

TOWN OF NISKAYUNA
Planning Board and Zoning Commission
Agenda
July 27, 2026 7:00 PM
Hybrid In-Person and Google Meets platform

REGULAR AGENDA MEETING

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES

1. July 13, 2026

IV. PUBLIC HEARINGS

V. PRIVILEGE OF THE FLOOR

VI. UNFINISHED BUSINESS

VII. NEW BUSINESS

1. RESOLUTION: 2026-33: A Resolution for site plan approval for a tenant change to Local Infusion at 400 Balltown Rd. (Planning Board)

VIII. DISCUSSION ITEMS

1. 398 Anthony St. – KLM Landscaping – A application for site plan modifications including a 30' x 60' nonpermanent storage building & outdoor material sorting and wood recycling area (New Project)
2. 2772 Troy Sch. Rd. – NFD #2 – A site plan application for a building addition (New Project)

IX. REPORTS

1. 2757 Aqueduct Rd. – Niskayuna Harbor

X. COMMISSION BUSINESS

XI. ADJOURNMENT

NEXT REGULAR MEETING: August 10, 2026 at 7 PM
To be Held in the Town Board Room & via Remote Software

TOWN OF NISKAYUNA
Planning and Zoning Commission
Hybrid Meeting
Meeting Minutes
July 13, 2026

Members Present:

Chairman David D'Arpino
Genghis Khan
Andrew Millspaugh
Alexander Billen-Calhoun
Leslie Gold
Jonathan Vaillancourt

Also in attendance

Rob Hess, Attorney
Laura Robertson, Town Planner
Clark Henry, Assistant Town Planner (virtual)
Trisha Bergami, Planning Department Assistant

I. CALL TO ORDER

Chairman D'Arpino called the hybrid meeting to order at 7:00 P.M.

II. ROLL CALL

Chris LaFlamme, Nancy Strang and Joseph Drescher were absent/excused.

III. APPROVAL OF MINUTES**1. June 29, 2026**

Mr. Khan made a motion to accept the minutes, Mr. Billen-Calhoun seconded. Mr. Kahn made a motion to amend line 114, Chairman D'Arpino seconded. All were in favor of the amendment. All were in favor of the June 29, 2026 amended minutes.

IV. PUBLIC HEARINGS

None.

V. PRIVILEGE OF THE FLOOR

Mr. Kordrupel of 2775 Aqueduct Road spoke about his wife's environmental concerns with the project at 2757 Aqueduct Road. He would like the area to stay the way it is. He also has concerns with adding additional traffic to an already busy fast-moving road. Mr. Kordrupel wanted on the record that he and his wife are against the project. He also asked why the bike path was moved near Rivers Ledge.

VI. UNFINISHED BUSINESS

None.

VII. NEW BUSINESS**1. RESOLUTION: 2026-32: A Resolution for site plan approval for a tenant change to Sally's Diner at the Rivers Ledge Sr. Center at 2837 Aqueduct Rd. (Ms. Gold)**

Chairman D'Arpino read the resolution into the minutes.

Moved by Ms. Gold, seconded by Mr. Khan.

Mr. Luizzi agreed with all the conditions in the resolution.

Chairman D'Arpino recapped as follows, code compliant signage on the entrance to the building which has been seen. Adding the wayfinding signage into the package would be helpful, it is something the Planning Department can oversee for proper placement. Chairman D'Arpino did have a question on where the bike rack should go. He thinks one of the small peninsulas that stick out in the parking lot would be a better suited area than right in front of the building.

Mr. Vaillancourt asked about the screening, both visual and noise impacting for the HVAC equipment on the building near the bike path. Would this carry forward for the ventilation for the kitchen also. He said he thought they should be mindful of this.

Mr. Luizzi said he will look into it. He is not sure if they needed it, or if was already installed, he will reach out to the Planning Department this week after he looks into it.

Ms. Robertson asked Mr. Luizzi to explain why the bike path had been moved.

Mr. Luizzi said they were required to move the bike path because it had been installed on National Grid property. National Grid was not cooperative or willing to let them keep it there.

Ms. Robertson said it has been moved back per the original plans.

There was some discussion on the parking. It was started they can request it be added to the plans when the applicant comes back for the addition.

Ms. Robertson said she thinks there should be a few parking spots labeled for Sally's.

Mr. Khan feels diners create a tremendous amount of required parking and he is not sure if this should be fine-tuned a little.

Mr. Luizzi said they could mark out five or six parking spots on the left side and potentially some on the bottom of the page shown. He said in the event they need to set more parking spots aside they can do so. Hearing no further discussion, Chairman D'Arpino stated the Board was ready to vote on this.

Ms. Bergami called the roll:

Mr. Khan	Aye
Mr. Millspaugh	Aye
Mr. Billen-Calhoun	Aye
Ms. Gold	Aye
Mr. Vaillancourt	Aye
Chairman D'Arpino	Aye

Resolution passed.

Chairman D'Arpino asked Mr. Luizzi to keep the Planning Board up to date on the signage package.

Mr. Luizzi said he is hoping to submit the signage package along with the location of the bike rack, everything needed for the storage addition and the ice cream parlor information this week.

VIII. DISCUSSION ITEMS

1. 400 Balltown Rd. – Mohawk Commons – A site plan application for a tenant change to a medical infusion center (New Project)

Mr. Taylor represented Local Infusion virtually. This will be a medical infusion office. It is an insurance reimbursed business. There would be six to eight treatment rooms or areas with an average of one to three patients a day. Low parking usage. Typically, five days a week sometimes on Saturdays, all by appointment only. This will not be open to the public. Mr. Taylor said he will have something for the next meeting for the board to look at. It is very straight forward, a reception area, a nurse reception area and four to six treatment rooms with a break room.

Chairman D'Arpino said the reasoning for a floorplan is to see if the tenant is using the same footprint or if there is still available space left. Chairman D'Arpino mentioned that parking, signage and wayfinding signage is something the board looks at. If there is a plan to change any outside building color or lighting there are restrictions for the plaza that need to be followed. Finally, the board looks at the landscaping to see if there is any dying or additional landscaping needed for the area around the building, if so, the board will ask for that to be added.

Mr. Taylor stated no wayfinding signage would be needed. The building signage would meet the code. He said this is a good set up for parking for them, they require handicapped parking and this works well.

Chairman D'Arpino suggested Mr. Taylor also speak with the landlord regarding the monument sign and see if they would need to be listed on it. If they feel they may need more handicap parking spaces the board can look at that.

Mr. Billen-Calhoun asked if they would have hazardous materials on site.

Mr. Taylor said they have a separate firm to handle needles and stuff like that. The drugs are delivered offsite and couriered by one of their employees. He will try to get the floorplan over to the planning Department by Wednesday if not they will be ready for the August meeting.

Mr. Henry suggested when they submit the information to the Planning Department to submit their building permits as well to save time. This is a busy time of year for building permits.

2. 2757 Aqueduct Rd. – Niskayuna Harbor – A sketch plan application for a Planned Unit Development (PUD) (Ms. Strang, Mr. LaFlamme)

Brett Steenberg of Steenberg Consulting Engineering and Chuck Pafundi of Reliable Development Consulting were present to address the Board. Mr. Steenberg stated that after consulting with their attorney, their interpretation was that since the Planning Board recommendation is non-binding, they could make the recommendation without the SEQR determination. Mr. Steenberg said that he would continue to comply with all the environmental requirements, however he stressed the applicant's desire to develop a PUD promptly.

Attorney Hess said that they had received and reviewed the letter from Attorney Brick, whom he respects. He noted that the conservative path and the one recommended by Town Attorney Finan is to let the SEQR process run its course before making a recommendation from the Planning Board. He said that there is a possibility of wasting time if the recommendation is made with haste.

The Board discussed with Mr. Steenberg and Mr. Pafundi the order of actions to be taken based on the Town Code and New York State law.

Mr. Steenberg discussed his experience and knowledge of the groundwater of the area. He and Mr. Pafundi expressed frustration to the Board regarding the delays and perceived deliberate obfuscation of the different Boards.

Chairman D'Arpino said that he agreed with the Town Counsel's recommendation to not go with the segmented review. He said that he felt strongly that the issues raised during the project have been because the plan had not evolved at all in the past several months and there are still issues. Chairman D'Arpino stated that the Board generally likes the idea of a PUD, but that they have not seen many options presented by the applicant, adding that the plan has a lot of concerns. Mr. Millspaugh commented that there were two letters that were in the packet, one from Schenectady County, one from DOT, both indicating that they wanted to see alternative designs.

Mr. Pafundi said that they were willing to refine the project, but believed that the underlying issue was that the Board was uncomfortable with the density.

Ms. Gold said that she disagreed with Chairman D'Arpino's comments. She said that a reduction in units would alleviate some of the issues, noting the difficulty of developing this particular plot of land, but, that removing units would decrease the financial viability of the project.

Ms. Robertson discussed the potential communication issues, noting that the feedback that she receives from other boards is that they have stated these concerns to the developer, and they feel that they are not being addressed. She stressed that these issues are not coming out of nowhere. She said that the Town doesn't disagree with the math that outlines the number of units but has discussed focusing on consolidating units into fewer footprints and reducing environmental impacts.

Mr. Hess said that the applicant's legal request for the density calculations was upheld by the Town even though the Town's reasoning for its allowance was different than the applicants. He added that to his mind, the math for the density issue is resolved. Ms. Robertson stressed that the number of units was not an issue, but that the building layout made it so that the footprints were encroaching into sensitive areas. She said that there were other ways to get that number of units with less four-unit buildings and more six-unit buildings, for example.

Mr. Khan suggested having clear and written issues and suggestions provided to the applicant. Mr. Hess clarified that Town Attorney is recommending that the Planning Board delay action on the sketch plan until after the SEQR determination. Mr. Khan stated he was clear on that and wouldn't go against the Town Attorney. Chairman D'Arpino stated that the Planning Board will be waiting until the Town Board makes their SEQR decision.

Mr. Pafundi suggested a meeting with his attorney and the Town attorney to better understand the procedural action, to which Ms. Robertson agreed she can try to set up.

Mr. Pafundi stated he felt there were challenges in communication between the Board and them, indicating that he felt as though the Town had not communicated several items. Ms. Robertson that she did not agree that the Town had not communicated certain areas, but said that she can always try to do better. Mr. Pafundi continued to express frustration, suggesting that there may be an outside organization intent on delaying the project, a suggestion that Ms. Robertson refuted and stated that all deliberations of this project have been at open, public meetings that are recorded. Chairman D'Arpino reiterated the lack of options presented by the applicant. Mr. Steenberg said that the desire for more options caught him by surprise because he thought that they were at a point where they felt comfortable moving forward. Mr. Pafundi added that there had been six revisions on the project. Chairman D'Arpino clarified that the sketch designs dating back to March had not changed substantially. He suggested reading the two additional SEQR letters which gave specific recommendations.

With no further discussion, Chairman D'Arpino stated he would move on to reports.

IX. REPORTS

None.

X. COMMISSION BUSINESS

None.

XI. ADJOURNMENT

Ms. Gold moved a motion to adjourn, Mr. Khan seconded. All were in favor. The meeting was adjourned at 8:57 pm.

The video recording for this meeting can be found at:

<https://www.youtube.com/watch?v=Bs3d8nXsmRs&list>



TOWN OF NISKAYUNA

PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VII. 1

MEETING DATE: 7/27/2026

ITEM TITLE: RESOLUTION: 400 Balltown Rd. Suite 1A – Mohawk Commons – A Resolution for site plan approval for a tenant change to Local Infusion.

PROJECT LEAD: TBD

APPLICANT: Nikki Kozak, agent

SUBMITTED BY: Laura Robertson

REVIEWED BY:

☐ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board
☐ OTHER:

ATTACHMENTS:

☒ Resolution ☒ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

Nikki Kozal, of Cornerstone Permit agent for the owner, submitted a site plan application for a tenant change to a medical infusion center in the southeastern most corner of Building 1 at 400 Balltown Rd. in Mohawk Commons. The site was most recently a Blaze Pizza restaurant. The proposed tenant change in this application will occupy the full Blaze Pizza space.

The property lies within the C-S Shopping Center Commercial zoning district. Medical offices and retail and service stores are a permitted use in the shopping center and zoning district.

Mr. Matt Taylor presented the application to the Planning Board at their 7/13/26 meeting. After a detailed discussion the board requested an interior layout of the suite. Mr. Taylor committed to providing the plan by 7/17/26 and the board called for a tentative resolution for approval.

COMPREHENSIVE PLAN

The proposed application complies with the 2013 Comprehensive Plan.

BACKGROUND INFORMATION

The following documents were provided with the application.

1. A 4-page drawing set entitled "ALTA/NSPS Land Title Survey, 402 Balltown Road, Niskayuna, Schenectady County, New York 12304" by Blew & Associates, P.A. with a most recent revision date of 1/6/23

The application proposes to utilize the space for a medical infusion center. Ms. Kozak is before the Planning Board this evening to present the application and address any question that arise.

7/13/26 Planning Board (PB) meeting – Matt Taylor attended the meeting and presented the project to the board. He began by describing the proposed use of the site. Local Infusion is a comfortable relaxed location for people to receive medical (non-chemotherapy) intravenous medication rather than visiting a hospital. Mr. Taylor apologized for not providing an interior floor plan of the building. He described it as having 6 to 8 treatment rooms. Sessions are by appointment only and typically 1 to 3 patients per day visit the facility. He stated this particular location is well suited for the use because it contains handicap parking spaces nearby. A board member asked if they had a nearby site in operation and Mr. Taylor indicated the closest location is in CT.

The PB asked Mr. Taylor to provide an interior floorplan and images of all proposed signage. He responded that he would have the material in by the end of the week. The board ended their discussion by calling for a tentative resolution for approval for the July 27, 2026 meeting.

RESOLUTION NO. 2026 – 33

AT A REGULAR MEETING OF THE PLANNING BOARD AND ZONING COMMISSION OF THE TOWN OF NISKAYUNA DULY CALLED AND HELD ON THE 27TH DAY OF JULY 2026 AT THE NISKAYUNA TOWN OFFICE BUILDING, ONE NISKAYUNA CIRCLE, IN SAID TOWN AT 7:00 P.M., THE FOLLOWING MEMBERS WERE PRESENT VIRTUALLY OR IN PERSON:

HONORABLE: DAVID D'ARPINO, CHAIRMAN
GENGHIS KHAN
CHRIS LAFLAMME
LESLIE GOLD
NANCY STRANG
ANDREW MILLSPAUGH
ALEXANDER BILLEN-CALHOUN
JOSEPH DRESCHER
JONATHAN VAILLANCOURT

One of the purposes of the meeting was to take action on a resolution for site plan approval.

The meeting was duly called to order by the Chairman.

The following resolution was offered by _____,
whom moved its adoption, and seconded by _____.

WHEREAS, Nikki Kozak of Cornerstone Permit Company, agent for the property owner, made an application to the Planning Board and Zoning Commission for site plan review for a tenant change to Local Infusion at Mohawk Commons 400 Balltown Rd. Suite 1A in Niskayuna, NY., and

WHEREAS, the property is located in the C-S Shopping Center Commercial zoning district and medical offices and retail and service stores are a permitted principal use in the district, and

WHEREAS, A 4-page drawing set entitled "ALTA/NSPS Land Title Survey, 402 Balltown Road, Niskayuna, Schenectady County, New York 12304" by Blew & Associates, P.A. with a most recent revision date of 1/6/23 was received with the application, and

WHEREAS, the proposed site plan application complies with the Town of Niskayuna 2013 Comprehensive Plan, and

WHEREAS, this Board has carefully reviewed the application and by this resolution does set forth its decision heron,

NOW, THEREFORE, be it hereby

RESOLVED, that this Planning Board and Zoning Commission does hereby classify this application as a Type 2 action under SEQR regulations and no further action is required.

FURTHER RESOLVED, that the Planning Board and Zoning Commission finds the above referenced site plan application meets the requirements of the Zoning Code and therefore, hereby approves this tenant change, with the following conditions:

1. Landscaping: Prior to completion of the building permit, the health of the existing landscaping shall be reviewed by the Tree Council and applicant together and any dead or dying vegetation will be replanted.

Upon roll call the foregoing resolution was adopted by the following vote:

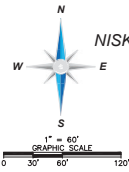
DAVID D'ARPINO, CHAIRMAN
GENGHIS KHAN
CHRIS LAFLAMME
LESLIE GOLD
NANCY STRANG
ANDREW MILLSPAUGH
ALEXANDER BILLEN-CALHOUN
JOSEPH DRESCHER
JONATHAN VAILLANCOURT

The Chairman declared the same _____.

ALTA/NSPS LAND TITLE SURVEY

402 BALLTOWN ROAD

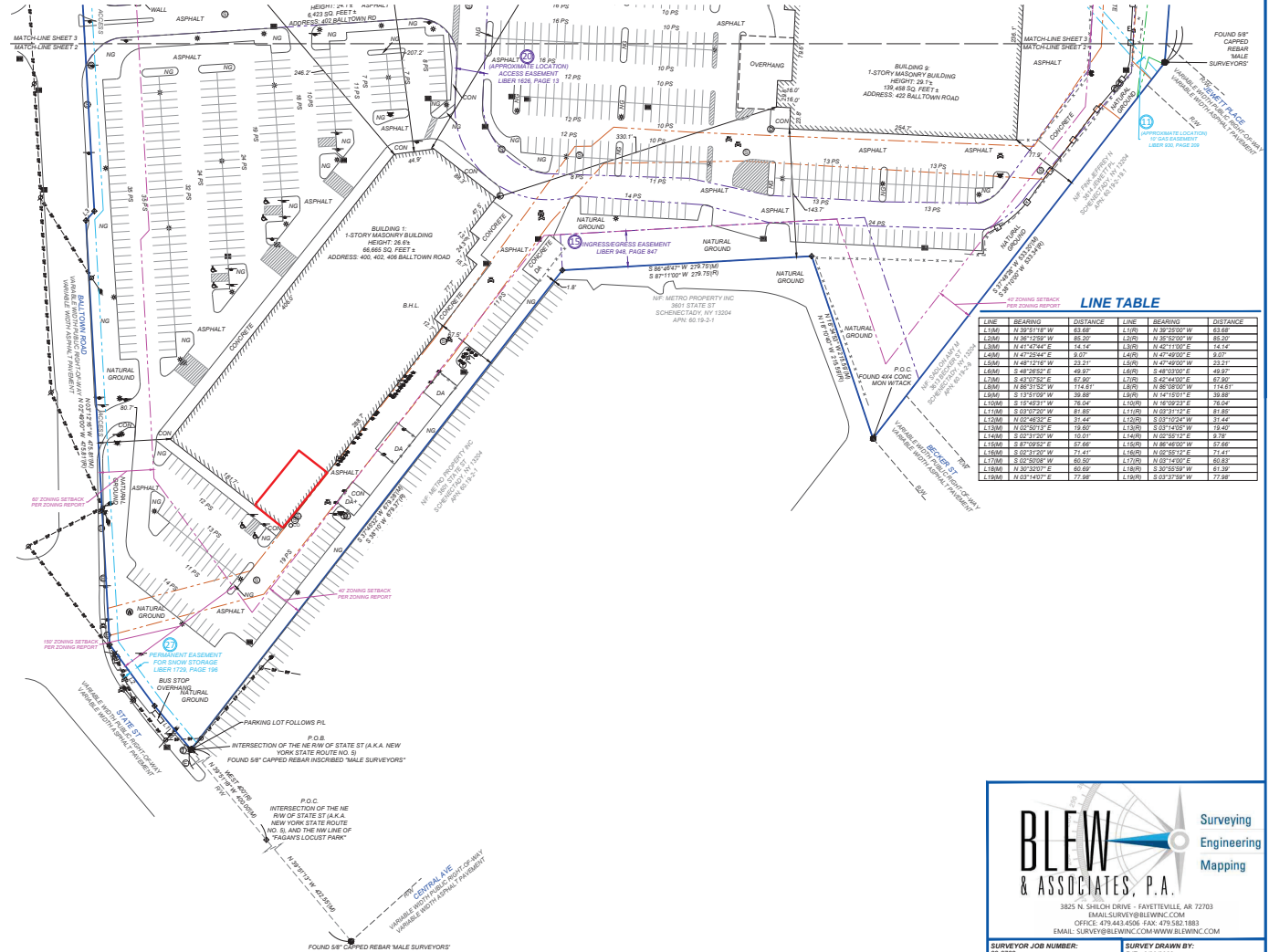
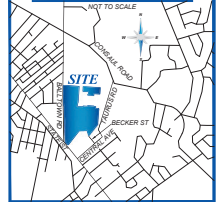
NISKAYUNA, SCHENECTADY COUNTY, NEW YORK 12304



LEGEND & SYMBOLS

- | | | |
|---------------------------|---------------------------------|-------------------------|
| ● FOUND MONUMENT AS-NOTED | ● WATER MANHOLE | DA DUMPSTER AREA |
| ○ COMPUTED POINT | ○ MANHOLE | NG NATURAL GROUND |
| ⬢ HANDICAP PARKING | ⬢ GUY ANCHOR | CON CONCRETE |
| ⬢ FIRE HYDRANT | ⬢ ELECTRIC CABINET | --- BOUNDARY LINE |
| ⬢ LIGHT | ⬢ ELECTRIC MANHOLE | --- RIGHT-OF-WAY LINE |
| ⬢ SANITARY MANHOLE | ⬢ TELEPHONE MANHOLE | --- CENTERLINE |
| ⬢ BOLLARD | ⬢ CLEAN OUT | --- FENCE LINE |
| ⬢ POWER POLE | ⬢ PARKING SPACE(S) | --- OVERHEAD POWER LINE |
| ⬢ ELECTRIC SWITCH | ⬢ RIGHT-OF-WAY | --- GUARD RAIL |
| ⬢ GAS VALVE | ⬢ CENTERLINE | |
| ⬢ ELECTRIC TABLE | ⬢ MEASURED/CALCULATED DIMENSION | |
| ⬢ ELECTRIC VALVE | ⬢ RECORD DIMENSION | |
| ⬢ ELECTRIC METER | ⬢ NOW OR FORMERLY | |
| ⬢ WATER VALVE | ⬢ BUILDING HEIGHT LOCATION | |
| ⬢ DRAIN GRATE | ⬢ P.O.B. POINT OF BEGINNING | |
| ⬢ STORM MANHOLE | ⬢ P.O.C. POINT OF COMMENCEMENT | |
| ⬢ MAILBOX | | |

VICINITY MAP



LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L14M	N 30°51'18\"	43.68'	L17M	N 30°23'00\"	43.68'
L24M	N 30°12'30\"	85.00'	L18M	N 30°23'00\"	85.00'
L34M	N 41°42'44\"	14.14'	L19M	N 42°11'00\"	14.14'
L44M	N 47°32'44\"	9.00'	L20M	N 42°11'00\"	9.00'
L54M	N 48°12'18\"	33.31'	L21M	N 47°49'00\"	23.31'
L64M	S 48°00'00\"	49.67'	L22M	S 48°00'00\"	49.67'
L74M	S 43°02'30\"	61.80'	L23M	S 42°44'00\"	61.80'
L84M	S 35°13'00\"	114.61'	L24M	N 30°23'00\"	114.61'
L94M	S 15°42'31\"	76.04'	L25M	N 30°23'00\"	76.04'
L104M	S 03°12'00\"	71.41'	L26M	N 03°12'00\"	71.41'
L114M	N 03°48'30\"	30.44'	L27M	N 03°48'30\"	30.44'
L124M	N 03°12'10\"	13.80'	L28M	N 03°12'10\"	13.80'
L134M	S 02°12'00\"	13.80'	L29M	N 02°58'13\"	8.78'
L144M	S 02°12'00\"	13.80'	L30M	N 02°58'13\"	8.78'
L154M	S 02°12'00\"	71.41'	L31M	N 02°14'00\"	60.80'
L164M	S 02°12'00\"	71.41'	L32M	N 02°14'00\"	60.80'
L174M	N 03°14'00\"	77.88'	L33M	S 03°37'30\"	77.88'

BLEW & ASSOCIATES, P.A.

3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703
 EMAIL: SURVEY@BLEWINC.COM
 OFFICE: 478.443.4006 FAX: 478.532.1883
 EMAIL: SURVEY@BLEWINC.COM WWW.BLEWINC.COM

Surveying Engineering Mapping

SURVEYOR JOB NUMBER: 02-4753	SURVEY DRAWN BY: C.L. 9/20/2022
SURVEY REVIEWED BY: S.T.M.	SHEET: 2 OF 4

ALTANSPS LAND TITLE SURVEY

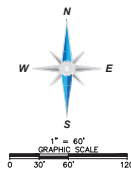
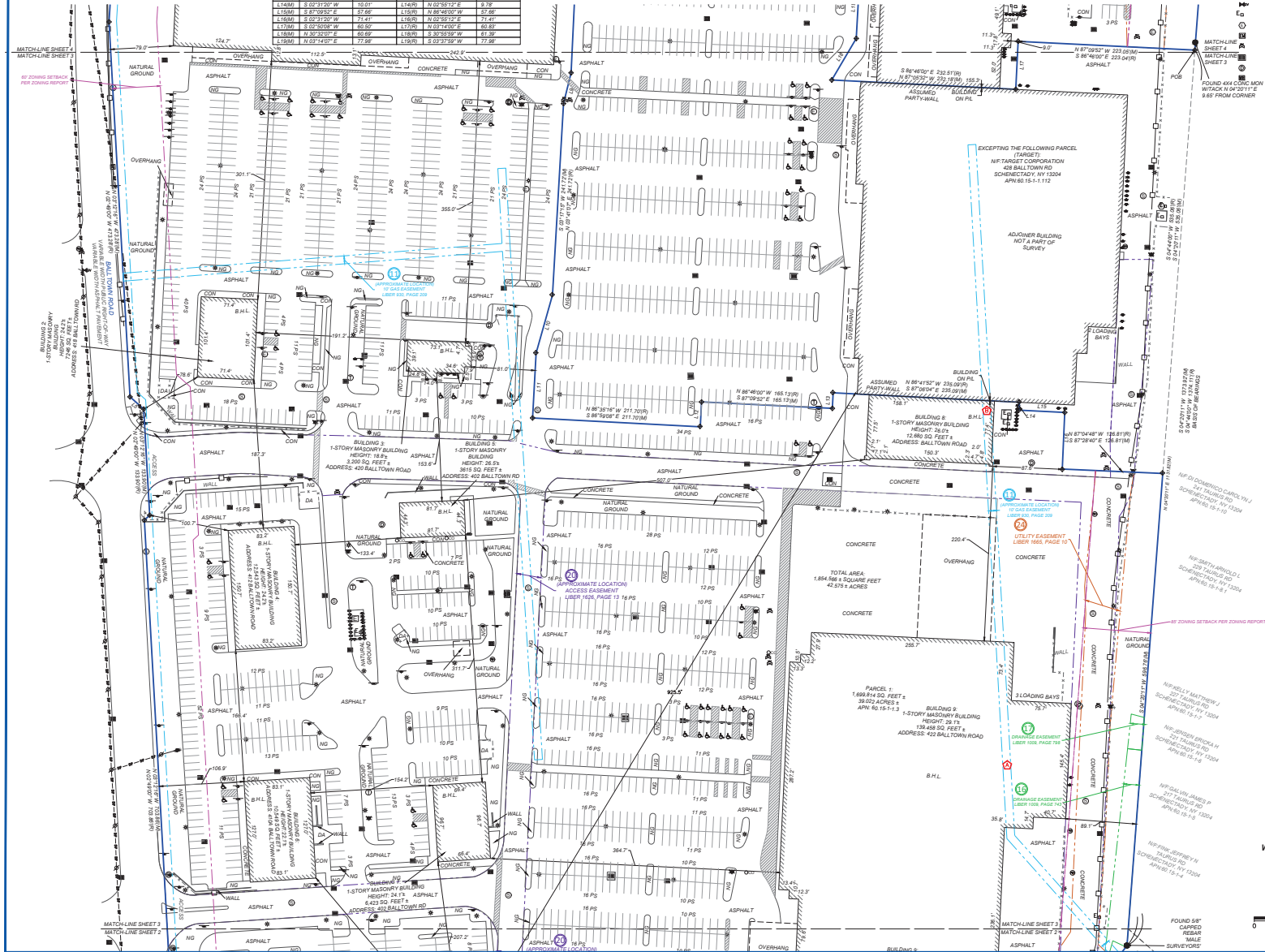
402 BALLTOWN ROAD
NISKAYUNA, SCHENECTADY COUNTY, NEW YORK 12304

LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L100	N 35° 51' 15" W	63.65'	L110	N 35° 25' 00" W	63.65'
L101	N 26° 12' 25" W	65.50'	L111	N 35° 25' 00" W	65.50'
L102	N 47° 42' 45" E	15.54'	L112	N 42° 11' 00" E	15.54'
L103	N 47° 25' 40" E	9.97'	L113	N 47° 40' 00" E	9.97'
L104	N 45° 12' 30" W	13.31'	L114	N 47° 40' 00" W	13.31'
L105	S 48° 25' 50" E	49.87'	L115	S 48° 25' 50" E	49.87'
L106	S 45° 53' 30" E	42.00'	L116	S 45° 53' 30" E	42.00'
L107	N 68° 31' 30" W	114.81'	L117	N 68° 31' 30" W	114.81'
L108	S 12° 51' 30" W	39.85'	L118	N 14° 10' 31" E	39.85'
L109	S 15° 45' 11" W	76.01'	L119	N 15° 10' 21" E	76.01'
L110	S 55° 32' 20" W	81.65'	L120	N 63° 21' 21" E	81.65'
L111	N 55° 46' 30" E	34.44'	L121	S 55° 32' 20" W	34.44'
L112	N 55° 39' 13" E	18.80'	L122	S 55° 39' 13" E	18.80'
L113	N 55° 39' 13" E	18.80'	L123	S 55° 39' 13" E	18.80'
L114	N 55° 39' 13" E	18.80'	L124	S 55° 39' 13" E	18.80'
L115	N 55° 39' 13" E	18.80'	L125	S 55° 39' 13" E	18.80'
L116	N 55° 39' 13" E	18.80'	L126	S 55° 39' 13" E	18.80'
L117	N 55° 39' 13" E	18.80'	L127	S 55° 39' 13" E	18.80'
L118	N 55° 39' 13" E	18.80'	L128	S 55° 39' 13" E	18.80'
L119	N 55° 39' 13" E	18.80'	L129	S 55° 39' 13" E	18.80'
L120	N 55° 39' 13" E	18.80'	L130	S 55° 39' 13" E	18.80'

LEGEND & SYMBOLS

- FOUND MONUMENT AS-HOTED
- COMPUTED POINT
- HANDICAP PARKING
- FIRE HYDRANT
- LIGHT
- SANITARY MANHOLE
- BOLLARD
- POWER POLE
- ELECTRIC SWITCH
- GAS VALVE
- ELECTRIC TALK
- ELECTRIC VAULT
- ELECTRIC METER
- WATER VALVE
- DRAIN GRATE
- STORM MANHOLE
- MAILBOX
- WATER MANHOLE
- MANHOLE
- GUY ANCHOR
- ELECTRIC CABINET
- ELECTRIC MANHOLE
- SDH
- TELEPHONE MANHOLE
- CLEAN-OUT
- ELECTRIC METER
- WATER VALVE
- DRAIN GRATE
- STORM MANHOLE
- MAILBOX
- DA
- NS
- CON
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- FENCE LINE
- OVERHEAD POWER LINE
- GUARD RAIL
- DUMPSTER AREA
- NATURAL GROUND
- CONCRETE
- MEASURED/CALCULATED DIMENSION
- RECORD DIMENSION
- HOW OR FORMERLY
- B.H.L.
- P.O.B.
- P.O.C.



SURVEYOR JOB NUMBER: 22-4752	SURVEY DRAWN BY: C.L. 9/20/2022
SURVEY REVIEWED BY: S.T.M.	SHEET: 3 OF 4

ALTA/NSPS LAND TITLE SURVEY

402 BALLTOWN ROAD

NISKAYUNA, SCHENECTADY COUNTY, NEW YORK 12304

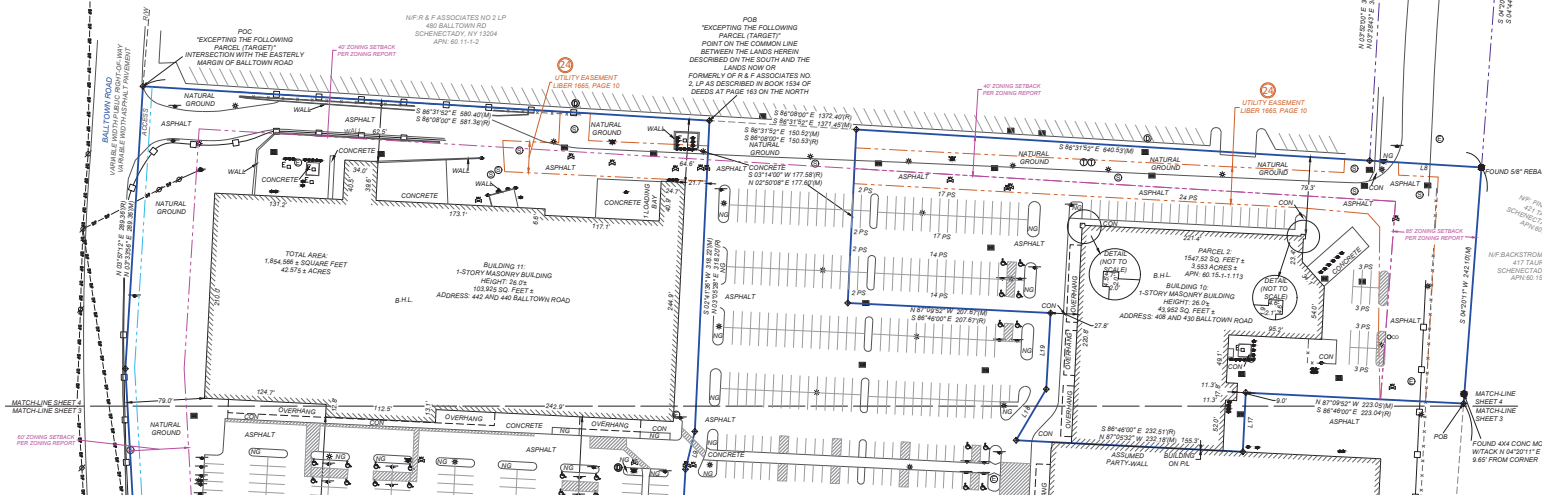
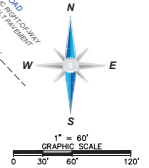
LEGEND & SYMBOLS			
●	FOUND MONUMENT AS NOTED	⊙	WATER MANHOLE
⬢	COMPUTED POINT	○	MANHOLE
⬢	HANDICAP PARKING	⊙	ELECTRIC CABINET
⬢	FIRE HYDRANT	⊙	ELECTRIC MANHOLE
⬢	LIGHT	⊙	SIGN
⬢	SANITARY MANHOLE	⊙	TELEPHONE MANHOLE
⬢	ROLLAND	⊙	CLEAN-OUT
⬢	POWER POLE	⊙	PARKING SPACE(S)
⬢	ELECTRIC SWITCH	⊙	RIGHT-OF-WAY
⬢	GAS VALVE	⊙	CENTERLINE
⬢	ELECTRIC TABLE	⊙	MEASURED/CALCULATED DIMENSION
⬢	ELECTRIC VAULT	⊙	RECORD DIMENSION
⬢	ELECTRIC METER	⊙	NOW OR FORMERLY
⬢	WATER VALVE	⊙	BUILDING HEIGHT LOCATION
⬢	DRAIN GRATE	⊙	P.O.B.
⬢	STORM MANHOLE	⊙	P.O.C.
⬢	MAILBOX	⊙	POINT OF COMMENCEMENT

DA	DUMPSTER AREA
NG	NATURAL GROUND
CON	CONCRETE
---	BOUNDARY LINE
---	RIGHT-OF-WAY LINE
---	SIGN
---	CENTERLINE
---	FENCE LINE
---	OVERHEAD POWER LINE
---	GUARD RAIL

LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1100	N 39°51'18" W	63.68'	L1170	N 39°23'00" W	63.68'
L1200	N 39°13'30" W	65.20'	L1230	N 39°23'00" W	65.20'
L1300	N 47°42'44" E	14.74'	L1330	N 42°11'00" E	14.74'
L1400	N 47°25'44" E	8.97'	L1430	N 47°40'00" E	8.97'
L1500	N 48°12'19" W	33.31'	L1530	N 47°40'00" W	33.31'
L1600	S 48°28'52" E	49.87'	L1630	S 48°23'00" E	49.87'
L1700	S 49°07'52" E	69.90'	L1730	S 42°44'00" E	69.90'
L1800	N 68°31'52" W	114.61'	L1830	N 68°08'30" W	114.61'
L1900	S 15°13'15" W	39.85'	L1930	N 14°13'01" E	39.85'
L2000	S 15°45'31" W	76.04'	L2030	N 18°09'23" E	76.04'
L2100	S 15°10'20" W	81.60'	L2130	N 12°31'12" E	81.60'
L2200	S 02°46'55" E	31.44'	L2230	S 03°10'24" W	31.44'
L2300	N 02°50'13" E	18.40'	L2330	S 03°14'55" W	18.40'
L2400	S 02°11'20" W	10.01'	L2430	N 02°48'17" E	10.01'
L2500	S 87°19'52" E	37.46'	L2530	N 88°48'00" W	37.46'
L2600	S 02°11'20" W	71.41'	L2630	N 02°48'17" E	71.41'
L2700	S 02°10'08" W	60.80'	L2730	N 03°14'10" E	60.80'
L2800	N 03°13'27" E	60.80'	L2830	S 30°33'30" W	60.80'
L2900	N 03°14'07" E	77.88'	L2930	S 03°37'59" W	77.88'

POB SECOND "TOGETHER WITH" POINT IN THE SOUTH-WESTERLY LINE OF CONGAL ROAD AT ITS INTERSECTION WITH THE EASTERLY LINE OF LANDS OF STATE OF NEW YORK, DEPARTMENT OF MENTAL HYGIENE



BLEW & ASSOCIATES, P.A.

3825 N. SHILOH DRIVE • FAYETTEVILLE, AR 72703
 EMAIL: SURVEY@BLEWINC.COM
 OFFICE: 479.443.4006 FAX: 479.582.1883
 EMAIL: SURVEY@BLEWINC.COM WWW.BLEWINC.COM

SURVEYOR JOB NUMBER: 22-0752

SURVEY DRAWN BY: C.J. 9/20/2022

SURVEY REVIEWED BY: S.T.M.

SHEET: 4 OF 4



Project Address

10

Redstone

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1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



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Source: U.S. Census Bureau, *Marriage, Divorce, Remarriage in the 1990s*, Table 1.1.

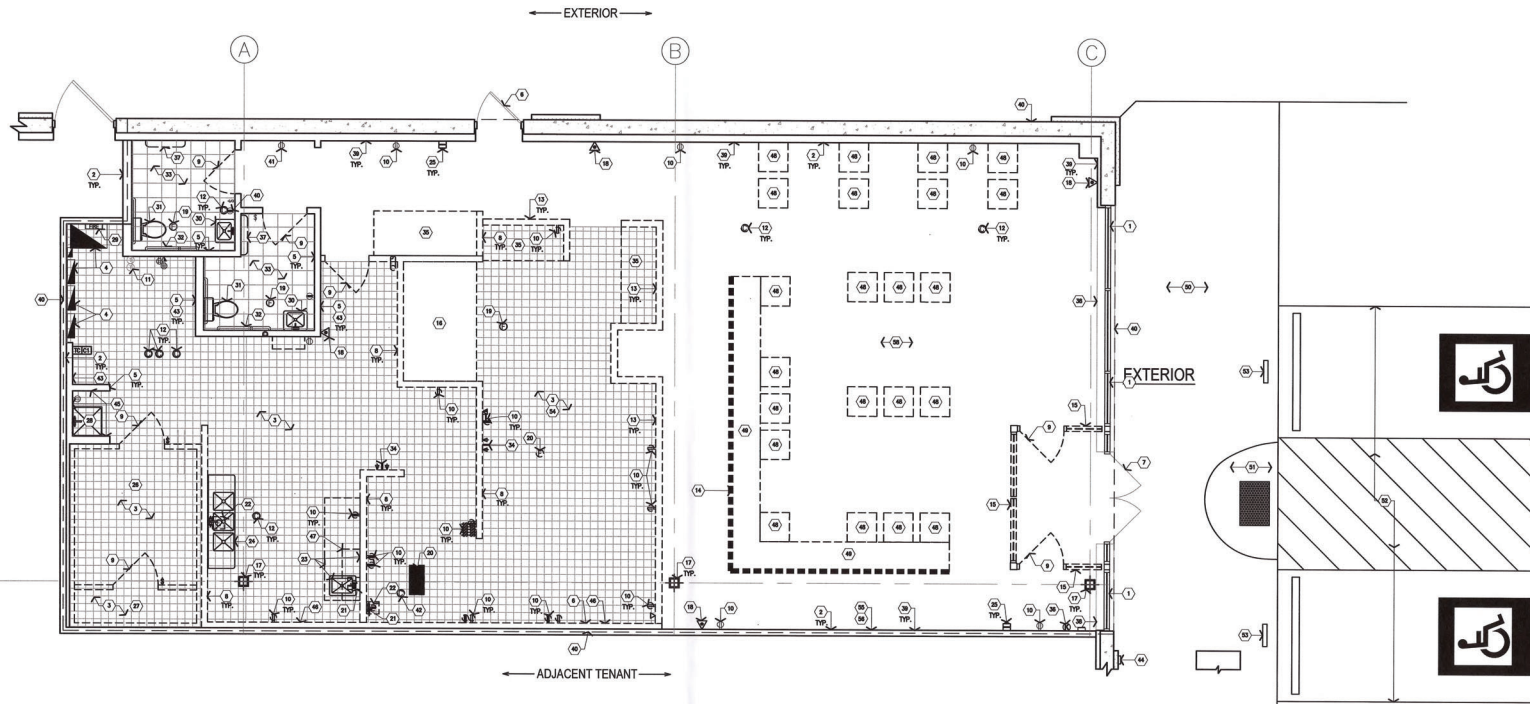
CS101

RESPONSIBILITY SCHEDULE	
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ABBREVIATIONS

	SCOPE OF WORK
--	---------------

DRAWING INDEX



1 DEMOLITION FLOOR PLAN 1/4" = 1'-0"

- SCOPE OF WORK**
THIS PORTION OF THE WORK INCLUDES ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR AND REASONABLY NECESSARY TO COMPLETE ALL DEMOLITION, DISMANTLING, AND SALVAGE AS SHOWN AND NOTED ON THE DRAWINGS AND SPECIFIED HEREIN. IN GENERAL, THE WORK TO BE PERFORMED UNDER THIS SECTION SHALL INCLUDE, BUT ARE NOT LIMITED TO, REMOVAL OF ALL EXISTING ROOFING AND INTERIOR WALL, CEILING AND FRAMES, LIGHT FIXTURES, FLOORING, DOORS AND WALLS, FURRED OUT COLUMN ENCLOSURES, AND STOREFRONT AND AS SPECIFIED ON THE DRAWINGS.
- CODES AND STANDARDS**
DEMOLITION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPLICABLE SAFETY REQUIREMENTS OF THE LANDLORD, CITY AND STATE OF THE PROJECT, THE ASSOCIATED GENERAL CONTRACTOR'S MANUAL, OF ACCORDANT PREVENTION IN CONSTRUCTION, LATEST EDITION, THE APPLICABLE REQUIREMENTS OF THE CONSTRUCTION CODES, AND OSHA.
- PERMITS AND LICENSES**
THE GENERAL CONTRACTOR SHALL PROVIDE ALL CITY, AND STATE PERMITS AND LICENSES, AND PAY ALL CHARGES AND FEES FOR THE SAME, UNLESS OTHERWISE SPECIFIED BY OWNER. THE PLANS SHALL BE FILED WITH LOCAL BUILDING DEPARTMENT, BY THE OWNER.
- OWNERSHIP AND PROTECTION**
A CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL ORDINANCES AND WITH LANDLORD REQUIREMENTS PERTAINING TO THE PROTECTION OF THE PUBLIC AND CONTRACTOR'S PERSONNEL AND PROVIDE PROTECTION FOR PERSONS AND ADJACENT TENANTS THROUGHOUT THE PROCESS OF THE WORK.
- THE LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL CONFINE THEIR OPERATIONS WITHIN THE LIMITS OF THE WORK AS INDICATED.**
- DEMOLITION WORK SHALL PROCEED IN SUCH A MANNER AS TO MINIMIZE THE SPREAD OF DUST AND FLYING PARTICLES AND TO PROVIDE SAFE WORKING CONDITIONS.**
- FIRES, EXPLOSIONS, AND OPEN FLAMES WILL NOT BE PERMITTED, UNLESS PERMITTED BY THE CITY.**
- ANY AND ALL EXISTING CONDITIONS, ADJACENT TENANT PROPERTIES, HVAC AND UTILITY LINES, AND OTHER ITEMS NOT SPECIFIED ON THE DRAWINGS, ETC., DAMAGED BY THE CONTRACTOR IN THE EXECUTION OF THIS CONTRACT SHALL BE RESTORED TO FORMER CONDITION OR TO THE SATISFACTION OF THE LANDLORD AT NO CHARGE IN THE CONTRACT PRICE.**
- ALL ITEMS INDICATED AS EXISTING TO REMAIN SHALL BE PROPERLY PROTECTED FROM ANY DAMAGES. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PRESERVE THE EXISTING TO REMAIN ITEMS.**
- DEMOLITION WORK SHALL NOT COMMENCE UNTIL TEMPORARY WORK SUCH AS FENCES AND BARRICADES AND ANY REQUIRED WARNING LIGHTS AND APPARATUS ARE FURNISHED AND INSTALLED.**
- SOIL INVESTIGATION**
CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF THE DEMOLITION WORK AND ANY OTHER MATTERS THAT IN ANY WAY AFFECT THE WORK. FAILURE OF CONTRACTOR TO ACCURATE THEMSELVES WITH ALL AVAILABLE INFORMATION CONCERNING CONDITIONS WILL NOT RELIEVE THEM FROM RESPONSIBILITY FOR ESTIMATING THE DIFFICULTY OR THE COST OF THE WORK. CONTRACTOR SHALL NOTIFY LANDLORD AT THE COMPLETION OF DEMOLITION TO ALLOW LANDLORD'S STRUCTURAL ENGINEER TO INSPECT STRUCTURAL FLOOR SLAB AND STOREFRONT FINISHING AS MAY BE REQUIRED.
- DISCONNECTION OF SERVICES**
A. EXISTING SERVICES THAT WILL BE DISRUPTED BY CONSTRUCTION WORK SHALL BE RE-ROUTED AS NECESSARY TO PROVIDE TEMPORARY CONTINUATION OF SERVICE.
B. DISCONNECTED SERVICES SHALL BE FLOODED AND SEALED IN AN APPROVED MANNER.
C. SPINNALED SHUT-DOWN SHALL BE COORDINATED WITH THE FIRE MARSHAL, LANDLORD, AND BUILDING DEPARTMENT TO DISCUSS WORK.
- ADVANCED ELECTRICAL WIRING**
CONDUITS DISCONNECTED IN THE PROCESS OF THE DEMOLITION THAT ARE TO BE ABANDONED SHALL BE DISCONNECTED AND THE ENDS FLOODED IN AN APPROVED MANNER. ANY ABANDONED CONDUITS INTERFERING WITH WORK UNDER THIS CONTRACT SHALL BE REMOVED ONLY TO THE EXTENT THAT THEY INTERFERE WITH NEW CONSTRUCTION.
- DISPOSITION OF MATERIALS, EQUIPMENT, AND DEBRIS**
MATERIALS AND EQUIPMENT TO BE SALVAGED.
A. CONTRACTOR SHALL CONSULT WITH TENANT AND REVIEW THE DRAWINGS TO DETERMINE THE ITEMS TO BE SALVAGED. ALL ITEMS NOTED FOR SALVAGE SHALL BE REMOVED AS CAREFULLY AS POSSIBLE SO THAT A MINIMUM AMOUNT OF RECONSTRUCTION WILL BE REQUIRED FOR REPAIRS THE ITEMS. RECONSTRUCTION AND REPAIRS OF SUCH ITEMS ARE SPECIFIED IN THE DRAWINGS AND APPLICABLE SECTIONS OF THESE SPECIFICATIONS. ANY SUCH ITEMS SHALL BE PACKAGED AND PROPERLY STORED AND PROTECTED UNTIL TIME FOR THEIR USE.
- WASTE AND EQUIPMENT NOT TO BE SALVAGED**
ALL MATERIALS AND EQUIPMENT NOT SPECIFIED TO BE SALVAGED INCLUDING DEBRIS, SHALL BECOME THE PROPERTY OF CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROPERTY IN A LEGAL MANNER. LOCATION OF DUMP AND METHOD OF HAUL SHALL BE CONTRACTOR'S RESPONSIBILITY.
- SALES OF SALVAGED MATERIALS SHALL NOT BE CONDUCTED AT THE PREMISES.**
- CLEAN UP**
UPON COMPLETION OF ALL DEMOLITION WORK, CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEBRIS RESULTING FROM DEMOLITION OPERATIONS. THE CONTRACTOR SHALL LEAVE THE PROPERTY, THE ADJACENT TENANT SPACES AND THE BUILDING IN A CLEAN MANNER, SATISFACTORY TO LOCAL AUTHORITIES AND THE LANDLORD. THE CONTRACTOR SHALL REMOVE ANY ADJACENT TENANT WALL, LIGHT FIXTURES, ETC., TO THE SATISFACTION OF INVOLVED PARTIES DAMAGED BY THE DEMOLITION PROCESS.

