6-inch fire protection service will be extended from the existing City main. A new 6-inch sewer lateral will be provided for domestic wastewater. Existing utility services will be abandoned in accordance with City Department of Public Works standards. The building will be fully sprinklered, and there will be no kitchen in the hotel.

Existing electric and gas service is provided by National Grid from existing distribution lines located on South Broadway.

Stormwater Management

The project will require a temporary construction disturbance of 1.5 acres site plus off site disturbance for the construction of public sidewalk and utility connections. A Stormwater Pollution Prevention Plan (SWPPP) is required for the project, as Chapter 242 of the City of Saratoga Springs Code requires a SWPPP for ground disturbance of 0.1 acres or more. Likewise, coverage under State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities is required since the disturbance will be greater than 1 acre. A SWPPP will be prepared and submitted to the City MS4 Officer (City Engineer) for approval prior to construction.

Elevations on the site range from approximately elevation 320 at the southeast corner to approximately elevation 314 Along South Broadway. Runoff from the site is collected in a closed drainage system on site which connects to the municipal storm sewer on South Broadway. Post-construction storm water management measures will be incorporated into the final design to provide peak flow and water quality mitigation in accordance with the NYS Drainage Manual and the City Engineer's requirements.



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway

Saratoga Springs, New York 12866-2296

Tel: 518-587-3550 fax: 518-580-9480

<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR:
SITE PLAN REVIEW
(INCLUDING PUD)

(Rev: 12/2015)

*****Application Check List - All submissions must include completed application check list and all required items.**

Project Name: Saratoga Fairfield Inn & Suites

Property Address/Location: 176 Broadway, Saratoga Springs, NY 12866

Tax Parcel #: 178.27-1-44, 165.83-2-35 & 36 Zoning District: T-5 - Neighborhood Center
(for example: 165.52-4-37)

Proposed Use: Hotel

Date special use permit granted (if any): _____ Date zoning variance granted (if any): _____

Is property located within (check all that apply)?:

Historic District Architectural Review District
 500' of a State Park, city boundary, or county/state highway

	<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name	<u>Saratoga Spings Hotel Associates, LLC</u>	<u>Turf and Spa Motel Inc</u>	<u>CHA Consulting Inc</u>
Address	<u>11751 East Coming Road</u> <u>Coming NY 14830</u>	<u>176 Broadway</u> <u>Saratoga Springs, NY 12866</u>	<u>441 S. Salina Street</u> <u>Syracuse NY 13202</u>
Phone			
Email			

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Application Fee: A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

<input type="checkbox"/>	<u>Sketch Plan</u> -	\$250	\$ 250.00
<input checked="" type="checkbox"/>	<u>Final Site Plan Approval</u>		
	Residential -	\$250 plus \$150/unit	\$ _____
	Non-Residential -	\$.500 plus \$100/1,000 SQ. FT.	\$ 500.00 \$5,500.00
<input type="checkbox"/>	<u>Modification</u>		
	Residential -	\$250	\$ _____
	Non-Residential -	\$500	\$ _____
			Total \$ 1250.00 \$5,500.00

Submission Deadline - Check City's website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES NO . IF YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, lessee or purchaser under contract for the property, hereby request Site Plan Review by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.2 of the Zoning Ordinance of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: Thomas J. Sawyer Date: 6/10/16
Thomas J. Sawyer
Vice President of Construction

If applicant is not current owner, owner must also sign.

Owner Signature: Mat Cappel Date: 6-13-16



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
 Saratoga Springs, New York 12866-2296
 Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

Rev.12/2015

SITE PLAN REVIEW SUBMITTAL CHECKLIST

Project Name: _____

Listed below are the minimum submittal requirements for site plan review as set forth in The City of Saratoga Springs' Zoning Ordinance Appendix B. The Planning Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimum requirements are not met. Please complete the checklist below and provide with your submission.

REQUIRED ITEMS: *3 hard copies and 1 digital copy of ALL materials are required.

CHECK EACH ITEM	
<input type="checkbox"/>	1. Completed Site Plan Application (3 hard copies - *1 w/original signature - and 1 digital) and Fee
<input type="checkbox"/>	2. SEQR Environmental Assessment Form- short or long form as required by action.
<input type="checkbox"/>	3. Set of plans including: (3) large scale plans (sheets must be 24" x 36", drawn to a scale of not more than 1"=50 feet). One digital version of all submittal items (pdf) shall be provided.
IN PROGRESS <input type="checkbox"/>	4. Basic or Full Storm Water Pollution Prevention Plan as required per City Code Chapter 242.
N/A <input checked="" type="checkbox"/>	5. Copy of signed DPW water connection agreement for all projects involving new water connections to the City system
<input type="checkbox"/>	6. Engineering Report for Water and Sanitary
<input type="checkbox"/>	7. Complete Streets Checklist
IN PROGRESS <input type="checkbox"/>	8. Project Cost Estimate-Quantities of work items and estimate of costs

REQUIRED ITEMS ON SITE PLAN, AS APPLICABLE:

<input type="checkbox"/>	1. Property line survey prepared by a licensed land surveyor. Site plan must reference such survey with all corners set and marked on plan. A copy of the original property survey must also be included.
<input type="checkbox"/>	2. North arrow and map scale
<input type="checkbox"/>	3. Parcel tax map number
<input type="checkbox"/>	4. Site location map
<input type="checkbox"/>	5. Site vicinity map (all features within 300 feet of property)
<input type="checkbox"/>	6. Identification of zoning district with corresponding area requirements

<input type="checkbox"/>	7. Building setback lines, either listed or shown on plans.
<input type="checkbox"/>	8. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input type="checkbox"/>	9. Topography data tied to NGVD 1929 datum
<input type="checkbox"/>	10. Name of all adjacent property owners
<input type="checkbox"/>	11. Parcel street address (existing and any proposed postal addresses)
Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	12. Identification of all existing or proposed easements, covenants or legal rights-of-way on this property
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. References to all prior variances or special use permits
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Existing and proposed contours and spot grades (at 2 foot intervals)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Identification of all spoil or borrow areas
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all watercourses, designated State wetlands, buffers, Federal wetlands, floodplains, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Location of proposed storage
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location and distance to fire hydrant
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location, size, and material of all existing and proposed utility services
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Parking lot layout plan and identification of all loading areas (number all spaces)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking demand calculations
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Location and screening plan for dumpster or recycling bins
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	26. Location, design, type of construction and materials, proposed use and exterior dimensions of all buildings (existing and proposed) on site
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. Identification of storage of any potentially hazardous materials
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	28. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input type="checkbox"/> IN PROGRESS <input type="checkbox"/>	29. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Erosion and sediment control plan – including designated concrete truck washout area

Checklist prepared by: Brian Bouchard (CHA Consulting, Inc.) Date: 6-16-16

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: Saratoga Fairfield Inn & Suites				
Project Location (describe, and attach a location map): 176 Broadway, Saratoga Springs, NY 12866				
Brief Description of Proposed Action: Construction of a 5-story hotel and related site improvements, including sidewalks, parking areas, landscaping, lighting, and site utilities.				
Name of Applicant or Sponsor: CHA Consulting Inc (c/o Brian Bouchard)		Telephone: [REDACTED] E-Mail: [REDACTED]		
Address: 441 S. Salina Street				
City/PO: Syracuse		State: NY	Zip Code: 13202	
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.			NO	YES
			X	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: NYSDEC - SPDES, NYSDOT PERM 33-COM,			NO	YES
				X
3.a. Total acreage of the site of the proposed action?		1.37 acres		
b. Total acreage to be physically disturbed?		1.50 acres		
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		1.37 acres		
4. Check all land uses that occur on, adjoining and near the proposed action.				
<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban)				
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____				
<input type="checkbox"/> Parkland				

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____</p>	<p>NO</p> <p>X</p>	<p>YES</p>
<p>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: _____ _____ _____</p>	<p>NO</p> <p>X</p>	<p>YES</p>
<p>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: _____ _____ _____</p>	<p>NO</p> <p>X</p>	<p>YES</p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: <u>Brian Bouchard</u> Date: <u>6-16-16</u></p> <p>Signature: _____</p>		

City of Saratoga Springs Complete Streets Checklist

Saratoga Springs Complete Street Policy Vision (May 2012)

The City of Saratoga Springs Complete Streets Policy will encourage the development of a complete streets network throughout the City to create a more balanced transportation system. The Policy shall be consistent with and assist in achieving the goals and recommendations set forth in the City's Comprehensive Plan and other policy documents. The Policy shall ensure new and updated public and private projects are planned, designed, maintained and operated to enable safer, comfortable and convenient travel to the greatest extent possible for users of all abilities including pedestrians, bicyclists, motorists and transit riders.

This checklist is intended to assist the City in achieving its vision for complete streets.

Project Name: Saratoga Fairfield Inn & Suites **Date:** 6-16-16

Project Location / Limits: 176 S. Broadway

Project Description: Construction of a 5-story Fairfield Inn & Suites Hotel

Instructions: For each box checked, please provide a brief description for how the item is addressed, not addressed, or not applicable and include supporting documentation.

Street Classification (identify street or streets within the project area)

Principal arterial Minor arterial Mixed use collector Mixed use local
 Residential collector Residential local Special use street

EXISTING CONDITIONS				
Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
<i>Existing Bicycle & Pedestrian Operations</i>				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing sidewalks
<i>Existing Transit Operations</i>				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the project area on a transit route? (CDTA Service Routes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Northway Express
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existing Access and Mobility</i>				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Via Bus Routes
Are there gaps inhibiting continuous access between schools, hospitals, senior care, or community centers or persons with disabilities within project area?"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Project Area Context</i>				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing sidewalks
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: City of Saratoga Springs Comprehensive Plan , City of Saratoga Springs Open Space Plan , Capital District Transportation Committee Bicycle/ Pedestrian Priority Network , City Standard Details , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bike Rack can be provided on site
Pedestrian accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks provided
Access and Mobility accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ADA access
Transit accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Streetscape elements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Streetscape and Patio

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable actuated traffic signal bike detection, including turn lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable consideration/provision for accessible pedestrian traffic signal features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Pedestrian Facilities:	
Sidewalks on both sides of the street	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Geometric modifications to reduce crossing distances such as curb extensions (e.g. bulb-outs)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable provision for pedestrian traffic signal features (e.g. ped. buttons)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Safety islands/medians on roadways with two or more traffic lanes in each direction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to any key destinations listed on page 1?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to neighborhoods?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Design Standards and Guidelines

Design meets guidelines such as described below for bicycle/pedestrian/bus/transit facilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Describe ADA access to street
--	------------------------------	-----------------------------	-----------------------------	-------------------------------

**American Association of State Highway and Transportation Officials (AASHTO) - A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities and AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities; Public Right-of-Way Accessibility Guide (PROWAG); Manual on Uniform Traffic Control Devices (MUTCD); Americans with Disabilities Act Accessibility Guidelines (ADAAG); National Association of City Transportation Officials (NACTO) - Urban Bikeway Design Guide. New York State Department of Transportation - Highway Design Manual*

PROPOSED HOTEL

SOUTH BROADWAY, U.S. ROUTE 9

CITY OF SARATOGA SPRINGS

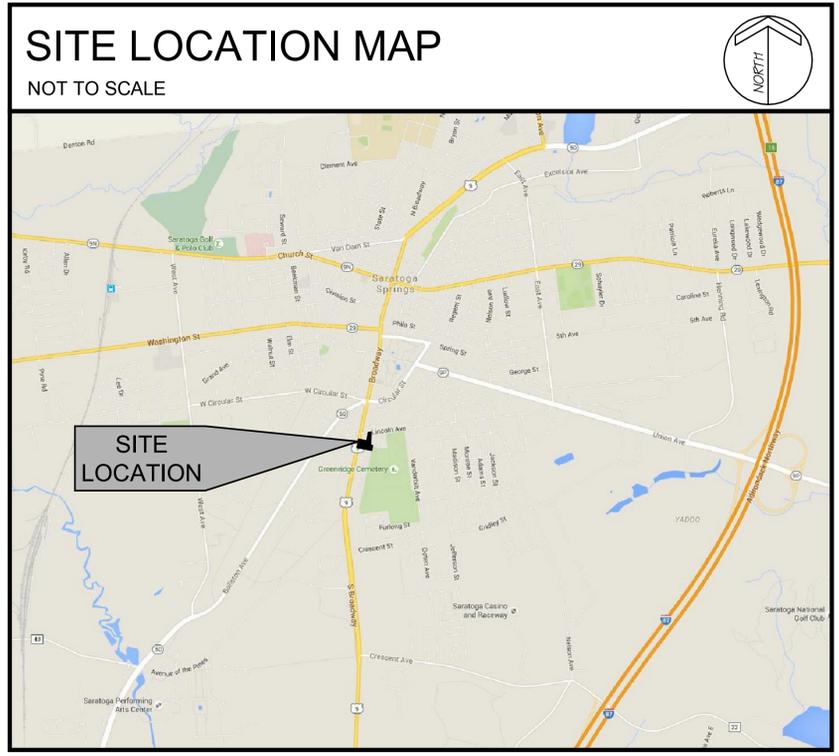
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PROPOSED HOTEL
 176 SOUTH BROADWAY
 SARATOGA SPRINGS, NY 12866
 SARATOGA COUNTY



SHEET NUMBER	SHEET TITLE
C-001	TITLE SHEET
C-002	GENERAL NOTES AND LEGEND
C-003	EXISTING CONDITIONS PLAN
C-004	DEMOLITION PLAN
C-101	SITE PLAN
C-201	GRADING AND DRAINAGE PLAN
C-301	UTILITY PLAN
C-501	EROSION AND SEDIMENT CONTROL PLAN
C-502	EROSION AND SEDIMENT CONTROL DETAILS
C-503	LANDSCAPING PLAN
C-504	PHOTOMETRICS PLAN
C-601	SITE DETAILS
C-602	SITE DETAILS
C-603	SITE DETAILS

JUNE 2016

OWNER:
**SARATOGA SPRINGS
 HOTEL ASSOCIATES, LLC**



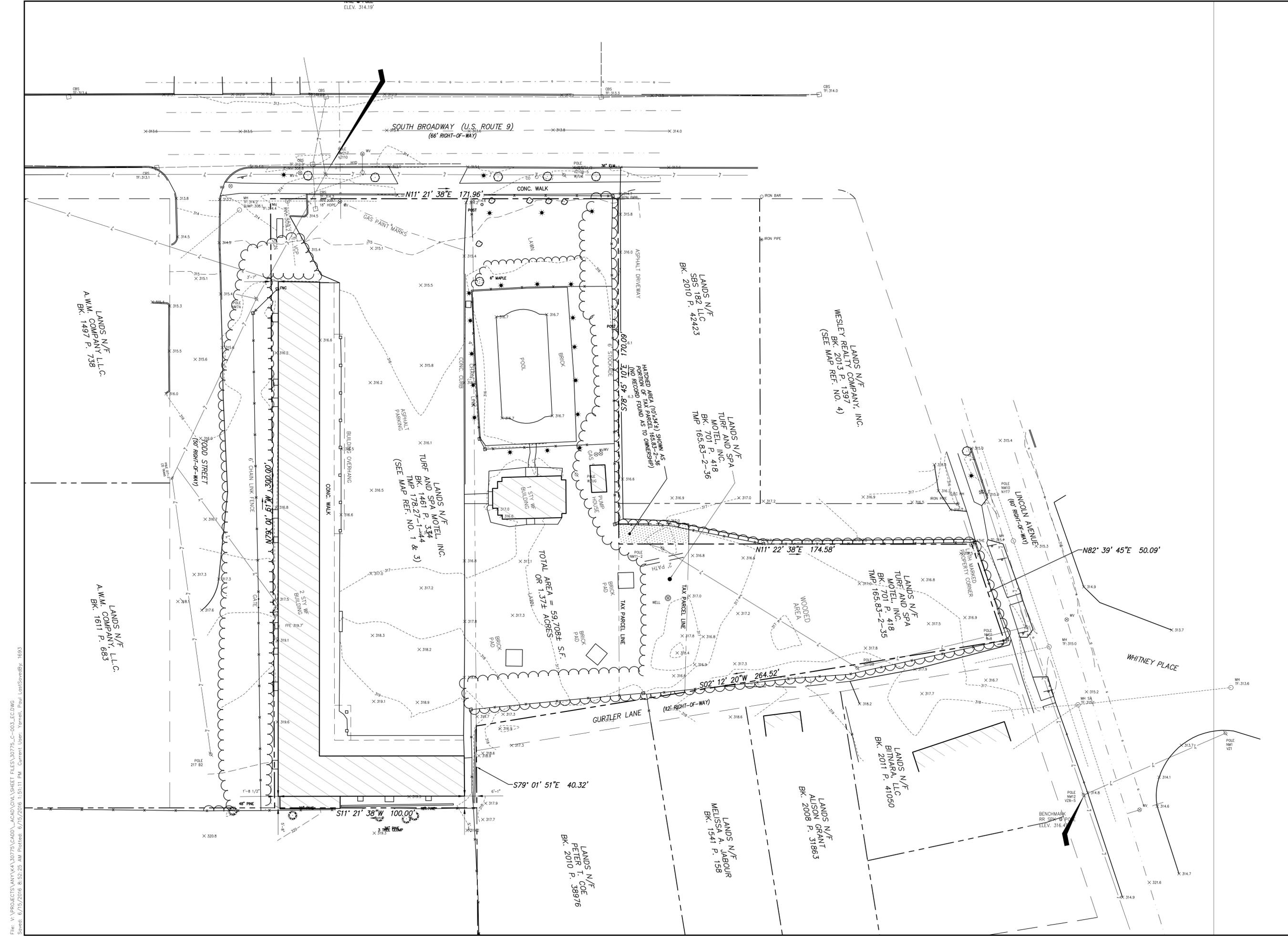
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TITLE SHEET

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Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

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 SARATOGA COUNTY

No.	Submission/Revision	Date	Appr. By	Date

EXISTING CONDITIONS PLAN

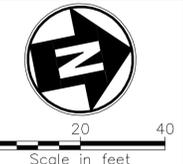
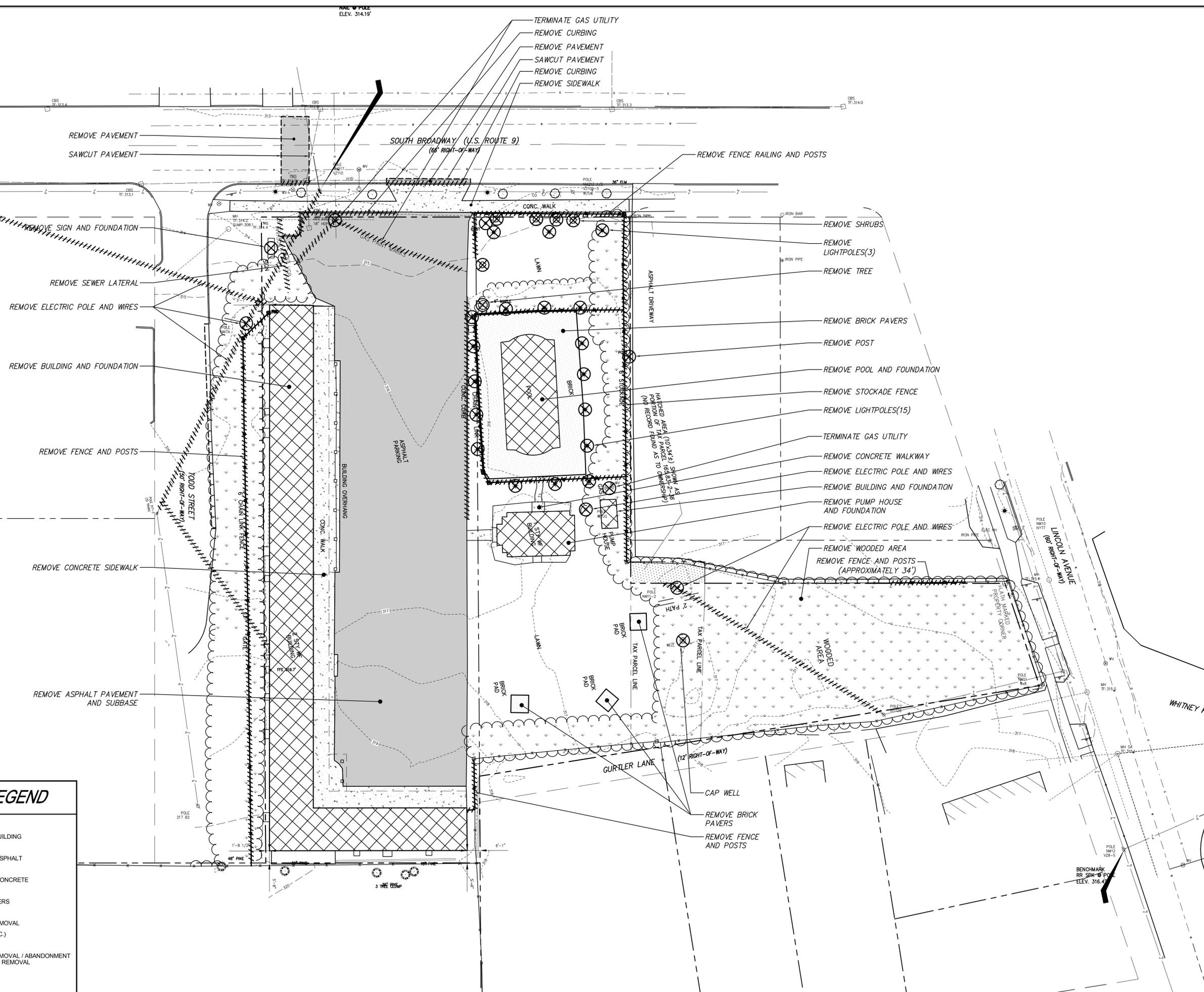
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C-003

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DEMOLITION LEGEND

-  - REMOVE EXISTING BUILDING
-  - REMOVE EXISTING ASPHALT
-  - REMOVE EXISTING CONCRETE
-  - REMOVE BRICK PAVERS
-  - MISCELLANEOUS REMOVAL (TREE, SIGN, ETC.)
-  - UTILITY SERVICE REMOVAL / ABANDONMENT OR LINEAR FEATURE REMOVAL



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DEMOLITION PLAN

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Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-004

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ZONING REGULATIONS FOR DEVELOPMENT

EXISTING LOT INFORMATION: ZONED T-5 NEIGHBORHOOD CENTER

ADDRESS	TAX MAP	ACREAGE
176 S. BROADWAY (LAND LOCKED)	178.27-1-44 165.83-2-36	1.105 0.058
LINCOLN AVENUE	165.83-2-35	0.207
TOTAL AREA		1.370

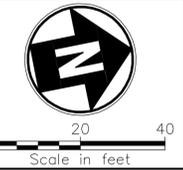
BUILDING FOOTPRINT AREA: 10,000 SF
 BUILDING GROSS FLOOR AREA: 50,000 SF (5 FLOORS)

COVERAGE REQUIREMENTS:	REQUIRED	EXISTING	PROVIDED
BUILDING COVERAGE:		12.4%	20.1%
IMPERVIOUS LOT COVERAGE:		52.3%	78.4%
BUILDOUT ALONG FRONTAGE:	70% MIN		93.6%
GREEN SPACE IN PARKING LOT:	10% MIN		10.0%

SET BACK REQUIREMENTS:	REQUIRED	PROPOSED
FRONT:	0-12'	5'
SIDE:	0'	5'
REAR:	0'	209'

PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING SPACE SIZE:	9' X 18'	9' X 18'
TOTAL NUMBER OF SPACES PROVIDED*		= 93 SP.

* PARKING BASED ON 1 SPACE/ROOM (89 ROOMS) AND 4 EMPLOYEE SPACES



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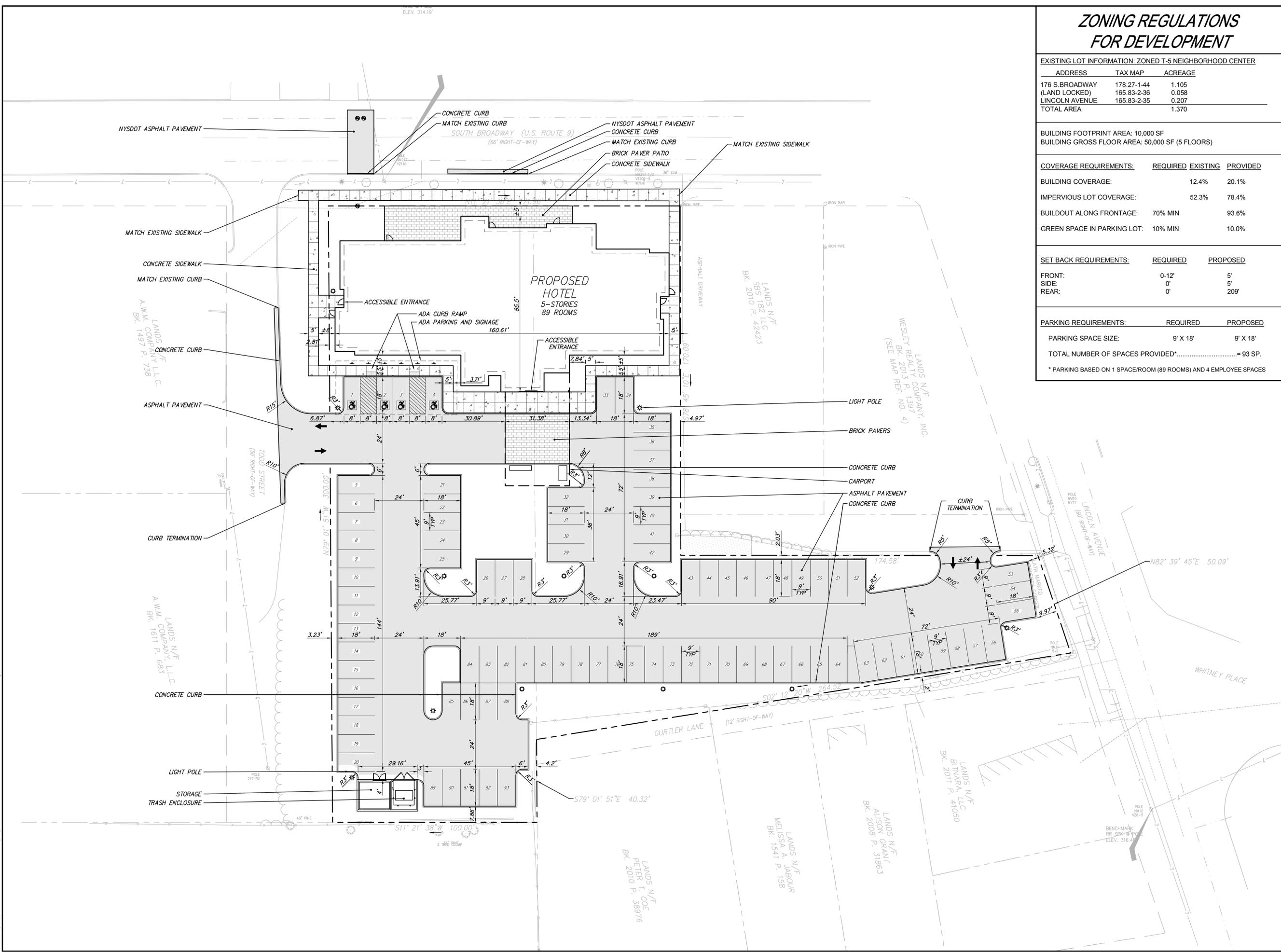
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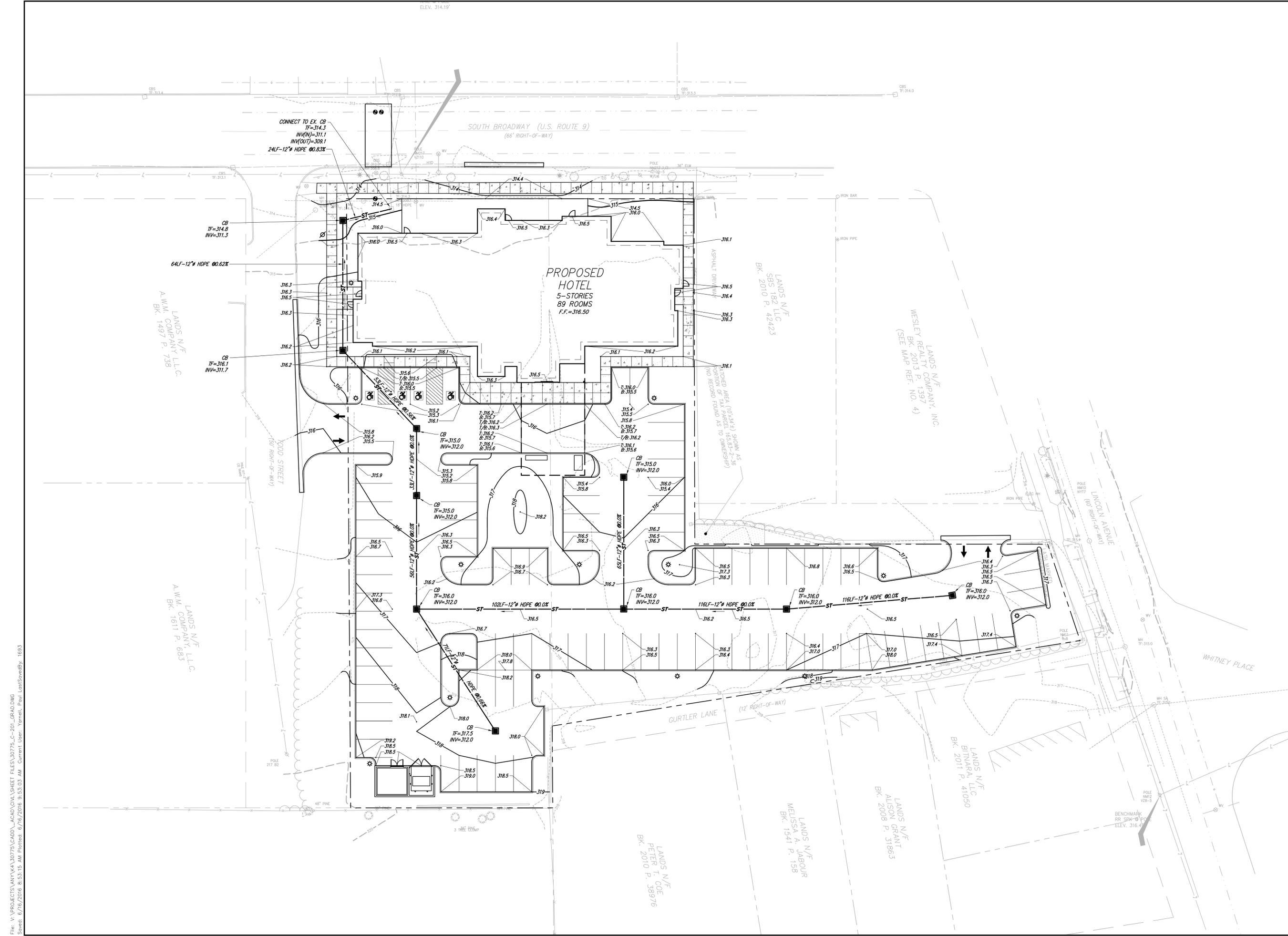
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SITE PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-101





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STATE OF NEW YORK
PROFESSIONAL ENGINEER
No. 081584

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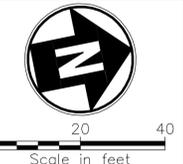
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SARATOGA COUNTY

No.	Submittal / Revision	Date	Appr. By	Date

GRADING AND DRAINAGE PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB	
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN	

Drawing No.:
C-201



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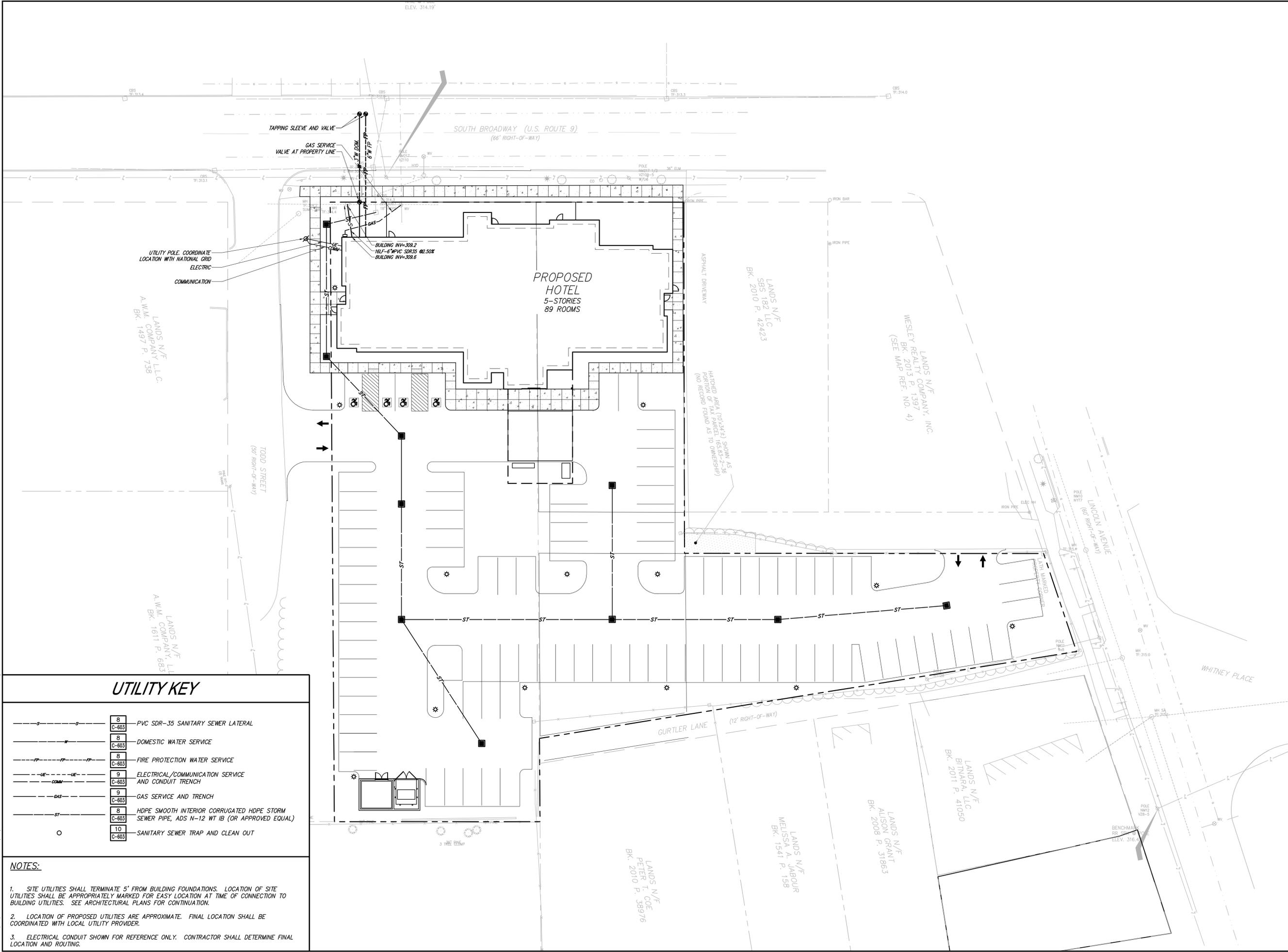
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UTILITY PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

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C-301

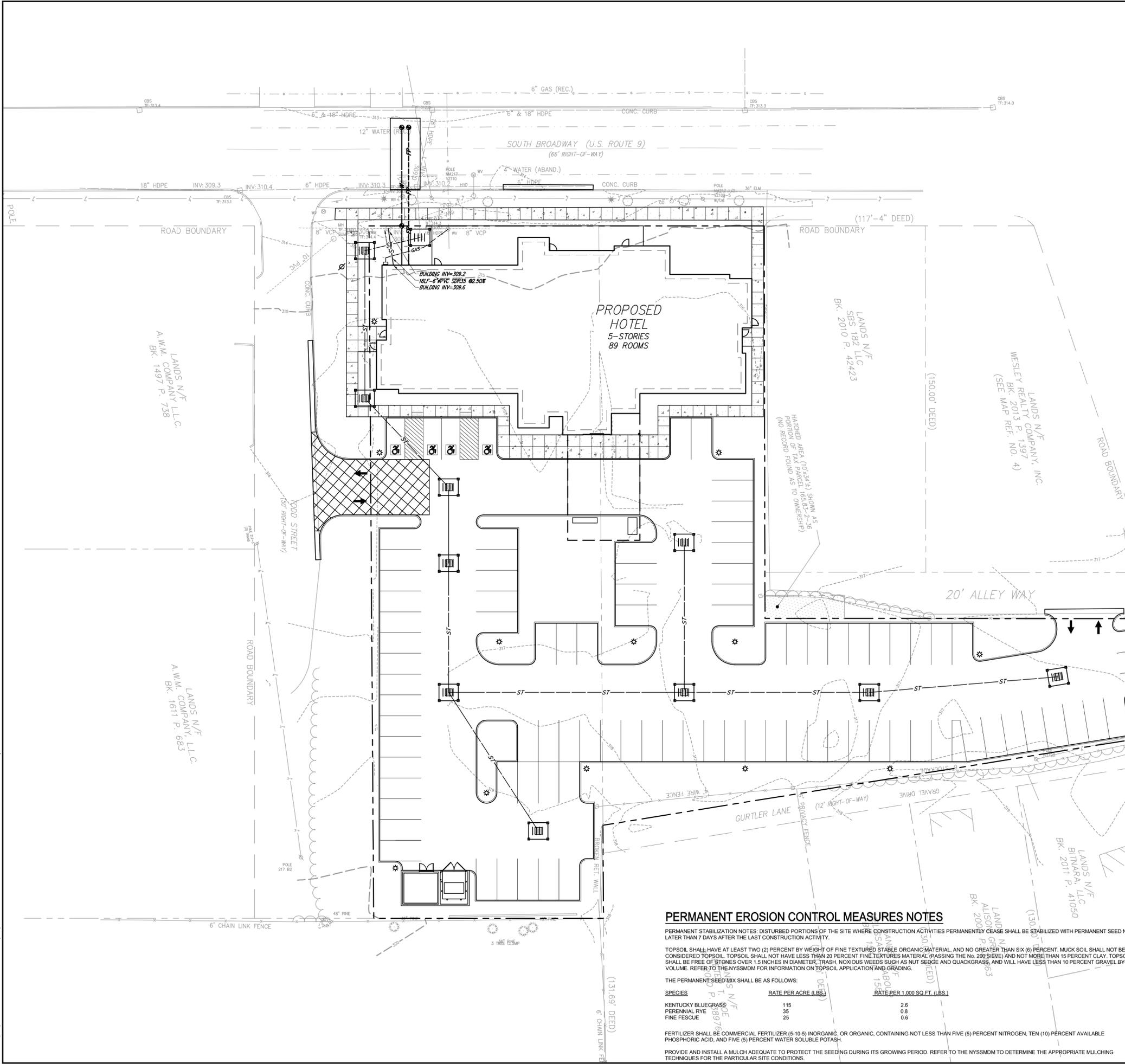


UTILITY KEY

	8 C-603	PVC SDR-35 SANITARY SEWER LATERAL
	8 C-603	DOMESTIC WATER SERVICE
	8 C-603	FIRE PROTECTION WATER SERVICE
	9 C-603	ELECTRICAL/COMMUNICATION SERVICE AND CONDUIT TRENCH
	9 C-603	GAS SERVICE AND TRENCH
	8 C-603	HDPE SMOOTH INTERIOR CORRUGATED HDPE STORM SEWER PIPE, ADS N-12 WT 18 (OR APPROVED EQUAL)
	10 C-603	SANITARY SEWER TRAP AND CLEAN OUT

- NOTES:**
1. SITE UTILITIES SHALL TERMINATE 5' FROM BUILDING FOUNDATIONS. LOCATION OF SITE UTILITIES SHALL BE APPROPRIATELY MARKED FOR EASY LOCATION AT TIME OF CONNECTION TO BUILDING UTILITIES. SEE ARCHITECTURAL PLANS FOR CONTINUATION.
 2. LOCATION OF PROPOSED UTILITIES ARE APPROXIMATE. FINAL LOCATION SHALL BE COORDINATED WITH LOCAL UTILITY PROVIDER.
 3. ELECTRICAL CONDUIT SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL DETERMINE FINAL LOCATION AND ROUTING.

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EROSION & SEDIMENT CONTROL SPECIFICATION

ONE WEEK PRIOR TO BEGINNING EARTHWORK OPERATIONS, A PRE-CONSTRUCTION MEETING WILL BE HELD TO DISCUSS THE EROSION AND SEDIMENT CONTROL PLAN, AND TO FINALIZE THE PAPER WORK FOR THE STORM WATER POLLUTION PREVENTION PLAN AS SPECIFIED IN THE NYS DEC STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) GENERAL PERMIT FOR STORM WATER DISCHARGE FROM CONSTRUCTION ACTIVITIES (GP-0-15-002).