- ALL DOORS, WALLS, FIXTURES, ETC. SHOWN IN DASHED LINES ARE TO BE REMOVED AND DEPOSED OF UNLESS NOTED OTHERWISE.**
- THE ARCHITECT IS TO BE NOTIFIED IMMEDIATELY OF ANY UNFORESEEN HAZARDOUS CONDITIONS OF ANY KIND. ALL CONDITIONS AND DIMENSIONS ARE TO BE CHECKED FOR DISCREPANCIES AND THE ARCHITECT IS TO BE NOTIFIED THERE HAVE BEEN AREAS WHICH WERE NOT ACCESSIBLE AT THE TIME OF THE EXISTING CONDITIONS SITE VISIT AND MAY NEED FURTHER CONSIDERATION.**
- NO ATTENTION TO THE EXISTING STRUCTURAL MEMBERS ARE ALLOWED.**
- COORDINATE WITH THE LANDLORD ON REPRESENTATIONS FOR ANY AND ALL DEMOLITION AT ALL TIMES.**
- FIRE SEPARATIONS BETWEEN TENANT SPACES ARE TO BE REMOVED DURING DEMOLITION AT ALL TIMES.**
- THE GENERAL CONTRACTOR WILL RESTORE ANY DAMAGE DURING DEMOLITION TO THE ORIGINAL STATE BEFORE DEMOLITION STARTED.**
- THE CONSTRUCTION SITE IS TO BE SEALED TIGHTLY AND ANY CONSTRUCTION BARRICADES SHALL BE REMOVED WITH THE LANDLORD, IF REQUIRED.**
- THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE LANDLORD IF ANY RELOCATION OF EXISTING SERVICE LINES SUCH AS SPINNALED MAIN, DOMESTIC WATER, SEWER LINE, GAS LINE, ETC. IS REQUIRED TO ACCOMMODATE THE NEW WORK.**
- THE ADJACENT TENANT PROPERTY IS TO BE MAINTAINED DURING DEMOLITION AND IF ANYTHING IS DAMAGED DURING THE WORK, IT IS TO BE REPAIRED OR REPLACED AT THE GENERAL CONTRACTOR'S COST. THIS INCLUDES PROPERTY WITHIN THE LEASE OUTLINE DIMENSIONS WHICH PASSED THROUGH THE SPACE.**
- ANY ABANDONED SERVICES OR UTILITIES SHALL BE REMOVED TO THE SOURCE AFTER REVIEW WITH THE LANDLORD AND/OR LOCAL AUTHORITIES.**
- G.C. TO REMOVE AND CAP PLUMBING LINES LOCATED IN WALL AS REQUIRED.**
- G.C. TO REMOVE SHOP DRAWINGS FOR THE IMPROVED AND G.C. IS TO SECURE ANY AND ALL PERMITS REQUIRED FOR THE IMPROVED DIRECTION AND PLACEMENT.**
- PRIOR TO DEMOLITION, THE G.C. IS TO INVESTIGATE EXISTING CONDITIONS FOR BASE BUILDING STRUCTURAL, ELECTRICAL, MECHANICAL, PLUMBING, LIFE SAFETY OR OTHER ELEMENTS OR CONDITIONS THAT MAY EFFECT THE EXTENT OF DEMOLITION. IF THE G.C. DISCOVERS UNUSUAL CONDITIONS OR BASE BUILDING ELEMENTS THAT SHOULD NOT BE REMOVED OR ALTERED, G.C. IS TO STOP WORK IMMEDIATELY AND CONTACT THE SHARE STORE PROJECT MANAGER AND THE ARCHITECT.**
- ANY DAMAGE THAT MAY OCCUR DURING DEMOLITION AND/OR CONSTRUCTION DUE TO THE CONTRACTOR'S FAULT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND MUST BE RESTORED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.**
- ANY UNLIMITED EXISTING CONDITIONS WHICH MAY CONFLICT WITH THE PROPOSED NEW WORK AND MAY REQUIRE MODIFICATION, RELOCATION AND OR REMOVAL SHALL BE IDENTIFIED AND REPORTED TO THE ARCHITECT AT ONCE.**
- IMMEDIATELY UPON COMPLETION OF DEMOLITION, ALL CONDITIONS AND DIMENSIONS ARE TO BE CHECKED FOR VARIANCES. THE SITE VERIFICATION DRAWINGS IS TO BE COMPLETED AND REPORTED IMMEDIATELY TO OWNER AND THE ARCHITECT.**
- G.C. MUST IMMEDIATELY THE SITE PRIOR TO SUBMISSION OF THEIR BID TO ANTICIPATE ANY DEMOLITION WHICH MAY NOT BE SHOWN ON THIS PLAN OR ANY OTHER DRAWINGS IN THESE CONSTRUCTION DOCUMENTS.**
- NO COMBUSTIBLE MATERIALS ARE ALLOWED ABOVE THE FINISHED CEILING.**
- REFER TO SCOPE OF NEW WORK IN ELECTRICAL DRAWINGS FOR ELECTRICAL FIXTURES LINES, ETC. ANY ABANDONED AND/OR NOT USED EQUIPMENT, FIXTURES, WIRING, ETC., DISCONNECTED DURING DEMOLITION SHALL BE REMOVED FROM THE JOB SITE.**
- (1) LIFE SAFETY SYSTEM/ALARM SYSTEM, IF (1) AND REQUIRED, SHALL REMAIN AND BE RECONFIGURED FOR NEW TENANT BUILD-OUT. DO NOT REMOVE, MODIFY ONLY. G.C. SHALL VERIFY PRIOR TO DEMOLITION/CONSTRUCTION.**

- (1) STOREFRONT GLAZING SYSTEM TO REMAIN. REMOVE DRAWINGS FROM PREVIOUS TENANT, G.C. TO INSPECT FOR ANY DAMAGED AREAS AT START OF CONSTRUCTION.**
- (1) REMAINING PROTECTION TO REMAIN, G.C. TO PATCH/REPAIR (1) CTR. BD. AS REQUIRED. G.C. TO MAINTAIN ANY EXISTING FIRE RATING, TYPICAL FOR ALL DEMISING WALLS, TENANT SIDE ONLY.**
- DEMO & DISCARD (1) TILE FLOOR & BASE, CONCRETE SLAB TO REMAIN, G.C. TO PATCH/REPAIR SLAB & PREP FLOOR FOR (1) FINISHES. V.I.F. PREP WORK PER SITE VISIT.**
- (1) ELECTRICAL PANEL/EQUIPMENT TO REMAIN. REF: ELECTRICAL DRAWINGS.**
- (1) INTERIOR WALL TO REMAIN, G.C. TO PATCH/REPAIR (1) CTR. BD. AS REQUIRED.**
- (1) DOOR/FRAME TO REMAIN, (1) DOOR TO BE PAINTED, REF: A/122. G.C. TO PROTECT DURING CONSTRUCTION, REPAIR/REPLACE ANY DAMAGED DOOR HARDWARE AS REQUIRED.**
- (1) STOREFRONT DOORS TO REMAIN, G.C. TO PROTECT DURING CONSTRUCTION.**
- DEMO & DISCARD (1) FURRED WALL, SHOWN DASHED.**
- DEMO & DISCARD (1) DOOR/FRAME.**
- DEMO & DISCARD (1) ELECTRICAL RECEPTACLES, SWITCHES, AND DATA PORTS BACK TO SOURCE (1) L.A.O. IN ELECTRICAL DRAWINGS TO REMAIN. REF: ELECTRICAL DRAWINGS, V.I.F.**
- (1) THERMOSTAT TO REMAIN. REF: ELECTRICAL DRAWINGS.**
- (1) CLEANOUT TO REMAIN.**
- DEMO & DISCARD (1) LOW HEIGHT WALL.**
- DEMO & DISCARD (1) HAND RAIL.**
- DEMO & DISCARD (1) VESTIBULAR GLAZING SYSTEM.**
- DEMO & DISCARD (1) PIZZA OVEN.**
- (1) STRUCTURAL COLUMN, G.C. TO PROTECT DURING CONSTRUCTION.**
- (1) THE STOREFRONT IS TO BE REMOVED AND DISCARDED.**
- (1) FLOOR DRAIN TO REMAIN.**
- DEMO & DISCARD (1) FLOOR DRAIN.**
- DEMO & DISCARD (1) SQUARE FLOOR DRAIN.**
- DEMO & DISCARD (1) STAINLESS STEEL WORK TABLE, UTILITY SINK, AND SHELF.**
- DEMO & DISCARD (1) 3-COMP SINK.**
- (1) FIRE WALL STROKE & FIRE ALARM PULL STATION TO BE RELOCATED, G.C. TO COORDINATE.**
- DEMO & DISCARD (1) WALK-IN COOLER.**
- DEMO & DISCARD (1) WALK-IN FREEZER.**
- (1) MOP SINK TO REMAIN.**
- (1) FIRE ALARM PANEL TO REMAIN.**
- (1) LAUNDRY TO REMAIN, G.C. TO REPLACE FAUCET.**
- DEMO & DISCARD (1) WATER CLOSET.**
- (1) CHAIR BASE TO REMAIN.**
- (1) FLOOR AND WALL TILE TO REMAIN, G.C. TO PATCH/REPAIR AS REQUIRED.**
- DEMO & DISCARD (1) STUB OUTS.**
- DEMO & DISCARD (1) MILLWORK.**
- (1) FIRE ALARM PANEL TO REMAIN.**
- (1) INTERIOR WALL TO REMAIN, G.C. TO PATCH/REPAIR WALL TILE AND WIP SOUND AS REQUIRED.**
- (1) LOW WALL TO REMAIN, G.C. TO PREP FOR (1) FINISHES.**
- DEMO & DISCARD (1) WOOD CHAIR RAIL & WANDCOT.**
- LEASE LINE, V.I.F.**
- (1) ELECTRICAL RECEPTACLES TO REMAIN.**
- DEMO & DISCARD (1) CLEANOUT; REMOVE PLUMBING BACK TO SOURCE, REF: PLUMBING DRAWINGS.**
- DEMO & DISCARD (1) F.A.P.**
- (1) KNOCK BOX TO REMAIN.**
- (1) F.A.P. TO REMAIN.**
- DEMO & DISCARD (1) FURRED WALL WITH WALL TILE.**
- (1) WALL SHELVING TO BE REMOVED AND DISCARDED.**
- (1) TABLES TO BE REMOVED AND DISCARDED. PATCH/REPAIR/FLOORING FOR NEW FINISHES.**
- (1) SINKING TO BE REMOVED AND DISCARDED.**
- (1) SIDEWALK.**
- (1) CURB RAMP.**
- (1) ADA PARKING STOPPING.**
- (1) ADA SIGNAGE.**
- (1) DEMO AND DISCARD (1) WALL TILE, REPLACE (1) SUBSTRATE AS REQUIRED.**
- (1) WANDCOT TO BE REMOVED AND DISCARDED.**
- (1) VINYL WALL GRAPHIC TO BE REMOVED AND DISCARDED.**
- (1) WATER FILTRATION SYSTEM TO BE REMOVED AND DISCARDED BACK TO SOURCE.**
- DEMO AND DISCARD (1) MISCELLANEOUS OVERHEAD CONDUIT.**

DEMOLITION SPECIFICATIONS

DEMOLITION GENERAL NOTES

DEMOLITION KEY NOTES

Issue Date 06/10/26

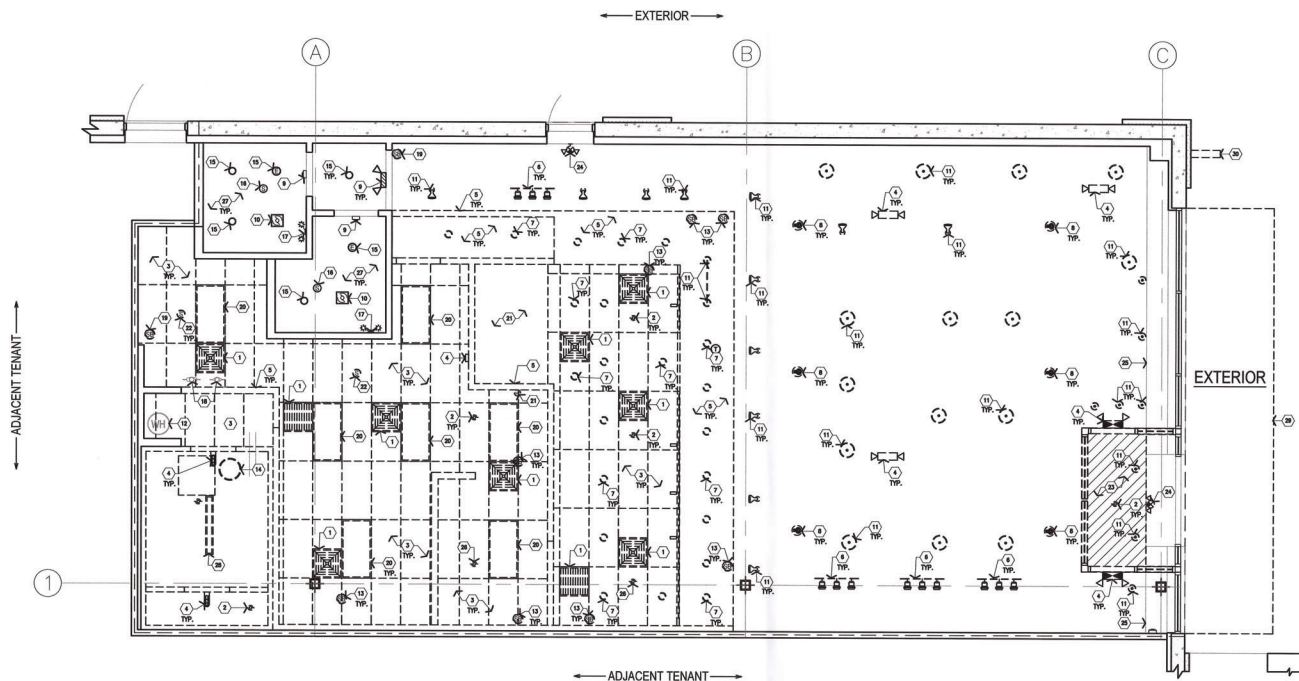
Revisions	Date	Description	By
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3			
4			
5			

Consultant

Seal

Received
JUN 16 2026
Schenectady Building Dept.

Sheet Number



1 DEMOLITION RCP 1/4" = 1'-0"

- SCOPE OF WORK**
THIS PORTION OF THE WORK INCLUDES ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR AND REASONABLY NECESSARY TO COMPLETE ALL DEMOLITION, DEMOLITION AND SALVAGE AS SHOWN AND NOTED ON THE DRAWINGS AND SPECIFIED HEREIN. IN GENERAL, THE WORK TO BE PERFORMED UNDER THIS SECTION SHALL INCLUDE, BUT ARE NOT LIMITED TO, REMOVAL OF ALL EXISTING ROOFING AND CEILING WALL BOARDS, CEILING AND FINISHES, LIGHT FIXTURES, FLOORING, DOORS AND WALLS, FURRED OUT COLUMN ENCLOSURES, AND STOREFRONT AND AS SPECIFIED ON THE DRAWINGS.
- CODES AND STANDARDS**
DEMOLITION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPLICABLE SAFETY REQUIREMENTS OF THE LANDLORD, CITY AND STATE OF THE PROJECT, THE ASSOCIATED GENERAL CONTRACTOR'S MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION, LATEST EDITION, THE APPLICABLE REQUIREMENTS OF THE CONSTRUCTION CODE, AND O.S.A.
- PERMITS AND LICENSES**
THE GENERAL CONTRACTOR SHALL OBTAIN ALL CITY, STATE PERMITS AND LICENSES, AND PAY ALL CHARGES AND FEES FOR THE SAME, UNLESS OTHERWISE SPECIFIED BY OWNER. THE PLANS SHALL BE FILED WITH LOCAL BUILDING DEPARTMENT BY THE OWNER.
- OBSTRUCTIONS AND PROTECTION**
A. CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL ORDINANCES AND WITH LANDLORD REQUIREMENTS REFERRING TO THE PROTECTION OF THE PUBLIC AND CONTRACTOR'S PERSONNEL AND PROVIDE PROTECTION FOR PERSONS AND ADJACENT TENANTS THROUGHOUT THE PROGRESS OF THE WORK.
B. THE LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL CONFINED THEIR OPERATIONS WITHIN THE LIMITS OF THE WORK AS INDICATED.
C. DEMOLITION WORK SHALL PROCEED IN SUCH A MANNER AS TO MINIMIZE THE SPREAD OF DUST AND FLYING PARTICLES AND TO PROVIDE SAFE WORKING CONDITIONS.
D. FIRES, EXPLOSIONS, AND OPEN FLAMES WILL NOT BE PERMITTED, UNLESS PERMITTED BY THE CITY.
E. ANY AND ALL EXISTING CONDITIONS, ADJACENT TENANT PROPERTIES, HVAC AND UTILITY LINES, AND OTHER ITEMS NOT SPECIFIED ON THE DRAWINGS, ETC., DAMAGED BY THE CONTRACTOR IN THE EXECUTION OF THIS CONTRACT SHALL BE RESTORED TO FORMER CONDITION BY CONTRACTOR TO THE SATISFACTION OF THE LANDLORD AT NO CHARGE IN THE CONTRACT PRICE.
F. ALL ITEMS INDICATED AS EXISTING TO REMAIN SHALL BE PROPERLY PROTECTED FROM ANY DAMAGES. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE EXISTING TO REMAIN ITEMS.
G. DEMOLITION WORK SHALL NOT COMMENCE UNTIL TEMPORARY WORK SUCH AS FENCES AND BARRICADES AND ANY REQUIRED WARNING LIGHTS AND APPARATUS ARE FURNISHED AND INSTALLED.
- SITE INVESTIGATION**
CONTRACTOR SHALL MEET THE SITE TO DETERMINE THE FULL EXTENT OF THE DEMOLITION WORK AND ANY OTHER MATTERS THAT IN ANY WAY AFFECT THE WORK. FAILURE OF CONTRACTOR TO ACCOUNT THEMSELVES WITH ALL AVAILABLE INFORMATION CONCERNING CONDITIONS WILL NOT RELIEVE THEM FROM RESPONSIBILITY FOR ESTIMATING THE DIFFICULTY OR THE COST OF THE WORK. CONTRACTOR SHALL NOTIFY LANDLORD AT THE COMPLETION OF DEMOLITION TO ALLOW LANDLORD'S STRUCTURAL ENGINEER TO INSPECT STRUCTURAL, FLOOR SLAB AND STOREFRONT TRIMMING AS MAY BE REQUIRED.

- DISCONNECTION OF SERVICES**
A. EXISTING SERVICES THAT WILL BE DISRUPTED BY CONSTRUCTION WORK SHALL BE RE-ROUTED AS NECESSARY TO PROVIDE TEMPORARY CONTINUATION OF SERVICE.
B. DISCONNECTED SERVICES SHALL BE PLUGGED AND SEALED IN AN APPROVED MANNER.
C. SPRINKLER SHUT-DOWN SHALL BE COORDINATED WITH THE FIRE MARSHAL, LANDLORD, AND BUILDING PRIOR TO EXECUTION OF WORK.
D. ABANDONED ELECTRICAL WIRING
CIRCUITS ENCOUNTERED IN THE PROGRESS OF THE DEMOLITION THAT ARE TO BE ABANDONED SHALL BE DISCONNECTED AND THE ENDS PLUGGED IN AN APPROVED MANNER. ANY ABANDONED CIRCUITS INTERFERING WITH WORK UNDER THIS CONTRACT SHALL BE REMOVED ONLY TO THE EXTENT THAT THEY INTERFERE WITH NEW CONSTRUCTION.
E. DEMOLITION OPERATIONAL PROCEDURES SHALL BE OPTIONAL, WITH CONTRACTOR REQUIRED THAT PROCEDURES DO NOT IMPROVE ON THE APPROVED WORK SCHEDULE OR SALVAGE REQUIREMENTS. WHERE SALVAGING IS REQUIRED, PROCEDURES SHALL BE SUCH THAT THE MINIMUM AMOUNT OF SALVAGE WILL RESULT. MATERIALS AND EQUIPMENT TO BE SALVAGED, IF ANY, ARE LISTED BELOW.
F. DISPOSITION OF MATERIALS, EQUIPMENT, AND DEBRIS
MATERIALS AND EQUIPMENT TO BE SALVAGED
MATERIALS AND EQUIPMENT TO BE SALVAGED ARE LISTED ON THE DEMOLITION PLANS. CONTRACTOR SHALL CONTACT WITH TENANT AND REVIEW THE DRAWINGS TO DETERMINE THE ITEMS TO BE SALVAGED. ALL ITEMS NOTED FOR SALVAGE SHALL BE REMOVED AS CAREFULLY AS POSSIBLE SO THAT A MINIMUM AMOUNT OF REDEMPTIONING WILL BE REQUIRED FOR REUSING THE ITEMS. REDEMPTIONING AND INSTALLING OF SUCH ITEMS ARE SPECIFIED IN THE DRAWINGS AND APPLICABLE SECTIONS OF THEIR SPECIFICATIONS. ANY SUCH ITEMS SHALL BE PACKAGED AND PROPERLY STORED AND PROTECTED UNTIL TIME FOR THEIR USE.
G. MATERIALS AND EQUIPMENT NOT TO BE SALVAGED:
ALL MATERIALS AND EQUIPMENT NOT SCHEDULED TO BE SALVAGED INCLUDING DEBRIS, SHALL BECOME THE PROPERTY OF CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROPERTY IN A LEGAL MANNER. LOCATION OF DUMP AND LENGTH OF TRAIL SHALL BE CONTRACTOR'S RESPONSIBILITY.
H. SALES OF SALVAGED MATERIALS SHALL NOT BE CONDUCTED AT THE PREMISES.
- CLEAN UP**
UPON COMPLETION OF ALL DEMOLITION WORK, CONTRACTOR SHALL PROMPTLY DISPOSE OF ALL DEBRIS RESULTING FROM DEMOLITION OPERATIONS. THE CONTRACTOR SHALL LEAVE THE PROPERTY, THE ADJACENT TENANT SPACES AND THE BUILDING IN A CLEAN CONDITION. SATISFACTION TO LOCAL AUTHORITIES AND THE LANDLORD, THE CONTRACTOR SHALL REPAIR ANY ADJACENT TENANT WALL, LOBBY FLOORING, ETC. TO THE SATISFACTION OF RACKED PARTIES DAMAGED BY THE DEMOLITION PROCESS.

- ALL DOORS, WALLS, FLOORING, ETC. SHOWN IN DASHED LINES ARE TO BE REMOVED AND DISPOSED OF UNLESS NOTED OTHERWISE.
- THE ARCHITECT IS TO BE NOTIFIED IMMEDIATELY OF ANY UNFORESEEN HAZARDOUS CONDITIONS OF ANY KIND. ALL CONDITIONS AND DIMENSIONS ARE TO BE CHECKED FOR DISCREPANCIES AND THE ARCHITECT IS TO BE NOTIFIED. THERE MAY HAVE BEEN AREAS WHICH WERE NOT ACCESSIBLE AT THE TIME OF THE EXISTING CONDITIONS SITE VISIT AND MAY NEED FURTHER CONSIDERATION.
- NO ALTERATION TO THE EXISTING STRUCTURAL MEMBERS ARE ALLOWED.
- COORDINATE WITH THE LANDLORD OR REPRESENTATIVE FOR ANY AND ALL DEMOLITION AT ALL TIMES.
- FIRE SEPARATIONS BETWEEN TENANT SPACES ARE TO BE REMOVED DURING DEMOLITION AT ALL TIMES.
- THE GENERAL CONTRACTOR WILL RESTORE ANY DAMAGE DURING DEMOLITION TO THE ORIGINAL STATE BEFORE DEMOLITION STARTED.
- THE CONTRACTOR SITE IS TO BE SEALED TIGHTLY AND ANY CONSTRUCTION BARRICADES SHALL BE REVIEWED WITH THE LANDLORD, IF REQUIRED.
- THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE LANDLORD IF ANY RELOCATION OF EXISTING SERVICE LINES SUCH AS SPRINKLER MAIN, DOMESTIC WATER, SEWER LINE, GAS LINE, ETC. IS REQUIRED TO ACCOMMODATE THE NEW WORK.
- THE ADJACENT TENANT PROPERTY IS TO BE MAINTAINED DURING DEMOLITION AND IF ANYTHING IS DAMAGED DURING THE WORK, IT IS TO BE REPAIRED OR REPLACED AT THE GENERAL CONTRACTOR'S COST. THIS INCLUDES PROPERTY WITHIN THE LEASE OUTLINE DIMENSIONS WHICH PASSED THROUGH THE SPACE.
- ANY ABANDONED SERVICES OR UTILITIES SHALL BE REMOVED TO THE SOURCE AFTER REVIEW WITH THE LANDLORD AND/OR LOCAL AUTHORITIES.
- G.C. TO REMOVE AND CAP PLUMBING LINES LOCATED IN WALL AS REQUIRED.
- G.C. TO PROVIDE SHOP DRAWINGS FOR THE BARRICADE AND G.C. IS TO SECURE ANY AND ALL PERMITS REQUIRED FOR THE BARRICADE ERECTION AND PLACEMENT.
- PRIOR TO DEMOLITION, THE G.C. IS TO INVESTIGATE EXISTING CONDITIONS FOR BASE BUILDING STRUCTURAL, ELECTRICAL, MECHANICAL, PLUMBING, LIFE SAFETY OR OTHER ELEMENTS OR CONDITIONS THAT MAY EFFECT THE EXTENT OF DEMOLITION. IF THE G.C. DISCOVERS UNUSUAL CONDITIONS OR BASE BUILDING ELEMENTS THAT SHOULD NOT BE REMOVED OR ALTERED, G.C. IS TO STOP WORK IMMEDIATELY AND CONTACT THE SHANE STORE PROJECT MANAGER AND THE ARCHITECT.
- ANY DAMAGE THAT MAY OCCUR DURING DEMOLITION AND/OR CONSTRUCTION DUE TO THE CONTRACTOR'S FAULT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND MUST BE RESTORED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ANY UNLIMITED EXISTING CONDITIONS WHICH MAY CONFLICT WITH THE PROPOSED NEW WORK AND ANY REQUIRE MODIFICATION, RELOCATION AND OR REMOVAL SHALL BE IDENTIFIED AND REPORTED TO THE ARCHITECT AT ONCE.
- IMMEDIATELY UPON COMPLETION OF DEMOLITION, ALL CONDITIONS AND DIMENSIONS ARE TO BE CHECKED FOR VARIANCES. THE SITE VERIFICATION DRAWINGS IS TO BE COMPLETED AND REPORT ANY DISCREPANCIES IMMEDIATELY TO OWNER AND THE ARCHITECT.
- G.C. MUST INVESTIGATE THE SITE PRIOR TO SUBMISSION OF THEIR BID TO ANTICIPATE ANY DEMOLITION WHICH MAY NOT BE SHOWN ON THIS PLAN OR ANY OTHER DRAWINGS IN THESE CONSTRUCTION DOCUMENTS.
- NO COMBUSTIBLE MATERIALS ARE ALLOWED ABOVE THE FINISHED CEILING.
- REFER TO SCOPE OF NEW WORK IN ELECTRICAL DRAWINGS FOR ELECTRICAL FIXTURES LINES, ETC. ANY ABANDONED AND/OR NOT USED EQUIPMENT, FIXTURES, WIRING, ETC., ENCOUNTERED DURING DEMOLITION SHALL BE REMOVED FROM THE JOB SITE.
- REFER TO LIFE SAFETY SYSTEM/ALARM SYSTEM, IF (C) AND REQUIRED, SHALL REMAIN AND BE RECONFIGURED FOR NEW TENANT BUILD-OUT. DO NOT REMOVE, MODIFY ONLY. G.C. SHALL VERIFY PRIOR TO DEMOLITION/CONSTRUCTION.

- DEMO & DISCARD (C) HVAC GRILLES/DIFFUSERS
- (C) SPRINKLER HEAD, ETC. TO COORDINATE ANY SPRINKLER HEAD RELOCATION AS REQUIRED FOR NEW LIGHTING & HVAC GRILLES LOCATED.
- DEMO & DISCARD (C) CEILING GRID & TILES
- DEMO & DISCARD (C) EMERGENCY/EXIT LIGHTS
- DEMO & DISCARD (C) DFP, RD, SUFFIT
- DEMO & DISCARD (C) TRACK LIGHT AND TRACK LIGHT HEADS
- DEMO & DISCARD (C) RECESSED COW LIGHTS
- DEMO & DISCARD (C) SPOONER
- DEMO & DISCARD (C) EMERGENCY LIGHT TO REMAIN
- EXHAUST FAN TO REMAIN
- DEMO & DISCARD (C) PENDANT LIGHTING
- WATER HEATER ABOVE CEILING TO REMAIN, REST PLUMBING DRAWINGS
- DEMO & DISCARD (C) SECURITY BARRIER
- DEMO & DISCARD (C) AIR COMPRESSOR ABOVE COOLER
- RECESSED LIGHT TO REMAIN
- SMOKE DETECTOR TO REMAIN
- DEMO & DISCARD (C) WALL SCIENCE
- IN-CEILING WATER METER TO REMAIN
- DEMO & DISCARD (C) SECURITY CAMERA
- DEMO & DISCARD (C) 224 LAY-IN LIGHT FIXTURE
- HOOD EXHAUST TO BE REMOVED AND DISCARDED
- DEMO & DISCARD (C) SMOKE DETECTOR
- DEMO & DISCARD (C) SMOKE DETECTOR IN HATCHED AREA
- DEMO & DISCARD (C) SMOKE DETECTOR
- EXISTING SPRINKLER HEAD TO BE RELOCATED, COORDINATE RELOCATION WITH FIRE SPRINKLER VENDOR
- DFP, RD, CEILING TO REMAIN
- STROP LIGHT TO REMAIN
- ANNING TO REMAIN
- LANDSCAPE LIGHT TO REMAIN

DEMOLITION SPECIFICATIONS

DEMOLITION GENERAL NOTES

DEMOLITION RCP KEY NOTES

Issue Date 06/10/26

Revisions	Date	Description	By
1			
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Consultant

Seal

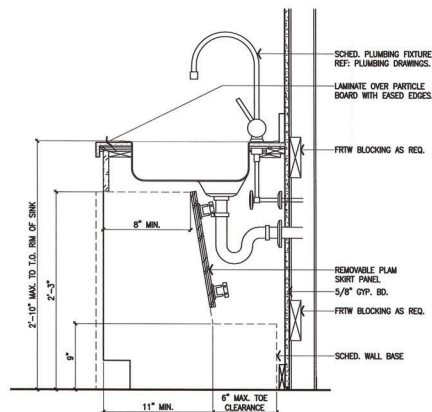




Received
JUN 16 2026
Niskayuna Building Dept.

HARDWARE SCHEDULE					
GROUP 1 STOREFRONT					
QTY.	DESCRIPTION	PART NUMBER	FINISHES	MANUFACTURER	NOTES
(F)	LOCKSET				G.C. TO BE-KEY.
(F)	DOOR CLOSER	SC70A RM/PA	689	FALCON	EXISTING TO REMAIN
GROUP 2 SERVICE DOOR					
1	PWNC EXT DEVICE	PIE00030FP	626/US28D	HARNEY	
1	DOOR CLOSER	SC70A RM/PA	689	FALCON	
3	HINGES FULL MORTISE, 4.5" X 4.5"	S8B1	US28D	MES	
1	GASKET	1885 PSA	GRAY	ZERO	
2	KICKPLATE 8400 12" X 34" LOW B-CS	630	MES		
1	SURFACE CLOSER	1885 PSA	689	FALCON	
GROUP 3 STORAGE					
1	CYLINDRICAL LOCKSET: PASSAGE	W1015	626/US28D	FALCON	
3	HINGES FULL MORTISE, 4.5" X 4.5"	S8B1	US28D	MES	
1	DOOR STOP: CORNER WALL STOP, US28D.	W5406/407	US28D	MES	
3	SILencers	S864	GRAY	MES	
GROUP 4 SUPPLY, BREAK ROOM					
1	CYLINDRICAL LOCKSET: OFFICE	W0119D	626/US28D	FALCON	
3	HINGES FULL MORTISE, 4.5" X 4.5"	S8B1	US28D	MES	
1	DOOR STOP: CORNER WALL STOP, US28D.	W5406/407	US28D	MES	
3	SILencers	S864	GRAY	MES	
GROUP 5 RESTROOM					
1	CYLINDRICAL LOCKSET: PRIVACY	W001	626/US28D	FALCON	
3	HINGES FULL MORTISE, 4.5" X 4.5"	S8B1	US28D	MES	
1	DOOR STOP	W5406/407	US28D	MES	
1	KICKPLATE 10" X 34"	K1050	US320	MES	RESTROOM SIDE OF DOOR.
3	SILencers	S864	GRAY	MES	
1	HOOK	B-76717	SATIN STAINLESS STEEL	BOBBICK	MOUNT 48" A.F.F. @ TREATMENT ROOM SIDE
GROUP 6 TREATMENT ROOM					
1	CYLINDRICAL LOCKSET: PASSAGE	W1015	626/US28D	FALCON	
3	HINGES FULL MORTISE, 4.5" X 4.5"	S8B1	US28D	MES	
1	DOOR STOP: CORNER WALL STOP, US28D.	W5406/407	US28D	MES	
3	SILencers	S864	GRAY	MES	
1	HOOK	B-76717	SATIN STAINLESS STEEL	BOBBICK	MOUNT 48" A.F.F. @ TREATMENT ROOM SIDE

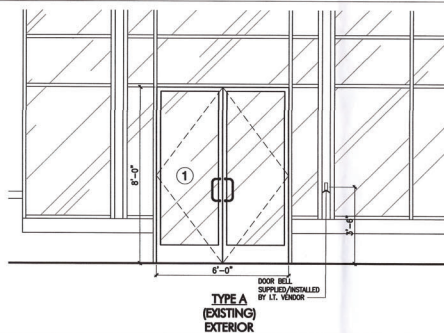
HARDWARE GROUP



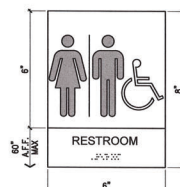
4 SECTION - SINK
1-1/2" = 1'-0"

DOOR NO.	ROOM NO.	LOCATION	SIZE	DOOR			FRAME		HARDWARE GROUP	REMARKS
				TYPE	MATERIAL	FINISH	MATERIAL	FINISH		
(1)	101	WAITING	(E) PR 3'-0" x 7'-0"	A	EXISTING	-	EXISTING	-	EXISTING	EXISTING TO REMAIN, G.C. VERIFY PROPER WORKING ORDER, RE KEY, AND REPLACE ANY MISSING/DAMAGED HARDWARE WITH GROUP 1.
(2)	103	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(3)	104	SUPPLY	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	4	
(4)	106	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(5)	114	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(6)	113	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(7)	112	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(8)	111	STORAGE	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	3	
(9)	115	TREATMENT ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	6	
(10)	107	BREAK ROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	4	
(11)	108	RESTROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	5	
(12)	110	RESTROOM	3'-0" x 7'-0"	B	WD	P-3	MTL	P-3	5	
(13)	107	BREAK ROOM (EXT. DOOR)	(E) 3'-0" x 7'-0"	C	EXISTING	P-3	EXISTING	P-3	EXISTING	(E) NEAR DOOR, G.C. TO PREVENT DURING CONSTRUCTION. PROVIDE ALTERNATE PRICING FOR REPLACEMENT SUPPLIERS/REPLACE MISSING/DAMAGED HARDWARE AS REQUIRED WITH HARDWARE GROUP 2

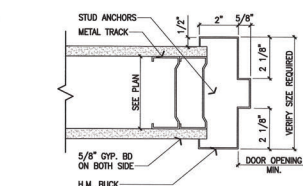
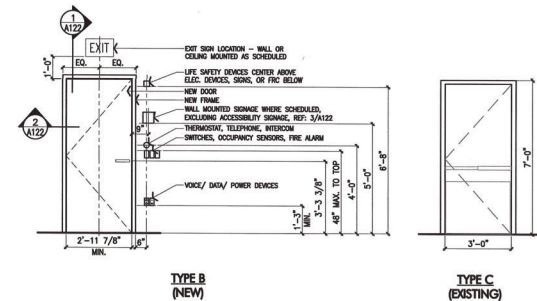
DOOR SCHEDULE



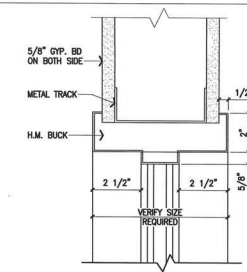
DOOR TYPES
3/8" = 1'-0"



3 SIGNAGE DETAIL
4" = 1'-0"



2 DOOR JAMB
4" = 1'-0"



1 DOOR HEAD
3" = 1'-0"

- FOR ALL WOOD MEMBERS REQUIRED BY CODE TO BE FIRE-RETARDANT TREATED, PROVIDE PRESSURE IMPREGNATION WITH FIRE RETARDANT CHEMICALS TO PROVIDE UL-755 FIRE HAZARD CLASSIFICATION. ALL SUCH WOOD SHALL BE IDENTIFIED WITH A UL LABEL CORRESPONDING THIS CLASSIFICATION AND FINISHING.
- APPROVED FIRE EXTINGUISHERS SHALL BE INSTALLED AS REQUIRED BY LOCAL AUTHORITY.
- ALL FLOORING OF FIRE RESISTIVE FLOOR OR SHUT WALLS SHALL BE PROTECTED BY MATERIAL AND INSTALLATION DETAILS THAT CONFORM TO UL STANDARDS FOR THROUGH PENETRATION FIRESTOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS THAT SHOW SUCH COMPLIANCE TO THE UL LISTING TO THE ARCHITECT. SUCH DRAWINGS SHALL BE AVAILABLE TO ANY CITY INSPECTOR. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.
- THE CONTRACTOR IS TO REPLACE ANY FIREPROOFING REMOVED FROM THE BUILDING STRUCTURE DURING DEMOLITION/CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING INTEGRITY OF RATED PARTITIONS & STRUCTURE PARTICULARLY WHERE PENETRATED BY WINDOW TRIMMS AND SERVICES.
- G.C. SHALL INSTALL FIRE EXTINGUISHERS CONSPICUOUSLY AS NOTED ON THE DRAWING AND TO BE READILY ACCESSIBLE AND SHALL BE INSTALLED IN A MANNER THAT THE TOP OF THE EXTINGUISHER SHALL NOT BE MORE THAN 4'-0" AND NOT LESS THAN 4" ABOVE FLOOR. ALL FIRE EXTINGUISHERS SHALL BE INSTALLED IN ACCORDANCE WITH CLASSIFICATION, RATING, AND DISTRIBUTION REQUIREMENTS OF NFPA 10. (NFPA 1: 13.6.1.1) SUGGESTED SPEC OR APPROVED EQUAL SPECIFICATION TO BE USED.

CONSTRUCTION NOTES

- ALL DOORS MUST BE OPERABLE WITHOUT SPECIAL KNOWLEDGE OR EFFORT W/ LEVER TYPE HARDWARE IN COMPLIANCE WITH STATE & LOCAL CODES.
- ALL EXISTING DOORS MUST BE READILY OPERABLE FROM THE EXTERIOR SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. DOORS SHALL BE OPERABLE WITH NOT MORE THAN ONE RELEASE OPERATION. IN ADDITION, DOOR HARDWARE SHALL HAVE A SHARP POINT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT FINGERING OR TWISTING OF THE WRIST TO OPERATE.
- ALL LOCK SETS TO BE RE-KEYED BY G.C. AFTER STORE TURNOVER.
- ALL HANDLES AND PULLS TO BE INSTALLED AT 36" A.F.F. TO CENTERLINE, U.S.G.
- ALL DOORS TO BE SINGLE ACTION U.S.A.
- PROVIDE THRESHOLDS 1/2" MIN. WITH A MAXIMUM HEIGHT OF 1/2" PER ADA REQUIREMENTS.
- HINGES FOR OUT SWINGING EXTERIOR DOORS SHALL BE EQUIPPED WITH NON-REMOVABLE WHITE PWD.
- BOTH THE LATCHING AND DEAD BOLT DEVICES ON EXTERIOR DOORS SHALL RELEASE WITH A SINGLE ACTION OF THE INSIDE LEVER PER CODE REQUIREMENTS.
- THE MAXIMUM DOOR OPENING FORCE FOR INTERIOR DOORS SHALL BE 5 LBS. PER ANSI A1.3.11
- ALL HARDWARE SHALL COMPLY WITH ALL CURRENT LOCAL AND NATIONAL CODES.
- ALL INTERIOR DOOR HARDWARE SHALL BE LEVER TYPE WHERE APPLICABLE AND MEET ALL CURRENT ADA STANDARDS.
- FINISH SIDE OF ALL DOORS TO HAVE A 1" CLEAR KICK PLATE FROM THE BOTTOM OF THE DOOR UP.
- ALL DOOR CLEARANCES TO COMPLY WITH LOCAL BUILDING CODES.
- G.C. TO PROVIDE 2 TEST CYLINDERS LOCKS W/ 10 KEYS EACH @ FRONT & REAR EXTERIOR DOORS.

DOOR AND HARDWARE NOTES

QUANTUM ENTRY SYSTEMS
8157 WOOD
TEL (254) 654-0375
BELLWOODENTRYSYSTEMS.COM

*G.C. TO OBTAIN BID FROM LISTED VENDOR(S) IN ADDITION TO OTHER QUALIFIED VENDORS

VENDORS



Project Address
Local Infusion
400 Balltown Rd.,
Suite 6C
Schenectady, NY 12304

Issue Date 06/10/26

Revisions	Date	Description	By
1			
2			
3			
4			
5			

Local Infusion
400 Balltown Rd., Suite 6C
Schenectady, NY 12304

Consultant

TIMOTHY M. LOTT
AIA, NCARB
2225 E Randall Rd. Suite 300
Arlington, TX 76011
(817) 701-4807
NEW YORK REG. NO. 044189

Seal



Job Number 260177

Drawn By JD

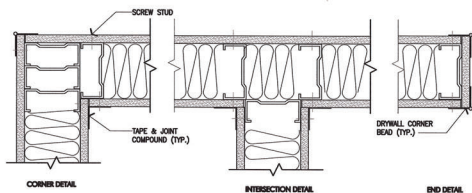
App'd By RER

Sheet Title

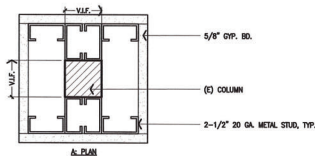
Construction Details & Door Schedule

Sheet Number

A122

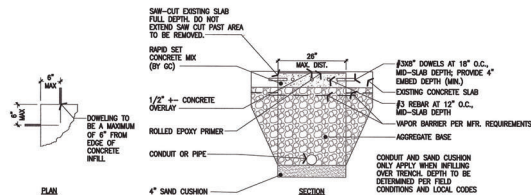


- NOTE:
1. REFER TO PLAN FOR LOCATION OF SOUND ATTENUATION
 2. PROVIDE DIAGONAL BRACING AT ALL NEW PARTITIONS, TYP.



7 TYPICAL GYP. BD. DETAILS

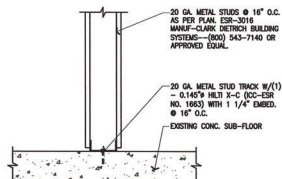
8 WALL PARTITION DETAIL



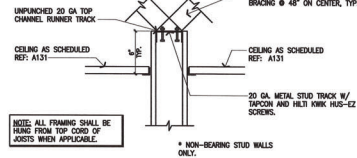
- CONTRACTOR NOTES:
1. SMOOT EDGES SHALL BE STRAIGHT AND EITHER PARALLEL, EXISTING CONTROL, / CONSTRUCTION JOINT, SMOOT AT AN ANGLE TO THE EXISTING CONTROL JOINT PATTERN WILL NOT BE ALLOWED UNDER ANY CIRCUMSTANCES.
 2. PRIOR TO CUTTING, INSTALL 3/4\"
 3. NO DISCUTTING SHALL BE ALLOWED AT EDGES OR CORNERS OF TRENCH AREA TO BE REMOVED. PORTIONS OF SLAB WHERE OVERCUTS OCCUR SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE, WITH NO EXTENSION OF THE CONSTRUCTION SCHEDULE.
 4. PERFORM CUTTING OF EXISTING CONCRETE SLABS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS USING SHAW AND / OR CORE DRILLS. ALL SLAB CUTTING SHALL BE PERFORMED AT NIGHT AFTER THE BUILDING HAS CLOSED FOR BUSINESS. JACK HAMMERS OR EXPLOSIVES WILL NOT BE ALLOWED AT ANY TIME.
 5. USE REMOVAL METHODS THAT WILL NOT CRACK, UNDERMINE, OR STRUCTURALLY DISTURB ADJACENT SLABS OR PARTITIONS.

5 SLAB TRENCHING DETAIL
1-1/2\"

6 WALL PREP DETAIL



ALL SUPPORTS TO BE FROM STRUCTURAL BEAMS AND JOISTS AND NOT FROM DECK ABOVE. DO NOT ATTACH TO WALL BRANDED. SHALL BRANDED CAN ONLY BE USED FOR LATERAL BRACING.



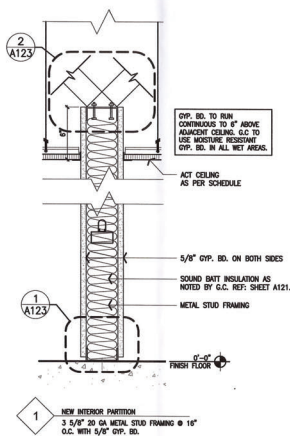
NOTE: ALL FRAMING SHALL BE HUNG FROM TOP CHORD OF JOISTS WHEN APPLICABLE.

* NON-BEARING STUD WALLS ONLY.

1 NON-BEARING WALL DETAILS
N.T.S.

2 NON-BEARING WALL DETAILS

3 PARTITION TYPES



1 NEW INTERIOR PARTITION
3-5/8\"/>

2 NEW INTERIOR PARTITION
3-5/8\"/>

Local Infusion

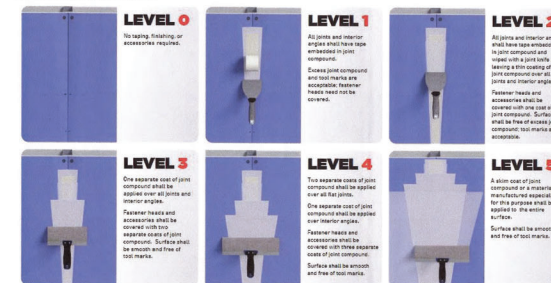
FASTSIGNS

Interior Wall Preparation

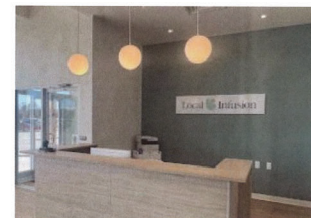
One interior wall in the reception area of each Local Infusion site will be covered by a third-party sign company with decorative textured vinyl. In order for this vinyl to properly adhere to the wall, it is important that contractors properly prepare this wall. Failure to prepare the wall properly will cause the vinyl to develop bubbles over time, or cause the vinyl to not attach properly to the wall, requiring subsequent wall repairs and replacement vinyl.

The designated wall must be primed and painted over a level 4 or level 5 drywall finish as defined in the table below. The paint must dry for at least 30 days prior to the installation of the vinyl.

5 Levels of Drywall Finish:



Sample of a Finished Wall:



1. NO MECHANICAL FASTENING TO LANDLOCK STRUCTURE.
2. ALL PENETRATIONS IN RATED WALLS ARE TO BE CALKED TO ENSURE RATING IS MAINTAINED.
3. ALL BLOCKING AND PLYWOOD INSTALLED SHALL BE PER.
4. G.C. TO VERIFY DECK HEIGHT AND CONFIRM MAX STUD HEIGHT FOR THE SPECIFIED IS ACCEPTABLE. NOTIFY ARCHITECT IF NEW STUD SPECS ARE REQUIRED.

END



Job Number: 260177
Drawn by: JD
App'd by: RER
Sheet Title: Partition Types and Details
Sheet Number: 1

4 GENERAL NOTES

phms
design group
Architecture + Engineering

2225 East Randol Mill Road, Suite #300
Arlington, Texas 76011
817.433.4200

Project Address
Local Infusion
400 Balltown Rd.,
Suite 6C
Schenectady, NY 12304

Issue Date				06/10/26	
Revisions					
	Date	Description		By	
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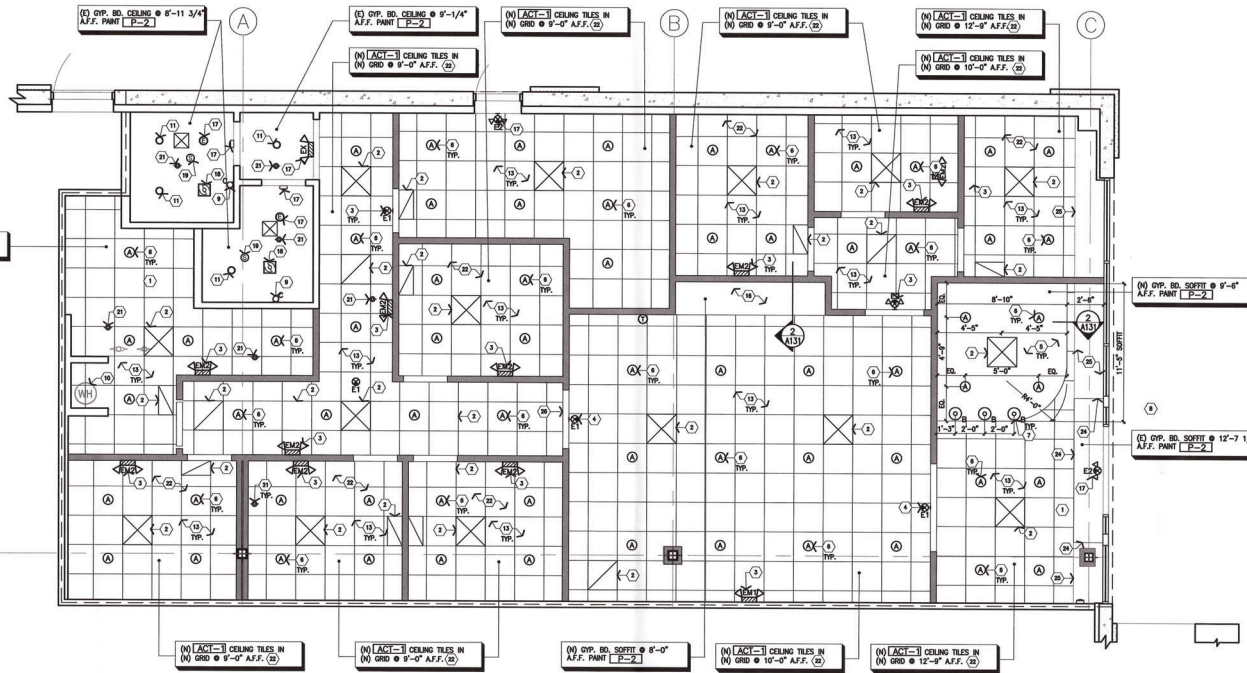
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Sheet Title: Partition Types and Details
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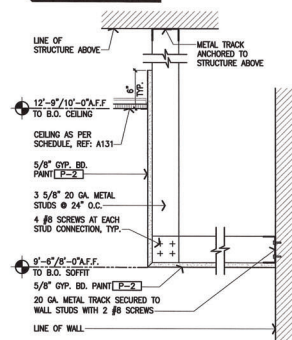
4 GENERAL NOTES

A123

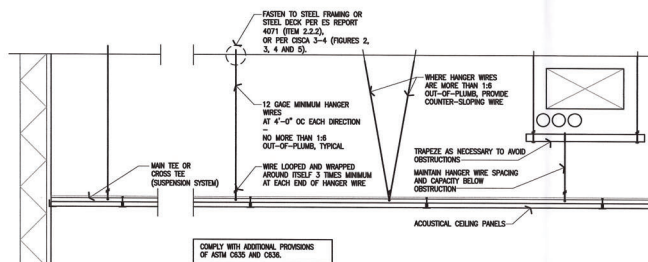


1 REFLECTED CEILING PLAN
1/4" = 1'-0"

ALL SUPPORTS TO BE FROM
STRUCTURAL BEAMS AND JOISTS
AND NOT FROM DECK ABOVE.



2 CEILING TRANSITION DETAIL



Perimeter Support
SUSPENDED ACOUSTICAL CEILING

General Support
SUSPENDED ACOUSTICAL CEILING

3 SUSPENDED CEILING DETAIL

- G.C. SHALL VISIT SITE PRIOR TO SUBMITTING BID. NO CHANGE ORDERS WILL BE ACCEPTED FOR EXISTING CONDITIONS.
- EMERGENCY LIGHTS TO BE INSTALLED ON SEPARATE CIRCUIT.
- ELECTRICAL CONTRACTOR TO VERIFY THAT EXISTING SERVICE IS ADEQUATE FOR DESIGN LOADS. IF NOT, NOTIFY ARCHITECT IMMEDIATELY.
- ALL EQUIPMENT SHALL BEAR UL LABELS.
- FIXTURES IN ACT TO BE MOUNTED IN CENTER OF TILE, UNLESS OTHERWISE NOTED.
- SPRINKLER VENDOR TO SUBMIT DRAWINGS TO THE A/E FOR ALL WORK BEING DONE.
- COORDINATE WITH ENGINEERING DRAWINGS FOR ALL MECHANICAL DUCT ROUTING.
- THE LOCATION FOR ACCESS PANEL(S) AS MAY BE REQUIRED IN CEILING SHALL BE COORDINATED WITH OWNER, ARCHITECT AND ENGINEER. LOCATION(S) SHALL BE SYMMETRICAL WITH CEILING DESIGN (AS MUCH AS POSSIBLE) G.C. TO VERIFY EXACT LOCATION IN FIELD, COORDINATE WITH ENGINEER DRAWINGS AND OWNER.

RCP GENERAL NOTES

- CEILING HEIGHT @ 33'-4" A.F.F. AT FRONT TO 20'-4" A.F.F. AT REAR OF SPACE.
- (N) DIFFUSER & (N) RETURN GRILLE, REF: MECHANICAL DRAWINGS FOR EXACT LOCATION AND ADDITIONAL INFORMATION.
- (N) EMERGENCY LIGHT, REF: ELECTRICAL DRAWINGS.
- (N) EXIT LIGHT, REF: ELECTRICAL DRAWINGS.
- (N) GYP. BD. SOFFIT ON METAL STUD FRAMING, REF: DETAIL 2/A131 AND A141 FOR FINISH SCHEDULE.
- (N) RECESSED CAN LIGHTS, REF: ELECTRICAL DRAWINGS.
- (N) SUSPENDED LIGHTING, REF: ELECTRICAL DRAWINGS. INSTALL @ 72" A.F.F. TO BOTTOM OF GLAZE.
- (N) G.C. TO PREP SIGN BAND FOR (N) SIGNAGE, G.C. TO MATCH (C) LANDSCAPE CONDITION.
- (N) WALL SCONCE, REF: ELECTRICAL DRAWINGS.
- (N) WATER HEATER ABOVE CEILING, REF: PLUMBING DRAWINGS.
- (N) RECESSED CAN LIGHTS, G.C. TO RE-LAMP WITH LED BULBS.
- (N) FIRE STROBE LIGHT, REF: FIRE ALARM DRAWINGS.
- (N) CEILING GRID & TILES, REF: DETAIL 3/A131 AND A141 FOR FINISH SCHEDULE.
- (N) EXHAUST FAN, REF: MECHANICAL DRAWINGS.
- (N) GYP. BD. SOFFIT @ 8'-0" A.F.F. REF: 2/A131.
- (N) EMERGENCY/EXIT LIGHT, REF: ELECTRICAL DRAWINGS.
- (N) EXHAUST FAN, REF: MECHANICAL DRAWINGS.
- (N) SMOKE DETECTOR.
- NOT USED.
- SPRINKLER HEAD, REF: SPRINKLER DRAWINGS FOR RECONFIGURATION.
- G.C. TO PROVIDE (N) SOUND BATT INSULATION ABOVE ACT CEILING.
- NOT USED.
- G.C. TO PATCH/REPAIR GYP. BD. SOFFIT TO MATCH ADJACENT CONDITIONS.
- (C) GYP. BD. SOFFIT @ 12'-7 1/4" TO REMAIN.

4 RCP KEY NOTES

Issue Date 06/10/26

Revisions	Date	Description	By
1			
2			
3			
4			
5			

A131



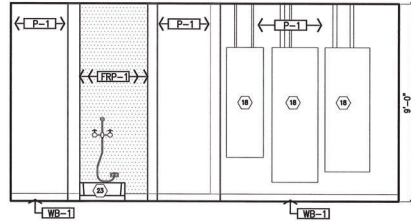
WALL ART SCHEDULE

- KEY NOTES

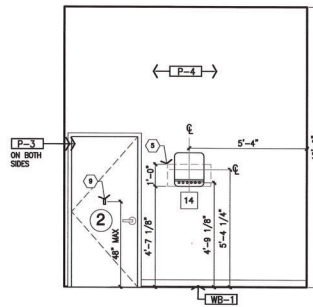


	WALL ART SCHEDULE
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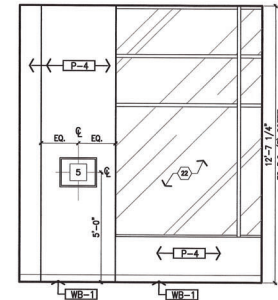
- KEY NOTES



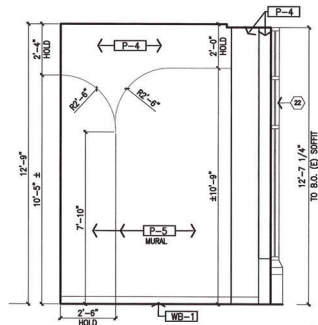
1 ELEVATION - STORAGE
3/8" = 1'-0" (FINISHES TYP AT ALL WALLS)



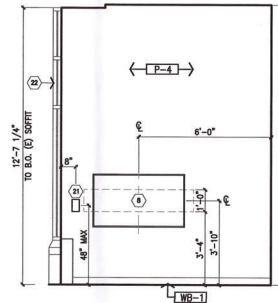
2 ELEVATION - TREATMENT ROOM
3/8" = 1'-0"



3 ELEVATION - TREATMENT ROOM
3/8" = 1'-0"



4 ELEVATION - TREATMENT ROOM
3/8" = 1'-0"



5 ELEVATION - TREATMENT ROOM
3/8" = 1'-0"

SYMBOL	ITEM	DESCRIPTION
1	FRAMED WALL ART	(2) 10'x14' CERTAINLY FRAMED
2	FRAMED WALL ART	(2) 10'x14' GOLF-DOOR
3	FRAMED WALL ART	(2) 10'x14' HORIZONTAL R. R. M
4	FRAMED WALL ART	(2) 10'x14' HORIZONTAL R. R. M
5	FRAMED WALL ART	(2) 10'x14' HORIZONTAL R. R. M
6	FRAMED WALL ART	(2) 10'x14' HORIZONTAL R. R. M
7	FRAMED WALL ART	(2) 10'x14' HORIZONTAL R. R. M
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Issue Date		06/10/26	
Revisions			
	Date	Description	By
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A201



TOWN OF NISKAYUNA

PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VIII. 1

MEETING DATE: 7/27/2026

ITEM TITLE: DISCUSSION: 398 Anthony St. – KJM Landscaping -- An application for site plan modifications to add a 30' x 60' non-permanent storage building, façade signage and storage areas.

PROJECT LEAD: TBD

APPLICANT: Karl Mohr

SUBMITTED BY: Laura Robertson

REVIEWED BY:

☐ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board
☐ OTHER:

ATTACHMENTS:

☐ Resolution ☒ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

Karl Mohr of KJM Landscaping, located at 398 Anthony St., submitted an application for modifications to the site plan to add a 30' x 60' non-permanent storage building, façade signage and storage areas. The Planning Board approved the tenant change from JDog Junk Removal to KJM Landscaping on February 23, 2026 with PB Resolution 2026-13.

The property lies within the I-G General Industrial zoning district. KJM Landscaping's use of the property is similar to the previous JDog Junk Removal mail-order sales offices and distribution centers; wholesale distribution and storage facilities use.

During the site plan review for the tenant change the Planning Office recommended that additional information be required of the applicant regarding items to be stored on the property, daily truck traffic associated with deliveries, etc. At that time the applicant indicated materials were delivered directly to the respective worksites and no storage of materials at 398 Anthony St. would be required. As they began to operate from the Anthony St. site during the spring of 2026 it became apparent that covered and open storage areas would be very useful to the business.

This is Mr. Mohor's initial appearance before the Planning Board for the requested modifications to the previously approved site plan.

COMPREHENSIVE PLAN

The proposed site plan application complies with the 2013 Comprehensive Plan.

BACKGROUND INFORMATION

The following documents were submitted with the site plan application.

1. A 1-page drawing entitled, "Site Plan for KJM Landscaping LLC, Street No. 398 Anthony Street" by ABD Engineers and Surveyors dated 7/1/26 with no subsequent revision dates was submitted to the Planning Office on 1/7/26.
2. An undated 1-page dimensioned sign drawing measuring 96"w x 42"h (28 sf) described as being constructed of white aluminum reading "KJM Seeding" and "KJM Landscaping".
3. A 1-page Google Map image of the exterior façade of the main building at 398 Anthony Street with the proposed locations for the two façade signs identified.
4. A Short Environmental Assessment Form Part 1 signed and dated July 1, 2026.

Proposed site plan modifications

1. *Non-permanent storage area* – the application proposes to add a 30' x 60' non-permanent covered storage area.
2. *Material sorting and recycling area* – a material sorting and recycling area is identified on the site plan with an oval dashed outline.
3. *Creation of two gravel areas* – two areas on the revised site plan drawing identify gravel surface areas.

Proposed New Signage

Column 7, Permitted Signs, of Niskayuna Zoning Code Schedule I-F for the I-G Zoning District lists the following specifications for signage: "Section 220-22" and "Same as C-N District regulations." Column 7, Permitted Signs of Schedule I-D for the C-N Zoning District lists the following.

"For all uses: For each linear foot of building frontage, 1 square foot of sign area shall be permitted. Such sign shall only be attached to the building face and shall not protrude more than 1 foot from the building face...Under no circumstances shall any 1 sign exceed 50 square feet." Therefore, the proposed 28 square foot sign is code compliant in terms of size, location and mounting. The proposed sign is also compliant with the requirements of Section 220-22 of the zoning code.

Next Steps

The PB should review the proposed site modifications with the applicant.



GENERAL NOTES:

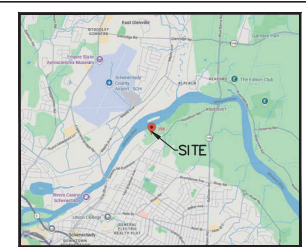
- THE PLANS SHOW SOME KNOWN STRUCTURE, ABOVEGROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA. EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPE LINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL U.T.F.O. (1-800-962-7962), TOLL FREE.
- WETLANDS REVIEW BY ARD ENGINEERS & SURVEYORS ON MAY 27, 2020 FIELD WALK AND WETLANDS DATABASE. NO WETLANDS EXIST ON THE PARCEL OR WITHIN 100 FEET OF THE STREAM TO THE EAST.

MAP NOTES:

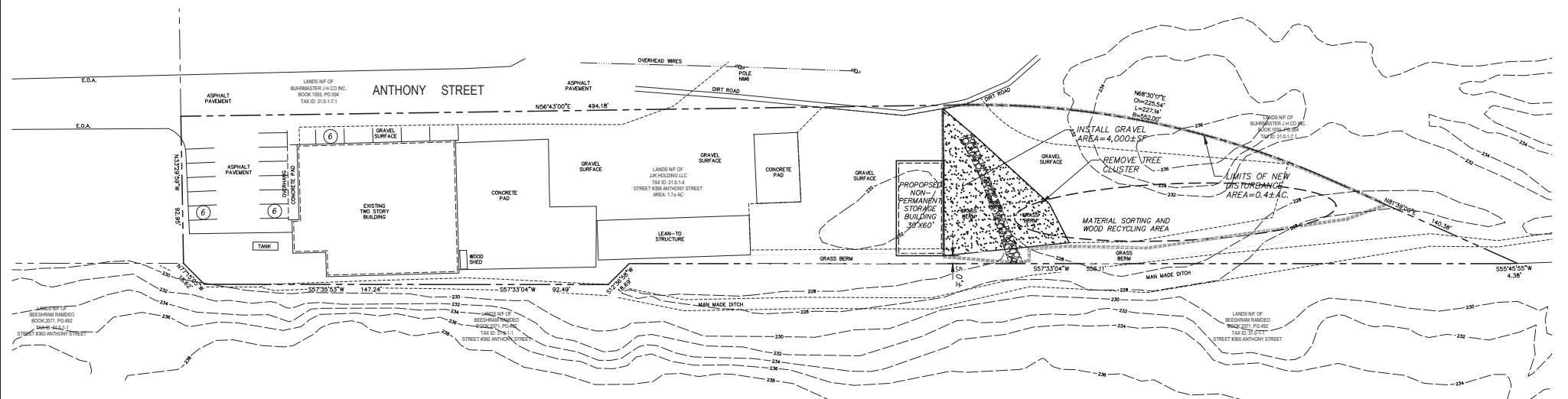
- BASE MAPPING SHOWN HEREON WAS COMPILED FROM THE MAP REFERENCE.
- TAX MAP DESIGNATION: 31.0 - 1 - 4.
- TOPOGRAPHIC INFORMATION SHOWN HEREON WAS COMPILED FROM AVAILABLE SCHENECTADY COUNTY LIDAR DATA.
- THE OFFSETS OR DIMENSIONS SHOWN HEREON FROM PROPERTY LINES TO BUILDINGS ARE FOR BUILDING REFERENCE AND LOCATION AND ARE NOT INTENDED TO MONUMENT THE PROPERTY LINES OR TO GUIDE THE ERECTION OF FENCES, ADDITIONAL STRUCTURES, OR ANY OTHER IMPROVEMENTS.
- SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS AND RESTRICTIONS OF RECORD.

MAP REFERENCE:

1. "LOT LINE ADJUSTMENT BETWEEN LANDS OF 388 ANTHONY STREET AND 380 ANTHONY STREET, TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NEW YORK," DATED JAN. 26, 2016, LAST RECORDED NOVEMBER 19, 2020, AS PREPARED BY C.T. WALE ASSOCIATES.



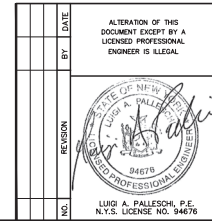
SITE LOCATION MAP
N.T.S.



REQUIRED:	
ZONING:	I-G GENERAL INDUSTRIAL
LOT AREA:	43,560 SF MIN.
LOT WIDTH:	150' MIN.
LOT DEPTH:	150' MIN.
BLDG. HEIGHT:	75' MAX.
PERCENTAGE OF COVERAGE BY BLDGS. & STRUCTURES:	25% MAX.
SETBACKS:	
FRONT:	50' MIN.
SIDE:	15' (30' TOTAL BOTH SIDES)
REAR:	25' MIN.

COVERAGE STATISTICS	EXISTING	PROPOSED
BUILDINGS: 25% MAX.	10,993 SF 14.6%	12,793 SF 17.3%
PAVEMENT:	41,987 SF 56.6%	44,167 SF 59.6%
GREEN SPACE:	21,139 SF 28.6%	17,139 SF 23.1%
TOTAL:	74,119 SF (1.70 ACRES)	100%

PARKING REQUIREMENTS	SPACES REQUIRED	SPACES REQUIRED	SPACES PROVIDED
CONSTRUCTION STORAGE YARD AND AUTOMOBILE STORAGE YARD	1 SPACE PER EMPLOYEE BUT NOT LESS THAN 5 SPACES	10 SPACES	18 SPACES



ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL ENGINEER IS ILLEGAL.

STATE OF NEW YORK
COUNTY OF SCHENECTADY

SITE PLAN
FOR
KJM LANDSCAPING LLC
STREET No. 398 ANTHONY STREET

TOWN OF NISKAYUNA

STATE OF NEW YORK
COUNTY OF SCHENECTADY

ARD ENGINEERS & SURVEYORS
411 Union Street
Schenectady, N.Y. 12305
518-377-0315 Fax: 518-377-0379
www.ardeng.com

DATE: JULY 1, 2026
SCALE: 1" = 30'
DWG. 5998A-S2
SHEET 1 OF 1



WHITE ALUMINUM SIGN LOCATED ON THE STREET SIDE OF 398 ANTHONY
THE LANDSCAPING SIGN WOULD GO RIGHT NEXT TO IT.







"White aluminum sign located on the street side of 398 Anthony St." to the 96" x 42" sign



Option 1
96"x42" SIGN
MOUNTED TO THE
BLDG.



96 in



Short Environmental Assessment Form

Part 1 - Project Information

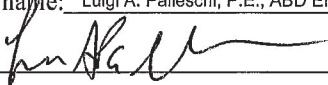
Instructions for Completing

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 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: KJM Landscaping, LLC			
Project Location (describe, and attach a location map): 398 Anthony Street, Niskayuna, Ny 12309			
Brief Description of Proposed Action: To modify existing landscaping operations, expand area, construct storage building, and wood recycling area.			
Name of Applicant or Sponsor: KJM Landscaping, LLC		Telephone: 518-487-8649	
		E-Mail: kjmlandscapingllc@gmail.com	
Address: 398 Anthony Street			
City/PO: Schenectady		State: NY	Zip Code: 12308
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 ☒
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Planning Board, Building Department			NO ☐
			YES ☒
3. a. Total acreage of the site of the proposed action?		1.6 acres	
b. Total acreage to be physically disturbed?		0.4 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		1.6 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
☐ Urban ☐ Rural (non-agriculture) ☒ Industrial ☒ Commercial ☐ Residential (suburban)			
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):			
☐ Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☒	☒	☐
b. Consistent with the adopted comprehensive plan?	☒	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify:	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation services available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:	☐	☒	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☐	☒	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☐	☒	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☒	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☐	☒	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	☒	☐
16. Is the project site located in the 100-year or 500-year flood plain?	NO	YES
	☒	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: Man made ditch	NO	YES
	☐	☒
	☒	☐
	☐	☒
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	☒	☐
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
	☒	☐
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: B00053, C447050 RIVER SIDE REZONING PARK & 45 MICHIGAN AVE	NO	YES
	☐	☒
21. Is the project located within, or within ½ mile of, a disadvantaged community? If No, could impacts from the project affect a disadvantaged community? If Yes to either question in 21, answer the following question. a. Identify the potential pollution impacts of the project, either direct or indirect, that may occur within the disadvantaged community (e.g., wastewater discharges, air emissions, noise, odors, solid or hazardous waste generation or management): None	NO	YES
	☐	☒
	☐	☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Luigi A. Palleschi, P.E., ABD Engineers & Surveyors, LLP</u> Date: <u>July 1, 2026</u> Signature: <u></u> Title: <u>Professional Engineer</u>		



TOWN OF NISKAYUNA

PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VIII. 2

MEETING DATE: 7/27/2026

ITEM TITLE: DISCUSSION: 2772 Troy Schenectady Rd. – NFD #2 – A site plan application for an addition to the existing fire station

PROJECT LEAD: TBD

APPLICANT: Mark DeCrescente, P.E., agent

SUBMITTED BY: Laura Robertson

REVIEWED BY:

☐ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board
☐ OTHER:

ATTACHMENTS:

☐ Resolution ☒ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

Mark DeCrescente, P.E., of Engineering Ventures, PC, agent for the owner, submitted an application for the construction of an addition to the Niskayuna Fire District No. 2 station at 2772 Troy Schenectady Rd.

The property lies within the R-2 Medium Density Residential zoning district.

This is Mr. DeCrescente's initial appearance before the board for the application.

COMPREHENSIVE PLAN

The proposed project complies with the current (2013) Comprehensive Plan.

BACKGROUND INFORMATION

The following documents were included with the application.

1. A 17-page site plan drawing set entitled "Niskayuna Fire District 2, Phase 2 – Additions, 2772 Balltown Rd., Schenectady, NY 12309" by Synthesis Architects dated 7/6/26 with no subsequent revisions.
2. A Short Form EAF dated 7/8/26
3. A 1-page survey drawing entitled "Boundary & Topographic Survey of the Lands of Niskayuna Fire District No 2" by Ausfeld & Waldruff Land Surveyors LLP dated 4/23/26 with no subsequent revisions

4. A 148-page Storm Water Pollution Prevention Program (SWPPP) entitled “Minor Stormwater Pollution Prevention Plan and Calculations Report for Niskayuna Fire District #2 – Phase 2 Additions” by Engineering Ventures, PC dated July 2, 2026 with no subsequent revisions.
5. A 2-page floorplan drawing entitled “Niskayuna Fire District 2, Phase 2” by Synthesis Architects dated “Last Saved: 7/8/26 12:15:38 PM” with no subsequent revisions.
6. An 11-page set of lighting manufacturer’s cut sheets

The application and supporting materials propose the following changes.

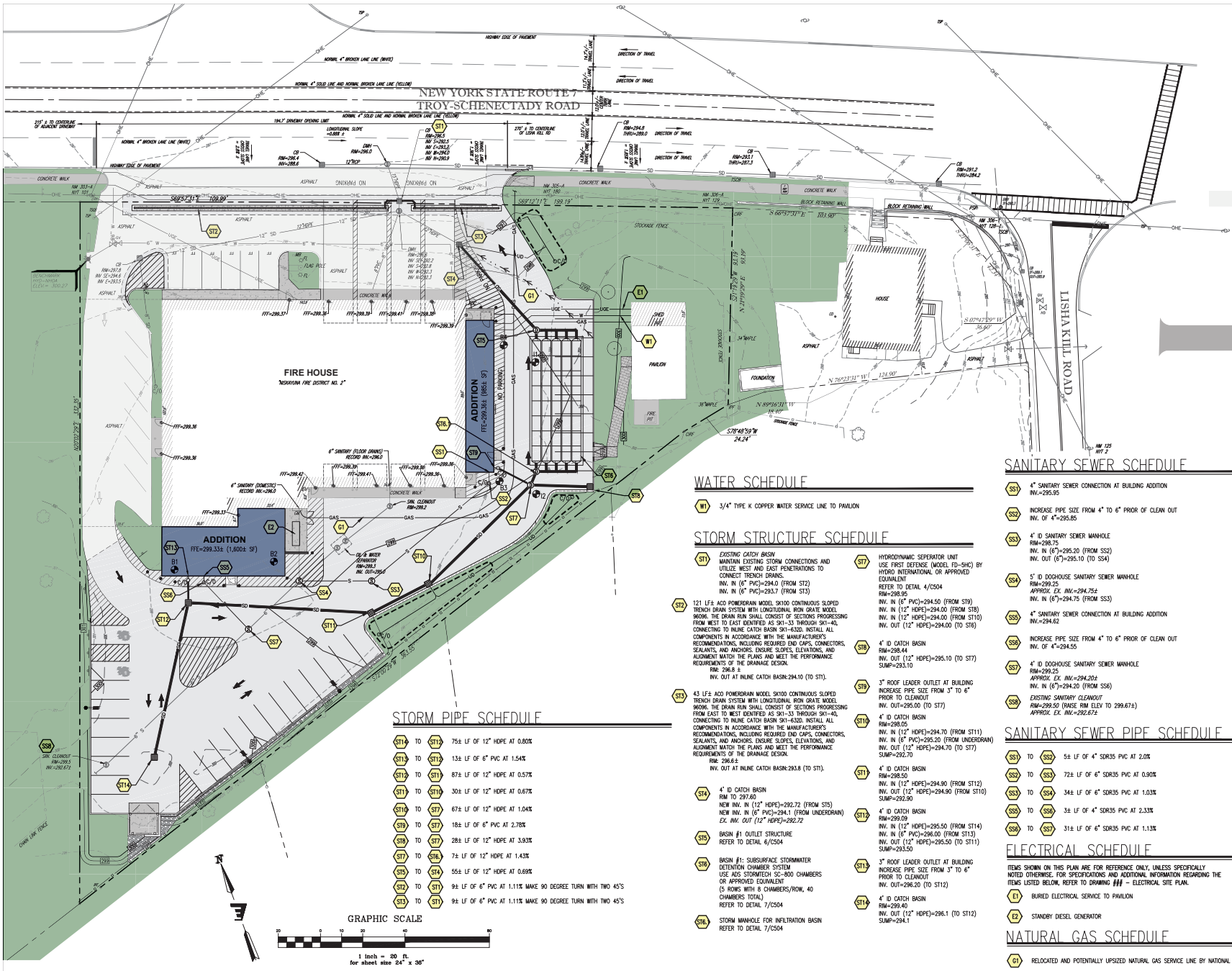
1. A 1,600 +/- SF addition to the rear (southwest corner) of the existing building
2. A 985 +/- SF addition to the eastern side of the existing building
3. Relocation of an existing shed from the southwest corner of the property to the northeastern side of the property.
4. Reconfiguration of portions of the parking lot as a result of the two additions

During the initial review of the documentation package the Planning Office noted that the locations for the two sheds do not comply with the required setbacks. Since the original submittal, the applicant has removed the two non-conforming shed locations from the plan (colored rendering).

The Fire District felt this was a type 2 action under SEQR and the Planning Department concurred. The basis for this determination is as follows:

- The project involves less than 4,000 square feet of gross floor area.
- The project does not involve a substantial change in land use.
- The project does not appear to trigger any other Type I thresholds.
- The project does not involve sensitive resources or other conditions that would preclude a Type II classification.

The Planning Board and Mr. DeCrescente should discuss the plans and review the proposed additions.



WATER SCHEDULE

- 3/4" TYPE K COPPER WATER SERVICE LINE TO PAVLON

STORM STRUCTURE SCHEDULE

- EXISTING CATCH BASIN
MAINTAIN EXISTING STORM CONNECTIONS AND
UTILIZE WEST AND EAST PENETRATIONS TO
CONNECT TRENCH DRAINS.
INV. IN (6" PVC)=294.0 (FROM ST2)
INV. IN (6" PVC)=293.5 (FROM ST3)
- 12" LF 4" ACD POWERGRAB MODEL SK100 CONTINUOUS SLOPED
TRENCH DRAIN SYSTEM WITH LONGITUDINAL IRON GRATE MODEL
9600. THE DRAIN RUN SHALL CONSIST OF SECTIONS PROGRESSING
FROM WEST TO EAST IDENTIFIED AS SK1-33 THROUGH SK1-40,
CONNECTING TO INLINE CATCH BASIN SK1-40. INSTALL ALL
COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S
RECOMMENDATIONS, INCLUDING REQUIRED END CAPS, CONNECTORS,
SEALANTS, AND ANCHORS. ENSURE SLOPES, ELEVATIONS, AND
ALIGNMENT MATCH THE PLANS AND MEET THE PERFORMANCE
REQUIREMENTS OF THE DRAINAGE DESIGN.
RIM: 296.8
INV. OUT AT INLINE CATCH BASIN: 294.10 (TO ST1)
- 43' LF 4" ACD POWERGRAB MODEL SK100 CONTINUOUS SLOPED
TRENCH DRAIN SYSTEM WITH LONGITUDINAL IRON GRATE MODEL
9600. THE DRAIN RUN SHALL CONSIST OF SECTIONS PROGRESSING
FROM EAST TO WEST IDENTIFIED AS SK1-33 THROUGH SK1-40,
CONNECTING TO INLINE CATCH BASIN SK1-40. INSTALL ALL
COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S
RECOMMENDATIONS, INCLUDING REQUIRED END CAPS, CONNECTORS,
SEALANTS, AND ANCHORS. ENSURE SLOPES, ELEVATIONS, AND
ALIGNMENT MATCH THE PLANS AND MEET THE PERFORMANCE
REQUIREMENTS OF THE DRAINAGE DESIGN.
RIM: 296.8
INV. OUT AT INLINE CATCH BASIN: 293.8 (TO ST1)
- 4" ID CATCH BASIN
RIM TO 297.60
NEW INV. IN (12" HOPE)=292.72 (FROM ST5)
NEW INV. IN (6" PVC)=294.1 (FROM UNDERDRAIN)
EX. INV. OUT (12" HOPE)=292.72
- BASEIN #1 OUTLET STRUCTURE
REFER TO DETAIL 6/C504
- BASEIN #1: SURGEWATER STORMWATER
DETENTION CHAMBER SYSTEM
USE ACD STORMTECH SC-800 CHAMBERS
OR APPROVED EQUIVALENT
(5 ROWS WITH 8 CHAMBERS/ROW, 40
CHAMBERS TOTAL)
REFER TO DETAIL 7/C504
- STORM MANHOLE FOR INFILTRATION BASIN
REFER TO DETAIL 7/C504
- HYDRODYNAMIC SEPARATOR UNIT
USE FIRST DEFENSE (MODEL FD-SHC) BY
HYDRO INTERNATIONAL OR APPROVED
EQUIVALENT
REFER TO DETAIL 4/C504
RIM=296.90
INV. IN (6" PVC)=294.50 (FROM ST9)
INV. IN (12" HOPE)=294.00 (FROM ST8)
INV. IN (12" HOPE)=294.00 (FROM ST10)
INV. OUT (12" HOPE)=294.00 (TO ST8)
- 4" ID CATCH BASIN
RIM=298.44
INV. OUT (12" HOPE)=295.10 (TO ST7)
SUMP=293.10
- 3" ROOF LEADER OUTLET AT BUILDING
INCREASE PIPE SIZE FROM 3" TO 6"
PRIOR TO CLEARDOUT
RIM=296.50 (TO ST7)
- 4" ID CATCH BASIN
RIM=298.05
INV. IN (12" HOPE)=294.70 (FROM ST11)
INV. IN (6" PVC)=295.20 (FROM UNDERDRAIN)
INV. OUT (12" HOPE)=294.70 (TO ST7)
SUMP=292.70
- 4" ID CATCH BASIN
RIM=298.50
INV. IN (12" HOPE)=294.90 (FROM ST12)
INV. OUT (12" HOPE)=294.90 (FROM ST10)
SUMP=292.90
- 4" ID CATCH BASIN
RIM=299.09
INV. IN (12" HOPE)=295.50 (FROM ST14)
INV. IN (6" PVC)=296.00 (FROM ST13)
INV. OUT (12" HOPE)=295.50 (TO ST11)
SUMP=293.50
- 3" ROOF LEADER OUTLET AT BUILDING
INCREASE PIPE SIZE FROM 3" TO 6"
PRIOR TO CLEARDOUT
INV. OUT=296.20 (TO ST12)
- 4" ID CATCH BASIN
RIM=298.40
INV. OUT (12" HOPE)=296.1 (TO ST12)
SUMP=294.1

SANITARY SEWER SCHEDULE

- 4" SANITARY SEWER CONNECTION AT BUILDING ADDITION
INV. OF 4"-295.95
- INCREASE PIPE SIZE FROM 4" TO 6" PRIOR OF CLEAN OUT
INV. OF 4"-295.85
- 4" ID SANITARY SEWER MANHOLE
RIM=298.75
INV. IN (6")=295.20 (FROM SS2)
INV. OUT (6")=295.10 (TO SS4)
- 5" ID DOGHOUSE SANITARY SEWER MANHOLE
RIM=299.25
APPROX. EX. INV.=294.75
INV. IN (6")=294.75 (FROM SS3)
- 4" SANITARY SEWER CONNECTION AT BUILDING ADDITION
INV.=294.62
- INCREASE PIPE SIZE FROM 4" TO 6" PRIOR OF CLEAN OUT
INV. OF 4"-294.55
- 4" ID DOGHOUSE SANITARY SEWER MANHOLE
RIM=299.25
APPROX. EX. INV.=294.20
INV. IN (6")=294.20 (FROM SS6)
- EXISTING SANITARY CLEARDOUT
RIM=299.50 (BASE RIM ELEV TO 299.674)
APPROX. EX. INV.=292.674

SANITARY SEWER PIPE SCHEDULE

- 54 LF OF 4" SDR35 PVC AT 2.0%
- 72 LF OF 6" SDR35 PVC AT 0.0%
- 34 LF OF 6" SDR35 PVC AT 1.0%
- 34 LF OF 4" SDR35 PVC AT 2.3%
- 31 LF OF 6" SDR35 PVC AT 1.1%

ELECTRICAL SCHEDULE

- ITEMS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY, UNLESS SPECIFICALLY
NOTED OTHERWISE. FOR SPECIFICATIONS AND ADDITIONAL INFORMATION REGARDING THE
ITEMS LISTED BELOW, REFER TO DRAWING #11 - ELECTRICAL SITE PLAN.

- BURIED ELECTRICAL SERVICE TO PAVLON
- STANDBY DIESEL GENERATOR

NATURAL GAS SCHEDULE

- RELOCATED AND POTENTIALLY UPSIZED NATURAL GAS SERVICE LINE BY NATIONAL GRID

PRINCIPALS

Michael Szomanski, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Freeman Filler Associates
22 Avonlea Road
Albany, New York 12205

Structural Engineer
Schenectady City & County
Structural Engineers, P.C.
Aver Park North 200 Faber Dr
Aver Park North, Connecticut 06001

PHASE 2

Not for Construction

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No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220203.03
BY PROJECT NO.	25496.00
DATE	7/6/2026
DRAWN BY	MHD
CHECKED BY	

Utility Plan

July 9, 2026

Ms. Laura Robertson, AICP
Town Planner
Town of Niskayuna Planning Department
1 Niskayuna Circle
Niskayuna, New York 12309

**RE: Niskayuna Fire District No. 2 Building Additions
Town Of Niskayuna, Schenectady County, New York
EV Project No. 25486
Site Plan Application**

Dear Ms. Robertson:

On behalf of the Applicant, Niskayuna Fire District #2, please find attached the Site Plan Review Application for the Niskayuna Fire District #2-Phase 2 Additions, located at 2772 Troy-Schenectady Road, Schenectady, NY 12309.

The project includes construction of a new decontamination (decon) addition and expanded meeting spaces to improve the functionality and operational capabilities of the existing facility. Site improvements include expansion and reconfiguration of the parking area to increase parking capacity, relocation of existing storage sheds, replacement of the existing trench drain along Troy-Schenectady Road (NYS Route 7), and upgraded site lighting. The project also includes stormwater management improvements, sanitary sewer improvements, and installation of a new standby generator. Upon completion, the site will provide 45 parking spaces and will include stormwater management, lighting, utilities, and other associated infrastructure improvements.

The project will require a Commercial Driveway Access Permit from the NYSDOT for the modifications to the site access and work within the Right of Way of NYS Route 7. The NYSDOT has been notified of the project and a formal permit will be filed concurrently with the Site Plan Application process. In addition, due to the project being located in or adjacent to an area designated as sensitive for archeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory, a SHPO consultation was filed on July 8, 2026. As of this letter, we are awaiting a response from SHPO and will forward all documentation to the Town upon receipt.

Attached for your review are the following materials:

1. Site Plan Application (3 copies)
2. SEQR Short EAF (3 copies)
3. Half size (12" x 18") Site Plans, prepared by Engineering Ventures, and dated 07/06/2026 (3 copies)
4. Half-size (12" x 18") Floor Plans and Elevations, prepared by Synthesis Architects (3 copies)
5. Half size (12" x 18") Site Survey, prepared by Ausfeld & Waldruff Land Surveyors (3 copies)

6. Site Lighting Cutsheets (3 copies)
7. Minor Stormwater Pollution Prevention Plan and Calculations Report, prepared by Engineering Ventures, and dated 07/02/2026 (1 copy)
8. One (1) digital copy of all application materials provided on a thumb drive

We understand that the Fire District is exempt from the Site Plan Review Application Fee.

Please let us know if any additional information is needed. If you have any questions, feel free to contact me by phone or email.

Sincerely,



Mark DeCrescente, PE



Cc: James Graham, Synthesis Architects ()

LeRoy Wyman, Niskayuna Fire District No. 2 Commissioner ()

TOWN OF NISKAYUNA

Application for Site Plan Review

Applicant (Owner or Agent):

Name Niskayuna Fire District 2

Address 2772 Troy-Schenectady Rd,
Schenectady, NY, 12309

Telephone [REDACTED] Fax _____

Location:

Number & Street 2772 Troy-Schenectady Rd

Section-Block-Lot 61.11 - 4 - 2.1

Zoning District R-2 Medium Density Residential

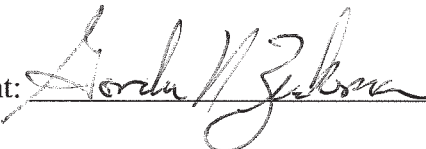
Proposal Description:

The project includes construction of a new decontamination (decon) addition and expanded meeting spaces to improve the functionality and operational capabilities of the existing facility. Site improvements include expansion and reconfiguration of the parking area to increase parking capacity, relocation of existing storage sheds, replacement of the existing trench drain along Troy-Schenectady Road, and upgrading site lighting. The project also includes stormwater management improvements, sanitary sewer improvements, and installation of a new standby generator.

Each site plan application shall be accompanied by:

1. Twelve (12) site plan maps prepared by a licensed engineer, architect or surveyor.
 - a. The site plan shall include the following: the title of the drawing, including the name(s), address(es), phone and fax numbers of the applicant and the name address, phone and fax number of the person, firm or organization preparing the map.
 - b. The North point, date and scale.
 - c. Boundaries of the property.
 - d. Existing watercourses and direction of existing and proposed drainage flow.
 - e. The location of all proposed site improvements; proposed water and utility facilities; a description of the method of sewage disposal and location of such facilities; the location of all proposed signs; and location of proposed areas of vegetation.
2. A lighting plan showing the lighting distribution of existing or proposed lights, specifications, photometric data, and catalog cuts of the proposed fixture(s) which meet the requirements of Article VIII B of the Zoning Ordinance of the Town of Niskayuna entitled "Guidelines for Lighting of Outdoor Areas under Site Plan Review".
3. Six (6) copies of the short or long Environmental Assessment Form (EAF), as required by 6NYCRR Part 617, "State Environmental Quality Review", and Chapter 95, "Environmental Quality Review", of the Code of the Town of Niskayuna.

4. If the application is being made by someone other than the current property owner, the applicant or the agent for the applicant must provide proof that they are authorized to pursue this site plan approval. Such proof may be in the form of a contract for sale or letter by the current owner that the applicant/agent is authorized to proceed with this application.
5. Administration Fees: An application for site plan approval shall be submitted to the Planning Board at least ten (10) business days prior to a regular meeting of the Planning Board. Each petition shall be accompanied by a minimum fee of **two hundred dollars (\$200.00)** plus an additional fee based on the square footage of new building construction. Fees are payable to the Town of Niskayuna.
6. Consulting Fees: The cost incurred by the Town for the review of an application by the Town Engineer, consulting engineering firm or other consulting fees, in connection with a Board's review of a proposed application shall be charged to the applicant. The Board to whom the application is made shall obtain an estimate from any designated consultant of the amount sufficient to defray the cost of such services and shall collect from the applicant the estimated charges. Any portion of the estimated charges so collected, which are not expended by the Town, shall be returned to the applicant. Any such costs incurred by the Town beyond the estimated charges initially collected from the applicant, shall be collected from the applicant prior to final action upon the application.

Signature of applicant:  Date: 7/8/2026

Signature of owner (if different from applicant): _____

Date: _____

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

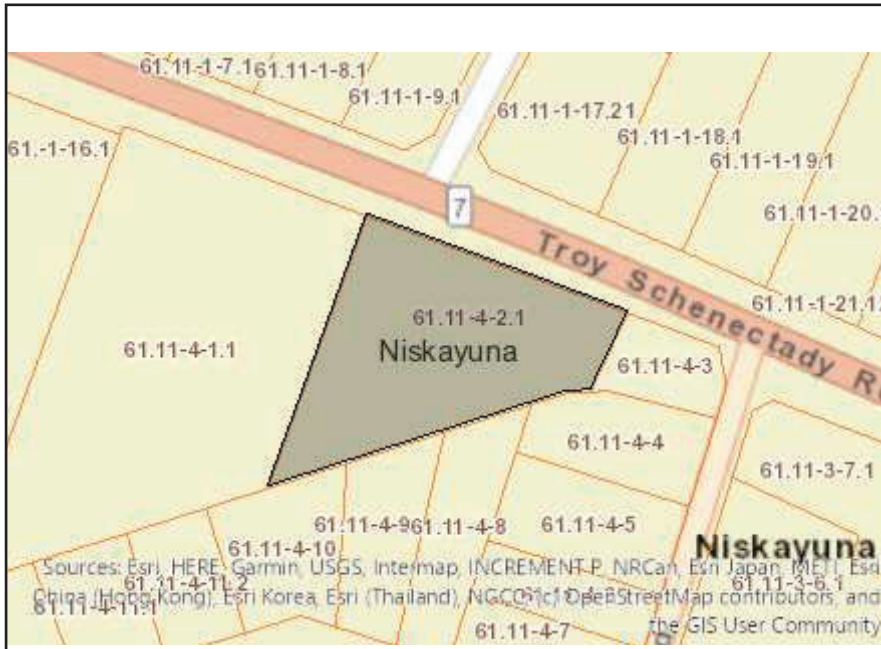
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. 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 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: Niskayuna Fire District 2 Phase 2 Additions			
Project Location (describe, and attach a location map): South Side of NYS Route 7 Troy-Schenectady Road, approx. 266.60 feet West of intersection with Lisha Kill Road			
Brief Description of Proposed Action: The project includes construction of a new decontamination (decon) addition and expanded meeting spaces to improve the functionality and operational capabilities of the existing facility. Site improvements include expansion and reconfiguration of the parking area to increase parking capacity, relocation of existing storage sheds, replacement of the existing trench drain along Troy-Schenectady Road, and upgraded site lighting. The project also includes stormwater management improvements, sanitary sewer improvements, and installation of a new standby generator.			
Name of Applicant or Sponsor:		T [REDACTED]	
Gordon Zuckerman, Chairman of the Board of Fire Commissioners		E [REDACTED]	
Address: 2772 Troy-Schenectady Rd			
City/PO: Schenectady		State: NY	Zip Code: 12309
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?		NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If No, continue to question 2.		☒	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency?		NO	YES
If Yes, list agency(s) name and permit or approval: NYSDOT		☐	☒
3. a. Total acreage of the site of the proposed action?		1.49 acres	
b. Total acreage to be physically disturbed?		0.80 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		0 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☒ Commercial ☒ Residential (suburban)			
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):			
☐ Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☐	☒	☐
b. Consistent with the adopted comprehensive plan?	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify:	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation services available at or near the site of the proposed action?	☐	☒	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☒	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:	☐	☒	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☐	☒	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☐	☒	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☒	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			

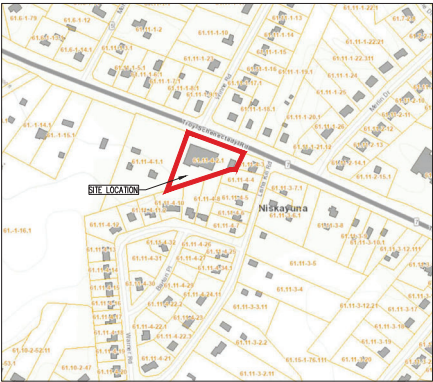
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO ☒	YES ☐
16. Is the project site located in the 100-year or 500-year flood plain?	NO ☒	YES ☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: Stormwater will be directed to an existing drainage system within NYSDOT ROW. On-site stormwater will be collected by a series of catch basins, trench drains, and will be managed by an underground detention basin in order to mitigate the increase in flows created from the proposed project.	NO ☐ ☐ ☐	YES ☒ ☒ ☒
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: _____	NO ☒	YES ☐
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 ☐
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 ☐
21. Is the project located within, or within ½ mile of, a disadvantaged community? If No, could impacts from the project affect a disadvantaged community? If Yes to either question in 21, answer the following question. a. Identify the potential pollution impacts of the project, either direct or indirect, that may occur within the disadvantaged community (e.g., wastewater discharges, air emissions, noise, odors, solid or hazardous waste generation or management):	NO ☒ ☒	YES ☐ ☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Gordon N. Zuckerman, CHAIR</u> Date: <u>7/8/2026</u> Signature: <u>Gordon N. Zuckerman</u> Title: <u>CHAIRMAN</u>		



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources to confirm data provided by the Mapper or to obtain data not provided by the Mapper.

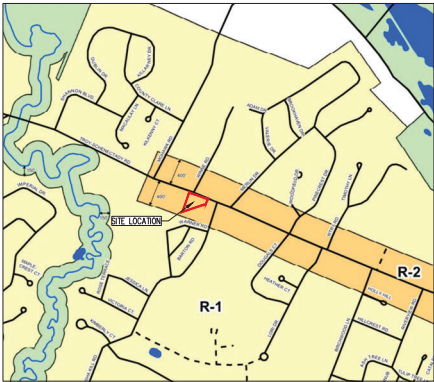


Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 or 500 Year Floodplain]	No
Part 1 / Question 20 [Remediation Site]	No
Part 1 / Question 21 [Disadvantaged Community]	No



TAX MAP

SCALE: 1" = 300'



ZONING DISTRICT MAP

ZONING KEY
MEDIUM DENSITY RESIDENTIAL (R-2)
LOW DENSITY RESIDENTIAL (R-1)
LAND CONSERVATION (L-C)

SCALE: 1" = 900'



VICINITY MAP

SCALE: 1" = 300'

GENERAL NOTES

- EXACT OBJECT LOCATIONS MAY DIFFER FROM THAT AS SHOWN, AND ADDITIONAL SUB-SURFACE AND SURFACE UTILITIES AND STRUCTURES MAY EXIST. THE CONTRACTOR IS TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK AND TO CALL DIG SAFE 72 HOURS PRIOR TO ANY DIGGING, DRILLING OR BLASTING.
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL FROM THE ENGINEER.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO EXISTING CONDITIONS OR BETTER AS DETERMINED BY THE TOWN OF NISKAYUNA. ANY DAMAGED TREES, SHRUBS AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION-RELATED PERMITS, INSPECTIONS, AND CERTIFICATES.
- THE CONTRACTOR WILL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW YORK STATE LICENSED LAND SURVEYOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT EXPLORATORY TEST PITS AS MAY BE REQUIRED TO DETERMINE UNDERGROUND CONDITIONS.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST OSHA AND NYS DEPARTMENT OF LABOR REGULATIONS FOR CONSTRUCTION. EXCAVATION BACKFILL ADJACENT TO EXISTING FOUNDATIONS AND BUILDINGS SHALL NOT EXTEND BELOW OR ABOVE THE EXISTING GRADE(S) OF SAID STRUCTURE(S) WITHOUT ADEQUATE SHEETING, BRACING, SHORING AND/OR UNDERPINNING DESIGNED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEMATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND IMPROVED SURFACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING CONNECTIONS, BENDS, VALVES, LOCATIONS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, MONITORING, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES AND TAKING PRECAUTIONARY STEPS TO AVOID ANY SEDIMENT TRANSFER TO NEIGHBORING SITES OR WATERS OF THE STATE.

SHEET INDEX

SHEET	SHEET TITLE
C001	SITE LEGEND AND NOTES
C201	EXISTING CONDITIONS AND DEMOLITION PLAN
C101	SITE PLAN
C102	GRADING PLAN
C103	UTILITY PLAN
C104	EROSION AND SEDIMENT CONTROL PLAN
C105	LIGHTING PLAN
C201	STORM PROFILES
C202	SANITARY & WATER PROFILES
C501	SITE DETAILS (1 of 3)
C502	SITE DETAILS (2 of 3)
C503	SITE DETAILS (3 of 3)
C504	STORMWATER DETAILS
C505	SANITARY DETAILS
C506	WATER DETAILS
C507	EROSION AND SEDIMENT CONTROL DETAILS (1 OF 2)
C508	EROSION AND SEDIMENT CONTROL DETAILS (2 OF 2)

SUBJECT PROPERTY:

2772 TROY SCHENECTADY ROAD
NISKAYUNA, NY 12309
TAX MAP PARCEL ID: 61-11-4-2.1

PROPERTY OWNER:

NISKAYUNA FIRE DISTRICT NO. 2
2772 TROY SCHENECTADY ROAD
NISKAYUNA, NY 12309

CONSULTANT/DESIGNER

ENGINEERING VENTURES, PC
368 BROADWAY, SUITE 11
SARATOGA SPRINGS, NY 12866
(518) 205-9141
www.engineeringventures.com

SYMBOL LEGEND

PROPOSED FEATURES	EXISTING FEATURES
BOUND	BOUND
BENCHMARK	BENCHMARK
DRILL HOLE	DRILL HOLE
SURVEY POINT	SURVEY POINT
IRON PIN	IRON PIN
TEST PIT	TEST PIT
BORING	BORING
PERC TEST	PERC TEST
CATCH BASIN (SQUARE)	CATCH BASIN (SQUARE)
CATCH BASIN (ROUND)	CATCH BASIN (ROUND)
HEADWALL	HEADWALL
FLARED END SECTION	FLARED END SECTION
STONE APRON	STONE APRON
DRAIN MANHOLE (DMH)	DRAIN MANHOLE (DMH)
DRAINAGE CLEAN OUT	DRAINAGE CLEAN OUT
SANITARY SEWER MANHOLE (SMH)	SANITARY SEWER MANHOLE (SMH)
SANITARY CLEAN OUT	SANITARY CLEAN OUT
HYDRANT	HYDRANT
WATER SHUTOFF	WATER SHUTOFF
TAPPING SLEEVE & VALVE	TAPPING SLEEVE & VALVE
GATE VALVE	GATE VALVE
WELL	WELL
UTILITY POLE	UTILITY POLE
GUY POLE	GUY POLE
ELECTRICAL MANHOLE	ELECTRICAL MANHOLE
FLOOD LIGHT	FLOOD LIGHT
LIGHT POST	LIGHT POST
TELEPHONE MANHOLE	TELEPHONE MANHOLE
NATURAL GAS MANHOLE	NATURAL GAS MANHOLE
COMMUNICATION MANHOLE	COMMUNICATION MANHOLE
BOLLARD	BOLLARD
SINGLE POLE SIGN	SINGLE POLE SIGN
DOUBLE POLE SIGN	DOUBLE POLE SIGN
SPOT ELEVATION	SPOT ELEVATION
ACCESSIBLE PARKING STALL	ACCESSIBLE PARKING STALL
ELECTRIC VEHICLE PARKING STALL	ELECTRIC VEHICLE PARKING STALL
DRAINAGE FLOW	DRAINAGE FLOW
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE

268

NRCS SOIL CLASSIFICATION

LINE/TYPE LEGEND

PROPOSED FEATURES	EXISTING FEATURES
100 MAJOR CONTOUR	100 MAJOR CONTOUR
98 MINOR CONTOUR	98 MINOR CONTOUR
PROPERTY LINE	PROPERTY LINE
SETBACK	SETBACK
EASEMENT	EASEMENT
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
EDGE OF DRAIN	EDGE OF DRAIN
EDGE OF CONCRETE	EDGE OF CONCRETE
CURB	CURB
FENCE (BARBED WIRE)	FENCE (BARBED WIRE)
FENCE (CHAIN LINK)	FENCE (CHAIN LINK)
FENCE (WOODEN)	FENCE (WOODEN)
GUARD RAIL	GUARD RAIL
TREE LINE	TREE LINE
STONE WALL	STONE WALL
SANITARY SEWER	SANITARY SEWER
SEWER FORCEMAIN	SEWER FORCEMAIN
STORM LINE	STORM LINE
STORM LINE APPROX.	STORM LINE APPROX.
UNDER DRAIN	UNDER DRAIN
FOUNDATION DRAIN	FOUNDATION DRAIN
ROOF DRAIN	ROOF DRAIN
DITCH/SWALE	DITCH/SWALE
UNDERGROUND TELECOM	UNDERGROUND TELECOM
OVERHEAD TELECOM	OVERHEAD TELECOM
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC	OVERHEAD ELECTRIC
6" WATER LINE	6" WATER LINE
8" WATER LINE	8" WATER LINE
EDGE OF SURFACE WATER	EDGE OF SURFACE WATER



162 Jay Street
Schenectady New York 12305
518.370.1576
synthesisllp.com

PRINCIPALS

Michael Szemansco, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Freeman Fisher Associates
22 Auden Road
Albany, New York 12205

Structural Engineer
Schenectady, NY & Albany, NY
Structural Engineers, P.C.
Avon Park North 200 Fisher Dr
Avon, Connecticut 06001



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Not for Construction

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(2)(df), (2)(dg), (2)(dh), (2)(di), (2)(dj), (2)(dk), (2)(dl), (2)(dm), (2)(dn), (2)(do), (2)(dp), (2)(dq), (2)(dr), (2)(ds), (2)(dt), (2)(du), (2)(dv), (2)(dw), (2)(dx), (2)(dy), (2)(dz), (2)(ea), (2)(eb), (2)(ec), (2)(ed), (2)(ee), (2)(ef), (2)(eg), (2)(eh), (2)(ei), (2)(ej), (2)(ek), (2)(el), (2)(em), (2)(en), (2)(eo), (2)(ep), (2)(eq), (2)(er), (2)(es), (2)(et), (2)(eu), (2)(ev), (2)(ew), (2)(ex), (2)(ey), (2)(ez), (2)(fa), (2)(fb), (2)(fc), (2)(fd), (2)(fe), (2)(ff), (2)(fg), (2)(fh), (2)(fi), (2)(fj), (2)(fk), (2)(fl), (2)(fm), (2)(fn), (2)(fo), (2)(fp), (2)(fq), (2)(fr), (2)(fs), (2)(ft), (2)(fu), (2)(fv), (2)(fw), (2)(fx), (2)(fy), (2)(fz), (2)(ga), (2)(gb), (2)(gc), (2)(gd), (2)(ge), (2)(gf), (2)(gg), (2)(gh), (2)(gi), (2)(gj), (2)(gk), (2)(gl), (2)(gm), (2)(gn), (2)(go), (2)(gp), (2)(gq), (2)(gr), (2)(gs), (2)(gt), (2)(gu), (2)(gv), (2)(gw), (2)(gx), (2)(gy), (2)(gz), (2)(ha), (2)(hb), (2)(hc), (2)(hd), (2)(he), (2)(hf), (2)(hg), (2)(hh), (2)(hi), (2)(hj), (2)(hk), (2)(hl), 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No.	Description	Date

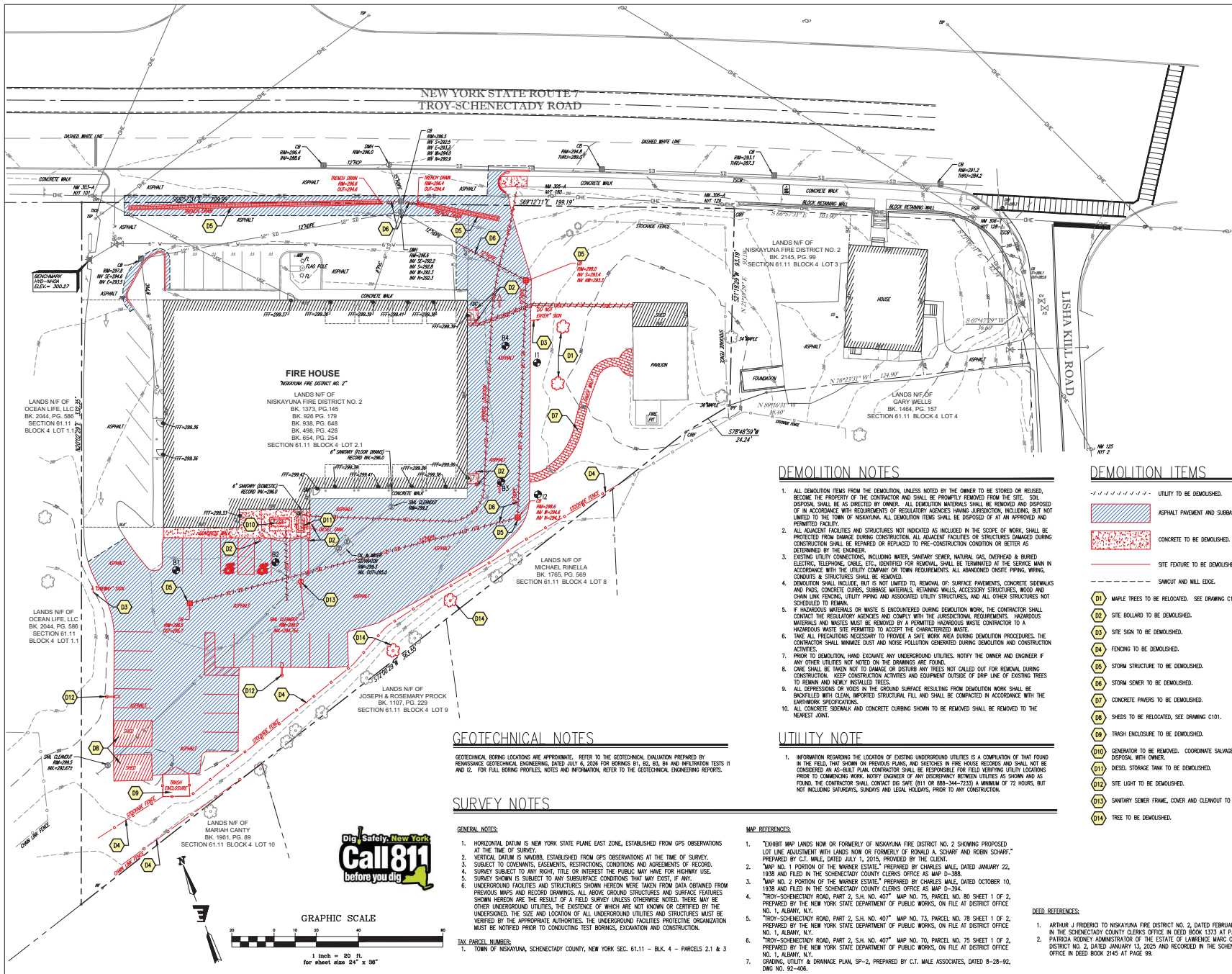
Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220223.03
BY PROJECT NO.	25498.00
DATE	7/6/2026
DRAWN BY	NHD
CHECKED BY	

Site Legend and Notes

C001



DEMOLITION NOTES

1. ALL DEMOLITION ITEMS FROM THE DEMOLITION, UNLESS NOTED BY THE OWNER TO BE STORED OR REUSED, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE. SOIL DISPOSAL SHALL BE AS DIRECTED BY OWNER. ALL DEMOLITION MATERIALS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH REQUIREMENTS OF REGULATORY AGENCIES HAVING JURISDICTION, INCLUDING, BUT NOT LIMITED TO THE TOWN OF NISKAYUNA. ALL DEMOLITION ITEMS SHALL BE DISPOSED OF AT AN APPROVED AND PERMITTED FACILITY.
2. ALL ADJACENT FACILITIES AND STRUCTURES NOT INDICATED AS INCLUDED IN THE SCOPE OF WORK SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ALL ADJACENT FACILITIES OR STRUCTURES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO PRE-CONSTRUCTION CONDITION OR BETTER AS DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY CONNECTIONS, INCLUDING WATER, SANITARY SEWER, NATURAL GAS, OVERHEAD & BURIED ELECTRIC, TELEPHONE, CABLE, ETC., IDENTIFIED FOR REMOVAL, SHALL BE TERMINATED AT THE SERVICE MAN IN ACCORDANCE WITH THE UTILITY COMPANY OR TOWN REQUIREMENTS. ALL UNARMED CHUTE PIPING, MANNHOLES & STRUCTURES SHALL BE REMOVED.
4. DEMOLITION SHALL INCLUDE, BUT IS NOT LIMITED TO, REMOVAL OF: SURFACE PAVEMENTS, CONCRETE SIDEWALKS AND PATHS, CONCRETE CURBS, SURFACE MATERIALS, RETAINING WALLS, ACCESSORY STRUCTURES, WOOD AND CHAIN LINK FENCING, UTILITY PIPING AND ASSOCIATED UTILITY STRUCTURES, AND ALL OTHER STRUCTURES NOT SCHEDULED TO REMAIN.
5. IF HAZARDOUS MATERIALS OR WASTE IS ENCOUNTERED DURING DEMOLITION WORK, THE CONTRACTOR SHALL CONTACT THE REGULATORY AGENCIES AND COMPLY WITH THE JURISDICTIONAL REQUIREMENTS. HAZARDOUS MATERIALS AND WASTES MUST BE REMOVED BY A PERMITTED HAZARDOUS WASTE CONTRACTOR TO A HAZARDOUS WASTE SITE PERMITTED TO ACCEPT THE CHARACTERIZED WASTE.
6. TIME ALL PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK AREA DURING DEMOLITION PROCEDURES. THE CONTRACTOR SHALL MINIMIZE DUST AND NOISE POLLUTION GENERATED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.
7. PRIOR TO DEMOLITION, HAND EXCAVATE ANY UNDERGROUND UTILITIES. NOTIFY THE OWNER AND ENGINEER IF ANY OTHER UTILITIES NOT NOTED ON THE DRAWINGS ARE FOUND.
8. CARE SHALL BE TAKEN NOT TO DAMAGE OR DISTURB ANY TREES NOT CALLED OUT FOR REMOVAL DURING CONSTRUCTION. KEEP CONSTRUCTION ACTIVITIES AND EQUIPMENT OUTSIDE OF DRIP LINE OF EXISTING TREES TO REMAIN AND NEWLY INSTALLED TREES.
9. ALL DEPRESSIONS OR Voids IN THE GROUND SURFACE RESULTING FROM DEMOLITION WORK SHALL BE INFILLED WITH CLEAN, IMPORTED STRUCTURAL FILL AND SHALL BE COMPACTED IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS.
10. ALL CONCRETE SIDEWALK AND CONCRETE CURBING SHOWN TO BE REMOVED SHALL BE REMOVED TO THE NEAREST JOINT.

UTILITY NOTE

1. INFORMATION REGARDING THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS A COMPILED OF THAT FOUND IN THE FIELD THAT SHOWN ON PREVIOUS PLANS AND SHEETS IN FIRE HOUSE RECORDS AND SHALL NOT BE CONSIDERED AN AS-BUILT PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER IF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. THE CONTRACTOR SHALL CONTACT DCE SAFE (811 OR 888-344-7233) A MINIMUM OF 72 HOURS, BUT NOT INCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO ANY CONSTRUCTION.

GEOTECHNICAL NOTES

GEOTECHNICAL BORING LOCATIONS ARE APPROXIMATE. REFER TO THE GEOTECHNICAL EVALUATION PREPARED BY REMONDIS, GEOTECHNICAL ENGINEERING, DATED JULY 6, 2008 FOR BORINGS B1, B2, B3, B4 AND VIBRATION TESTS 11 AND 12. FOR FILL BORING PROFILES, NOTES AND INFORMATION, REFER TO THE GEOTECHNICAL ENGINEERING REPORTS.

SURVEY NOTES

GENERAL NOTES:

1. HORIZONTAL DATUM IS NEW YORK STATE PLANE EAST ZONE, ESTABLISHED FROM GPS OBSERVATIONS AT THE TIME OF SURVEY.
2. VERTICAL DATUM IS NAVD83, ESTABLISHED FROM GPS OBSERVATIONS AT THE TIME OF SURVEY.
3. SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS, CONDITIONS AND AGREEMENTS OF RECORD.
4. SURVEY SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE PUBLIC MAY HAVE FOR HIGHWAY USE.
5. SURVEY SHOWN IS SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST. IF ANY UNDERGROUND FACILITIES AND STRUCTURES SHOWN HEREIN WERE TAKEN FROM DATA OBTAINED FROM PREVIOUS MAPS AND RECORD DRAWINGS, ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREIN ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSEEN. THE SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND UTILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.