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED PRIOR TO BEGINNING ANY LAND DISTURBANCE ACTIVITIES. THE DEVICES PROVIDING PROTECTION TO A GIVEN AREA SHALL NOT BE REMOVED UNTIL THE LANDS IN THAT AREA ARE STABILIZED.

NO DISTURBED AREA SHALL REMAIN EXPOSED FOR MORE THAN 7 CALENDAR DAYS, EXCEPT FOR PORTIONS OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND 7 DAYS (I.E. THE BUILDING FOOTPRINT).

CONSTRUCTION SEQUENCE:

- GENERAL NOTES:**
- SEDIMENT TRAPS/BASINS MAY BE CONSTRUCTED AS NECESSARY PER BLUE BOOK GUIDELINES.
 - SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPES WITH BUFFER AREAS PER BLUE BOOK GUIDELINES.
 - BACKFILL SHALL BE PLACED ON THE UPSTREAM SIDE OF ALL TRENCHES DURING UTILITY CONSTRUCTION.
 - PROTECT ALL EXISTING STORM SEWER FACILITIES/ROADWAYS ADJACENT TO THE SITE FROM SEDIMENT TRANSPORT.
- SEQUENCE:**
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN. LIMIT ALL VEHICULAR TRAFFIC TO THIS ENTRANCE ONLY.
 2. PROTECT EXISTING DRAINAGE SYSTEM ALONG ADJACENT ROADWAYS.
 3. INSTALL SILT FENCE AS SHOWN. ADDITIONAL SILT FENCING MAY BE INSTALLED AS NECESSARY.
 4. ROUGH GRADE PER DESIGN AND BEGIN BUILDING FOUNDATION CONSTRUCTION.
 5. PROVIDE SILT FENCING AROUND PERIMETER OF STAGED/STOCKPILED TOP SOIL AND/OR TEMPORARY STAGED PILE OR FILL.
 6. SWALES/DIKES SHALL BE CONSTRUCTED AS NEEDED TO PROVIDE POSITIVE DRAINAGE.
 7. INSTALL STORM SEWER AND UTILITIES. TRENCHES SHALL BE BACKFILLED/COMPACTED AND STABILIZED IMMEDIATELY AFTER BACKFILL OPERATION.
 8. ALL GRADED AREAS ARE TO BE SEEDED AND MULCHED FOR VEGETATIVE COVER IMMEDIATELY UPON COMPLETION OF EARTHWORK OPERATION.
 9. CONSTRUCT ACCESS DRIVES AND PARKING LOTS.
 10. COMPLETE FINAL GRADING AND INSTALL PERMANENT SEEDING, MULCH AND LANDSCAPING.
 11. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND GROUND IS STABILIZED, REMOVE TEMPORARY EROSION CONTROL MEASURES AND RESEED ANY DISTURBED AREAS CREATED BY THEIR REMOVAL.

INSPECTION PROCEDURES & MAINTENANCE:

1. DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL FACILITIES. ALSO, AREAS THAT HAVE BEEN SEEDING WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS.
2. INSPECTIONS OF ALL DEVICES SHALL BE COMPLETED WEEKLY. REPAIRS SHOULD BE COMPLETED IMMEDIATELY UPON DISCOVERY OF DEFICIENCIES.
3. THE OWNER WILL DESIGNATE A QUALIFIED PERSON(S) TO PERFORM THE FOLLOWING INSPECTIONS:
 - A. STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT.
 - B. STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN, WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UP-SLOPE SIDE OF THE FILTER FABRIC.
 - C. DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.
 - D. CONSTRUCTION ENTRANCES: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
4. ALL SEEDED AREAS SHALL BE MAINTAINED AS FOLLOWS:
 - A. IDENTIFY SEEDED AREAS WITH STAKES, STRING AND BRIGHTLY COLORED FLAGGING. PROTECT SEEDED AREAS UNTIL VEGETATION HAS BEEN ESTABLISHED.
 - B. IMMEDIATELY RESEED AREAS WHICH DO NOT ESTABLISH VEGETATION.

PERMANENT EROSION CONTROL MEASURES NOTES

PERMANENT STABILIZATION NOTES: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

TOPSOIL SHALL HAVE AT LEAST TWO (2) PERCENT BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN SIX (6) PERCENT MUCK SOIL SHALL NOT BE CONSIDERED TOPSOIL. TOPSOIL SHALL NOT HAVE LESS THAN 20 PERCENT FINE TEXTURES MATERIAL (PASSING THE No. 200 SIEVE) AND NOT MORE THAN 15 PERCENT CLAY. TOPSOIL SHALL BE FREE OF STONES OVER 1.5 INCHES IN DIAMETER, TRASH, NOXIOUS WEEDS SUCH AS NUT SEEDS AND QUACKGRASS, AND WILL HAVE LESS THAN 10 PERCENT GRAVEL BY VOLUME. REFER TO THE NYSSMDM FOR INFORMATION ON TOPSOIL APPLICATION AND GRADING.

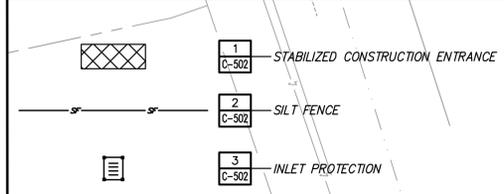
THE PERMANENT SEED MIX SHALL BE AS FOLLOWS:

SPECIES	RATE PER ACRE (LBS)	RATE PER 1,000 SQ. FT. (LBS)
KENTUCKY BLUEGRASS	115	2.6
PERENNIAL RYE	35	0.8
FINE FESCUE	25	0.6

FERTILIZER SHALL BE COMMERCIAL FERTILIZER (5-10-5) INORGANIC, OR ORGANIC, CONTAINING NOT LESS THAN FIVE (5) PERCENT NITROGEN, TEN (10) PERCENT AVAILABLE PHOSPHORIC ACID, AND FIVE (5) PERCENT WATER SOLUBLE POTASH.

PROVIDE AND INSTALL A MULCH ADEQUATE TO PROTECT THE SEEDING DURING ITS GROWING PERIOD. REFER TO THE NYSSMDM TO DETERMINE THE APPROPRIATE MULCHING TECHNIQUES FOR THE PARTICULAR SITE CONDITIONS.

EROSION AND SEDIMENT CONTROL KEY



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CHA
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0 20 40
Scale in feet

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PROPOSED HOTEL
 176 SOUTH BROADWAY
 SARATOGA SPRINGS, NY 12866
 SARATOGA COUNTY

No.	Submittal / Revision	Appr. By	Date

EROSION AND SEDIMENT CONTROL PLAN

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.: **C-501**

PLANT SCHEDULE*

SYMBOL	QTY	GENUS & SPECIES	COMMON NAME	PLANTING SIZE (AS NOTED)	ROOT	MATURE SIZE (HEIGHT x WIDTH)	NOTES
TREES							
AR	5	Acer rubrum 'Frank Jr.'	Redpointe® Red Maple	2-2.3" CAL.	B&B	40' x 30'	Red in Fall
BN	3	Betula nigra 'Cully'	Heritage® River Birch Multi	10-12' HT., Clump	B&B	50' x 50'	Peeling Bark
PP	20	Picea pungens glauca	Colorado Blue Spruce	10-12' HT.	B&B	50' x 20'	Evergreen
PA	59	Picea abies 'Cupressina'	Columnar Norway Spruce	6-7' HT.	B&B	20' x 5'	Evergreen
PS	2	Prunus sargentii columnaris	Columnar Sargent Cherry	2-2.5" CAL.	B&B	20' x 15'	Pink-White Flowers in Spring
PC	4	Pyrus calleryana 'Glen's Form'	Chanticleer® Callery Pear	2-2.5" CAL.	B&B	30' x 15'	White Flowers in Spring
SHRUBS, PERENNIALS & BULBS							
AM	59	Achillea millefolium 'Summerwine'	Summerwine Yarrow	1 GAL.	CONT.	2' x 3'	Red Flowers in Summer
EP	45	Echinacea purpurea 'Tiki Torch'	Tiki Torch Coneflower	3 GAL.	CONT.	3' x 2'	Orange Flowers All Summer
HA	72	Hemerocallis x 'Alabama Jubilee'	Alabama Jubilee Daylily	2 GAL.	CONT.	3' x 2'	Orange Flowers All Summer
IV	36	Ilex verticillata 'Red Sprite' (female)-40 / 'Jim Dandy' (male)-5	Red Sprite Winterberry	5 GAL.	CONT.	4' x 4'	Evergreen, Red berries in winter
LM	96	Liriope muscari	Lily Turf	1 GAL.	CONT.	12" x 2"	Purple Flowers in Late Summer
ND	20	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	5 GAL.	CONT.	4' x 3'	Evergreen, Red Berries in Fall & Winter
PV	6	Panicum virgatum 'Heavy Metal'	Heavy Metal Blue Switch Grass	3 GAL.	CONT.	3' x 3'	Ornamental Grass
RR	20	Rosa x 'Radtko'	Red Double Knock Out® Rose	3 GAL.	CONT.	4' x 4'	Bright Red Flowers All Summer
NF	9	Nepeta faassenii 'Novanepjun'	Junior Walker™ Catmint	3 GAL.	CONT.	15" x 4"	Purple Flowers in Summer
AL	83	Allium moly	Golden Garlic Ornamental Onion	-	BULB	18"x10"	Yellow Flowers in Summer
NK	83	Narcissus 'King Alfred'	Trumpet Daffodil	-	BULB	16"x6"	Yellow Flowers in Spring

FOOTNOTES:
 * ALL PLANT SPACING IS AS SHOWN ON PLAN. BULBS TO BE PLANTED 12" O.C.

LANDSCAPE NOTES

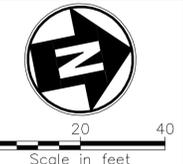
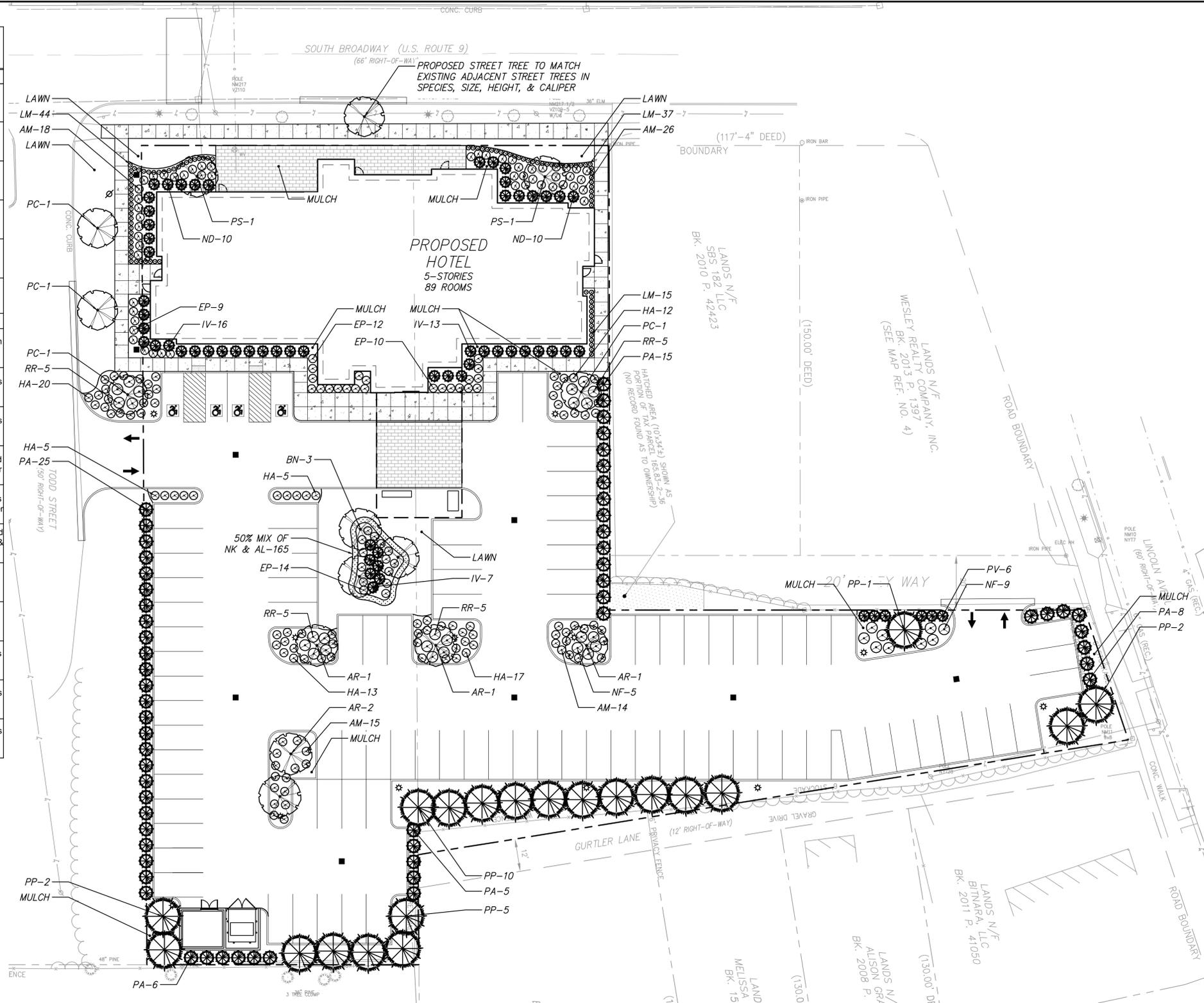
- THE CONTRACTOR SHALL SUPPLY PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN. ANY DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANT SCHEDULE AND THOSE REQUIRED BY THE CONTRACT DRAWINGS SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL REMUNERATION.
- THE CONTRACTOR SHALL VERIFY AND VISUALLY INSPECT FINAL SELECTION OF PLANT MATERIALS WITH THE OWNER PRIOR TO INSTALLATION.
- ALL PLANTING LOCATIONS SHALL BE STAKED OUT AND APPROVED IN THE FIELD BY THE OWNER PRIOR TO INSTALLATION.
- NO PLANT MATERIAL WILL BE ACCEPTED WHICH DISPLAYS MAJOR IRREGULARITIES OR MECHANICAL DAMAGE. THE OWNER RETAINS THE RIGHT TO REJECT ANY PLANT MATERIAL DEEMED UNFIT.
- CONTRACTOR MAY SUBSTITUTE ANY OF THE PLANTINGS LISTED IN THE PLANT SCHEDULE DUE TO AVAILABILITY WITH APPROVAL BY THE OWNER PRIOR TO INSTALLATION.
- EXISTING VEGETATION SHALL REMAIN UNDISTURBED IN ALL AREAS WHICH ARE NOT PART OF THE PROPOSED PROJECT.
- GUARANTEE:
 - FOR A PERIOD OF TWELVE MONTHS FROM THE DATE THAT THE WORK UNDER THIS CONTRACT IS CERTIFIED AS COMPLETE, THE CONTRACTOR SHALL: 1) GUARANTEE ALL PLANTS AND SEEDING AREAS UNDER THIS CONTRACT; 2) REMOVE AND REPLACE DURING THIS GUARANTEE PERIOD PLANTS WHICH DIE OR ARE IN A BADLY IMPAIRED CONDITION; 3) REPLANT WITH STOCK OF SAME SIZE AND QUALITY AS ORIGINALLY SPECIFIED; 4) GUY AND MAINTAIN AS SPECIFIED HEREIN AT NO ADDITIONAL COST TO THE OWNER.
 - REPLACEMENTS MADE WITHIN SIX MONTHS AFTER THE BEGINNING OF THE GUARANTEE PERIOD SHALL NOT EXTEND THE GUARANTEE PERIOD OF THESE PARTICULAR PLANTS. THOSE REPLACEMENTS MADE SIX MONTHS OR MORE AFTER THE BEGINNING OF THE GUARANTEE PERIOD SHALL BE MAINTAINED AND GUARANTEED FOR A PERIOD OF SIX MONTHS FROM THE TIME OF PLACEMENT.
- MULCH: PROVIDE MINIMUM 3" THICK LAYER OF BROWN SHREDDED BARK MULCH. MULCH SHALL BE USED ONLY AS TREE COLLARS AND IN PLANTING BED AS SHOWN ON THE PLAN.
- PRE-EMERGENT: 1) APPLY TO MULCH IN PLANTING AREAS TO PROHIBIT WEED GROWTH. IF WEEDS APPEAR IN TREATED AREAS DURING THE FIRST YEAR, LANDSCAPER SHALL RETURN TO REMOVE ALL WEEDS AT NO ADDITIONAL COST. 2) PROVIDE A MIXTURE WITH ACTIVE INGREDIENTS CONSISTING OF "A-AA-TRIFLUORO-2, 6-DINITRO-N, N-DIPROPYL-P-TOLUIDINE" (1.75% OF TOTAL MIXTURE) AND INACTIVE INGREDIENTS (98.25% OF TOTAL MIXTURE). MANUFACTURER: "GREEN GOLD" BY LEBANON CHEMICAL CORP. OR EQUAL.
- WEED BARRIER FABRIC: 1) APPLY TO PLANTING BEDS BELOW MULCH. 2) PROVIDE BLACK POLYPROPYLENE SHEET 27 MILS THICK, 4 OZ./SQ. YD., GRAB TENSILE STRENGTH PER ASTM D-4632; 90LB. (MACHINE DIRECTION) 50 LBS. (CROSS MACHINE DIRECTION). PROVIDE DEWITT "WEED BARRIER" OR APPROVAL EQUAL.
- WATER THOROUGHLY IMMEDIATELY AFTER PLANTING.

TOPSOIL NOTES

- ALL AREAS OF THE SITE WHICH ARE DISTURBED AND NOT PLANTED, MULCHED, PAVED, ETC. SHALL BE TOPSOILED AND SEEDED. TOPSOIL TO BE INSTALLED TO A MINIMUM 3" DEPTH IN AREAS OF SEED. SEED SHALL BE FRESH, CLEAN, NEW-CROP SEED MIXED IN WITH SPECIES AND VARIETY CONFORMING TO FEDERAL AND STATE STANDARDS.
 - PROVIDE AND INSTALL A MULCH ADEQUATE TO PROTECT THE SEEDING DURING ITS GROWING PERIOD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE APPROPRIATE MULCHING TECHNIQUES FOR THE PARTICULAR SITE CONDITIONS AND ACQUIRE APPROVAL OF THE SAME FROM THE OWNER.
 - TOPSOIL SHALL CONSIST OF FERTILE, FRIABLE, NATURAL LOAM FREE OF SUBSOIL, CLAY LUMPS, BRUSH, TWIGS, ENVIRONMENTAL CONTAMINANTS, STONES OR OTHER DELETERIOUS MATERIALS LARGER THAN 2" IN GREATEST DIMENSION.
 - PROPOSED TOPSOIL SHALL BE TESTED BY INDEPENDENT TESTING FACILITY WITH TEST RESULTS SUBMITTED TO THE ENGINEER FOR APPROVAL. CONTRACTOR SHALL PAY FOR ALL TESTING. ACCEPTANCE OF TOPSOIL SHALL BE BASED UPON TEST RESULTS. ONE TEST SHALL BE PERFORMED PER 100 C.Y. OF TOPSOIL.
- | SIEVE | PERCENT PASSING |
|---------|-----------------|
| 1/4" | 65-100 |
| 1" | 85-100 |
| NO. 200 | 20-60 |
- NATURAL TOPSOIL MAY BE AMENDED WITH APPROVED MATERIALS, BY APPROVED METHODS, TO MEET THE ABOVE SPECIFICATIONS.

SEEDING NOTES

- ALL AREAS TO BE SEEDED SHALL BE SOWN WITH THE FOLLOWING SEEDING MIX:
 - 30% NASSAU KENTUCKY BLUEGRASS
 - 25% BELMONT KENTUCKY BLUEGRASS
 - 25% KENTUCKY BLUEGRASS
 - 20% FINE TEXTURE RYE
- WEED SEED CONTENT SHALL NOT EXCEED 0.25%.
- THE SEED MIXTURE SHALL BE DISTRIBUTED BY MEANS OF HYDRO-SEEDING.
- THE FERTILIZER SHALL BE 5-10-5 COMMERCIAL GRADE FERTILIZER APPLIED AT THE MANUFACTURER'S RECOMMENDED APPLICATION RATE.
- SEEDING APPLICATION RATE SHALL BE 5 LBS PER 1,000 SQ. FT.
- WATER THOROUGHLY IMMEDIATELY AFTER SEEDING.



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 SARATOGA COUNTY

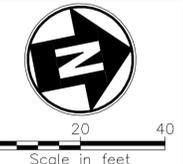
No.	Submittal/Revision	Appr'd. By	Date

LANDSCAPING PLAN

Designed By:	Drawn By:	Checked By:
ZTP	ZTP	BFB
Issue Date:	Project No.:	Scale:
06/15/16	30775	AS SHOWN

Drawing No.:
C-503

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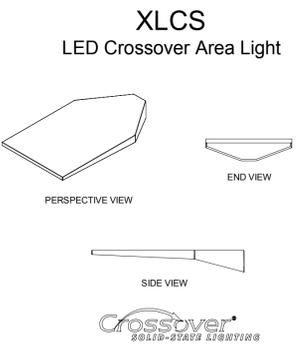
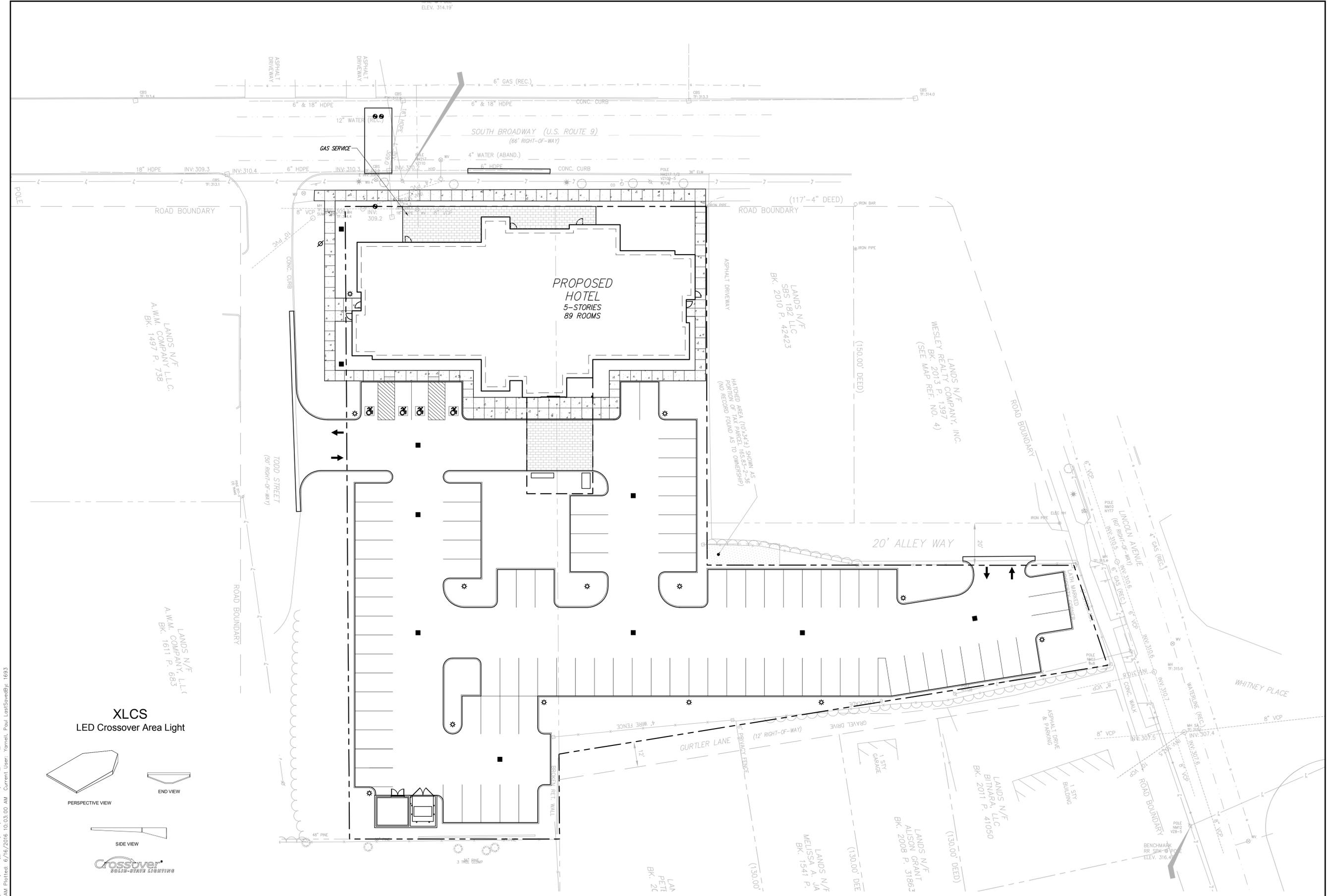
PROPOSED HOTEL
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 SARATOGA COUNTY

No.	Submittal/Revision	Appr. By	Date

**PHOTOMETRICS
 PLAN**

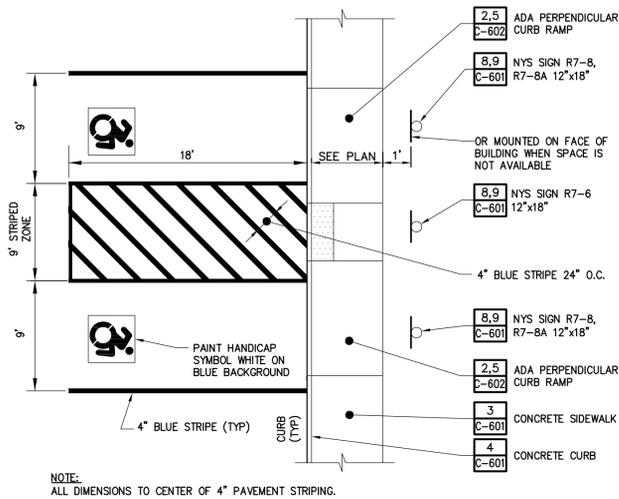
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Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

Drawing No.:
C-504



Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

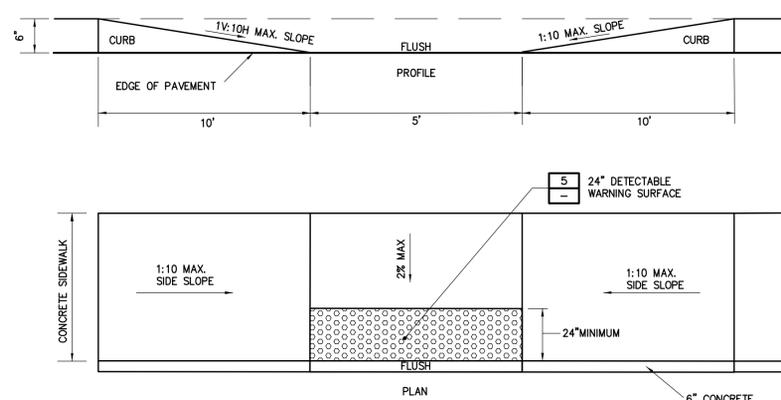
This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.



NOTE:
ALL DIMENSIONS TO CENTER OF 4" PAVEMENT STRIPING.

1 ACCESSIBLE PARKING SPACE

SCALE: N.T.S.

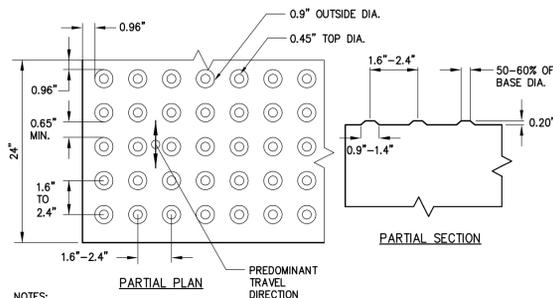


NOTES:

1. TRANSITION AND FLUSH SECTIONS SHALL BE CUT STRAIGHT OR TO THE PROPER RADIUS AS DESIGNATED ON PLANS.
2. FLUSH CURB SECTIONS ARE 10' LENGTH TYPICAL EXCEPT WHERE NOTED OTHERWISE ON PLANS. FLUSH CURB SECTIONS ARE TO MEET LEVEL WITH ASPHALT PAVEMENT SURFACES WITH NO REVEAL.
3. PROVIDE HEAVY BROOM FINISH ON ALL CONCRETE RAMP SURFACES WITH THE EXCEPTION OF THE DETECTABLE WARNING AREA.
4. DETECTABLE WARNING SURFACE TO COVER THE FIRST 24" OF RAMP SURFACE FOR FULL WIDTH OF RAMP.

2 ADA PERPENDICULAR SIDEWALK CURB RAMP W/ DETECTABLE WARNING SURFACE DETAIL

SCALE: N.T.S.



NOTES:

1. THE COLOR OF THE DETECTABLE SURFACE IS TO BE BRICK RED (NOT ORANGE).
2. DETAIL REFERENCED FROM NYS DOT SS M608-5R1.
3. THE QUANTITY OF DOMES DEPICTED ARE FOR ILLUSTRATION ONLY.
4. THE TRUNCATED DOME SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING WALKING SURFACES. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE TRUNCATED DOME SURFACE.
5. DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE OF WARNING FIELD NEAREST TO THE ROADWAY SURFACE IS 6" TO 9" FROM THE EDGE OF ROADWAY AND FROM THE BACK OF THE DROPPED CURB, WHERE A DROPPED CURB CONTINUES ACROSS THE BOTTOM OF THE SIDEWALK CURB RAMP. THE DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
6. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL.

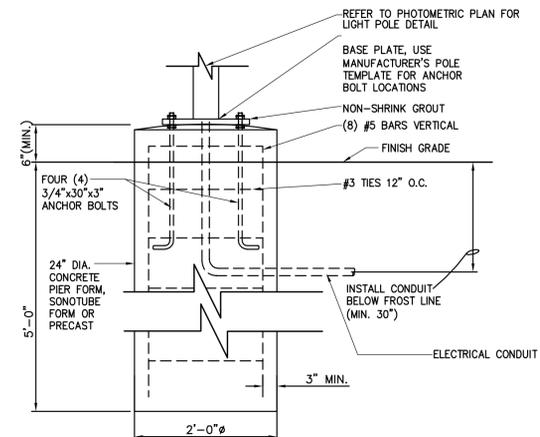
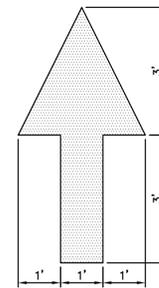
5 DETECTABLE WARNING SURFACE

SCALE: N.T.S.

3 PAVEMENT PAINTING DETAIL

SCALE: N.T.S.

- NOTES:
1. PAINT COLOR TO BE "YELLOW" FOR ARROW AND LETTERS. 4" WIDE STROKES.
 2. STRIPPING COLOR TO BE "YELLOW" WITH 4" WIDE STROKES.
 3. ALL MARKINGS TO RECEIVE TWO COATS OF PAINT.



NOTES:

1. DETAIL IS FOR REFERENCE ONLY.
2. FOR ADDITIONAL LIGHTING INFORMATION REFER TO PHOTOMETRIC PLAN.

4 LIGHT POLE BASE

SCALE: N.T.S.



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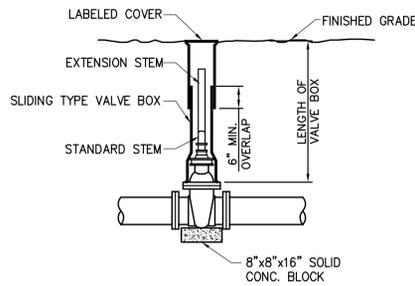
PROPOSED HOTEL
176 SOUTH BROADWAY
SARATOGA SPRINGS, NY 12866
SARATOGA COUNTY

No.	Submital / Revision	Appr'd. By	Date

SITE DETAILS

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

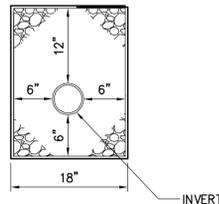
Drawing No.:
C-602



NOTES:

1. VALVE BOX COVERS SHALL BE CAST WITH AN ARROW POINTING TO THE DIRECTION OF THE OPENING AND THE WORD "OPEN". BOX AND COVER SHALL BE TAR COATED. INSTALLATION OF EXTENSION STEM REQUIRED IF STANDARD STEM IS MORE THAN FIVE (5) FEET FROM FINISHED GRADE.
2. GATE VALVE MUST MEET AWWA C509 REQUIREMENTS
3. ALL GATE VALVES 4 INCHES AND LARGER SHALL BE OPEN RIGHT (CLOCKWISE) WITH AN OPERATING NUT COLORED RED.
4. PROVIDE A MINIMUM OF ONE VALVE KEY TO UTILITY OWNER. SEE SPECIFICATIONS FOR EXACT NUMBER TO BE REQUIRED.

1 GATE VALVE
SCALE: N.T.S.



4 TYPICAL UNDERDRAIN SECTION
SCALE: N.T.S.

THRUST BLOCK NOTES

1. FOR REQUIRED BEARING AREA DIMENSIONS D & L SEE TABLE. DIMENSIONS OF D & L OTHER THAN THOSE SHOWN IN THE TABLE MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR LARGER THAN THAT REQUIRED.
2. CONCRETE NOT TO OVERLAP ANY JOINT.
3. CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.
4. APPROXIMATE VOLUME OF CONCRETE THRUST BLOCK:

$$V = \frac{LD(W+D) - ID}{81}$$

WHERE:

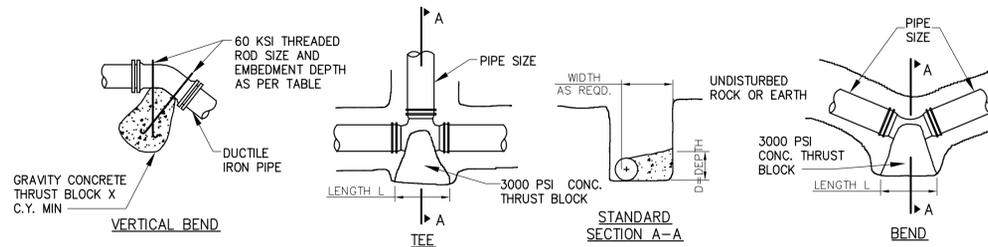
V = VOLUME IN CUBIC YARDS
L = LENGTH OF BLOCK IN FEET
D = DEPTH OF BLOCK IN FEET
W = WIDTH OF BLOCK IN FEET
ID = INSIDE DIAMETER OF PIPE IN FEET

5. VALUES FOR TEE ALSO APPLY TO END PLUGS, CAPS, AND TAPPING SLEEVES.
6. REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 150 PSI WORKING PRESSURE PLUS 50%(75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE. NORMAL PIPE DIAMETER USED.
7. REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 2000 LBS. PER SQUARE FOOT FOR SAND. DUE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE ENGINEER.
8. IN MUCK, PEAT, OR RECENTLY PLACED FILL ALL THRUST SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

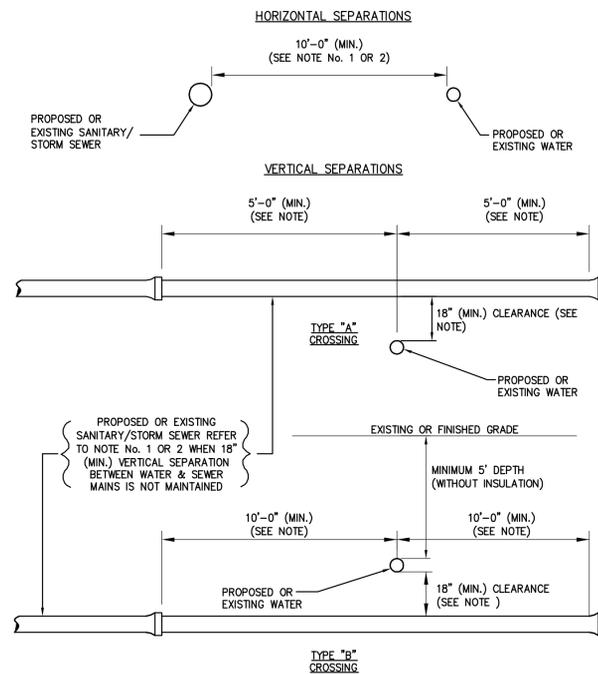
REQUIRED BEARING AREAS & DIMENSIONS FOR CONCRETE THRUST BLOCKS											
PIPE SIZE (IN.)	TEE (See Note 5)		90°(1/4)BEND		45°(1/8)BEND		22-1/2°(1/16)BEND		11-1/4°(1/32)BEND		
	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	AREA Sq.Ft.	Dimen. D x L	
2,3,4	1.4	1.0 x 1.5	2.0	1.0 x 2.0	1.1	1.0 x 1.5	0.6	0.5 x 1.5	0.3	0.5 x 1.0	
6	3.2	1.5 x 2.5	4.5	2.0 x 2.5	2.4	1.5 x 2.0	1.2	1.0 x 1.5	0.6	1.5 x 1.5	
8	5.7	2.0 x 3.0	8.0	2.0 x 4.0	4.3	2.0 x 2.5	2.2	1.5 x 1.5	1.1	1.0 x 1.5	

TYPE A BLOCKING FOR 11 1/4° & 22 1/2° VERT BENDS					
PIPE SIZE NOM DIA.(INCHES)	VERTICAL BEND DEGREES	NO. OF CUBIC YARDS OF CONCRETE BLOCKING	NO. OF SHACKLES (RODS)(2*)	DIA. OF SHACKLES (RODS) (INCHES)	DEPTH OF RODS IN CONCRETE (FEET)
2,3,4	11 1/4°	8	2.0	3/4	1.6
	22 1/2°	16	2.5	3/4	1.6
6	11 1/4°	16	2.5	3/4	1.6
	22 1/2°	32	3.2	3/4	1.6
8	11 1/4°	28	3.0	3/4	1.6
	22 1/2°	55	3.8	3/4	1.6

TYPE B BLOCKING FOR 45° VERTICAL BENDS					
PIPE SIZE NOM DIA.(INCHES)	NO. OF CUBIC YARDS OF CONCRETE BLOCKING	NO. OF SHACKLES (RODS) (2*)	DIA. OF SHACKLES (RODS) (INCHES)	DEPTH OF RODS IN CONCRETE (FEET)	
2,3,4	29	3.1	3/4	1.6	
6	59	3.9	3/4	1.6	
8	102	4.7	3/4	1.6	



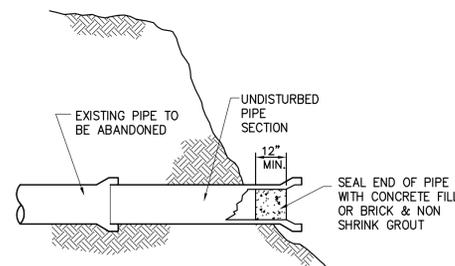
2 THRUST BLOCK DETAILS
SCALE: N.T.S.



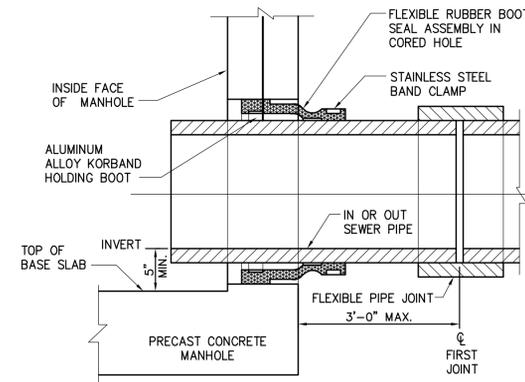
NOTE:

WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING METHOD MUST BE SPECIFIED: EITHER THE WATER OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING. MEASURED PERPENDICULAR TO THE WATER LINE. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE HEALTH DEPARTMENT FOR USE IN WATERMAIN CONSTRUCTION. STORM SEWER SYSTEM MUST ALSO MEET THESE REQUIREMENTS.

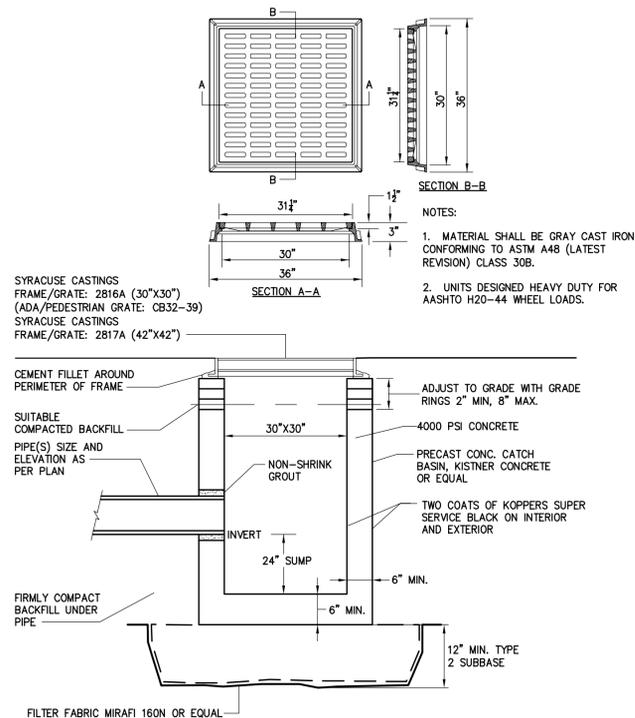
3 SEWER & WATER SEPARATION DETAIL
SCALE: N.T.S.



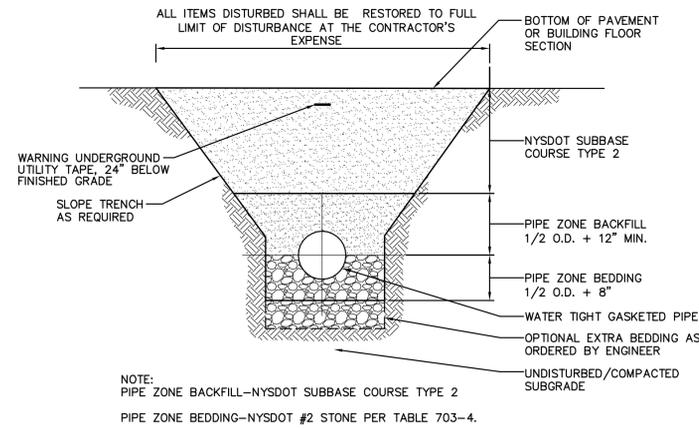
5 STORM SEWER PIPE TERMINATION
SCALE: N.T.S.



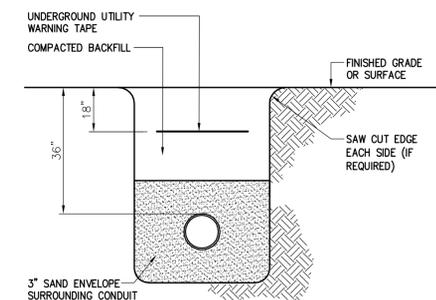
6 FLEXIBLE PIPE-TO-M.H. JOINT DETAIL FOR CONNECTION OF PROPOSED SANITARY SEWER LINE TO EXISTING MH
SCALE: N.T.S.



7 PRECAST CONCRETE KNOCKOUT CATCH BASIN DETAIL
SCALE: N.T.S.



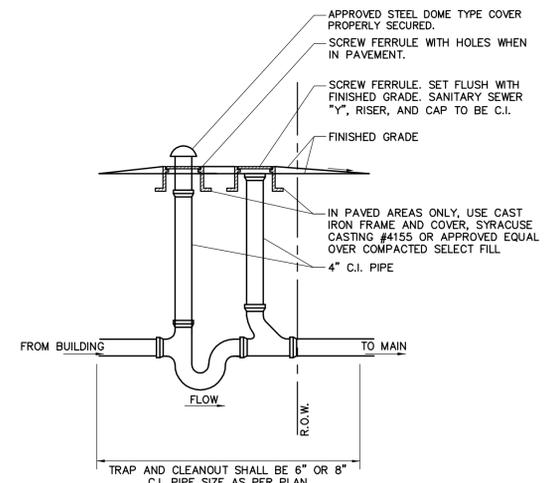
8 TYPICAL STORM, SANITARY, WATER TRENCH DETAIL
SCALE: N.T.S.



NOTES:

1. CONTRACTOR SHALL ENCASE FIBER OPTIC AND COMMUNICATION DUCT BANKS WITH 2,500 PSI CONCRETE WITHIN RIGHT OF WAY.
2. AN ADDITIONAL LINE OF WARNING TAPE SHALL BE INSTALLED JUST ABOVE DUCT WITHIN RIGHT-OF-WAY.

9 UNDERGROUND CONDUIT TRENCH
SCALE: N.T.S.



10 C.I. TRAP, VENT, AND CLEANOUT
SCALE: N.T.S.

CHA
441 South Salina Street
Syracuse, NY 13202-4722
315.471.9920 • www.chacompanies.com

SARATOGA SPRINGS HOTEL ASSOCIATES, LLC
11751 E. CORNING RD.
CORNING, NY 14830



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT, ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL BE USED. THE SIGNATURE AND SEAL OF THE NOTATION ALTERED BY FOLLOWING BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROPOSED HOTEL
176 SOUTH BROADWAY
SARATOGA SPRINGS, NY 12866
SARATOGA COUNTY

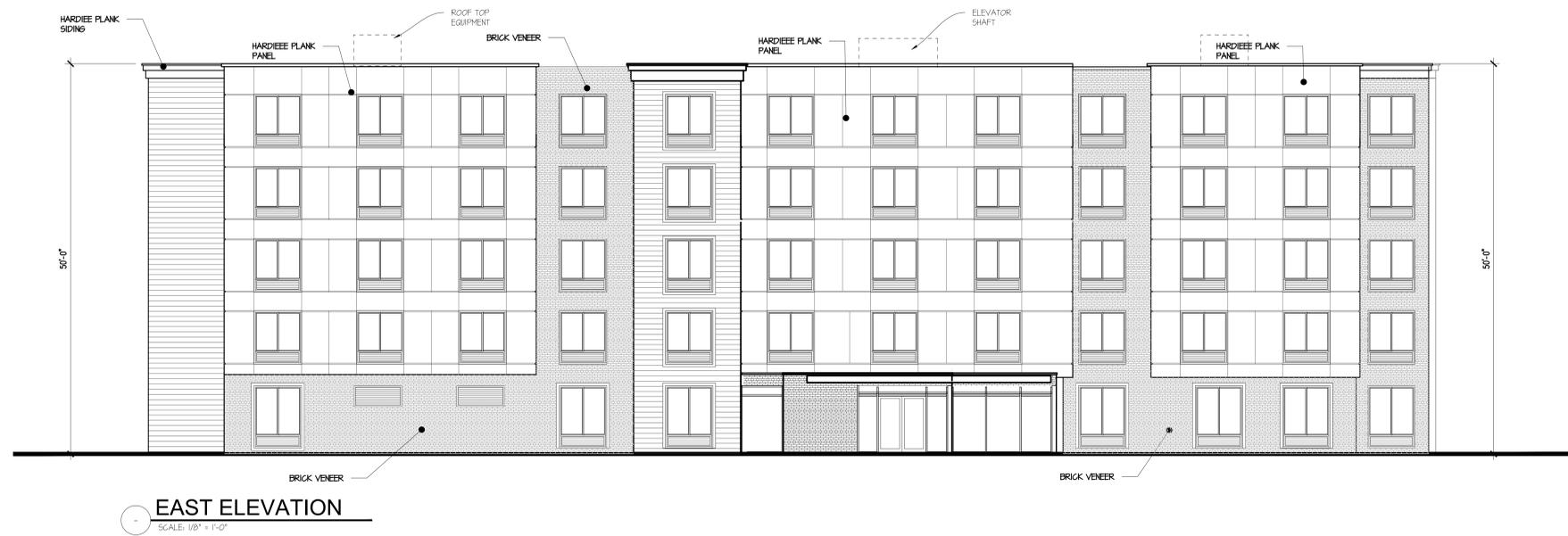
No.	Submital/Revision	Appr'd. By	Date

SITE DETAILS

Designed By: ZTP	Drawn By: ZTP	Checked By: BFB
Issue Date: 06/15/16	Project No: 30775	Scale: AS SHOWN

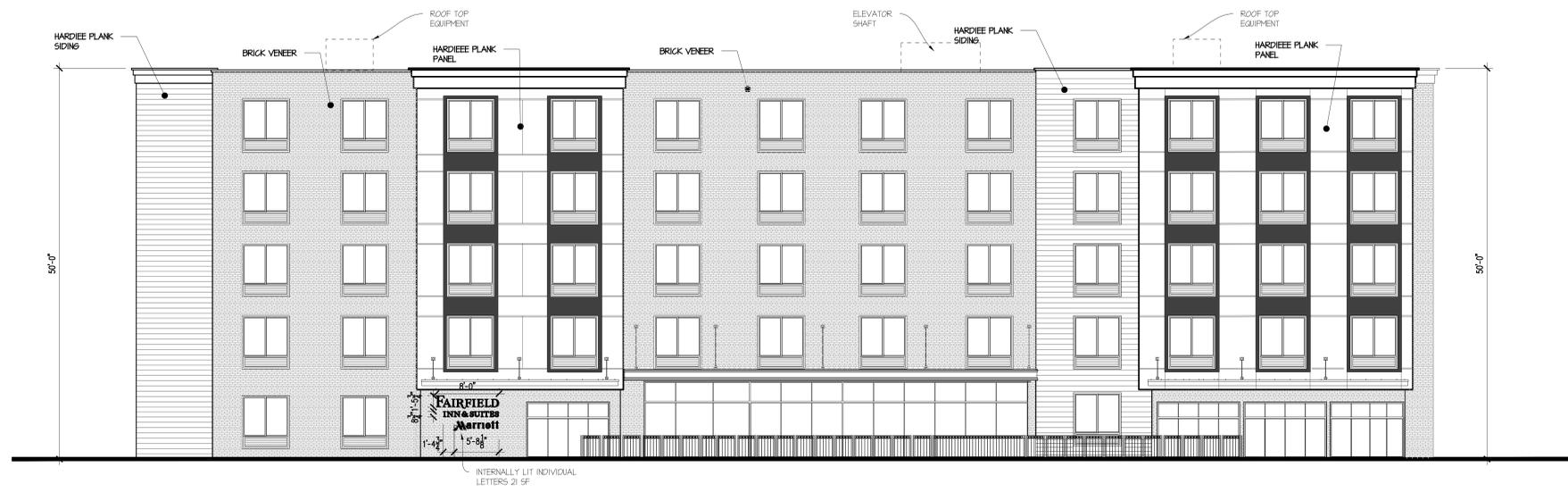
Drawing No.:
C-603

File: V:\PROJECTS\NY\K4\30775\CADD\LACAD\CIVIL\SHEET FILES\30775_C-6005_DTL15.DWG
 Saved: 6/15/2016 10:46:43 AM Plotted: 6/16/2016 10:14:31 AM Current User: Yarnell, Paul Last Saved By: R33



EAST ELEVATION

SCALE: 1/8" = 1'-0"



WEST ELEVATION

SCALE: 1/8" = 1'-0"

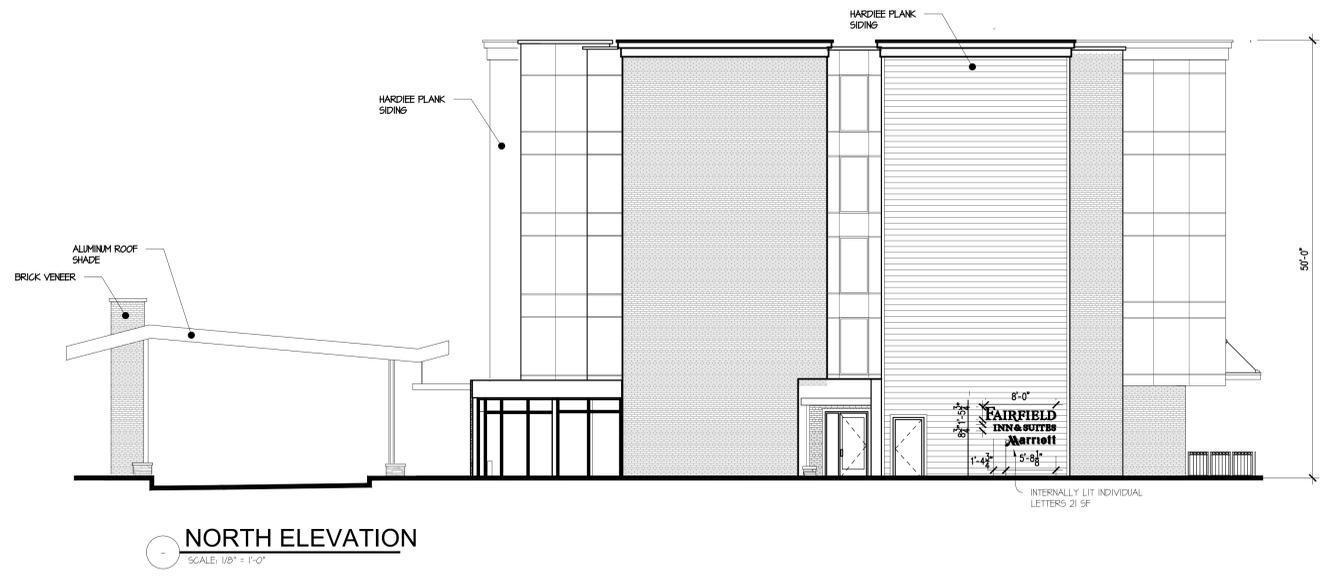
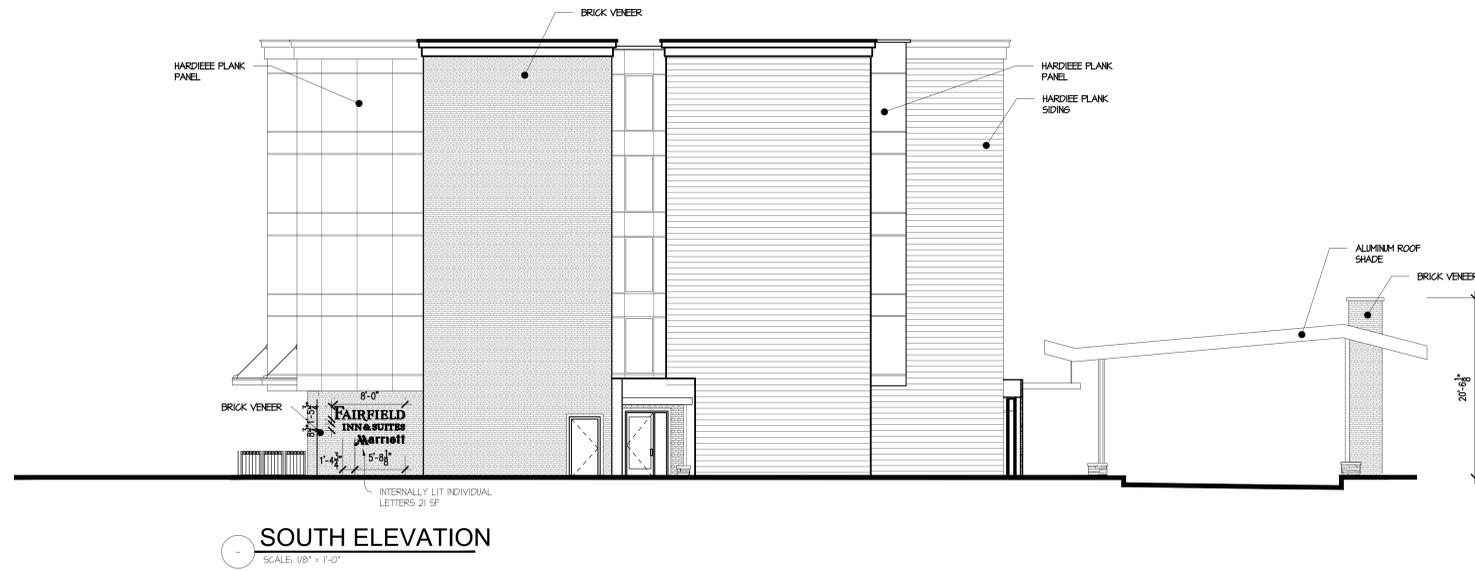
FAIRFIELD INN & SUITES

SARATOGA, NY

215067
06-07-16



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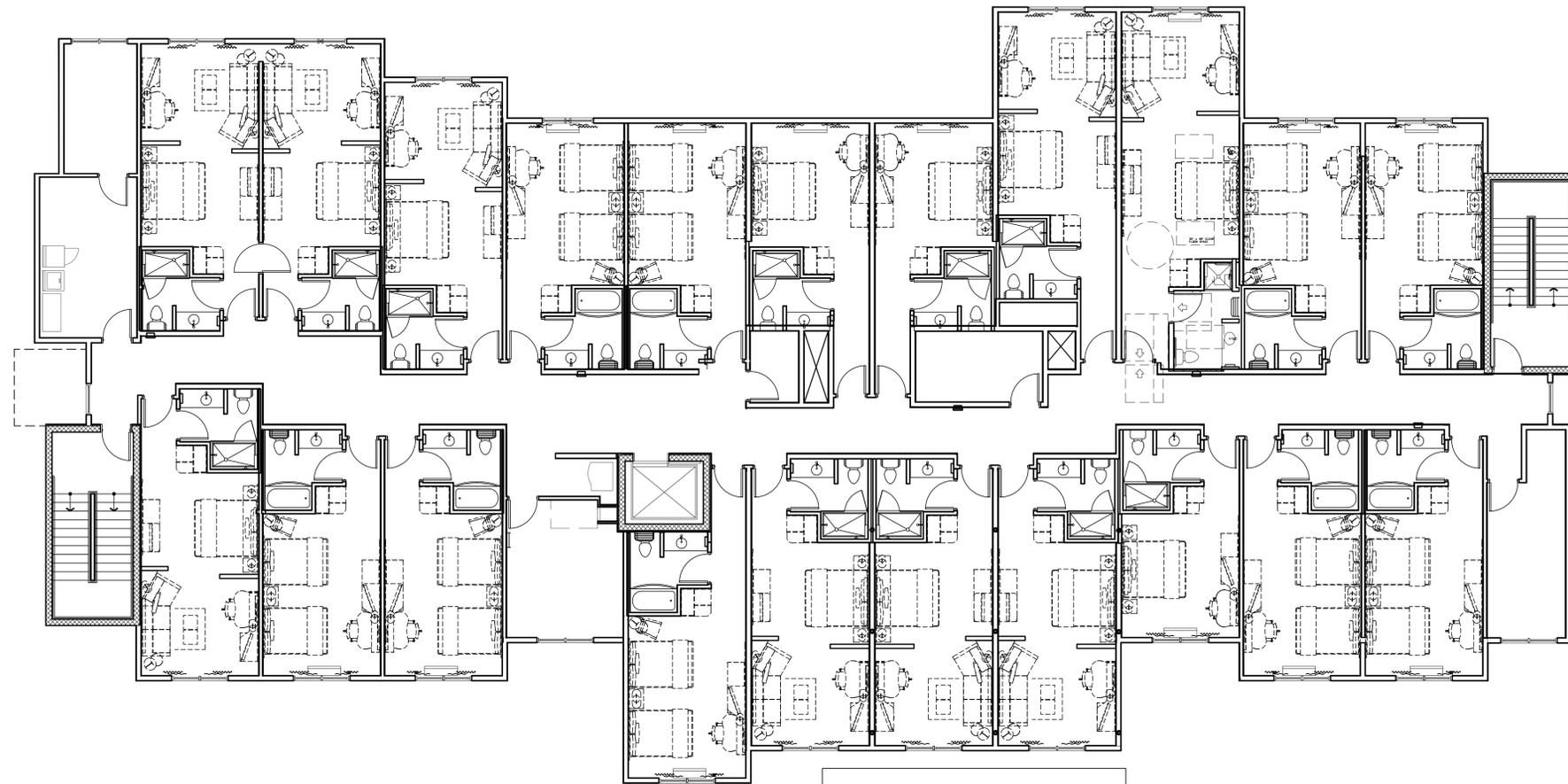


FAIRFIELD INN & SUITES

SARATOGA, NY

215067
06-07-16





SE²ON² 00²TH² LOOR² LAN²
 SCALE: 1/8" = 1'-0"



FAIRFIELD INN & SUITES

SARATOGA, NY

#215067
 06-07-16

M MUSSACHIO
 ARCHITECTS
 30 NORTH FOREST RD.
 WILLIAMSVILLE, NEW YORK 14221
 (716) 631-9949T (716) 631-0521 F
 www.MussachioArchitects.com

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CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR:
SUBDIVISION APPROVAL

(Rev: 12/2015)

***Application Check List - All submissions must include completed application check list and all required items.

Project Name: subdivision of Lands of Norman E. Mendenhall and Kathelyn M. Mendenhall

Property Address/Location: 101 Old Schuylerville Road

Tax Parcel #: 167.00-1-9 Zoning District: RR-1
(for example: 165.52-4-37)

Total Acres: 26.66 Land to be Subdivided Into: 4 Lots

	APPLICANT(S)*	OWNER(S) (If not applicant)	ATTORNEY/AGENT
Name	<u>NORMAN E. MENDENHALL</u>		<u>Survey Associates</u>
Address	[REDACTED]	[REDACTED]	<u>Daniel C. Wheeler</u> <u>432 Broadway, Suite 5</u> <u>Saratoga Springs NY</u> <u>12866</u>
Phone	[REDACTED]	[REDACTED]	
Email	[REDACTED]	[REDACTED]	

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Application Fee: A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

Sketch Plan - \$400

Preliminary Subdivision Plat Approval
1-20 Lots \$400
21-50 Lots \$600
51+ Lots \$1,000

Fee submitted \$ 1,300-

Final Subdivision Plat Approval
Residential - \$1,000 plus \$100/lot
Non-Residential - \$1,500/lot

\$ _____
\$ _____

Submission Deadline - Check City's website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES _____ NO . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner or purchaser under contract for the property, hereby request Subdivision consideration by the Planning Board for the identified property above. I agree to meet all requirements under the Subdivision Regulations for the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: Norman E. Wardenhall Date: 5/31/2016

If applicant is not current owner, owner must also sign.

Owner Signature: Norman E. Wardenhall Date: 5/31/2016



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
 Saratoga Springs, New York 12866-2296
 Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

Rev.12/2015

PRELIMINARY/ FINAL SUBDIVISION APPROVAL REQUIRED SUBMITTAL CHECKLIST

1. Project Name: Subdivision of Lands of Norman E. Mendenhall and Kathelyn M. Mendenhall
2. Checklist Prepared By: Daniel C. Wheeler Date: 6-1-2016

Listed below are the minimum submittal requirements as set forth in The City of Saratoga Springs' Subdivision Regulations. The Planning Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimum requirements are not met. Please complete the checklist below and provide with your submission.

REQUIRED ITEMS:

CHECK EACH ITEM	
<input checked="" type="checkbox"/>	1. Completed Subdivision Application and Application Fee
<input checked="" type="checkbox"/>	2. SEQR Environmental Assessment Form- short or long form as required by action.
<input checked="" type="checkbox"/>	3. Set of plans including: (4) large scale plans (sheets <u>must be</u> 24" x 36", drawn to a scale of not more than 1"=50 feet), (8) 11"x17". A digital version of all submittal items (pdf) shall be provided.
<input checked="" type="checkbox"/>	4. Basic or Full Storm Water Pollution Prevention Plan as required per City Code Chapter 242.
<input checked="" type="checkbox"/>	5. Copy of signed DPW water connection agreement for all projects involving new water connections to the City system
<input checked="" type="checkbox"/>	6. Engineering Report for Water and Sanitary
<input type="checkbox"/>	7. Complete Streets Checklist
<input checked="" type="checkbox"/>	8. Project Cost Estimate-Quantities of work items and estimate of costs

REQUIRED ITEMS ON SUBDIVISION PLAT, AS APPLICABLE:

<input checked="" type="checkbox"/>	1. Name of Subdivision
<input checked="" type="checkbox"/>	3. Property line survey prepared by a licensed land surveyor. Subdivision plat must reference such survey with all corners set and marked on plan. Reference NGVD 1929 datum. A copy of the original property survey must also be included.
<input checked="" type="checkbox"/>	4. North arrow and map scale

<input checked="" type="checkbox"/>	5. Parcel tax map number
<input checked="" type="checkbox"/>	6. Site location map
<input checked="" type="checkbox"/>	7. Site vicinity map (all features within 300 feet of property)
<input checked="" type="checkbox"/>	8. Identification of current zoning with corresponding area requirements
<input checked="" type="checkbox"/>	9. Building setback lines, either listed or shown on plans
<input checked="" type="checkbox"/>	10. Title block with subdivision name; name and address of applicant; and name and address of property owner (if different)
<input checked="" type="checkbox"/>	11. Name, address and phone number of subdivision surveyor and/or engineer
<input checked="" type="checkbox"/>	12. Names of all adjacent property owners within 300 feet (include both sides of street)
<input checked="" type="checkbox"/>	13. Identification of size, elevations, material, and slopes of all existing and proposed utilities within 400 ft of site.
<input checked="" type="checkbox"/>	14. Parcel street address (existing and any proposed postal addresses)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	15. Identification of existing or proposed easements, covenants or legal rights-of-way on this property
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	16. References to all prior variances or special use permits
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	17. Existing and proposed contours and spot grades (at 2 foot intervals)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18. Identification of all watercourses, designated State wetlands, buffers, Federal wetlands, floodplains, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	19. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	20. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location and distance to fire hydrant
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Erosion and sediment control plan – including designated concrete truck washout area
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Approximate location, dimensions and areas for proposed lots and proposed public recreational land
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Proposal for utility systems and lateral connections
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	25. Location and width of proposed streets

Short Environmental Assessment Form

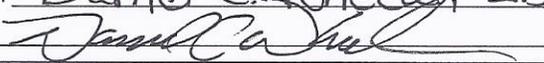
Part 1 - Project Information

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 <i>Subdivision of Lands of Norman E. Mendenhall and Kathelyn M. Mendenhall</i>																		
Name of Action or Project: →																		
Project Location (describe, and attach a location map): <i>North Side of Old Schuylerville Rd, approx. 1,500 Ft. West of Ingersoll Rd.</i>																		
Brief Description of Proposed Action: <i>existing house on 26.66 acres Subdivide into 4 total lots Creating 3 new lots</i>																		
Name of Applicant or Sponsor: <i>Norman E. Mendenhall</i>		Telephone: [REDACTED]																
Address: [REDACTED]		E-Mail: [REDACTED]																
City/PO: [REDACTED]		State: [REDACTED]	Zip Code: [REDACTED]															
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.			<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>											
NO	YES																	
<input checked="" type="checkbox"/>	<input type="checkbox"/>																	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: <i>Saratoga Springs Planning Board Approval</i>			<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	NO	YES	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
NO	YES																	
<input type="checkbox"/>	<input checked="" type="checkbox"/>																	
3.a. Total acreage of the site of the proposed action?		<i>26.66</i> 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																
4. Check all land uses that occur on, adjoining and near the proposed action.																		
<table style="width: 100%;"> <tr> <td><input type="checkbox"/> Urban</td> <td><input checked="" type="checkbox"/> Rural (non-agriculture)</td> <td><input type="checkbox"/> Industrial</td> <td><input type="checkbox"/> Commercial</td> <td><input type="checkbox"/> Residential (suburban)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Forest</td> <td><input type="checkbox"/> Agriculture</td> <td><input type="checkbox"/> Aquatic</td> <td><input checked="" type="checkbox"/> Other (specify): <i>horse farm</i></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Parkland</td> <td colspan="3"></td> <td></td> </tr> </table>				<input type="checkbox"/> Urban	<input checked="" type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Residential (suburban)	<input checked="" type="checkbox"/> Forest	<input type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> Other (specify): <i>horse farm</i>		<input type="checkbox"/> Parkland				
<input type="checkbox"/> Urban	<input checked="" type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Residential (suburban)														
<input checked="" type="checkbox"/> Forest	<input type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> Other (specify): <i>horse farm</i>															
<input type="checkbox"/> Parkland																		

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p> <p>_____</p>	<table border="1"> <tr> <th>NO</th> <th>YES</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES				
<input checked="" type="checkbox"/>	<input type="checkbox"/>				
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<table border="1"> <tr> <th>NO</th> <th>YES</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES				
<input checked="" type="checkbox"/>	<input type="checkbox"/>				
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<table border="1"> <tr> <th>NO</th> <th>YES</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES				
<input checked="" type="checkbox"/>	<input type="checkbox"/>				
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p>					
<p>Applicant/sponsor name: <u>Daniel C. Wheeler, L.S.</u> Date: <u>6-1-2016</u></p> <p>Signature: <u></u></p>					

Project: Date:

Short Environmental Assessment Form
Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Project:

Date:

Short Environmental Assessment Form
Part 3 Determination of Significance

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

_____ Name of Lead Agency _____ Date

_____ Print or Type Name of Responsible Officer in Lead Agency _____ Title of Responsible Officer

_____ Signature of Responsible Officer in Lead Agency _____ Signature of Preparer (if different from Responsible Officer)

*Water & Sanitary
Engineering Report
For
Mendenhall Subdivision
Old Schuylerville Road
Saratoga Springs, NY*

June 7, 2016

By

*Engineering America Company
76 Washington Street
Saratoga Springs, NY
(518) 587-1340
George Yasenchak, PE*

Water Supply System

All three (3) lots will have potable water provided from the existing municipal system located along the north side of Old Schuylerville Road.

There will be three (3) separate water taps and three (3) separate curb valves – one for each lot.

Lots 3 and 4 will have 3/4-in copper supply lines, and Lot 2 will require a 1-in line to help keep pressure loss at a minimum.

The lines shall be installed as shown on the drawings for the subdivision.

Sanitary System

The attached letter to Survey Associates dated December 21st, 2015 details the test hole and percolation test results for these lots.

Lots 2 and 3 will be OK with typical in-ground systems since no mottling or water was visible to a depth of 72-in.

Lot 4, however, will require approximately three (3) feet of fill to be brought in since mottling was only at 21-in below grade. It is recommended that this fill be placed in 6 – 9" lifts and compacted with one (1) pass of a tracked or wheeled vehicle, or placed and allowed to sit through a freeze / thaw cycle before the system is installed.

The size of the septic system components and field size are shown in Table MS-2, attached. These components were sized using NYSDoH "Residential Onsite Wastewater Treatment Systems" Design Handbook 2012 edition. The Tables used, Tables 3 and 6A are attached.

When installed the septic systems must comply with the proper setbacks from the NYSDEC and ACOE wetlands as well as the other NYSDoH required setbacks as outlined on Table 2, attached.

Engineering America Company

76 Washington Street
Saratoga Springs, NY 12866



December 21, 2015

To: Survey Associates

Re: Mendenhall Subdivision
101 Old Schuylerville Road
Soil and Percolation Tests

Dear Dan:

This letter confirms the results of the deep hole and percolation tests conducted on December 21, 2015.

I also checked the Saratoga County Soils maps to confirm our findings.

Test Hole 1

The soil in the area of this test hole is an Oakville loamy fine sandy soil

- 0-9" topsoil / loamy sand
- 9-19" yellowish-brown sand
- 19-72" slightly lighter color yellowish-brown sand

No water found

No mottling found

Stabilized percolation rate – 1-in drop in 1-min 30-sec.

Test Hole 2

The soil in the area of this test hole is Deerfield loamy fine sand

- 0-10" top soil / loamy sand
- 10-18" dark yellowish-brown sand
- 18-48" mottled dark yellowish-brown sand

Water at 42-in

Mottling at 21-in below grade

Stabilized percolation rate – 1-in drop in 2-min 30-sec

Summary

The lot associated with Test Hole #1 will be able to utilize a typical in ground septic system.

The lot associated with Test Hole #2 will need fill brought in, approximately 3-ft, to maintain a 24-inch separation between bottom of the septic system and seasonal high ground water. However, aside from the fill it is my opinion that we can utilize a typical in ground septic system if approved by the City Engineer.

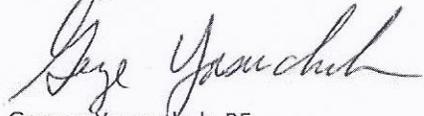
Page 2
Survey Associates
Soils Data – 101 Old Schuylerville Road
December 21, 2015

Also, according to the Saratoga Count Soil Maps the Deerfield soil inclusion within the Oakville area is somewhat small. We may be able to do additional soil testing at the time of construction, with the City's permission, and locate the septic system in an area that does not require fill at all – similar to Test Hole #1.

If you need anything else regarding the soils or percolation at this time please let me know.

Have a great day.

Sincerely,

A handwritten signature in cursive script that reads "George Yasenchak". The signature is written in dark ink and is positioned above the printed name.

George Yasenchak, PE

Table MS-2
Septic Sizes for Lots 1, 2 and 3 - Mendenhall Subdivision

<i>Number Bedrooms</i>	<i>Septic Tank Size (gal)</i>	<i>Leach Field Total Length (ft)</i>	<i>Leach Field Typ. Design</i>
2	1000	92	3-runs of 35-ft each
3	1000	138	4-runs of 35-ft each
4	1250	184	5-runs of 40-ft each

Note: System sizes based on NYSDoH "Residential Onsite Wastewater Treatment Systems" Design Handbook 2012

TABLE 3

MINIMUM SEPTIC TANK CAPACITIES

Number of Bedrooms	Minimum Tank Capacity (gallons)	Minimum Liquid Surface Area (ft ²)
1, 2, 3	1,000	27
4	1,250	34
5	1,500	40
6	1,750	47

NOTES:

- a) Tank size requirements for more than six (6) bedrooms shall be calculated by adding 250 gallons and seven (7) square feet of surface area for each additional bedroom.
- b) A garbage grinder shall be considered equivalent to an additional bedroom for determining septic tank size.
- c) A whirlpool bath or spa (connected to house plumbing) should be considered equivalent to an additional bedroom for determining septic tank size.

TABLE 6A
REQUIRED LENGTH OF CONVENTIONAL ABSORPTION TRENCH
FOR STANDARD DAILY DESIGN FLOWS
(FEET)
(BASED UPON TWO (2) FOOT WIDE TRENCH)

Percolation Rate (min/inch)	Application Rate (gal/day/ft ²)	Daily Flow Rate (gallons per day)														
		2 Bedrooms			3 Bedrooms			4 Bedrooms			5 Bedrooms			6 Bedrooms		
		220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
1 - 5	1.20	92	108	125	138	162	187	184	216	250	230	270	312	275	325	374
6 - 7	1.00	110	130	150	165	195	225	220	260	300	275	325	375	330	390	450
8 - 10	0.90	123	145	167	184	217	250	245	290	333	306	360	417	367	433	500
11 - 15	0.80	138	162	188	207	244	281	275	325	375	344	406	469	413	488	563
16 - 20	0.70	158	186	214	236	279	321	315	372	429	393	464	536	472	557	643
21 - 30	0.60	184	217	250	275	325	375	367	433	500	459	542	625	550	650	750
31 - 45	0.50	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
46 - 60	0.45	245	290	333	367	433	500	489	578	667	612	722	833	734	867	1000

Dosing required if there is 500-foot or more of total trench length
 Alternate Dosing required if there is 1000-foot or more of total trench length

TABLE 6B
CONVENTIONAL ABSORPTION TRENCH
APPLICATION RATES FOR
NON-STANDARD DAILY DESIGN FLOWS

Percolation Rate (minutes/inch)	Application Rate (gallons/day/ft ²)
1 - 5	1.20
6 - 7	1.00
8 - 10	0.90
11 - 15	0.80
16 - 20	0.70
21 - 30	0.60
31 - 45	0.50
46 - 60	0.45

Soil with a percolation rate of less than one (1) minutes/inch is unsuitable for a conventional system.

Required Total Trench Bottom Area (ft²) =
 Flow Rate (GPD)/Application Rate (GPD/ft²)

Required Total Absorption Trench Length =
 Required Total Trench Bottom Area (ft²)/2 feet (trench width)

**TABLE 2
REQUIRED SEPARATION DISTANCES FROM WASTEWATER TREATMENT SYSTEM COMPONENTS
(FEET)**

System Components	Well or Suction Line (e)(g)	Stream, Lake, Watercourse (h), or Wetland	Dwelling	Property Line	Drainage Ditch or Rain Gardens (h)
House Sewer Drain (watertight joints)	25 if cast iron, 50 otherwise	25	3	10	10
Septic Tank, Dosing Tank or watertight ETU	50	50	10	10	10
Influent Line to Distribution Box/Drop Box	50	50	10	10	10
Distribution Box/Drop Box	100	100	20	10	20
Absorption Field (c)(d)	100 (a)	100	20	10	20
Septage Pit(d)	150 (a)	100	20	10	20
Used System or Mound (c)(d)	100 (a)	100	20	10	20
Intermittent Sand Filter (d)	100 (a)(f)	100 (f)	20	10	20
On-Waterborne Systems with offsite individual disposal	50	50	20	10	10
On-Waterborne Systems with onsite discharge	100	50	20	10	20

Notes:

When wastewater treatment systems are located upgrade and in the direct path of surface water drainage to a well, the closest part of the treatment system shall be at least 200 feet away from the well.

Mean high water mark. Wetland or watercourse determinations should be addressed with the LHD or other agency having jurisdiction and the applicable NYSDEC regional office.

For all systems involving the placement of fill material, separation distances are measured from the toe of the slope of the fill, except for some shallow absorption trench systems as described in Section 9.12.2 of this Handbook.

Separation distances shall also be measured from the edge of the designated additional useable area (i.e., reserve area), when available.

The closest part of the wastewater treatment system shall be located at least ten (10) feet from any water service line (e.g., public water supply main, public water service line or residential well water service line).

When intermittent sand filters are designed to be watertight and collect all effluent, the separation distance can be reduced to 50 feet.

The listed water well separation distances from contaminant sources shall be increased by 50% whenever aquifer water enters the water well at less than 50-feet below grade. If a 50% increase cannot be achieved, then the greatest possible increase in separation distance shall be provided with such additional measures as needed to prevent contamination.

Recommended; use site evaluation to avoid OWTS short-circuiting to the surface or groundwater and to minimize impacts on OWTS functionality.

bankment or very steep slope: It is recommended that system components be located a minimum of 25 feet and the absorption field be located a minimum of 50 feet in an embankment or very steep slope. Maximize separation distances and use site evaluation to avoid short-circuiting to surface (breakout or seepage).

swimming pools (above or below ground): It is recommended that system components be located a minimum of 20 feet and the absorption field be located a minimum of 50 feet from swimming pools. Maximize separation distances and use site evaluation to minimize impacts on OWTS accessibility and functionality.

NOTICE OF INTENT

New York State Department of Environmental Conservation

Division of Water

625 Broadway, 4th Floor

NYR

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(for DEC use only)

Albany, New York 12233-3505

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002
 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)

PRIVATE OWNER

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

MENDENHALL

Owner/Operator Contact Person First Name

NORM

Owner/Operator Mailing Address

101 OLD SCHUYLERVILLE ROAD

City

SARATOGA SPRINGS

State

NY

Zip

12866 -

Phone (Owner/Operator)

518 - 587 - 0811

Fax (Owner/Operator)

- - -

Email (Owner/Operator)

NORMKATH@NYCAP.RR.COM

FED TAX ID

- - -

(not required for individuals)

Project Site Information

Project/Site Name

SUBDIVISION OF MENDENHALL

Street Address (NOT P.O. BOX)

101 OLD SCHUYLERVILLE ROAD

Side of Street

 North South East West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

SARATOGA SPRINGS

State Zip

NY

12866-

County

SARATOGA

DEC Region

5

Name of Nearest Cross Street

JAMESON ROAD

Distance to Nearest Cross Street (Feet)

1500

Project In Relation to Cross Street

 North South East West

Tax Map Numbers

Section-Block-Parcel

167.00-1-9

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you must go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/ismaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

602882

Y Coordinates (Northing)

4771358

2. What is the nature of this construction project?

- New Construction
 Redevelopment with increase in impervious area
 Redevelopment with no increase in impervious area

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

Name

WETLANDS ON SITE

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-0-15-002? Yes No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? 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?

0000.0

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

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

Empty grid box for additional information.

SWPPP Preparer

ENGINEERING AMERICA CO.

Contact Name (Last, Space, First)

YASENCHAR, GEORGE

Mailing Address

76 WASHINGTON STREET

City

SARATOGA SPRINGS

State Zip

NY 12866 -

Phone

518-587-1340

Fax

- - -

Email

GEORGEYAS3@YAHOO.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-0-15-002. 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

GEORGE

MI

Last Name

YASENCHAR

Signature

George Yassenchar

Date

06/09/2016

0182089828

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

. 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.

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

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

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

Alternative SMP	Total Contributing Impervious Area (acres)	
<input type="radio"/> Hydrodynamic		
<input type="radio"/> Wet Vault		
<input type="radio"/> Media Filter		
<input type="radio"/> 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

. acre-feet

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

Yes No

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

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

Minimum RRV Required

. acre-feet

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

Yes No

If Yes, go to question 33.

Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

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

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
 . 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). .