TAX PARCEL NUMBERS:

1. TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NEW YORK SEC. 61.11 - BULK 4 - PARCELS 2.1 & 3

MAP REFERENCES:

1. "EXISTING MAP LANDS NOW OR FORMERLY OF NISKAYUNA FIRE DISTRICT NO. 2 SHOWING PROPOSED LOT LINE ADJUSTMENT WITH LANDS NOW OR FORMERLY OF RONALD A. SCHWARTZ AND ROBIN SCHWARTZ," PREPARED BY C.T. MALE, DATED JULY 1, 2015, PROVIDED BY THE CLIENT.
2. "MAP NO. 1 PORTION OF THE WARNER ESTATE," PREPARED BY CHARLES MALE, DATED JANUARY 22, 1938 AND FILED IN THE SCHENECTADY COUNTY CLERKS OFFICE AS MAP D-388.
3. "MAP NO. 2 PORTION OF THE WARNER ESTATE," PREPARED BY CHARLES MALE, DATED OCTOBER 10, 1938 AND FILED IN THE SCHENECTADY COUNTY CLERKS OFFICE AS MAP D-394.
4. "TROY-SCHENECTADY ROAD, PART 2, S.A. NO. 407," MAP NO. 75, PARCEL NO. 80 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.
5. "TROY-SCHENECTADY ROAD, PART 2, S.A. NO. 407," MAP NO. 75, PARCEL NO. 78 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.
6. "TROY-SCHENECTADY ROAD, PART 2, S.A. NO. 407," MAP NO. 70, PARCEL NO. 75 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.
7. "GRADING, UTILITY & DRAINAGE PLAN, SP-2, PREPARED BY C.T. MALE ASSOCIATES, DATED 8-28-92, DWS NO. 92-406.

DEED REFERENCES:

1. ARTHUR J. FREDERICK TO NISKAYUNA FIRE DISTRICT NO. 2, DATED FEBRUARY 16, 1993 AND RECORDED IN THE SCHENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 1373 AT PAGE 145.
2. PATRICK ROONEY ADMINISTRATOR OF THE ESTATE OF LAWRENCE MARC CRANE TO NISKAYUNA FIRE DISTRICT NO. 2, DATED JANUARY 13, 2005 AND RECORDED IN THE SCHENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 2145 AT PAGE 99.

DEMOLITION ITEMS

- UTILITY TO BE DEMOLISHED.
- ASPHALT PAVEMENT AND SUBGRADE TO BE DEMOLISHED.
- CONCRETE TO BE DEMOLISHED.
- SITE FEATURE TO BE DEMOLISHED, SALVAGED, OR RELOCATED
- SNOWFILT AND MILL EDGE.
- D1 MAPLE TREES TO BE RELOCATED. SEE DRAWING C101.
- D2 SITE BOLLARD TO BE DEMOLISHED.
- D3 SITE SIGN TO BE DEMOLISHED.
- D4 FENCING TO BE DEMOLISHED.
- D5 STORM STRUCTURE TO BE DEMOLISHED.
- D6 STORM SEWER TO BE DEMOLISHED.
- D7 CONCRETE PAVERS TO BE DEMOLISHED.
- D8 SHEETS TO BE RELOCATED, SEE DRAWING C101.
- D9 TRASH ENCLOSURE TO BE DEMOLISHED.
- D10 GENERATOR TO BE REMOVED. COORDINATE SALVAGE, RELOCATION, OR DISPOSAL WITH OWNER.
- D11 DIESEL STORAGE TANK TO BE DEMOLISHED.
- D12 SITE LIGHT TO BE DEMOLISHED.
- D13 SANITARY SEWER FRAME, COVER AND CLEAVOUT TO BE DEMOLISHED.
- D14 TREE TO BE DEMOLISHED.



162 Jay Street
Schenectady New York 12305
518.370.1576
synthesisllp.com

PRINCIPALS

Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
388 Broadway, Suite 11
Saratoga Springs,
New York 12866

MEP Engineer
Treasure Faber Associates
22 Auden Road
Albany, New York 12205

Structural Engineer
Schnack, Nyl & Pyle
Structural Engineers, P.C.
Avon Park North 200 Fisher Dr
Avon, Connecticut 06001



PHASE 2

Not for Construction

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THIS IS A PRELIMINARY DRAWING OF A PROPOSED PROJECT. IT IS NOT TO BE USED FOR CONSTRUCTION OR FOR ANY OTHER PURPOSE. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES RENDERED. THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES RENDERED. THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED.

No.	Description	Date

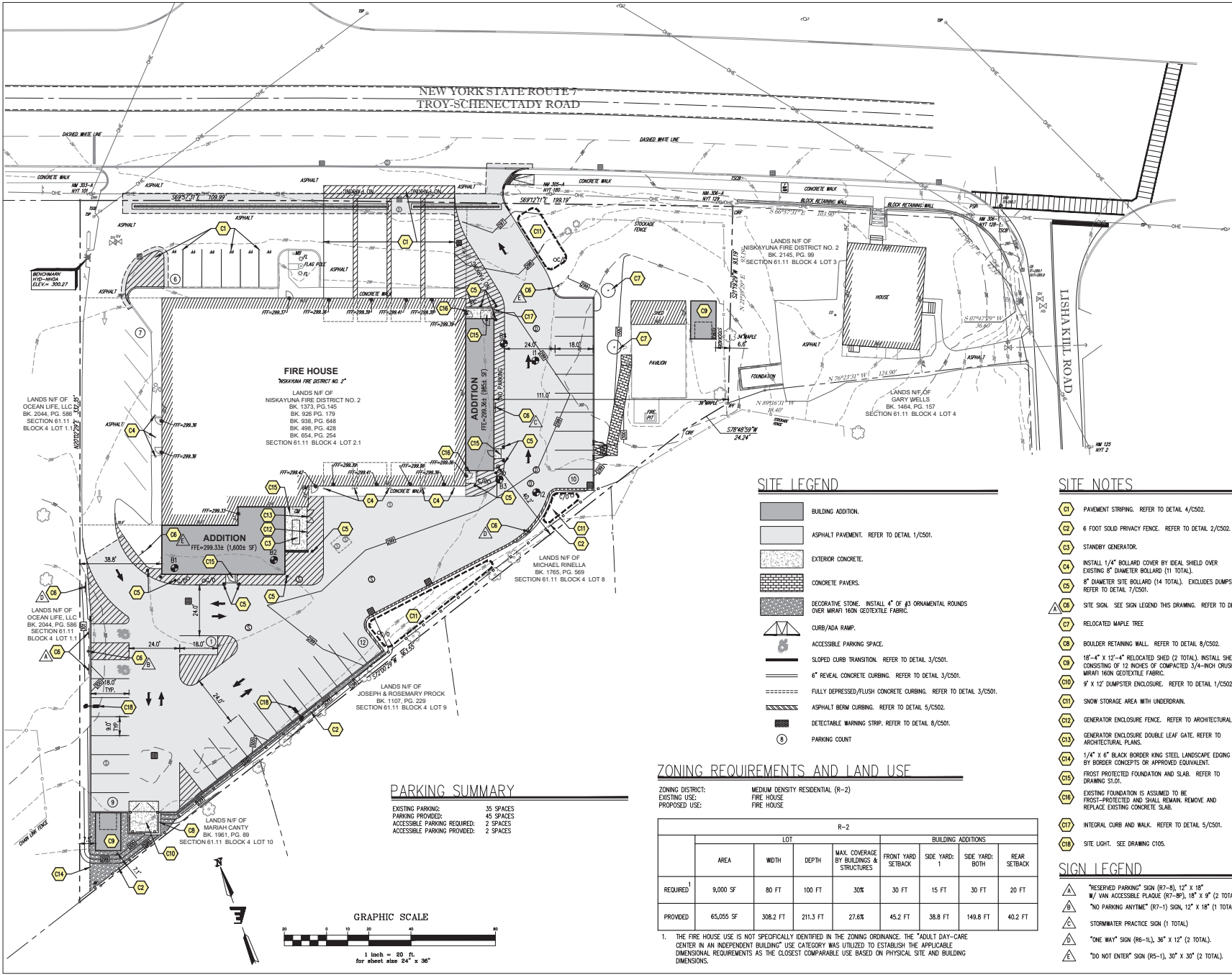
Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	2022023.03
BY PROJECT NO.	25490.00
DATE	7/6/2026
DRAWN BY	MMD
CHECKED BY	

Existing Conditions and Demolition Plan

CD101



SITE LEGEND

- BUILDING ADDITION.
- ASPHALT PAVEMENT. REFER TO DETAIL 1/C501.
- EXTERIOR CONCRETE.
- CONCRETE PAVERS.
- DECORATIVE STONE. INSTALL 4" OF #3 ORNAMENTAL ROUNDS OVER MIRAF 160N GEOTEXTILE FABRIC.
- CURB/ADA RAMP.
- ACCESSIBLE PARKING SPACE.
- SLOPED CURB TRANSITION. REFER TO DETAIL 3/C501.
- 6" REVEAL CONCRETE CURBING. REFER TO DETAIL 3/C501.
- FULLY DEPRESSSED/FLUSH CONCRETE CURBING. REFER TO DETAIL 3/C501.
- ASPHALT REIN CURBING. REFER TO DETAIL 5/C502.
- DETECTABLE WARNING STRIP. REFER TO DETAIL 8/C501.
- PARKING COUNT

SITE NOTES

- PAVEMENT STRIPING. REFER TO DETAIL 4/C502.
- 6 FOOT SOLID PRIVACY FENCE. REFER TO DETAIL 2/C502.
- STANDBY GENERATOR.
- INSTALL 1/4" BOLLARD COVER BY IDEAL SHIELD OVER EXISTING 6" DIAMETER BOLLARD (11 TOTAL).
- 8" DIAMETER SITE BOLLARD (14 TOTAL). EXCLUDES DUMPSTER ENCLOSURE. REFER TO DETAIL 7/C501.
- SITE SIGN. SEE SIGN LEGEND THIS DRAWING. REFER TO DETAIL 4/C501.
- RELOCATED MAPLE TREE.
- BOULDER RETAINING WALL. REFER TO DETAIL 8/C502.
- 18'-4" X 12'-4" RELOCATED SHED (2 TOTAL). INSTALL SHED ON A BASE CONSISTING OF 12 INCHES OF COMPACTED 3/4-INCH CRUSHED STONE OVER MIRAF 160N GEOTEXTILE FABRIC.
- 9' X 12' DUMPSTER ENCLOSURE. REFER TO DETAIL 1/C502.
- SNOW STORAGE AREA WITH UNDERDRAN.
- GENERATOR ENCLOSURE FENCE. REFER TO ARCHITECTURAL PLANS.
- GENERATOR ENCLOSURE DOUBLE LEAF GATE. REFER TO ARCHITECTURAL PLANS.
- 1/4" X 6" BLACK BORDER KING STEEL LANDSCAPE EDGING BY BORDER CONCEPTS OR APPROVED EQUIVALENT.
- FROST PROTECTED FOUNDATION AND SLAB. REFER TO DRAWING S1.01.
- EXISTING FOUNDATION IS ASSUMED TO BE FROST-PROTECTED AND SHALL REMAIN. REMOVE AND REPLACE EXISTING CONCRETE SLAB.
- INTEGRAL CURB AND WALK. REFER TO DETAIL 5/C501.
- SITE LIGHT. SEE DRAWING C105.

PARKING SUMMARY

EXISTING PARKING:	35 SPACES
PARKING PROVIDED:	45 SPACES
ACCESSIBLE PARKING REQUIRED:	2 SPACES
ACCESSIBLE PARKING PROVIDED:	2 SPACES

ZONING REQUIREMENTS AND LAND USE

ZONING DISTRICT: FIRE HOUSE
PROPOSED USE: MEDIUM DENSITY RESIDENTIAL (R-2)
FIRE HOUSE

	LOT				BUILDING ADDITIONS			
	AREA	WIDTH	DEPTH	MAX. COVERAGE BY BUILDINGS & STRUCTURES	FRONT YARD SETBACK	SIDE YARD: 1	SIDE YARD: BOTH	REAR SETBACK
REQUIRED ¹	9,000 SF	80 FT	100 FT	30%	30 FT	15 FT	30 FT	20 FT
PROVIDED	65,055 SF	308.2 FT	211.3 FT	27.6%	45.2 FT	38.8 FT	149.8 FT	40.2 FT

1. THE FIRE HOUSE USE IS NOT SPECIFICALLY IDENTIFIED IN THE ZONING ORDINANCE. THE "ADULT DAY-CARE CENTER IN AN INDEPENDENT BUILDING" USE CATEGORY WAS UTILIZED TO ESTABLISH THE APPLICABLE DIMENSIONAL REQUIREMENTS AS THE CLOSEST COMPARABLE USE BASED ON PHYSICAL SITE AND BUILDING DIMENSIONS.

PRINCIPALS

Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Freyman Filmer Associates
12 Aviation Road
Albany, New York 12205

Structural Engineer
Schemaco, H&B & Flurry
Structural Engineers, P.C.
Aver Park North 200 Fisher Dr
Aver Park North 12205



PHASE 2

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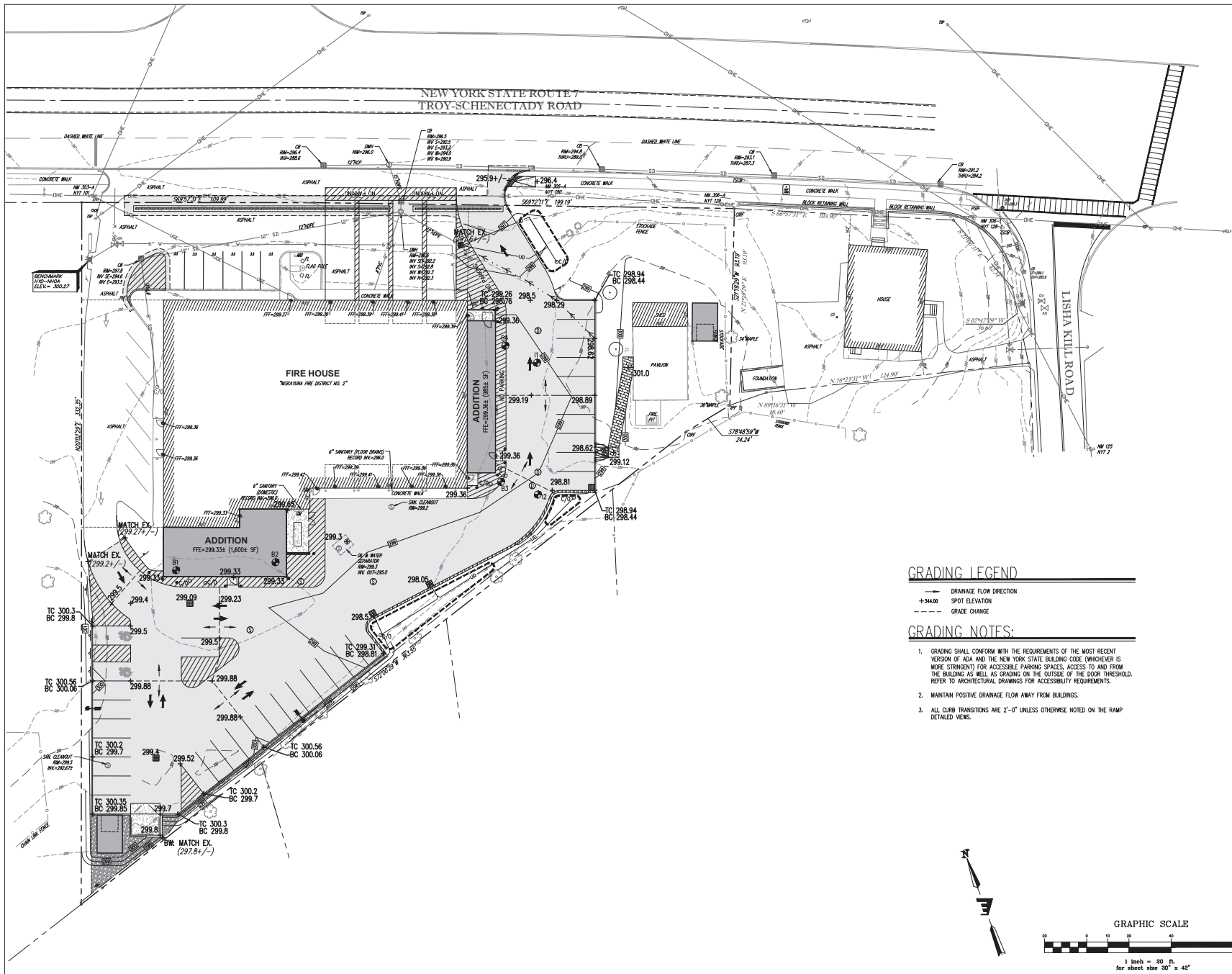
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Niskayuna Fire District 2

Phase 2 - Additions
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PROJECT NO.	20220203.03
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CHECKED BY	

Site Plan

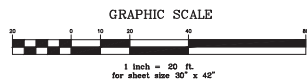


GRADING LEGEND

- DRAINAGE FLOW DIRECTION
- +344.00 SPOT ELEVATION
- GRADE CHANGE

GRADING NOTES:

- GRADING SHALL CONFORM WITH THE REQUIREMENTS OF THE MOST RECENT VERSION OF ADA AND THE NEW YORK STATE BUILDING CODE (WHICHEVER IS MORE STRINGENT) FOR ACCESSIBLE PARKING SPACES, ACCESS TO AND FROM THE BUILDING AS WELL AS GRADING ON THE OUTSIDE OF THE DOOR THRESHOLD. REFER TO ARCHITECTURAL DRAWINGS FOR ACCESSIBILITY REQUIREMENTS.
- MAINTAIN POSITIVE DRAINAGE FLOW AWAY FROM BUILDINGS.
- ALL CURVE TRANSITIONS ARE 2'-0" UNLESS OTHERWISE NOTED ON THE RAMP DETAILED VIEWS.



162 Jay Street
Schenectady New York 12305
518.370.1576
synthesisllp.com

PRINCIPALS

Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
388 Broadway, Suite 11
Saratoga Springs,
New York 12866

MEP Engineer
Treman Faber Associates
22 Audette Road
Albany, New York 12205

Structural Engineer
Structural Engineers, P.C.
Avon Park North 200 Fisher Dr
Avon, Connecticut 06001



PHASE 2

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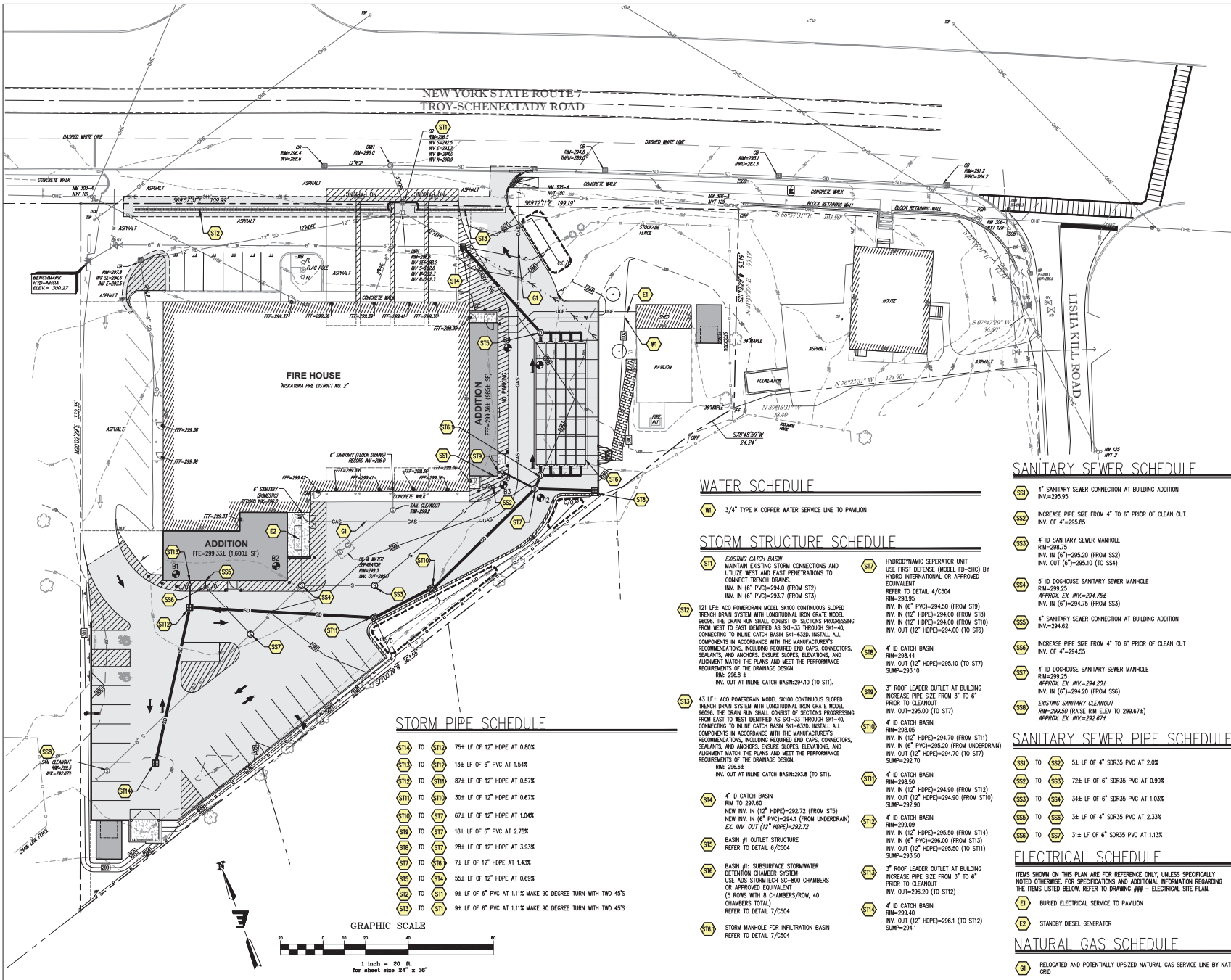
No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220223.03
EX PROJECT NO.	25496.00
DATE	7/6/2026
DRAWN BY	MHD
CHECKED BY	

Grading Plan



PRINCIPALS
Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS
Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Freeman Filler Associates
12 Avon Road
Albany, New York 12205

Structural Engineer
Schenectady, NY & Albany, NY
Structural Engineers, P.C.
Aver Park North 200 Fisher Dr.
Albany, New York 12205



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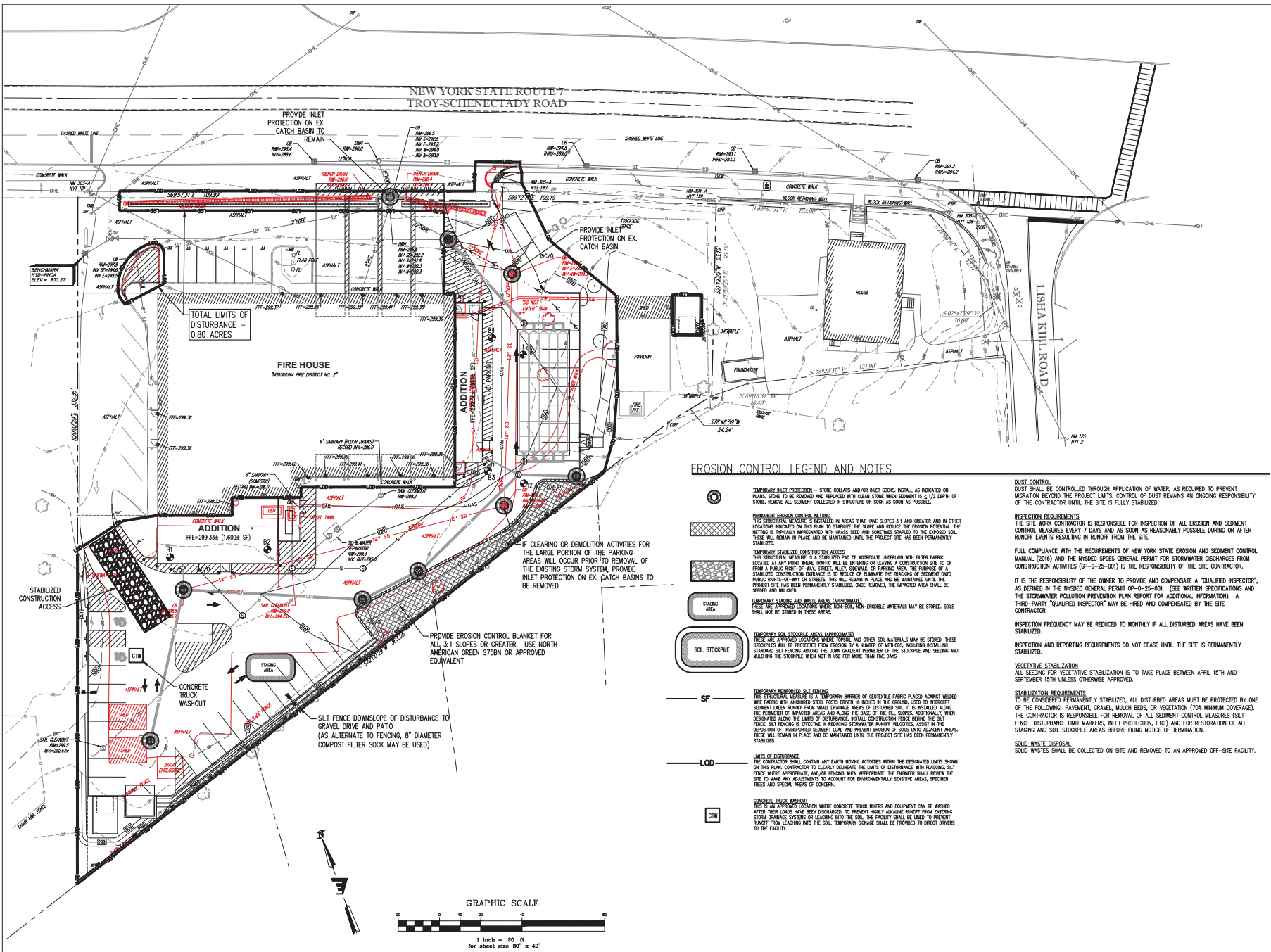
No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220203.03
BY PROJECT NO.	25496.00
DATE	7/6/2026
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Utility Plan



PRINCIPALS
Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS
Civil Engineer
Engineering Ventures P.E.
388 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Treman Faber Associates
22 Auden Road
Albany, New York 12205

Structural Engineer
Somers, N.Y. & P.C.
Structural Engineers, P.C.
Avon Park North 200 Fisher Dr
Avon, Connecticut 06001



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No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220203.03
BY PROJECT NO.	254900.00
DATE	7/6/2026
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Erosion & Sediment Control Plan



Michael Szemansco, AIA
James Graham, AIA

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs,
New York 12866



Friedman Fisher Associates
22 Aviation Road
Albany, New York 12205

Szewczak, Kily & Fluhr
Structural Engineers, P.C.
Avon Park North 200 Fish
Avon, Connecticut 06001



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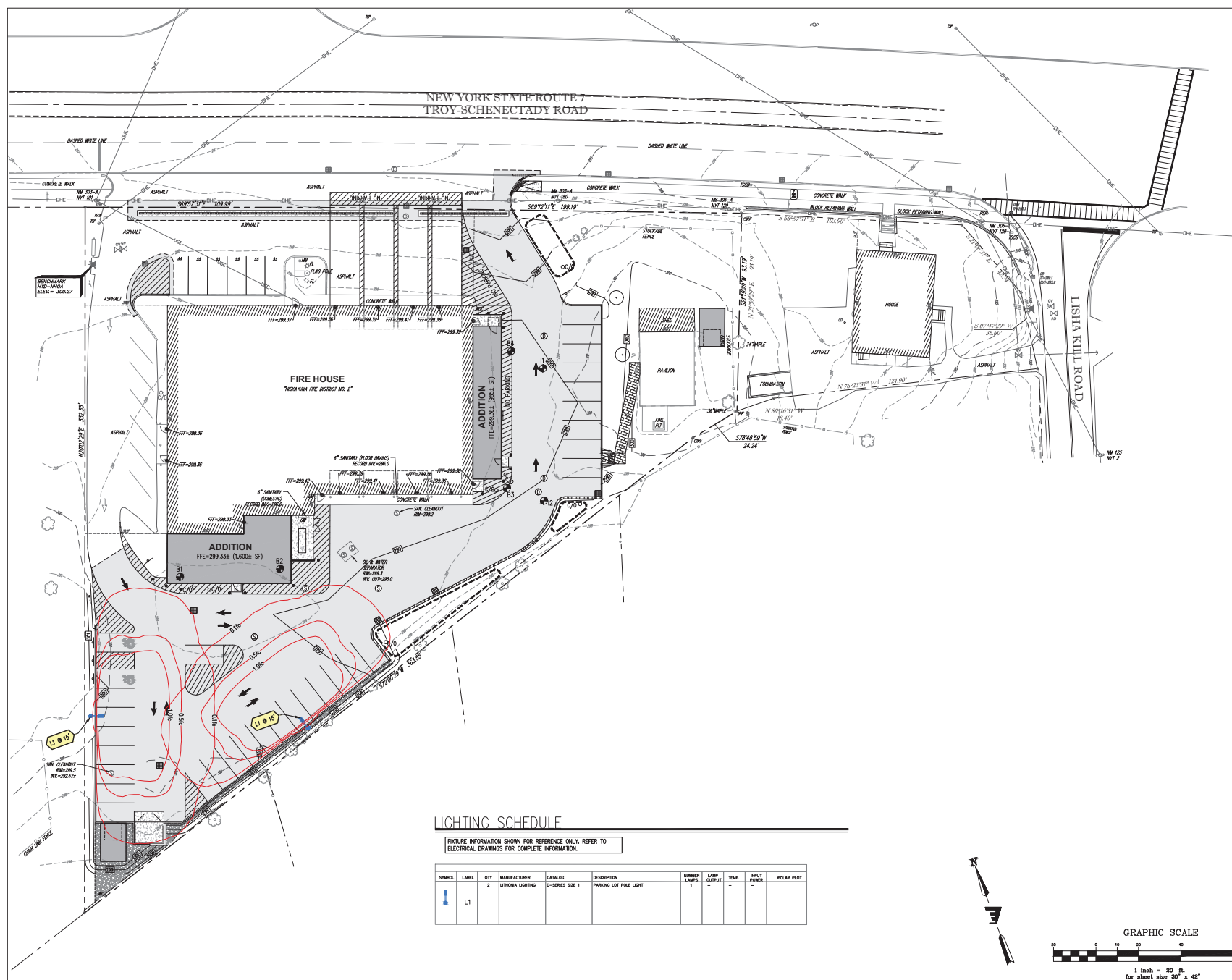
IT IS A VIOLATION OF NEW YORK EDUCATION LAWS ART. 145 SEC. 7229 & ART. 147 SEC. 7267, FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR IS ALTERED; THE ALTERING ARCHITECT, ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM THEIR SEAL AND NOTATION "ALTERED BY" FOLLOWED BY THE SIGNATURE AND DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION; THESE CHANGES ARE NOT TO BE SCALED.

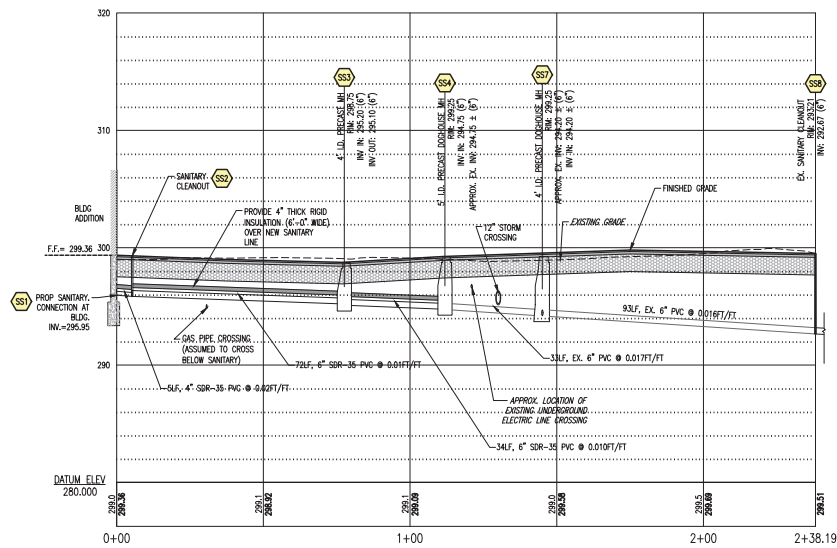
No.	Description	Date

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	2022023.03
EV PROJECT NO.	25406.00
DATE	7/6/2026
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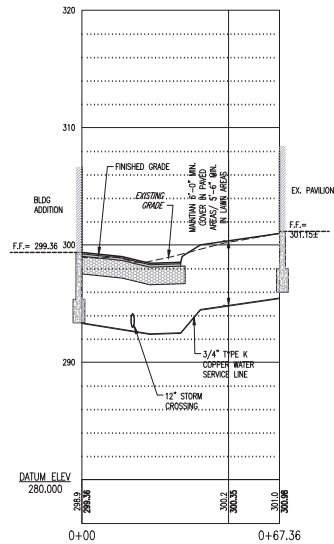
Lighting Plan





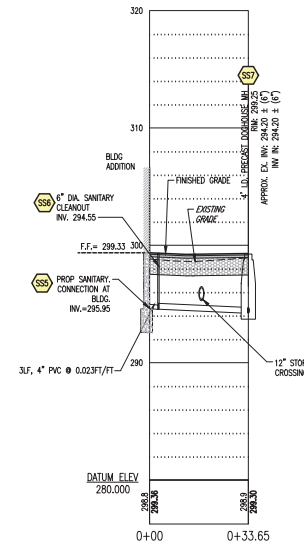
SS1-SS8 PROFILE

SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'



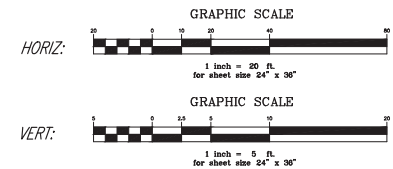
WATER SERVICE PROFILE

SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'



SS5-SS7 PROFILE

SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'



162 Jay Street
Schenectady, New York 12305
518.370.1576
synthesisllp.com

PRINCIPALS

Michael Szemansko, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs, New York 12866

MEP Engineer
Freeman Palmer Associates
22 Avon Road
Albany, New York 12205

Structural Engineer
Stoverman, Kuty & Flaherty
Structural Engineers, P.C.
Aver Park North 200 Fisher Dr.
Aver Park North, Connecticut 06001



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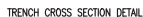
Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220203.03
BY PROJECT NO.	25496.00
DATE	7/6/2020
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Sanitary & Water Profiles

C202



NOTES:

1. UTILIZE CONCRETE MIX DESIGN FOR EXTERIOR SLAB-ON-GRADE.
2. PROVIDE EQUALLY SPACED CONTROL JOINTS AT SPACING AND PATTERN INDICATED ON PLANS (NOT TO EXCEED 5'-0").
3. PROVIDE EXPANSION JOINT EVERY 20'-0" MAX.
4. MAINTAIN CURB HEIGHT OF 18" FOR FULLY DERESSED CURB AND SLOPED CURB TRANSITIONS. ADJUST SUBGRADE ELEVATION TO MAINTAIN 18" MIN COURSE CRUSHED GRAVEL.
5. SLOPED CURB TRANSITIONS. SINGLE PLY SEPARATION FABRIC, NYSDOT TA 372.



- CONCRETE SIDEWALK NOTES:**
1. UTILIZE CONCRETE MIX DESIGN FOR EXTERIOR SLAB-ON-GRADE.
 2. WHERE SIDEWALK IS ADJACENT TO FROST PROTECTED PADS/FOUNDATIONS, SIDEWALK SHALL BE DOWELED TO PAD/FOUNDATION ON ALL SHARED SIDES WITH 12" LONG 1/2" SMOOTH DOWELS (CENTERED) AT 12" OC (PORTION OF DOWEL IN SIDEWALK TO BE GREASED). SEE DETAIL 2/5052 FOR SIDEWALKS ADJACENT TO BUILDINGS INTERIOR AND EXTERIOR STALLS.
 3. WHERE SIDEWALK IS ADJACENT TO CURB, BOLLARD, BUILDING OR OTHER HARD FEATURE, INSTALL 1/2" EXPANSION MATERIAL (FULL DEPTH) MINIMUMLY, DETAIL FEATURE AND SIDEWALK WITH SHIP CAP BY MIN. HEIGHT AND COLOR MATCHING JOINT SEALANT.
 4. REFER TO SITE/FACTORORY SPECIFICATIONS FOR PREPARATION OF SUBGRADE, PLACEMENT OF FILL MATERIALS (INCLUDING GRADE SUBSIDE), COMPACTOR REQUIREMENTS, AND TESTING REQUIREMENTS.

6" DIA. OR 8" DIA SCH. 40 STEEL PIPE BOLLARD (FILL WITH CONCRETE) (SEE PLAN FOR DIAMETER)

CONCRETE SURFACE ONLY - POLYURETHANE ELASTOMERIC SELF-LEVELING SEALANT, TOOK DOWN 1/8", COLOR TO MATCH CONCRETE

CONCRETE SURFACE ONLY - 1/2" PRE-FORMED, COMPRESSIBLE FILLER THROUGH FULL DEPTH OF CONCRETE

FINISH GRADE - CONCRETE OR ASPHALT PAVED SURFACE. REFER TO PLANS FOR ELEVATIONS

2" THICK GRASS LAWN

6" DIA. OR 8" DIA. L.D.P.E. 1/4" BOLLARD COVER BY IDEAL SHIELD OR APPROVED EQUAL. (SEE PLAN FOR DIAMETER). COLOR TO BE DETERMINED BY THE OWNER.

5'-0"

5'-0"

1'-6"

18" SOUTHERN CONCRETE BOLLARD FOUNDATION

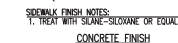
PROOF-ROLL, INSPECTED AND APPROVED SUBGRADE OR COMPACTED FILL

NOTES:
1. UTILIZE CONCRETE MIX DESIGN FOR



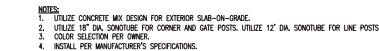
-
- Technical drawing of a 4x4x4 inch concrete expansion joint. The drawing shows a cross-section of the joint with dimensions: 1/2 inch preformed filler, 24 inch long, 1/4 inch hole, 1/4 inch o.c. grease one end. It also shows a full depth formed expansion joint and a cast-in-place concrete joint with a 4x4x4 inch center in sidewalk form. The drawing is labeled with 'X' marks indicating the joint location.
- EXPANSION JOINT NOTES:**
1. PROVIDE ONE EXPANSION JOINT EVERY 18 FEET MAXIMUM OR AS SHOWN ON THE PLANS, IDENTIFIED AS "E".
 2. PROVIDE (2) EXPANSION JOINTS AT EVERY DRAINAGE INTERSECTION.
 3. CALL ALL EXPANSION JOINTS WITH COLOR MATCHING JOINT SEALANT.
- CONCRETE NOTES:**
1. CLAS B CONCRETE SHALL HAVE:
 - a. MIN. COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS
 - b. AIR: MINIMUM OF .5% TO 7% BY VOLUME.
 - c. MAXIMUM WATER/CEMENT RATIO: 0.60.
 - d. SLUMP: 2-4 INCHES BEFORE ADJUSTMENT OF WATER REDUCER, INCHES AFTER ADJUSTMENT OF WATER REDUCER.
 2. PLACE NO CONCRETE WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT OR MORE THAN 90 DEGREES FAHRENHEIT.
 3. NO CONCRETE SHALL BE DROPPED MORE THAN 30 FEET INSIDE A FORM.
 4. MAINTAIN TEMPERATURE OF CONCRETE SURFACE AT MINIMUM 50 DEGREES FAHRENHEIT FOR 72 HOURS AFTER PLACING CONCRETE. PROVIDE AN ENCLOSURES FOR A MINIMUM OF 6 HOURS TO PROVIDE A MIN. SURFACE TEMPERATURE OF 45 DEGREES FAHRENHEIT.
 5. ALLOW TO SET AND CURE ALL THROAT BLOCKS, CONCRETE SUPPORTS, AND ANCHORS A MINIMUM OF 24 HOURS BEFORE BACKFILLING.
 6. COMPLETELY CURE AND SEAL ALL JOINTS WITH AN APPROPRIATE HYDROPHOBIC OR LEAKAGE STOPPING OF PIPELINE.
 7. REINFORCING BARS SHALL BE HALCO TRADEMARK, AS MANUFACTURED BY LEVIN & FINK INDUSTRIAL PRODUCTS.
 8. DO NOT PLACE ANY MORTAR OR GROUT WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT.
 9. MATERIALS TO BE USED SHALL BE CONSIST OF THE FOLLOWING:
 - a. CEMENT-TYPE I, ASTM C150.
 - b. HYDRATED LIME, ASTM C28.
 - c. SAND - ASTM C144, 3/4" MAX. AGGREGATES FOR CONCRETE.
 - d. WATER-CLEAN, SUITABLE FOR DRINKING.
 10. REINFORCING BARS SHALL BE 1/2" DIA. WITH A 1/2" DIA. BARS

EXPANSION JOINT



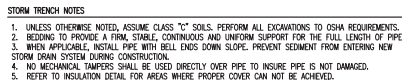
CONC. SIDEWALK JOINTS, FINISH, AND NOTES

Niskayuna Fire District 2

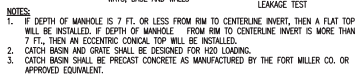


- BOULDER WALL

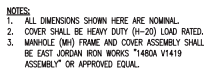




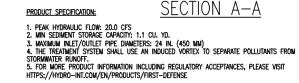
NOT TO SCALE 1



NOT TO SCALE (2)



NOT TO SCALE (3)



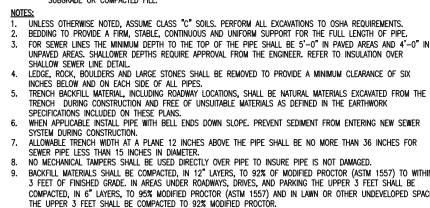
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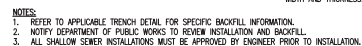
PARTS LIST			
ITEM	QTY	SIZE (in)	DESCRIPTION
1	1	60	I.D. PRECAST MANHOLE
2	1		INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	FRAME AND COVER (ROUND)
4	1	12	OUTLET PIPE (BY OTHERS)
5	3	6 and 12	INLET PIPE (BY OTHERS)



NOT TO SCALE



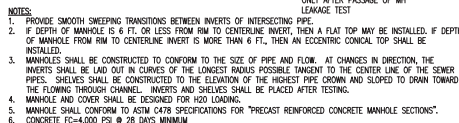
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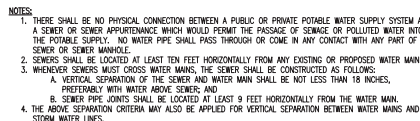
NOT TO SCALE



NOT TO SCALE



NOT TO SCALE 4



NOT TO SCALE 5

GENERAL

- GENERAL
1. BEFORE ANY SEWER WORK IS COMMENCED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE TOWN DPW AT LEAST 48 HOURS IN ADVANCE.
 2. THE CONTRACTOR SHALL COLLECT AND MAINTAIN "AS BUILT" INFORMATION DURING THE INSTALLATION OF THE SEWER SYSTEM. "AS BUILT" DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR UPON COMPLETION OF THE SEWER SYSTEM.
 3. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS DETAILLED IN THE LATEST EDITION OF THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION ENVIRONMENTAL PROTECTION RULES CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES. CONTRACTOR IS RESPONSIBLE FOR READING AND FOLLOWING THE COMPLETE EDITION PROVIDED BY THE STATE.

SANITARY SEWERS

- A. MATERIALS: THE BUILDING SEWER SHALL BE CONSTRUCTED IN A MANNER WHICH WILL PREVENT LEAKING, BREAKING OR CLOGGING. ACCEPTABLE MATERIALS FOR THE SEWER ARE RUBBER-RING-JOINTED PVC GRADY SEWER PIPE (SPDS ASTM D3034).
- B. SIZING: SLOPE, VELOCITY-MINIMUM BUILDING SEWER SIZE IS 4-INCHES (UNLESS SHOWN ON THE PLAN) AND A MINIMUM SLOPE IS 0.02 FOOT PER FOOT. ALL GRADY SEWER LINES SHALL BE INSTALLED WITH NOT LESS THAN THE SLOPES SHOWN BELOW:
- | PIPE SIZE (INCHES) | SLOPE (FEET/100-FEET) |
|--------------------|-----------------------|
| 4-INCHES | .75 |
| 6-INCHES | 1.0 |
| 8-INCHES | 0.4% |
- C. CLEANOUTS: BUILDING SEWERS SHALL BE PROVIDED AT EACH HORIZONTAL CHANGE IN DIRECTION OF THE BUILDING SEWER GREATER THAN 45 DEGREES AND WHERE INDICATED ON THE DESIGN DRAWINGS. BUILDING SEWER CHANGES IN DIRECTION WHICH EXCEED 45 DEGREES SHOULD BE MADE WITH NOT LESS THAN 45 DEGREE ELBS OF LONG-SEED FITTINGS. MINORALLY AND EXCEPT AT LEADS TO CLEANOUTS, WHERE BUILDING SEWERS ARE TO BE INSTALLED AT A DEPTH OF LESS THAN 3 FEET UNDER FINISHED GRADE ARE ANTICIPATED, EXTRA HEAVY CAST IRON PIPE SHALL BE USED.
- D. TRENCHING: LEASE, ROAD, BUILDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF SIX INCHES BELOW AND ON EACH SIDE OF ALL PIPES.
- E. BEDDING: SEE TRENCH DETAILS THIS DRAWING FOR MATERIALS. TRENCH BACKFILL SHALL BE OF A SUITABLE NATURAL FIRM, FREE FROM DEBRIS, FINEGRANULAR, SAND, LARGE CLOGS OR STONES, ORGANIC MATTER, OR OTHER UNSUITABLE MATERIALS.
- F. CHANGES IN PIPE SIZE: WHEN A SMALLER SIZER JOINS A LARGER ONE, THE INVERT OF THE LARGER SIZER LINE IS CONSIDERED SUFFICIENT TO MAINTAIN THE SAME ENERGY GRADE.
- G. MATERIAL: PVC SDR 35, ASTM D3034, WITH PUSH ON GASKETED JOINTS. GASKETS SHALL CONFORM TO ASTM D2122. SEWER JOINTS SHALL BE CONSTRUCTED TO MINIMIZE INFILTRATION AND TO PREVENT THE ENTRANCE OF ROOTS INTO THE SYSTEM.
- H. LEAKAGE: TESTS UPON COMPLETION OF SEWER CONSTRUCTION, THE SEWER LINE SHALL BE TESTED IN ACCORDANCE WITH THE STATE OF VERMONT SPECIFICATIONS (EPH-CHAPTER 1, APPENDIX "N").

LEAKAGE TESTS FOR GRAVITY SEWER LINES

1. **PERFORM A PRESSURIZED AIR TEST ON THE GRAVITY LINE IN ACCORDANCE WITH THE NEWMAN ENVIRONMENTAL PROTECTION RULES ON EACH SECTION OF THE GRAVITY SEWER. THE ENGINEER SHALL BE GIVEN 72 HOURS NOTICE BEFORE THE TEST IS CONDUCTED. TEST MUST BE WITNESSED BY THE ENGINEER.**
2. **PLUG ALL OPENINGS IN THE TEST SECTION AND AIR UNTIL THE INTERNAL PRESSURE OF THE LINE IS RAISED TO APPROXIMATELY 40 POUNDS/PER SQUARE INCH (PSI) GREATER THAN THE AVERAGE PRESSURE OF ANY GROUND WATER. AFTER THIS PRESSURE IS REACHED, ALLOW THE PRESSURE TO STABILIZE. THE SECTION MAY NORMALLY DROP AT THE AIR TEMPERATURE STABILIZES. THIS USUALLY TAKES 2 TO 5 MINUTES DEPENDENT ON THE PIPE SIZE. THE PRESSURE MAY BE REDUCED TO 3.5 PSI BEFORE STARTING THE TEST.**
3. **WHEN THE PRESSURE HAS STABILIZED AND IS 3 PSI OR ABOVE, THE STARTING TEST PRESSURE OF 3.5 PSI ABOVE THE PIPE STARTS THE TEST. IF THE PRESSURE DROPS MORE THAN 1.0 PSI DURING THE TEST, THE LINE IS PRESUMED TO HAVE FAILED THE TEST. IF A 1.0 PSI DROP OCCURS BEFORE THE TEST, THE LINE HAS PASSED THE TEST. THE TEST TIME SHALL BE DETERMINED FROM THE FOLLOWING TABLE. IF THE SECTION OF LINE IS 10 PSI ABOVE THE TEST PRESSURE, THE LINE IS PRESUMED TO HAVE PASSED THE TEST. FOR EACH SIZE AND AIR TEST TIMES TO APPLY AT THE TOTAL TEST TIME FOR THE SECTION.**
- | PIPE SIZE (IN) | T (TIME LINE/FOOT) |
|----------------|--------------------|
| 4 | 0.3 |
| 6 | 0.4 |
| 8 | 0.5 |
| 10 | 0.7 |
| 12 | 1.0 |
| 18 | 1.5 |

PIPE SIZE (IN)	T (TIME) (MIN./100FT)
3	0.2
4	0.3
6	0.7
8	1.2
10	1.5
12	1.8

1. INSTALLATION: PIPE SHALL BE Laid WITH BELL ENDS FACING UPOUNDER AND LAYING SHALL START AT THE DOWNGRADE END.
2. WATER/SEWER SEPARATION: SENSERS SHALL BE Laid AT LEAST 18 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE, SET TYPICAL, SEWER/WATER SEPARATION DETAIL.
3. WHERE IMPOSSIBLE OR UNPRACTICAL TO MAINTAIN THE TEN FEET SENSER/WATER PIPE HORIZONTAL SEPARATION, DUE TO LOGS, BOLLARDS OR OTHER UNUSUAL CONDITIONS THE WATER LINE MAY BE IN A SEPARATE TRENCH OR ON AN EXISTING SLOPE OR THE SENSER TRENCH PROVIDED THAT THE BOTTOM OF THE WATER LINE IS AT LEAST 18-INCHES ABOVE THE TOP OF THE SENSER. WHEREVER IMPOSSIBLE OR IMPRACTICAL TO MAINTAIN THE 18-INCH VERTICAL SEPARATION, THE SENSER LINE SHALL BE CONSTRUCTED USING PRESSURE PIPE TO MAINTAIN THE 18-INCH VERTICAL SEPARATION AND PRESSURE TESTED TO 50-PSI FOR 15-MINUTES PRIOR TO BACKFILL.
4. CROSSING: SENSER CROSSING WATER MAINS SHALL BE Laid BETWEEN THE WATER MAIN WITH AT LEAST 18-INCHES VERTICAL CLEARANCE BETWEEN THE OUTSIDE OF THE SENSER AND THE OUTSIDE OF THE WATER MAIN. WHEN IT IS IMPOSSIBLE TO MAINTAIN THE 18-INCH VERTICAL SEPARATION:
- a. THE CROSSING SHALL BE AVOIDED SO THAT FULL LENGTH OF SENSER IS CONTAINED ABOVE OR BELOW THE WATER MAIN WITH SENSER JOINTS AS FAR AWAY AS POSSIBLE FROM WATER JOINTS.
 - b. IF CROSSING CANNOT BE AVOIDED, THE CROSSING SHALL BE MADE AT A 90-DEGREE ANGLE. A TOTAL OF THREE PIPE LAYERS SHALL BE REQUIRED.
 - c. THE SENSER CONSTRUCTED TO CROSS WATER MAINS MUST BE PRESSURE TESTED TO 50-PSI FOR 15-MINUTES WITHOUT LEAKAGE PRIOR TO BACKFILL FROM 1-FOOT ABOVE THE PIPE TO ASSURE WATER TIGHTNESS.
5. WATER MAIN CROSSING: WATER MAIN CROSSING UNDER A SENSER SHALL BE PROVIDED FOR THE SENSER TO PREVENT DAMAGE TO THE WATER MAIN.
6. MANHOLES
- a. DRAINAGE: THE MINIMUM DIAMETER OF MANHOLES SHALL BE 48-INCHES. LARGE DIAMETERS ARE PROVIDED FOR CONNECTION TO LARGE DRAINAGE STRUCTURES. A MINIMUM ASHRAE DIAMETER OF 24-INCHES SHALL BE PROVIDED FOR ALL OTHER CONNECTIONS.
 - b. SENSER PROTECTION: SENSER SHALL BE PROTECTED BY A MANHOLE AND SENSER SHALL BE MADE TO CONFORM TO SENSE AND SLOPE OF THE GROUND.
 - c. MANHOLES SHALL BE OF THE PRE-CAST CONCRETE OR POLY-PROPYLENE CONCRETE TYPE. MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR.
 - d. ALL MANHOLES SHALL BE CONSTRUCTED TO MAINTAIN THE SENSER AT THE SAME ELEVATION TO PREVENT SETTLEMENT OF THE PIPE AND MANHOLE WALL TO TAKE PLACES.
 - e. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE. LEAKAGE TESTING OF GRUNTY SENSES UTILIZING THE WATER TESTING PROCEDURES TAKEN INTO ACCOUNT THE LEAKAGE FROM MANHOLE IN THE TEST SECTION. OTHERWISE, MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:
- 1. FLOOD PLACES TO PREVENT BACKFLOW.
 - 2. OPEN THE MANHOLE AND BEND ASSEMBLED IN PLACE, ALL LIFTING HOLES AND EXTERIOR JOINTS SHALL BE FILLED WITH AN APPROVED NON-SHRINKING MORTAR. ALL PIPES AND OTHER OPENINGS INTO THE MANHOLE SHALL BE SEQUESTERED PLUGGED.
 - 3. EACH MANHOLE SHALL BE CHECK FOR INFILTRATION BY FILLING WITH WATER TO THE TOP OF THE LEAKAGE SECTION. A STABILIZED PERIOD OF ONE HOUR SHALL BE PROVIDED TO ALLOW FOR ABSORPTION. AT THE END OF THIS PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE. IF THE CONE IS NOT FULL, THE LEAKAGE SHALL BE REPAIRED. IF THE CONE IS FULL, THE VOLUME OF WATER LOSSES, THIS AMOUNT SHALL BE CONVERTED TO A 24-HOUR WATER INFILTRATION DURING THE BIGGEST DEPTH OF THE LEAKAGE SECTION FOR EACH MANHOLE. NOT EXCEED ONE GALLON PER HOUR FOR A 24-HOUR PERIOD FOR INFILTRATION AND THERE SHALL BE NO SIGNS OF LEAKAGE.



INVERTS OF INTERSECTING TO CENTERLINE INVERT

2. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING PIPE.
3. IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP MAY BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN A SLOTTED CONCRETE TOP SHALL BE INSTALLED.
4. MANHOLE INVERTS, WALLS AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERT PIPE SHALL BE LAID OUT IN CURVES OF THE LARGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVEES SHALL BE CONSTRUCTED AT THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAMENT OF THE INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVEES SHALL BE COVERED AFTER TESTING.
5. MANHOLE AND PLACER SHALL BE DESIGNED FOR 120 LADING.
6. MANHOLE SHALL CONFORM TO ASTM A478 SPECIFICATIONS FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
7. CONCRETE 15-4000 PSI @ 28 DAYS MINIMUM
8. BASE SECTION SHALL BE ONE (1) JOINT MANHOLE SECTION



CONSULTANTS

Civil Engineer
Engineering Ventures P.J.
369 Broadway, Suite 11
Saratoga Springs,
New York 12866

MEP Engineer
Friedman Fisher Associates
22 Aviation Road
Albany, New York 12205

Structural Engineers
Szewczak, Kily & Fluhr
Structural Engineers, P.C.
Avon Park North 200 Fish
Avon, Connecticut 06001



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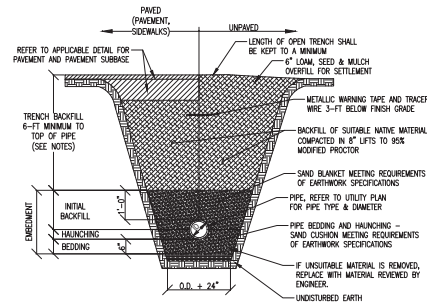
[illegible]Niskayuna Fire
District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Schenectady, NY, 12309
Niskayuna Fire District

PROJECT NO.	2022023.03
EV PROJECT NO.	25486.00
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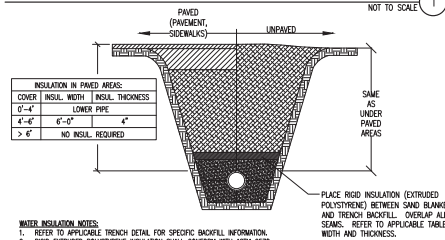
Sanitary Details

C505



- WATER TRENCH NOTES:**
- UNLESS OTHERWISE NOTED, ASSUME CLASS 7" SOILS. PERFORM ALL EXCAVATIONS TO OSM REQUIREMENTS.
 - BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR FULL LENGTH OF PIPE.
 - PROVIDE 6'-FT MINIMUM COVER OVER WATER PIPE.
 - INSTALL WATER PIPE IN ACCORDANCE WITH ANNA STANDARD C500.
 - BACKFILL SHALL BE OF A SUITABLE MATERIAL REMOVED FROM EXCAVATION EXCEPT WHERE OTHER MATERIAL IS SPECIFIED. DEBRIS, FROZEN MATERIAL, LARGE CLODS OR STONES, ORGANIC MATERIAL, OR OTHER UNSTABLE MATERIALS SHALL NOT BE USED FOR BACKFILL WITHIN TWO FEET OF THE TOP OF THE PIPE.
 - LEDGE, ROCK, BOULDER AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF FOUR INCHES BELOW AND ON EACH SIDE OF ALL PIPES.

WATER TRENCH DETAIL



- WATER INSULATION NOTES:**
- REFER TO APPLICABLE TRENCH DETAIL FOR SPECIFIC BACKFILL INFORMATION.
 - RIGID EXTRUDED POLYSTYRENE INSULATION SHALL CONFORM WITH ASTM C578 - STANDARD SPECIFICATION FOR RIGID CELLULAR POLYSTYRENE THERMAL INSULATION AND SHALL BE LOW STRENGTH HIGH LOAD 40 OR EQUIVALENT.

INSULATION OVER SHALLOW WATER LINE DETAIL

WATER NOTES

- WATER MAINS**
- PERFORM A HYDROSTATIC AND LEAKAGE TEST ACCORDING TO ANNA C500 (LATEST REVISION) ON EACH PIPE LINE.
 - THE ENGINEER SHALL BE GIVEN AT LEAST 72 HOURS NOTICE BEFORE THE TEST IS CONDUCTED. TEST MUST BE WITNESSED BY THE ENGINEER.
 - SPECIFIED TEST PRESSURE IS A MINIMUM OF 200 PSI OR 1.5X THE WORKING PRESSURE, WHICHEVER IS GREATER, AND PRESSURE DURING TEST SHALL NOT VARY BY MORE THAN 5 PSI. SEE THE CURRENT EDITION OF ANNA C500 FOR ALLOWABLE LEAKAGE.

- EXISTING UTILITIES**
- LOCATION OF UTILITY INSTALLATIONS AND UNDERGROUND STRUCTURES ARE SHOWN AS APPROXIMATE ON THE CONTRACT DOCUMENTS. SOME UTILITIES MAY NOT BE SHOWN.
 - ALL UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.
 - EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED DURING CONSTRUCTION.
 - ALL WATER, GAS, CABLE, TELEPHONE, ELECTRIC, SEWER, AND OTHER UTILITIES FOUND TO INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED IN A MANNER ACCEPTABLE TO THE ENGINEER, PRIOR TO COMMENCING DEMOLITION.

PIPE BEDDING

- SAND BLANKET/BEDDING SHALL MEET REQUIREMENTS OF EARTHWORK SPECIFICATIONS.
- TRENCH FINAL BACKFILL MATERIAL - MATERIAL WILL EXCLUDE PIECES OF PAVEMENT, ORGANIC MATERIAL, TOPSOIL, ALL NET OR SOFT MUCK, FERT. CLAY, LARGE ROCKS (GREATER THAN 12" DIMENSIONS), OR ANY MATERIAL DETERMINED BY THE ENGINEER THAT WILL NOT BE SUITABLE.

PIPE TRENCH BACKFILL

- MEET EARTHWORK SPECIFICATIONS FOR PLACEMENT AND COMPACTION.
- PVC PIPE (WATER)
 - HIPS PIPE: PE 3408 HIGH DENSITY POLYETHYLENE RESIN (ANNA C500).
 - FITTINGS: DUCTILE IRON, STANDARD THICKNESS, 350 PSI PRESSURE RATING (ANNA C110, C153, C105, ANS A21.10).
 - JONES BUTT FUSION (ASTM D2857).
 - NON-BURIED UTILITY GATE VALVES SHALL BE PROVIDED WITH FLANGED ENDS AND HANDWHEELS UNLESS OTHERWISE NOTED.
- LAYING PIPE
 - PIPE SHALL BE LAD WITH BELL ENDS FACING IN THE DIRECTION OF LAYING.
 - WHERE PIPE IS LAD ON A SLOPE OF 5% OR MORE, THE LAYING SHALL START AT THE LOW END AND PROCEED UPHILL, WITH THE BELL ENDS UPWARD.
 - A WEDGELIKE FILL SHALL BE PLACED IN THE OPEN ENDS OF INSTALLED PIPE WHEN PIPE LAYING IS NOT IN PROGRESS.
 - MAX. PERMISSIBLE DEFLECTION IS 75% OF ANNA SPEC. C500.

COLORIZATION OF DOMESTIC WATER LINES

- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF BEGINNING ANY DISINFECTION OF WATER MAINS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR BACTERIOLOGICAL TESTING AS REQUIRED BY THIS SPECIFICATION AND REFERENCE STANDARDS MENTIONED.
- DISINFECT ALL NEW PIPELINE SYSTEMS IN ACCORDANCE WITH ANNA C501, INCLUDING:
 - METHOD OF COLORING APPLICATION. USE CONTINUOUS FEED METHOD OR SLUG METHOD (TABLET METHOD IS NOT ACCEPTABLE).
 - FORM OF CHLORINE UTILIZED.
 - FINAL FLUSHING.
 - BACTERIOLOGICAL TESTING.
 - REPEITION OF PROCEDURE.

GATE VALVES

- RESILIENT SEAT GATE VALVES BY KENNEDY "KEN-SEAL" OR EQUAL.
- IRON BODY GATE VALVES TO MEET ANNA C-509-87.
- STEM CONSTRUCTION: NON-RISING.
- STEM SEALS: DOUBLE O-RING.
- GATE: CAST IRON RESILIENT WEDGE WITH SYNTHETIC ELASTOMER COATING, AND SHALL BE EPOXY COATED (FUSION BONDED) INSIDE AND OUT.
- FRONT THROUHOPE SHALL MEET ASTM A307, CHROMIUM PLATED.
- OUTLET CONNECTION: STANDARD MECHANICAL JOINT.
- OPERATION: OPEN RIGHT.

TAPPING SLEEVES AND VALVES

- TAPPING VALVES TO MEET ANS/ANNA C509-87, STANDARD FOR RESILIENT SEATED GATE VALVES.
- VALVES SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI.
- VALVES SHALL OPEN RIGHT.
- INLET FLANGES SHALL BE CLASS 125, ANS B16.1, OR ANS/ANNA C110/A21.10.
- OUTLET CONNECTION: STANDARD MECHANICAL JOINT.
- STEM SEALS: O-RING.
- STEM CONSTRUCTION: NON-RISING.
- SEATING: PARALLEL SEAT.
- END CONNECTIONS: MECHANICAL, ON RUM, FLANGED OR BRONCH.
- BURIED TAPPING VALVES SHALL BE PROVIDED WITH A 2 INCH SQUARE WRENCH NUT AND CAST IRON VALVE BODY. IF DEPTH FROM GRADE TO TOP OF VALVE OPERATING NUT IS GREATER THAN 6'-0", A VALVE STEM RISER MADE OF HIGH STRENGTH STEEL SHALL BE PROVIDED. DEPTH FROM VALVE STEM RISER NUT TO GRADE WILL BE 4 TO 6 FEET.

TAPPING SLEEVES

- ANNA C500, LATEST REVISION.
- ANNA C507, CLASS D, MAX. WORKING PRESSURE OF 150 PSI.
- SLEEVES: SPLIT SLEEVES OF CAST IRON OR DUCTILE IRON.
- MECHANICAL JOINT ENDS WITH END AND GASKET SEALS.
- BOLTS AND NUTS, MECHANICAL JOINTS: HIGH STRENGTH CAST IRON OR HIGH STRENGTH LOW ALLOY STEEL, ANS/ANNA C111/A21.11-90.
- BOLTS AND NUTS, FLANGED JOINTS: HIGH STRENGTH, LOW CARBON STEEL CONFORMING TO ANS/ANNA C110/A21.10-87, APPENDIX.
- COAT ALL NUTS AND BOLTS WITH A RUST RESISTANT LUBRICANT.
- ALL BOLTS AND NUTS USED WITH PIPE SLEEVES SHALL BE BRUSH COATED HEAVILY AFTER FINAL TIGHTENING WITH AUTOMATIC COAT-APPLIED MATERIAL TO THOROUGHLY COVER ALL EXPOSED SURFACES OF BOLTS AND NUTS.

VALVE BOXES

- ACCEPTABLE MANUFACTURER'S: MUELLER, CLOW, OR EQUAL.
- CLOW F-2452 SLIDING TYPE, TWO PIECE, OR EQUAL.
- 5 1/2" HIGH SHIRT.
- SIZE 664-M (40-60 INCH OVERALL LENGTH).
- CAST IRON.
- CLOW F-2400 LIDS OR EQUAL.
- THE WORD "WATER" TO BE CAST INTO TOP OF COVERS, AND ARROW SHOWING DIRECTION OF OPENING.

CONCRETE

- CONCRETE SHALL HAVE:
 - MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS
 - AIR ENTRAINMENT OF 4% TO 6% BY VOLUME.
 - WATER/CEMENT RATIO OF 0.49 LBS. WATER/CEMENT.
 - SLUMP OF 3 TO 4 INCHES.
- CONCRETE SHALL NOT BE PLACED WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT OR MORE THAN 90 DEGREES FAHRENHEIT.
- CONCRETE SHALL NOT BE DROPPED MORE THAN SIX FEET INSIDE A FORM.
- MAINTAIN TEMPERATURE OF CONCRETE SURFACE AT MINIMUM 50 DEGREES FAHRENHEIT FOR 72 HOURS AFTER PLACING CONCRETE. PREVENT ALL ENCLUSURES FOR A MINIMUM OF 2 HOURS TO PROVIDE A MIN. SURFACE TEMPERATURE OF 45 DEGREES FAHRENHEIT.
- ALLOW TO SET AND CURE ALL THRUST BLOCKS, CONCRETE SUPPORTS, AND ANCHORS A MINIMUM OF 24 HOURS BEFORE BACKFILLING.
- COMPLETELY CURE AND SET CONCRETE BEFORE ANY HYDROSTATIC OR LEAKAGE TESTING OF PIPELINE SYSTEMS. NONSHRINK GROUT SHALL BE IN-100 THROUHOPE, AS MANUFACTURED BY LEIM & FINK INDUSTRIAL PRODUCTS.
- DO NOT PLACE ANY MORTAR OR GROUT WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT.
- MORTAR FOR MANHOLES SHALL CONSIST OF THE FOLLOWING:
 - CEMENT-TYPE II, ASTM C150.
 - HYDRATED LIME-TYPE N, ASTM C207.
 - SAND-ASTM C 33, FINE AGGREGATES FOR CONCRETE.
 - WATER-CLEAN, SUITABLE FOR DRINKING.

GENERAL

- CONTRACTOR SHALL NOTIFY THE TOWN OF ELIZABETH/TOWN DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS BEFORE BEGINNING WATER LINE WORK.
- "AS BUILT" DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR AT THE TIME OF COMPLETION OF THE SYSTEM.

PRINCIPALS

Michael Szemanczak, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
388 Broadway, Suite 11
Saratoga Springs,
New York 12866

MEP Engineer
Treutman Fisher Associates
22 Andover Road
Albany, New York 12205

Structural Engineer
Schemack, Nyl & Flury
Structural Engineers, P.C.
Avon Park North 200 Fifth Dr
Avon, Connecticut 06001



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No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Schenectady Rd
Scheneclady, NY, 12309
Niskayuna Fire District

PROJECT NO.	2022023.03
BY PROJECT NO.	25496.00
DATE	7/6/2026
DRAWN BY	MAJ
CHECKED BY	MAJ

Water Details

PRINCIPALS

Michael Szemczak, AIA
James Graham, AIA

CONSULTANTS

Civil Engineer
Engineering Ventures P.E.
368 Broadway, Suite 11
Saratoga Springs,
New York 12866

MEP Engineer
Treutman Faber Associates
12 Auditor Road
Albany, New York 12205

Structural Engineer
Schemack, Nyls & Pyle
Structural Engineers, P.C.
Avon Park North 200 Fisher Dr
Avon, Connecticut 06001



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No.	Description	Date

Niskayuna Fire District 2

Phase 2 - Additions
2772 Troy-Scheneclady Rd
Scheneclady, NY, 12309
Niskayuna Fire District

PROJECT NO.	20220223.03
BY PROJECT NO.	25496.00
DATE	7/6/2026
DRAWN BY	MAJD
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Erosion & Sediment Control Details (1 of 2)

C507

EROSION CONTROL NOTES

GENERAL NOTES

1. THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE PRESENT ON-SITE FROM DAY-TO-DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ON-SITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
2. EROSION CONTROL MEASURES SHALL BE CONDUCTED IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL*, DATED NOVEMBER 2016, OR LATEST EDITION.
3. DISTURBANCE LIMITS ARE TO BE MAINTAINED, AND THE FOLLOWING MANAGEMENT PRACTICES INSTALLED, PRIOR TO BEGINNING EARTH WORK IN ANY GIVEN AREA: SILT FENCE, CONSTRUCTION ENTRANCE, INLET PROTECTION ON EXISTING STRUCTURES, AND TREE PROTECTION FENCING.
4. THE PERIOD BETWEEN OCTOBER 15TH AND APRIL 15TH IS CONSIDERED THE "WINTER CONSTRUCTION PERIOD". A PLAN FOR WINTER CONSTRUCTION MUST BE DEVELOPED BY THE CONTRACTOR, AND SUBMITTED TO THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF PROPOSED EARTH DISTURBANCE DURING THIS PERIOD.
5. ALL DISTURBED AREAS ARE TO BE STABILIZED (TEMPORARY OR FINAL) WITHIN 7 DAYS OF INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE WITHIN THIS WORK AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
 - a. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN 24 HOURS AND NO PRECIPITATION IS FORECAST DURING THAT PERIOD.
 - b. WORK IS OCCURRING WITHIN A SELF-CONTAINED EXCAVATION, 2 FEET OR MORE IN DEPTH.
 - c. IN NO CASE SHALL SOIL BE EXPOSED FOR MORE THAN 14 DAYS WITHOUT BEING STABILIZED.
6. THE CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION OF THE ADJACENT ROADWAYS FOR OFF-SITE TRACKING OF SOIL MATERIALS. SOIL, STONE, AND DEBRIS FLOW LEAVING THE SITE ARE TO BE REMOVED (WHEN FOUND) BY SWEEPING AT THE END OF EACH CONSTRUCTION DAY, OR MORE FREQUENTLY WHEN NEEDED TO PREVENT IMPACTS TO ADJACENT ROADS AND SIDEWALKS.
7. IF DETERMINING IS REQUIRED FOR CONSTRUCTION, THE CONTRACTOR MUST UTILIZE SEDIMENT FILTER BAGS (OR ALTERNATE APPROVED BY THE ENGINEER) TO PREVENT DISCHARGE OF SEDIMENT-LOADED WATER OFF SITE.

TEMPORARY/CONSTRUCTION EROSION CONTROL MEASURES

1. THE "SMALLEST PRACTICAL" AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE ENGINEER.
2. DUST SHALL BE CONTROLLED WITH WATER DISTRIBUTED BY A TRUCK-MOUNTED SPRAY BAR. CALCIUM CHLORIDE (AGSHTO M 144) OR SODIUM CHLORIDE (AGSHTO M 143) SHALL BE USED AS DIRECTED BY THE ENGINEER.
3. SILT FENCES SHALL BE INSTALLED GENERALLY 10 FEET FROM THE BASE OF THE FILL SLOPES, OR AS SHOWN ON THE PLANS. THESE SHALL REMAIN IN PLACE UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 6 INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
4. EXCAVATED MATERIAL FROM EARTH EXCAVATION AND OTHER DIGGING SHALL BE PLACED ON-SITE IN A LOCATION TO BE APPROVED OF BY THE OWNER AND/OR THE ENGINEER OR USED FOR PROJECT FILL MATERIAL, IF DETERMINED SUITABLE BY THE OWNER'S REPRESENTATIVE.
5. STOCKPILED MATERIAL (TOPSOIL, BORROW, ETC.) SHALL HAVE SILT FENCE CONSTRUCTED AROUND THE PERIMETER. THE STOCKPILED MATERIAL SHALL BE SEEDING AND MULCHED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION AND SEDIMENTATION OFF SITE. LOCATE STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, IF POSSIBLE. DURING WINTER CONSTRUCTION, STOCKPILED MATERIAL SHALL BE COVERED OR WATERED APPROPRIATELY TO PREVENT WIND EROSION.
6. SLOPES GREATER THAN 3:1 SHALL HAVE EROSION CONTROL NETTING INSTALLED TO STABILIZE THE SLOPE AND REDUCE THE EROSION POTENTIAL. NETTING SHALL BE BIODEGRADABLE WITH A 12 MONTH LONGEVITY. STITCHING AS MANUFACTURED OR APPROVED EQUIVALENT. INSTALL NETTING OVER MULCHED SLOPES SO THAT ALL PARTS ARE IN CONTACT WITH THE SOIL AND MULCH. PIN NETTING WITH WIRE STAPLES 3 FEET O.C. TO ENSURE FULL BONDING WITH SOIL SURFACE. THE SLOPE SURFACE SHOULD BE LEFT SLIGHTLY ROUGHENED AND NOT SMOOTH. IF LARGE AMOUNTS OF OFF-SITE WATER WILL DRAIN OVER THESE SLOPES, TEMPORARY DIVERSION SWALES SHALL BE INSTALLED UP SLOPE UNTIL THE SLOPE VEGETATION STABILIZES.

PERMANENT EROSION CONTROL MEASURES

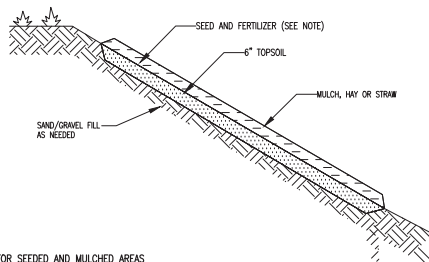
1. WHEN FINAL GRADES ARE REACHED IN AN AREA, IT SHALL BE SEEDING AND MULCHED WITHIN 48 HOURS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL DISTURBED AREAS, INCLUDING WATERING UNTIL THE AREA IS INSPECTED AND ACCEPTED BY THE OWNER OR ENGINEER.
3. AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.
4. RE-SEEDING SHALL BE DONE UNTIL ALL AREAS ARE COMPLETELY COVERED WITH A MAJORITY STRAND OF GRASS. AN AREA SHALL BE CONSIDERED COVERED WHEN THE ENTIRE SURFACE CONTAINS A VIGOROUS STAND OF GRASS. AREAS THAT, IN THE OPINION OF THE ENGINEER, ARE PROBABLY NEEDS SHALL BE PLACED UP, FINE GRADED, FERTILIZED AND RE-SEEDING IN THE MANNER SPECIFIED PREVIOUSLY, EXERCISING CAUTION NOT TO CAUSE DAMAGE TO NEW OR EXISTING PLANT MATERIAL.
5. ALL STABILIZATION INVOLVING SEEDING IS TO BE COMPLETED BY SEPTEMBER 15TH.

WINTER EROSION CONTROL NOTES

WINTER CONSTRUCTION STANDARDS AND EROSION AND SEDIMENT CONTROL MEASURES APPLY TO ALL CONSTRUCTION ACTIVITIES INVOLVED WITH ONGOING LAND DISTURBANCE AND EXPOSURE BETWEEN OCTOBER 15TH TO THE FOLLOWING APRIL 15TH.

WINTER CONSTRUCTION PROCEDURES

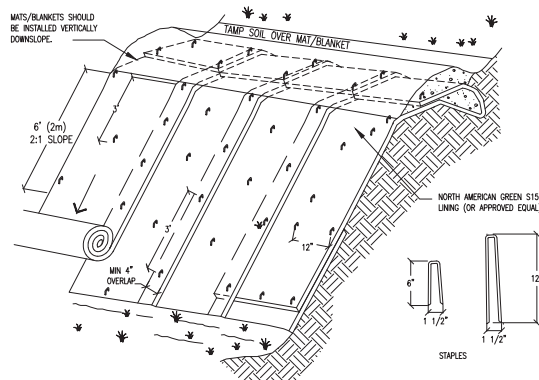
1. DURING WINTER CONSTRUCTION, INSPECTIONS BY THE ON-SITE PLAN COORDINATOR SHALL OCCUR DAILY WHEN AREAS ARE UN-STABLE, AND WEEKLY PRIOR TO ANY FORECASTED RAIN, THAW OR SPRING MELT WHEN TEMPORARY STABILIZATION IS IN PLACE.
2. IF THE SITE WILL NOT HAVE EARTH DISTURBING ACTIVITIES ONGOING DURING THE WINTER CONSTRUCTION PERIOD, ALL BARE EXPOSED SOIL MUST BE STABILIZED BY ESTABLISHING VEGETATION, STRAW OR OTHER ACCEPTABLE MULCH, MATING, ROCK, OR OTHER APPROVED MATERIALS, SUCH AS ROLLED EROSION CONTROL PRODUCTS. SEEDING OF AREAS WITH MULCH COVER IS PREFERRED BUT SEEDING ALONE IS NOT ACCEPTABLE FOR PROPER STABILIZATION.
3. PREPARE A SNOW MANAGEMENT PLAN WITH ADEQUATE STORAGE FOR SNOW AND CONTROL OF MELT WATER, REQUIRING CLEARED SNOW TO BE STORED IN A MANNER NOT AFFECTING ONGOING CONSTRUCTION ACTIVITIES.
4. ENLARGE AND STABILIZE ACCESS POINTS TO PROVIDE FOR SNOW MANAGEMENT AND STOCKPILING. SNOW MANAGEMENT ACTIVITIES MUST NOT DESTROY OR DEGRADE INSTALLED EROSION AND SEDIMENT CONTROL PRACTICES.
5. LIMITS OF DISTURBANCE SHALL BE MOVED OR REPLACED TO REFLECT BOUNDARY OF WINTER WORK.
6. A MINIMUM 25'-FT BUFFER SHALL BE MAINTAINED FROM ALL PERIMETER CONTROLS (SUCH AS SILT FENCE) TO ALLOW FOR CLEARING AND MAINTENANCE. MARK SILT FENCE WITH TALL STAKES THAT ARE VISIBLE ABOVE THE SNOW PACK.
7. SNOW IS TO BE REMOVED FROM ALL STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES FOLLOWING EACH SIGNIFICANT SNOWFALL. NO SNOW STORAGE UP-GRADE/OF DISTURBANCE. NO SNOW DISPOSAL IN SEDIMENT POND/BASINS. IF NECESSARY, SNOW/ICE MUST BE REMOVED PRIOR TO STABILIZATION OF DISTURBED AREAS.
8. EDGES OF DISTURBED AREAS THAT DRAIN TO A WATERBODY WITHIN 100 FT SHALL HAVE 2 ROWS OF SILT FENCE, 5 FEET APART, INSTALLED ON THE CONTOUR.
9. DRAINAGE STRUCTURES SHALL BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS. ALL DEBRIS, ICE DAMS, OR DEBRIS FROM PLOWING OPERATIONS, THAT RESTRICT THE FLOW OF RUNOFF AND MELTWATER, ARE TO BE REMOVED.
10. SEDIMENT BARRIERS MUST BE INSTALLED AT ALL APPROPRIATE PERIMETER AND SENSITIVE LOCATIONS. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED BEFORE THE GROUND FREEZES.
11. SOIL STOCKPILES MUST BE PROTECTED BY THE USE OF ESTABLISHED VEGETATION, ANCHORED STRAW MULCH, ROLLED STABILIZATION MATTING, OR OTHER DURABLE COVERING. A BARRIER MUST BE INSTALLED AT LEAST 15 FT FROM THE TOE OF THE STOCKPILE TO PREVENT SOIL MIGRATION AND TO CAPTURE LOOSE SOIL.
12. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES SHOULD BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN THREE (3) DAYS. ROLLED EROSION CONTROL BARRIERS MUST BE USED ON ALL SLOPES 1:3 OR STEEPER.
13. IF STRAW MULCH ALONE IS USED FOR TEMPORARY STABILIZATION, IT SHALL BE APPLIED AT DOUBLE THE STANDARD RATE OF 2 TONS PER ACRE, MAKING THE APPLICATION RATE 4 TONS PER ACRE. OTHER MANUFACTURED MULCHES SHOULD BE APPLIED AT DOUBLE THE MANUFACTURER'S RECOMMENDED RATE.
14. TO ENSURE ADEQUATE STABILIZATION AND COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL SHOULD BE STABILIZED AT THE END OF EACH WORK DAY WITH THE FOLLOWING EXCEPTIONS:
 - a. WORK WILL RESUME WITHIN 24 HOURS IN THE SAME AREA AND NO PRECIPITATION IS FORECAST OR;
 - b. THE WORK IS IN DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS OPEN UTILITY TRENCHES, FOUNDATION EXCAVATIONS, OR WATER MANAGEMENT AREAS.
15. USE STONE PATHS TO STABILIZE ACCESS PERIMETERS OF BUILDINGS UNDER CONSTRUCTION AND AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE A MINIMUM 10 FT IN WIDTH BUT WIDER AS NECESSARY TO ACCOMMODATE EQUIPMENT.
16. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE BY OCTOBER 15, OR IF NOT POSSIBLE, THEN PRIOR TO GROUND FREEZE.
17. SNOW AND ICE SHALL BE REMOVED TO LESS THAN 1" THICKNESS PRIOR TO STABILIZATION.



NOTES FOR SEEDING AND MULCHED AREAS

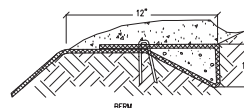
1. MULCH: HAY OR STRAW MAY BE UTILIZED AND SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE.
2. SEED: SHALL BE OF THE FOLLOWING MIXTURE:
KENTUCKY BLUE GRASS ----- 20 POUNDS / ACRE
CREeping RED FESCUE ----- 20 POUNDS / ACRE
RYE GRASS ----- 5 POUNDS / ACRE
3. COVER SEED WITH 1 INCH SOIL UNLESS A HYDROSEEDER IS USED.
4. MULCH ANCHORING: SHALL BE ACCOMPLISHED BY DEGRADABLE MULCH NETTING. USE WHEN SLOPES ARE GREATER THAN 10%.
5. TOPSOIL AND MULCHING NOT TO BE APPLIED IN AREAS OF TRAVELWAYS.
6. SEEDING AND MULCHING OF DISTURBED AREAS SHALL TAKE PLACE WITHIN 48 HOURS OF FINAL GRADING.

FERTILIZER - 10 LBS. PER 1000S.F.
SPRING SEEDING
FALL SEEDING
LIME - 90 LBS. PER 1000S.F.
CALCINIC GROUND LIMESTONE
NOT LESS THAN 80% OF THE TOTAL
CARBONATE
TOP SOIL
6" MINIMUM APPROVED TOPSOIL
STRAW MULCH - 2 BALES PER 1000S.F.
APPLY BRICKER OR NETTING AS NEEDED

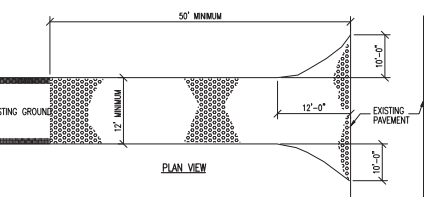
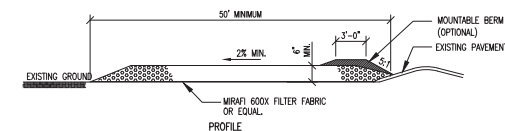


EROSION CONTROL MATTING NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, LOGS, STICKS AND OTHERS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.



EROSION CONTROL MATTING DETAIL



STABILIZED CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE: USE 1-1/2" CRUSHED STONE.
2. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE.
3. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. REPAIR AND/OR CLEANUP ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
5. INVEITS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION ACCESS DETAIL

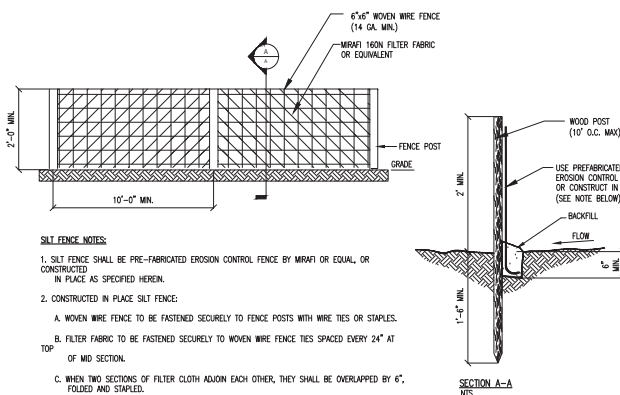
NOT TO SCALE 2

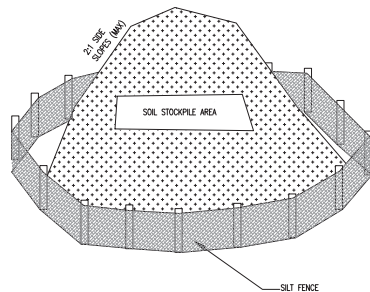
SILT FENCE DETAIL

NOT TO SCALE 4

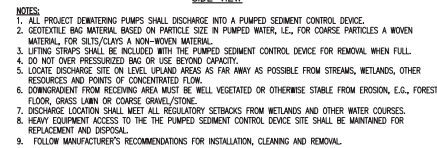
SILT FENCE NOTES:

1. SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MRWFI OR EQUAL, OR CONSTRUCTED IN PLACE AS SPECIFIED HEREIN.
2. CONSTRUCTED IN PLACE SILT FENCE:
 - A. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - B. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE TIES SPACED EVERY 24" AT TOP OF MID SECTION.
 - C. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6", FOLDED AND STAPLED.
3. INSPECTION SHALL BE FREQUENT (MINIMUM ONCE A WEEK AND AFTER EVERY RAINFALL). MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.

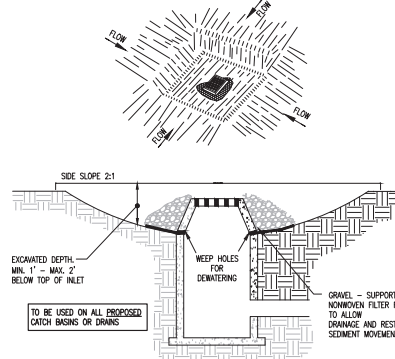
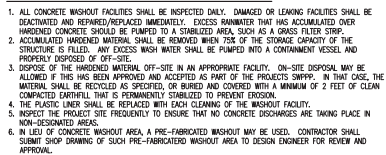




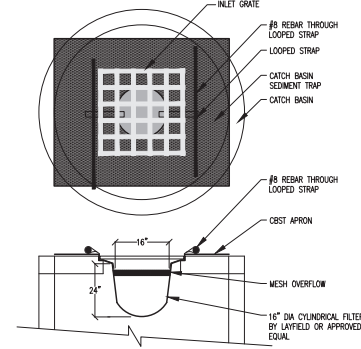
1. STOCKPILES TO HAVE MAXIMUM 2:1 SIDE SLOPES.
2. SILT FENCE SHALL BE PLACED AROUND THE PERIMETER OF STOCKPILE AREA.
3. STOCKPILE AREA TO BE STABILIZED WITH VEGETATION, GEOTEXTILE, OR COVER. IF COVER TO BE USED, COVER SHALL BE SECURED WITH USE OF SAND BAGS OR OTHER MEASURES TO PREVENT COVER FROM BLOWING OFF STOCKPILE.
4. STOCKPILES SHALL BE PLACED ON DRY AND STABLE AREAS.



NOT TO SCALE



1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES MUST BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.
5. GRAVEL BAGS, GRADE GUARDS, FILTERTEX OR SEDIGUARD INLET PROTECTION DEVICES MAY BE USED TO PREVENT PRODUCT INLET FOR EXCAVATION FOR REVIEW PRIOR TO USE. INSTALL PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE LATEST EDITION OF THE NY EPSC STANDARDS AND SPECIFICATIONS.



NOT TO SCALE

NOT TO SCALE 7

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A DETAILED CONSTRUCTION SEQUENCE DETAILING THE SPECIFIC WORK THAT WILL BE PERFORMED. THE SEQUENCE PROVIDED IS FOR GENERAL WORK ITEMS TO ENSURE THAT SEDIMENT LADEN RUNOFF IS NOT DISCHARGED FROM SITE. CONTRACTOR TO ENSURE THAT NO MORE THAN 5 ACRES IS DISTURBED AT ANY ONE TIME WITHOUT AREAS BEING FULLY STABILIZED.

- 100

C508

	CATCH BASIN
	HYDRANT
	LIGHT POLE
	SANITARY MANHOLE
	STORM MANHOLE
	ELECTRIC MANHOLE
	WATER VALVE
	TELEPHONE PEDESTAL
	ELECTRIC BOX
	ELECTRIC TRANSFORMER
	UTILITY POLE
	TELEPHONE MANHOLE
	TRAFFIC CONTROL POLE
	TRAFFIC SIGNAL POLE
	TRAFFIC SIGNAL POLE
	GAS LINE
	SANITARY LINE
	STORM LINE
	WATER LINE
	TELEPHONE LINE
	OVERHEAD WIRES
	SPOT ELEVATION
	CAPPED IRON ROAD FOUND
	IRON ROAD FOUND
	IRON PIPE FOUND
	LANDSCAPED AREA
	ROAD DRAIN
	SAND DRIVEWAY
	MONITORING WELL
	GAS MARKER POST
	ELECTRIC METER
	GAS METER

SITE LOCATION PLAN: 1"=100'

LANDS N/F OF OCEAN LIFE, LLC
BK. 2044, PG. 589
SECTION 61.11 BLOCK 4 LOT 1.1

LANDS N/F OF GARY WELLS
BK. 1464, PG. 157
SECTION 61.11 BLOCK 4 LOT 4

LANDS N/F OF MICHAEL RINELLA
BK. 1706, PG. 569
SECTION 61.11 BLOCK 4 LOT 8

LANDS N/F OF JOSEPH & ROSEMARY PROCK
BK. 1107, PG. 229
SECTION 61.11 BLOCK 4 LOT 9

LANDS N/F OF MARSH CNTY.
BK. 1961, PG. 89
SECTION 61.11 BLOCK 4 LOT 10

LANDS N/F OF NISKAYUNA FIRE DISTRICT NO. 2
BK. 1373, PG. 145
BK. 928 PG. 179
BK. 938 PG. 645
BK. 498 PG. 426
BK. 654 PG. 254
SECTION 61.11 BLOCK 4 LOT 2.1

BENCHMARK
PID-ANDA
ELEV = 300.27

MAP REFERENCES:

- "EXHIBIT MAP LANDS NOW OR FORMERLY OF NISKAYUNA FIRE DISTRICT NO. 2 SHOWING PROPOSED LOT LINE ADJUSTMENT WITH LANDS NOW OR FORMERLY OF SCHAFER AND ROBIN SCHAFER" PREPARED BY C.T. MALE ASSOCIATES, DATED JANUARY 22, 1938 AND THE SCHOENECTADY COUNTY CLERKS OFFICE AS MAP NO. 1.
- "MAP NO. 1 PORTION OF THE WARNER ESTATE" BY CHARLES MALE, DATED JANUARY 22, 1938 AND THE SCHOENECTADY COUNTY CLERKS OFFICE AS MAP NO. 1.
- "MAP NO. 2 PORTION OF THE WARNER ESTATE" BY CHARLES MALE, DATED OCTOBER 10, 1938 AND THE SCHOENECTADY COUNTY CLERKS OFFICE AS MAP NO. 2.
- "TROY-SCHENECTADY ROAD, PART 2, S.H. NO. 75, PARCEL NO. 80 SHEET 1 OF 2, PREPARED BY NEW YORK STATE DEPARTMENT OF PUBLIC WORKS DISTRICT OFFICE NO. 1, ALBANY, N.Y."
- "TROY-SCHENECTADY ROAD, PART 2, S.H. NO. 73, PARCEL NO. 78 SHEET 1 OF 2, PREPARED BY NEW YORK STATE DEPARTMENT OF PUBLIC WORKS DISTRICT OFFICE NO. 1, ALBANY, N.Y."
- "TROY-SCHENECTADY ROAD, PART 2, S.H. NO. 70, PARCEL NO. 75 SHEET 1 OF 2, PREPARED BY NEW YORK STATE DEPARTMENT OF PUBLIC WORKS DISTRICT OFFICE NO. 1, ALBANY, N.Y."
- GRADING, UTILITY & DRAINAGE PLAN, SP-2, PREPARED BY C.T. MALE ASSOCIATES, DATED 8-28-92, DWG NO. 8-28-92.

TAX PARCEL NUMBER:
TOWN OF NISKAYUNA, SCHOENECTADY COUNTY, NEW YORK
SEC. 61.11 - BLK. 4 - PARCELS 2.1 & 3

DEED REFERENCES:

- ARTHUR J FRIDERICO TO NISKAYUNA FIRE DISTRICT NO. 2, DATED FEBRUARY 16, 1993 AND RECORDED IN THE SCHOENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 1373 AT PAGE 145.
- PATRICIA RODNEY ADMINISTRATOR OF THE ESTATE OF LAWRENCE MARC CRANE TO NISKAYUNA FIRE DISTRICT NO. 2, DATED JANUARY 13, 2022 AND RECORDED IN THE SCHOENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 2145 AT PAGE 94.

Ausfeld & Waldruft Land Surveyors LLP
333 CLINTON STREET, SCHOENECTADY NY
Phone: (518) 346-1595 Fax: (518) 770-1655

DATE:	REVISION:	2772 & 2780 TROY SCHENECTADY ROAD
		BOUNDARY & TOPOGRAPHIC SURVEY OF THE LANDS OF NISKAYUNA FIRE DISTRICT NO. 2
TOWN OF NISKAYUNA	SCHOENECTADY COUNTY, N.Y.	
SCALE: 1"=20'	APRIL 23, 2026	
DRAWN BY: KOW	PROJECT NO: 264137	

Scale bar: 20' 0' 20'
SCALE IN FEET
1"=20'

HORIZONTAL DATUM IS NEW YORK STATE PLANE EAST ZONE,
ESTABLISHED FROM GPS OBSERVATIONS AT THE TIME OF
SURVEY

HORIZONTAL DATUM IS NEW YORK STATE PLANE EAST ZONE,
ESTABLISHED FROM GPS OBSERVATIONS AT THE TIME OF
SURVEY

VERTICAL DATUM IS NAVD88, ESTABLISHED FROM GPS

OBSERVATIONS AT THE TIME OF SURVEY

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 NEW YORK STATE
EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED
WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OF

HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TR
COPIES.

SURVEYED FROM RECORD DESCRIPTION AND AS IN POSSESSION

SUBJECT TO CONTAINED, EASEMENTS, RESTRICTIONS,

SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS,
CONDITIONS AND AGREEMENTS OF RECORD.

SURVEY SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE

PUBLIC MAY HAVE FOR HIGHWAY USE.

SURVEY SHOWN IS SUBJECT TO ANY SUBSURFACE CONDITION
THAT MAY EXIST. IF ANY

UNDERGROUND FACILITIES AND STRUCTURES CLOAKED PERSON

UNDERGROUND FACILITIES AND STRUCTURES SHOWN HEREON
WERE TAKEN FROM DATA OBTAINED FROM PREVIOUS MAPS AND
RECORDS DRAFTED BY THE U.S. ARMY CORP. OF ENGINEERS AND

RECORD DRAWINGS. ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A

FIELD SURVEY UNLESS OTHERWISE NOTED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE

NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. THE SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES

MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST

UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.

AND CONSTRUCTION.

Drawing Name: Z:\PROJECTS\2026\26-4137\deg\26-4137-bm.deg
(refs. Attached)

Date Printed: Apr 24, 2026, 10:13am

1. "EXISTING MAP LANDS NOW OR FORMERLY IN LINCOLN COUNTY, NEW YORK, SHOWING PROPOSED LOT LINE AND BOUNDARY OF THE LANDS OF THE STATE OF NEW YORK, COUNTY OF LINCOLN, TOWN OF RONALD A. SCHARF AND ROBIN SCHARF, BY C.P.T. M.A. DAVID, DATED JULY 1, 2015, PROVIDED BY THE PREPARED BY:

2. "THE MAP NO. 1 PORTION OF THE WANNER ESTATE AS MAP D-387, DATED JANUARY 1, 1938, AND FILED IN THE SHERMANTON COUNTY CLERKS OFFICE AS MAP D-388.

3. "THE MAP NO. 2 PORTION OF THE WANNER ESTATE AS MAP D-388, DATED JANUARY 1, 1938, AND FILED IN THE SHERMANTON COUNTY CLERKS OFFICE AS MAP D-389.

4. "75%-SHERMANTON ROAD, PART, 2.5 H. NOS. 407" MAP NO. 73, PARCEL NOS. 80 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.

5. "75%-SHERMANTON ROAD, PART, 2.5 H. NOS. 407" MAP NO. 73, PARCEL NOS. 78 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.

6. "75%-SHERMANTON ROAD, PART, 2.5 H. NOS. 407" MAP NO. 73, PARCEL NOS. 75 SHEET 1 OF 2, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.

7. GRADING, UTILITY & DRAINAGE PLAN, 2.5 H. NOS. 407, PREPARED BY THE NEW YORK STATE DEPARTMENT OF PUBLIC WORKS, ON FILE AT DISTRICT OFFICE NO. 1, ALBANY, N.Y.

TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NEW YORK
SEC. 61.11 - BLK. 4 - PARCELS 2.1 & 3

1. ARTHUR J FRIDERICI TO NISKAYUNA FIRE DISTRICT NO. 2, DATED FEBRUARY 16, 1993 AND RECORDED IN THE SCHENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 1373 AT PAGE 145.

2. PATRICIA RODNEY ADMINISTRATOR OF THE ESTATE OF LAURENCE MARC CRANE TO NISKAYUNA FIRE DISTRICT NO. 2, DATED JANUARY 13, 2025 AND RECORDED IN THE SCHENECTADY COUNTY CLERKS OFFICE IN DEED BOOK 2145 AT PAGE 89.

		2772 & 2780 TROY SCHENECTADY ROAD		
		BOUNDARY & TOPOGRAPHIC SURVEY OF THE LANDS OF NISKAYUNA FIRE DISTRICT NO. 2		
RETURN TO:		TOWN OF NISKAYUNA	SCHENECTADY COUNTY, N.Y.	
		SCALE: 1"=60'	APRIL 23, 2008	
		DRAWN BY: P&W	PROJECT NO: 26-4137	
DATE:		Auseful & Waldruff Land Surveys LLP 121 CLINTON STREET, SCHENECTADY NY NY 12305, 518-346-1500 Fax: 518-346-1501 www.auslff.com		VINCENT P. AUSFELD P.L.S. 2008-0001 www.auslff.com



D-Series Size 1

Amber Series

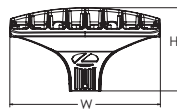
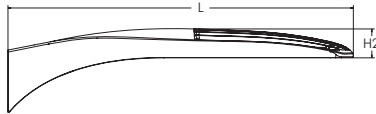
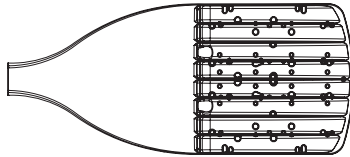
LED Area Luminaire



d#series

Specifications

EPA:	0.69 ft ² (0.06 m ²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in Amber LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications.

Ordering Information

EXAMPLE: DSX1 LED P7 AMBPC AMCRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED											
Series	LEDs	Color temperature ²	Color Rendering Index ²	Distribution			Voltage	Mounting			
DSX1 LED	Forward optics	AMBLW Limited wavelength amber	AMCRI	AFR	Automotive front row	T5M	Type V medium	MVOLT	(120V-277V) ⁴	Shipped included	
	P1 P6			T1S	Type I short	T5LG	Type V low glare	HVOLT	(347V-480V) ^{5,6}		SPA
	P2 P7	AMBPC Phosphor converted amber		T2M	Type II medium	T5W	Type V wide	XVOLT	(277V - 480V) ^{7,8}	RPA	Round pole mounting (#8 drilling)
	P3 P8			T3M	Type III medium	BLC3	Type III backlight control ³		SPA5	Square pole mounting #5 drilling ⁹	
	P4 P9			T3LG	Type III low glare ³	BLC4	Type IV backlight control ³		RPA5	Round pole mounting #5 drilling ⁹	
	P5			T4M	Type IV medium	LCCO Left corner cutoff ³	RCCO Right corner cutoff ³		SPA8N	Square narrow pole mounting #8 drilling	
	Rotated optics			T4LG	Type IV low glare ³			WBA	Wall bracket ¹⁰		
	P10 ¹ P12 ¹			TFTM	Forward throw medium			MA	Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)		
	P11 ¹										

Control options		Other options		Finish (required)			
Shipped installed		Shipped installed		Shipped installed			
NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{11, 12, 20, 21}	PER7	Seven-pin receptacle only (controls ordered separate) ^{14, 21}	SPD20KV	20KV surge protection	DDBXD	Dark Bronze
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{13, 20, 21}	FAO	Field adjustable output ^{15, 21}	HS	Houseside shield (black finish standard) ²²	DBLXD	Black
PER	NEMA twist-lock receptacle only (controls ordered separate) ¹⁴	BL30	Bi-level switched dimming, 30% ^{16, 21}	L90	Left rotated optics ¹	DNAXD	Natural Aluminum
PER5	Five-pin receptacle only (controls ordered separate) ^{14, 21}	BL50	Bi-level switched dimming, 50% ^{16, 21}	R90	Right rotated optics ¹	DWHXD	White
		DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) ¹⁷	CCE	Coastal Construction ²³	DDBTXD	Textured dark bronze
		DS	Dual switching ^{18, 19, 21}	Shipped separately		DBLBXD	Textured black
				EGSR	External Glare Shield (reversible, field install required, matches housing finish)	DNATXD	Textured natural aluminum
				BSDB	Bird Spikes (field install required)	DWHGXD	Textured white



COMMERCIAL OUTDOOR

1 Acuity Way, Decatur, GA 30035 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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DSX1-LED AMBER
Rev. 08/28/25
Page 1 of 11

Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ²⁴
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ²⁴
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ²⁴
DSHORT SBK	Shorting cap ²⁴
DSX1HS P#	House-side shield (enter package number 1-12 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSX1EGSR (FINISH)	External glare shield (specify finish)
DSX1BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

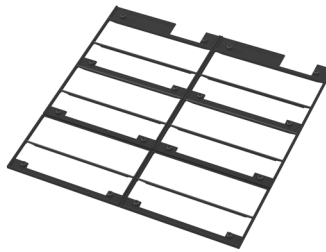
NOTES

- Rotated optics available with packages P10, P11 and P12. Must be combined with option L90 or R90.
- AMBLW only available in package P1, P4, P7 and P10. AMCR1 must be specified with AMBLW or AMBPC.
- T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- HVOLT not available with packages P1, P7 and P10 when combined with option NLTAIR2 PIRHN or option PIR. HVOLT not available with package P4 when combined with option AMBLW and option NLTAIR2 PIRHN and option PIR.
- XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
- XVOLT not available in packages P1, P7 or P10. XVOLT not available in package P4 when AMBLW is selected. XVOLT not available in packages P1, P2, P4, P5, P7, P8, P10 and P11 when combined with option NLTAIR2 PIRHN or PIR.
- SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
- WBA cannot be combined with Type 5 distributions plus photocell (PER).
- NLTAIR2 and PIRHN must be ordered together. For more information on nLight AIR2 visit this [link](#).
- NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50, DMG and DS.
- PIR not available with NLTAIR2 PIRHN, PER, PER5, PER7, FAO, BL30, BL50, DMG and DS.
- PER/PER5/PER7 not available with NLTAIR2 PIRHN, PIR, BL30, BL50, FAO, DMG and DS. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, DMG and DS.
- BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO, DMG and DS.
- DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DS.
- DS not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DMG.
- DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P8, P9, P10, P11 and P12.
- Reference Motion Sensor Default Settings table on page 4 to see functionality.
- Reference Controls Options table on page 4.
- HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
- CCE option not available with option BSDB and EGSR. Contact Technical Support for availability.
- Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.

Shield Accessories



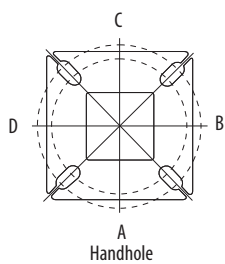
External Glare Shield (EGSR)



House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION

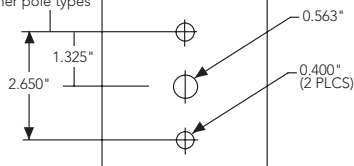


Handhole

Template #8

Top of Pole

1.75" for aluminum poles
2.75" for other pole types



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
Minimum Acceptable Outside Pole Dimension							
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 with SPA	0.69	1.38	1.23	1.54	---	1.58
DSX1 with SPA5, SPA8N	0.70	1.40	1.30	1.66	---	1.68
DSX1 with RPA, RPA5	0.70	1.40	1.30	1.66	1.60	1.68
DSX1 with MA	0.83	1.66	1.50	2.09	2.09	2.09

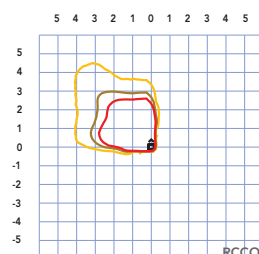
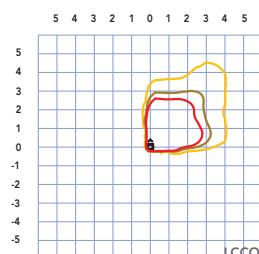
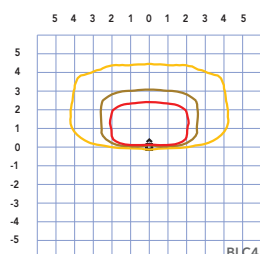
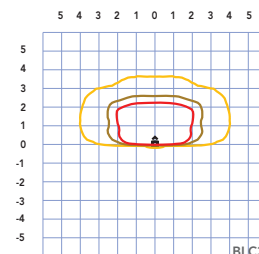
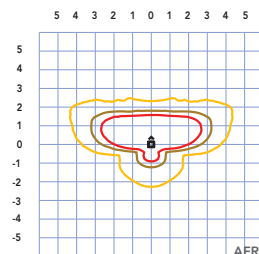
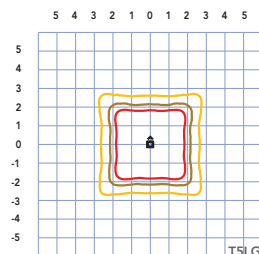
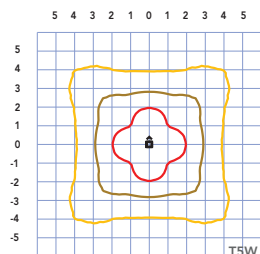
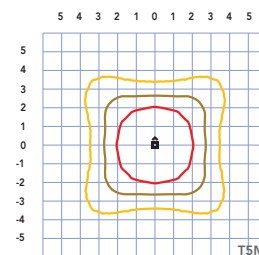
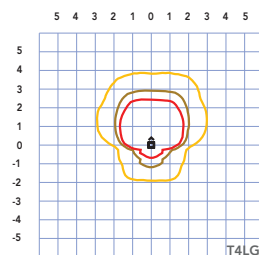
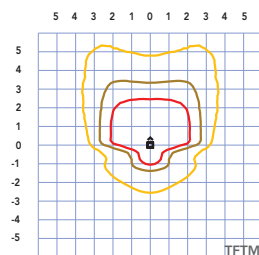
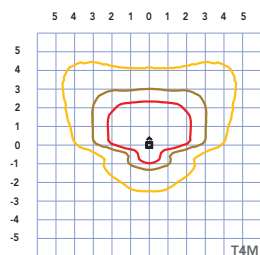
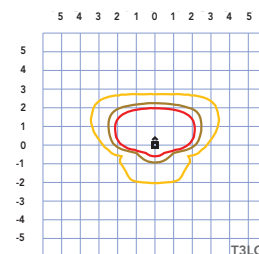
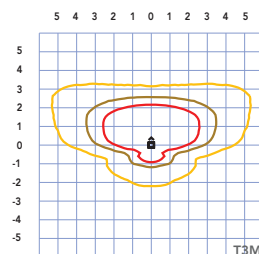
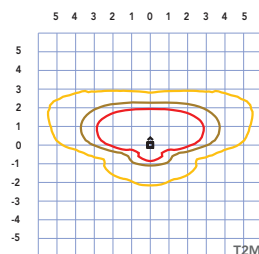
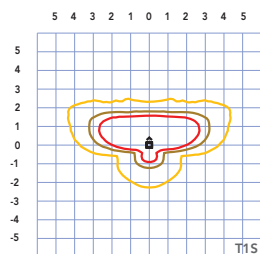
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [homepage](#).