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 . acre-feet CPv Provided . 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 . CFS Post-development . CFS

Total Extreme Flood Control Criteria (Qf)

Pre-Development . CFS Post-development . CFS

3547089826

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

NORMAN

MI

Print Last Name

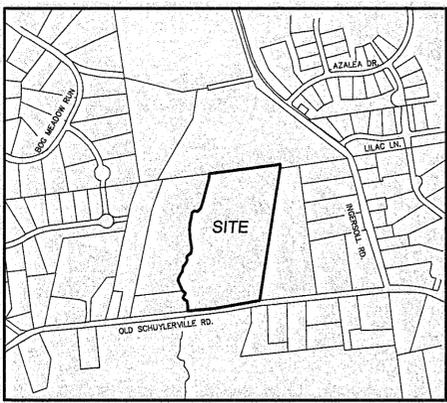
MENDEHALL

Owner/Operator Signature

Norman Mendehall

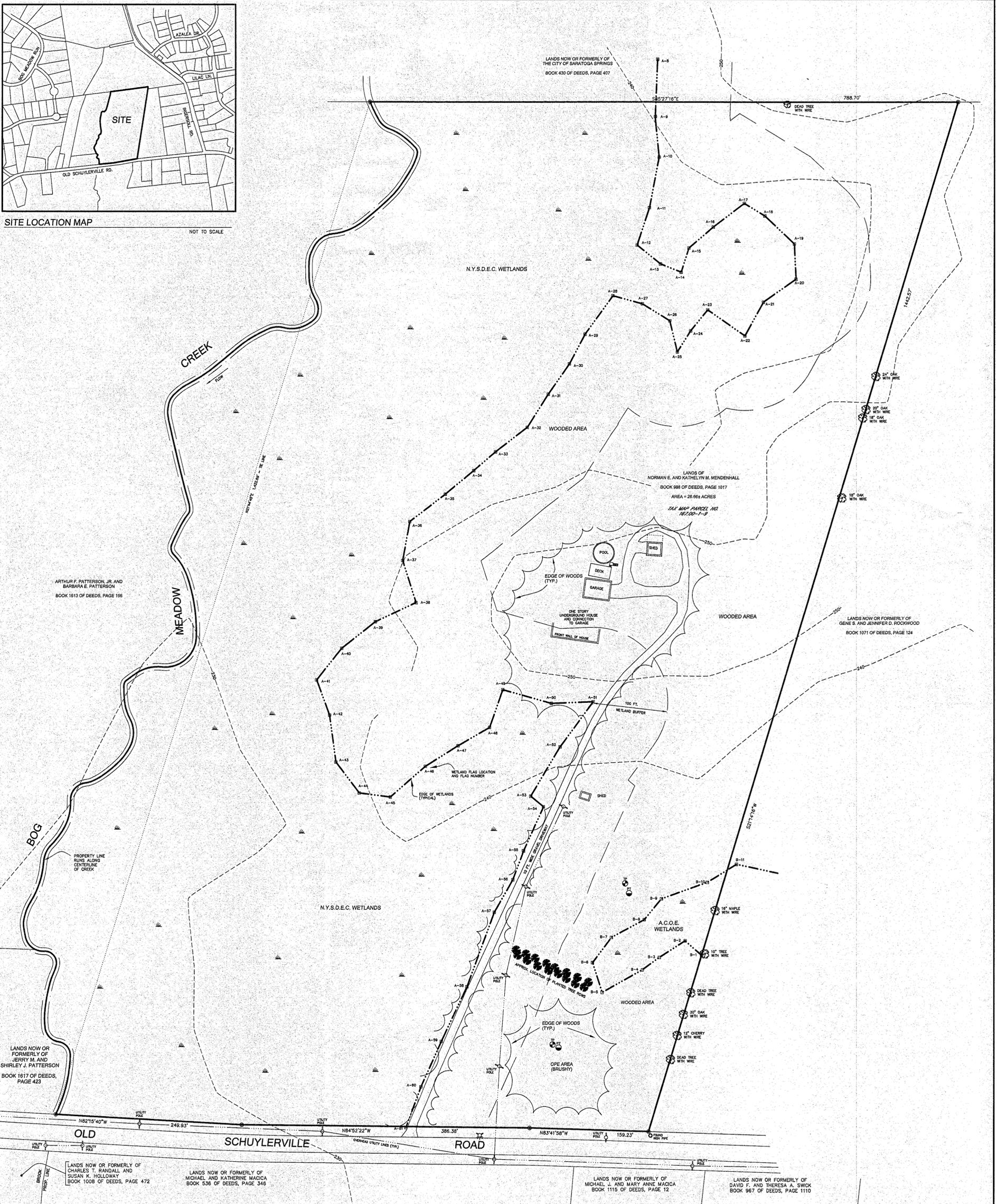
Date

06/10/2016



SITE LOCATION MAP

NOT TO SCALE



ARTHUR F. PATTERSON, JR. AND BARBARA E. PATTERSON
BOOK 1813 OF DEEDS, PAGE 166

LANDS NOW OR FORMERLY OF JERRY M. AND SHIRLEY J. PATTERSON
BOOK 1817 OF DEEDS, PAGE 423

LANDS NOW OR FORMERLY OF CHARLES T. RANDALL AND SUSAN K. HOLLOWAY
BOOK 1008 OF DEEDS, PAGE 472

LANDS NOW OR FORMERLY OF MICHAEL AND KATHERINE MACIOA
BOOK 536 OF DEEDS, PAGE 346

LANDS NOW OR FORMERLY OF MICHAEL J. AND MARY ANNE MACIOA
BOOK 1115 OF DEEDS, PAGE 12

LANDS NOW OR FORMERLY OF DAVID F. AND THERESA A. SWICK
BOOK 967 OF DEEDS, PAGE 110

WOODED AREAS:
MOST OF THIS SITE IS WOODED. THE TREES ARE A MIX OF HARDWOODS AND WHITE PINES. THIS APPEARS TO BE A 40 TO 50 YEAR OLD GROWTH.

SOILS INFORMATION:
TEST PIT 1
0-9" TOP SOIL / LOAMY SAND
9-19" YELLOWISH-BROWN SAND
19-72" SLIGHTLY LIGHTER COLOR YELLOWISH-BROWN SAND
NO WATER FOUND
NO MOTTLING FOUND
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 1 MIN. 30 SEC.

DENSITY CALCULATION:
TOTAL AREA = 26.66± ACRES
CONSTRAINED ACREAGE:
N.Y.S.D.E.C. WETLANDS: 14.28± ACRES
A.C.O.E. WETLANDS: 0.26± ACRES
TOTAL WETLANDS: 14.54± ACRES
UNCONSTRAINED ACREAGE: 12.12± ACRES
BASE UNITS AVAILABLE: 12.12 / 2 = 6

NOTES:
1.) THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE OR A TITLE REPORT.
2.) WETLANDS SHOWN WERE FLAGGED ON OCTOBER 6, 2015 BY ROGER J. CASE, SOIL SCIENTIST, DIVERSIFIED SOIL SERVICES, LTD.
3.) CONTOURS SHOWN SCALED FROM U.S.G.S. TOPOGRAPHIC QUADRANGLE.

TEST PIT 2
0-10" TOP SOIL / LOAMY SAND
10-18" DARK YELLOWISH-BROWN SAND
18-48" MOTTLED DARK YELLOWISH-BROWN SAND
WATER AT 42"
MOTTLING AT 21 IN. BELOW GRADE
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 2 MIN. 30 SEC.

MAP REFERENCES:
1.) MAP ENTITLED "A MAP OF LANDS TO BE CONVEYED TO ARTHUR PATTERSON, JR.", DATED MARCH 14, 1986, MADE BY BENCHMARK SURVEYING SERVICES AND RECORDED IN THE SARATOGA COUNTY CLERK'S OFFICE AS MAP NO. "P-75".
2.) MAP ENTITLED "SURVEY OF LANDS OF ARTHUR F. PATTERSON, JR. AND THOMAS E. PATTERSON", DATED JANUARY 21, 2002, MADE BY PAUL F. TOMMELL, L.S., P.C. AND FILED IN THE SARATOGA COUNTY CLERK'S OFFICE AS MAP NO. "P-285".

DEED REFERENCE:
1.) DEED DATED NOVEMBER 1, 1978 FROM CHARLES C. MAGNELL AND ALICE H. MAGNELL TO NORMAN E. MENDENHALL AND KATHELYN M. MENDENHALL AND RECORDED IN THE SARATOGA COUNTY CLERK'S OFFICE IN BOOK 988 OF DEEDS AT PAGE 1017.

SURVEY DANIEL C. WHEELER, L.S.
ASSOCIATES, LLC
PROFESSIONAL LAND SURVEYING
432 BROADWAY, SUITE 5, SARATOGA SPRINGS, NY 12866
PH. (518) 583-7302 FAX (518) 583-7303

UNAUTHORIZED ALTERATION OR ADDITION TO THIS MAP IS A VIOLATION OF ARTICLE 145, SECTION 7209, SUB-PARAGRAPH (2) OF THE NEW YORK STATE EDUCATION LAW.
OWNER / DEVELOPER:
NORMAN E. AND KATHELYN M. MENDENHALL
101 OLD SCHUYLERVILLE ROAD
SARATOGA SPRINGS, NEW YORK 12866

PLANNING BOARD PROJECT NO. 2016 . . .
TITLE:
EXISTING CONDITIONS / CONSERVATION ANALYSIS PLAN
SUBDIVISION OF LANDS OF NORMAN E. MENDENHALL AND KATHELYN M. MENDENHALL OLD SCHUYLERVILLE ROAD
LOCATION: CITY OF SARATOGA SPRINGS (O.D.)
DATE: MAY 18, 2016
SARATOGA COUNTY, NEW YORK
SCALE: 1 INCH = 60 FEET
SHEET 1 OF 3
MAP NO. 2016-05-04

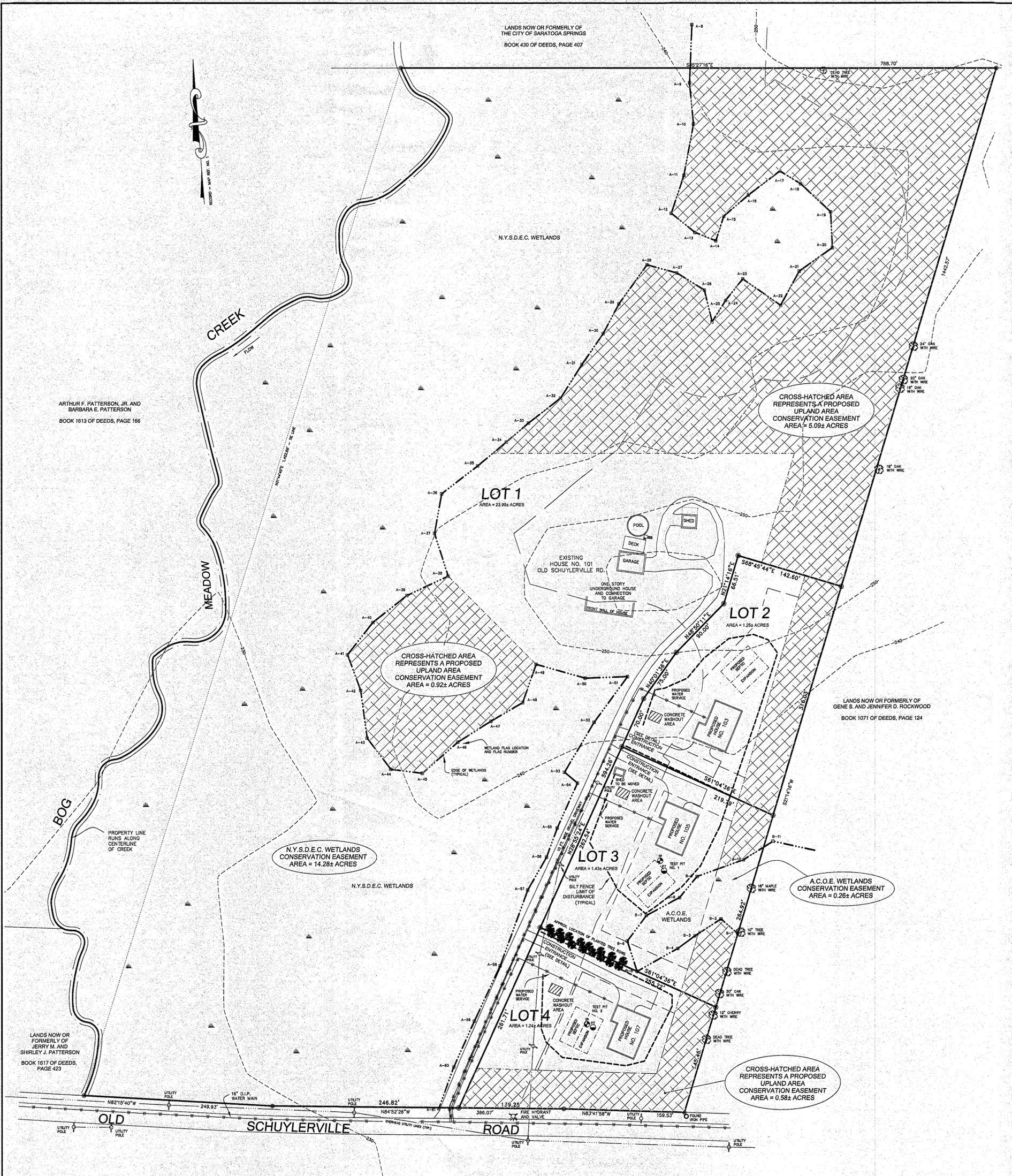
GEORGE YASENCHAK
P.E. LIC. NO. 054,743
DANIEL C. WHEELER
P.L.S. LIC. NO. 50,137

LANDS NOW OR FORMERLY OF
THE CITY OF SARATOGA SPRINGS
BOOK 430 OF DEEDS, PAGE 407

ARTHUR F. PATTERSON, JR. AND
BARBARA E. PATTERSON
BOOK 1613 OF DEEDS, PAGE 166

LANDS NOW OR FORMERLY OF
GENE S. AND JENNIFER D. ROCKWOOD
BOOK 1071 OF DEEDS, PAGE 124

LANDS NOW OR
FORMERLY OF
JERRY M. AND
SHIRLEY J. PATTERSON
BOOK 1617 OF DEEDS,
PAGE 423



SOILS INFORMATION:

TEST PIT 1
0-9" TOP SOIL / LOAMY SAND
9-19" YELLOWISH-BROWN SAND
19-72" SLIGHTLY LIGHTER COLOR YELLOWISH-BROWN SAND
NO WATER FOUND
NO MOTTLING FOUND
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 1 MIN. 30 SEC.

TEST PIT 2
0-10" TOP SOIL / LOAMY SAND
10-18" DARK YELLOWISH-BROWN SAND
18-46" MOTTLED DARK YELLOWISH-BROWN SAND
WATER AT 42"
MOTTLING AT 21 IN. BELOW GRADE
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 2 MIN. 30 SEC.

CONSERVATION EASEMENT SUMMARY

TOTAL EASEMENT AREA (WETLANDS AND UPLANDS) = 21.13± ACRES
UPLANDS EASEMENT AREA = 6.59± ACRES
(54% OF UNCONSTRAINED LAND)

SEPTIC SYSTEM SIZES FOR LOTS 2, 3 AND 4

NUMBER OF BEDROOMS	SEPTIC TANK SIZE (GAL.)	LEACH FIELD TOTAL LENGTH (FT.)	LEACH FIELD TYP. DESIGN
2	1000	92	3 RUNS OF 35 FT. EA.
3	1000	138	4 RUNS OF 35 FT. EA.
4	1250	184	5 RUNS OF 40 FT. EA.

NOTES:

- THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE OR A TITLE REPORT.
- WETLANDS SHOWN WERE FLAGGED ON OCTOBER 6, 2015 BY ROGER J. CASE, SOIL SCIENTIST, DIVERSIFIED SOIL SERVICES, LTD.
- CONTOURS SHOWN PER U.S.G.S. QUAKER SPRINGS, N.Y. QUADRANGLE.

DEED REFERENCE:

- DEED DATED NOVEMBER 1, 1978 FROM CHARLES C. MAGNELL AND ALICE H. MAGNELL TO NORMAN E. MENDENHALL AND KATHELYN M. MENDENHALL AND RECORDED IN THE SARATOGA COUNTY CLERK'S OFFICE IN BOOK 988 OF DEEDS AT PAGE 1017.

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- MAP ENTITLED "SURVEY OF LANDS OF ARTHUR F. PATTERSON, JR. AND THOMAS E. PATTERSON", DATED JANUARY 21, 2002, MADE BY PAUL F. TOMMELL, L.S., P.C. AND FILED IN THE SARATOGA COUNTY CLERK'S OFFICE AS MAP NO. "P-288".

SURVEY DANIEL C. WHEELER, L.S.
ASSOCIATES, LLC
PROFESSIONAL LAND SURVEYING
432 BROADWAY, SUITE 5, SARATOGA SPRINGS, NY 12866
PH. (518) 583-7302 FAX (518) 583-7303

UNAUTHORIZED ALTERATION OR ADDITION TO THIS MAP IS A VIOLATION OF ARTICLE 146, SECTION 7209, SUB-PARAGRAPH (2) OF THE NEW YORK STATE EDUCATION LAW.

OWNER / DEVELOPER:
NORMAN E. AND KATHELYN M. MENDENHALL
101 OLD SCHUYLERVILLE ROAD
SARATOGA SPRINGS, NEW YORK 12866

PLANNING BOARD PROJECT NO. 2016

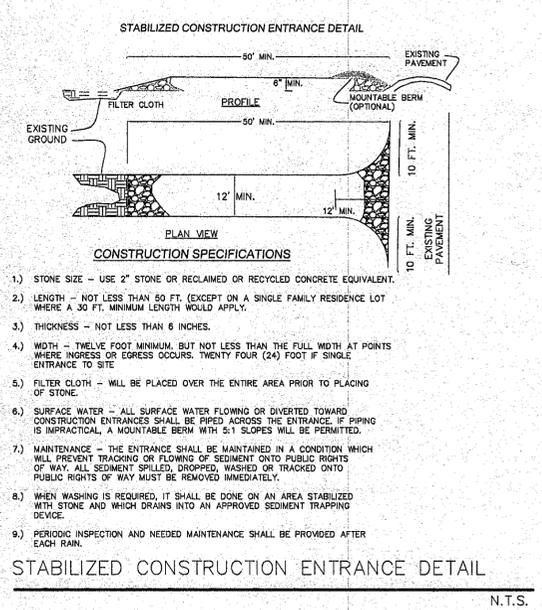
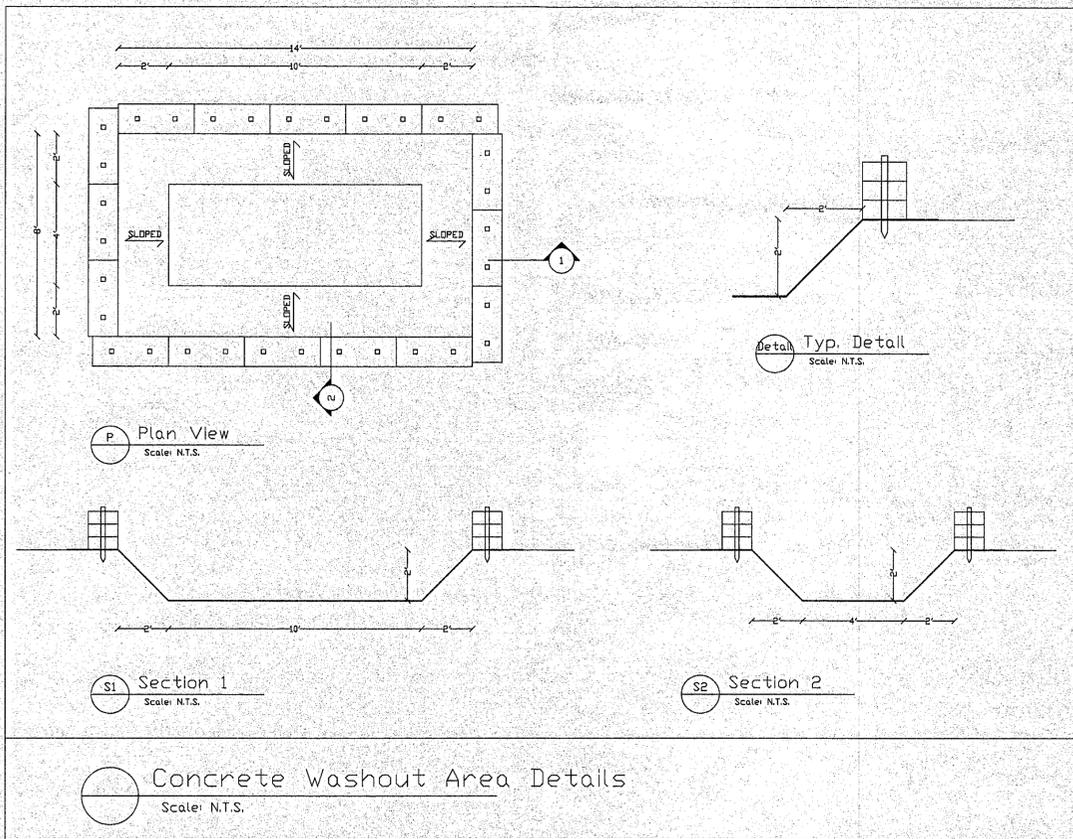
TITLE:
SUBDIVISION PLAN
**SUBDIVISION OF LANDS OF
NORMAN E. MENDENHALL AND
KATHELYN M. MENDENHALL
OLD SCHUYLERVILLE ROAD**

LOCATION: DATE:
CITY OF SARATOGA SPRINGS (O.D.) MAY 18, 2016
SARATOGA COUNTY, NEW YORK

SCALE: SHEET 2 OF 3
1 INCH = 60 FEET MAP NO. 2016-05-04

GEORGE YASENCHAK
P.E. LIC. NO. 054,743

DANIEL C. WHEELER
P.L.S. LIC. NO. 50,137



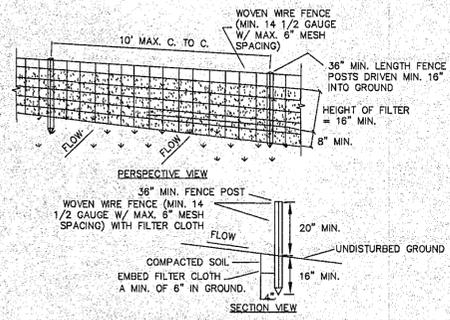
- CONSTRUCTION SPECIFICATIONS**
- 1.) STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - 2.) LENGTH - NOT LESS THAN 50 FT. (EXCEPT ON A SINGLE FAMILY RESIDENCE LOT WHERE A 30 FT. MINIMUM LENGTH WOULD APPLY).
 - 3.) THICKNESS - NOT LESS THAN 6 INCHES.
 - 4.) WIDTH - TWELVE FOOT 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 TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
 - 8.) WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - 9.) PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.

CONSERVATION EASEMENT RESTRICTIONS:

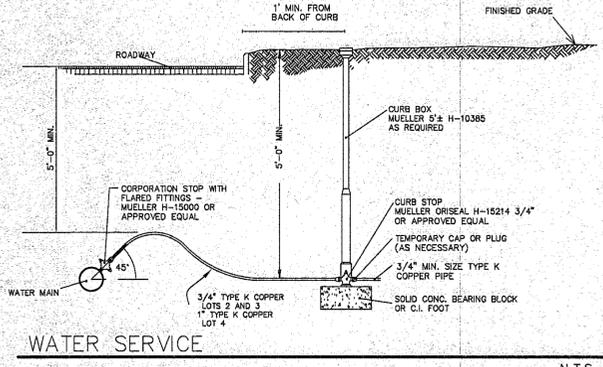
THESE RESTRICTIONS OF THE PROPERTY SHALL RUN WITH THE PROPERTY IN PERPETUITY AS A CONSERVATION EASEMENT, AND BE BINDING ON THE GRANTOR, AND THE GRANTOR'S SUCCESSORS, ASSIGNS, LESSEES, AND OTHER OCCUPIERS AND USERS. THIS CONSERVATION EASEMENT IS A CONDITION OF FINAL SUBDIVISION APPROVAL. THIS CONSERVATION EASEMENT SHALL BE FILED IN THE OFFICE OF THE SARATOGA COUNTY CLERK ALONG WITH THE FINAL SUBDIVISION PLOT. THE TERMS ON THIS CONSERVATION EASEMENT SHALL BE ENFORCEABLE BY THE CITY OF SARATOGA SPRINGS.

- 1.) **GENERAL** - THERE SHALL BE NO FUTURE FILLING, FLOODING EXCAVATING, MINING OR DRILLING; NO REMOVAL OF NATURAL MATERIALS; NO DUMPING OF MATERIALS, AND, NO ALTERATION OF THE TOPOGRAPHY WHICH WOULD MATERIALLY AFFECT THE PROPERTY IN ANY MANNER, EXCEPT AS MAY BE AUTHORIZED BY PERMIT.
- 2.) **WATERS AND WETLANDS** - IN ADDITION TO THE GENERAL RESTRICTIONS ABOVE, WITHIN THE PROPERTY THERE SHALL BE NO DRAINING, DREDGING, DAMMING OR IMPOUNDING; NO CHANGING THE GRADE OR ELEVATION, IMPAIRING THE FLOW OR CIRCULATION OF WATERS, OR REDUCING THE REACH OF WATERS; AND NO OTHER DISCHARGES OR ACTIVITY REQUIRING A PERMIT UNDER APPLICABLE WATER POLLUTION CONTROL LAWS AND REGULATIONS, EXCEPT AS MAY BE AUTHORIZED BY PERMIT OR BY CURRENT NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PERMITS, OR ANY AMENDMENTS THEREOF.
- 3.) **TREES/VEGETATION** - ON THE PROPERTY THERE SHALL BE NO CLEARING, BURNING, CUTTING OR DESTROYING OF TREES OR VEGETATION, EXCEPT AS MAY BE NECESSARY TO PROTECT PUBLIC HEALTH OR SAFETY OR AS MAY BE AUTHORIZED BY PERMIT; THERE SHALL BE NO PLANTING OR INTRODUCTION OF NON-NATIVE OR EXOTIC SPECIES OF TREES OR VEGETATION.
- 4.) **USES** - NO AGRICULTURAL, ANIMAL HUSBANDRY, INDUSTRIAL, MINING, LOGGING OR COMMERCIAL ACTIVITY SHALL BE UNDERTAKEN OR ALLOWED ON THE PROPERTY.
- 5.) **STRUCTURES** - THERE SHALL BE NO CONSTRUCTION, ERECTION, OR PLACEMENT OF BUILDINGS, BILLBOARDS, OR ANY OTHER STRUCTURES, TO INCLUDE TRAILERS, MOBILE HOMES OR RECREATIONAL VEHICLES OR ADDITIONS TO EXISTING STRUCTURES, ON THE PROPERTY.
- 6.) **NEW ROADS** - THERE SHALL BE NO CONSTRUCTION OF NEW ROADS, TRAILS OR WALKWAYS ON THE PROTECTED PROPERTY WITHOUT THE PRIOR WRITTEN APPROVAL (INCLUDING APPROVAL OF THE MANNER OF CONSTRUCTION) OF THE HOLDER AND N.Y.S.D.E.C. AND/OR THE A.C.O.E.
- 7.) **UTILITIES** - THERE SHALL BE NO CONSTRUCTION OR PLACEMENT OF UTILITIES OR RELATED FACILITIES (INCLUDING TELECOMMUNICATIONS TOWERS AND ANTENNAS) ON THE PROTECTED PROPERTY WITHOUT THE PRIOR WRITTEN APPROVAL (INCLUDING APPROVAL OF THE MANNER OF CONSTRUCTION) OF THE HOLDER AND N.Y.S.D.E.C. AND/OR THE A.C.O.E.
- 8.) **PEST CONTROL** - THERE SHALL BE NO APPLICATION OF PESTICIDES OR BIOLOGICAL CONTROLS, INCLUDING CONTROLS OF PROBLEM VEGETATION, ON THE PROPERTY WITHOUT PRIOR WRITTEN APPROVAL (INCLUDING APPROVAL OF THE MANNER OF APPLICATION) OF THE HOLDER AND N.Y.S.D.E.C. AND/OR THE A.C.O.E.
- 9.) **VEHICULAR USE** - THERE SHALL BE NO USE OF ANY MOTORIZED VEHICLE OF MOTORIZED EQUIPMENT, AND NO USE OF ANY NON-MOTORIZED BICYCLE ANYWHERE ON THE PROPERTY, EXCEPT IN THE CASE OF EMERGENCY, FOR THE PURPOSE OF ENFORCEMENT OF APPLICABLE LAWS AND REGULATIONS OR FOR THE PURPOSE OF MONITORING COMPLIANCE WITH THE PURPOSES OF THE CONSERVATION EASEMENT.
- 10.) **SUBDIVISION** - THERE SHALL BE NO SUBDIVISION OF THE PROPERTY INTO PARCELS OR LOTS, SO AS TO CREATE NEW PARCELS, LOTS OR SITES WITH OR WITHOUT ACCESS.
- 11.) **MARKING** - THE GRANTOR SHALL MARK THE LIMITS OF THE PROPERTY IN A MANNER APPROVED BY THE HOLDER AND THE CORPS, AND SHALL MAINTAIN THE MARKING IN PLACE SO AS TO NOTIFY THE PUBLIC THAT THE PROPERTY IS AN AREA PRESERVED FOR CONSERVATION PURPOSES.
- 12.) **OTHER PROHIBITIONS** - ANY OTHER USE OF, OR ACTIVITY ON, THE PROPERTY WHICH IS OR MAY BECOME INCONSISTENT WITH THE PURPOSES OF THIS CONSERVATION EASEMENT, THE PRESERVATION OF THE PROPERTY SUBSTANTIALLY IN ITS NATURAL CONDITION, OR THE PROTECTION OF ITS ENVIRONMENTAL SYSTEMS, IS PROHIBITED.

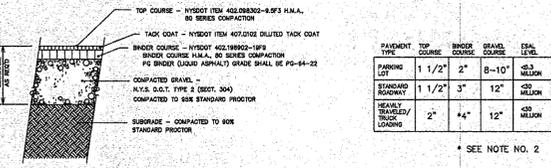


- CONSTRUCTION SPECIFICATIONS**
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
 4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVROFENCE, OR APPROVED EQUIVALENT.
 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE
N.T.S.
BASED ON NEW YORK GUIDELINES FOR URBAN EROSION & SEDIMENT CONTROL.



WATER SERVICE
N.T.S.



- ASPHALT PAVEMENT**
N.T.S.
- NOTES:
- 1.) PAVEMENT SECTIONS SPECIFIED ARE TYPICAL FOR STREET, DRIVEWAY AND PARKING LOT CONSTRUCTION WHERE TRAFFIC VOLUMES AND LOADINGS ARE NOT EXCESSIVE. BASED ON ANTICIPATED VOLUMES AND LOADS, THE CITY ENGINEER MAY REQUIRE STRUCTURAL PAVEMENT SECTION TO BE INCREASED TO CARRY DESIGN LOADS.
 - 2.) BINDER TO BE PLACED IN 2 - 2" LIFTS W/ TACK COAT BETWEEN.
 - 3.) THE CITY MAY REQUIRE COMPACTION TESTING AND/OR CORE SAMPLES TO VERIFY PAVEMENT THICKNESS. ALL TESTING SHALL BE AS ORDERED BY THE CITY ENGINEER AND SHALL BE PAID FOR BY THE CONTRACTOR.
 - 4.) NOTIFY THE CITY ENGINEER 48 HOURS MINIMUM PRIOR TO COMMENCING PAVING OPERATIONS.

SOILS INFORMATION:

TEST PIT 1
0-9" TOP SOIL / LOAMY SAND
9-19" YELLOWISH-BROWN SAND
19-72" SLIGHTLY LIGHTER COLOR YELLOWISH-BROWN SAND
NO WATER FOUND
NO MOTTLING FOUND
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 1 MIN. 30 SEC.

TEST PIT 2
0-10" TOP SOIL / LOAMY SAND
10-18" DARK YELLOWISH-BROWN SAND
18-48" MOTTLED DARK YELLOWISH-BROWN SAND
WATER AT 42"
MOTTLING AT 21 IN. BELOW GRADE
STABILIZED PERCOLATION RATE - 1 IN. DROP IN 2 MIN. 30 SEC.

CITY OF SARATOGA SPRINGS - STANDARD NOTES:

- 1.) ALL WORK MUST CONFORM TO ALL FEDERAL, STATE AND CITY CODES, SPECIFICATIONS, ORDINANCES, RULES AND REGULATIONS.
- 2.) ELEVATIONS ESTABLISHED FROM INFORMATION SUPPLIED BY THE CITY OF SARATOGA SPRINGS ENGINEER'S OFFICE.
- 3.) ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR TO A LOCATION APPROVED BY THE CITY ENGINEER.
- 4.) THE CONTRACTOR MUST SET UP A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER PRIOR TO ANY CONSTRUCTION. CONSTRUCTION INSPECTIONS BY A DESIGNATED REPRESENTATIVE OF THE APPLICANT/DEVELOPER ARE REQUIRED. THE COST OF THE CONSTRUCTION INSPECTION IS THE RESPONSIBILITY OF THE APPLICANT/DEVELOPER. AN ESCROW ACCOUNT TO COVER THE COST OF THE INSPECTIONS MUST BE ESTABLISHED PRIOR TO ANY CONSTRUCTION.
- 5.) THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM THE BUILDING INSPECTOR IF ANY BLASTING IS REQUIRED FOR THE PROJECT.
- 6.) THE CONTRACTOR MUST OBTAIN A STREET OPENING PERMIT ISSUED BY THE DEPARTMENT OF PUBLIC WORKS FOR ANY WORK IN THE STREET OR RIGHT OF WAY OF ANY CITY STREET, ROAD OR ALLEY.
- 7.) ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT OR DEBRIS ONTO A PUBLIC ROAD.
- 8.) NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL SITE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND AN AS-BUILT DRAWING HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY ENGINEER.

MAP REFERENCES:

- 1.) MAP ENTITLED "A MAP OF LANDS TO BE CONVEYED TO ARTHUR PATTERSON, JR.", DATED MARCH 14, 1986, MADE BY BENCHMARK SURVEYING SERVICES AND RECORDED IN THE SARATOGA COUNTY CLERK'S OFFICE AS MAP NO. "P-75".
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ZONING INFORMATION:

ZONING DISTRICT: RR-1
MINIMUM LOT SIZE: 2 ACRES
MINIMUM MEAN LOT WIDTH: 200 FT.
MAXIMUM PERCENT OF LOT TO BE OCCUPIED BY:
PRINCIPAL BUILDING: 15 %
ACCESSORY BUILDING: 5 %
MINIMUM YARD DIMENSIONS:
FRONT: 60 FT.
REAR: 100 FT.
ONE SIDE: 30 FT.
TOTAL SIDE: 100 FT.
MAXIMUM BUILDING HEIGHT: 35 FT.
MINIMUM DISTANCE FROM ACCESSORY BUILDING TO:
PRINCIPAL BUILDING: 5 FT.
FRONT LOT LINE: 60 FT.
SIDE LOT LINE: 30 FT.
REAR LOT LINE: 50 FT.
MINIMUM PERCENT OF LOT TO BE PERMEABLE: 80%

- NOTES:**
- 1.) THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE OR A TITLE REPORT.
 - 2.) WETLANDS SHOWN WERE FLAGGED ON OCTOBER 6, 2015 BY ROGER J. CASE, SOIL SCIENTIST, DIVERSIFIED SOIL SERVICES, LTD.

DEED REFERENCE:

- 1.) DEED DATED NOVEMBER 1, 1978 FROM CHARLES C. MAGNELL AND ALICE H. MAGNELL TO NORMAN E. MENDENHALL AND KATHELYN M. MENDENHALL, AND RECORDED IN THE SARATOGA COUNTY CLERK'S OFFICE IN BOOK 988 OF DEEDS AT PAGE 1017.

SURVEY ASSOCIATES, LLC
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PROFESSIONAL LAND SURVEYING
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UNAUTHORIZED ALTERATION OR ADDITION TO THIS MAP IS A VIOLATION OF ARTICLE 145, SECTION 7209, SUB-PARAGRAPH (2) OF THE NEW YORK STATE EDUCATION LAW.

OWNER / DEVELOPER:
NORMAN E. AND KATHELYN M. MENDENHALL
101 OLD SCHUYLERVILLE ROAD
SARATOGA SPRINGS, NEW YORK 12866

PLANNING BOARD PROJECT NO. 2016

TITLE:
NOTES AND DETAILS
SUBDIVISION OF LANDS OF NORMAN E. MENDENHALL AND KATHELYN M. MENDENHALL
OLD SCHUYLERVILLE ROAD

LOCATION: DATE: MAY 18, 2016
CITY OF SARATOGA SPRINGS (O.D.)
SARATOGA COUNTY, NEW YORK

SCALE: SHEET 3 OF 3
1 INCH = 60 FEET
MAP NO. 2016-05-04

GEORGE YASENCHAK
P.E. LIC. NO. 054,743

DANIEL C. WHEELER
P.L.S. LIC. NO. 50,137



City of Saratoga Springs
OFFICE OF PUBLIC WORKS
5 Lake Avenue
Saratoga Springs, New York 12866

ANTHONY J. SCIROCCO
COMMISSIONER
TIMOTHY J. COGAN
DEPUTY COMMISSIONER

Phone 518-587-3550 ** Fax 518-587-2417
www.saratoga-springs.org

NEW WATER SERVICE CONNECTION
AGREEMENT & APPLICATION FORM

Subdivision of Lands of

Property Owner's Name: Norm Mendenhall Project Name (if applicable): Mendenhall

Property Address: 101 Old Saratoga Rd. Tax Map#: 167.00 1-9

Size of Tap (check one below):

3/4" 1"

Lots
3 & 4 *LOT 2*

Greater than 1"

A unit of water shall be defined as fourteen thousand (14,000) cubic feet of water per year.

Contact the Water Dept at ext. 2502 for assistance with water use estimation and meter specifications before signing below.

Number of Dwellings: 3 Estimated Cubic Feet of Water per Year: _____

To be completed in full without any contingencies or protest, on or before the Building Inspector approval of the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.

The undersigned represents to the City that they have full and complete authority to execute this document and bind and commit the developer to abide by the City Water Ordinance. This agreement shall be binding on all of the undersigned transferees.

The undersigned acknowledges that a copy of this document will be delivered to all appropriate and necessary governmental entities.

Authorized Signature: Norm Mendenhall Company Name: _____

Company Address: _____

Phone Number: _____ Fax Number: _____ Date: _____

Department of Public Works Approval: [Signature] Date: 6/15/16

LETTER OF TRANSMITTAL

TO: Saratoga Springs Planning Department
 City Hall
 Saratoga Springs, NY 12866

DATE: 6/23/2016

JOB NO.: 2013125

RE: Excelsior Springs Valet Parking Lot

WE ARE SENDING YOU Attached Under separate cover via _____ the following items

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
3			Full size Site Plan Application Plan Sets
1			Site Plan Application fee check for \$500
3			Site plan application form
3			Site plan application check lists
3			Cost Estimate for Letter of Credit
3			Short EAF
1			Lease agreement with National Grid
1			CD of PDF's for the submission

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your records Approved as noted Submit _____ copies for distribution
 As requested Return for corrections Return _____ corrected prints
 For review and comments _____
 FOR BIDS DUE _____ 20____ PRINTS RETURNED AFTER LOAN TO US

REMARKS:

cc:

SIGNED: _____



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

<p>APPLICATION FOR: SITE PLAN REVIEW (INCLUDING PUD)</p>

(Rev: 12/2015)

*****Application Check List - All submissions must include completed application check list and all required items.**

Project Name: _____

Property Address/Location: _____

Tax Parcel #: _____ Zoning District: _____
(for example: 165.52-4-37)

Proposed Use: _____

Date special use permit granted (if any): _____ Date zoning variance granted (if any): _____

Is property located within (check all that apply)?: Historic District Architectural Review District
 500' of a State Park, city boundary, or county/state highway

<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
----------------------	------------------------------------	-----------------------

Name _____

Address _____

Phone _____		
Emai _____		

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Application Fee: A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

<input type="checkbox"/>	<u>Sketch Plan</u> -	\$250	\$ _____
<input type="checkbox"/>	<u>Final Site Plan Approval</u>		
	Residential -	\$250 plus \$150/unit	\$ _____
	Non-Residential -	\$500 plus \$100/1,000 SQ. FT.	\$ _____
<input type="checkbox"/>	<u>Modification</u>		
	Residential -	\$250	\$ _____
	Non-Residential -	\$500	\$ _____
		Total	\$ _____

Submission Deadline – Check City’s website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES ____ NO ____ . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Site Plan Review by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.2 of the Zoning Ordinance of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: _____ Date: _____

If applicant is not current owner, owner must also sign.