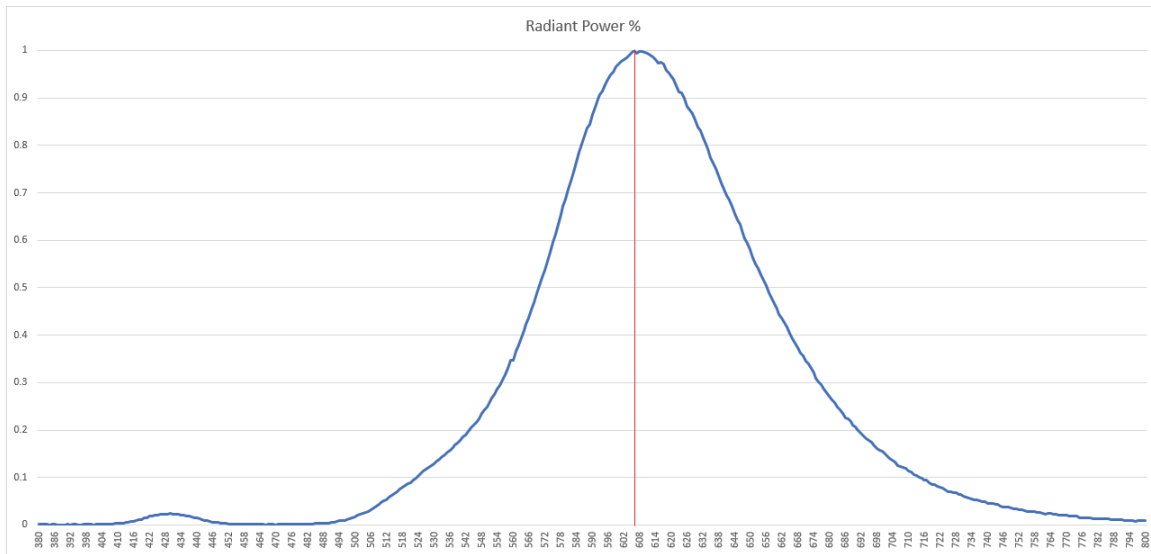
Isofootcandle plots for the DSX1 LED P9 AMBPC AMCRI. Distances are in units of mounting height (20').

LEGEND

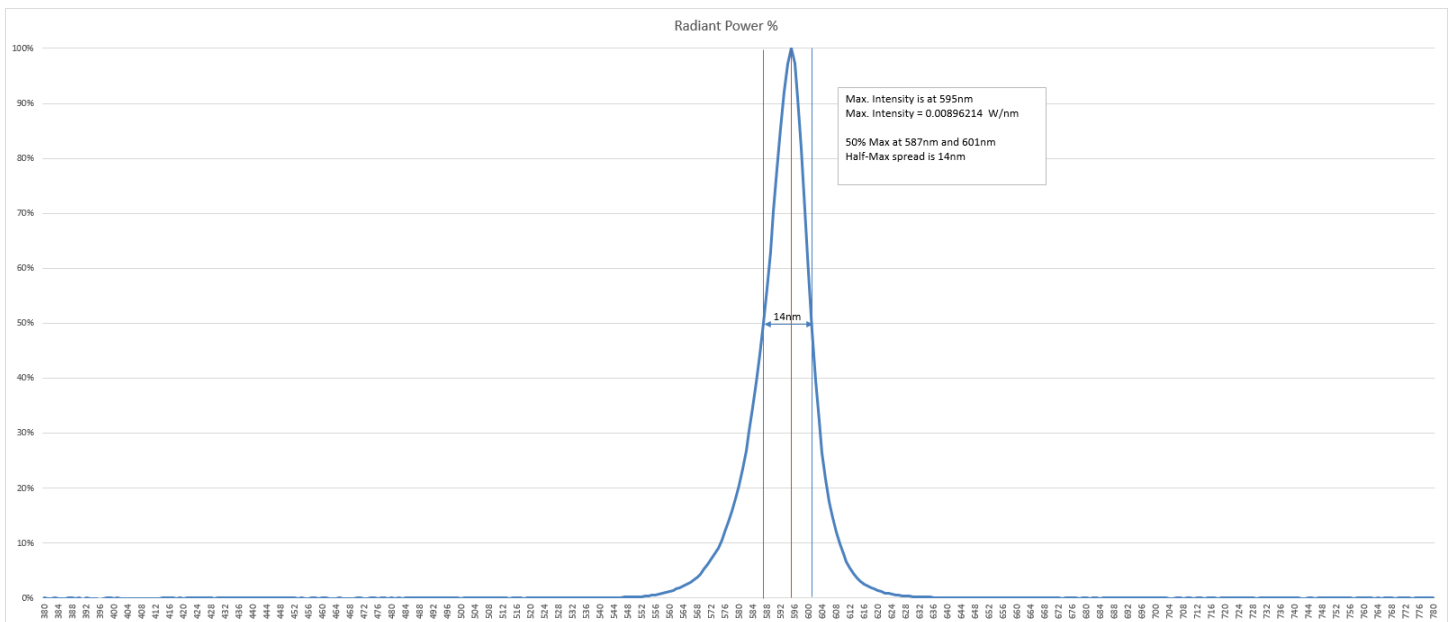
- 0.1 fc
- 0.5 fc
- 1.0 fc



AMBPC - Phosphor Converted Amber



AMBLW - True Limited Wavelength Amber



Performance Data

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use maximum published values by package listed on specification sheet (input watts and lumens by optic type).

Electrical Load - AMBPC (Phosphor Converted Amber)

					Current (A)					
	Performance Package	LED Count	Drive Current (mA)	Wattage	120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	30	530	52	0.43	0.25	0.22	0.19	0.15	0.11
	P2	30	700	69	0.58	0.33	0.29	0.25	0.20	0.14
	P3	30	1050	105	0.88	0.51	0.44	0.38	0.30	0.22
	P4	40	530	69	0.58	0.33	0.29	0.25	0.20	0.14
	P5	40	700	92	0.77	0.44	0.38	0.33	0.27	0.19
	P6	40	1050	140	1.17	0.67	0.58	0.51	0.40	0.29
	P7	60	530	103	0.86	0.50	0.43	0.37	0.30	0.22
	P8	60	700	138	1.15	0.66	0.57	0.50	0.40	0.29
	P9	60	1050	210	1.75	1.01	0.88	0.76	0.61	0.44
Rotated Optics (Requires L90 or R90)	P10	60	530	103	0.86	0.50	0.43	0.37	0.30	0.22
	P11	60	700	138	1.15	0.66	0.58	0.50	0.40	0.29
	P12	60	1050	210	1.75	1.01	0.88	0.76	0.61	0.44

Electrical Load - AMBLW (Limited Wavelength Amber)

					Current (A)					
	Performance Package	LED Count	Drive Current (mA)	Wattage	120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	30	530	41	0.34	0.20	0.17	0.15	0.12	0.08
	P4	40	530	55	0.46	0.26	0.23	0.20	0.16	0.11
	P7	60	530	81	0.68	0.39	0.34	0.29	0.23	0.17
Rotated Optics (Requires L90 or R90)	P10	60	530	81	0.68	0.39	0.34	0.29	0.23	0.17

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Photocell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PERS or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclipse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

FORWARD OPTICS

Performance Package	LED Count	Drive Current (mA)	Distribution Type	AMBPC (Phosphor Converted)							AMBLW (Limited Wavelength)					
				System Watts	Lumens	B	U	G	LPW		System Watts	Lumens	B	U	G	LPW
P1	30	530	T1S	52W	4,696	1	0	1	90	41W	2,044	0	0	1	50	
			T2M		4,350	1	0	2	84		1,893	1	0	1	46	
			T3M		4,401	1	0	2	85		1,915	1	0	1	47	
			T3LG		3,931	1	0	1	76		1,711	0	0	1	42	
			T4M		4,466	1	0	2	86		1,944	1	0	1	48	
			T4LG		4,062	1	2	1	78		1,768	0	1	1	43	
			TFTM		4,497	1	0	2	87		1,957	0	0	1	48	
			T5M		4,595	3	0	1	89		2,000	2	0	1	49	
			T5W		4,670	3	0	1	90		2,033	2	0	1	50	
			T5LG		4,608	2	0	1	89		2,006	1	0	0	49	
			BLC3		4,670	3	0	1	90		1,393	0	0	1	34	
			BLC4		3,306	0	0	2	64		1,439	0	0	1	35	
			RCCO		3,230	0	0	1	62		1,406	0	0	1	35	
			LCCO		3,230	0	0	1	62		1,406	0	0	1	35	
			AFR		4,696	1	0	1	90		2,044	0	0	1	50	
P2	30	700	T1S	69W	5,944	1	0	1	86							
			T2M		5,506	1	0	2	79							
			T3M		5,570	1	0	3	80							
			T3LG		4,975	1	0	1	72							
			T4M		5,653	1	0	3	82							
			T4LG		5,141	1	2	1	74							
			TFTM		5,692	1	0	3	82							
			T5M		5,816	3	0	1	84							
			T5W		5,910	3	0	2	85							
			T5LG		5,833	2	0	1	84							
			BLC3		4,051	0	0	2	58							
			BLC4		4,184	0	0	2	60							
			RCCO		4,088	0	0	2	59							
			LCCO		4,088	0	0	2	59							
			AFR		5,944	1	0	1	86							
P3	30	1050	T1S	105W	7,830	1	0	2	74							
			T2M		7,254	1	0	3	69							
			T3M		7,338	1	0	3	70							
			T3LG		6,555	1	0	1	62							
			T4M		7,447	1	0	3	71							
			T4LG		6,773	1	2	2	64							
			TFTM		7,499	1	0	3	71							
			T5M		7,662	3	0	2	73							
			T5W		7,786	4	0	2	74							
			T5LG		7,684	3	0	1	73							
			BLC3		5,337	0	0	2	51							
			BLC4		5,513	0	0	3	52							
			RCCO		5,385	0	0	2	51							
			LCCO		5,385	0	0	2	51							
			AFR		7,830	1	0	2	74							

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

FORWARD OPTICS

Performance Package	LED Count	Drive Current (mA)	Distribution Type	AMBPC (Phosphor Converted)							AMBLW (Limited Wavelength)					
				System Watts	Lumens	B	U	G	LPW		System Watts	Lumens	B	U	G	LPW
P4	40	530	T1S	69W	6,181	1	0	1	89		55W	2,560	0	0	1	47
			T2M		5,726	1	0	2	83			2,371	1	0	1	43
			T3M		5,792	1	0	3	83			2,399	1	0	1	44
			T3LG		5,174	1	0	1	75			2,143	0	0	1	39
			T4M		5,879	1	0	3	85			2,435	1	0	2	44
			T4LG		5,347	1	2	1	77			2,214	0	1	1	40
			TFTM		5,919	1	0	3	85			2,452	1	0	2	45
			T5M		6,048	3	0	1	87			2,505	2	0	1	46
			T5W		6,146	3	0	2	89			2,546	2	0	1	46
			T5LG		6,066	2	0	1	87			2,512	1	0	0	46
			BLC3		4,213	0	0	2	61			1,745	0	0	1	32
			BLC4		4,351	0	0	2	63			1,802	0	0	1	33
			RCCO		4,251	0	0	2	61			1,761	0	0	1	32
			LCCO		4,251	0	0	2	61			1,761	0	0	1	32
			AFR		6,181	1	0	1	89			2,560	0	0	1	47
P5	40	700	T1S	92W	7,868	1	0	2	85							
			T2M		7,289	1	0	3	79							
			T3M		7,373	1	0	3	80							
			T3LG		6,586	1	0	1	71							
			T4M		7,483	1	0	3	81							
			T4LG		6,806	1	2	2	74							
			TFTM		7,483	1	0	3	81							
			T5M		7,699	3	0	2	83							
			T5W		7,824	4	0	2	85							
			T5LG		7,721	3	0	1	84							
			BLC3		5,363	0	0	2	58							
			BLC4		5,539	0	0	3	60							
			RCCO		5,411	0	0	2	59							
			LCCO		5,411	0	0	2	59							
			AFR		7,868	1	0	2	85							
P6	40	1050	T1S	140W	10,524	1	0	2	75							
			T2M		9,749	2	0	3	69							
			T3M		9,862	2	0	3	70							
			T3LG		8,809	1	0	2	63							
			T4M		10,009	2	0	3	71							
			T4LG		9,103	1	2	2	65							
			TFTM		10,078	2	0	3	72							
			T5M		10,298	4	0	2	73							
			T5W		10,465	4	0	2	75							
			T5LG		10,327	3	0	1	74							
			BLC3		7,173	0	0	2	51							
			BLC4		7,409	0	0	3	53							
			RCCO		7,238	1	0	2	52							
			LCCO		7,238	1	0	2	52							
			AFR		10,524	1	0	2	75							

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

FORWARD OPTICS

Performance Package	LED Count	Drive Current (mA)	Distribution Type	AMBPC (Phosphor Converted)							AMBLW (Limited Wavelength)					
				System Watts	Lumens	B	U	G	LPW		System Watts	Lumens	B	U	G	LPW
P7	60	530	T1S	103W	9,284	1	0	2	90		81W	3,529	1	0	1	43
			T2M		8,601	2	0	3	83			3,269	1	0	2	40
			T3M		8,700	2	0	3	84			3,307	1	0	2	41
			T3LG		7,772	1	0	2	75			2,954	1	0	1	36
			T4M		8,830	2	0	3	85			3,357	1	0	2	41
			T4LG		8,031	1	2	2	78			3,053	1	1	1	38
			TFTM		8,830	2	0	3	85			3,380	1	0	2	42
			T5M		9,085	4	0	2	88			3,453	2	0	1	42
			T5W		9,232	4	0	2	89			3,509	3	0	1	43
			T5LG		9,111	3	0	1	88			3,463	2	0	0	43
			BLC3		6,328	0	0	2	61			2,406	0	0	1	30
			BLC4		6,536	0	0	3	63			2,485	0	0	2	31
			RCCO		6,385	1	0	2	62			2,427	0	0	1	30
			LCCO		6,385	1	0	2	62			2,427	0	0	1	30
			AFR		9,284	1	0	2	90			3,529	1	0	1	43
P8	60	700	T1S	138W	11,650	1	0	2	84							
			T2M		10,792	2	0	3	78							
			T3M		10,917	2	0	3	79							
			T3LG		9,752	1	0	2	71							
			T4M		11,080	2	0	3	80							
			T4LG		10,077	1	2	2	73							
			TFTM		11,156	2	0	3	81							
			T5M		11,400	4	0	2	83							
			T5W		11,584	4	0	3	84							
			T5LG		11,433	3	0	1	83							
			BLC3		7,941	0	0	2	58							
			BLC4		8,201	0	0	3	59							
			RCCO		8,012	1	0	2	58							
			LCCO		8,012	1	0	2	58							
			AFR		11,650	1	0	2	84							
P9	60	1050	T1S	210W	15,577	2	0	2	74							
			T2M		14,429	2	0	3	69							
			T3M		14,597	2	0	4	69							
			T3LG		13,039	2	0	2	62							
			T4M		14,814	2	0	4	71							
			T4LG		13,474	2	0	2	64							
			TFTM		14,917	2	0	4	71							
			T5M		15,242	4	0	2	73							
			T5W		15,489	5	0	3	74							
			T5LG		15,286	3	0	2	73							
			BLC3		10,617	0	0	2	51							
			BLC4		10,966	0	0	3	52							
			RCCO		10,713	1	0	2	51							
			LCCO		10,713	1	0	2	51							
			AFR		15,577	2	0	2	74							

Performance Data

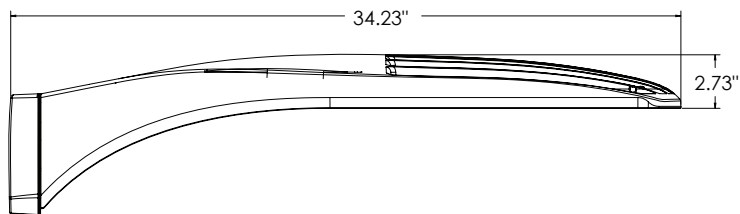
Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

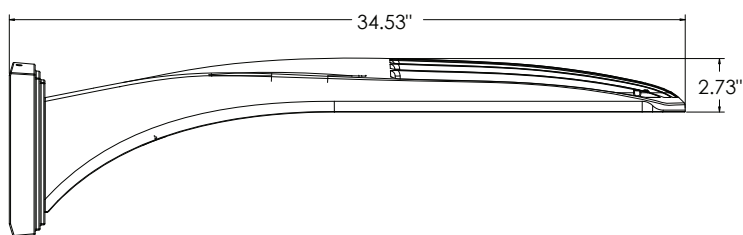
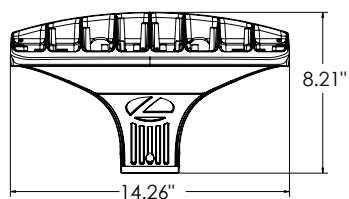
ROTATED OPTICS

Performance Package	LED Count	Drive Current (mA)	Distribution Type	AMBPC (Phosphor Converted)							AMBLW (Limited Wavelength)					
				System Watts	Lumens	B	U	G	LPW		System Watts	Lumens	B	U	G	LPW
P10	60	530	T1S	103W	9,020	3	0	3	87		81W	3,499	2	0	2	43
			T2M		8,356	3	0	3	81			3,241	2	0	2	40
			T3M		8,452	3	0	3	82			3,278	2	0	2	40
			T3LG		7,551	3	0	3	73			2,929	1	0	1	36
			T4M		8,452	3	0	3	82			3,327	2	0	2	41
			T4LG		7,801	3	0	3	76			3,026	1	0	1	37
			TFTM		8,638	3	0	3	84			3,351	2	0	2	41
			T5M		8,825	4	0	2	85			3,423	2	0	1	42
			T5W		8,968	4	0	2	87			3,479	3	0	1	43
			T5LG		8,851	3	0	1	86			3,433	2	0	0	42
			BLC3		6,148	3	0	3	60			2,385	2	0	2	29
			BLC4		6,350	3	0	3	61			2,463	2	0	2	30
			RCCO		6,204	4	0	4	60			2,406	3	0	3	30
			LCCO		6,203	0	0	2	60			2,406	0	0	1	30
			AFR		9,020	3	0	3	87			3,499	2	0	2	43
P11	60	700	T1S	138W	11,491	3	0	3	83							
			T2M		10,645	4	0	4	77							
			T3M		10,767	4	0	4	78							
			T3LG		9,619	3	0	3	70							
			T4M		10,927	4	0	4	79							
			T4LG		9,938	3	0	3	72							
			TFTM		11,005	4	0	4	80							
			T5M		11,243	4	0	2	81							
			T5W		11,425	4	0	3	83							
			T5LG		11,275	3	0	1	82							
			BLC3		7,832	3	0	3	57							
			BLC4		8,089	3	0	3	59							
			RCCO		7,903	4	0	4	57							
			LCCO		7,902	1	0	2	57							
			AFR		11,491	3	0	3	83							
P12	60	1050	T1S	210W	15,332	3	0	3	73							
			T2M		14,203	4	0	4	68							
			T3M		14,366	4	0	4	68							
			T3LG		12,834	3	0	3	61							
			T4M		14,366	4	0	4	68							
			T4LG		13,260	3	0	3	63							
			TFTM		14,683	4	0	4	70							
			T5M		15,001	4	0	2	71							
			T5W		15,244	4	0	3	73							
			T5LG		15,044	3	0	2	72							
			BLC3		10,450	3	0	3	50							
			BLC4		10,793	4	0	4	51							
			RCCO		10,545	4	0	4	50							
			LCCO		10,543	1	0	2	50							
			AFR		15,332	3	0	3	73							

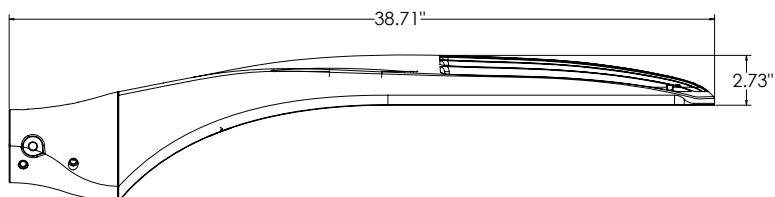
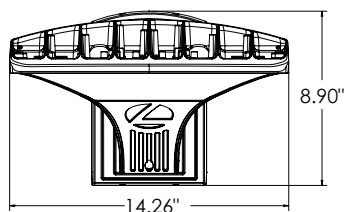
Dimensions



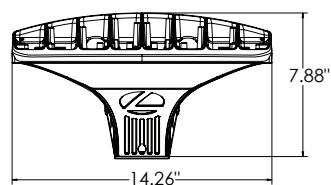
DSX1 with RPA, RPA5, SPA5, SPA8N mount
Weight: 36 lbs



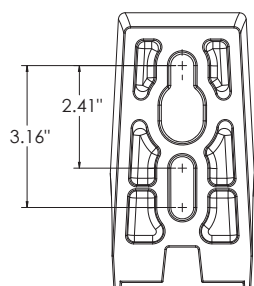
DSX1 with WBA mount
Weight: 38 lbs



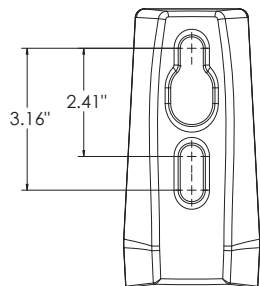
DSX1 with MA mount
Weight: 39 lbs



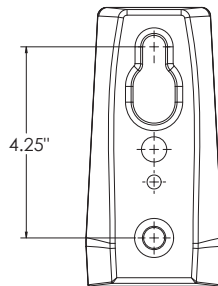
SPA (STANDARD ARM)



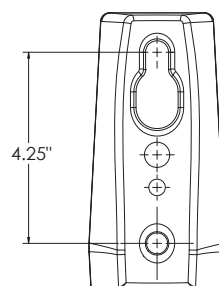
RPA



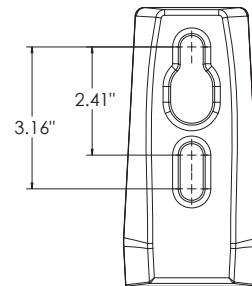
SPA5



RPA5

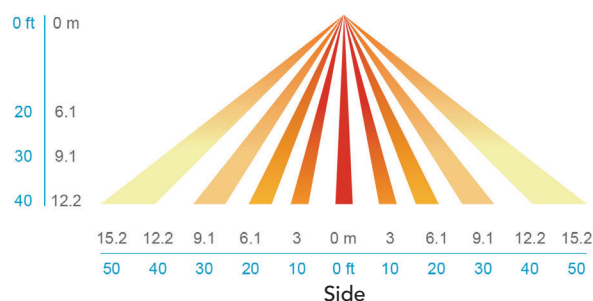
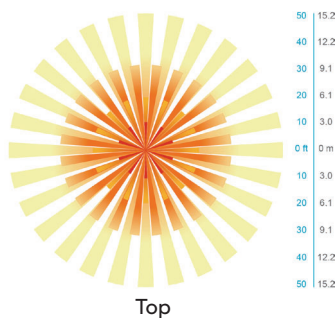


SPA8N



nLight Sensor Coverage Pattern

NLTAIR2 PIRHN



FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G for SPA and MA. 1.5G for mountings RPA, RPA5, SPA5 and SPA8N. Low EPA (0.69 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

Coastal Construction (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS

Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of amber LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life. Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensor with on-board photocells feature field-adjustable programming and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS

The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found here.

INSTALLATION

Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

GOVERNMENT PROCUREMENT

BAA – Buy America(n) Act: Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

MINOR STORMWATER POLLUTION PREVENTION PLAN AND CALCULATIONS REPORT

for

Niskayuna Fire District #2- Phase 2 Additions

Prepared by

Engineering Ventures, PC

Vermont

208 Flynn Avenue, Suite 2A
Burlington, Vermont 05401

New York

368 Broadway, Suite 11
Saratoga Springs, NY 12866

New Hampshire

85 Mechanic Street, Suite E2-3
Lebanon, NH 03766



Niskayuna Fire District #2
2772 Troy Schenectady Road
Schenectady, NY 12309



July 2, 2026

EV Job# 25486

Niskayuna Fire District #2 – Phase 2 Additions

Minor Stormwater Pollution Prevention Plan

Table of Contents

Part 1: Narrative

- I. Project Description
- II. Existing Conditions
- III. Receiving Water
- IV. Potential Impacts to Natural Resources
- V. Site Soils Information
- VI. Proposed Conditions
- VII. Stormwater Management Methodology
- VIII. Stormwater Objectives
- IX. Post-Construction Stormwater Management Treatment Practices
- X. Storm Sewer Collection and Conveyance Design
- XI. Erosion and Sediment Control Design
- XII. General Housekeeping & Spill Prevention and Procedures
- XIII. Maintenance and Inspections
- XIV. Winter Construction Standards and Procedures

Part 2: E&S Checklist

Part 3: Site Location and Natural Resource Maps

- I. Location Map
- II. Aerial Map
- III. NYS Environmental Resource Mapper

Part 4: Soils Mapping and Information

- I. Soil Map
- II. Soil Descriptions
- III. Geotechnical Boring Locations
- IV. Infiltration Test Results

Part 5: HydroCAD Report (1YR, 10YR, 50YR, and 100 YR)

- I. Extreme Precipitation Tables
- II. HYD1: Pre-Development Drainage Area Map
- III. Pre-Development HydroCAD Report
- IV. HYD2: Post-Development Drainage Area Map
- V. Post-Development HydroCAD Report

Part 6: WQv and Stormwater Treatment Practice Calculations

- I. HYD3: Impervious Area Map for WQv Calculation
- II. WQv Calculation
- III. WQv Peak Flow Calculation

Part 7: Stormwater Conveyance Calculations (100-YR)

- I. HYD4: Inlet Watershed Map
- II. 100-YR Intensity Frequency Duration
- III. Inlet Areas
- IV. Storm Pipe Analysis

Part 8: Maintenance & Inspections

- I. Contractor Certification Form
- II. Pre-Construction Meeting Documents (from E&S Manual)
- III. Construction Duration Inspections (from E&S Manual)
- IV. Individual Stormwater Practices Construction Inspection Checklists
- V. Individual Stormwater Practices POST-Construction Operation and Maintenance Manuals

Associated Plans (Under Separate Cover)

- C001: Site Legend and Notes
- CD101: Existing Conditions and Demolition Plan
- C101: Site Plan
- C102: Grading Plan
- C103: Utility Plan
- C104: Erosion and Sediment Control Plan
- C201: Storm Profiles
- C202: Sanitary & Water Profiles
- C501: Site Details (1 of 3)
- C502: Site Details (2 of 3)
- C503: Site Details (3 of 3)
- C504: Stormwater Details
- C505: Sanitary Details
- C506: Water Details
- C507: Erosion and Sediment Control Details (1 of 2)
- C508: Erosion and Sediment Control Details (2 of 2)

Part 1:

Narrative

I. Project Description

The Applicant, Niskayuna Fire District #2, is proposing the construction of a new decontamination (decon) addition and expanded meeting spaces to improve the functionality and operational capabilities of the existing facility located at 2772 Troy-Schenectady Road. The project is located on Tax Parcel 61.11-4-2.1. Site improvements include 2 building additions, totaling 2,585 SF+/-, the expansion and reconfiguration of the parking area to increase parking capacity, relocation of existing storage sheds, replacement of the existing trench drain along Troy-Schenectady Road (NYS Route 7), lighting, stormwater management, sanitary sewer improvements, and installation of a new standby generator. Modifications will be made to the entrance which will require a NYSDOT Commercial Access Permit. The proposed project will be serviced by municipal water and sewer. The site is located within the Town of Niskayuna, which is a designated MS4. The total lot area is 1.49 acres +/-.

II. Existing Conditions of Site and Surrounding Areas

The project is surrounded primarily by residential properties on all sides, with a commercial property to the immediate west of the site. Troy-Schenectady Road (NYS Route 7) borders the site to the north. Currently, the site is mostly developed with an existing 13,814+/- footprint masonry fire station, a 290-SF+/- shed and 900-SF+/- pavilion to the east of the existing fire station, parking areas, sidewalks, and utilities. The existing fire station consists of 4 fire engine bays that access directly onto Troy-Schenectady Road via a 183'+/- flush curb.

III. Receiving Water

The site drains to an existing NYSDOT storm sewer system within Troy-Schenectady Road that ultimately conveys runoff to the east to the Mohawk River, approximately 1 mile northeast of the project site. The Mohawk River has a stream classification of A.

IV. Potential Impacts to Natural Resources

There are no wetlands, floodplains, significant natural communities, or endangered species located in the project area according to the New York State Environmental Resource Mapper.

V. Site Soils Information

The soils on the site were mapped using the NRCS Web Soil Survey. According to the NRCS Soil Mapper, the following soil is located on the site:

- CoA – Colonia loamy sand, 0-3 percent slopes. These soils are excessively draining soils with a Hydrologic Soil Group A.

Infiltration Testing was performed on the site in June of 2026, by Renaissance Geotechnical, in the area of the proposed stormwater management area. The infiltration testing indicated that despite the A-soils mapped by NRCS, the sub-surface conditions do not support infiltration, as there was a 0"/hr infiltration rate for 3 different tests.

See Part 4 of this report for all soils information.

VI. Proposed Conditions

As stated in the project description, project work will include the proposed building additions, redeveloped and expanded (new) parking areas, sidewalks, a generator pad, utilities, landscaping, stormwater management, and sanitary sewer improvements. Stormwater management practices have been provided to convey, treat, and mitigate increased runoff within the project area. These practices are described in detail in Section VII of this narrative.

VII. Stormwater Management Methodology

The stormwater design was prepared in accordance with the New York State Stormwater Management Manual. The following objectives were established in the development of the Stormwater Management Plan for the proposed project:

1. Reduce the total post-development peak discharges to pre-development discharges for the 1-YR, 10-YR, 25-YR, 50-YR, and 100-YR storms in accordance with the New York State Stormwater Management Manual and NYSDOT regulations.
2. Provide treatment for the 90% runoff event (WQv) for the redeveloped and new impervious areas in accordance with the New York State Stormwater Management Manual.

The total drainage area used for the analysis is 1.427 acres. Table 1 below shows the pre-development and post-development areas for the total area.

Table 1: Summary of Total Areas for Hydrologic Analysis

	PRE-DEVELOPMENT (Nodes 1Sv-2Sv)	POST-DEVELOPMENT (Nodes 1Sc-3Sc)
Lawn, A-soils	0.398 Ac.	0.230 Ac.
Impervious Surfaces	1.029 Ac.	1.197 Ac.
TOTAL ON-SITE AREA	1.427 Ac.	1.427 Ac.

For purposes of analyzing the development from this project, two (2) points of interest were established.

- **Point of Interest #1 (POI #1)**

POI#1 is the point within the NYSDOT storm sewer system in Troy-Schenectady Road (NYS Route 7), northeast of the property, to which a majority of the runoff from the site drains. Table 1.1 below shows the pre-development and post-development areas for POI#1:

Table 1.1: Summary of Total Areas for Hydrologic Analysis of POI#1

	PRE-DEVELOPMENT (Node 1Sv)	POST-DEVELOPMENT (Nodes 1Sc and 2Sc)
Lawn, A-soils	0.212 Ac.	0.135 Ac.
Impervious Surfaces	0.996 Ac.	1.185 Ac.
TOTAL ON-SITE AREA	1.208 Ac.	1.320 Ac

To mitigate the increase in runoff, one (1) subsurface detention basin (Basin #1) has been designed to reduce the peak runoff rates in the post-development condition to less than pre-development levels

prior to discharging from the site. Due to the lack of infiltration characteristics of the subsoils, infiltration is not a feasible method of treatment for the WQv storm event. In order to treat the required WQv for new and redeveloped impervious areas, a hydrodynamic separator will be installed as a flow-based treatment device. These practices are described further in Section IX of this narrative.

- **Point of Interest #2 (POI #2)**

POI#2 is the point along the southeastern property line, where a small portion of the site (mostly pervious areas) drain to the neighboring properties to the south and southeast. Table 1.2 below shows the pre-development and post-development areas for POI#2:

Table 1.2: Summary of Total Areas for Hydrologic Analysis of POI#2

	PRE-DEVELOPMENT (Node 2Sv)	POST-DEVELOPMENT (Node 3Sc)
Lawn, A-soils	0.186 Ac.	0.095 Ac.
Impervious Surfaces	0.033 Ac.	0.012 Ac.
TOTAL ON-SITE AREA	0.219 Ac.	0.107 Ac

Due to reductions in drainage areas, volume, and peak runoff rates in the post-development condition compared to the pre-development condition, there is not need for stormwater mitigation for POI#2.

PRE-DEVELOPMENT HYDROLOGY

Using the established Points of Interest, drainage areas were delineated. Time of concentrations and runoff curve numbers were determined for the drainage areas and input into HydroCAD. Due to the large percentage of impervious area on the site, a minimum time of concentration of 5 minutes was utilized in the design. Pre-Development conditions were analyzed for the 1-, 10-, 25-, 50-, and 100-year frequency storm events using SCS TR-20 Method as provided by *HydroCAD version 10.20*. All program input and output can be found in Part 5 of this report.

POST-DEVELOPMENT HYDROLOGY

Post-Development drainage areas were established to the Points of Interest. For the POIs, drainage areas were delineated to each of the proposed stormwater practices as well as any areas bypassing any stormwater practices. The runoff curve numbers and time of concentration values were determined for the post-development conditions. A minimum time of concentration value of 5 minutes was utilized for the post-development calculations in the developed areas, due to the large amount of impervious area compared to the drainage area sizes. Again, by using the SCS TR-20 method as provided by *HydroCAD version 10.20*, the peak runoff rates were determined for the 1-, 10-, 25-, 50-, and 100-year frequency storm events.

VIII. Stormwater Objectives

The following section outlines how the stated stormwater objectives, described in Section VII above, were satisfied for the project.

Objective 1: Reduction of Peak Runoff Rates

Tables 2.1 and 2.2 summarize the results of the stormwater management analysis for the two control points concerning the pre-development and post-development peak runoff rate control. Table 2.3 summarizes the results of the total drainage area (both Points POI#1 and POI#2 combined).

Table 2.1: Summary of Peak Flows at Study Point for POI#1 (HydroCAD Link Nodes 1Lv and 1Lc)

	Peak Runoff Rates				
	1-YR	10-YR	25-YR	50-YR	100-YR
<i>PRE-DEV</i>	<i>1.94 CFS</i>	<i>4.32 CFS</i>	<i>5.64 CFS</i>	<i>6.74 CFS</i>	<i>8.17 CFS</i>
POST-DEV	1.62 CFS	3.28 CFS	4.18 CFS	4.92 CFS	5.89 CFS
% decrease	16.5%	24.1%	25.9%	27.0%	27.9%

Table 2.2: Summary of Peak Flows at Study Point for POI#2 (HydroCAD Link Nodes 2Lv and 2Lc)

	Peak Runoff Rates				
	1-YR	10-YR	25-YR	50-YR	100-YR
<i>PRE-DEV</i>	<i>0.00 CFS</i>	<i>0.01 CFS</i>	<i>0.05 CFS</i>	<i>0.11 CFS</i>	<i>0.24 CFS</i>
POST-DEV	0.00 CFS	0.00 CFS	0.01 CFS	0.04 CFS	0.09 CFS
% decrease	-	100%	80.0%	63.6%	62.5%

Table 2.3: Summary of Peak Flows for TOTAL Site (HydroCAD Link Nodes 3Lv and 3Lc)

	Peak Runoff Rates				
	1-YR	10-YR	25-YR	50-YR	100-YR
<i>PRE-DEV</i>	<i>1.94 CFS</i>	<i>4.32 CFS</i>	<i>5.66 CFS</i>	<i>6.84 CFS</i>	<i>8.40 CFS</i>
POST-DEV	1.62 CFS	3.28 CFS	4.18 CFS	4.95 CFS	5.98 CFS
% decrease	16.5%	24.1%	26.1%	27.6%	28.8%

As can be seen by Tables 2.1, 2.2, and 2.3, all design storms have been reduced to equal/less than pre-development levels as a result of the project development. Therefore, Objective 1 has been satisfied.

Objective 2: Water Quality Volume, Runoff Reduction Volume, and Compliance with Requirements of the NYS Stormwater Manual

- **Water Quality Volume (WQv)**

The project is a redevelopment of an existing facility, with the majority of impervious areas being new or re-developed impervious areas. Table 3 below shows the different impervious coverage areas within the limits of disturbance:

Table 3: Summary of Impervious Areas for WQv Calculations

New Impervious	0.178 Ac.
Redeveloped Impervious	0.459 Ac.

Due to the re-developed nature of the site, the site will meet, to the maximum extent feasibly possibly, the WQv requirement for Section II.C.2.c.i.4 of the NYSDEC G-0-25-001 and , which states: "Capture and treat 100% of the required WQv, for a minimum of 75% of the WQv from the disturbed redevelopment impervious area, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm, as well as any additional runoff from tributary areas by application of the alternative practices discussed in Section 9.2.1.IV of the Design Manual"

The project will direct 83%+/- of the redeveloped impervious areas and 71%+/- of the new impervious areas to a hydrodynamic separator unit, shown as ST7 on the plan. This device is a “flow-through” device that provides treatment for the WQv storm before discharging, while allowing the higher intensity storm events (1YR – 100YR) to flow through a bypass.

The required WQv for the site is calculated as follows:

Required WQv

New impervious Area = 0.178 Ac (100% Treated)

Re-Developed Impervious Area = 0.459 Ac (75% Treated)

TOTAL IMPERVIOUS AREA (A) = (100% x 0.178 Ac.) + (75% x 0.459 Ac.) = 0.522 Ac.

P = 1.15”

I = 100; Rv = 0.95

WQv = (P*Rv*A)/12 = 0.048 Ac-FT = 2,091 CF

WQv required = 2,091 CF

Table 3 summarizes the WQv that will be treated by each hydrodynamic separator unit:

Unit	WQv Draining to Unit	WQv Peak Rate	Treatment Capacity of Unit
ST7	1,985 CF (94.9% of required WQv)	0.78 CFS	2.35 CFS

IX. Post-Construction Stormwater Management Practices

Basin #1:

A subsurface detention basin consisting of a 61’L x 25.25’W x 3.75’D stone bed with five (5) rows of SC-800 StormTech chambers and 8 chambers per row totaling 40 chambers, has been designed to attenuate all storm events to less than pre-development values. Due to the lack of infiltration found, the basin has been designed so that the bottom orifice is located at the bottom of the basin, thus preventing standing water in the basin. Runoff will be collected for the basin via overland flow to new catch basins prior to being conveyed to the basin. The bottom of the stone for the proposed basin is at elevation 293.10. From the proposed HydroCAD modeling, the 100-YR storm event elevation within the underground basin is 296.56, which provides 0.29 ft below the top of stone bed elevation.

Pre-treatment: Pre-treatment for the underground basin will be provided by catch basin sumps and a hydrodynamic separator, which is described further below.

First Defense Stormwater Separator (by Hydro International) Hydrodynamic Separator:

A 5’ Diameter First Defense Stormwater Separator by Hydro International (or approved equivalent) will be utilized to meet the water quality component, as described in the previous section of this report. The unit has a treatment capacity of 2.35 CFS and peak online flow rate of 20 CFS. The peak flow, during the WQv storm event, as described previously is 0.78 CFS, and the 100-year flow through the unit is 3.92 CFS, which are below the treatment and internal bypass capacities.

X. Storm Sewer Collection and Conveyance Design

Stormwater piping systems were analyzed using the Rational Method to demonstrate that the structures can convey the 100-year storm event without surcharging any of the stormwater structures. An analysis on the stormwater sewer system is provided in Part 7.

XI. Erosion and Sediment Control Design

Typical Erosion and Sediment Control facilities, details, and specifications are shown on the plan. These measures are intended to minimize the impact of the project on surrounding and downstream properties, both during and after construction. All erosion and sediment control measures will be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Erosion and sediment control measures provided on the site include:

Temporary Measures

- **Silt Fence**
Silt Fence has been designed downslope of any disturbed areas and/or around the perimeter of the site, unless another sediment trapping device is noted. The silt fence provided shall meet the specifications in the NYS E&S Manual. Silt fence shall remain in place until all upslope areas have achieved permanent stabilization.
- **Stabilized Construction Access**
A Stabilized Construction Access will be provided to prevent the tracking of sediment outside of the work area. The stabilized construction access shall remain in place until the site has been stabilized and there is no potential for sediment to be tracked off-site from construction vehicles.
- **Erosion Control Blanket**
Erosion Control Blanket will be provided on all steep sloped areas. North American Green S75BN, or approved equivalent, shall be provided on all berms and disturbed/proposed 3:1 slopes or greater.
- **Storm Drain Inlet Protection**
Inlet Protection will be provided on the existing and proposed catch basins located within the project site area. The inlet protection will prevent sediment laden runoff from entering the catch basin and the existing/proposed storm systems.
- **Dust Control**
Dust shall be controlled through the application of water, as required to prevent migration beyond the project limits. Control of dust remains an ongoing responsibility of the contractor until the site is fully stabilized.
- **Concrete Truck Washout**
This is an approved location where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into the soil. The facility shall be lined to prevent runoff from leaching into the soil. Temporary signage shall be provided to direct drivers to the facility.

Vegetative Measures

- **Topsoiling/Seeding/Mulching**
All proposed grass/lawn areas will be covered with 6" of topsoil to achieve final grade. These areas will be seeded and mulched within 48 hours of final grading per the details and specs shown on the plan.

XII. General Housekeeping & Spill Prevention and Procedures

During Construction activities, the following materials are anticipated to be stored on-site:

- Construction Debris: Existing asphalt pavement/concrete debris, tress/vegetation, stumps, on-site fill and gravel materials, concrete and/or metal tanks.
- Construction/Building Materials: Roofing materials, steel and/or wood framing, building materials, concrete structures, gravel, sand, mulch, topsoil, asphalt sealants, piping
- Chemicals: Pesticides, fertilizers, herbicides
- Hazardous/Toxic Materials: Paints, caulks, sealants, solvents, petroleum products, wood preservatives, additives.

The Owner/Operator and Contractor shall implement general house-keeping measures, as listed below, during construction activities:

- All stockpile materials, including gravel, sand, topsoil, etc. shall be stored in designated stockpile areas located upslope of disturbed areas and shall be surrounded with the appropriate erosion and sedimentation controls to prevent pollution from the materials, including, but not limited to, silt fence around the perimeter of the stockpile areas. The Contractor shall notify the Qualified Inspector if additional stockpile areas or a different location is required.
- Construction materials, debris, and equipment shall be stored in designated staging areas as shown on the Erosion and Sediment Control Plan. The Contractor shall notify the Qualified Inspector if additional staging areas or a different location is required. The location of the storage/staging areas shall be located away from existing or proposed storm catch basins, pipe inlets, or other devices that have an adverse impact to water quality of the surrounding areas.
- Trash and waste materials shall be stored in the appropriate trash receptacles or containers.
- Chemicals, solvents, paints, sealants, fertilizers, and other toxic materials shall be contained and stored within the appropriate containers. Any runoff discovered to contain any of these materials must be disposed of at an approved NYSDEC off-site facility.
- All concrete trucks must utilize the concrete truck washout as described in the Section XI. The Contractor shall locate the concrete washout area as shown on the Erosion and Sediment Control Plan. The Contractor shall notify the Qualified Inspector if a different location is required. The Contractor shall maintain the concrete washout area as noted on the plans.
- The Contractor shall ensure that spilled oil/grease from construction vehicles/equipment are cleaned up immediately. Any re-fueling of construction vehicles shall take place in an area designated by the Qualified Inspector/Qualified Professional, to be determined at the pre-construction meeting.
- On-site sanitary facilities shall be located in an approved area by the Qualified Inspector/Qualified Professional, to be determined at the pre-construction meeting.

The Contractor shall immediately notify the Owner/Operator and the appropriate Town of Niskayuna Personnel in the event of any non-stormwater related spill within two (2) hours of the spill release. All non-stormwater related spills in excess of two (2) gallons shall be reported to the NYSDEC Spill Hotline (1-800-457-7362) within two (2) hours of the spill release. The following spill prevention and procedures shall be implemented during construction:

- Comply with all manufacturer's recommended methods for spill cleanup and storage. All manufacturer spill prevention/cleanup recommended methods shall be posted on-site at an appropriate location, such as the construction trailer.
- A Spill Response Contractor shall be designated at the pre-construction meeting.

- All spill management personnel shall be properly qualified and shall wear appropriate hazardous waste clothing and safety appliances. The names of all qualified on-site personnel to handle spill cleanups shall be posted on-site at an appropriate location, such as the construction trailer.
- The names and phone numbers of the Owner/Operator and the appropriate Town of Niskayuna Personnel, as well as the NYSDEC Spill Hotline noted above, shall be posted on-site at an appropriate location, such as the construction trailer.
- All materials and equipment for spill cleanup shall be kept in the appropriate staging/storage area onsite.
- Once properly cleaned, all spill materials shall be stored in the appropriate containers and disposed of at an approved NYSDEC facility.

XIII. Maintenance and Inspections

The operator shall comply with all aspects of the following regarding maintenance and inspections:

- 1) New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-25-001);
- 2) New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;
- 3) New York State Stormwater Management Design Manual, dated January 2024 (or most current);
- 4) Town of Niskayuna local codes and laws.

Please Note:

- **SWPPP Inspections must be performed by a qualified professional (see below) and all reports must be available on-site.**
- **A pre-construction meeting is required prior to any construction activities.**
- **A site assessment that certifies erosion and sediment controls described in the SWPPP are in place prior to construction commencement must be completed by a qualified professional.**

Requirements for the Qualified Inspector and Qualified Professional

The operator is responsible for designating a “qualified inspector” to perform the inspections for the site during construction. Per the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001), a 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 individuals.

A qualified inspector can also be someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that the 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 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.

A qualified inspector can also be a person that meets the “qualified professional” qualifications in addition to the qualified inspector qualifications. Per the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001), a 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 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 (Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

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.

Inspections

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 to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, and all points of discharge. The qualified inspector shall prepare an inspection report subsequent to each and every inspection, including all aspects listed within Part IV.C.4 of the General Permit. Within one (1) business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

During Construction, all inspections shall be conducted as follows:

- During construction and when soil disturbance is on-going, the qualified inspector shall conduct a site inspection at least every seven (7) calendar days.
- When soil disturbances have been temporarily suspended (e.g., winter shutdown, etc.), and temporary measures have been applied to all disturbed areas, the qualified inspector shall conduct a site inspection at least once every thirty (30) calendar days.
- When soil disturbances have been stopped with partial project completion, the qualified inspector can stop conducting inspections if all areas disturbed as part 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. If soil disturbances are not resumed within two (2) years from the date of the shutdown, the owner or operator shall have the qualified inspector perform a final inspection and certify that all disturbed activities 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 conformation 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.

After construction, the post-construction stormwater management features shall be inspected on an annual basis to ensure that they are functioning properly. See the Long-Term Operation and Maintenance Plan.

Maintenance

- Temporary Erosion and Sediment Control Practices

Maintenance procedures and guidelines for specific temporary erosion and sediment control features are detailed in the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. The following detail maintenance procedures for temporary measures at a minimum:

- Silt Fence:

Damaged silt fence shall be repaired as needed. Maintenance shall be performed and sediment shall be removed when sediment is visibly built up behind the silt fence (typically to a height of about 1/2 the fence height).

- Inlet Protection:

Remove sediment as needed and maintain stone around inlet to ensure that runoff passes over the stone into the catch basin and not past the structure. After rain storms, remove sediment to provide for accurate storage volume for subsequent rain storms. Fabric over catch basins shall be maintained to ensure that runoff is not bypassing the catch basin.

- Stabilized Construction Access:

The stabilized construction access shall be maintained in a condition which will prevent tracking of sediment onto public right-of-way. When washing is required, it shall be done on the area stabilized with aggregate, which drains to an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

- Erosion Control Blanket:

Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a uniform 80% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 2 calendar days.

- Concrete Truck Washout:

1. All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area.
2. Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess water shall be pumped into a containment vessel and properly disposed of off-site.
3. Dispose of the hardened material off-site in an approved construction/demolition landfill.
4. The plastic lining shall be replaced with each cleaning of the washout facility.
5. Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

- Permanent Erosion and Sediment Control Practices and Post Construction Stormwater Features

Maintenance procedures and guidelines for specific permanent erosion and sediment control features are detailed in the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016 and the New York State Stormwater Management Design Manual, dated January 2024 (or most current). The following detail maintenance procedures for permanent measures at a minimum:

- Subsurface Detention Basins
The units shall be maintained as recommended by the manufacturer's specifications, which are included in Part 8 of this report.
- First Defense Stormwater Separator (by Hydro International)
The unit shall be maintained as recommended by the manufacturer's specifications, which are included in Part 8 of this Report.
- Catch Basins
Catch basins shall be inspected annually and shall be cleaned out when sediment has accumulated to within 6 inches of the invert out.

XIV. Winter Construction Standards and Procedures

Winter construction standards and erosion and sediment control measures apply to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Winter Construction Procedures

1. During winter construction, inspections by the On-Site Plan Coordinator shall occur daily when areas are un-stable, and weekly prior to any forecasted rain, thaw or spring melt when temporary stabilization is in place.
2. If the site will not have earth disturbing activities ongoing during the winter construction period, all bare exposed soil must be stabilized by establishing vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.
3. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.
4. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.
5. Limits of disturbance shall be moved or replaced to reflect boundary of winter work.
6. A minimum 25-ft buffer shall be maintained from all perimeter controls (such as silt fence) to allow for clearing and maintenance. Mark silt fence with tall stakes that are visible above the snow pack.

7. Snow is to be removed from all structural erosion and sediment control measures following each significant snowfall. No snow storage up-gradient of disturbance. No snow disposal in sediment ponds/basins. If necessary, snow/ice must be removed prior to stabilization of disturbed areas.
8. Edges of disturbed areas that drain to a waterbody within 100 ft shall have 2 rows of silt fence, 5 feet apart, installed on the contour.
9. Drainage structures shall be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.
10. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.
11. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 ft from the toe of the stockpile to prevent soil migration and to capture loose soil.
12. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3h:1v or steeper.
13. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.
14. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:
 - a. Work will resume within 24 hours in the same area and no precipitation is forecast or;
 - b. The work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.
15. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 ft in width but wider as necessary to accommodate equipment.
16. All erosion prevention and sediment control measures are to be in place by October 15, or if not possible, then prior to ground freeze.
17. Snow and ice shall be removed to less than 1" thickness prior to stabilization.

Part 2:

E&S Checklist

APPENDIX E

EROSION AND SEDIMENT CONTROL PLAN REVIEW CHECKLIST

Project Name <u>Niskayuna Fire District #2- Phase 2</u> <u>Additions</u> (EV# 23206)	Site Location <u>2772 Troy-Schenectady Rd, Town of Niskayuna,</u> <u>Schenectady County, NY</u>
Applicant's Name & Address	<u>Niskayuna Fire District #2</u> <u>2772 Troy-Schenectady Road</u> <u>Schenectady, NY 12309</u>

General

A narrative statement shall be provided that describes the proposed project nature and purpose; the existing site conditions including topography, vegetation and drainage; adjacent and off-site areas affected by the project; description of the soils on the site and key properties; notations of critical areas such as steep slopes, channels or wetlands; the overall phasing, sequencing and stabilization plan; total disturbed area and, areas not to be disturbed, and soil restoration plan.