Owner Signature: _____ Date: _____



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
 Saratoga Springs, New York 12866-2296
 Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

 (Application #)

 (Date received)

Rev.12/2015

SITE PLAN REVIEW SUBMITTAL CHECKLIST

Project Name: _____

Listed below are the minimum submittal requirements for site plan review as set forth in The City of Saratoga Springs' Zoning Ordinance Appendix B. The Planning Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimum requirements are not met. Please complete the checklist below and provide with your submission.

REQUIRED ITEMS: *3 hard copies and 1 digital copy of ALL materials are required.

CHECK EACH ITEM	
<input type="checkbox"/>	1. Completed Site Plan Application (3 hard copies - *1 w/original signature - and 1 digital) and Fee
<input type="checkbox"/>	2. SEQR Environmental Assessment Form- short or long form as required by action.
<input type="checkbox"/>	3. Set of plans including: (3) large scale plans (sheets must be 24" x 36", drawn to a scale of not more than 1"=50 feet). One digital version of all submittal items (pdf) shall be provided.
<input type="checkbox"/>	4. Basic or Full Storm Water Pollution Prevention Plan as required per City Code Chapter 242.
<input type="checkbox"/>	5. Copy of signed DPW water connection agreement for all projects involving new water connections to the City system
<input type="checkbox"/>	6. Engineering Report for Water and Sanitary
<input type="checkbox"/>	7. Complete Streets Checklist
<input type="checkbox"/>	8. Project Cost Estimate-Quantities of work items and estimate of costs

REQUIRED ITEMS ON SITE PLAN, AS APPLICABLE:

<input type="checkbox"/>	1. Property line survey prepared by a licensed land surveyor. Site plan must reference such survey with all corners set and marked on plan. A copy of the original property survey must also be included.
<input type="checkbox"/>	2. North arrow and map scale
<input type="checkbox"/>	3. Parcel tax map number
<input type="checkbox"/>	4. Site location map
<input type="checkbox"/>	5. Site vicinity map (all features within 300 feet of property)
<input type="checkbox"/>	6. Identification of zoning district with corresponding area requirements

<input type="checkbox"/>	7. Building setback lines, either listed or shown on plans.
<input type="checkbox"/>	8. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input type="checkbox"/>	9. Topography data tied to NGVD 1929 datum
<input type="checkbox"/>	10. Name of all adjacent property owners
<input type="checkbox"/>	11. Parcel street address (existing and any proposed postal addresses)
Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	12. Identification of all existing or proposed easements, covenants or legal rights-of-way on this property
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. References to all prior variances or special use permits
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Existing and proposed contours and spot grades (at 2 foot intervals)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Identification of all spoil or borrow areas
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all watercourses, designated State wetlands, buffers, Federal wetlands, floodplains, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Location of proposed storage
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location and distance to fire hydrant
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location, size, and material of all existing and proposed utility services
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Parking lot layout plan and identification of all loading areas (number all spaces)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking demand calculations
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Location and screening plan for dumpster or recycling bins
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	26. Location, design, type of construction and materials, proposed use and exterior dimensions of all buildings (existing and proposed) on site
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. Identification of storage of any potentially hazardous materials
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	28. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	29. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Erosion and sediment control plan – including designated concrete truck washout area

Checklist prepared by: _____ Date: _____

City of Saratoga Springs Complete Streets Checklist

Saratoga Springs Complete Street Policy Vision (May 2012)

The City of Saratoga Springs Complete Streets Policy will encourage the development of a complete streets network throughout the City to create a more balanced transportation system. The Policy shall be consistent with and assist in achieving the goals and recommendations set forth in the City's Comprehensive Plan and other policy documents. The Policy shall ensure new and updated public and private projects are planned, designed, maintained and operated to enable safer, comfortable and convenient travel to the greatest extent possible for users of all abilities including pedestrians, bicyclists, motorists and transit riders.

This checklist is intended to assist the City in achieving its vision for complete streets.

Project Name: _____ **Date:** _____

Project Location / Limits: _____

Project Description: _____

Instructions: For each box checked, please provide a brief description for how the item is addressed, not addressed, or not applicable and include supporting documentation.

Street Classification (identify street or streets within the project area)

Principal arterial Minor arterial Mixed use collector Mixed use local
 Residential collector Residential local Special use street

EXISTING CONDITIONS

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
<i>Existing Bicycle & Pedestrian Operations</i>				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existing Transit Operations</i>				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the project area on a transit route? (CDTA Service Routes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existing Access and Mobility</i>				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there gaps inhibiting continuous access between schools, hospitals, senior care, or community centers or persons with disabilities within project area?"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Project Area Context</i>				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: City of Saratoga Springs Comprehensive Plan , City of Saratoga Springs Open Space Plan , Capital District Transportation Committee Bicycle/ Pedestrian Priority Network , City Standard Details , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pedestrian accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access and Mobility accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Streetscape elements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable actuated traffic signal bike detection, including turn lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable consideration/provision for accessible pedestrian traffic signal features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Pedestrian Facilities:	
Sidewalks on both sides of the street	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Geometric modifications to reduce crossing distances such as curb extensions (e.g. bulb-outs)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable provision for pedestrian traffic signal features (e.g. ped. buttons)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Safety islands/medians on roadways with two or more traffic lanes in each direction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to any key destinations listed on page 1?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to neighborhoods?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Design Standards and Guidelines

Design meets guidelines such as described below for bicycle/pedestrian/bus/transit facilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Describe
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*American Association of State Highway and Transportation Officials (AASHTO) - *A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities and AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*; [Public Right-of-Way Accessibility Guide \(PROWAG\)](#); [Manual on Uniform Traffic Control Devices \(MUTCD\)](#); [Americans with Disabilities Act Accessibility Guidelines \(ADAAG\)](#); National Association of City Transportation Officials (NACTO) - [Urban Bikeway Design Guide](#). New York State Department of Transportation – [Highway Design Manual](#)

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Appendix B
Short Environmental Assessment Form

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: Excelsior Springs Banquet Valet Parking. Site Plan Amendment to Spa Hotel, II, LLC				
Project Location (describe, and attach a location map): 47 Excelsior Avenue				
Brief Description of Proposed Action: The proposed project involves striping an existing paved area for valet parking to support an existing banquet facility. The project includes pavement striping, perimeter fencing, sidewalks, lighting and street trees along the frontage of the proposed lot.				
Name of Applicant or Sponsor: Saratoga Restaurant Hospitality, LLC	Telephone:			
	E-Mail:			
Address: 302 Washington Avenue				
City/PO: Albany	State: NY	Zip Code: 12203		
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.			NO	YES
			X	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Site plan amendment - Saratoga Springs Planning Board Saratoga County Planning Board Advisory Opinion			NO	YES
				X
3.a. Total acreage of the site of the proposed action?		<u>6.67</u> acres		
b. Total acreage to be physically disturbed?		<u>0.20</u> acres		
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>10.32</u> acres		
4. Check all land uses that occur on, adjoining and near the proposed action.				
<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland				

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____	NO	YES
	X	
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: _____ _____ _____	NO	YES
	X	
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: <u>The national grid site is a known area of hazardous waste</u> _____ _____	NO	YES
		X
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: _____ Date: _____		
Signature: _____		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept “Have my responses been reasonable considering the scale and context of the proposed action?”

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing: a. public / private water supplies? b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?		
11. Will the proposed action create a hazard to environmental resources or human health?		

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

Cost Estimate for Letter of Credit				PB # xx.xxx
Project No:	2013125			
Project:	Excelsior Springs Banquet Valet Parking			
Location:	Excelsior Avenue			
	Saratoga Springs, New York			
Date:	6/23/2016			
ON-SITE WORK				
Item	Quantity	Unit	Unit Cost	Subtotal
<u>Site Amenities</u>				
20' Sliding Gate	1	EA	\$1,200.00	\$2,200.00
24' Sliding Gate	1	EA	\$1,500.00	\$3,000.00
Fencing	680	LF	\$16.00	\$10,880.00
Signage and Striping	1	LS	\$2,500.00	\$2,500.00
On-Site Total				\$18,580.00
On-Site Total X .25				\$4,645.00
OFF-SITE WORK				
Asphalt Pavement and base	975	SF	\$3.25	\$3,168.75
Concrete Sidewalk/Patio	1475	SF	\$5.25	\$7,743.75
Decorative Street Lights	4	EA	\$3,000.00	\$12,000.00
Deciduous Trees	4	EA	\$500.00	\$2,000.00
As Built Drawings	1	LS	\$3,500.00	\$1,500.00
Off-Site Total				\$26,412.50
Letter of Credit Amounts				
Total off-site work				\$26,412.50
Total on-site work x .25				\$4,645.00
Total				\$31,057.50

LICENSE AGREEMENT

THIS LICENSE AGREEMENT (this "Agreement") is made as of the 6 day of Apr. 1, 2016, by and between **Niagara Mohawk Power Corporation**, (hereinafter referred to as "Licensor") with offices at 300 Erie Boulevard West, Syracuse, New York 13202 and **Saratoga Restaurant Hospitality, LLC**, a New York limited liability company having a principal place of business at 302 Washington Avenue Ext., Albany, New York 12203 (hereinafter the "Licensee").

WHEREAS, Licensor is the owner of a certain parcel of land located adjacent to 47 Excelsior Avenue, Saratoga Springs, New York referenced as tax parcels 166.29-2-9 and 166.5-5-1 as shown on Exhibit A (hereinafter "Licensor's Property").

WHEREAS, Licensor and Licensee entered into that certain License Agreement dated June, 15, 2009 attached hereto as Exhibit B (the "Original License"), pursuant to which Licensor granted Licensee the right to install and operate parking spaces on an approximately twenty-five foot section of Licensor's Property identified as "Existing Paved Parking" on Exhibit C (the "Original Parking Area"). The Original Parking Area is included in this Agreement and the Original License is hereby terminated as of the effective date hereof.

WHEREAS, Licensee desires to use an additional portion of the Licensor's Property for the purpose of installing, maintaining and repairing a fenced parking area approximately 35,136 square feet for 115 vehicle parking spaces as shown on the plan attached hereto as Exhibit C (the "Valet Parking Area"). The Valet Parking Area and the Original Parking Area are collectively referred to herein as the "Licensed Premises".

NOW THEREFORE, in consideration of the mutual promises contained herein and for other good and valuable consideration, the receipt and sufficient of which are hereby acknowledged, the parties agree as follows:

1. GRANT OF LICENSE

- A. The Licensors grants to Licensee a license for the following uses (collectively the "Activity"):
- a. The use of the Original Parking Area for short term parking of motor vehicles of guests and employees of Licensee's Excelsior Springs Banquet facility located on Licensee's property at 47 Excelsior Avenue, Saratoga Springs, New York (the "Banquet Facility"); and
 - b. The use of the Valet Parking Area for short term valet guest parking associated with the Banquet Facility.
- B. The Licensors grants to Licensee a license for the construction, installation, repair and maintenance of the following improvements within the Licensed Premises for the allowed Activity (collectively the "Improvements"):
- a. A license for the construction, maintenance and operation of the fencing, gates, pavement, lighting and improvements within the Valet Parking area shown on and in accordance with Exhibit C; and
 - b. A license for the fencing, pavement, lighting and improvements within the Original Parking Area shown on and in accordance with Exhibit C.

The use of the Licensed Premises for the Activity and the Improvements are subject to the terms and conditions set forth in this Agreement. Upon completion of the Improvements, any excavation, digging, disturbance of any surface soils or removal of the pavement within the Licensed Premises or Licensors's Property is not permitted. Any repairs of Improvements that require excavation shall be requested in writing by Licensee and shall not commence without the written consent of Licensors.

Licensee agrees that this Agreement shall be subject to Licensee's receipt of any and all necessary permits, licenses and approvals required by the Environmental Protection Agency ("EPA"), New York State Department of Environmental Conservation ("DEC") and any other regulatory agency or other governmental authority having jurisdiction over the environmental condition of Licensors's Property. Licensee shall commence no work on Licensors's Property until all necessary approvals as determined by Licensors have been obtained. The Activity and Improvements shall not in any way interfere with or impact EPA's right of access to Licensors's Property or the Licensed Premises at any time for purposes of conducting any activity related to the Consent Decree with EPA. Licensee is aware of the existence of as well as the terms of the Consent Decree with EPA (including but not limited to the land use restrictions) and will not engage in any actions or activities which will be in contravention of such Consent Decree.

2. TERM

This Agreement shall be for a term of three (3) years, commencing on August 31, 2015 for the Original Parking Area and March 1, 2016 for the Valet Parking Area and terminating for both areas on August 31, 2019 (the "Original Term"), unless extended by mutual agreement of the parties as follows: provided that the Licensee is not in default of any term, covenant or obligation of this Agreement then upon Licensee's written notice

to the Licensor given at least 180 days before the expiration of the Term, in accordance with the Notice provisions contained herein, this Agreement may be extended for two (2) consecutive terms of ten (10) years each upon the same terms and conditions of this Agreement (each and "Extended Term"), except that the License Fee (as defined herein) for any Extended Term shall be negotiated by the parties hereto at that time of the requested extension and shall be based upon the prevailing market rent at that time.

3. LICENSE FEE

The Licensee agrees to pay the following annual fees (collectively the "License Fee"):

- A. Three Thousand Five-Hundred Dollars and 00/100 (\$3,500.00) annually for the Original Parking Area; and
- B. Sixteen Thousand Five Hundred Dollars and 00/100 (16,500.00) annually for the Valet Parking Area.

The License Fee shall be payable annually in advance and shall be due for the first year of the original term upon the execution of this Agreement, and, annually thereafter, on September 1st of each year of the Term. If the License Fee for any Extended Term shall not have been determined prior to the commencement of such Extended Term, the Licensee shall pay the License Fee in effect for the immediately preceding term for the first year of said of the Original or applicable Extended Term and shall pay any additional amount due once the License Fee for said Extended Term is determined.

Notwithstanding the foregoing, upon execution of this Agreement Licensor shall bill Licensee and Licensee shall pay within ten (10) business days of receipt of such invoice the following amounts:

- (i) \$7,000.00 for the License Fee applicable to the Original Parking Area for the 2014-2015 and 2015-2016 license years; and
- (ii) \$ 8250 for the prorated License Fee applicable to the Valet Parking Area for the period from March 1, 2016 through August 31, 2016.

4. LICENSEE'S USE AND OCCUPANCY OF THE LICENSED PREMISES

- (a) The Licensee's use of the Licensed Premises shall be restricted to the Activity and to the use, installation, repair, and maintenance of the Improvements and access thereto for pedestrians and ordinary passenger vehicles. The Licensee, its employees, agents, customers, licensees, and/or contractors shall have access to the Licensed Premises seven (7) days per week, twenty-four (24) hours per day. Licensee covenants and agrees with Licensor that all work and activities shall be limited to the Activity and restricted to within the Licensed Premises. Licensee covenants and agrees with Licensor that the Improvements shall conform to all applicable rules and regulations and shall be maintained in good repair and condition at all times.

- (b) Licensee covenants and agrees with Licensor that no excavation work shall be performed by Licensee within an area bounded by a line drawn twenty-five feet (25') plus two and one half (2.5) times the depth of the excavation from the tower leg, guy wire or guy anchor, and that the top of any slopes resulting from the excavation shall not be within twenty-five feet (25') of any structure or facility located on Licensor's Property. Upon completion of the excavation, the slopes of the bank shall be graded on a slope no steeper than one (1) vertical to five (5) horizontal and stabilized with vegetation or rip rap. Licensee covenants and agrees that Licensee shall not make any changes in the existing grade of Licensor's Property, except the minor grading that is included among the Improvements.
- (c) Except with respect to short term parking of vehicles of Licensee or its employees, guests, agents, contractors, licensees, and/or customers and storage of construction trucks and/or equipment during initial construction of the Improvements in connection with the Activity, Licensee covenants and agrees with Licensor that neither Licensee nor any person claiming under Licensee, nor the employees, guests, agents, contractors, licensees, invitees or visitors of Licensee or any such person shall store or permit to be stored on the Licensed Premises any vehicles or equipment (including without limitation excavation equipment, drilling rig, flatbed truck and crane). Licensee further covenants and agrees with Licensor that Licensee shall not cause, permit, allow, or suffer the placement, stockpiling or accumulation of earth, materials, trailers, storage containers, supplies or equipment either temporarily or permanently, on Licensor's Property or within the Licensed Premises.
- (d) Licensee covenants and agrees with Licensor to notify Steve Stucker 315-428-5652 at least seven (7) days before commencing any fieldwork whether for the initial construction of the Improvements or subsequently. Licensor, at its election may have an inspector present at the time or times of fieldwork by Licensee is being performed, and such inspector shall have the right and authority to require the modification or cessation of any or all work hereunder when, in his judgment, such work is contrary to the provisions of this Agreement or is, or may become, a source of danger to the facilities of Licensor. If billed by Licensor for the cost of such inspector, Licensee shall pay to Licensor the reasonable cost and expense of such inspection, based on prevailing wage rates of Licensor's inspection personnel. The presence or absence of Licensor's inspector shall not constitute a waiver of any provisions of this Agreement.
- (e) Licensee covenants and agrees with Licensor that, in connection with the Activity and construction of the Improvements, Licensee shall not perform any blasting or use explosives on Licensor's Property.
- (f) The Licensee agrees that it shall keep the Licensed Premises in good repair and reasonably free from water, ice, snow or other hazardous conditions and further agrees that all work done in connection with Licensee's maintenance and repair of

the Licensed Premises and the Improvements shall be done in a good workmanlike manner. Licensee shall not push, place, move or store snow or ice onto Licensor's Property. Licensee shall be responsible for providing appropriate policing and security for the Licensed Premises in connection with the Activity.

- (g) All vehicles utilizing the Licensed Premises shall not exceed a 10 M.P.H. speed limit. Licensee, its contractors, employees, invitees and guests shall not perform any repair or maintenance to any vehicles or equipment on the Licensed Premises or Licensor's Property. Vehicles or equipment requiring repair or maintenance shall be transported off the Licensed Premises or Licensor's Property by tow truck if necessary, at Licensee's sole cost and expense. In the event of an oil or fuel leak, Licensee shall immediately contact Steven Stucker at 315-428-5652 as soon as such leak or spill is detected.
- (h) The Licensee acknowledges and agrees that the Licensor is under no obligation to restore, repair, or maintain the Licensed Premises or the Improvements in any respect or to render the Licensed Premises serviceable for access or passage or any other purpose in any respect, and specifically including, without limitation, paving, sealcoating, and removing any accumulated or excess debris, water, ice, snow, or other hazardous conditions. However, in the event that Licensor determines, in its sole reasonable discretion, that restoration, repair or maintenance work with respect to the Licensed Premises is necessary or appropriate as a result of Licensee's use of the Licensed Premises, Licensor has the right, but not the obligation, to conduct such restoration, repair and/or maintenance work at Licensee's sole cost and expense, without liability to Licensor, and any such costs and expenses so incurred by Licensor, direct and indirect, shall be paid to Licensor by Licensee promptly upon demand.
- (i) The Licensee acknowledges and agrees that the Licensor makes no representation or warranty with respect to the condition, safety, title, or fitness of the Licensed Premises, including, without limitation the suitability of the Licensed Premises for the Activity and the Improvements, the environmental condition of the Licensor's Property, including the Licensed Premises, or rights of others held in and to the Licensed Premises and that the Licensee occupies and uses the Licensed Premises at its sole risk. The Licensee has inspected the Licensed Premises and accepts the Licensed Premises "AS IS", "WHERE IS", AND "WITH ALL FAULTS".
- (j) Licensee covenants and agrees with Licensor that Licensee, its agents, employees, licensees, contractors, visitors, and invitees, shall take all necessary precautions for the safety of Licensee, its agents, employees, licensees, contractors, visitors, and invitees on or about Licensor's Property and shall comply with all applicable federal, state, and municipal laws, regulations, ordinances, court orders and administrative orders thereto to prevent accidents or injury to persons or property on, about or adjacent to Licensor's Property and without limiting the generality of the foregoing but specifically including, to the extent applicable, all National Electric Safety Code, Installation and Maintenance of Electric Transmission Lines

(220 CMR 125.00), and OSHA Standard 29 CFR 1926. 550 Subpart N, although specific to cranes, derricks, hoists, elevators, and conveyors, shall apply as the minimum clearance from energized lines for all vehicles and equipment used by Licensee within Licensor's Property. Licensee shall ensure all vehicles, equipment or loads maintain the minimum clearances specified in the OSHA Standard unless a more restrictive standard applies in which instance Licensee shall, to the extent applicable, comply with the more restrictive standards for working clearances from energized lines.

- (k) Licensee represents and warrants to Licensor that Licensee shall, at Licensee's sole cost and expense, obtain all necessary licenses, permits, approvals, and consents from any governmental entity having jurisdiction over the Activity, the Improvements or the Licensed Premises (hereinafter, "Government Approvals"), and prior to the construction of the Improvements Licensee shall deliver true, accurate and complete copies of the same to the Licensor. Licensor reserves the right to approve all such Government Approvals, and, in the event Licensor does not grant such approval, Licensee shall, at its sole cost and expense, obtain new Government Approvals in form and substance acceptable to Licensor. Licensee further represents and warrants to Licensor that Licensee has obtained all necessary consents or approvals from any person or entity having an interest in the Licensed Premises.
- (l) The Licensee agrees never to interfere unreasonably with the Licensor's use of, or access to, the Licensor's Property, including but not limited to Licensor's use of, and access to, the substation, transmission, and/or distribution facilities whether now existing or hereafter constructed on Licensor's Property. In the event of a breakdown of Licensor's facilities or any other contingency requiring immediate maintenance or repairs, Licensee agrees, upon receiving either written or oral notification, to use its best efforts to remove any vehicle or other obstruction that may be present within the Licensed Premises, at Licensee's sole cost and expense, so as to give Licensor immediate access to its facilities. In the event Licensee fails to so remove any vehicle or obstruction in accordance with this provision, Licensor may remove the same without any liability to Licensee, and Licensee shall reimburse Licensor all indirect and direct costs and expenses associated therewith upon demand.
- (m) The Licensee shall not make any alterations, additions or improvements to or upon the Licensed Premises, other than those permitted herein.
- (n) The Licensee agrees that it shall not permit any liens or encumbrances to be placed on the Licensed Premises, including without limitation, any mechanics liens or similar liens for labor and material furnished to the Licensee or claimed to have been furnished to the Licensee in connection with work of any character performed or claimed to have been performed at the direction of the Licensee. The placement of any such lien on the Licensed Premises shall constitute a default under this Agreement unless, within thirty (30) days after Licensee receives either

written or oral notice or becomes aware of the existence of such lien, Licensee causes the same to be discharged or bonded over.

- (o) Licensor and Licensee agree that, upon termination of this Agreement, at the option of the Licensor, Licensor may require Licensee to remove the Improvements in accordance with Section 10 or such Improvements shall become the property of Licensor, and Licensee shall deliver such Improvements to Licensor in good condition, reasonable wear and tear, casualty and condemnation excepted.
- (p) The Licensee agrees that the Licensee, or any other person or persons claiming through or under the Licensee, (i) shall not permit any use of the Licensed Premises which shall create a fire hazard or be unlawful or which constitutes a legal nuisance or that is contrary to any law, rule, regulation or requirement of any governmental authority; (ii) shall not injure, overload, deface or commit waste at the Licensed Premises; (iii) shall comply with all federal, state, or local statutes, laws, regulations, ordinances, orders or other requirements affecting the Licensed Premises; and (iv) shall obtain all necessary federal, state and local permits, licenses, and other approvals, in its name, which are required for Licensee's use of the Licensed Premises and the installation and maintenance of the Improvements on the Licensed Premises.
- (q) If relocation of the Improvements is deemed necessary by Licensor in connection with the present and/or future business activities of Licensor or any of its affiliates at the Licensor's Property, Licensor shall have the right, upon ninety (90) days written notice to Licensee, to require Licensee to relocate the Improvements, or any of them, on Licensor's Property, at Licensee's sole cost and expense or to terminate this Agreement as provided for herein. Licensee covenants and agrees to pay Licensor on demand any and all costs incurred by Licensor which, in the sole discretion of Licensor, are necessitated by or related to Licensee's exercise of this License, including, but not limited to, any and all costs for outages, repairs of, or modifications to, any structures, guys, anchors, grounds, counterpoises, culverts, access roads or any other utility facility or equipment located on Licensor's Property, (including without limitation buried underground wires).

5. LICENSOR'S RESERVATION OF RIGHTS

Licensor expressly reserves the right to enter upon the Licensed Premises at any time for any purpose whatsoever and, without limiting the generality of the foregoing, specifically reserves the right to enter upon the Licensed Premises for any and all remediation work, maintenance, construction or other activity in connection with its present or future operations; to pass and repass with vehicles and equipment; and to install, construct or maintain any transmission, distribution or communication lines and facilities or other additional facilities to meet the need of Licensor's business. Except in the event of an emergency, Licensor agrees not to interfere unreasonably with Licensee's operations at,

or use of, the Licensed Premises. Licensee covenants and agrees that Licensee, its affiliates, employees, tenants, agents, licensees and contractors will not hinder or interfere with any of the rights reserved by Licensor herein. Neither the Licensor nor its affiliates, or any officers, directors, shareholders, employees or agent of any of them, shall be liable to the Licensee, its employees, tenants, agents, servants, contractors, visitors and invitees with respect to any claim or cause of action or right to payment for any personal injury or property damage (including, without limitation, damage to the Improvements on the Licensed Premises) resulting from or in any way connected with the rights reserved in this Paragraph 5.

6. INDEMNIFICATION; INSURANCE

- (a) The Licensee agrees to defend with counsel satisfactory to the Licensor and to pay, protect, indemnify and save harmless the Licensor and its affiliates, and all officers, directors, shareholders, employees or agents of any of them, from and against, any and all liabilities, damages, loss, costs, expenses (including any and all attorneys' fees and expenses of the Licensor), causes of action, suits, claims, demands or judgments of any nature whatsoever arising from the exercise of this Agreement by Licensee or its employees, agents, tenants, servants, contractors, visitors, guests or invitees or any person claiming under any of them and (a) any work, act or omission to act done in, on or about the Licensed Premises, the Improvements, or any part thereof, by or on behalf of the Licensee or any person claiming under the Licensee, or the employees, agents, tenants, contractors, invitees, guests or visitors of the Licensee or any such person; (b) injury to, or the death of, persons or damage to property on the Licensed Premises, the Improvements, or in any way growing out of, or connected with, the use, non-use, condition, possession, operation, maintenance, management or occupation of the Licensed Premises or the Improvements by the Licensee or any person claiming under the Licensee, or the employees, agents, tenants, contractors, licensees, invitees, guests or visitors of the Licensee or any such person, or resulting from the condition of the Licensed Premises or the Improvements; or (c) violation of any agreement or condition of this Agreement or of any applicable federal, state or local statutes, laws, regulations, ordinances or other requirements affecting the Licensed Premises, the Improvements, or the ownership, occupancy or use thereof. The foregoing indemnification shall not include injury or damage caused by the sole negligence of the Licensor. The provisions of this Paragraph 6 shall survive the expiration or earlier termination of this Agreement.
- (b) Licensee shall maintain insurance coverage in the amounts set forth in Exhibit D attached hereto and incorporated herein by reference and made a part hereof.

7. HAZARDOUS MATERIALS; OIL

The Licensee covenants and agrees with the Licensor that neither the Licensee nor any person claiming under the Licensee, nor the employees, agents, tenants, contractors, licensees, invitees, or visitors of the Licensee or any such person shall bring onto, store, generate, or permit to be stored or generated on the Licensed Premises any oil,

hazardous material, hazardous waste or hazardous substance, as those terms are defined by any applicable law, rule or regulation, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 U.S.C. §§ 9601 et seq. and the Resource Conservation and Recovery Act, as amended, 42 U.S.C. §§ 6901 et seq. The Licensee shall indemnify and hold the Licensor harmless from and against any claim, liability, loss, damage or expense, including attorneys' fees, arising out of a breach of any of the covenants or agreements of this paragraph. The provisions of this paragraph notwithstanding, the bringing onto the Licensed Premises of vehicles and the normal and ordinary operating fluids thereof that are self-contained, non-leaking and necessary for the operation of such vehicles, shall not cause a breach under this paragraph; provided, however, that the Licensee shall indemnify and hold the Licensor harmless from and against any claim, liability, loss, damage or expense, including attorneys' fees, resulting from, or arising out of, the presence of fuel or operating fluids on the Licensed Premises. The indemnification provision of this Paragraph 7 shall survive the expiration or earlier termination of this Agreement.

8. ASSIGNMENT

The Licensee agrees that this Agreement cannot be assigned in whole or in part by Licensee. Neither this Agreement nor any portion of the term of this Agreement shall be mortgaged or pledged by the Licensee. Despite any assignment, sublease or sublicense made in accordance with this paragraph, the Licensee shall remain primarily liable for the performance of the terms, covenants and obligations of this Agreement. Any assignment, mortgage or pledge made in contravention of this paragraph shall be void and shall constitute a default under this Agreement.

9. DEFAULT

Each of the following shall constitute a default by the Licensee under this Agreement:

- (a) Licensee fails to make any payment required under this Agreement when due and such failure continues for ten (10) days after Licensee receives written notice from the Licensor of Licensee's failure to make such payment.
- (b) Licensee fails to comply with, perform or observe any of Licensee's covenants, agreements, or obligations under this Agreement (other than those referred to in the foregoing subparagraph) and such failure is not corrected within thirty (30) days after Licensee receives written notice from Licensor to Licensee thereof, or, if such failure of Licensee is of such a nature that Licensee cannot reasonably remedy the same within such thirty (30) day period, Licensee shall fail to commence promptly to remedy the same and to prosecute such remedy to completion with due diligence and continuity and within such period of time as would be reasonably required under the circumstances.
- (c) Licensee files a petition in bankruptcy or a petition in bankruptcy is filed

against Licensee; Licensee is adjudicated a bankrupt or insolvent; a receiver, trustee, or liquidator is appointed for all or a substantial part of Licensee's property; or Licensee makes an assignment for the benefit of creditors.

- (d) Licensee assigns, mortgages or pledges this Agreement in violation of Paragraph 8 of this Agreement.
- (e) Licensee's default under any separate environmental agreement between the parties relating to Licensor's Property.

If the Licensee is in default under the provisions in this paragraph, Licensor, its employees or agents may lawfully, immediately or at any time thereafter, and without further demand or notice, enter into and upon the Licensed Premises and repossess the same and expel the Licensee and those claiming by, through or under the Licensee, and remove Licensee's effects without being deemed guilty of any manner of trespass, and without prejudice to any remedies which might otherwise be used or preceding breach of covenant or condition, and upon entry, this Agreement shall cease and terminate, in which event this Agreement shall be of no further force and effect except as to such of Licensee's liabilities or obligations hereunder, actual or contingent, as shall have arisen on or prior to such date of termination or which by their terms survive the termination of the Agreement. The provisions of this paragraph notwithstanding, if the Licensee fails to comply with, perform or observe any of Licensee's covenants, agreements or obligations under this Agreement with respect to those requirements and obligations either provided in Paragraph 8 herein or that affect or jeopardize the value or integrity of the Licensor's facilities or of the Licensed Premises, the Licensor, without being under any obligation to do so and without thereby waiving any default may, at any time including during the period of time given to Licensee under Paragraph 9(b) for remedying such failure, remedy such failure for the account and at the expense of the Licensee. If the Licensor makes or incurs any expenditures or incurs any obligations for the payment of money in connection therewith, including but not limited to, reasonable attorney's fees in instituting, prosecuting or defending any action or proceeding, such sums paid or obligations incurred shall be paid to the Licensor by the Licensee as an additional fee within thirty (30) days of receiving notice from Licensor of such amount and actions.

10. TERMINATION

Notwithstanding anything herein contained to the contrary, both parties to this License reserves the right to terminate this License at any time by giving a written notice of termination at least sixty (60) days prior to the effective date of said termination. Upon the effective date of termination, this License shall be of no further force and effect, except as to such of Licensee's liabilities or obligations hereunder, actual or contingent, as shall have arisen on or prior to such date of termination or which by their terms survive the termination of this License. Upon such termination Licensor shall at its sole discretion determine if the Improvements shall be removed or must be abandoned in place. If Licensor requires Licensee to remove the Improvements from the Licensed

Premises Licensee shall so remove the Improvements within sixty (60) days after the mailing of such notice. Any such removal conducted by Licensee shall be accomplished at Licensee's sole cost and expense and performed by personnel designated and authorized by Licensor. Licensor may elect to protect its systems and facilities by authorizing removal work to be conducted by its own employees or contractors. If Licensee fails to remove the Improvements within such sixty (60) period, Licensor may effect such removal, demand and collect the cost thereof from Licensee without liability on account of or with respect to said facilities, or the salvaged value thereof.

11. NOTICE

All notices required or permitted under, or relating to, this Agreement shall be in writing and either delivered in hand or mailed (a) by registered or certified mail (return receipt requested) with the United States Postal Service, or (b) by Federal Express or other overnight mail carrier furnishing evidence of receipt, to Licensor at 1125 Broadway, Attention: Real Estate Manager, Albany, New York 12204, with a copy to Assistant General Counsel – Real Estate, National Grid, 40 Sylvan Road, Waltham MA 02451, and to Licensee at the mailing address as set forth on the first page of this License to the attention of _____, with a copy to _____. Any party may change the address at which it is to receive notices by giving notice as hereinabove set forth. Any notice or other communication in connection with this Agreement shall be deemed duly served when received (or upon attempted delivery if delivery is not accepted.)

12. GENERAL PROVISIONS

- (a) Failure of the Licensor to complain of any act or omission hereunder on the part of the Licensee, no matter how long the same may continue, shall not be deemed a waiver by the Licensor of any of its rights hereunder. No waiver by the Licensor at any time, express or implied, of any breach of any provision of this Agreement shall ever be deemed a waiver of a breach of any other provision of this Agreement, or a consent to any subsequent breach of the same or any other provision. If any action by the Licensee shall require the Licensor's consent or approval, such consent or approval on any particular occasion shall not be deemed a consent or approval of any other action on any subsequent occasion.
- (b) If any provision of this Agreement, or the application thereof to any person or circumstance, shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected. Each provision of this Agreement shall be deemed valid and enforceable to the fullest extent permitted by law.
- (c) The section headings contained in this Agreement are for reference and convenience only and in no way define or limit the scope and contents of this Agreement or in any way affect its provisions.

- (d) This Agreement constitutes the entire agreement between the parties relating to the subject matter hereof and supersedes all prior oral and written offers, negotiations, proposals, representations, agreements, courses of dealing and understandings between the parties relating to the subject matter hereof, and is subject to no understandings, conditions, or representations other than those expressly stated herein.
- (e) This Agreement may only be amended or modified by a writing signed by the Licensor and the Licensee and which refers to this Agreement.
- (f) This Agreement shall be governed by and construed in accordance with the laws of the State of New York.
- (g) The permission to enter upon Licensor's Property contained in this Agreement is subject to any easements, restrictions, and encumbrances of record, including the right of Licensor to perform any remediation or other work in or on the Licensed Premises and specifically the right to access and maintenance of Licensor's extraction wells located now or in the future within the Licensed Premises. In addition, Licensee acknowledges that the Licensed Premises are part of a larger parcel listed on the U.S. Environmental Protection Agency's National Priority List of Hazardous Waste Sites and is further subject to all deed restrictions as recorded in the Saratoga County Clerk's office in Book 01523 at Page 00760 as of July 14, 1999 as set forth as Exhibit E attached hereto.
- (h) This Agreement is subject and subordinate to all security interests, trust indentures, chattel mortgages, and other mortgages which may now or hereafter affect the Licensed Premises and to all renewals, supplements, modifications, consolidations, replacements, and extensions thereof and advances there under. This paragraph shall be self-operative and no further instrument of subordination shall be required by any secured party, mortgagee or trustee. In confirmation of such subordination, the Licensee agrees, at Licensor's request, to execute and deliver promptly any certificate or other instrument which Licensor may request subordinating the Agreement and all rights of the Licensee under this agreement to any mortgage indenture and to all advances made under any such mortgage indenture.
- (i) If the Licensee executes this Agreement through an agent or representative, each such agent or representative hereby warrants and represents to the other party that he is authorized to execute, acknowledge, and deliver this Agreement on behalf of such party and to thereby bind such party to the same.
- (j) This Agreement shall not be construed as creating or vesting in the Licensee any easement or estate in the Licensed Premises, but only the limited rights of possession and use under the Agreement hereinabove described.

- (k) This Agreement: (i) shall be executed in duplicate counterparts, each of which when executed by all parties to this Agreement shall be deemed to be an original; (ii) shall take effect as a sealed instrument; (iii) shall bind and inure to the parties and their respective legal representatives, successors and assigns, except that the Licensee may not delegate any of its obligations under this Agreement or assign this Agreement except as provided for under Paragraph 8 herein; and (iv) is not intended to inure to the benefit of any third-party beneficiary.
- (l) In the event of any conveyance, grant or other transfer of the Licensor's interest in the Licensed Premises, all liabilities and obligations of Licensor under this Agreement arising thereafter shall terminate and all liabilities and obligations of the Licensor under this Agreement arising thereafter shall ipso facto be binding upon the new owner of the Licensed Premises.
- (m) This Agreement shall be treated as a lease for purposes of the provisions of the federal bankruptcy code concerning executory contracts and leases.
- (n) Licensee acknowledges that electrostatic currents are expected under some conditions and, although these currents (felt as shocks) may be annoying, Licensor will be not be able to eliminate these currents.
- (o) Licensee hereby represents and warrants to Licensor that (i) Licensee has the power and authority to execute, deliver and perform its obligations under this Agreement, and (ii) the person executing and delivering this Agreement on behalf of Licensee is duly authorized to so execute and deliver this Agreement.
- (p) This Agreement may fully be executed by all parties hereto in any number of identical counterparts. If so executed, each such counterpart shall constitute this Agreement.

12. EMINENT DOMAIN

If any governmental agency or other party having the power of eminent domain condemns or takes a portion of the Licensed Premises in order to meet its business needs, the Licensor may require the Licensee to expeditiously alter or remove any or all of the Improvements, at Licensee's sole cost and expense, so as to permit the Licensor to reconfigure, reconstruct or otherwise alter its facilities within the Licensed Premises to fully meet and satisfy its business needs. If any governmental agency or other party having the power of eminent domain condemns or takes all of the Licensed Premises, the Licensor may terminate this Agreement by notice to the Licensee. Any damages recoverable in respect to such appropriation or acquisition shall be the sole property of the Licensor; the Licensee hereby releases unto the Licensor any interest it may have in the same. Nothing contained herein shall be construed to prevent Licensee from prosecuting in any eminent domain proceedings a claim for its personal property, trade fixtures and equipment so taken or any

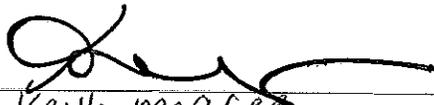
relocation, moving and other dislocation expenses, provided that such action shall not affect the amount of compensation otherwise recoverable by Licensor from the taking authority.

13. **TAXES**

Licensee shall bear, pay and discharge all taxes, assessment and public charges, ordinary and extraordinary, levied, assessed or accruing upon the Licensor's Property arising from the Licensed Premises, the Activity or the Improvements. Every such tax, assessment and public charge shall be paid, discharged or cancelled not more than thirty (30) days after the same shall become a lien, and if Licensee shall fail to pay, discharge or cancel any such charge within thirty (30) days after the same shall become a lien, Licensor may, at its option, pay and satisfy the same any amounts so paid, together with all penalties in connection therewith, together with interest from the date of payment, shall be paid to Licensor, upon thirty (30) days demand.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be signed, under seal, in their names and behalf by their respective officers being thereunto duly authorized, as of the day and year first above written.

NIAGARA MOHAWK POWER CORPORATION

By: 
Name: Keith McAfee
Title: VP, New York Electric

SARATOGA RESTAURANT HOSPITALITY, LLC

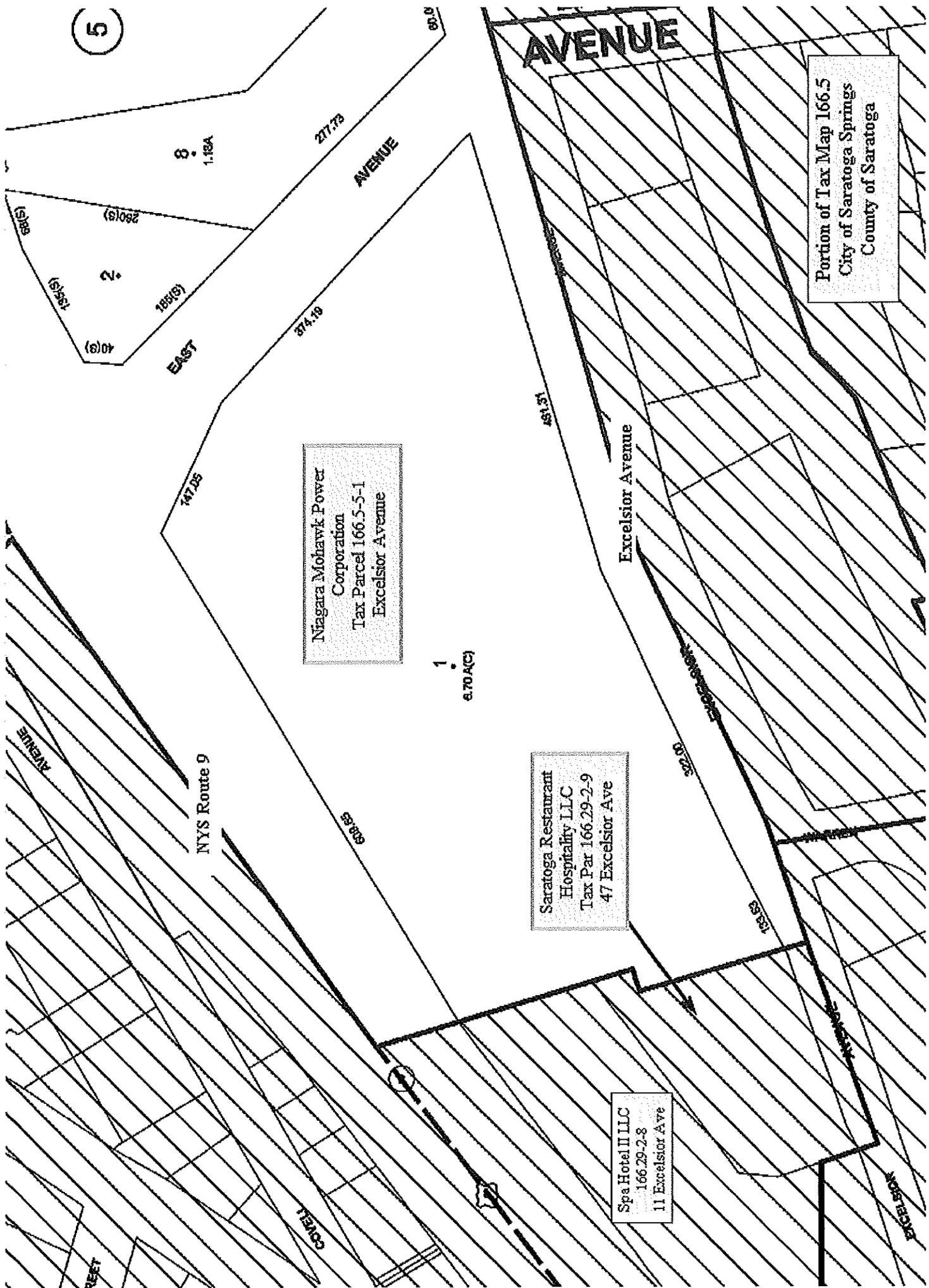
By: 
Name: Stephen Obrenyria
Title: Member SRL, LP

EXHIBITS

Exhibit "A"

Tax Map showing Licensor's Property

5



Niagara Mohawk Power Corporation
 Tax Parcel 166.5-5-1
 Excelsior Avenue

Saratoga Restaurant Hospitality LLC
 Tax Par 166.29-2-9
 47 Excelsior Ave

Spa Hotel II LLC
 166.29-2-8
 11 Excelsior Ave

Portion of Tax Map 166.5
 City of Saratoga Springs
 County of Saratoga

Exhibit "B"

License Agreement dated June 15, 2009

FILE COPY

LICENSE AGREEMENT

THIS INDENTURE, made the 15th day of June 2009, by and between **NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID**, a transportation corporation organized and existing under the laws of the State of New York, with its principal office and place of business at 300 Erie Boulevard West in the City of Syracuse, County of Onondaga, and State of New York, 13202 (hereinafter called "Licensor"), and **SARATOGA RESTAURANT HOSPITALITY, LLC**, with its principal office and place of business at 302 Washington Avenue Ext., Albany, New York 12203 (hereinafter called "Licensee"),

WITNESSETH:

Subject to and upon the terms and conditions hereinafter set forth and upon receipt of the annual payment of Three Thousand Five-hundred dollars and 00/100 \$3,500 by Licensee to the Licensor upon the execution of this agreement and annually thereafter on the first day of August, the Licensor does hereby authorize and grant to the Licensee, its successors and assigns as hereinafter provided, license to install, construct, maintain, operate, repair, reconstruct, relocate and remove at its own cost, expense, and risk an approximately twenty-five foot section of land located on the southerly portion of Licensor's Excelsior Avenue facility as shown on Exhibit "A", attached hereto and made a part hereof (the "License Area"), located in the City of Saratoga Springs, County of Saratoga, and State of New York (the "Property").

LOCATION OF
LICENSEE'S
FACILITIES

TOGETHER WITH a right of ingress and egress over Licensor's Property to the extent reasonably necessary in order to exercise the rights granted hereunder.

GRANT
SUBORDINATE TO
PRIOR RIGHTS

The rights described above are given upon the conditions and covenants set forth herein, each and all of which Licensee shall keep and perform.

1. Licensee's rights granted hereunder shall be subject to the following:

A. Any and all outstanding leases, tenancies, easements, licenses or other tenures and/or claims of title affecting the Property and License Area or any portion or portions thereof; and subject also to any and all encumbrances, liens, conditions, restrictions, and/or reservations subject to or under which Licensor holds the same including but not limited to Licensor's right to perform any remediation or other work in or on the Property and access and maintenance of its extraction well reflected in the "hatched" area on Exhibit A as set forth in the site plan. In addition, Licensee acknowledges that the Property is part of a larger parcel listed on the U.S. Environmental Protection Agency's National Priority List of Hazardous Waste Sites and is further subject to all deed restrictions as recorded in the Saratoga County Clerks Office in Book 01523 at Page 00760 as of July 14, 1999 and as set forth herein as Exhibit "C" attached hereto and made a part hereof..

B. The paramount right of Licensor now and hereafter to occupy and use all or any portion or portions of the License Area, and Licensor shall not be responsible to Licensee for changes or damages to Licensee's facilities arising out of Licensor's operations or otherwise.

C. The right of Licensor from time to time hereafter to grant to others or to authorize the occupancy or use by others of any portion or portions of the License Area for any purpose or purposes whatsoever, provided, however, that any such future grant or authorization shall not interfere with the rights conferred herein.

DISCLAIMER OF
WARRANTY

2. The Licensor does not warrant the fitness or suitability of its Property for any purpose(s) granted herein. Licensee accepts the condition of the Property "as is where is," with all hazards, and shall not look to Licensor for maintenance, repairs or improvements of said Property.

SPECIAL CONDITIONS
AND REQUIREMENTS

3. The installation, construction, maintenance, operation, repair, relocation, and removal of Licensee's facilities shall be in accordance with the terms and conditions set forth in this Agreement, including any such terms and conditions contained in any Exhibits and/or Appendices specifically attached hereto and made a part hereof.

PRIOR NOTICE OF
CONSTRUCTION

4. Licensee shall give Licensor at least seven (7) days' written notice before commencing any fieldwork hereunder whether in the initial construction or subsequently. Such notice shall be addressed to Licensor as follows:

Niagara Mohawk Power Corporation
300 Erie Blvd. West
Syracuse, New York 13202
Attention: William Jones, Environmental Affairs

RIGHTS OF
INSPECTION

5. Licensor, at its election, may have an Inspector present at the time or times field work by Licensee is being performed, and such Inspector shall have the right and authority to require the modification or cessation of any or all work hereunder when, in his judgment, such work is contrary to the provisions of this grant or is, or may become, a source of danger to the facilities of Licensor. If billed by Licensor, Licensee shall pay to Licensor the reasonable cost and expense of such inspection, based on prevailing wage rates of Licensor's inspection personnel. The presence or absence of Licensor's Inspector shall not constitute a waiver of any provision of this Agreement.

INTERFERENCE
WITH FACILITIES

6. A. Licensee shall construct and shall thereafter maintain, operate, repair, relocate and/or remove its facilities so as not to injure or damage the Property or injure, damage or interfere with the Licensor's facilities.

B. Licensee hereby assumes the responsibility for reimbursing Licensor for any adjustment (temporary or permanent), and outages or relocations (temporary or permanent) of its facilities necessary to accommodate the construction, operation, maintenance or removal of Licensee's facilities.

RESTORATION OF PROPERTY

7. Subject to the provisions of Article 4 hereof, all earth or soil disturbed by the installation, construction, maintenance, operation, repair, relocation and/or removal of Licensee's facilities shall be properly replaced and the surface thereof restored to its former condition (including reseeded) by Licensee at its sole cost and expense

REIMBURSEMENT FOR MODIFICATION OF FACILITIES

8. Licensee shall promptly reimburse Licensor for any costs and expenses which Licensor may incur in changing, modifying or relocating Licensor's facilities, now or in the future, in order to accommodate the construction, maintenance, operation, repair, relocation and/or removal of Licensee's facilities installed under the terms of this Agreement upon submission of proper bills therefor.

RELOCATION OF LICENSEE'S FACILITIES

9. A. As soon as practicable, but in any event no later than upon ninety (90) days' prior notice from Licensor, Licensee shall, at its sole cost and expense, relocate all or any part or parts of the facilities installed under the terms of this Agreement as Licensor may at any time, or from time to time, require.

B. Should Licensee not desire to relocate its facilities, Licensee may elect to leave said facilities in place upon delivering to Licensor its written agreement to reimburse Licensor for any increase in cost resulting from Licensor's need to alter its normal design in the construction or installation of the Licensor's own facilities or other improvements upon the License Area.

PHOTOGRAPHS

10. Photographs of the condition of the License area shall be taken by Licensee both prior to, and after, the completion of all construction by Licensee, and prints of such photographs shall be made available to the Licensor.

INSURANCE REQUIREMENT

11. Licensee shall provide to Licensor, prior to exercise of rights hereby granted, and keep in force during the term of this Agreement, unless waived in writing by Licensor, a general Public Liability insurance policy which shall include contractual coverage. Such policy(ies) shall be written by a company and contain language and policy limits to be approved by Licensor. The type of policy, nature of special

endorsements, if any, and amount of coverage shall be as set forth in Exhibit "D" attached hereto and made a part hereof.

If the exercise of the rights herein granted or any part of such rights are performed by one or more contractors, the insurance provisions attached, except self-insurance, shall apply.

INDEMNIFICATION

12. Licensee hereby assumes all risk of loss, damage or injury (including death) to persons or property occasioned by negligence or otherwise, and arising out of or in any way connected with the construction, maintenance, renewal, repair, operation, use, existence or removal of Licensee's facilities or the activities herein authorized. Licensee hereby expressly agrees to indemnify, defend and save harmless Licensor, its officers, contractors, agents and employees from and against all such loss, damage or injury, whether resulting or accruing to Licensor, its officers, contractors, agents or employees, or to any other person or persons, and from all claims arising out of such loss, damage or injury, and from all costs and expenses connected therewith (including, but not limited to, counsel fees and disbursements incurred by Licensor in any action or proceeding between Licensee and Licensor or between Licensor and any third party or otherwise), unless it is established and the same was occasioned by the sole negligence of Licensor.

It is agreed that Licensee is responsible for all costs, expenses or damages arising out of, or in connection with, any injuries to persons or damages to property (including real property, personal property and environmental damages) caused by the installation, erection, construction or reconstruction, excavation, grade of land or maintenance of Licensee's facilities, as previously described.

Licensee specifically agrees to indemnify Licensor against any claim which may be made pursuant to the federal Comprehensive Environmental Response Compensation and Liability Act of 1980, and any subsequent amendments thereto, arising from the operation of the subject facilities. This indemnification also applies to any claims resulting from Licensee's violation of any state laws or regulations pertaining to releases or spills of toxic and/or hazardous substances to the environment.

Licensee shall take prompt action to defend and indemnify Licensor against claims, actual or threatened, but in no event later than notice by Licensor to Licensee of the service of a notice, summons, complaint, petition or other service of a process against Licensor alleging damage, injury, liability, or expenses attributed in any way to this Agreement, including but not limited to the acts, fault, negligence, equipment, materials, properties, facilities, personnel, or property of the Licensee, its agents, employees, sub-contractors or suppliers. Licensee shall defend any such claim or threatened claim, including as applicable, engagement of legal counsel, to respond to, defend, settle, or compromise any claim or threatened claim.

Furthermore, Licensee understands and agrees it is responsible for any and all costs and expenses incurred by Licensor to enforce this indemnification provision.

The obligations set forth in this article shall survive completion of the work, termination or expiration of this contract.

NOTICE

13. Any notice given to either party under the terms of this Agreement (except construction notification as set forth in paragraph 3 hereof), shall be given by certified or registered mail, return receipt, or by overnight delivery service, addressed as follows:

To Licensor:
 Niagara Mohawk Power Corporation
 Attn: Legal Department
 300 Erie Boulevard West
 Syracuse, New York 13202

With a copy to:
 Niagara Mohawk Power Corporation
 Attn: Real Estate Supervisor
 1125 Broadway
 Albany, New York 14214

To Licensee:
 Mr. Edward King
 Saratoga Restaurant Hospitality, LLC
 302 Washington Avenue Ext.
 Albany, NY 12203

Notice shall be deemed to have been given three (3) days after mailing if made by certified or registered mail, and one (1) day after mailing if made by overnight courier.

REIMBURSEMENT
OF TAXES

14. Licensee shall bear, pay and discharge all taxes, assessments and public charges, ordinary and extraordinary, levied, assessed or accruing upon the Property because of its License Area and facilities. Every such tax, assessment and public charge shall be paid, discharged or cancelled not more than thirty (30) days after the same shall become a lien, and if Licensee shall fail to pay, discharge or cancel any such tax, assessment or public charge within thirty (30) days after the same shall become a lien, Licensor may, at its option, pay and satisfy the same and any amount so paid, together with all penalties in connection therewith, together with interest from date of payment, shall be repaid to Licensor, upon thirty (30) days' demand.

COMPLIANCE
WITH LAW

15. Licensee shall, at its own cost, comply with all applicable laws, ordinances, orders, rules and regulations of the United States, of the State of New York, of any departments, bureaus, authorities or commissions created under the laws of either government and of the several municipalities in which the Property and License Area are situated insofar as the same relate to the exercise of any privilege or the performance of any duty under this Agreement, and whether the same are obligatory upon the Licensee or upon the Licensor.

REMOVAL OF
LICENSEE'S
FACILITIES

16. Upon termination, revocation, cancellation or surrender of this Agreement in accordance with its terms, Licensor shall, in its sole discretion, determine if the facilities must be removed or must be abandoned in place. If Licensor shall require Licensee's facilities to be removed, such removal shall be accomplished at the expense of the Licensee, and field work shall be performed by personnel designated and authorized by Licensor. Licensor may elect to protect its system and facilities by authorizing removal work to be done only by its own employees or

contractors.

ASSIGNABILITY

17. This Agreement shall inure to the benefit of Licensee's successors and assigns and the successors and assigns of Licensor but Licensee shall not assign this Agreement or rights granted hereunder without the written consent of Licensor and the assumption in writing by Licensee's assignee of all duties and obligations hereunder.

TERM

18. Except as provided in paragraph 19 hereof, the Initial Term of this License shall be for a period of ten (10) years, commencing September 1, 2008 and ending August 31, 2018 unless extended by mutual agreement of the parties as follows: upon Licensee's written notice to the Licensor given at least 180 days before the expiration of the Initial Term, in accordance with the Notice provisions contained herein, this License may be extended for two (2) consecutive extended terms of ten (10) years each upon the same terms and conditions of this License, except that the rent for the extended terms shall be negotiated by the parties hereto at the time of the requested extension and shall be based upon prevailing market terms at that time.

REVOCATION

19. Licensor hereby reserves the right to terminate, cancel and revoke the privileges or rights extended to Licensee by the terms of this agreement at any time, with or without cause, upon sixty (60) days' written notice to Licensee.. Upon revocation, this agreement shall become null and void and all rights of Licensee hereunder shall forever cease and determine and be in all respects forfeited. Thereafter, Licensor may require Licensee to remove said facilities from the premises, and if Licensee fails so to do within sixty (60) days after the mailing of such notice, Licensor may effect such removal, demand and collect the cost thereof from Licensee, without liability on account of or with respect to said facilities, or the salvage value thereof.

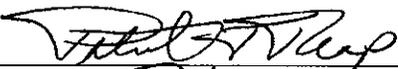
ENTIRE AGREEMENT

20. No provision of this Agreement shall be deemed to have been waived by the Licensor unless such waiver be in writing signed by the Licensor. This

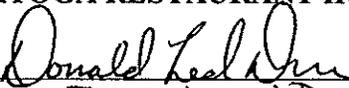
Agreement contains the entire agreement between the parties and any executory agreement hereafter made shall be ineffective to change, modify or discharge it in whole or in part unless such executory agreement is in writing and signed by the Licensor and Licensee. In the event that any part of this Agreement is determined to be invalid, illegal or unenforceable, such determination shall not affect the validity, legality or enforceability of any other part of this instrument and remaining parts of this instrument shall be enforced as if such invalid, illegal or unenforceable part were not contained in the instrument.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their proper officers thereunto duly authorized and their respective corporate seals to be affixed hereunto all as of the day and year first above written.

**NIAGARA MOHAWK POWER CORPORATION
d/b/a NATIONAL GRID**

By 
Name: PATRICK F. REAP
Title: LEAD ANALYST - LEASE ADMIN.

SARATOGA RESTAURANT HOSPITALITY, LLC

By 
Name: Donald Led Duke
Title: Member

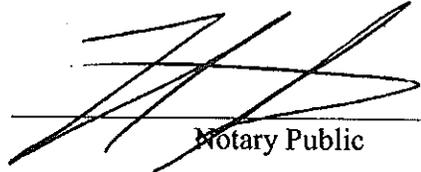
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Hospitality llc license - Excelsior Ave.doc

STATE OF :
SS:
COUNTY OF ONONDAGA :

On this 15th day of June, in the year 2009, before me, the undersigned, personally appeared PATRICK J. REAP, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Frank L. Sciortino
Notary Public State of New York
No 01SC5041778
Qualified in Onondaga County
Commission Expires April 10, 2011

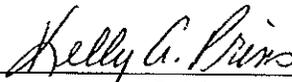


Notary Public

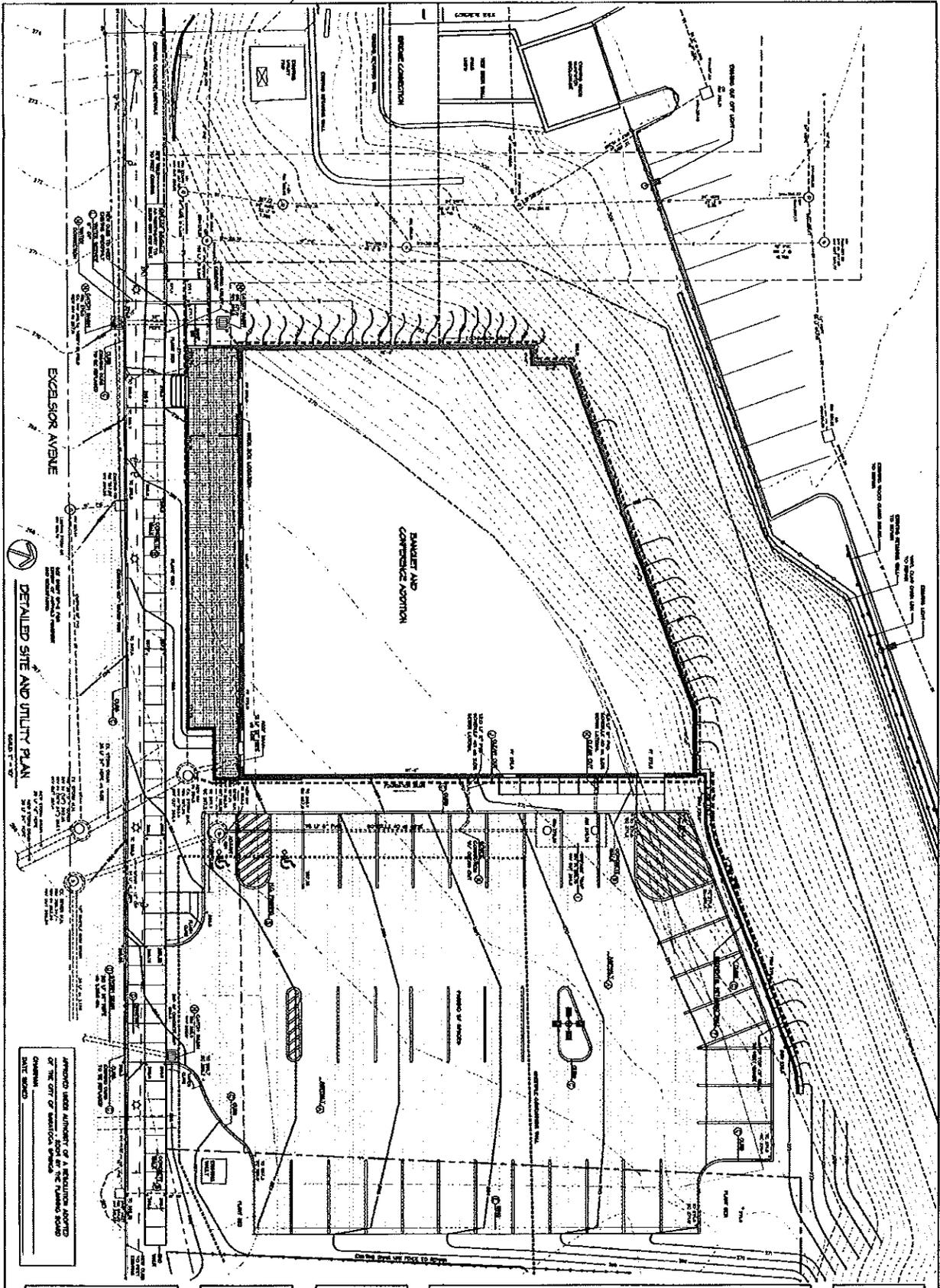
STATE OF NEW YORK :
SS:
COUNTY OF ALBANY :

On this 23rd day of June, in the year 2009, before me, the undersigned, personally appeared Donald Ted Blute, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

KELLY A. PRINS
Notary Public, State of New York
No. 4889874
Qualified in Rensselaer County
Commission Expires April 20, 2011



Notary Public



DETAILED SITE AND UTILITY PLAN

APPROVED UNDER ALIGNMENT OF A RESOLUTION APPROVED BY THE CITY OF SARATOGA SPRINGS

DETAILED
GRADING
AND
UTILITY
PLAN
SP-3

**NACE
ENGINEERING**
Civil Engineering
1000 North Broadway
Saratoga Springs, NY 12858
Tel: 518/584-1111

**MILLER
ASSOCIATES**
Landscape Architecture
1000 North Broadway
Saratoga Springs, NY 12858
Tel: 518/584-1111

**SARATOGA MARRIOTT COURTYARD
BANQUET-CONFERENCE FACILITY ADDITION**
Excelsior Avenue, City of Saratoga Springs, Saratoga County, NY
Applicant: SPA Hotels, II, LLC
110 Wolf Road, Albany NY 12205

EXHIBIT C
PLAN (ORIGINAL PARKING AREA AND VALET PARKING AREA)

Exhibit "D"

Insurance Requirements

| | |

Exhibit "D"

Insurance Requirements

1. From the commencement of the Agreement, through final expiration or longer where specified below, Licensee shall provide and maintain, at its own expense, insurance policies, intended to be primary (with no right of contribution by any other coverage available to National Grid USA its direct and indirect parents, subsidiaries and affiliates (the "Insured Entities")), covering all Operations, Work and Services to be performed under or in connection with this Agreement, issued by reputable insurance companies with an A.M. Best Rating of at least B+, which at least meet or exceed the requirements listed herein:

- (a) **Workers' Compensation and Employers Liability insurance** as required by the State in which the work activities under this Agreement will be performed. If applicable, Coverage shall include the U.S. Longshoreman's and Harbor Workers Compensation Act, and the Jones Act. The employer's liability limit shall be at least \$500,000 each per accident, per person disease, and disease by policy limit.

If Licensee is exempt from having to obtain and maintain workers' compensation coverage due to their legal status as a sole proprietor or partnership, Licensee shall obtain:

1. Long term disability insurance covering any illness or injury incurred in connection with this Agreement that prevents Licensee from working, with benefits of at least 50% of the Licensee's monthly income on the last day before the disability begins.
2. Health Care Insurance, covering any loss occasioned by bodily injury, sickness or disease, and medial expense, with limits, coverage, deductibles, co-insurance payments, and any other cost sharing features customarily maintained by other entities of a similar size and business nature.

- (b) **Commercial General Liability (CGL) Insurance**, covering all operations to be performed by or on behalf of Licensee under or in connection with this Agreement, with minimum limits of:

Bodily Injury (BI)	- \$1,000,000 per occurrence
Property Damage (PD)	- \$ 500,000 per occurrence
	OR
Combined Single Limit	- \$1,000,000 per occurrence
	OR
BI & PD per Occurrence	- \$1,000,000
General Aggregate & Product Aggregate	- \$2,000,000 each

- Coverage shall include: contractual liability (with this Agreement, and any associated verbal agreements, being included under the definition of "Insured Contract" thereunder), products/completed operations, and if applicable, explosion, collapse and underground (XC&U).
- If the products-completed operations coverage is written on a claims-made basis, the retroactive date shall not precede the effective date of this Agreement and coverage shall be maintained continuously for the duration of this Agreement and for at least two years thereafter.
- Additional Insured as required in Article 3 below,
- The policy shall contain a separation of insureds condition.

- In the event Licensee is a governmental entity such as a Town, County, Municipality etc., and such entity's liability to a third party is limited by law, regulation, code, ordinance, by-laws or statute (collectively the "Law"), this liability insurance shall contain an endorsement that waives such Law for insurance purposes only and strictly prohibits the insurance company from using such Law as a defense in either the adjustment of any claim, or in the defense of any suit directly asserted by an Insured Entity.

(c) **Automobile Liability**, covering all owned, non-owned and hired vehicles used in connection with all operations, work or services to be performed by or on behalf of Licensee under or in connection with this Agreement with minimum limits of:

Bodily Injury - \$500,000 per occurrence; 1,000,000 aggregate
Property Damage - \$500,000 per occurrence
OR
Combined Single Limit - \$1,000,000 per occurrence

Additional Insured as required in Article 3 below.

(d) **Umbrella Liability or Excess Liability** coverage, with a **minimum** per occurrence limit of \$4,000,000. This coverage shall run concurrent to the CGL required in Article 1(b) above, shall apply excess of the required automobile, CGL and employer's liability coverage required in this Insurance Exhibit, and shall provide additional insured status as outlined in Article 3 below.

(e) **Watercraft Liability**, if used in connection with this Agreement, with the same **minimum** limits of liability as outlined in requirement 1(b) above, and naming the Insured Entities, including their officers and employees, as additional insured as outlined in article 3.

(f) **Aircraft Liability**, if used in connection with this Agreement, with a limit of liability of not less than \$10,000,000 combined single limit per occurrence, and naming the Insured Entities, including their officers and employees, as additional insured's as required in Article 3 below. Such coverage shall not include a per-passenger or per seat coverage limit.

(g) **Contractors Pollution Liability (CPL)**: covering any sudden and accidental pollution liability which may arise out of, under, or in connection with this Agreement, including all operations to be performed by or on behalf of Licensee, or that arise out of the Licensee's use of any owned, non-owned or hired vehicles, with a minimum liability limit of:

Bodily Injury (BI) - \$1,000,000 per occurrence
Property Damage (PD) - \$ 500,000 per occurrence
OR
Combined Single Limit - \$1,000,000 per occurrence

This requirement may be satisfied by providing either this CPL policy, which would include naming the Insured Entities, including their officers and employees, as additional insured's as outlined in Article 3 below; **OR** by providing coverage for sudden and accidental pollution liability under the CGL and commercial automobile insurance policies required above - limited solely by the Insurance Services Organization (ISO) standard pollution exclusion, or its equivalent.

In the event Licensee is unable to secure and/or maintain any or all of this sudden and accidental pollution liability coverage, Licensee agrees to indemnify and hold the Insured Entities harmless

against any and all liability resulting from any coverage deficiency that is out of compliance with this insurance requirement.

- (h) **Risk of Loss:** Licensee shall be responsible for all risk of loss to its equipment and materials, and any other equipment and materials owned by its employees or by other third parties that may be in their care, custody and control. If this coverage is excluded from the Commercial General Liability policy, then coverage will be acceptable under Licensee's property policy.

In the event that any equipment or materials (Goods) are supplied by the Insured Entities, an Insured Entities representative will provide the insurable value of the Goods to Licensee in writing, both cumulatively and on a maximum per item basis. Licensee will provide replacement cost insurance for these Goods under a blanket builder's risk policy, an equipment floater, or other equivalent coverage, while such Goods are under the care, custody and control of Licensee. Such insurance shall cover all Goods outlined in the Agreement or as noted on subsequent contract amendments. The coverage limit shall apply on either a per location basis or a maximum per item basis, and shall name the Insured Entities, as a Loss Payee with respect to their insurable interest as required in Article 3 below.

- (i) **Homeowners/Sole Proprietors Insurance:** In the event that Licensee is either a homeowner or sole proprietor, the requirements in section 1 A and D do not apply. However, these requirements do apply to any contractors that have been hired by Licensee to perform any work activities on the premises as defined in this Agreement.

In addition, if a Homeowners insurance company will not provide the additional insured status to National Grid as required in section 3, Licensee agrees to indemnify and hold harmless the Insured Entities for any liability that would have otherwise been covered had the insurance carrier recognized the additional insured status.

- (j) **Limits:** Any combination of Commercial General Liability, Automobile Liability and Umbrella Liability policy limits can be used to satisfy the limit requirements in items 1 b, c & d above.

If the term of this agreement is longer than five (5) years, in the fifth year, and every five (5) years thereafter, the Commercial General Liability and Umbrella/Excess Liability insurance limits required above shall be increased by the percentage increase in the Consumer Price Index from the month the Agreement was executed to the month immediately preceding the first month of the year in which the increase is required.

2. **Self-Insurance:** Proof of qualification as a qualified self-insurer, if approved in advance in writing by an Insured Entities representative, will be acceptable in lieu of securing and maintaining one or more of the coverages required in this Insurance Section. Such acceptance shall become a part of this insurance provision by reference herein.

For Workers' Compensation, such evidence shall consist of a copy of a current self-insured certificate for the State in which the work will be performed.

In order for self insurance to be accepted, Licensee's unsecured debt must have a financial rating of at least investment grade. For purposes of this section, "Investment Grade" means (i) if Licensee has a Credit Rating from both S&P and Moody's then, a Credit Rating from S&P equal to or better than "BBB-" and a Credit Rating from Moody's equal to or better than "Baa3"; (ii) if Licensee has a Credit Rating from only one of S&P and Moody's, then a Credit Rating from S&P equal to or better than "BBB-" or a Credit Rating from Moody's equal to or better than "Baa3; or (iii) if the Parties have mutually agreed in writing on an additional or alternative rating agency,

then the equivalent credit rating assigned to an entity by such additional or alternative rating agency that is equal to or better than "BBB-" from S&P and/or "Baa3" from Moody's.

3. **Additional Insured and Loss Payee:** The intent of the Additional Insured requirement under the CGL, Auto, CPL, Umbrella/Excess, Aircraft and Watercraft policies is to include the Insured Entities, their directors, officers and employees, as Additional Insured's for liabilities associated with, or arising out of, all operations, work or services to be performed by or on behalf of Licensee, including ongoing and completed operations, under this Agreement. The following language should be used when referencing the additional insured status: **National Grid USA, its subsidiaries and affiliates shall be named as additional insured.**

The Loss Payee language, as required in article 1.h above, shall read as follows: **National Grid USA, its subsidiaries and affiliates shall be included as a Loss Payee as their interest may appear.**

To the extent Licensee's insurance coverage does not provide the full Additional insured coverage as required herein, Licensee agrees to indemnify and hold harmless the Insured Entities against any and all liability resulting from any deficiency in Licensee's insurance coverage that may be out of compliance with this insurance requirement.

4. **Waiver of Recovery:** Licensee and its insurance carrier(s) shall waive all rights of recovery against the Insured Entities and their directors, officers and employees, for any loss or damage covered under those policies referenced in this insurance provision, or for any required coverage that may be self-insured by Licensee. To the extent Licensee's insurance carriers will not waive their right of subrogation against the Insured Entities, Licensee agrees to indemnify the Insured Entities for any subrogation activities pursued against them by Licensee's insurance carriers. However, this waiver shall not extend to the gross negligence or willful misconduct of the Insured Entities or their employees, sub-contractors or agents.
5. **Contractors:** In the event Licensee uses Contractors in connection with this Agreement, it is expressly agreed that Licensee shall have the sole responsibility to make certain that all Contractors are in compliance with these insurance requirements and remains in compliance throughout the course of this Agreement, and thereafter as required. Licensee shall remain liable for the performance of the Contractor, and such sub-contract relationship shall not relieve Licensee of its obligations under this agreement.

Unless agreed to in writing by the Risk Management Department of National Grid USA Service Company, any deductible or self insured retentions maintained by any Contractor, which shall be for the account of the Contractor, and shall not exceed \$100,000. In addition, Contractor shall name both the Licensee and National Grid USA, (including their subsidiaries, affiliates, officers and employees), as additional insured's under the Commercial General Liability and Umbrella/Excess Liability insurance. If requested by National Grid, Licensee shall provide National Grid with an insurance certificate from its Contractor evidencing this coverage.

In the event any Contractor is unable to maintain all of the same insurance coverage as required in this insurance article, Licensee agrees to indemnify and hold the Insured Entities harmless against any and all liability resulting from any deficiency in Contractor's insurance coverage that may be out of compliance with these insurance requirements.

6. **Insurance Certification:** Upon execution of this Agreement, Licensee shall promptly provide National Grid with (a) **Certificate(s) of Insurance** for all coverage's required herein at the following address:

National Grid
Attn: Risk Management Bldg. B-3
300 Erie Boulevard West
Syracuse, NY 13202

Such certificates, and any renewals or extensions thereof, shall outline the amount of deductibles or self-insured retentions which shall be for the account of Licensee. Such deductibles or self-insured retentions shall not exceed \$100,000 unless agreed to in writing by the Risk Management Department of National Grid USA Service Company, whose approval shall not be unreasonably withheld, delayed or conditioned.

Licensee shall provide National Grid with at least 30 days prior written notice of any cancellation or diminution of the insurance coverage required in this insurance article.

7. **Insurance Obligation:** If any insurance coverage is not secured, maintained or is cancelled and Licensee fails immediately to procure other insurance as specified, National Grid has the right, but not the obligation, to procure such insurance and to invoice Licensee for said coverage.
8. **Incident Reports:** Licensee shall furnish the Risk Management Department of National Grid USA Service Company with copies of any non-privileged accident or incident report(s)(collectively, the "Documents") sent to Licensee's insurance carriers covering accidents, incidents or events occurring as a result of the performance of all operations, work and services to be performed by or on behalf of Licensee under or in connection with this Agreement, excluding any accidents or incidents occurring on Licensee property. If any of the National Grid Companies are named in a lawsuit involving the operations and activities of Licensee associated with this Agreement, Licensee shall promptly provide copies of all insurance policies relevant to this accident or incident if requested by National Grid. However, in the event such Documents are deemed privileged and confidential (Attorney Client Privilege), Licensee shall provide the relevant facts of the accident or incident in a format that does not violate such Attorney Client Privilege.
9. **Other Coverage:** These requirements are in addition to any which may be required elsewhere in this Agreement. In addition, Licensee shall comply with any governmental site specific insurance requirements even if not stated herein.
10. **Coverage Representation:** Licensee represents that it has the required policy limits available, and shall notify National Grid USA Service Company's Risk Management Department in writing when the minimum coverage's required in this article herein have been reduced as a result of claims payments, expenses, or both. However, this obligation does not apply to any claims that would be handled solely with in Licensee's deductible or self-insured retention.
11. **Responsibility:** The complete or partial failure of the Licensee's insurance carrier to fully protect and indemnify the Insured Entities per the terms of the Agreement, including without limitation, this exhibit, or the inadequacy of the insurance shall not in any way lessen or affect the obligations of the Licensee to the Insured Entities.
12. **Coverage Limitation:** Nothing contained in this article is to be construed as limiting the extent of the Licensee's responsibility for payment of damages resulting from all operations, work and services to be performed by or on behalf of Licensee under or in connection with this Agreement, or limiting, diminishing, or waiving Licensee's obligation to indemnify, defend, and save harmless the Insured Entities in accordance with this Agreement.

Exhibit "E"

Declaration of Covenants and Restrictions

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SARATOGA COUNTY CLERK
COUNTY CLERK'S RECORDING PAGE

RECEIPT NO.: 225936

INDEXED BY: 

SCANNED BY:

BOOK OF DEEDS

BOOK 01523 PAGE 00760

NO. PAGES 20

INSTRUMENT CODE: AGM

INSTRUMENT NO.: 990010382

RECORDING:	
RECORDING PAPER FEES	68.00
EDUCATION FEE	5.00
DEEDS - EA-5217	0.00
FILING FEE	0.00
TOTAL:	73.00

*****NOTICE: THIS IS NOT A BILL*****

STATE OF NEW YORK
SARATOGA COUNTY CLERK

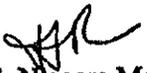
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IN BOOK DEEDS PAGE 00760 OF 01523

Kathleen A. Marchione
SARATOGA COUNTY CLERK

THIS PAGE IS PART OF THE INSTRUMENT

DECLARATION OF COVENANTS AND RESTRICTIONS


WHEREAS, Niagara Mohawk Power Corporation is a corporation organized under the laws of the State of New York and has its principal place of business at 300 Erie Boulevard West, Syracuse, New York 13202; and

WHEREAS, Niagara Mohawk Power Corporation is the owner of a certain site known as the Niagara Mohawk Power Corporation (Saratoga Springs) site, which on February 22, 1990 was added to the National Priorities List for Uncontrolled Hazardous Waste Sites promulgated by the federal Environmental Protection Agency (EPA); the site being located at Excelsior Avenue and East Avenue in the City of Saratoga Springs, New York, and further being the location of a former coal gas manufacturing plant which operated from 1853 until the late 1940's; and

WHEREAS, the said National priorities List site is the subject of a certain Consent Decree entered on May 15, 1997 by the United States District Court for the Northern District of New York in connection with Civil Action No. 97-CV-0136 (FJS) (NDNY), which Decree provides for resolution of claims by the United States against Niagara Mohawk Power Corporation related to the site and requires Niagara Mohawk to develop, perform and maintain the remedial action set forth by EPA in a Record of Decision issued for the site on September 29, 1995;

NOW, THEREFORE, Notice is hereby given:

First, that the premises affected by this Declaration of Covenants and Restrictions are as described and/or depicted in the following documents attached hereto as Exhibit "A" through Exhibit "H":

1. City of Saratoga Springs Real Property Tax Map attached as Exhibit "A";
2. A.P.&L. Corp. KEY MAP E-1417, attached as Exhibit "B" on which the affected premises are designated, subject to the exclusions listed below in this paragraph, as parcels E-203, E-200, E-202, E-206 and E-201; the affected premises do not include the property along the northern edge of parcels E-203 and E-200 which were acquired by the State of New York in 1967 for purposes of the proposed improvement of the City of Saratoga Springs North-South Arterial Highway (See Exhibit "H" attached hereto), and further include only those portions of the parcels designated E-206 and E-201 which are located to the west of East Avenue;
3. Deed dated January 5, 1899 by which John K. Walbridge conveyed to Saratoga Gas, Electric Light and Power Company the property identified as parcel E-203 in the attached Exhibit "B" key map, and recorded in the Saratoga County Clerk's Office in Book of Deeds No. 221 at page 307, attached hereto as Exhibit "C";
4. Deed dated February 11, 1868 by which Milo J. Jennings conveyed to The Saratoga Gas Light Company the property identified as parcel E-200 in the attached Exhibit "B" key map, and recorded in the Saratoga County Clerk's Office in Book of Deeds 109 at page 470, attached hereto as Exhibit "D";

BOOK 1523 760

SARATOGA COUNTY CLERK
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VOL. 01523 PAGE 00760
FILED 07/14/99 11:56 AM

5. Deed dated November 10, 1869 by which Seth Covell and wife conveyed to The Saratoga Gas Light Company the property identified as parcel E-202 in the attached Exhibit "B" key map, and recorded in the Saratoga County Clerk's Office in Book of Deeds No. 115 at page 266, attached hereto as Exhibit "E";

6. Deed dated August 1, 1873 by which William Allerdice conveyed to the Saratoga Gas Light Company the property identified as parcel E-206 in the attached Exhibit "B" key map, and recorded in the Saratoga County Clerk's office in Book of Deeds No. 128 at page 2, attached hereto as Exhibit "F";

7. Deed dated June 28, 1873 by which Seth Covell conveyed to the Saratoga Gas Light Company the property identified as parcel E-201 in the attached Exhibit "B" key map, and recorded in the Saratoga County Clerk's office in Book of Deeds No. 127 at page 374, attached hereto as Exhibit "G";

8. Description and Map for the Appropriation of Property issued June 7, 1967 by the New York State Department of Public Works, for the purpose of the "proposed improvement of the City of Saratoga Springs North-South Arterial Highway", attached hereto as Exhibit "H".