I. Construction Drawings

Are the following items shown on the construction drawings:	<u>Yes</u>	<u>No</u>	
1. Vicinity Map with scale and north arrow	<u>X</u>	<u> </u>	C001
2. Legend, scales, N arrow on plan view	<u>X</u>	<u> </u>	ALL PLANS
3. Existing and proposed topography shown with contours labeled with spots elevations in critical areas	<u>X</u>	<u> </u>	CD101, C101-C104
4. Scope of the plan noted in the Title Block	<u>X</u>	<u> </u>	ALL PLANS
5. Limits of clearing and grading shown , and methods of spoil disposal	<u>X</u>	<u> </u>	CD101, C101-C104
6. Existing vegetation delineated	<u>X</u>	<u> </u>	CD101
7. Soil boundaries shown on the existing and proposed plan views	<u>X</u>	<u> </u>	C104
8. Existing drainage patterns, 100 year floodplain and sub-areas shown, runoff outfall locations identified	<u>X</u>	<u> </u>	CD101, C102-103 HYD-1 AND HYD-2 (PART 5 OF SWPPP)
9. Existing and proposed development facilities/ improvements shown	<u>X</u>	<u> </u>	CD101, C101, C103
10. Location of Erosion and Sediment control practices as phased with construction, with dimensions and material specifications	<u>X</u>	<u> </u>	C104
11. Phasing plan with 5 acre threshold limits shown	<u> </u>	<u>N/A</u>	
12. Stockpile locations, staging areas, access points, and concrete trunk washout locations clearly defined	<u>X</u>	<u> </u>	C104
13. Street profiles, utility locations, property boundaries and, easement delineations shown	<u>X</u>	<u> </u>	CD101, C103
14. Soil Restoration Plan detailed on the site plan	<u>N/A</u>	<u> </u>	

II. <u>Construction Notes & Details</u>	<u>Yes</u>	<u>No</u>	
1. Specific sequence of operation given for each phase	<u>X</u>	<u> </u>	C104, C508
2. Inspection and maintenance schedule shown for the specific practices	<u>X</u>	<u> </u>	NARRATIVE
3. Design details show all dimensions and installation details necessary for construction	<u>X</u>	<u> </u>	C507-C508
4. Implementation schedule for E&S practices is provided with removal criteria stated	<u>X</u>	<u> </u>	C104, C508
5. Site pollution and construction waste management plan incorporated in the notes	<u>X</u>	<u> </u>	C104, NARRATIVE
6. Site Inspections during construction are noted on the drawings and are in accordance with the General Permit for Stormwater Discharges from Construction Activities	<u>X</u>	<u> </u>	C104, NARRATIVE

III. Erosion & Sediment Control Practices

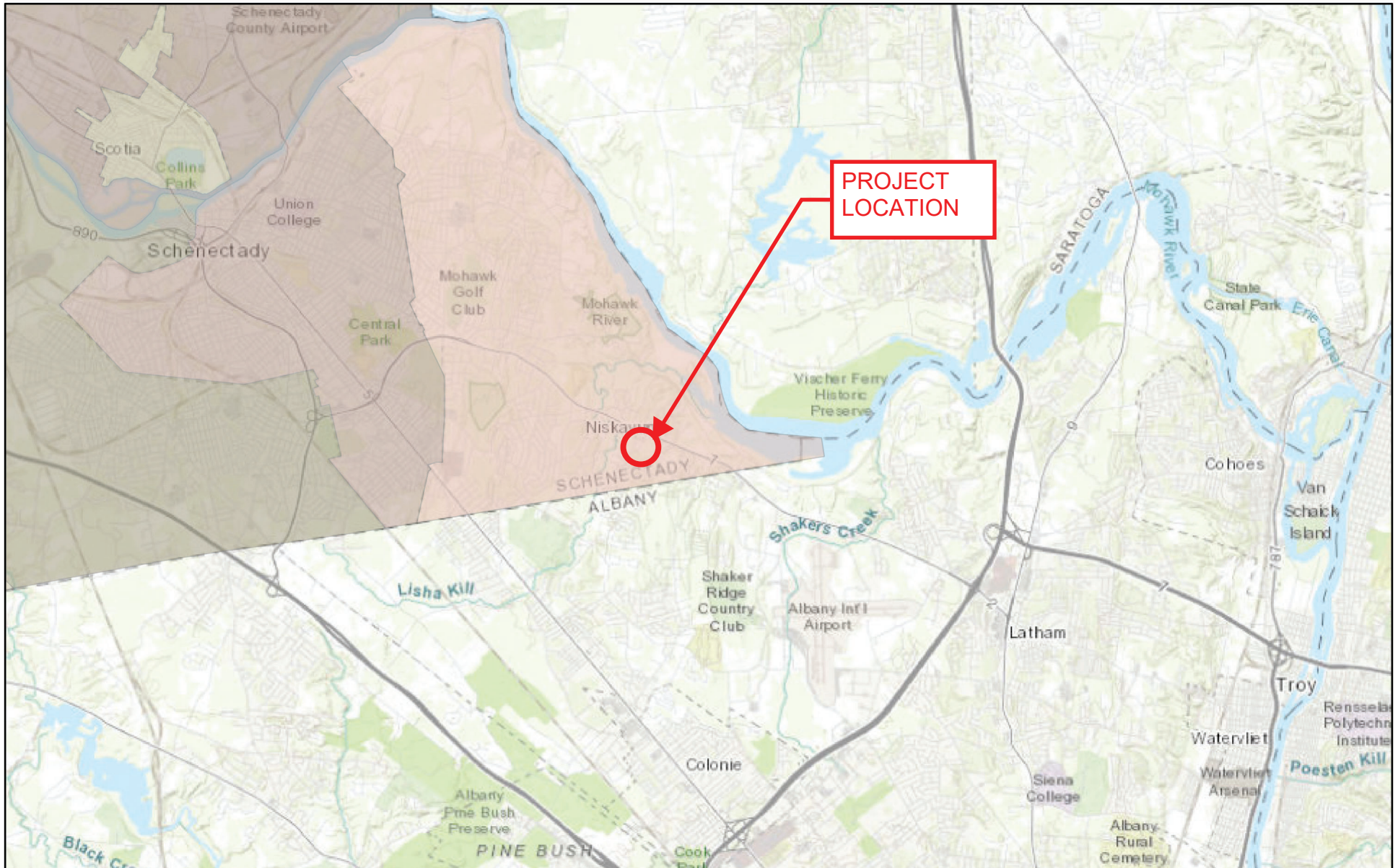
A. <u>General</u>	<u>Yes</u>	<u>No</u>	
1. Practice meets purpose and design criteria	<u>X</u>	<u> </u>	C104, NARRATIVE
2. Standard details and construction notes are provided	<u>X</u>	<u> </u>	C104, C507-C508
3. Special timing of practice noted if applicable	<u>X</u>	<u> </u>	C508 (Sequencing)
4. Provisions for traffic crossings shown on the drawings where necessary	<u> </u>	<u>N/A</u>	
B. <u>Practices Controlling Runoff</u>	<u>Yes</u>	<u>No</u>	
1. Positive drainage is maintained with contributing drainage area shown	<u>X</u>	<u> </u>	C104
2. Flow grades properly stabilized	<u>X</u>	<u> </u>	C104
3. Adequate outlet or discharge condition stabilized	<u>X</u>	<u> </u>	C104
4. Necessary dimensions, gradations, calculations, and materials shown	<u>X</u>	<u> </u>	C104, Narrative
C. <u>Practices Stabilizing Soil</u>	<u>Yes</u>	<u>No</u>	
1. Seeding rates and areas properly shown on the drawings	<u>X</u>	<u> </u>	C507
2. Mulch materials and rates specified on the drawings	<u>X</u>	<u> </u>	C507
3. Sequencing and timing provisions limit soil exposure to 7 to14 days as appropriate	<u>X</u>	<u> </u>	C104, C508

C. Practices Stabilizing Soil (cont'd)	<u>Yes</u>	<u>No</u>	
4. Rolled Erosion Control Products (RECP's) used are specified to location and appropriate weight/tie down	<u>X</u>	_____	C104, C507
5. All soil seed bed preparation and amendments are specified on the drawings or in the specifications	<u>X</u>	_____	C104
6. The seeding dates are specified to cover the entire year for both temporary and permanent seedings	<u>X</u>	_____	C104, C507
7. Maximum created slopes are no steeper than 2 foot horizontal to 1 foot vertical with Cut and Fill slopes shown	<u>X</u>	_____	C104
D. Practices Controlling Sediment	<u>Yes</u>	<u>No</u>	
1. Sediment traps/basins are sized in accordance with criteria	_____	_____	N/A
2. The contributing drainage area is shown on the grading plan	<u>X</u>	_____	HYD 4 (SWPPP)
3. All scaled dimensions and volumes are shown on the plan	<u>X</u>	_____	C104
4. Maintenance requirements and clean out elevations established for all sediment control practices (50% capacity)	<u>X</u>	_____	C507-C508
5. All access points of the project are shown to be stabilized	<u>X</u>	_____	C104
6. Storm drain inlets adequately protected	<u>X</u>	_____	C104
7. Buffer filter strips are appropriately sited and installed	<u>N/A</u>	_____	
7. Silt fences are shown on the contour lines with no more than one quarter acre per 100 foot drainage to it	<u>X</u>	_____	C104
8. Temporary sediment traps are not being used at locations of future stormwater infiltration facilities	_____	_____	N/A
9. Dewatering devices for traps and basins are adequately designed with details shown on the plans	_____	_____	N/A
10. Geotextile filter bags are properly sited, sized, and have their maintenance requirements detailed on the drawings	<u>X</u>	_____	C508
11. Turbidity curtains are properly located with installation, anchoring, and maintenance details shown on the plans	_____	<u>N/A</u>	

Part 3:

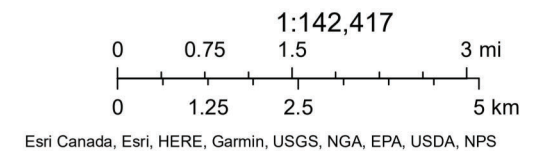
Site Location and Natural Resource Maps

Location Map



July 2, 2026

Municipalities



Location Map

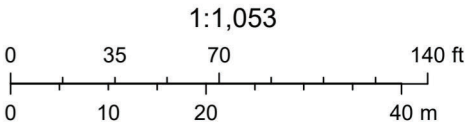


July 2, 2026



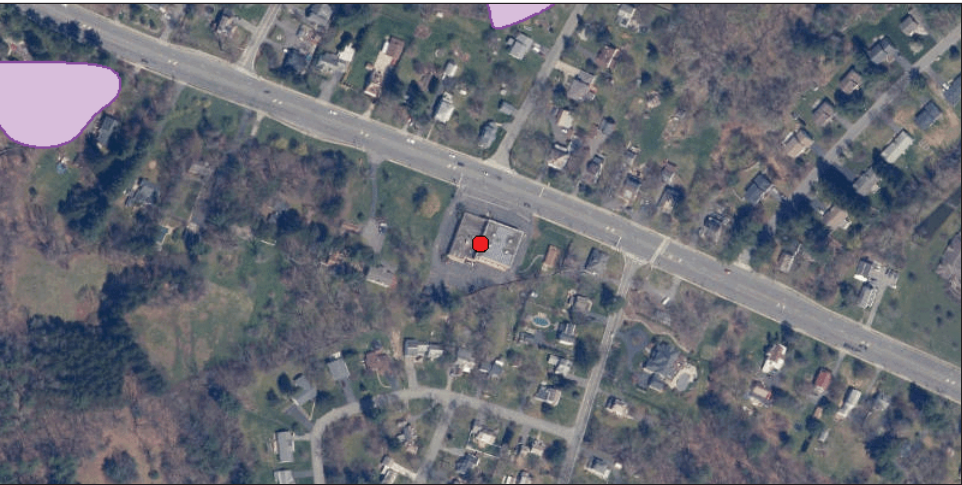
Parcels

Parcel Labels



New York State, Microsoft, Vantor

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	Easting:	594287.6904267025	Northing:	4737010.816824993
Longitude/Latitude	Longitude:	-73.84732898139603	Latitude:	42.77984626990129

The approximate address of the point you clicked on is:
Niskayuna Fire District 2

County: Schenectady
Town: Niskayuna
USGS Quad: NISKAYUNA

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

Part 4:

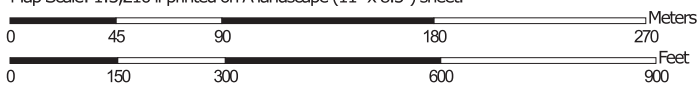
Soils Mapping and Information

Soil Map—Schenectady County, New York



Soil Map may not be valid at this scale.

Map Scale: 1:3,210 if printed on A landscape (11" x 8.5") sheet.



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



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

3/25/2026
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Schenectady County, New York

Survey Area Data: Version 24, Sep 2, 2025

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

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Cheektowaga fine sandy loam	1.4	2.8%
CoA	Colonie loamy fine sand, 0 to 3 percent slopes	23.0	45.7%
CoC	Colonie loamy fine sand, 3 to 15 percent slopes	14.4	28.7%
LoA	Lordstown gravelly silt loam, 0 to 3 percent slopes	0.7	1.5%
NuC	Nunda channery silt loam, 8 to 15 percent slopes	1.3	2.5%
Ra	Raynham silt loam	1.5	2.9%
UnB	Unadilla silt loam, 0 to 8 percent slopes	5.6	11.1%
Wy	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	2.4	4.8%
Totals for Area of Interest		50.3	100.0%

Schenectady County, New York

CoA—Colonie loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: bd3v

Elevation: 150 to 1,000 feet

Mean annual precipitation: 38 to 44 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 170 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Colonie and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Colonie

Setting

Landform: Proglacial deltas, Proglacial beach ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciofluvial or eolian deposits

Typical profile

H1 - 0 to 6 inches: loamy fine sand

H2 - 6 to 70 inches: fine sand

H3 - 70 to 110 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Ecological site: F101XY005NY - Dry Outwash

Hydric soil rating: No

Minor Components

Plainfield

Percent of map unit: 5 percent

Hydric soil rating: No

Elnora

Percent of map unit: 5 percent

Hydric soil rating: No

Junius

Percent of map unit: 5 percent

Hydric soil rating: No

Howard

Percent of map unit: 5 percent

Hydric soil rating: No

Unadilla

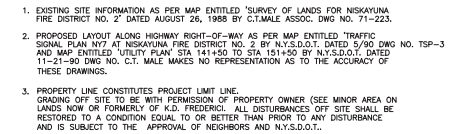
Percent of map unit: 5 percent

Hydric soil rating: No

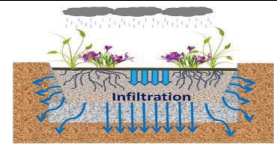
Data Source Information

Soil Survey Area: Schenectady County, New York

Survey Area Data: Version 24, Sep 2, 2025



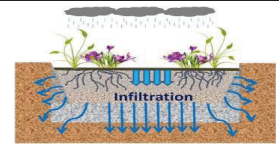
TOWN OF NISKAYUNA		SCHENECTADY COUNTY, NY	
C.T. MALE ASSOCIATES, P.C. 50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110 (518) 786-7400 • FAX (518) 786-7299 ENGINEERING • SURVEYING • ARCHITECTURE • LAND PLANNING LANDSCAPE ARCHITECTURE • COMPUTER SERVICES		SCALE: 1"=20' SHEET OF DATE: 08/28/92 DWG. NO: 92-406	



APPENDIX D OF THE NEW YORK STATE STORMWATER DESIGN MANUAL

PROJECT NAME:	Niskayuna Fire District 2	TEST LOCATION:	I-1
PROJECT LOCATION:	Niskayuna, New York	INSTRUMENT USE:	PVC Well Pipe / Water Meter Indicator
RGE PROJECT NUMBER:	26.0028	TESTED BY:	BRENDAN RUSSO
SITE CONDITIONS:	SUNNY / CLEAR	TEST DATE:	Wednesday, June 10, 2026
RECOMMENDED INFILTRATION RATE	0.0	INCHES PER HOUR	
SHEET NUMBER	1	OF	1

Test No.	Elapsed Time (minutes)	Elapsed Time (seconds)	Readings (ft)	Δ_{readings} (inches)	Δ_{readings} (feet)	Time (Hour)	Δ_{time} (Hours)	Infiltration Rate (Inch/Hour)
1	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
2	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
3	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
4	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00



APPENDIX D OF THE NEW YORK STATE STORMWATER DESIGN MANUAL

PROJECT NAME:	Niskayuna Fire District 2	TEST LOCATION:	I-2
PROJECT LOCATION:	Niskayuna, New York	INSTRUMENT USE:	PVC Well Pipe / Water Meter Indicator
RGE PROJECT NUMBER:	26.0028	TESTED BY:	BRENDAN RUSSO
SITE CONDITIONS:	SUNNY / CLEAR	TEST DATE:	Wednesday, June 10, 2026
RECOMMENDED INFILTRATION RATE	0.0	INCHES PER HOUR	
SHEET NUMBER	1	OF	1

Test No.	Elapsed Time (minutes)	Elapsed Time (seconds)	Readings (ft)	Δ_{readings} (inches)	Δ_{readings} (feet)	Time (Hour)	Δ_{time} (Hours)	Infiltration Rate (Inch/Hour)
1	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.08	1.00	0.08	0.25	0.25	4.00
	15	0	8.08	0.00	0.00	0.25	0.25	0.00
	15	0	8.08	0.00	0.00	0.25	0.25	0.00
2	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
3	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
4	0	0	8.00	0.00	0.00	0	0	N/A
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00
	15	0	8.00	0.00	0.00	0.25	0.25	0.00

Part 5:

**HydroCAD Report
(1-YR, 10-YR, 25-YR, 50-YR, and 100-YR)**

Extreme Precipitation Tables

Northeast Regional Climate Center

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

Metadata for Point	
Smoothing	Yes
State	New York
Location	New York, United States
Latitude	42.780 degrees North
Longitude	73.847 degrees West
Elevation	90 feet
Date/Time	Wed Jun 24 2026 10:12:41 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.41	0.51	0.67	0.83	1.04	1yr	0.72	0.96	1.19	1.46	1.79	2.19	2.50	1yr	1.94	2.40	2.80	3.38	3.90	1yr
2yr	0.33	0.51	0.64	0.84	1.06	1.31	2yr	0.91	1.17	1.49	1.80	2.16	2.58	2.91	2yr	2.28	2.80	3.27	3.88	4.42	2yr
5yr	0.40	0.62	0.77	1.04	1.33	1.65	5yr	1.14	1.44	1.88	2.26	2.69	3.16	3.59	5yr	2.79	3.45	4.01	4.66	5.28	5yr
10yr	0.45	0.71	0.89	1.21	1.57	1.97	10yr	1.36	1.68	2.24	2.69	3.16	3.68	4.21	10yr	3.26	4.05	4.68	5.37	6.05	10yr
25yr	0.54	0.85	1.08	1.49	1.98	2.48	25yr	1.71	2.06	2.83	3.37	3.93	4.52	5.21	25yr	4.00	5.01	5.75	6.47	7.23	25yr
50yr	0.60	0.97	1.24	1.75	2.35	2.97	50yr	2.03	2.41	3.38	4.01	4.64	5.29	6.12	50yr	4.68	5.89	6.73	7.46	8.28	50yr
100yr	0.70	1.13	1.45	2.06	2.80	3.54	100yr	2.42	2.81	4.03	4.75	5.47	6.18	7.20	100yr	5.47	6.92	7.88	8.59	9.49	100yr
200yr	0.80	1.30	1.69	2.42	3.34	4.23	200yr	2.88	3.29	4.81	5.64	6.45	7.23	8.47	200yr	6.40	8.14	9.23	9.91	10.89	200yr
500yr	0.97	1.59	2.07	3.01	4.21	5.34	500yr	3.63	4.06	6.06	7.08	8.02	8.91	10.51	500yr	7.89	10.10	11.38	11.98	13.06	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.21	0.32	0.40	0.53	0.65	0.85	1yr	0.57	0.83	0.95	1.30	1.53	1.89	2.13	1yr	1.67	2.05	2.40	3.07	3.52	1yr
2yr	0.32	0.49	0.61	0.82	1.01	1.16	2yr	0.87	1.13	1.31	1.67	2.09	2.51	2.82	2yr	2.22	2.71	3.17	3.78	4.32	2yr
5yr	0.36	0.56	0.70	0.96	1.22	1.36	5yr	1.05	1.33	1.54	1.96	2.49	2.95	3.32	5yr	2.61	3.19	3.71	4.35	4.97	5yr
10yr	0.40	0.62	0.77	1.07	1.38	1.53	10yr	1.19	1.49	1.74	2.21	2.75	3.32	3.72	10yr	2.94	3.57	4.18	4.83	5.51	10yr
25yr	0.46	0.70	0.88	1.25	1.65	1.79	25yr	1.42	1.75	2.05	2.59	3.17	3.89	4.29	25yr	3.44	4.12	4.87	5.52	6.31	25yr
50yr	0.51	0.78	0.97	1.39	1.87	2.02	50yr	1.61	1.97	2.32	2.92	3.52	4.38	4.79	50yr	3.88	4.60	5.48	6.09	7.00	50yr
100yr	0.57	0.86	1.07	1.55	2.13	2.28	100yr	1.84	2.23	2.63	3.29	3.90	4.94	5.33	100yr	4.37	5.13	6.17	6.70	7.76	100yr
200yr	0.63	0.95	1.20	1.74	2.42	2.58	200yr	2.09	2.52	3.00	3.71	4.32	5.58	5.90	200yr	4.94	5.67	6.93	7.36	8.59	200yr
500yr	0.73	1.09	1.40	2.03	2.89	3.03	500yr	2.49	2.97	3.56	4.35	4.96	6.53	6.67	500yr	5.78	6.42	8.08	8.30	9.84	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.45	0.55	0.74	0.91	1.06	1yr	0.78	1.03	1.22	1.52	1.95	2.35	2.70	1yr	2.08	2.60	3.04	3.68	4.19	1yr
2yr	0.35	0.54	0.66	0.89	1.10	1.24	2yr	0.95	1.21	1.39	1.77	2.28	2.66	3.04	2yr	2.36	2.92	3.38	4.02	4.56	2yr
5yr	0.43	0.67	0.83	1.14	1.45	1.58	5yr	1.25	1.54	1.76	2.24	2.82	3.39	3.86	5yr	3.00	3.71	4.31	4.96	5.59	5yr
10yr	0.52	0.80	0.99	1.39	1.79	1.90	10yr	1.55	1.86	2.13	2.67	3.33	4.07	4.67	10yr	3.60	4.49	5.18	5.86	6.54	10yr
25yr	0.67	1.02	1.27	1.82	2.39	2.42	25yr	2.06	2.37	2.71	3.39	4.16	5.22	6.03	25yr	4.62	5.80	6.63	7.33	8.06	25yr
50yr	0.81	1.23	1.53	2.20	2.96	2.91	50yr	2.56	2.84	3.26	4.06	4.92	6.30	7.33	50yr	5.58	7.05	8.00	8.68	9.45	50yr
100yr	0.98	1.48	1.86	2.68	3.68	3.50	100yr	3.17	3.42	3.91	4.85	5.82	7.62	8.92	100yr	6.74	8.58	9.66	10.29	11.11	100yr
200yr	1.19	1.79	2.27	3.28	4.58	4.21	200yr	3.95	4.11	4.71	5.81	6.90	9.23	10.87	200yr	8.17	10.46	11.66	12.23	13.07	200yr
500yr	1.55	2.31	2.97	4.31	6.13	5.37	500yr	5.29	5.25	6.00	7.37	8.69	11.90	14.16	500yr	10.54	13.62	15.01	15.41	16.21	500yr

Pre-Development



LEGEND

2Lv 25v HYDROCAD NODE

WATERSHED
BOUNDARY

TIME OF CONCENTRATION (T_c) NOTE:
DUE TO THE LARGE PERCENTAGE OF IMPERVIOUS
AREA COMPARED TO THE OVERALL WATERSHED
AREAS, A MINIMUM T_c OF 5 MIN. WAS ASSUMED
FOR THE CALCULATIONS.

GRAPHIC SCALE



1 inch = 40 ft.
for sheet size 11" X 17"



208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225
85 Mechanic Street, Suite E2-3, Lebanon, NH 03786 • 603-442-9333
368 Broadway, Suite 11, Saratoga Springs, NY 12866 • 518-205-9141
www.engineeringventures.com

**NISKAYUNA FIRE
DISTRICT 2**
2772 TROY SCHENECTADY RD
SCHENECTADY, NY 12309
(518) 785-6033

Sheet Title:

PRE-DEVELOPMENT
DRAINAGE AREA MAP

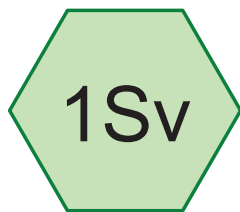
Project Title:

NISKAYUNA FIRE DISTRICT 2 - PHASE 2 ADDITIONS
TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NY

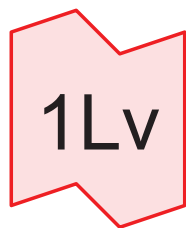
EV Project # 25486
Drawn By: MJD
Checked By: MJD
Scale: 1" = 40'
Date: 06/24/2026

Figure:

HYD1



Pre-Dev POI#1



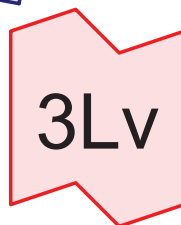
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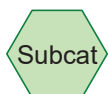
Pre-Dev-POI#2



PRE-POI#2



TOTAL PRE



Routing Diagram for 25486-SWM

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25486-SWM

Prepared by Engineering Ventures, Inc

Printed 7/2/2026

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.398	39	>75% Grass cover, Good, HSG A (1Sv, 2Sv)
1.029	98	Impervious (1Sv, 2Sv)
1.427	82	TOTAL AREA

25486-SWM

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.398	HSG A	1Sv, 2Sv
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
1.029	Other	1Sv, 2Sv
1.427		TOTAL AREA

25486-SWM*NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"*

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Page 4

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sv: Pre-Dev POI#1

Runoff Area=1.208 ac 82.45% Impervious Runoff Depth=1.12"
Tc=5.0 min CN=88 Runoff=1.94 cfs 0.113 af

Subcatchment2Sv: Pre-Dev-POI#2

Runoff Area=0.219 ac 15.07% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=48 Runoff=0.00 cfs 0.000 af

Link 1Lv: PRE-POI#1

Inflow=1.94 cfs 0.113 af
Primary=1.94 cfs 0.113 af

Link 2Lv: PRE-POI#2

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link 3Lv: TOTAL PRE

Inflow=1.94 cfs 0.113 af
Primary=1.94 cfs 0.113 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.113 af Average Runoff Depth = 0.95"
27.89% Pervious = 0.398 ac 72.11% Impervious = 1.029 ac

25486-SWM*NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"*

Prepared by Engineering Ventures, Inc

Printed 7/2/2026

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Page 5

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sv: Pre-Dev POI#1

Runoff Area=1.208 ac 82.45% Impervious Runoff Depth=2.43"
Tc=5.0 min CN=88 Runoff=4.32 cfs 0.245 af

Subcatchment2Sv: Pre-Dev-POI#2

Runoff Area=0.219 ac 15.07% Impervious Runoff Depth=0.19"
Tc=5.0 min CN=48 Runoff=0.01 cfs 0.003 af

Link 1Lv: PRE-POI#1

Inflow=4.32 cfs 0.245 af
Primary=4.32 cfs 0.245 af

Link 2Lv: PRE-POI#2

Inflow=0.01 cfs 0.003 af
Primary=0.01 cfs 0.003 af

Link 3Lv: TOTAL PRE

Inflow=4.32 cfs 0.248 af
Primary=4.32 cfs 0.248 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.248 af Average Runoff Depth = 2.09"
27.89% Pervious = 0.398 ac 72.11% Impervious = 1.029 ac

25486-SWM*NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"*

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Page 6

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sv: Pre-Dev POI#1

Runoff Area=1.208 ac 82.45% Impervious Runoff Depth=3.22"
Tc=5.0 min CN=88 Runoff=5.64 cfs 0.324 af

Subcatchment2Sv: Pre-Dev-POI#2

Runoff Area=0.219 ac 15.07% Impervious Runoff Depth=0.42"
Tc=5.0 min CN=48 Runoff=0.05 cfs 0.008 af

Link 1Lv: PRE-POI#1

Inflow=5.64 cfs 0.324 af
Primary=5.64 cfs 0.324 af

Link 2Lv: PRE-POI#2

Inflow=0.05 cfs 0.008 af
Primary=0.05 cfs 0.008 af

Link 3Lv: TOTAL PRE

Inflow=5.66 cfs 0.331 af
Primary=5.66 cfs 0.331 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.331 af Average Runoff Depth = 2.79"
27.89% Pervious = 0.398 ac 72.11% Impervious = 1.029 ac

25486-SWM*NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"*

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Page 7

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sv: Pre-Dev POI#1

Runoff Area=1.208 ac 82.45% Impervious Runoff Depth=3.95"
Tc=5.0 min CN=88 Runoff=6.74 cfs 0.397 af

Subcatchment2Sv: Pre-Dev-POI#2

Runoff Area=0.219 ac 15.07% Impervious Runoff Depth=0.70"
Tc=5.0 min CN=48 Runoff=0.11 cfs 0.013 af

Link 1Lv: PRE-POI#1

Inflow=6.74 cfs 0.397 af
Primary=6.74 cfs 0.397 af

Link 2Lv: PRE-POI#2

Inflow=0.11 cfs 0.013 af
Primary=0.11 cfs 0.013 af

Link 3Lv: TOTAL PRE

Inflow=6.84 cfs 0.410 af
Primary=6.84 cfs 0.410 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.410 af Average Runoff Depth = 3.45"
27.89% Pervious = 0.398 ac 72.11% Impervious = 1.029 ac

25486-SWM*NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"*

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Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sv: Pre-Dev POI#1

Runoff Area=1.208 ac 82.45% Impervious Runoff Depth=4.80"
Tc=5.0 min CN=88 Runoff=8.17 cfs 0.483 af

Subcatchment2Sv: Pre-Dev-POI#2

Runoff Area=0.219 ac 15.07% Impervious Runoff Depth=1.08"
Tc=5.0 min CN=48 Runoff=0.24 cfs 0.020 af

Link 1Lv: PRE-POI#1

Inflow=8.17 cfs 0.483 af
Primary=8.17 cfs 0.483 af

Link 2Lv: PRE-POI#2

Inflow=0.24 cfs 0.020 af
Primary=0.24 cfs 0.020 af

Link 3Lv: TOTAL PRE

Inflow=8.40 cfs 0.503 af
Primary=8.40 cfs 0.503 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.503 af Average Runoff Depth = 4.23"
27.89% Pervious = 0.398 ac 72.11% Impervious = 1.029 ac

25486-SWM

NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

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Page 1

Summary for Subcatchment 1Sv: Pre-Dev POI#1

Runoff = 1.94 cfs @ 12.03 hrs, Volume= 0.113 af, Depth= 1.12"
 Routed to Link 1Lv : PRE-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

Area (ac)	CN	Description
0.212	39	>75% Grass cover, Good, HSG A
* 0.996	98	Impervious
1.208	88	Weighted Average
0.212		17.55% Pervious Area
0.996		82.45% Impervious Area

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

Summary for Subcatchment 2Sv: Pre-Dev-POI#2

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Link 2Lv : PRE-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

Area (ac)	CN	Description
0.186	39	>75% Grass cover, Good, HSG A
* 0.033	98	Impervious
0.219	48	Weighted Average
0.186		84.93% Pervious Area
0.033		15.07% Impervious Area

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

Summary for Link 1Lv: PRE-POI#1

Inflow Area = 1.208 ac, 82.45% Impervious, Inflow Depth = 1.12" for 1-yr event
 Inflow = 1.94 cfs @ 12.03 hrs, Volume= 0.113 af
 Primary = 1.94 cfs @ 12.03 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lv: PRE-POI#2

Inflow Area = 0.219 ac, 15.07% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lv: TOTAL PRE

Inflow Area = 1.427 ac, 72.11% Impervious, Inflow Depth = 0.95" for 1-yr event
Inflow = 1.94 cfs @ 12.03 hrs, Volume= 0.113 af
Primary = 1.94 cfs @ 12.03 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

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Page 3

Summary for Subcatchment 1Sv: Pre-Dev POI#1

Runoff = 4.32 cfs @ 12.03 hrs, Volume= 0.245 af, Depth= 2.43"
 Routed to Link 1Lv : PRE-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

Area (ac)	CN	Description
0.212	39	>75% Grass cover, Good, HSG A
* 0.996	98	Impervious
1.208	88	Weighted Average
0.212		17.55% Pervious Area
0.996		82.45% Impervious Area

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

Summary for Subcatchment 2Sv: Pre-Dev-POI#2

Runoff = 0.01 cfs @ 12.52 hrs, Volume= 0.003 af, Depth= 0.19"
 Routed to Link 2Lv : PRE-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

Area (ac)	CN	Description
0.186	39	>75% Grass cover, Good, HSG A
* 0.033	98	Impervious
0.219	48	Weighted Average
0.186		84.93% Pervious Area
0.033		15.07% Impervious Area

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

Summary for Link 1Lv: PRE-POI#1

Inflow Area = 1.208 ac, 82.45% Impervious, Inflow Depth = 2.43" for 10-yr event
 Inflow = 4.32 cfs @ 12.03 hrs, Volume= 0.245 af
 Primary = 4.32 cfs @ 12.03 hrs, Volume= 0.245 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lv: PRE-POI#2

Inflow Area = 0.219 ac, 15.07% Impervious, Inflow Depth = 0.19" for 10-yr event
Inflow = 0.01 cfs @ 12.52 hrs, Volume= 0.003 af
Primary = 0.01 cfs @ 12.52 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lv: TOTAL PRE

Inflow Area = 1.427 ac, 72.11% Impervious, Inflow Depth = 2.09" for 10-yr event
Inflow = 4.32 cfs @ 12.03 hrs, Volume= 0.248 af
Primary = 4.32 cfs @ 12.03 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

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Page 5

Summary for Subcatchment 1Sv: Pre-Dev POI#1

Runoff = 5.64 cfs @ 12.03 hrs, Volume= 0.324 af, Depth= 3.22"
 Routed to Link 1Lv : PRE-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

Area (ac)	CN	Description
0.212	39	>75% Grass cover, Good, HSG A
* 0.996	98	Impervious
1.208	88	Weighted Average
0.212		17.55% Pervious Area
0.996		82.45% Impervious Area

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

Summary for Subcatchment 2Sv: Pre-Dev-POI#2

Runoff = 0.05 cfs @ 12.14 hrs, Volume= 0.008 af, Depth= 0.42"
 Routed to Link 2Lv : PRE-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

Area (ac)	CN	Description
0.186	39	>75% Grass cover, Good, HSG A
* 0.033	98	Impervious
0.219	48	Weighted Average
0.186		84.93% Pervious Area
0.033		15.07% Impervious Area

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

Summary for Link 1Lv: PRE-POI#1

Inflow Area = 1.208 ac, 82.45% Impervious, Inflow Depth = 3.22" for 25-yr event
 Inflow = 5.64 cfs @ 12.03 hrs, Volume= 0.324 af
 Primary = 5.64 cfs @ 12.03 hrs, Volume= 0.324 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lv: PRE-POI#2

Inflow Area = 0.219 ac, 15.07% Impervious, Inflow Depth = 0.42" for 25-yr event
Inflow = 0.05 cfs @ 12.14 hrs, Volume= 0.008 af
Primary = 0.05 cfs @ 12.14 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lv: TOTAL PRE

Inflow Area = 1.427 ac, 72.11% Impervious, Inflow Depth = 2.79" for 25-yr event
Inflow = 5.66 cfs @ 12.03 hrs, Volume= 0.331 af
Primary = 5.66 cfs @ 12.03 hrs, Volume= 0.331 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

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Page 7

Summary for Subcatchment 1Sv: Pre-Dev POI#1

Runoff = 6.74 cfs @ 12.03 hrs, Volume= 0.397 af, Depth= 3.95"
 Routed to Link 1Lv : PRE-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

Area (ac)	CN	Description
0.212	39	>75% Grass cover, Good, HSG A
* 0.996	98	Impervious
1.208	88	Weighted Average
0.212		17.55% Pervious Area
0.996		82.45% Impervious Area

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

Summary for Subcatchment 2Sv: Pre-Dev-POI#2

Runoff = 0.11 cfs @ 12.05 hrs, Volume= 0.013 af, Depth= 0.70"
 Routed to Link 2Lv : PRE-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

Area (ac)	CN	Description
0.186	39	>75% Grass cover, Good, HSG A
* 0.033	98	Impervious
0.219	48	Weighted Average
0.186		84.93% Pervious Area
0.033		15.07% Impervious Area

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

Summary for Link 1Lv: PRE-POI#1

Inflow Area = 1.208 ac, 82.45% Impervious, Inflow Depth = 3.95" for 50-yr event
 Inflow = 6.74 cfs @ 12.03 hrs, Volume= 0.397 af
 Primary = 6.74 cfs @ 12.03 hrs, Volume= 0.397 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lv: PRE-POI#2

Inflow Area = 0.219 ac, 15.07% Impervious, Inflow Depth = 0.70" for 50-yr event
Inflow = 0.11 cfs @ 12.05 hrs, Volume= 0.013 af
Primary = 0.11 cfs @ 12.05 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lv: TOTAL PRE

Inflow Area = 1.427 ac, 72.11% Impervious, Inflow Depth = 3.45" for 50-yr event
Inflow = 6.84 cfs @ 12.03 hrs, Volume= 0.410 af
Primary = 6.84 cfs @ 12.03 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

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Page 9

Summary for Subcatchment 1Sv: Pre-Dev POI#1

Runoff = 8.17 cfs @ 12.03 hrs, Volume= 0.483 af, Depth= 4.80"
 Routed to Link 1Lv : PRE-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

Area (ac)	CN	Description
0.212	39	>75% Grass cover, Good, HSG A
* 0.996	98	Impervious
1.208	88	Weighted Average
0.212		17.55% Pervious Area
0.996		82.45% Impervious Area

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

Summary for Subcatchment 2Sv: Pre-Dev-POI#2

Runoff = 0.24 cfs @ 12.04 hrs, Volume= 0.020 af, Depth= 1.08"
 Routed to Link 2Lv : PRE-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

Area (ac)	CN	Description
0.186	39	>75% Grass cover, Good, HSG A
* 0.033	98	Impervious
0.219	48	Weighted Average
0.186		84.93% Pervious Area
0.033		15.07% Impervious Area

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

Summary for Link 1Lv: PRE-POI#1

Inflow Area = 1.208 ac, 82.45% Impervious, Inflow Depth = 4.80" for 100-yr event
 Inflow = 8.17 cfs @ 12.03 hrs, Volume= 0.483 af
 Primary = 8.17 cfs @ 12.03 hrs, Volume= 0.483 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 3Lv : TOTAL PRE

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lv: PRE-POI#2

Inflow Area = 0.219 ac, 15.07% Impervious, Inflow Depth = 1.08" for 100-yr event
Inflow = 0.24 cfs @ 12.04 hrs, Volume= 0.020 af
Primary = 0.24 cfs @ 12.04 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lv : TOTAL PRE

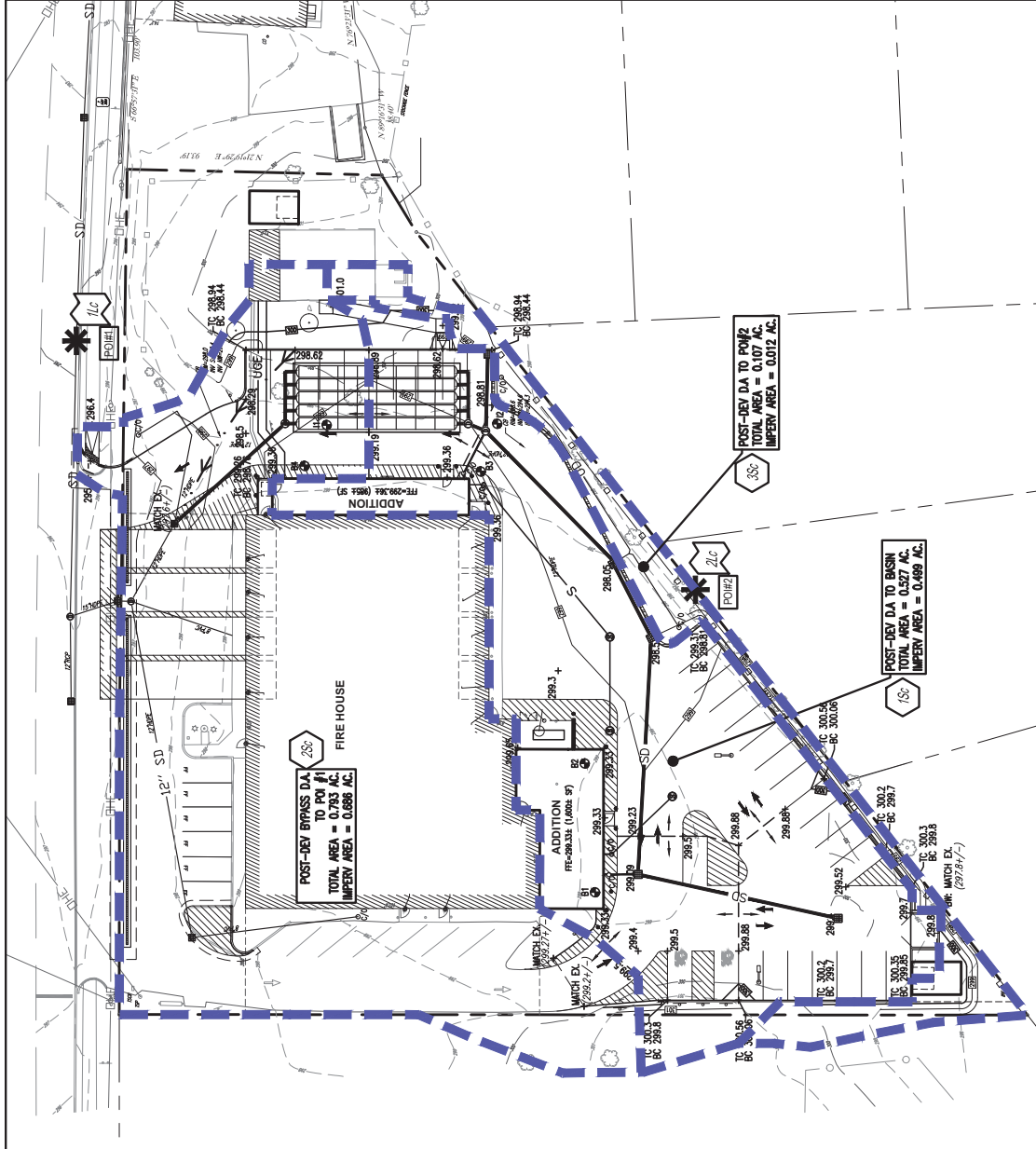
Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lv: TOTAL PRE

Inflow Area = 1.427 ac, 72.11% Impervious, Inflow Depth = 4.23" for 100-yr event
Inflow = 8.40 cfs @ 12.03 hrs, Volume= 0.503 af
Primary = 8.40 cfs @ 12.03 hrs, Volume= 0.503 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Post-Development



LEGEND



HYDROCAD NODE



WATERSHED
BOUNDARY

TIME OF CONCENTRATION (T_C) NOTE:
DUE TO THE LARGE PERCENTAGE OF IMPERVIOUS
AREA COMPARED TO THE OVERALL WATERSHED
AREAS, A MINIMUM T_C OF 5 MIN. WAS ASSUMED
FOR THE CALCULATIONS.



GRAPHIC SCALE



1 inch = 40 ft.
for sheet size 11" X 17"



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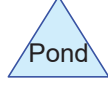
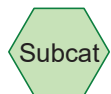
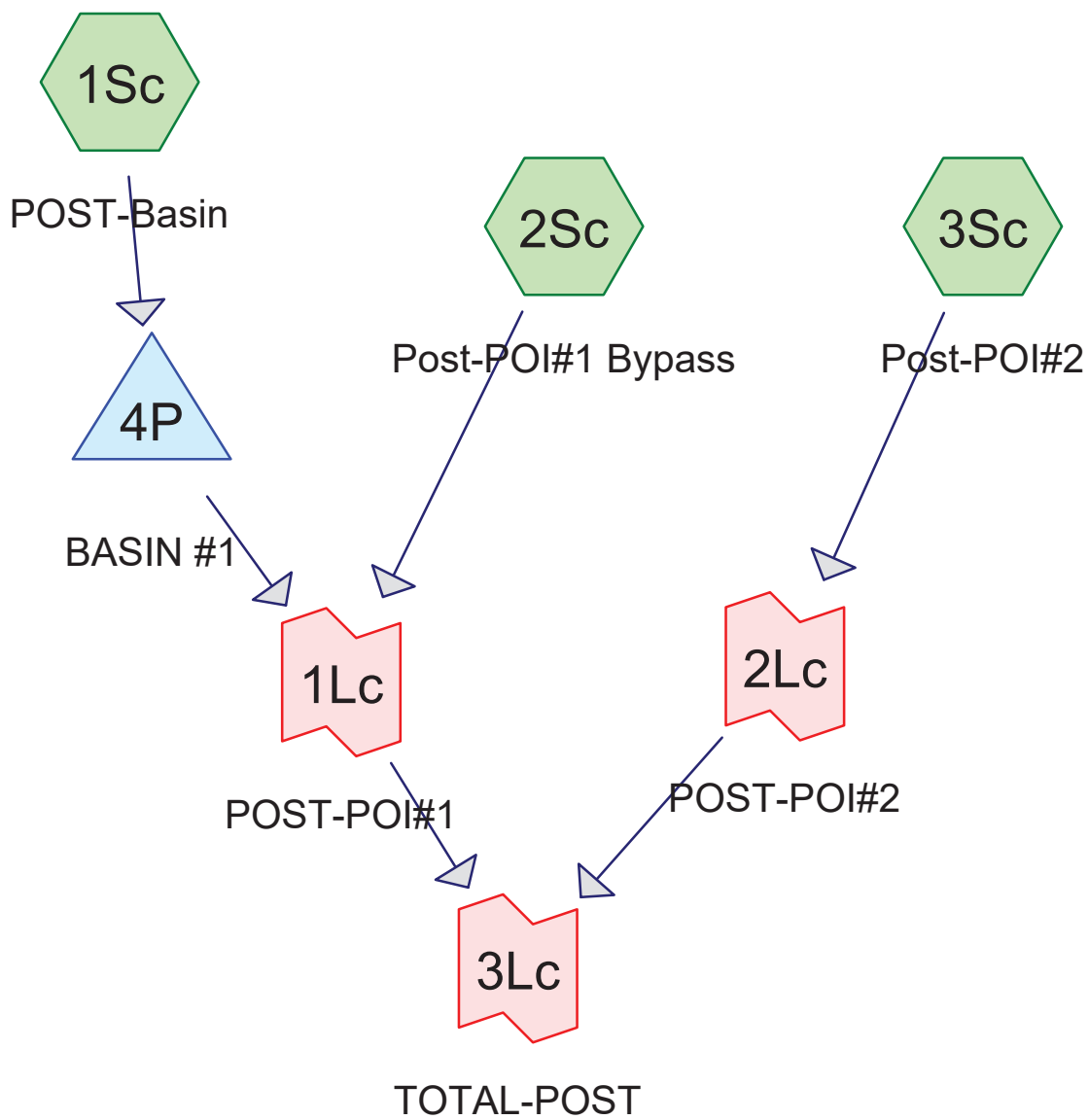
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85 Mechanic Street, Suite E2.3, Lebanon, NH 03766 • 603-442-9333
368 Broadway, Suite 11, Saratoga Springs, NY 12866 • 518-205-9141
www.engineeringventures.com

**NISKAYUNA FIRE
DISTRICT 2**
2772 TROY SCHENECTADY RD
SCHENECTADY, NY 12306
(518) 785-6033

Sheet Title:
**POST-DEVELOPMENT
DRAINAGE AREA MAP**
Project Title:
**NISKAYUNA FIRE DISTRICT 2 - PHASE 2 ADDITIONS
TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NY**

EV Project #	25486	Figure	
Drawn By:	MJD		
Checked By:	MJD		
Scale:	1" = 40'		
Date:	06/24/2026		

HYD2



Routing Diagram for 25486-SWM

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25486-SWM

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.230	39	>75% Grass cover, Good, HSG A (1Sc, 2Sc, 3Sc)
1.197	98	Impervious (1Sc, 2Sc, 3Sc)
1.427	88	TOTAL AREA

25486-SWM

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.230	HSG A	1Sc, 2Sc, 3Sc
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
1.197	Other	1Sc, 2Sc, 3Sc
1.427		TOTAL AREA

25486-SWM*NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"*

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Page 4

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sc: POST-Basin Runoff Area=0.527 ac 94.69% Impervious Runoff Depth=1.66"
Tc=5.0 min CN=95 Runoff=1.23 cfs 0.073 af

Subcatchment2Sc: Post-POI#1 Bypass Runoff Area=0.793 ac 86.51% Impervious Runoff Depth=1.26"
Tc=5.0 min CN=90 Runoff=1.44 cfs 0.083 af

Subcatchment3Sc: Post-POI#2 Runoff Area=0.107 ac 11.21% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=46 Runoff=0.00 cfs 0.000 af

Pond 4P: BASIN #1 Peak Elev=294.09' Storage=919 cf Inflow=1.23 cfs 0.073 af
Outflow=0.22 cfs 0.073 af

Link 1Lc: POST-POI#1 Inflow=1.62 cfs 0.156 af
Primary=1.62 cfs 0.156 af

Link 2Lc: POST-POI#2 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link 3Lc: TOTAL-POST Inflow=1.62 cfs 0.156 af
Primary=1.62 cfs 0.156 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.156 af Average Runoff Depth = 1.31"
16.12% Pervious = 0.230 ac 83.88% Impervious = 1.197 ac

25486-SWM*NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"*

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Page 5

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sc: POST-Basin Runoff Area=0.527 ac 94.69% Impervious Runoff Depth=3.12"
Tc=5.0 min CN=95 Runoff=2.30 cfs 0.137 af

Subcatchment2Sc: Post-POI#1 Bypass Runoff Area=0.793 ac 86.51% Impervious Runoff Depth=2.62"
Tc=5.0 min CN=90 Runoff=3.03 cfs 0.173 af

Subcatchment3Sc: Post-POI#2 Runoff Area=0.107 ac 11.21% Impervious Runoff Depth=0.14"
Tc=5.0 min CN=46 Runoff=0.00 cfs 0.001 af

Pond 4P: BASIN #1 Peak Elev=295.15' Storage=2,160 cf Inflow=2.30 cfs 0.137 af
Outflow=0.33 cfs 0.137 af

Link 1Lc: POST-POI#1 Inflow=3.28 cfs 0.310 af
Primary=3.28 cfs 0.310 af

Link 2Lc: POST-POI#2 Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af

Link 3Lc: TOTAL-POST Inflow=3.28 cfs 0.311 af
Primary=3.28 cfs 0.311 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.311 af Average Runoff Depth = 2.62"
16.12% Pervious = 0.230 ac 83.88% Impervious = 1.197 ac

25486-SWM*NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"*

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Page 6

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sc: POST-Basin Runoff Area=0.527 ac 94.69% Impervious Runoff Depth=3.94"
Tc=5.0 min CN=95 Runoff=2.86 cfs 0.173 af

Subcatchment2Sc: Post-POI#1 Bypass Runoff Area=0.793 ac 86.51% Impervious Runoff Depth=3.41"
Tc=5.0 min CN=90 Runoff=3.89 cfs 0.226 af

Subcatchment3Sc: Post-POI#2 Runoff Area=0.107 ac 11.21% Impervious Runoff Depth=0.34"
Tc=5.0 min CN=46 Runoff=0.01 cfs 0.003 af

Pond 4P: BASIN #1 Peak Elev=295.88' Storage=2,894 cf Inflow=2.86 cfs 0.173 af
Outflow=0.39 cfs 0.173 af

Link 1Lc: POST-POI#1 Inflow=4.18 cfs 0.399 af
Primary=4.18 cfs 0.399 af

Link 2Lc: POST-POI#2 Inflow=0.01 cfs 0.003 af
Primary=0.01 cfs 0.003 af

Link 3Lc: TOTAL-POST Inflow=4.18 cfs 0.402 af
Primary=4.18 cfs 0.402 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.402 af Average Runoff Depth = 3.38"
16.12% Pervious = 0.230 ac 83.88% Impervious = 1.197 ac

25486-SWM*NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"*

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Page 7

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sc: POST-Basin Runoff Area=0.527 ac 94.69% Impervious Runoff Depth=4.71"
Tc=5.0 min CN=95 Runoff=3.31 cfs 0.207 af

Subcatchment2Sc: Post-POI#1 Bypass Runoff Area=0.793 ac 86.51% Impervious Runoff Depth=4.16"
Tc=5.0 min CN=90 Runoff=4.61 cfs 0.275 af

Subcatchment3Sc: Post-POI#2 Runoff Area=0.107 ac 11.21% Impervious Runoff Depth=0.59"
Tc=5.0 min CN=46 Runoff=0.04 cfs 0.005 af

Pond 4P: BASIN #1 Peak Elev=296.41' Storage=3,277 cf Inflow=3.31 cfs 0.207 af
Outflow=0.82 cfs 0.207 af

Link 1Lc: POST-POI#1 Inflow=4.92 cfs 0.481 af
Primary=4.92 cfs 0.481 af

Link 2Lc: POST-POI#2 Inflow=0.04 cfs 0.005 af
Primary=0.04 cfs 0.005 af

Link 3Lc: TOTAL-POST Inflow=4.95 cfs 0.487 af
Primary=4.95 cfs 0.487 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.487 af Average Runoff Depth = 4.09"
16.12% Pervious = 0.230 ac 83.88% Impervious = 1.197 ac

25486-SWM*NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"*

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Page 8

Time span=0.00-96.00 hrs, dt=0.02 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1Sc: POST-Basin Runoff Area=0.527 ac 94.69% Impervious Runoff Depth=5.59"
Tc=5.0 min CN=95 Runoff=3.92 cfs 0.246 af

Subcatchment2Sc: Post-POI#1 Bypass Runoff Area=0.793 ac 86.51% Impervious Runoff Depth=5.02"
Tc=5.0 min CN=90 Runoff=5.54 cfs 0.332 af

Subcatchment3Sc: Post-POI#2 Runoff Area=0.107 ac 11.21% Impervious Runoff Depth=0.94"
Tc=5.0 min CN=46 Runoff=0.09 cfs 0.008 af

Pond 4P: BASIN #1 Peak Elev=296.56' Storage=3,367 cf Inflow=3.92 cfs 0.246 af
Outflow=1.80 cfs 0.246 af

Link 1Lc: POST-POI#1 Inflow=5.89 cfs 0.577 af
Primary=5.89 cfs 0.577 af

Link 2Lc: POST-POI#2 Inflow=0.09 cfs 0.008 af
Primary=0.09 cfs 0.008 af

Link 3Lc: TOTAL-POST Inflow=5.98 cfs 0.586 af
Primary=5.98 cfs 0.586 af

Total Runoff Area = 1.427 ac Runoff Volume = 0.586 af Average Runoff Depth = 4.93"
16.12% Pervious = 0.230 ac 83.88% Impervious = 1.197 ac

25486-SWM

NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

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Page 1

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 1.23 cfs @ 12.02 hrs, Volume= 0.073 af, Depth= 1.66"
 Routed to Pond 4P : BASIN #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

Summary for Subcatchment 2Sc: Post-POI#1 Bypass

Runoff = 1.44 cfs @ 12.03 hrs, Volume= 0.083 af, Depth= 1.26"
 Routed to Link 1Lc : POST-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

Area (ac)	CN	Description
0.107	39	>75% Grass cover, Good, HSG A
* 0.686	98	Impervious
0.793	90	Weighted Average
0.107		13.49% Pervious Area
0.686		86.51% Impervious Area

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

Summary for Subcatchment 3Sc: Post-POI#2

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Link 2Lc : POST-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

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NY-Niskayuna 24-hr S1 1-yr Rainfall=2.19"

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Page 2

Area (ac)	CN	Description
0.095	39	>75% Grass cover, Good, HSG A
* 0.012	98	Impervious
0.107	46	Weighted Average
0.095		88.79% Pervious Area
0.012		11.21% Impervious Area

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

Summary for Pond 4P: BASIN #1

Inflow Area = 0.527 ac, 94.69% Impervious, Inflow Depth = 1.66" for 1-yr event
 Inflow = 1.23 cfs @ 12.02 hrs, Volume= 0.073 af
 Outflow = 0.22 cfs @ 12.42 hrs, Volume= 0.073 af, Atten= 82%, Lag= 23.7 min
 Primary = 0.22 cfs @ 12.42 hrs, Volume= 0.073 af
 Routed to Link 1Lc : POST-POI#1

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 Peak Elev= 294.09' @ 12.42 hrs Surf.Area= 1,540 sf Storage= 919 cf

Plug-Flow detention time= 50.9 min calculated for 0.073 af (100% of inflow)
 Center-of-Mass det. time= 51.0 min (852.0 - 800.9)

Volume	Invert	Avail.Storage	Storage Description
#1	293.10'	1,487 cf	25.25'W x 61.00'L x 3.75'H Prismatic 5,776 cf Overall - 2,058 cf Embedded = 3,718 cf x 40.0% Voids
#2	293.60'	2,058 cf	ADS_StormTech SC-800 +Cap x 40 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 40 Chambers in 5 Rows Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		3,545 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	293.10'	12.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 293.10' / 292.72' S= 0.0069 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	293.10'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	296.30'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.22 cfs @ 12.42 hrs HW=294.09' (Free Discharge)

- 1=Culvert (Passes 0.22 cfs of 2.44 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.22 cfs @ 4.47 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

Summary for Link 1Lc: POST-POI#1

Inflow Area = 1.320 ac, 89.77% Impervious, Inflow Depth = 1.42" for 1-yr event
Inflow = 1.62 cfs @ 12.03 hrs, Volume= 0.156 af
Primary = 1.62 cfs @ 12.03 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lc: POST-POI#2

Inflow Area = 0.107 ac, 11.21% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lc: TOTAL-POST

Inflow Area = 1.427 ac, 83.88% Impervious, Inflow Depth = 1.31" for 1-yr event
Inflow = 1.62 cfs @ 12.03 hrs, Volume= 0.156 af
Primary = 1.62 cfs @ 12.03 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

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Page 4

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 2.30 cfs @ 12.02 hrs, Volume= 0.137 af, Depth= 3.12"
 Routed to Pond 4P : BASIN #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

Summary for Subcatchment 2Sc: Post-POI#1 Bypass

Runoff = 3.03 cfs @ 12.03 hrs, Volume= 0.173 af, Depth= 2.62"
 Routed to Link 1Lc : POST-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