Second, that the above-referenced Consent Decree is binding upon Niagara Mohawk Power Corporation and its successors in interest;

Third, that the provisions of the above-referenced Consent Decree are restrictive covenants which shall run with the land and shall be binding upon all future owners of the premises described herein;

Fourth, that the use of the premises is or may be restricted by the requirements of the above-referenced Consent Decree and by other orders issued or to be issued according to law, including but not limited to the following restrictions:

1. The property shall only be used for industrial or commercial purposes, and there shall be no residential use of this property as long as hazardous substances remain on property;

2. There shall be no consumption or use of the groundwater underlying the property, except for the limited purpose of treating and monitoring groundwater contamination levels. Groundwater wells shall only be installed pursuant to a plan approved by EPA;

3. The property shall not be used in any manner that EPA determines would adversely affect the integrity of any containment system, treatment system, collection system or monitoring system installed pursuant to the Consent Decree;

4. Neither the surface nor subsurface of this property shall be disturbed by filling, drilling, excavation, removal of topsoil and other materials except upon prior written approval from EPA;

5. The property shall not be used in any manner that would diminish the effectiveness of any prior response actions undertaken in respect of this property or of any remedial action measures implemented pursuant to the Consent Decree.

Fifth, that any deed for conveyance of the premises described herein shall state that the said conveyance is subject to and encumbered by this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the 28th day of May, 1999.



Edward J. Dienst
Senior Vice President –
Asset Management and Energy Delivery

STATE OF NEW YORK)
COUNTY OF ONONDAGA)

On the 28th day of May, 1999, before me personally came Edward J. Dienst, to me known, who, being by me duly sworn, did depose and say that he resides in Skaneateles, New York; that he is the Senior Vice President-Asset Management and Energy Delivery of Niagara Mohawk Power Corporation, the corporation described in and which executed the above instrument; and that he signed his name thereto by authority of the board of directors of said corporation.



WILLIAM C. WEISS
Notary Public, State of New York
No. 4719926
Qualified in Onondaga County
My Commission Expires October 31, 2000

BOOK 1523 762

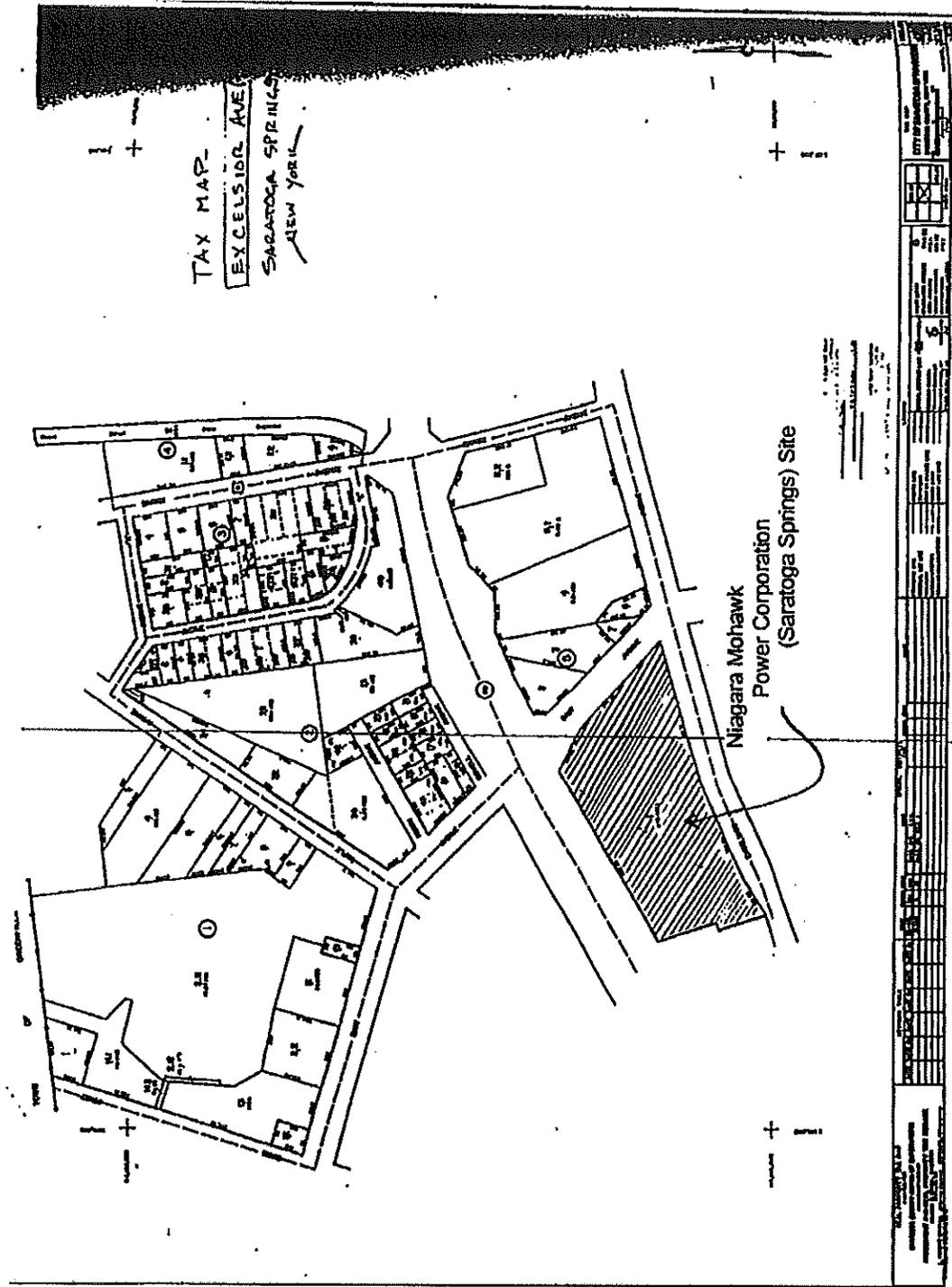


Exhibit "A"

Exhibit "A"

BOOK 1523 763

E-1417



A.P. & L. CORP
 KEY MAP
 Property in
 Saratoga Springs.
 Scale: 1" = 200'

See Book 247 pages 46 - The S. G. E. L. & P. Co., to
 The N.E. E. 4. for their track rights.

DATE	BY	REVISION
5-15-22	J.H.L.	5/17/22
5-12-22	E.L.B.	5/17/22
5-12-22	J.H.L.	5/17/22

Exhibit "B"

E-1417

Saratoga Sub

71

THIS INDENTURE, made this fifth day of January in the year of our Lord one thousand eight hundred and ninety-nine, BETWEEN JOHN K. WALBRIDGE of Saratoga Springs, New York, of the first part, and THE SARATOGA GAS ELECTRIC LIGHT AND POWER COMPANY, of the second part,

WITNESSETH, That the said part of the first part, in consideration of the sum of ONE THOUSAND TWO HUNDRED AND FIFTY DOLLARS to him duly paid, has sold, and

E-203

By these Presents do grant and convey to the said party of the second part, its successors and assigns, all that Tract or Parcel of Land situate in the Village of Saratoga Springs, Saratoga County, N.Y., bounded and described as follows: Beginning at a stake standing in the north line of the highway leading from the village of Saratoga Springs to the Ten Springs and which stake stands at the south east corner of a lot of land owned by J.P. Butler, running thence easterly along the north side of said highway two hundred and forty-five (245) feet to a lot conveyed by W.P. Mitchell of The Saratoga Gas Company, thence northerly at right angles to the north line of said highway to the south line of lands belonging to the Saratoga and White Hall Railroad Company; thence westerly and along the south line of the lands of said railroad company to a stake and stones about two hundred and forty-five (245) feet, thence southerly on a line parallel with the second course above mentioned to the place of beginning, being the premises upon which the Saratoga A Spring is situated. Being the same premises and description contained in a deed from Walter P. Butler, Referee, to the said John K. Walbridge, dated January 28, 1897, and recorded in the Saratoga County Clerk's office, September 8, 1897, in book of deeds No. 216, at page 465.

WITH THE APPURTENANCES: AND ALL THE Estate, Title and Interest, therein of the said party of the first part. And the said John K. Walbridge does hereby covenant and agree to and with the said party of the second part, its successors and assigns, that at the time of the ensealing and delivery of these presents, he was the lawful owner and was well seized of the premises above conveyed, free and clear from all encumbrances and that the premises thus conveyed in Quiet and Peaceable Possession of the said party of the second part, its successors and assigns he will forever Warrant and Defend against any person whomsoever lawfully claiming the same, or any part thereof.

Exhibit "C"

IN WITNESS WHEREOF, the party of the first part, has hereunto set his hand and seal the day and year first above written.

Sealed and Delivered in John K. Walbridge.
the Presence of
W.P. Butler

STATE OF NEW YORK
COUNTY OF SARATOGA SS

On this 5th day of January in the year one thousand eight hundred and ninety-nine before me, the subscriber, personally appeared JOHN K. WALBRIDGE, to me known to be the same person described in and who executed the foregoing instrument, and acknowledged that he executed the same.

W.P. Butler, Notary Public.

*Book 221
Page 307*

1995 1081 3412

BOOK 1523 766

THIS INDENTURE, Made this eleventh day of February in the year of our Lord one thousand eight hundred & sixty-eight, Between MILO J. JENNINGS of Saratoga Springs, of the first part and THE SARATOGA GAS LIGHT COMPANY, of the second part.

E-200

WITNESSETH, That the said party of the first part in consideration of the sum of ONE THOUSAND FIVE HUNDRED DOLLARS, to him in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, hath bargained, sold, remised & quit-claimed and by these presents doth bargain, sell remise & quit-claim unto the said party of the second part & to its successor or successors & assigns forever,

ALL THAT CERTAIN PIECE OR PARCEL OF LAND situate, lying & being in the Village of Saratoga Springs, in the County of Saratoga and bounded and described as follows: Commencing at the northeasterly corner of lands now owned & occupied by the Saratoga A. Spring Company & running then southeasterly on the division line of the lands of said Company & Seth Covell to the center of the highway leading to the Ten Springs; thence northeasterly along the center of said highway to a point where a line running at right angles with said highway will include three acres of land; thence along said line northwesterly to the line of the Saratoga & Washington Railroad Company; thence southwesterly along the line of lands of said Company to the place of beginning, containing three acres of land & being the same premises this day conveyed to Seth Covell & wife to the party of the first part, subject to a mortgage upon said premises, which the party of the second part hereby assumes and agrees to pay.

TOGETHER with all & singular the hereditaments and appurtenances thereto belonging or in any wise appertaining and the reversion and reversions, remainder and remainders, rents, issues & profits thereof & all the estate, right, title, interest, claim & demand whatsoever of the said party of the first part, either in law or equity of in & to the above bargained premises with the said hereditaments & appurtenances. To have & to hold the said premises to the said party of the second part & its assigns to the sole and only proper benefit & behoof of the said party of the second part & its assigns forever.

Exhibit "D"

IN WITNESS WHEREOF, the party of the first part hath hereunto set his hand & seal the day & year first above written.

Sealed & delivered in
the Presence of

Milo J. Jennings L.S.

James M. Andrews, Jr.

STATE OF NEW YORK
SARATOGA COUNTY SS

On this eleventh day of February in the year one thousand and eight hundred & sixty-eight, before me, appeared MILO J. JENNINGS, of Saratoga Springs, to me personally known to be the same person described in & who executed the foregoing instrument & acknowledged that he executed the same.

James M. Andrews, Jr.,
Notary Public

Recorded February 22, 1868
Book 109, page 470

9 h. 45 m. A.M.

Sara. Co. Clerk's cert. of record of deed attached.

1995 1081 3411

EXHIBIT "D", continued

BOOK 1523 768

THIS INDENTURE, Made this Tenth day of November in the year of our Lord one thousand eight hundred and sixty nine, BETWEEN SETH COVELL AND BEULAH his wife of Saratoga Springs County of Saratoga and State of New York of the first part and THE SARATOGA GAS LIGHT COMPANY of the same place of the second part, WITNESSETH, That the said parties of the first part in consideration of the sum of NINE HUNDRED AND SEVENTY TWO 90/100 DOLLARS to them duly paid have sold and by these presents do grant and convey to the said party of the second part its successors and assigns,

E-202

ALL THAT TRACT OR PARCEL OF LAND situate in the village of Saratoga Springs in said County bounded and described as follows: Beginning at a point in the southerly line of the Saratoga and Whitehall Railroad lands at the north east corner of lands now belonging to the party of the second part and running thence south nine degrees and fifteen minutes east along the easterly line of said lands of the party of the second part five hundred and seventeen feet and three inches to the center of the highway leading to the Ten Springs thence north eighty degrees and forty five minutes east along the center of said highway two hundred feet thence north nine degrees and fifteen minutes west five hundred and forty two feet and three inches more or less to the southerly line of the said Railroad lands, thence westerly along the south line of said Railroad lands to the place of beginning being a tract of land two hundred feet in width and extending from said highway leading to the Ten Springs on the south to the south line of the Saratoga and Whitehall Railroad lands on the north and containing two acres and 42/100 of an acre of land.

WITH THE APPURTENANCES AND all the estate title and interest therein of the said parties of the first part and the said SETH COVELL doth hereby covenant and agree to and with the said party of the second part its successors and assigns that the premises thus conveyed in the quiet and peaceable possession of the said party of the second part its successors and assigns he will forever warrant and defend against any person whomsoever lawfully claiming the same or any part thereof.

IN WITNESS WHEREOF, The parties of the first part have hereunto set their hands and seals the day and year first above written.

Sealed and Delivered in the presence of Seth Covell L.S. Beulah Covell L.S.

The word "heirs" erased once on 1st and twice on 2nd page and the word successors interlined in place thereof.

J.W.Crane

STATE OF NEW YORK
SARATOGA COUNTY SS

On this Eleventh day of November in the year one thousand eight hundred and sixty nine before me appeared SETH COVELL AND BEULAH his wife to me personally known to be the same persons described in and who executed the foregoing instrument who severally acknowledged that they executed the same and the said Buelah on a private examination by me apart from her said husband acknowledged that she executed the same freely and without any fear or compulsion of her said husband.

J.W.Crane, Comr. of Deeds

Recorded Nov.10,1869, 9 h. A.M. Book 115 Page 266

Sara.Co. Clerk's cert. of record of deed attached.

Exhibit "E", continued

BOOK 1523 770

Saratoga Sub 200 71

THIS INDENTURE Made the First day of August in the year of our Lord one thousand eight hundred and seventy three BETWEEN WILLIAM ALLERDICE of the village of Saratoga Springs county of Saratoga and State of New York and ESTHER his wife parties of the first part and the SARATOGA GAS LIGHT COMPANY of the same village county and state, of the second part,

E-206

WITNESSETH That the said parties of the first part for and in consideration of the sum of EIGHT HUNDRED DOLLARS lawful money of the United States of America to them in hand paid by the said party of the second part the receipt whereof is hereby confessed and acknowledged have granted bargained sold conveyed aliened remised released enfeoffed and confirmed and by these presents do grant bargain sell convey alien remise release enfeoff and confirm unto the said party of the second part and to their successors and assigns forever.

ALL THAT CERTAIN LOT OF LAND situate in the village of Saratoga Springs bounded on the west by lands lately conveyed by said parties of the first part to Mr. Everett on the north by lands of the Saratoga and Washington Railroad Company on the south by the north bounds of Geneva Street as said line was prior to the laying out of Spring Avenue and on the east by a line drawn parallel to said first mentioned line and sufficiently distant therefrom to include in the lot hereby conveyed one acre of land. But the said party of the second part their successors and assigns are to make and perpetually maintain the fences along the north line of the premises hereby conveyed and adjoining said Railroad lands and also make and maintain the fences along the east bounds of the premises so long as Seth Covell owns the lands along the said east bounds.

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging or in any wise appertaining and the reversion and reversions remainder and remainders rents issues and profits thereof and all the estate right title interest claim and demand whatsoever of the said parties of the first part either in law or equity of in and to the above granted premises with the said hereditaments and appurtenances, TO HAVE AND TO HOLD the above mentioned and described premises with the appurtenances and every part and parcel thereof to the said party of the second part their successors and assigns forever. And the said William Allerdice for himself his heirs executors and administrators doth covenant promise and agree to and with the said party of the second part their successors and assigns to warrant and forever defend the above granted premises and

Exhibit "F"

every part and parcel thereof now being in the quiet and peaceable possession of the said party of the second part against the said parties of the first part their heirs executors administrators and assigns and against all and every other person or persons claiming or to claim the said premises or any part thereof.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hands & seals the day and year first above written.

Sealed & delivered in the presence of
Charles C. Lester

William Allerdice L.S.
Esther Allerdice L.S.

STATE OF NEW YORK
SARATOGA COUNTY

I certify that on the fourth day of August, 1873 before me appeared WILLIAM ALLERDICE & ESTHER his wife both to me personally known to be the persons described in and who executed the foregoing deed and severally acknowledged the execution thereof. And the said Esther Allerdice on a private examination apart from her husband acknowledged that she executed the same freely and without any fear or compulsion of her said husband.

Charles S. Lester, Sara. Co.
Judge

Recorded Aug. 20, 1873 5 h, P.M.
Book 128 Page 2

Sara. Co. Clerk's cert. of record of deed attached.

1873 AUG 20 1 00 PM '73

Exhibit "F", continued

THIS INDENTURE Made the 28th day of June in the year of our Lord one thousand eight hundred and seventy three BETWEEN SETH COVELL of Saratoga Springs Saratoga County and State of New York of the first part and THE SARATOGA GAS LIGHT COMPANY of the second part WITNESSETH That the said party of the first part for and in consideration of the sum of SIXTEEN HUNDRED AND SEVENTY FOUR DOLLARS lawful money of the United States of America to him in hand paid by the said party of the second part the receipt whereof is hereby confessed and acknowledged hath granted bargained sold conveyed aliened remised released enfeoffed and confirmed and by these presents doth grant bargain sell convey alien remise release enfeoff and confirm unto the said party of the second part and to its assigns forever.

E201

ALL THAT CERTAIN PIECE OR PARCEL OF LAND in the village of Saratoga Springs bounded and described as follows. Commencing at a point in the center of the highway (now called Spring Avenue) at the south west corner of lands of William B. Taylor and running thence north one degree east five hundred and eighty six feet to lands of the Saratoga and Washington Rail Road Company, thence south seventy five degrees and fifteen minutes west along the lands of said R.R. Company two hundred seventy three and one half feet to lands of Allerdice thence south eighty four degrees and forty five seconds east five hundred and thirty seven and one half feet along Allerdice's east line to the center line of the said highway, thence along the center of said highway north eighty five degrees east one hundred and sixty two feet to the place of beginning, containing two and seventy nine hundredths acres. Subject to the covenant of Covill to keep up fence between said premises and the Saratoga and Washington R.R.Co.

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging or in any wise appertaining and the reversion and reversions remainder and remainders rents issues and profits thereof and all the estate right title interest claim and demand whatsoever of the said party of the first part either in law or equity of in and to the above granted premises with the said hereditaments and appurtenances. To have and to hold the above mentioned and described premises with the appurtenances and every part and parcel thereof, to the said party of the second part and its assigns forever, and the said Seth Covill for himself his heirs executors and administrators do covenant promise and agree to and with the said party of the second part and its assigns, to warrant and forever to

Exhibit "C"

defend the above granted premises and every part and parcel thereof now being in the quiet and peaceable possession of the said party of the second part against the said party of the first part his heirs executors administrators and assigns and against all and every person or persons claiming or to claim the said premises or any part thereof.

IN WITNESS WHEREOF the said party of the first part hath hereunto set this hand and seal the day and year first above written.

Sealed and delivered in
the presence of
Charles C. Lester

Seth Covell L.S.

STATE OF NEW YORK
SARATOGA COUNTY SS

I certify that on the 28th day of June 1873, before me appeared Seth Covell to me personally known to be the person described in and who executed the foregoing deed and acknowledged the execution thereof.

Charles C. Lester
Notary Public

Recorded July 5, 1873 9h. A.M.
Book 127 Page 274

Para. Co. Clerk's cert. of record of deed attached.

1995 1081 3403

Exhibit "G", continued

BOOK 1523 774



NEW YORK STATE DEPARTMENT OF PUBLIC WORKS
DESCRIPTION AND MAP FOR THE APPROPRIATION OF PROPERTY

CITY OF SARATOGA SPRINGS: NORTH-SOUTH ARTERIAL HIGHWAY, CITY OF SARATOGA SPRING
COUNTY OF SARATOGA

Map No. 57
Parcel No. 64 and 65

Total Area = 2.744± Ac.

NIAGARA MOHAWK POWER CORPORATION
(Repealed Order)

Description and map of property which the Superintendent of Public Works deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, for purposes connected with the highway system of the State of New York pursuant to Sections 30 and 349C of the Highway Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to statutes set forth above, and in accordance with the official order of the superintendent of public works, the above descriptions and map are hereby officially approved; and said descriptions and the original tracing of this map are hereby officially filed in the office of the department of public works.

Date June 7, 1967

P. O. BALDWIN
Director, Bureau of Rights of Way and Claims

I have compared the foregoing copy of description and map with the original thereof, as filed in the office of the department of public works and I do hereby certify the same to be a true and correct copy of said original and of the whole thereof.

Director, Bureau of Rights of Way and Claims

Exhibit H
Book 1523 Pg 775

Survey notes on file at New York
 State Department of Public Works
 District Office No. 1 located
 at Albany, New York.
 TRN 58
 CC L 262 P 46
 127 374
 123 2
 115 266
 100 470
 221 307

All those pieces or parcels of property hereinafter designated as Parcel Nos. 64 and 65, situate in the City of Saratoga Springs, County of Saratoga, State of New York, as shown on the accompanying map and described as follows:

PARCEL NO. 64

Beginning at a point on the southeasterly boundary of Covell Avenue, an existing city street at the intersection of the said boundary with the division line between the property of Charles P. & Lillian Lent (reputed owners) on the southwest and the property of Niagara Mohawk Power Corp. (reputed owner) on the northeast, said point being 133+ feet distant northwesterly measured at right angles from Station 117+23+ of the hereinafter described survey baseline for the construction of the City of Saratoga Springs, North-South Arterial Highway; thence southeasterly along said division line 90+ feet to its intersection with the common division line between the property of Niagara Mohawk Power Corp. (reputed owner) on the northwest and the properties of Antonio & Frances Ballesteros (reputed owners) and Spa Steel Products Company, Inc. (reputed owner) on the southeast, said point being 43+ feet distant northwesterly measured at right angles from Station 117+21+ of the said baseline; thence northeasterly along the last mentioned common division line 50+ feet to its intersection with the division line between the property of George S. Covell (reputed owner) on the northeast and the property of Niagara Mohawk Power Corp. (reputed owner) on the southwest, the last mentioned point being 47+ feet distant northwesterly measured at right angles from Station 117+71+ of the said baseline; thence northwesterly along the last mentioned division line, 84+ feet to its intersection with the first mentioned southeasterly boundary of said existing City Street, the last mentioned point being 17+ feet distant northwesterly measured at right angles from Station 117+74+ of the said baseline; thence northwesterly along the last mentioned southeasterly boundary of said existing highway, 30 feet to the point of beginning, being 0.184 acre more or less.

PARCEL NO. 65

Beginning at a point on the southwesterly boundary of East Avenue, an existing city street at the intersection of the said boundary with the common division line between the properties of Spa Steel Products Company, Inc. (reputed owners) and Antonio & Frances Ballesteros (reputed owners) on the West and South and the property of Niagara Mohawk Power Corp. (reputed owner) on the East and North, said point being 55+ feet distant southeasterly measured at right angles from Station 118+82+ of the hereinafter described survey baseline for the construction of the City of Saratoga Springs, North-South Arterial Highway; thence southerly along said common division line, 693+ feet to an angle point; thence easterly and continuing along said common division line 36+ feet to a point 69+ feet distant southeasterly measured at right angles from Station 111+61+ of said baseline; thence North 32°-39' East, 70+ feet to a point 66 feet distant southeasterly measured at right angles from Station 112+37+ of said baseline; thence North 59°-28' East, 594+ feet to a point 83 feet distant southeasterly measured at right angles from Station 118+31+ of said baseline; thence South 65°-06' East, 149+ feet to a point on the southwesterly boundary of said existing city street, the last mentioned point being 190+ feet distant southeasterly measured at right angles from Station 119+40+ of the said baseline; thence northwesterly along the last mentioned southwesterly boundary of said existing city street, 158+ feet to the point of beginning, being 0.644 acre more or less.

The above mentioned survey baseline is a portion of the survey baseline for the construction of the City of Saratoga Springs, North-South Arterial Highway, as shown on a map on file in the Office of the State Department of Public Works and described as follows:

Beginning at Station 104+98.91; thence North 32°-20'-27" East to Station 111+98.77; thence North 37°-50'-05" East to Station 118+62.64; thence North 65°-46'-29" East to Station 119+00.9 (P.O.L.) - Station "L" 5+00; thence North 65°-46'-29" East to Station 125+98.49.

All bearings referred to True North at the 74°-20' Meridian of West Longitude.

Date Sept. 2 1966

F. W. Jordan
 F. W. JORDAN

Assistant District Engineer, District No. 1

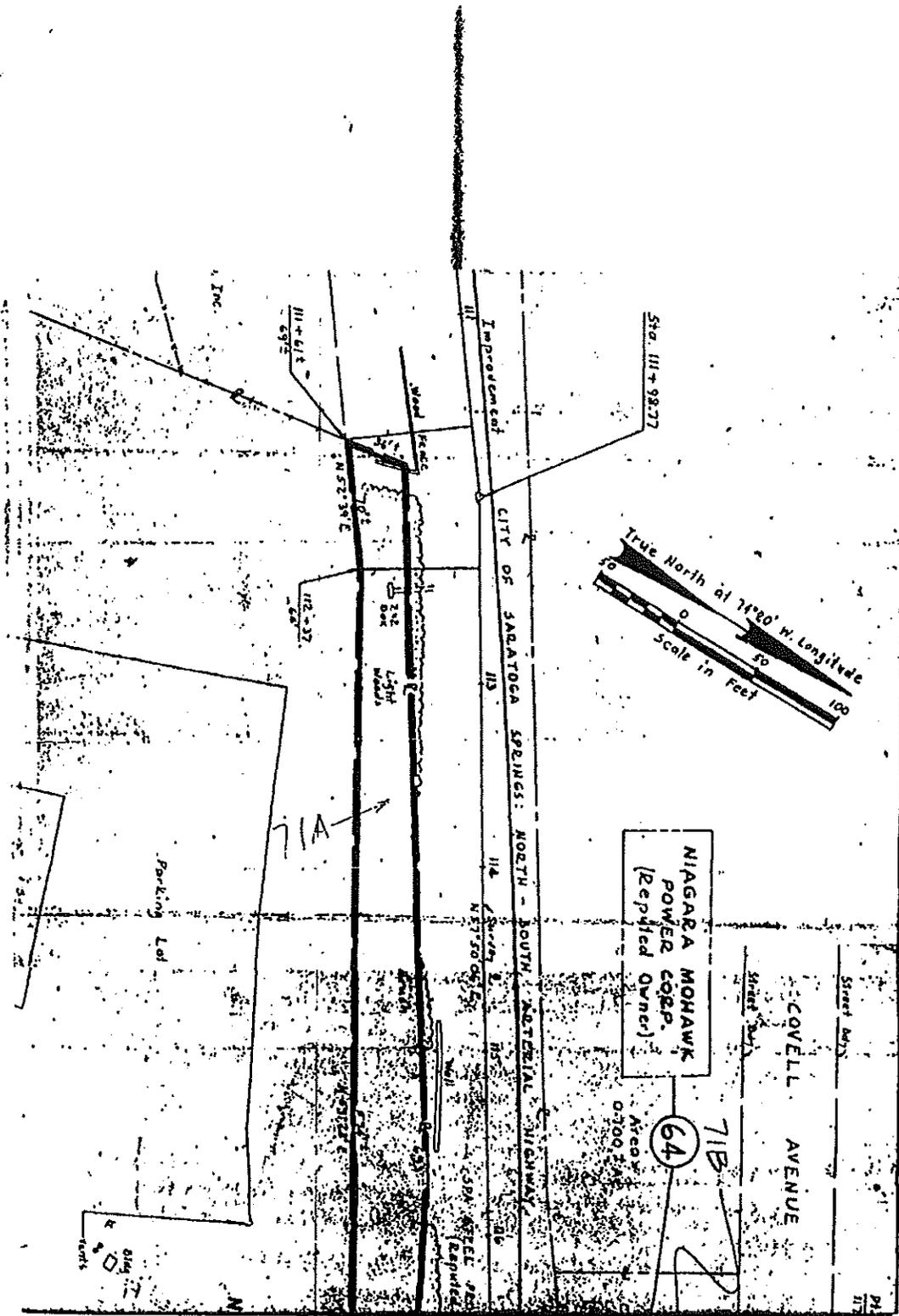


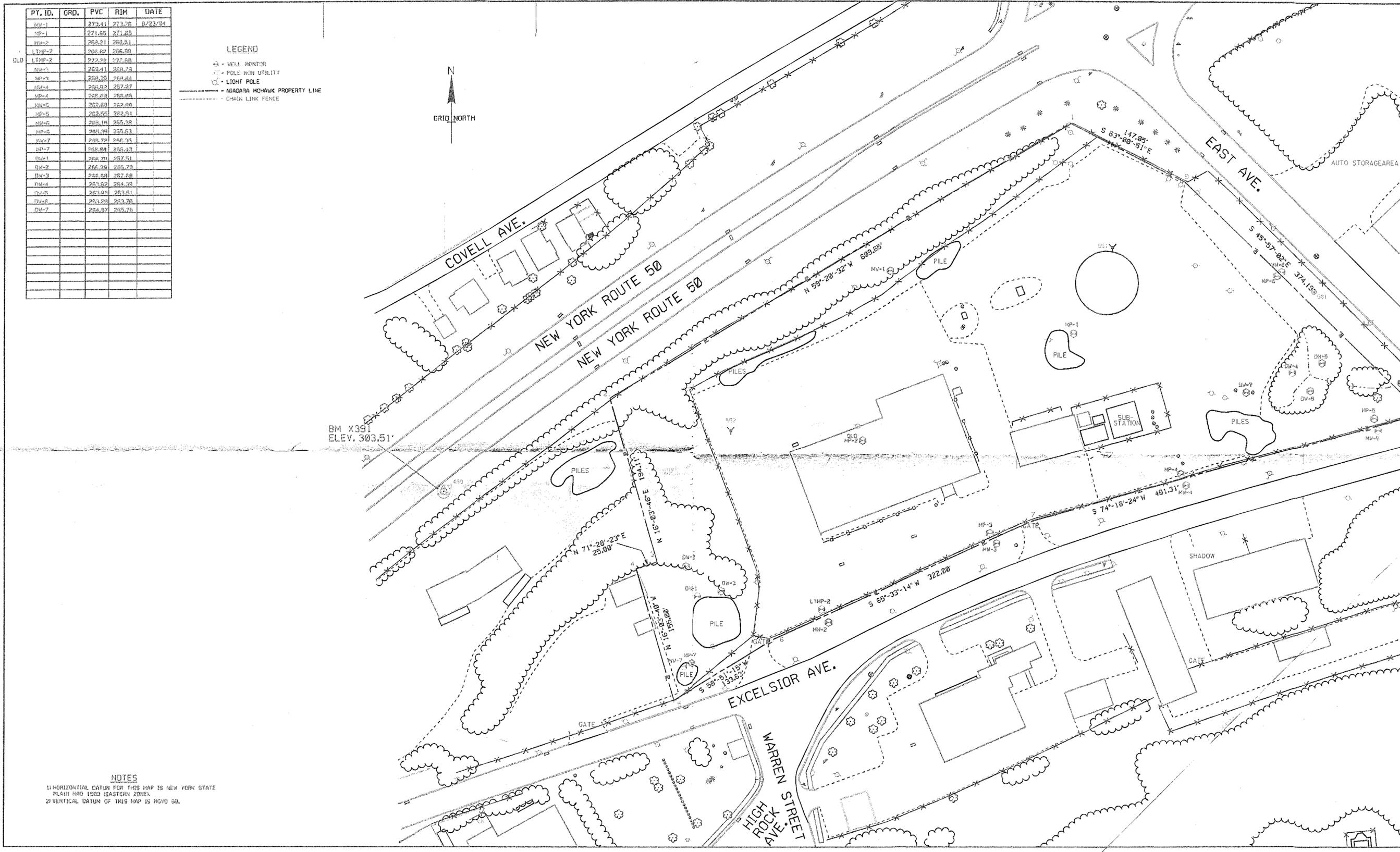
Exhibit H
 Book 1523 Pg 778

A B C D E F G H

1
2
3
4
5
6

PT. ID.	GRD.	PVC	RIM	DATE
MW-1	273.41	273.26	8/23/04	
MP-1	271.95	271.89		
MW-2	268.21	268.11		
LTMP-2	268.82	268.80		
MW-3	272.23	272.89		
MW-4	263.41	264.73		
MP-4	269.29	269.54		
MW-5	262.92	262.87		
MW-6	262.09	262.89		
MW-7	262.69	262.66		
MW-8	262.55	262.34		
MW-9	262.14	265.38		
MW-10	261.98	265.63		
MW-11	258.72	256.34		
MW-12	258.98	255.33		
MW-13	258.70	257.51		
MW-14	258.39	256.73		
MW-15	256.58	257.28		
MW-16	253.92	264.33		
MW-17	253.95	253.51		
MW-18	253.28	253.78		
MW-19	254.97	255.78		

LEGEND
 * - WELL MONITOR
 * - POLE MON UTILITY
 * - LIGHT POLE
 --- NIAGARA MOHAWK PROPERTY LINE
 --- CHAIN LINK FENCE



BM X391
ELEV. 303.51'

NOTES
 1) HORIZONTAL DATUM FOR THIS MAP IS NEW YORK STATE PLAIN AND 1983 (EASTERN ZONE).
 2) VERTICAL DATUM OF THIS MAP IS NAVD 83.

0 50 100
SCALE: 1"=50'

SEE SHEET #10

SEE SHEET #6

SURVEY REF. FILE NO. 3435.01

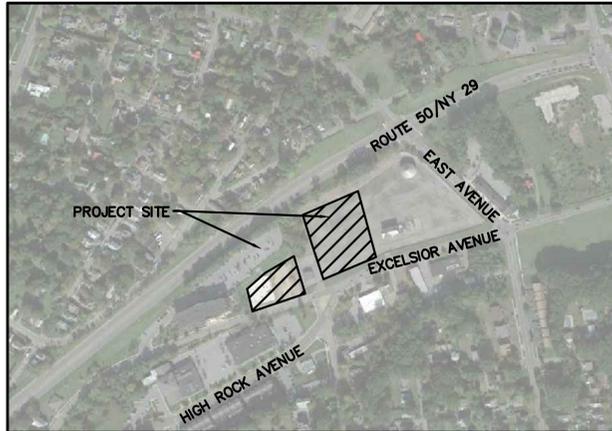
										DJK. APPROVED GDS. APPROVED DR. APPROVED CK. APPROVED APPROVED		PREPARED BY Niagara Mohawk Power Corporation ACCOUNT NUMBER		SARATOGA SPRINGS MGP REMEDIATION SITE		ORIGINAL ISSUE DATE 9/22/04 FILE INDEX DRAWING NUMBER 34350-E SHEET NUMBER SHEET 5	
REFERENCE DESCRIPTION	DRAWING NUMBER	NO.	DATE	DESCRIPTION OF ISSUE OR REVISION	DR.	CK.	APP.	NO.	DATE	DESCRIPTION OF ISSUE OR REVISION	DR.	CK.	APP.	CITY OF SARATOGA SPRINGS	SARATOGA COUNTY, NEW YORK		

CONFIDENTIALITY STATEMENT
 This document contains confidential and proprietary information in Saratoga Springs, New York, and is the property of Niagara Mohawk Power Corporation. It is to be used only for the purposes for which it was prepared and is not to be distributed outside of the project. Any other use is prohibited without the written authorization of Niagara Mohawk Power Corporation.

Excelsior Springs Banquet Valet Parking Amended Site Plan Application

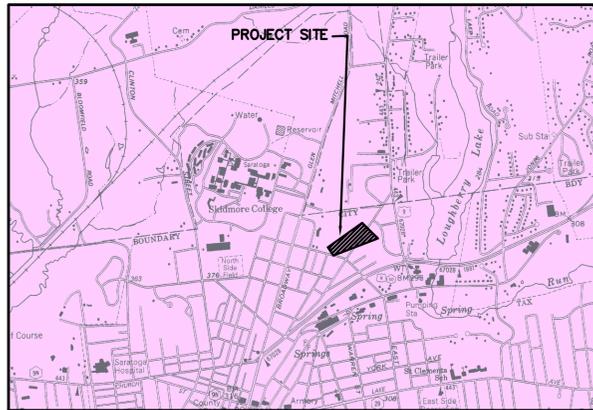
47 Excelsior Avenue
Saratoga Springs, New York

June 23, 2016



Vacinity Map:

SCALE: NTS



Project Location Map:

SCALE: NTS



SITE STATISTICS

PROPOSED USE:	VALET PARKING FACILITY
TAX MAP PARCEL NUMBER:	166.29-2-9 & 166.5-5-1
EXISTING ZONING:	T-5 NEIGHBORHOOD CENTER
FRONTAGE BUILD-OUT:	MINIMUM 70%
BUILD-TO LINE ALL BUILDINGS FROM FRONTAGE LINE:	0 FT. TO 12 FT
SIDE SETBACK:	0 FT MINIMUM
BUILDING HEIGHT:	50 FT MAX. HEIGHT

PARKING

EXISTING SPACES:	37 SPACES (ONSITE)
PROPOSED SPACES:	111 SPACES (VALET ONLY)
TOTAL SPACES PROVIDED:	148 SPACES

SHEET INDEX:

COVER SHEET
SURVEY
L-1 EXISTING CONDITIONS PLAN
L-2 SITE LAYOUT PLAN
L-3 SITE DETAILS

SPECIAL USE PERMIT

CITY OF SARATOGA SPRINGS
PLANNING BOARD
City Hall - 474 Broadway
Saratoga Springs, New York 12866
Tel: 518-887-3500 Fax: 518-880-6480
www.saratoga.org

CLIFFORD VAN WAGEN, Chair
JAMES TOTTINO, Vice Chair
AMY GUGLIEMO
MICHAEL PERINIS
LARRY BARNHART
PAUL W. HELEN
DAN SHAIN

NOTICE OF DECISION
In the matter of the application #09.018 of
Spa Hotel II, LLC Restaurant/Banquet Facility
11 Excelsior Avenue
Saratoga Springs, NY 12866

Involving the premises at 11 Excelsior Avenue in the City of Saratoga Springs, on an application for special use permit modification with the Planning Board who met on April 16, 2009 and made the following decisions each by a 5-0 vote (J. Tanno, M. Perkins - absent):

- Reaffirmed the previous SEORA Negative Declaration on the basis that the project modification (1) does not constitute a material change and (2) reduces the intensity of the use.
- Approved a modified permanent special use permit as per the requirements set forth in Article VI of the City of Saratoga Springs Zoning Ordinance with the following conditions:
 - A hotel is permitted with all accessory uses commonly associated with a hotel and the number of hotel rooms shall not exceed 144;
 - Meeting space in the hotel will be for up to 175 people and at a maximum of 2,500 square feet;
 - The restaurant facilities in the hotel will be limited to breakfast and will be served for no more than 50 seats;
 - An attached banquet facility is permitted and the number of seats shall not exceed 240 seats.

April 23, 2009
Date

Clifford Van Wagen
Chair

cc: Bob Hickey, Building Dept;
Paul Male, City Engineer;
File;
Accounts Dept.;
Stephanie Bitter, Agent

ZONING VARIANCE

CITY OF SARATOGA SPRINGS
ZONING BOARD OF APPEALS
City Hall - 474 Broadway
Saratoga Springs, New York 12866
Tel: 518-887-3500 x 218 Fax: 518-880-6480
www.saratoga.org

IN THE MATTER OF THE APPEAL OF
Spa Hotel II, LLC
11 Excelsior Avenue
Saratoga Springs, New York 12866

from the determination of the Building Inspector involving the premises at 11 Excelsior Avenue, in the City of Saratoga Springs, New York being Section 166.29, Block 2, Lots 1, 1.1, 1.1, and B, inside District, on the Assessment Map of said City.

WHEREAS, the applicant having applied for an area variance under the Zoning Ordinance of said City as amended, to construct a banquet and conference facility, in a Tractee-05 District and public notice having been duly given of a hearing on said application held on the 5th day of March 2009.

WHEREAS, in consideration of the balance between benefit to the applicant with detriment to the health, safety and welfare of the community, the Board makes the following resolution and finding of fact that the requested area variance for the following relief or lesser dimensions:

AREA VARIANCE	Existing	Proposed	Total Relief Requested
-Min. front build-out:	70%	14%	56%
-Min. build-to-line:	12 feet	18 feet	6 feet

As shown on the submitted plans, be approved for the following reasons:

- The applicant has demonstrated this benefit cannot be achieved by other means feasible because the City holds a utility easement that prevents the location of a structure within the build-to-line. The easement also prevents conformance with the frontage build-out requirement.
- The applicant has demonstrated that granting this variance will not create an undesirable change in neighborhood character or detriment to nearby properties. The location of the proposed banquet and conference facility will be aligned with the existing hotel and be architecturally consistent with the hotel. In addition, the two buildings will be connected by an 85.5-foot bridge connection.
- The applicant has demonstrated this variance is not substantial. Although the request seems substantial, the placement of the building beyond the build-to-line is necessary because of the existence of the City easement along the frontage of the property, where buildings are encouraged in the Tractee-05 District.
- This applicant has demonstrated this variance will not have an adverse physical or environmental effect on the neighborhood or district. The request for relief to locate the building outside of the required build-to-line would not have an adverse physical or environmental impact upon the neighborhood. The applicant will have to address physical and environmental effects of the total project during the site plan process. Saratoga County Planning Board issued a recommendation of "no County impact" for the area variances and identified issues to be considered at site plan review.
- While the siting difficulty can be considered self-created, it can be argued that the existing City easement prevented locating the building in that area, an area where buildings are encouraged in the Tractee-05 District; however, this is not fatal to the application.

Adopted by the following vote:
AYES: 7 (M. Mearns, C. Maguire, J. Stuchin, N. Goldberg, K. Kaplan, B. Moore, G. Heisbrock)
NAYES: 0

Dated: March 12, 2009

This variance shall expire 18 months from this date unless the necessary building permit has been issued and actual construction begun as per Article 245-14.5 G.

Maureen Mearns
Date
Chair

I hereby certify the above to be a full, true and correct copy of a resolution duly adopted by the Zoning Board of Appeals of the City of Saratoga Springs on the date above mentioned, seven members of the Board being present.

Janine Stuchin
Date
Secretary

- ### CITY OF SARATOGA SPRINGS STANDARD NOTES
- All work must conform to all Federal, State and City Codes, specifications, ordinances, rules and regulations.
 - The elevation base for the contours and benchmarks are based on the National Geodetic Vertical Datum, 1929.
 - All refuse, debris and miscellaneous items to be removed shall be legally disposed of off-site by the Contractor to a location approved by the City Engineer.
 - The Contractor must set up a pre-construction meeting with the City Engineer prior to any construction. Construction inspections by the Design Professional or a designated representative are required. The cost of the construction inspections is the responsibility of the Applicant/Developer. An escrow account to cover the cost of the proposed sitework must be established with the city prior to any construction.
 - The contractor must obtain a blasting permit from the Building Inspector if any blasting is required for the project.
 - The contractor must obtain a street opening permit issued by the Department of Public Works for any work in the street or right-of-way of any city street, road or alley.
 - All points of construction ingress or egress shall be maintained to prevent tracking or flowing of sediment or debris onto a public road.
 - No Certificate of Occupancy will be issued until all site work has been completed in accordance with the approved plans; and an as-built drawing has been prepared in accordance with the requirements of the City Engineer.
 - The applicant must verify that the proposed project can accommodate the turning movements of any fire truck that the fire department so designates.

Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson

Applicant/Owner:
Saratoga Restaurant Hospitality, LLC
302 Washington Avenue Extension
Albany, NY 12203

**Approved Project
Planning Board # xxxxxxxx**

Prepared By:

the LA group
Landscape Architecture
and Engineering, P.C.
40 Long Alley
Saratoga Springs
New York 12866
518/587-8100
Telefax 518/587-0180



the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-8100
 F 518/587-0180
 www.thelagroup.com

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 New York State Education Law

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Design DRC
 Drawn MCB
 Checked DRC

PREPARED FOR:
 SARATOGA RESTAURANT HOSPITALITY, LLC
 302 WASHINGTON AVENUE EXTENSION
 ALBANY, NY 12203

EXCELSIOR SPRINGS BANQUET VALET PARKING
 EXCELSIOR AVENUE, SARATOGA SPRINGS, NY

Title
EXISTING CONDITIONS PLAN

Project: 2013125
 Date: 06/23/2016

Drawing

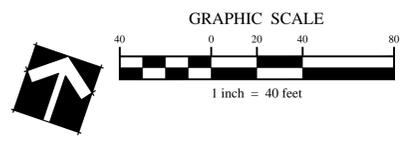
L-1



- LEGEND**
- PROPERTY LINE
 - ~ EXISTING VEGETATION
 - ST EXISTING STORM SEWER
 - S EXISTING SANITARY SEWER
 - W EXISTING WATER LINE
 - G EXISTING GAS LINE
 - OH EXISTING OVERHEAD ELECTRIC
 - x-x-x-x- EXISTING FENCE
 - █ EXISTING BUILDING
 - EXISTING MONITORING WELL

MAP REFERENCES: MAP TITLED AS-BUILT SURVEY OF EXCELSIOR HALL BY NACE ENGINEERING, DATED DECEMBER 6, 2013; SARATOGA SPRINGS MGP REMEDIATION SITE SURVEY, BY NIAGARA MOHAWK POWER CORPORATION, DATED SEPTEMBER 22, 2004

Approval
 Approved under authority of a resolution adopted _____
 by the Planning Board of the City of Saratoga Springs.
 _____ Chairperson
 Date Signed _____



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the LA group
Landscape Architecture
and Engineering, PC
40 Long Alley
Saratoga Springs
New York 12866
P 518/587-8100
F 518/587-0180
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Design DRC
Drawn MCB
Checked DRC

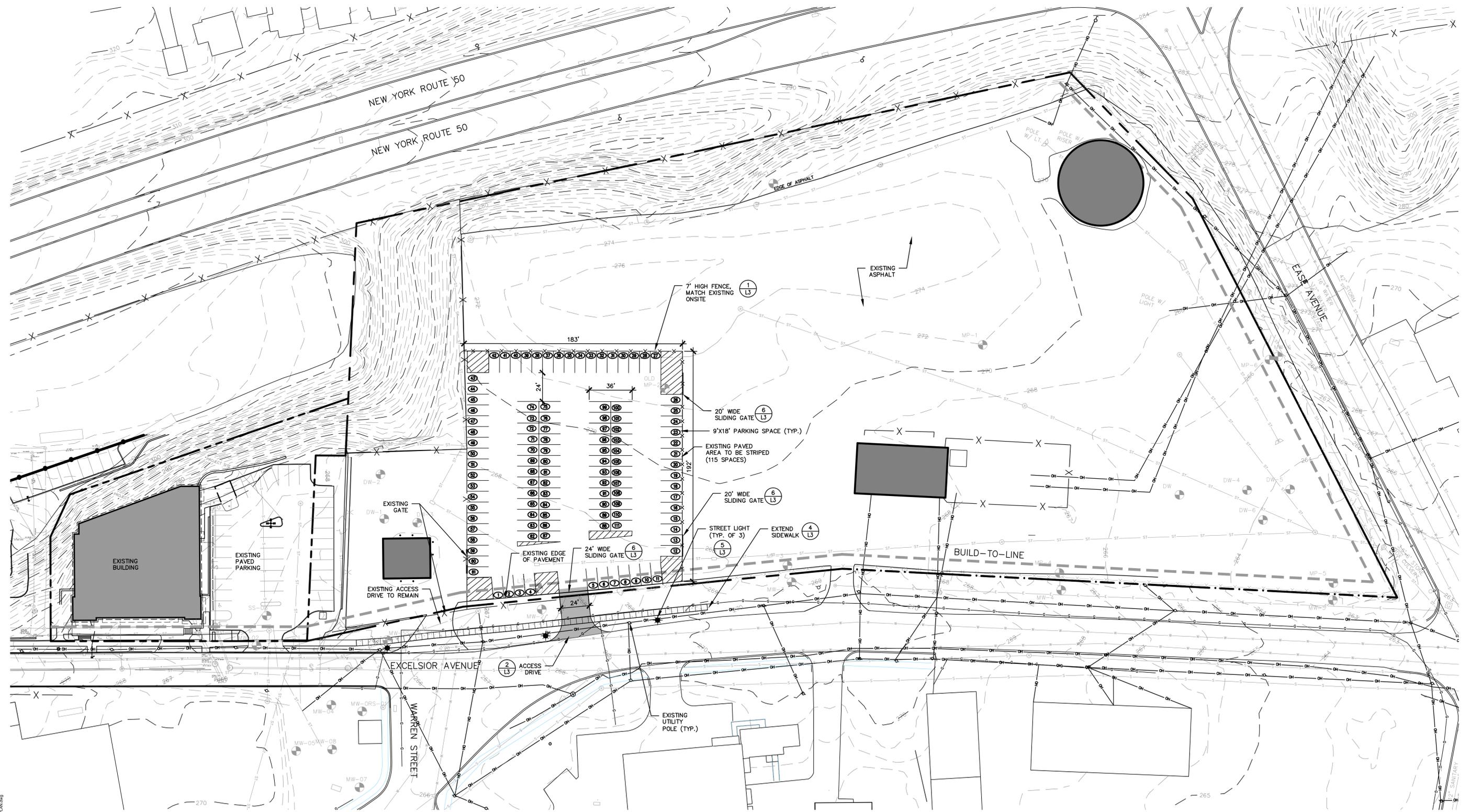
PREPARED FOR:
SARATOGA RESTAURANT HOSPITALITY, LLC
302 WASHINGTON AVENUE EXTENSION
ALBANY, NY 12203

EXCELSIOR SPRINGS BANQUET VALET PARKING
EXCELSIOR AVENUE, SARATOGA SPRINGS, NY

Title
SITE LAYOUT PLAN

Project: 2013125
Date: 06/23/2016
Drawing

L-2

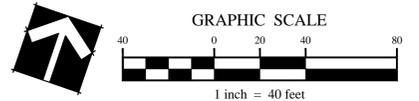


LEGEND

	PROPERTY LINE		PROPOSED ASPHALT
	EXISTING VEGETATION		PROPOSED STREET LIGHT
	EXISTING STORM SEWER		
	EXISTING SANITARY SEWER		
	EXISTING WATER LINE		
	EXISTING GAS LINE		
	EXISTING OVERHEAD ELECTRIC		
	EXISTING FENCE		
	PROPOSED CHAINLINK FENCE		

- LAYOUT NOTES**
1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
 2. ALL LINE AND GRADE PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A NEW YORK STATE REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.
 3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE ON AND WITHIN AREA AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
 5. AT ALL LOCATIONS WHERE EXISTING CURBING, BITUMINOUS CONCRETE ROADWAY OR CONCRETE SIDEWALK ADJUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. PROVIDE PAVEMENT KEY AS DETAILED. TACK COAT EXPOSED EDGES OF EXISTING BITUMINOUS CONCRETE PRIOR TO PLACEMENT OF NEW BITUMINOUS CONCRETE PAVEMENT.
 6. BITUMINOUS PAVEMENT SHALL NOT BE LAID WHEN GROUND TEMPERATURE IS LESS THAN 40 F. AND AIR TEMPERATURE IS LESS THAN 50F.
 7. ALL NEW WORK SHALL BE STAKED-OUT PRIOR TO CONSTRUCTION. OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCIES.
 8. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REP. AND APPROPRIATE MUNICIPAL OFFICIALS PRIOR TO CONSTRUCTION.
 9. ALL EXISTING UTILITIES SHOWN IN THEIR RELATIVE POSITION. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE VERTICAL AND HORIZONTAL POSITION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 10. NATIONAL GRID NEEDS TO RETAIN THE RIGHT TO CLOSE THE PARKING AREA DURING MAJOR STORM RESTORATION EVENTS OR AT SUCH TIMES AS THE PARKING AREA MAY BE REQUIRED FOR NATIONAL GRID'S USE TO STAGE VEHICLES, EQUIPMENT AND MATERIALS.
 11. THE COST OF ANY POTENTIAL ALTERATION OR RELOCATION OF THE EXISTING GAS DISTRIBUTION FACILITIES IN THE VICINITY OF THE PROPOSED DRIVEWAY AND SIDEWALK, AS A RESULT OF THE PROJECT, ARE THE RESPONSIBILITY OF SARATOGA RESTAURANT HOSPITALITY, LLC.

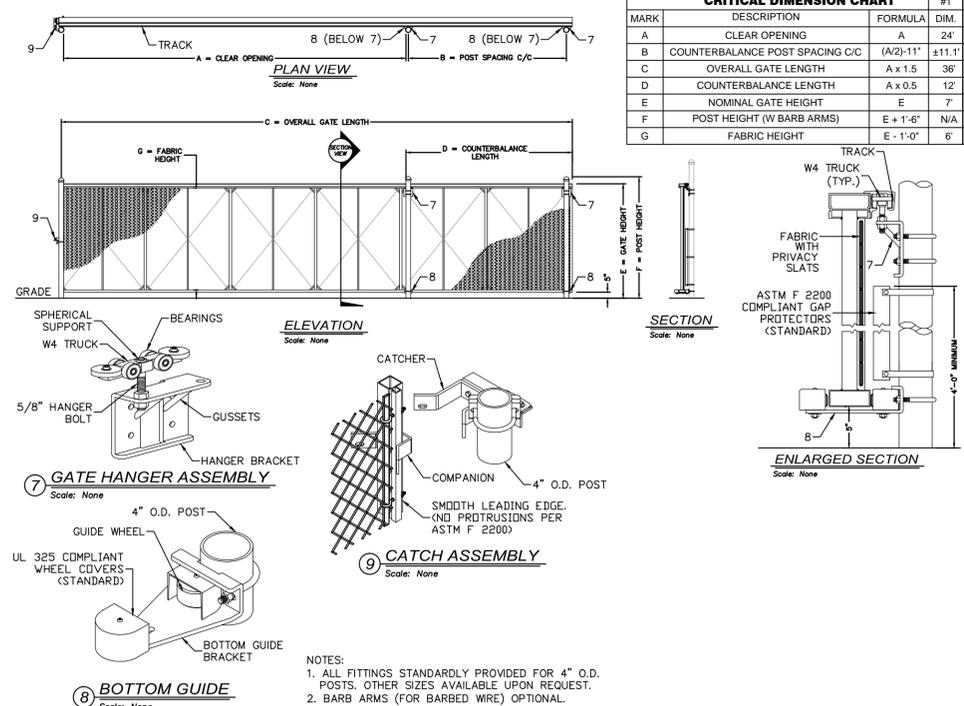
Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____ Chairperson



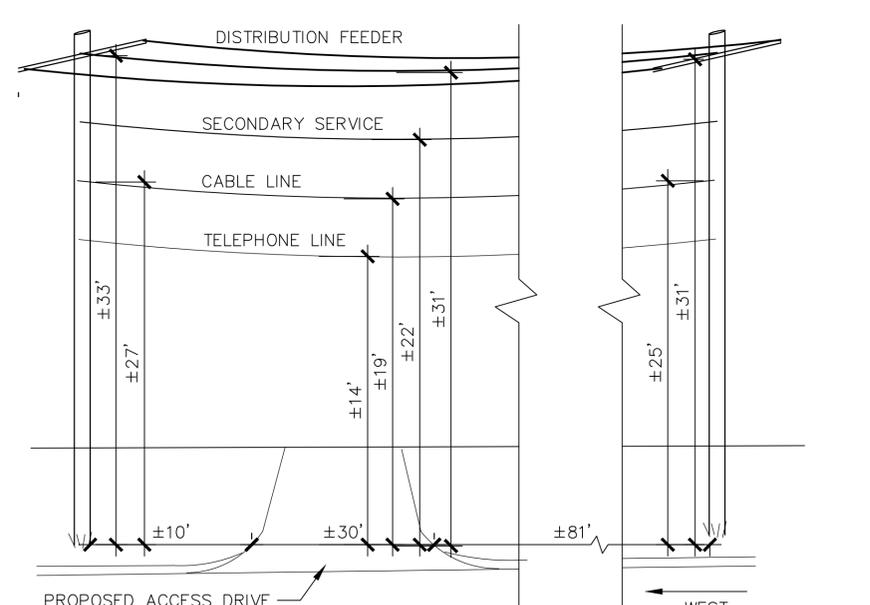
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CRITICAL DIMENSION CHART				
MARK	DESCRIPTION	FORMULA	#1 DIM.	#2 DIM.
A	CLEAR OPENING	A	24'	24'
B	COUNTERBALANCE POST SPACING C/C	(A/2)-11"	±11.1'	±11.1'
C	OVERALL GATE LENGTH	A x 1.5	36'	36'
D	COUNTERBALANCE LENGTH	A x 0.5	12'	12'
E	NOMINAL GATE HEIGHT	E	7'	7'
F	POST HEIGHT (W BARB ARMS)	E + 1'-6"	N/A	N/A
G	FABRIC HEIGHT	E - 1'-0"	6'	6'

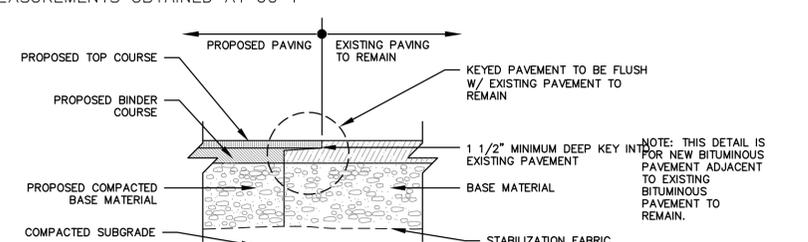


6 CANTILEVER SLIDE GATE SCALE: NTS



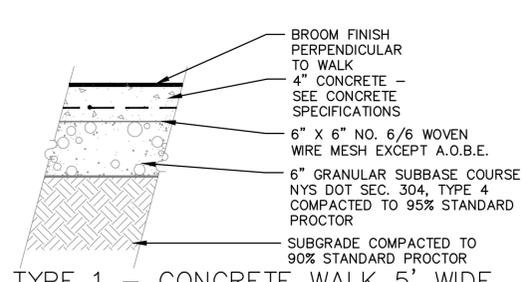
7 UTILITY CLEARANCE SCALE: NTS

NOTE: THESE DIMENSIONS SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION, MEASUREMENTS OBTAINED AT 60° F



8 PAVEMENT KEY PROP.BIT.CONC./EXIST.BIT.CONC. SCALE: NTS

Approval
Approved under authority of a resolution adopted _____
by the Planning Board of the City of Saratoga Springs.
Date Signed _____
Chairperson

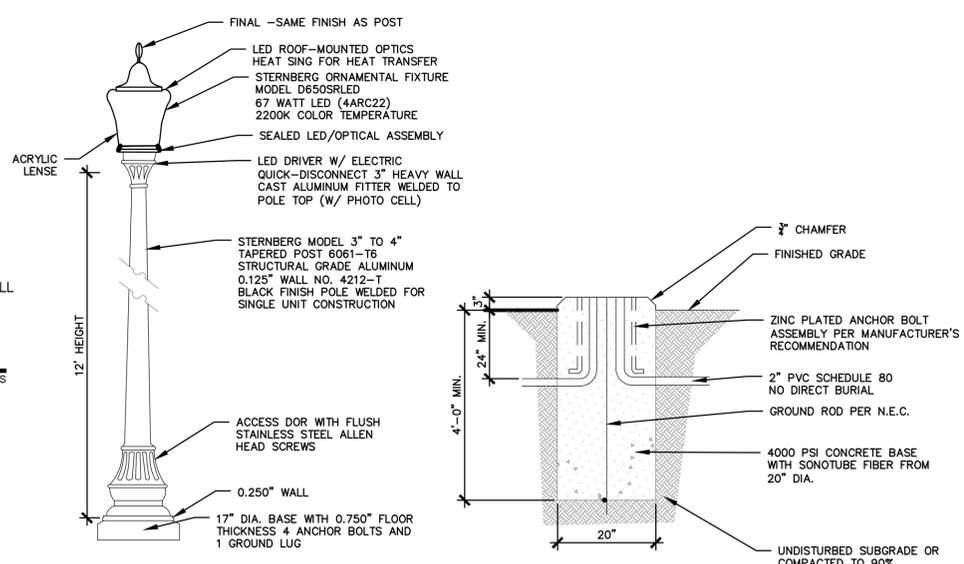


TYPE 1 - CONCRETE WALK 5' WIDE

NOTES:
EXPANSION JOINT SPACING - 20'-25' O.C.
CONTROL JOINT SPACING - 5' O.C. NOMINAL
CROSS SLOPE - 1/8" TO 1/4" PER FOOT (MAX SLOPE 1:50 TYP.) TOWARDS STREET OR A.O.B.E.
MAX. SLOPE ALONG THE LENGTH OF THE WALK SHOULD NOT EXCEED 1:12

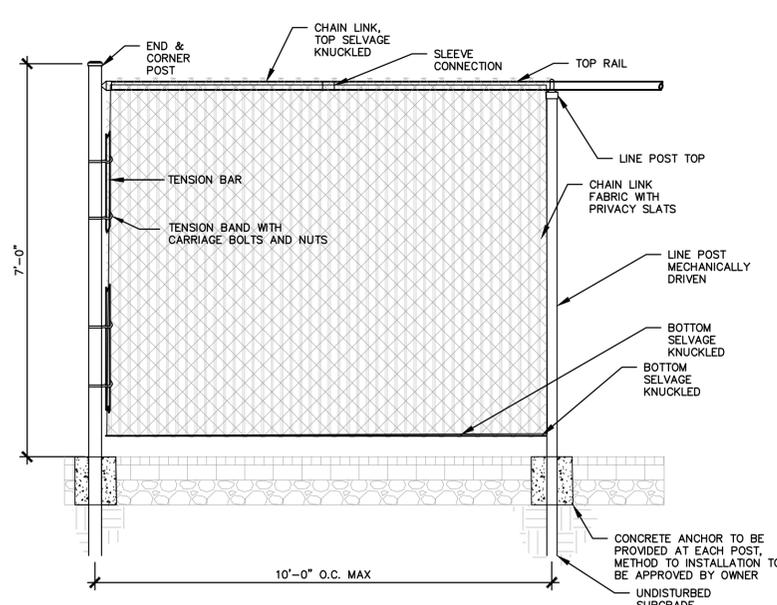
4 CONCRETE SIDEWALK SCALE: NTS

- CITY OF SARATOGA SPRINGS CONCRETE SPECIFICATIONS
- THE FOLLOWING CONCRETE SPECIFICATIONS SHALL APPLY TO ALL CONCRETE WORK WITHIN THE CITY OF SARATOGA SPRINGS RIGHT OF WAY AND/OR WITHIN THE APPROVAL AUTHORITY OF THE PLANNING BOARD. ALL MATERIALS MUST BE FROM AN APPROVED NYSDOT SOURCE. QUANTITIES MAY VARY DUE TO VARIATIONS IN MATERIALS. PLAN BATCH TICKETS SHALL BE PROVIDED UPON REQUEST BY THE CITY ENGINEER. IF "APPROVED EQUAL" MIXES ARE BEING PROPOSED, PRIOR APPROVAL SHALL BE OBTAINED FROM THE CITY ENGINEER. SUBMITTALS FOR "APPROVED EQUAL" MIXES SHALL BE PROVIDED WITH TEST RESULTS FROM AT LEAST THREE (3) PREVIOUS JOBS.
 - WHEN AIR TEMPERATURES ARE 50 DEGREES FAHRENHEIT AND BELOW, A NON-CHLORINE ACCELERATOR IS REQUIRED PER A.C.I. SECTION 306R-88. WHEN AIR TEMPERATURES ARE 90 DEGREES FAHRENHEIT AND ABOVE, AN INCREASE IN RETARDER IS REQUIRED TO CONTROL SET TIME PER A.C.I. 305R-99.
 - CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS AND SHALL CONFORM TO THE NYSDOT 2002 SPECIFICATIONS AS LISTED IN SECTION 501-2 FOR CLASS "A" MIX (OR APPROVED EQUAL).
NOTE: A SUPERPLASTICIZER MAY BE USED TO INCREASE SLUMP AND WORKABILITY WITHOUT INCREASING THE WATER-CEMENT RATIO. UP TO 20 PERCENT OF THE CEMENT CONTENT MAY BE SUBSTITUTED WITH POZZOLAN. THE INITIAL SLUMP PRIOR TO THE ADDITION OF A SUPERPLASTICIZER IS APPROXIMATELY 2 INCHES TO 3 INCHES.
 - ALL SIDEWALKS CONSTRUCTED FROM NOVEMBER 1 THROUGH APRIL 30 SHALL BE TREATED WITH A PENETRATING TYPE PROTECTIVE SEALER PER NYSDOT ITEM 717-03 TO PROTECT THE FRESH SURFACE AGAINST SPALLING CAUSED BY SALT INFILTRATION.
 - ALL SLIP-FORM CONCRETE CURBING SHALL CONFORM TO THE REQUIREMENTS FOR A CLASS J CONCRETE MIXTURE (OR APPROVED EQUAL).
 - ANY CLARIFICATIONS, REVISIONS, OR MODIFICATIONS THERETO SHALL ONLY BE MADE SUBJECT TO APPROVAL OF THE CITY ENGINEER.

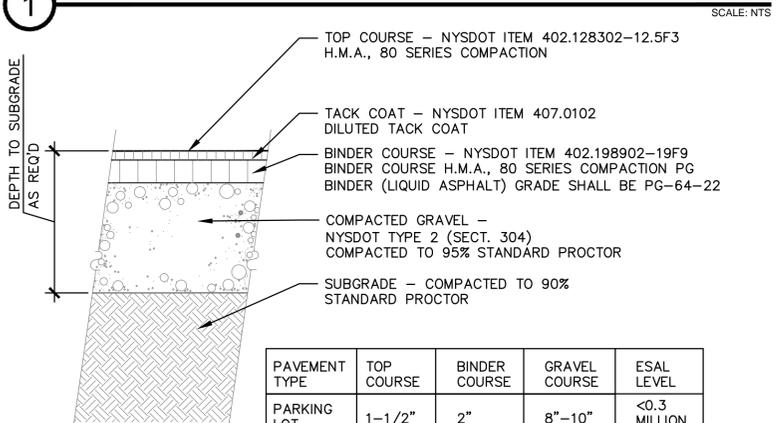


- NOTE:
1. INSTALLATION OF DECORATIVE LIGHTS SHALL BE COORDINATED WITH THE CITY ELECTRICIAN AND DEPARTMENT OF PUBLIC WORKS.
2. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ELECTRIFY IN THE SYSTEM AND PAYING THE ELECTRIC BILLS UNTIL ACCEPTED AND TAKEN OVER BY THE CITY OF SARATOGA SPRINGS.
3. ELECTRIC SERVICE: SWEEPS AT CONCRETE BASES AND BETWEEN BASES USE 2" SCHEDULE 40 PVC. NON-METALLIC CONDUIT, UNLESS UNDER DRIVEWAYS WHERE SCHEDULE 80 PVC IS REQUIRED. FOR WIRE: THHN COPPER STRANDED NUMBER 6 COLORED RED, WHITE, AND GREEN. LIGHTS ARE WIRED 120 VOLTS. PROVIDE A SEPARATE HANDHOLE, SYNERTCH SYN121212HH02, TO BE OWNED BY THE CITY FOR THE DISCONNECT NEAR THE BASE OF THE ELECTRIC POLE OR BOX AT THE BEGINNING OF SERVICE. PROVIDE AND INSTALL (1) 5/8 INCH COPPER GROUND ROD IN HANDHOLE. WIRE AND CONDUIT FROM HANDHOLE TO POSE OR BOX PER NATIONAL GREID'S STANDARDS. IN CONNECTING ONLY ONE LIGHT PROVIDE WATERTIGHT FUSEHOLDER. FERRAZ SHAWMUT FEB-21-21 1P 600V WITH 5 AMP FUSE WITH INSULATOR BOOTS PART FTZ FB1 IN HANDHOLE FOR FUSING THE POWER WIRE. IN CONNECTING MORE THAN ONE LIGHT PUT A 30 AMP FUSE IN WATERTIGHT FUSEHOLDER IN HANDHOLE AND PROVIDE SEPARATE FUSE HOLDERS. BUSSMAN HEB-AA FUSEHOLDER WITH 5 AMP FUSE, IN BASE OF EACH LAMP. RUN #12 THHN COPPER, (RED, WHITE, AND GREEN) FROM BASE TO TOP OF LIGHTS. THE LIGHT IS TO BE MOUNTED DIRECTLY ONTO CONCRETE BASE USING FENDER WASHERS, 2 INCH OD 1/2 INCH ID AND 1/8 INCH THICKNESS, AND LOCK WASHERS.

5 DECORATIVE STREET LIGHT SCALE: NTS



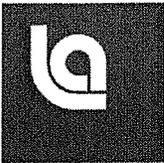
1 CHAIN LINK FENCE SCALE: NTS



- NOTES:
1. PAVEMENT SECTIONS SPECIFIED ARE TYPICAL FOR STREET, DRIVEWAY AND PARKING LOT CONSTRUCTION WHERE TRAFFIC VOLUMES AND LOADINGS ARE NOT EXCESSIVE. BASED ON ANTICIPATED VOLUMES AND LOADS THE CITY ENGINEER MAY REQUIRE STRUCTURAL PAVEMENT SECTION TO BE INCREASED TO CARRY DESIGN LOADING.
2. BINDER TO BE PLACED IN 2-2" LIFTS W/ TACK COAT BETWEEN.
3. THE CITY ENGINEER MAY REQUIRE COMPACTION TESTING AND/OR CORE SAMPLES TO VERIFY PAVEMENT THICKNESSES. ALL TESTING SHALL BE AS ORDERED BY THE CITY ENGINEER AND SHALL BE PAID FOR BY THE CONTRACTOR.
4. NOTIFY THE CITY ENGINEER 48 HOURS MINIMUM PRIOR TO COMMENCING PAVING OPERATIONS.

2 ASPHALT PAVEMENT SCALE: NTS

3 DETAIL REMOVED SCALE: NTS



June 23, 2016

Mr. Mark Torpey - Chair
Saratoga Springs Planning Board
City Hall – 474 Broadway
Saratoga Springs, NY 12866

**Re: *Special Use Permit Application
Allerdice Glass & Aluminum
Saratoga Springs, NY***

Dear Mr. Torpey,

Please accept the attached application for a Special Use Permit for the existing Allerdice Glass & Aluminum site. The Planning Board originally granted Site Plan approval on May 5, 1999. A building addition was approved with a site plan amendment on October 3, 2001. Additional expansions were approved in 2004 and 2008 although the last expansion was not constructed.

The original zoning for the property was Inner Excelsior Avenue District (IEAD) which was changed to Transect – 5 (T-5) in 2004. A special use permit was not required under the original zoning but is required in the T-5 Zone. Therefore, a Special Use permit does not exist for this property.

We are seeking a special use permit for the existing Glass & Aluminum business, and a personal training facility.

If you have any questions, please let me know and I would be happy to furnish additional information.

Sincerely,

David Carr, Jr, RLA
for
The LA Group, P.C.

enclosures

cc:



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

APPLICATION FOR: SPECIAL USE PERMIT

(Rev: 05/2016)

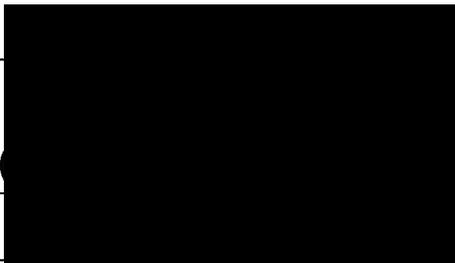
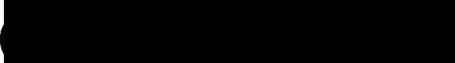
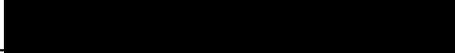
Project Name: Allerdice Glass & Aluminum

Property Address/Location: 120 Excelsior Avenue

Tax Parcel #: 166-4-3.1 Zoning District: T-5, Neighborhood Center
(for example: 165.52-4-37)

Proposed Use: Window and Door Manufacturing/Sales/Personal Training Studio

Type of Special Use Permit: Permanent Temporary Renewable

	<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name	<u>Wallace Allerdice</u>		<u>Dave Carr, RLA</u>
Address			<u>The LA Group, PC</u> <u>40 Long Alley</u>
Phone			
Email			

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Please check the following to affirm information is included with submission.

Sketch Plan Attached:
Applicant is encouraged to submit sketch plans showing features of the site and /or neighborhood and illustrate proposed use.

Environmental Assessment Form:
All applications must include a completed SEQR Short or Long Form. SEQR Forms can be completed at <http://www.dec.ny.gov/permits/6191.html>.

Water Service Connection Agreement- For all projects including new water connections to the City system, a copy of a signed water service connection fee agreement with the City Department of Public Works is required and **MUST** be submitted with this application.

Application Fee: \$750.00 (check box)
A check for the total amount made payable to: "Commissioner of Finance" **MUST** accompany this application.

3 hard copies (*I signed original) and one electronic copy (PDF) of complete application and ALL attachments.

Submission Deadline - Check City's website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES NO . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Special Use Permit approval by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.1 of the Zoning Code of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: William W. O'Keefe

Date: 6/21/2016

If applicant is not current owner, owner must also sign.

Owner Signature: _____

Date: _____

617.20
Appendix B
Short Environmental Assessment Form

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: Allerdice Glass & Aluminum Special Use Permit			
Project Location (describe, and attach a location map): 120 Excelsior Avenue			
Brief Description of Proposed Action: The proposed action includes application for a special Use permit for an existing glass and aluminum sales and manufacturing facility and a personal training studio.			
Name of Applicant or Sponsor: Wallace Allerdice		Telephone: [REDACTED]	
		E-Mail: [REDACTED]	
Address: [REDACTED]			
City/PO: [REDACTED]		State: [REDACTED]	Zip Code: [REDACTED]
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.			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		3.0 acres	
b. Total acreage to be physically disturbed?		0.0 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		9.6 acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
<input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____			
<input type="checkbox"/> Parkland			

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ A retention pond exists on-site which was constructed as part of the original site plan approval. _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: _____ National Grid Coal Tar Remediation. _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: Wallace Allerdice	Date: 6/26/2016	
Signature: 		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
_____	_____
Name of Lead Agency	Date
_____	_____
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
_____	_____
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT

RESET



Vicinity Map:

SCALE: 1" = 300'



Site Statistics:

Parcel Size	3.0 Acres
Tax Map No.	166-4-3.1 (Inside District)
Existing Zoning	T-5, Neighborhood Center

Proposed Uses:

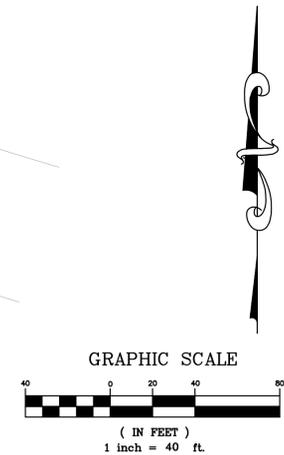
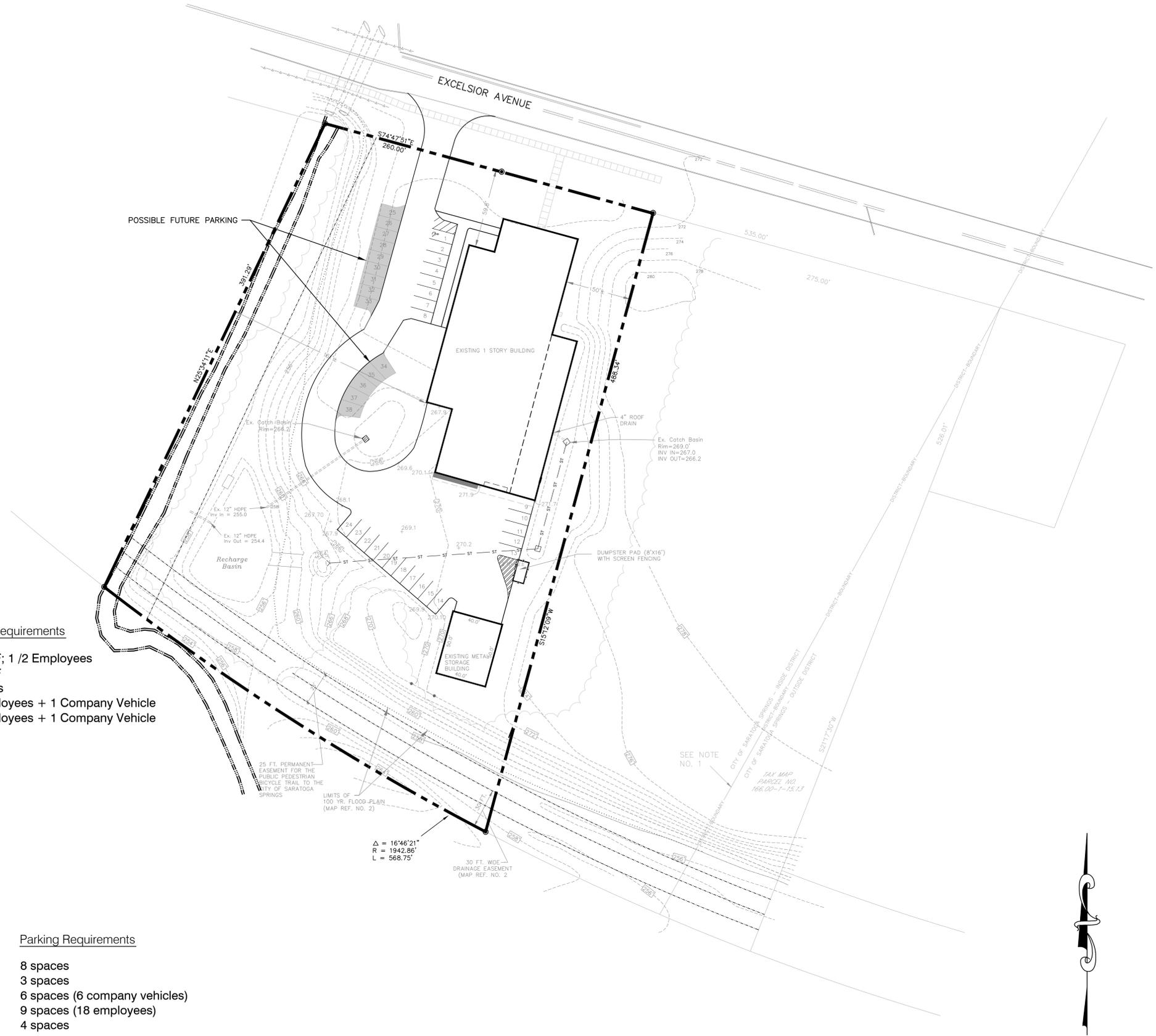
Proposed Uses	Maximum SF	Existing SF	Parking Requirements
Retail	5,000 SF	1,000 SF	1 /300 SF; 1 /2 Employees
Office (Including Real Estate Office)	10,000 SF	2,450 SF	1 /300 SF
Recreational Facility	5,000 SF	2,650 SF	1 /5 Seats
Manufacturing & Assembly	20,000 SF		1 /2 Employees + 1 Company Vehicle
Warehouse	20,000 SF	13,525 SF	1 /2 Employees + 1 Company Vehicle

Proposed Accessory Uses:

Proposed Uses	Maximum SF
Outdoor Display/Storage	1,500 SF

Parking Statistics:

Existing Facility	Square Footage	Parking Requirements
Office (1 per 300 SF required)	2,450 SF	8 spaces
Showroom (1 per 300 SF required)	1,000 SF	3 spaces
Warehouse (1 per company vehicle required)	13,525 SF	6 spaces (6 company vehicles)
(1 per 2 employees required)		9 spaces (18 employees)
Personal Training Studio (no use/activity category)	2,650 SF	4 spaces
	19,625 SF	
Required Parking		30 spaces
Existing Parking		24 spaces outside
		7 spaces inside
		31 spaces available
Possible Future Parking		14 spaces (If required with future site plan)



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Design DRC

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Saratoga Springs, N.Y. 12866

ALLERDICE GLASS & ALUMINUM

120 Excelsior Ave.
Saratoga Springs, N.Y.
Title
Sketch Plan

Revisions
3/12/2014
4/07/2014
6/20/2016

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Drawing