Area (ac)	CN	Description
0.107	39	>75% Grass cover, Good, HSG A
* 0.686	98	Impervious
0.793	90	Weighted Average
0.107		13.49% Pervious Area
0.686		86.51% Impervious Area

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

Summary for Subcatchment 3Sc: Post-POI#2

Runoff = 0.00 cfs @ 12.53 hrs, Volume= 0.001 af, Depth= 0.14"
 Routed to Link 2Lc : POST-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

25486-SWM

NY-Niskayuna 24-hr S1 10-yr Rainfall=3.68"

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Page 5

Area (ac)	CN	Description
0.095	39	>75% Grass cover, Good, HSG A
* 0.012	98	Impervious
0.107	46	Weighted Average
0.095		88.79% Pervious Area
0.012		11.21% Impervious Area

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

Summary for Pond 4P: BASIN #1

Inflow Area = 0.527 ac, 94.69% Impervious, Inflow Depth = 3.12" for 10-yr event
 Inflow = 2.30 cfs @ 12.02 hrs, Volume= 0.137 af
 Outflow = 0.33 cfs @ 12.56 hrs, Volume= 0.137 af, Atten= 86%, Lag= 32.3 min
 Primary = 0.33 cfs @ 12.56 hrs, Volume= 0.137 af
 Routed to Link 1Lc : POST-POI#1

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 Peak Elev= 295.15' @ 12.56 hrs Surf.Area= 1,540 sf Storage= 2,160 cf

Plug-Flow detention time= 68.1 min calculated for 0.137 af (100% of inflow)
 Center-of-Mass det. time= 67.8 min (845.8 - 778.0)

Volume	Invert	Avail.Storage	Storage Description
#1	293.10'	1,487 cf	25.25'W x 61.00'L x 3.75'H Prismatic 5,776 cf Overall - 2,058 cf Embedded = 3,718 cf x 40.0% Voids
#2	293.60'	2,058 cf	ADS_StormTech SC-800 +Cap x 40 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 40 Chambers in 5 Rows Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		3,545 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	293.10'	12.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 293.10' / 292.72' S= 0.0069 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	293.10'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	296.30'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.33 cfs @ 12.56 hrs HW=295.15' (Free Discharge)

- 1=Culvert (Passes 0.33 cfs of 4.37 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.33 cfs @ 6.68 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

Summary for Link 1Lc: POST-POI#1

Inflow Area = 1.320 ac, 89.77% Impervious, Inflow Depth = 2.82" for 10-yr event
Inflow = 3.28 cfs @ 12.03 hrs, Volume= 0.310 af
Primary = 3.28 cfs @ 12.03 hrs, Volume= 0.310 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lc: POST-POI#2

Inflow Area = 0.107 ac, 11.21% Impervious, Inflow Depth = 0.14" for 10-yr event
Inflow = 0.00 cfs @ 12.53 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 12.53 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lc: TOTAL-POST

Inflow Area = 1.427 ac, 83.88% Impervious, Inflow Depth = 2.62" for 10-yr event
Inflow = 3.28 cfs @ 12.03 hrs, Volume= 0.311 af
Primary = 3.28 cfs @ 12.03 hrs, Volume= 0.311 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

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Page 7

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 2.86 cfs @ 12.02 hrs, Volume= 0.173 af, Depth= 3.94"
 Routed to Pond 4P : BASIN #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

Summary for Subcatchment 2Sc: Post-POI#1 Bypass

Runoff = 3.89 cfs @ 12.03 hrs, Volume= 0.226 af, Depth= 3.41"
 Routed to Link 1Lc : POST-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

Area (ac)	CN	Description
0.107	39	>75% Grass cover, Good, HSG A
* 0.686	98	Impervious
0.793	90	Weighted Average
0.107		13.49% Pervious Area
0.686		86.51% Impervious Area

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

Summary for Subcatchment 3Sc: Post-POI#2

Runoff = 0.01 cfs @ 12.44 hrs, Volume= 0.003 af, Depth= 0.34"
 Routed to Link 2Lc : POST-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

25486-SWM

NY-Niskayuna 24-hr S1 25-yr Rainfall=4.52"

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Page 8

Area (ac)	CN	Description
0.095	39	>75% Grass cover, Good, HSG A
* 0.012	98	Impervious
0.107	46	Weighted Average
0.095		88.79% Pervious Area
0.012		11.21% Impervious Area

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

Summary for Pond 4P: BASIN #1

Inflow Area = 0.527 ac, 94.69% Impervious, Inflow Depth = 3.94" for 25-yr event
 Inflow = 2.86 cfs @ 12.02 hrs, Volume= 0.173 af
 Outflow = 0.39 cfs @ 12.57 hrs, Volume= 0.173 af, Atten= 87%, Lag= 32.9 min
 Primary = 0.39 cfs @ 12.57 hrs, Volume= 0.173 af
 Routed to Link 1Lc : POST-POI#1

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 Peak Elev= 295.88' @ 12.57 hrs Surf.Area= 1,540 sf Storage= 2,894 cf

Plug-Flow detention time= 76.7 min calculated for 0.173 af (100% of inflow)
 Center-of-Mass det. time= 76.5 min (847.5 - 771.1)

Volume	Invert	Avail.Storage	Storage Description
#1	293.10'	1,487 cf	25.25'W x 61.00'L x 3.75'H Prismatic 5,776 cf Overall - 2,058 cf Embedded = 3,718 cf x 40.0% Voids
#2	293.60'	2,058 cf	ADS_StormTech SC-800 +Cap x 40 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 40 Chambers in 5 Rows Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		3,545 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	293.10'	12.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 293.10' / 292.72' S= 0.0069 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	293.10'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	296.30'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.39 cfs @ 12.57 hrs HW=295.88' (Free Discharge)

- 1=Culvert (Passes 0.39 cfs of 5.38 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.39 cfs @ 7.85 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

Summary for Link 1Lc: POST-POI#1

Inflow Area = 1.320 ac, 89.77% Impervious, Inflow Depth = 3.63" for 25-yr event
Inflow = 4.18 cfs @ 12.03 hrs, Volume= 0.399 af
Primary = 4.18 cfs @ 12.03 hrs, Volume= 0.399 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lc: POST-POI#2

Inflow Area = 0.107 ac, 11.21% Impervious, Inflow Depth = 0.34" for 25-yr event
Inflow = 0.01 cfs @ 12.44 hrs, Volume= 0.003 af
Primary = 0.01 cfs @ 12.44 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lc: TOTAL-POST

Inflow Area = 1.427 ac, 83.88% Impervious, Inflow Depth = 3.38" for 25-yr event
Inflow = 4.18 cfs @ 12.03 hrs, Volume= 0.402 af
Primary = 4.18 cfs @ 12.03 hrs, Volume= 0.402 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

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Page 10

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 3.31 cfs @ 12.02 hrs, Volume= 0.207 af, Depth= 4.71"
 Routed to Pond 4P : BASIN #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

Summary for Subcatchment 2Sc: Post-POI#1 Bypass

Runoff = 4.61 cfs @ 12.03 hrs, Volume= 0.275 af, Depth= 4.16"
 Routed to Link 1Lc : POST-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

Area (ac)	CN	Description
0.107	39	>75% Grass cover, Good, HSG A
* 0.686	98	Impervious
0.793	90	Weighted Average
0.107		13.49% Pervious Area
0.686		86.51% Impervious Area

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

Summary for Subcatchment 3Sc: Post-POI#2

Runoff = 0.04 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 0.59"
 Routed to Link 2Lc : POST-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

25486-SWM

NY-Niskayuna 24-hr S1 50-yr Rainfall=5.29"

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Page 11

Area (ac)	CN	Description
0.095	39	>75% Grass cover, Good, HSG A
* 0.012	98	Impervious
0.107	46	Weighted Average
0.095		88.79% Pervious Area
0.012		11.21% Impervious Area

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

Summary for Pond 4P: BASIN #1

Inflow Area = 0.527 ac, 94.69% Impervious, Inflow Depth = 4.71" for 50-yr event
 Inflow = 3.31 cfs @ 12.02 hrs, Volume= 0.207 af
 Outflow = 0.82 cfs @ 12.36 hrs, Volume= 0.207 af, Atten= 75%, Lag= 20.3 min
 Primary = 0.82 cfs @ 12.36 hrs, Volume= 0.207 af
 Routed to Link 1Lc : POST-POI#1

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 Peak Elev= 296.41' @ 12.36 hrs Surf.Area= 1,540 sf Storage= 3,277 cf

Plug-Flow detention time= 76.7 min calculated for 0.207 af (100% of inflow)
 Center-of-Mass det. time= 76.8 min (843.2 - 766.4)

Volume	Invert	Avail.Storage	Storage Description
#1	293.10'	1,487 cf	25.25'W x 61.00'L x 3.75'H Prismatic 5,776 cf Overall - 2,058 cf Embedded = 3,718 cf x 40.0% Voids
#2	293.60'	2,058 cf	ADS_StormTech SC-800 +Cap x 40 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 40 Chambers in 5 Rows Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		3,545 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	293.10'	12.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 293.10' / 292.72' S= 0.0069 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	293.10'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	296.30'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.82 cfs @ 12.36 hrs HW=296.41' (Free Discharge)

- 1=Culvert (Passes 0.82 cfs of 6.00 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.42 cfs @ 8.60 fps)
- 3=Orifice/Grate (Weir Controls 0.40 cfs @ 1.10 fps)

Summary for Link 1Lc: POST-POI#1

Inflow Area = 1.320 ac, 89.77% Impervious, Inflow Depth = 4.38" for 50-yr event
Inflow = 4.92 cfs @ 12.03 hrs, Volume= 0.481 af
Primary = 4.92 cfs @ 12.03 hrs, Volume= 0.481 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lc: POST-POI#2

Inflow Area = 0.107 ac, 11.21% Impervious, Inflow Depth = 0.59" for 50-yr event
Inflow = 0.04 cfs @ 12.13 hrs, Volume= 0.005 af
Primary = 0.04 cfs @ 12.13 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lc: TOTAL-POST

Inflow Area = 1.427 ac, 83.88% Impervious, Inflow Depth = 4.09" for 50-yr event
Inflow = 4.95 cfs @ 12.03 hrs, Volume= 0.487 af
Primary = 4.95 cfs @ 12.03 hrs, Volume= 0.487 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 3.92 cfs @ 12.02 hrs, Volume= 0.246 af, Depth= 5.59"
 Routed to Pond 4P : BASIN #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

Summary for Subcatchment 2Sc: Post-POI#1 Bypass

Runoff = 5.54 cfs @ 12.02 hrs, Volume= 0.332 af, Depth= 5.02"
 Routed to Link 1Lc : POST-POI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

Area (ac)	CN	Description
0.107	39	>75% Grass cover, Good, HSG A
* 0.686	98	Impervious
0.793	90	Weighted Average
0.107		13.49% Pervious Area
0.686		86.51% Impervious Area

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

Summary for Subcatchment 3Sc: Post-POI#2

Runoff = 0.09 cfs @ 12.05 hrs, Volume= 0.008 af, Depth= 0.94"
 Routed to Link 2Lc : POST-POI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

25486-SWM

NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

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Page 14

Area (ac)	CN	Description
0.095	39	>75% Grass cover, Good, HSG A
* 0.012	98	Impervious
0.107	46	Weighted Average
0.095		88.79% Pervious Area
0.012		11.21% Impervious Area

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

Summary for Pond 4P: BASIN #1

Inflow Area = 0.527 ac, 94.69% Impervious, Inflow Depth = 5.59" for 100-yr event
 Inflow = 3.92 cfs @ 12.02 hrs, Volume= 0.246 af
 Outflow = 1.80 cfs @ 12.16 hrs, Volume= 0.246 af, Atten= 54%, Lag= 8.3 min
 Primary = 1.80 cfs @ 12.16 hrs, Volume= 0.246 af
 Routed to Link 1Lc : POST-POI#1

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
 Peak Elev= 296.56' @ 12.16 hrs Surf.Area= 1,540 sf Storage= 3,367 cf

Plug-Flow detention time= 70.7 min calculated for 0.246 af (100% of inflow)
 Center-of-Mass det. time= 70.5 min (832.5 - 762.0)

Volume	Invert	Avail.Storage	Storage Description
#1	293.10'	1,487 cf	25.25'W x 61.00'L x 3.75'H Prismatic 5,776 cf Overall - 2,058 cf Embedded = 3,718 cf x 40.0% Voids
#2	293.60'	2,058 cf	ADS_StormTech SC-800 +Cap x 40 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 40 Chambers in 5 Rows Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		3,545 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	293.10'	12.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 293.10' / 292.72' S= 0.0069 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	293.10'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	296.30'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.79 cfs @ 12.16 hrs HW=296.56' (Free Discharge)

- 1=Culvert (Passes 1.79 cfs of 6.16 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.43 cfs @ 8.79 fps)
- 3=Orifice/Grate (Weir Controls 1.36 cfs @ 1.67 fps)

Summary for Link 1Lc: POST-POI#1

Inflow Area = 1.320 ac, 89.77% Impervious, Inflow Depth = 5.25" for 100-yr event
Inflow = 5.89 cfs @ 12.03 hrs, Volume= 0.577 af
Primary = 5.89 cfs @ 12.03 hrs, Volume= 0.577 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 2Lc: POST-POI#2

Inflow Area = 0.107 ac, 11.21% Impervious, Inflow Depth = 0.94" for 100-yr event
Inflow = 0.09 cfs @ 12.05 hrs, Volume= 0.008 af
Primary = 0.09 cfs @ 12.05 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3Lc : TOTAL-POST

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

Summary for Link 3Lc: TOTAL-POST

Inflow Area = 1.427 ac, 83.88% Impervious, Inflow Depth = 4.93" for 100-yr event
Inflow = 5.98 cfs @ 12.03 hrs, Volume= 0.586 af
Primary = 5.98 cfs @ 12.03 hrs, Volume= 0.586 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs

25486-SWM

NY-Niskayuna 24-hr S1 100-yr Rainfall=6.18"

Prepared by Engineering Ventures, Inc

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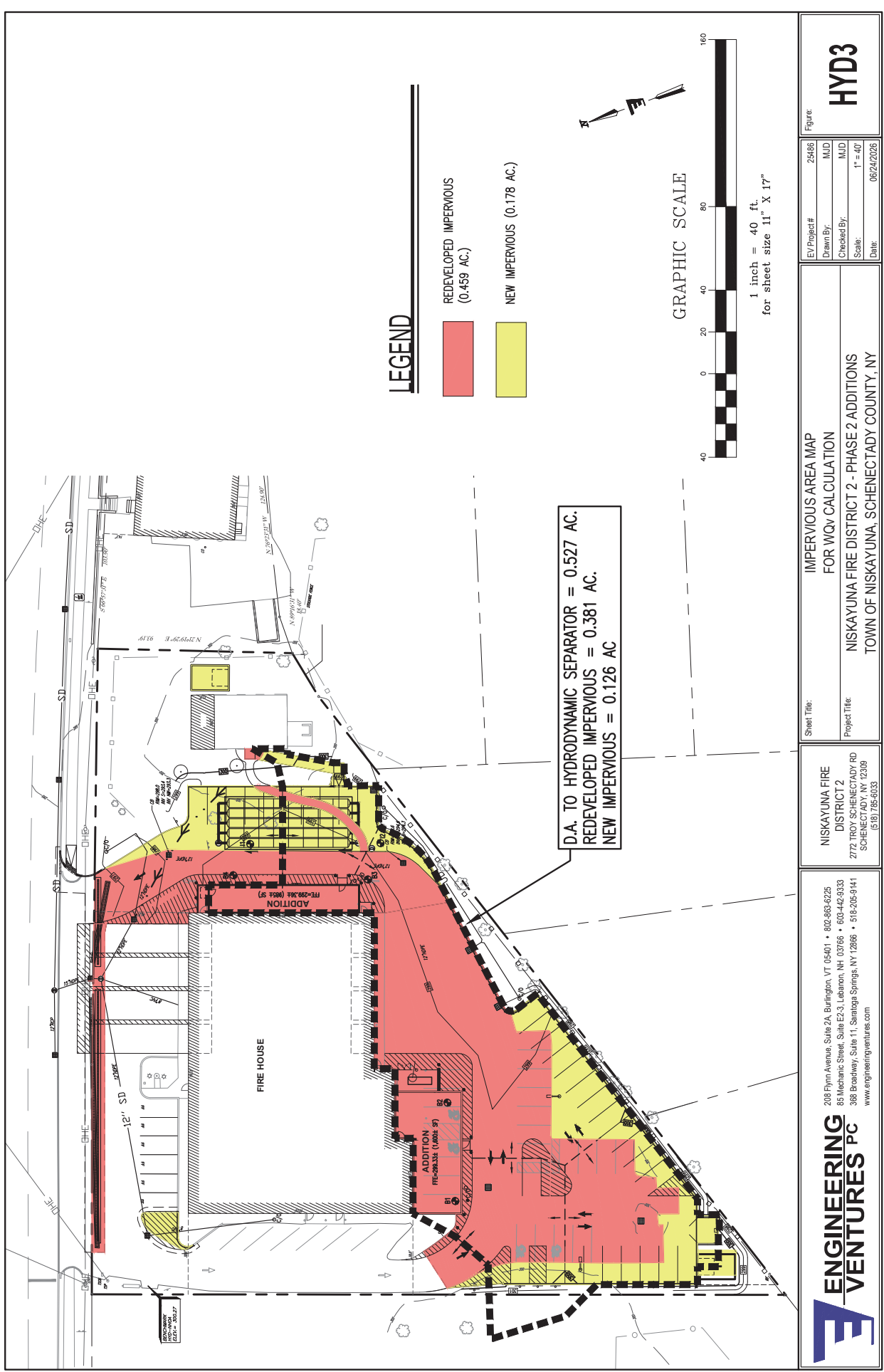
Page 1

Stage-Area-Storage for Pond 4P: BASIN #1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
293.10	0	295.70	2,725
293.15	31	295.75	2,772
293.20	62	295.80	2,818
293.25	92	295.85	2,863
293.30	123	295.90	2,907
293.35	154	295.95	2,950
293.40	185	296.00	2,992
293.45	216	296.05	3,031
293.50	246	296.10	3,069
293.55	277	296.15	3,105
293.60	308	296.20	3,139
293.65	371	296.25	3,173
293.70	435	296.30	3,206
293.75	498	296.35	3,237
293.80	560	296.40	3,268
293.85	623	296.45	3,299
293.90	686	296.50	3,329
293.95	748	296.55	3,360
294.00	810	296.60	3,391
294.05	872	296.65	3,422
294.10	933	296.70	3,453
294.15	995	296.75	3,483
294.20	1,056	296.80	3,514
294.25	1,117	296.85	3,545
294.30	1,177		
294.35	1,238		
294.40	1,298		
294.45	1,358		
294.50	1,417		
294.55	1,477		
294.60	1,535		
294.65	1,594		
294.70	1,652		
294.75	1,710		
294.80	1,768		
294.85	1,825		
294.90	1,882		
294.95	1,938		
295.00	1,994		
295.05	2,050		
295.10	2,105		
295.15	2,160		
295.20	2,214		
295.25	2,268		
295.30	2,321		
295.35	2,374		
295.40	2,426		
295.45	2,477		
295.50	2,528		
295.55	2,578		
295.60	2,628		
295.65	2,677		

Part 6:

Water Quality (WQv) and Stormwater Treatment Practice Calculations





NISKYUNA FIRE DISTRICT #2

WQV DRAWING TO HYDRODYNAMIC SEPARATOR

$$P = 1.15''$$

$$A = 0.527 \text{ AC}$$

$$I = 94.69\%$$

$$R_v = 0.05 + 0.009(I) = 0.90221$$

$$\Rightarrow WQV = \frac{PR_v A}{12} = \frac{(1.15)(0.90221)(0.527)}{12} = 0.0456 \text{ AC-FT} = 1,985 \text{ CF}$$

$$CN_w = 95$$

$$S = \frac{100}{CN_w} - 10 = 0.5263''$$

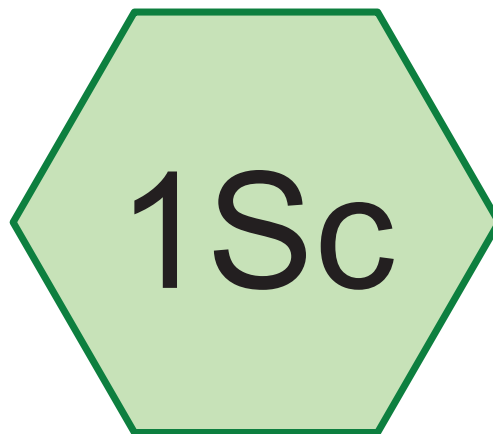
$$Q = \frac{WQV}{A} = \frac{0.0456 \text{ AC-FT}}{0.527 \text{ AC}} = 0.0865 \text{ FT} = 1.038''$$

$$P_g = S + 2.5Q + \frac{(6.25Q^2 + 25SQ)^{1/2}}{5}$$

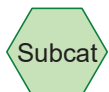
$$= 0.5263 + 2.5(1.038) + \frac{[6.25(1.038)^2 + 25(0.5263)(1.038)]^{1/2}}{5}$$

$$= (0.5263 + 2.595 + 4.5151) / 5 = 1.53''$$

$\Rightarrow$ FROM HYDROCAD, WQV PEAK FLOW = 0.78 CFS



POST-Basin



Routing Diagram for 25486-SWM

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25486-SWM

NY-Niskayuna 24-hr S1 1-yr 90% WQv Rainfall=1.53"

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Page 2

Summary for Subcatchment 1Sc: POST-Basin

Runoff = 0.78 cfs @ 12.03 hrs, Volume= 0.046 af, Depth= 1.04"
Routed to Pond 4P : BASIN #1

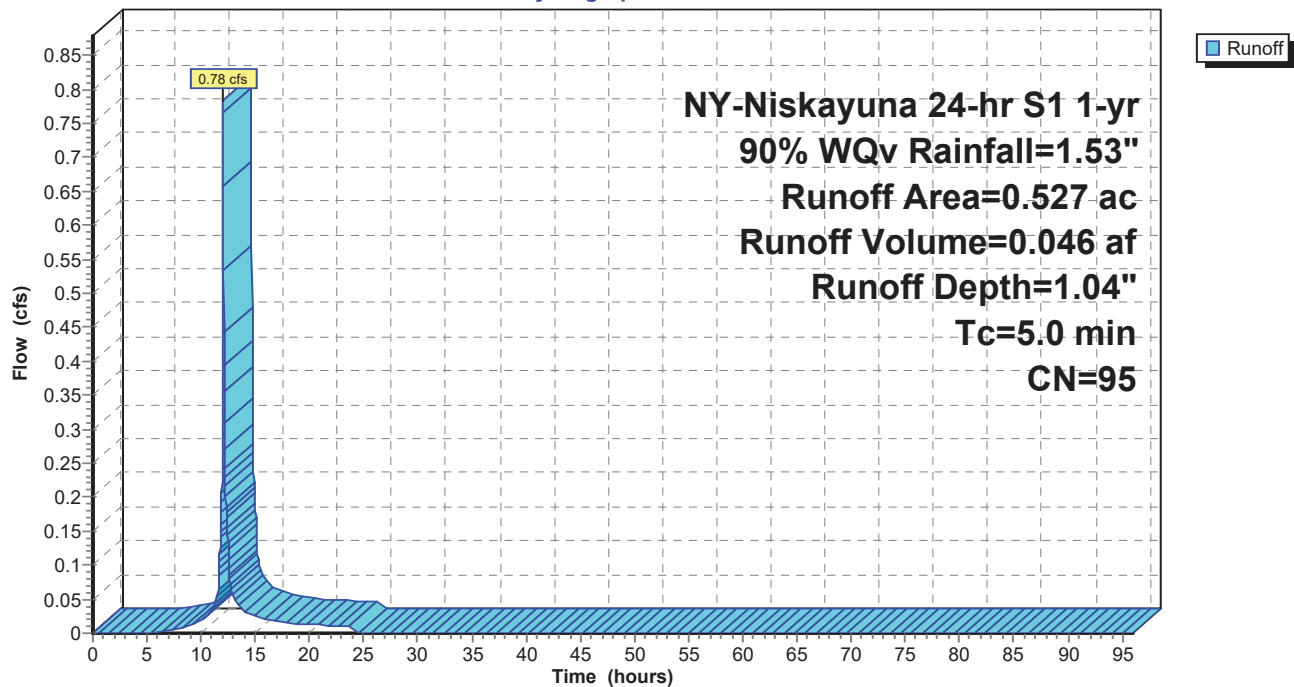
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.02 hrs
NY-Niskayuna 24-hr S1 1-yr 90% WQv Rainfall=1.53"

Area (ac)	CN	Description
0.028	39	>75% Grass cover, Good, HSG A
* 0.499	98	Impervious
0.527	95	Weighted Average
0.028		5.31% Pervious Area
0.499		94.69% Impervious Area

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

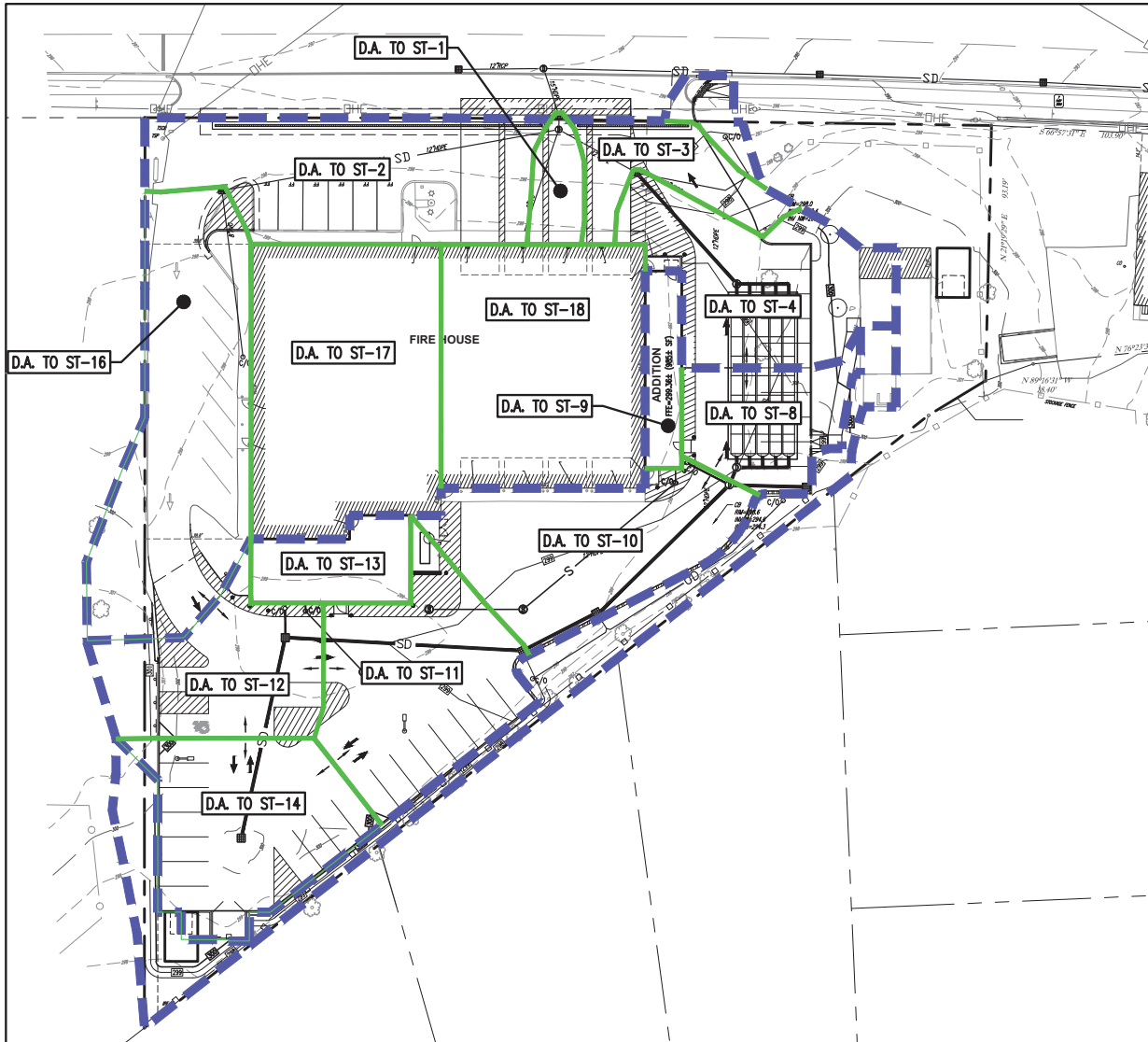
Subcatchment 1Sc: POST-Basin

Hydrograph



Part 7:

Storm Sewer Calculations (100-YR)



TIME OF CONCENTRATION (T_c) NOTE:
DUE TO THE LARGE PERCENTAGE OF IMPERVIOUS AREA COMPARED TO THE OVERALL WATERSHED AREAS, A MINIMUM T_c OF 5 MIN. WAS ASSUMED FOR THE CALCULATIONS.

GRAPHIC SCALE



1 inch = 40 ft.
for sheet size 11" X 17"



208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225
85 Mechanic Street, Suite E2-3, Lebanon, NH 03786 • 603-442-9333
368 Broadway, Suite 11, Saratoga Springs, NY 12866 • 518-205-9141
www.engineeringventures.com

**NISKAYUNA FIRE
DISTRICT 2**
2772 TROY SCHENECTADY RD
SCHENECTADY, NY 12309
(518) 785-6033

Sheet Title:

INLET WATERSHED MAP

Project Title:

NISKAYUNA FIRE DISTRICT 2 - PHASE 2 ADDITIONS
TOWN OF NISKAYUNA, SCHENECTADY COUNTY, NY

EV Project #	25486
Drawn By:	MJD
Checked By:	MJD
Scale:	1" = 40'
Date:	06/24/2026

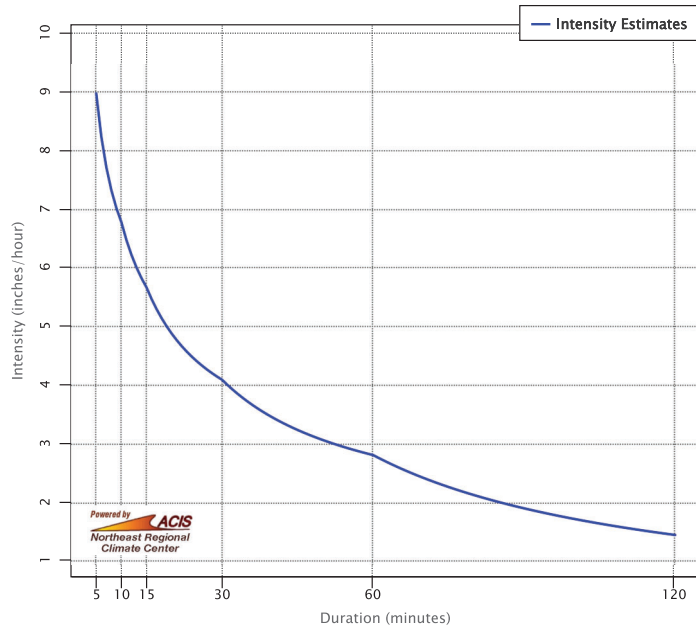
Figure:

HYD4

Intensity Frequency Duration - 100yr



(42.780N, -73.847W)



Time (hours)	Intensity (in/hr)
5*	8.96
6	8.23
7*	7.71
8*	7.32
9*	7.01
10*	6.77
11*	6.47
12	6.21
13*	6.00
14*	5.82
15*	5.66
16*	5.46
17*	5.29
18*	5.13
19*	4.99
20*	4.87
21*	4.76
22*	4.66
23*	4.56
24	4.48
25*	4.40
26*	4.33
27*	4.26
28*	4.20
29*	4.14
30*	4.08
31*	4.00
32*	3.92
33*	3.85
34*	3.78
35*	3.72
36*	3.66
37*	3.60
38*	3.54
39*	3.49
40*	3.44
41*	3.40
42*	3.35
43*	3.31
44*	3.27
45*	3.23
46*	3.19
47*	3.16
48	3.12
49*	3.09
50*	3.06
51*	3.03
52*	3.00
53*	2.97
54*	2.94
55*	2.92
56*	2.89
57*	2.87
58*	2.85
59*	2.82
60*	2.80
61*	2.76
62*	2.71
63*	2.67
64*	2.63
65*	2.59

INLET WATERSHED AREAS

Project: Niskayuna Fire District 2 - Phase 2 Additions

EV#: 25486

Date: 06/24/2026

Rational Method $Q=CiA$ (cfs)

Intensity

i, 100-YR (5 min)

8.96 in/hr

ST-1 (Existing)			
Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.019	0.01805
			0.01805
Total Area (ac.)	0.019		
Weighted C	0.95		
Q (cfs)	0.16		

ST-8			
Cover	C	A	CA
Lawn	0.35	0.005	0.0018
Impervious	0.95	0.051	0.0485
			0.0502
Total Area (ac.)	0.056		
Weighted C	0.90		
Q (cfs)	0.45		

ST-2			
Cover	C	A	CA
Lawn	0.35	0.015	0.00525
Impervious	0.95	0.119	0.11305
			0.1183
Total Area (ac.)	0.134		
Weighted C	0.88		
Q (cfs)	1.06		

ST-9			
Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.022	0.0209
			0.0209
Total Area (ac.)	0.022		
Weighted C	0.95		
Q (cfs)	0.19		

ST-3			
Cover	C	A	CA
Lawn	0.35	0.006	0.0021
Impervious	0.95	0.037	0.03515
			0.03725
Total Area (ac.)	0.043		
Weighted C	0.87		
Q (cfs)	0.33		

ST-10			
Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.111	0.1055
			0.1055
Total Area (ac.)	0.111		
Weighted C	0.95		
Q (cfs)	0.94		

ST-4			
Cover	C	A	CA
Lawn	0.35	0.031	0.01085
Impervious	0.95	0.072	0.0684
			0.07925
Total Area (ac.)	0.103		
Weighted C	0.77		
Q (cfs)	0.71		

ST-11			
Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.114	0.1083
			0.1083
Total Area (ac.)	0.114		
Weighted C	0.95		
Q (cfs)	0.97		

ST-12

Cover	C	A	CA
Lawn	0.35	0.019	0.00665
Impervious	0.95	0.065	0.06175
			0.0684
Total Area (ac.)		0.084	
Weighted C		0.81	
Q (cfs)		0.61	

ST-17

Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.165	0.1568
			0.1568
Total Area (ac.)		0.165	
Weighted C		0.95	
Q (cfs)		1.40	

ST-13

Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.036	0.0342
			0.0342
Total Area (ac.)		0.036	
Weighted C		0.95	
Q (cfs)		0.31	

ST-18

Cover	C	A	CA
Lawn	0.35	0	0
Impervious	0.95	0.152	0.1444
			0.1444
Total Area (ac.)		0.152	
Weighted C		0.95	
Q (cfs)		1.29	

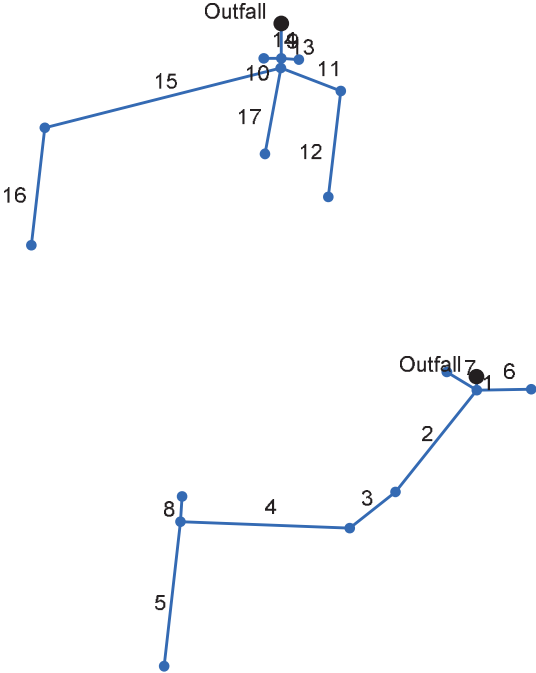
ST-14

Cover	C	A	CA
Lawn	0.35	0.004	0.0014
Impervious	0.95	0.1	0.095
			0.0964
Total Area (ac.)		0.104	
Weighted C		0.93	
Q (cfs)		0.86	

ST-16

Cover	C	A	CA
Lawn	0.35	0.055	0.01925
Impervious	0.95	0.107	0.10165
			0.1209
Total Area (ac.)		0.162	
Weighted C		0.75	
Q (cfs)		1.08	

25486-Storm



Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	7.000	88.898	MH	0.00	0.00	0.00	0.0	293.90	1.43	294.00	12	Cir	0.012	1.00	298.95	ST7-ST6.1
2	1	67.000	39.664	DrGrt	0.00	0.11	0.95	5.0	294.00	1.04	294.70	12	Cir	0.012	0.50	298.05	ST10-ST7
3	2	30.000	12.887	DrGrt	0.00	0.11	0.00	5.0	294.70	0.67	294.90	12	Cir	0.012	1.05	298.50	ST11-ST10
4	3	87.000	40.758	DrGrt	0.00	0.08	0.81	5.0	294.90	0.57	295.40	12	Cir	0.012	1.50	299.09	ST12-ST11
5	4	75.000	-85.827	DrGrt	0.00	0.10	0.95	5.0	295.50	0.80	296.10	12	Cir	0.012	1.00	299.40	ST14-ST12
6	1	28.000	-89.959	DrGrt	0.00	0.06	0.90	5.0	294.00	3.93	295.10	12	Cir	0.012	1.00	298.44	ST8-ST7
7	1	18.000	122.491	DrGrt	0.00	0.02	0.95	5.0	294.50	2.78	295.00	6	Cir	0.012	1.00	299.36	ST9-ST7
8	4	13.000	91.358	DrGrt	0.00	0.04	0.95	5.0	296.00	1.54	296.20	6	Cir	0.012	1.00	299.36	ST13-ST12
9	End	18.000	90.000	DrGrt	0.00	0.02	0.95	5.0	290.00	5.00	290.90	15	Cir	0.012	1.50	296.50	ST1-EX MH
10	9	5.000	2.997	MH	0.00	0.00	0.00	0.0	292.50	-4.00	292.30	15	Cir	0.012	0.96	296.60	ST15-ST1
11	10	33.000	-71.953	DrGrt	0.00	0.08	0.79	5.0	292.20	1.58	292.72	12	Cir	0.012	1.46	297.60	ST4-ST15
12	11	55.000	75.697	MH	3.21	0.00	0.00	0.0	292.72	0.69	293.10	12	Cir	0.012	1.00	299.00	ST5-ST4
13	9	9.000	-86.011	DrGrt	0.00	0.07	0.89	5.0	293.70	1.11	293.80	6	Cir	0.012	1.00	296.51	ST3-ST1
14	9	9.000	89.802	DrGrt	0.00	0.13	0.88	5.0	294.00	1.11	294.10	6	Cir	0.012	1.00	296.70	ST2-ST1
15	10	125.000	72.747	DrGrt	0.00	0.16	0.75	5.0	292.30	0.96	293.50	12	Cir	0.012	1.42	297.80	ST16-ST15
16	15	61.000	-69.218	DrGrt	0.00	0.17	0.95	5.0	294.60	2.30	296.00	8	Cir	0.012	1.00	299.36	ST17-ST16
17	10	45.000	7.383	DrGrt	0.00	0.15	0.95	5.0	292.80	7.11	296.00	8	Cir	0.012	1.00	299.36	ST18-ST15
25486-Storm												Number of lines: 17				Date: 7/6/2026	

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	ST7-ST6.1	3.36	12	Cir	7.000	293.90	294.00	1.429	296.56*	296.61*	0.28	296.90	End	Manhole
2	ST10-ST7	2.70	12	Cir	67.000	294.00	294.70	1.045	296.90*	297.23*	0.09	297.32	1	DropGrate
3	ST11-ST10	1.77	12	Cir	30.000	294.70	294.90	0.667	297.32*	297.38*	0.08	297.46	2	DropGrate
4	ST12-ST11	1.77	12	Cir	87.000	294.90	295.40	0.575	297.46*	297.65*	0.12	297.77	3	DropGrate
5	ST14-ST12	0.85	12	Cir	75.000	295.50	296.10	0.800	297.77*	297.80*	0.02	297.82	4	DropGrate
6	ST8-ST7	0.48	12	Cir	28.000	294.00	295.10	3.929	296.90*	296.90*	0.01	296.91	1	DropGrate
7	ST9-ST7	0.17	6	Cir	18.000	294.50	295.00	2.778	296.90*	296.91*	0.01	296.92	1	DropGrate
8	ST13-ST12	0.34	6	Cir	13.000	296.00	296.20	1.539	297.77*	297.81*	0.05	297.85	4	DropGrate
9	ST1-EX MH	9.32	15	Cir	18.000	290.00	290.90	5.000	291.16	292.07	n/a	292.07	End	DropGrate
10	ST15-ST1	7.57	15	Cir	5.000	292.50	292.30	-4.000	293.75*	293.81*	0.57	294.38	9	Manhole
11	ST4-ST15	3.78	12	Cir	33.000	292.20	292.72	1.576	294.38*	294.69*	0.52	295.22	10	DropGrate
12	ST5-ST4	3.21	12	Cir	55.000	292.72	293.10	0.691	295.22*	295.60*	0.26	295.86	11	Manhole
13	ST3-ST1	0.56	6	Cir	9.000	293.70	293.80	1.111	294.06	294.18	0.19	294.18	9	DropGrate
14	ST2-ST1	1.02	6	Cir	9.000	294.00	294.10	1.111	294.50*	294.76*	0.42	295.18	9	DropGrate
15	ST16-ST15	2.52	12	Cir	125.000	292.30	293.50	0.960	294.38*	294.91*	0.23	295.14	10	DropGrate
16	ST17-ST16	1.44	8	Cir	61.000	294.60	296.00	2.295	295.14	296.56	n/a	296.56	15	DropGrate
17	ST18-ST15	1.27	8	Cir	45.000	292.80	296.00	7.111	294.38	296.53	n/a	296.53 j	10	DropGrate
25486-Storm									Number of lines: 17				Run Date: 7/6/2026	
NOTES: Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.														

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (l)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	7.000	0.00	0.52	0.00	0.00	0.38	0.0	5.0	8.9	3.36	4.61	4.27	12	1.43	293.90	294.00	296.56	296.61	299.10	298.95	ST7-ST6.1
2	1	67.000	0.11	0.44	0.95	0.10	0.30	5.0	5.0	8.9	2.70	3.94	3.44	12	1.04	294.00	294.70	296.90	297.23	298.95	298.05	ST10-ST7
3	2	30.000	0.11	0.33	0.00	0.00	0.20	5.0	5.0	8.9	1.77	3.15	2.25	12	0.67	294.70	294.90	297.32	297.38	298.05	298.50	ST11-ST10
4	3	87.000	0.08	0.22	0.81	0.06	0.20	5.0	5.0	8.9	1.77	2.92	2.25	12	0.57	294.90	295.40	297.46	297.65	298.50	299.09	ST12-ST11
5	4	75.000	0.10	0.10	0.95	0.10	0.10	5.0	5.0	8.9	0.85	3.45	1.08	12	0.80	295.50	296.10	297.77	297.80	299.09	299.40	ST14-ST12
6	1	28.000	0.06	0.06	0.90	0.05	0.05	5.0	5.0	8.9	0.48	7.65	0.62	12	3.93	294.00	295.10	296.90	296.90	298.95	298.44	ST8-ST7
7	1	18.000	0.02	0.02	0.95	0.02	0.02	5.0	5.0	8.9	0.17	1.01	0.87	6	2.78	294.50	295.00	296.90	296.91	298.95	299.36	ST9-ST7
8	4	13.000	0.04	0.04	0.95	0.04	0.04	5.0	5.0	8.9	0.34	0.75	1.73	6	1.54	296.00	296.20	297.77	297.81	299.09	299.36	ST13-ST12
9	End	18.000	0.02	0.78	0.95	0.02	0.68	5.0	5.0	8.9	9.32	15.64	7.83	15	5.00	290.00	290.90	291.16	292.07	296.00	296.50	ST1-EX MH
10	9	5.000	0.00	0.56	0.00	0.00	0.49	0.0	5.0	8.9	7.57	0.00	6.17	15	-4.00	292.50	292.30	293.75	293.81	296.50	296.60	ST15-ST1
11	10	33.000	0.08	0.08	0.79	0.06	0.06	5.0	5.0	8.9	3.78	4.84	4.81	12	1.58	292.20	292.72	294.38	294.69	296.60	297.60	ST4-ST15
12	11	55.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.21	3.21	4.09	12	0.69	292.72	293.10	295.22	295.60	297.60	299.00	ST5-ST4
13	9	9.000	0.07	0.07	0.89	0.06	0.06	5.0	5.0	8.9	0.56	0.64	3.58	6	1.11	293.70	293.80	294.06	294.18	296.50	296.51	ST3-ST1
14	9	9.000	0.13	0.13	0.88	0.11	0.11	5.0	5.0	8.9	1.02	0.64	5.21	6	1.11	294.00	294.10	294.50	294.76	296.50	296.70	ST2-ST1
15	10	125.000	0.16	0.33	0.75	0.12	0.28	5.0	5.0	8.9	2.52	3.78	3.21	12	0.96	292.30	293.50	294.38	294.91	296.60	297.80	ST16-ST15
16	15	61.000	0.17	0.17	0.95	0.16	0.16	5.0	5.0	8.9	1.44	1.98	4.70	8	2.30	294.60	296.00	295.14	296.56	297.80	299.36	ST17-ST16
17	10	45.000	0.15	0.15	0.95	0.14	0.14	5.0	5.0	8.9	1.27	3.49	3.96	8	7.11	292.80	296.00	294.38	296.53	296.60	299.36	ST18-ST15
25486-Storm																Number of lines: 17				Run Date: 7/6/2026		
NOTES:Intensity = 33.70 / (Inlet time + 4.20) ^ 0.60; Return period =Yrs. 100 ; Pipe travel time suppressed. ; c = cir e = ellip b = box																						

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)		Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)		
	(in)	(cfs)									(ft)											(K)	(ft)
1	12	3.36	293.90	296.56	1.00	0.79	4.27	0.28	296.84	0.757	7.000	294.00	296.61	1.00	0.79	4.27	0.28	296.90	0.757	0.757	0.053	1.00	0.28
2	12	2.70	294.00	296.90	1.00	0.79	3.44	0.18	297.08	0.491	67.000	294.70	297.23	1.00	0.79	3.44	0.18	297.41	0.491	0.491	0.329	0.50	0.09
3	12	1.77	294.70	297.32	1.00	0.79	2.25	0.08	297.40	0.210	30.000	294.90	297.38	1.00	0.79	2.25	0.08	297.46	0.210	0.210	0.063	1.05	0.08
4	12	1.77	294.90	297.46	1.00	0.79	2.25	0.08	297.54	0.210	87.000	295.40	297.65	1.00	0.79	2.25	0.08	297.73	0.210	0.210	0.183	1.50	0.12
5	12	0.85	295.50	297.77	1.00	0.79	1.08	0.02	297.78	0.049	75.000	296.10	297.80	1.00	0.79	1.08	0.02	297.82	0.049	0.049	0.036	1.00	0.02
6	12	0.48	294.00	296.90	1.00	0.79	0.62	0.01	296.90	0.016	28.000	295.10	296.90	1.00	0.79	0.61	0.01	296.91	0.016	0.016	0.004	1.00	0.01
7	6	0.17	294.50	296.90	0.50	0.20	0.87	0.01	296.91	0.078	18.000	295.00	296.91	0.50	0.20	0.87	0.01	296.92	0.078	0.078	0.014	1.00	0.01
8	6	0.34	296.00	297.77	0.50	0.20	1.73	0.05	297.81	0.313	13.000	296.20	297.81	0.50	0.20	1.73	0.05	297.85	0.313	0.313	0.041	1.00	0.05
9	15	9.32	290.00	291.16	1.16	1.19	7.84	0.95	292.11	0.000	18.000	290.90	292.07	1.17**	1.19	7.82	0.95	293.02	0.000	0.000	n/a	1.50	n/a
10	15	7.57	292.50	293.75	1.25*	1.23	6.17	0.59	294.34	1.171	5.000	292.30	293.81	1.25	1.23	6.17	0.59	294.40	1.170	1.171	0.059	0.96	0.57
11	12	3.78	292.20	294.38	1.00	0.79	4.81	0.36	294.74	0.958	33.000	292.72	294.69	1.00	0.79	4.81	0.36	295.05	0.958	0.958	0.316	1.46	0.52
12	12	3.21	292.72	295.22	1.00	0.79	4.09	0.26	295.48	0.693	55.000	293.10	295.60	1.00	0.79	4.09	0.26	295.86	0.692	0.692	0.381	1.00	0.26
13	6	0.56	293.70	294.06	0.36*	0.15	3.67	0.19	294.25	0.000	9.000	293.80	294.18	0.38**	0.16	3.48	0.19	294.37	0.000	0.000	n/a	1.00	0.19
14	6	1.02	294.00	294.50	0.50*	0.20	5.21	0.42	294.92	2.839	9.000	294.10	294.76	0.50	0.20	5.21	0.42	295.18	2.837	2.838	0.255	1.00	0.42
15	12	2.52	292.30	294.38	1.00	0.79	3.21	0.16	294.54	0.426	125.000	293.50	294.91	1.00	0.79	3.21	0.16	295.07	0.426	0.426	0.533	1.42	0.23
16	8	1.44	294.60	295.14	0.54	0.30	4.80	0.33	295.46	0.000	61.000	296.00	296.56	0.56**	0.31	4.59	0.33	296.89	0.000	0.000	n/a	1.00	n/a
17	8	1.27	292.80	294.38	0.67	0.30	3.65	0.21	294.58	0.949	45.000	296.00	296.53 j	0.53**	0.30	4.26	0.28	296.82	0.994	0.971	n/a	1.00	n/a
25486-Storm														Number of lines: 17					Run Date: 7/6/2026				
Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box																							

Part 8:

Maintenance and Inspection

CONTRACTOR, SUB-CONTRACTOR, AND TRAINED CONTRACTOR CERTIFICATION

Prior to the commencement of construction activities, 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 the implementation of the SWPPP, known as the *Trained Contractor*. The *Owner or Operator* shall ensure that at least one (1) *Trained Contractor* is on site on a daily basis when soil disturbance activities are being performed.

To be completed by each Contractor and Sub-Contractor:

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.

Name & Title (PRINT) _____

Signature: _____ Date: _____

Specific Elements of SWPPP that Contractor/Subcontractor is Responsible for:

Name & Title of Trained Contractor (PRINT):

Signature: _____ Date: _____

Company Name: _____

Address: _____

Phone: _____

Project Site Location/Address: _____

I. PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____
Permit No. _____ **Date of Authorization** _____
Name of Operator _____
Prime Contractor _____

a. Preamble to Site Assessment and Inspections

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified professional¹ conduct an assessment of the site prior to the commencement of construction² and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements.

When construction starts, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater (Construction Duration Inspections). The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request. The Operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis (Monthly Summary Report).

The operator shall also prepare a written summary of compliance with this general permit at a minimum frequency of every three months (Operator's Compliance Response Form), while coverage exists. The summary should address the status of achieving each component of the SWPPP.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization³ using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 "Qualified Professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control).

2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

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

b. Operators Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly 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. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Name (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

c. Qualified Professional's Credentials & Certification

"I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the following Pre-construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

Name (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

d. Pre-construction Site Assessment Checklist

(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

- ☐ ☐ ☐ Has a Notice of Intent been filed with the NYS Department of Conservation?
- ☐ ☐ ☐ Is the SWPPP on-site? Where? _____
- ☐ ☐ ☐ Is the Plan current? What is the latest revision date? _____
- ☐ ☐ ☐ Is a copy of the NOI (with brief description) onsite? Where? _____
- ☐ ☐ ☐ Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

- ☐ ☐ ☐ Are construction limits clearly flagged or fenced?
- ☐ ☐ ☐ Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
- ☐ ☐ ☐ Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

- ☐ ☐ ☐ Clean stormwater runoff has been diverted from areas to be disturbed.
- ☐ ☐ ☐ Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- ☐ ☐ ☐ Appropriate practices to protect on-site or downstream surface water are installed.
- ☐ ☐ ☐ Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Entrance

Yes No NA

- ☐ ☐ ☐ A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- ☐ ☐ ☐ Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- ☐ ☐ ☐ Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Perimeter Sediment Controls

Yes No NA

- ☐ ☐ ☐ Silt fence material and installation comply with the standard drawing and specifications.
- ☐ ☐ ☐ Silt fences are installed at appropriate spacing intervals
- ☐ ☐ ☐ Sediment/detention basin was installed as first land disturbing activity.
- ☐ ☐ ☐ Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

- ☐ ☐ ☐ The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
- ☐ ☐ ☐ The plan is contained in the SWPPP on page _____
- ☐ ☐ ☐ Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

- (1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- (2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- (3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- (4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- (5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- (6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)

Date of Inspection

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality**Yes No NA**

- ☐ ☐ ☐ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☐ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☐ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☐ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

- ☐ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☐ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☐ ☐ Is construction impacting the adjacent property?
- ☐ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

- ☐ ☐ ☐ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☐ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☐ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☐ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

- ☐ ☐ ☐ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☐ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☐ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☐ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

Yes No NA

- ☐ ☐ ☐ Installed per plan.
- ☐ ☐ ☐ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☐ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

- ☐ ☐ ☐ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☐ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☐ Sediment-laden runoff directed to sediment trapping structure

Runoff Control Practices (continued)

4. Stone Check Dam

Yes No NA

- ☐ ☐ ☐ Is channel stable? (flow is not eroding soil underneath or around the structure).
☐ ☐ ☐ Check is in good condition (rocks in place and no permanent pools behind the structure).
☐ ☐ ☐ Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

- ☐ ☐ ☐ Installed per plan.
☐ ☐ ☐ Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

- ☐ ☐ ☐ Stockpiles are stabilized with vegetation and/or mulch.
☐ ☐ ☐ Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

- ☐ ☐ ☐ Temporary seedings and mulch have been applied to idle areas.
☐ ☐ ☐ 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

- ☐ ☐ ☐ Stone is clean enough to effectively remove mud from vehicles.
☐ ☐ ☐ Installed per standards and specifications?
☐ ☐ ☐ Does all traffic use the stabilized entrance to enter and leave site?
☐ ☐ ☐ Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

- ☐ ☐ ☐ Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
☐ ☐ ☐ Joints constructed by wrapping the two ends together for continuous support.
☐ ☐ ☐ Fabric buried 6 inches minimum.
☐ ☐ ☐ Posts are stable, fabric is tight and without rips or frayed areas.
 Sediment accumulation is ____% of design capacity.

Sediment Control Practices (continued)**3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)****Yes No NA**

- ☐ ☐ ☐ Installed concrete blocks lengthwise so open ends face outward, not upward.
- ☐ ☐ ☐ Placed wire screen between No. 3 crushed stone and concrete blocks.
- ☐ ☐ ☐ Drainage area is 1 acre or less.
- ☐ ☐ ☐ Excavated area is 900 cubic feet.
- ☐ ☐ ☐ Excavated side slopes should be 2:1.
- ☐ ☐ ☐ 2" x 4" frame is constructed and structurally sound.
- ☐ ☐ ☐ Posts 3-foot maximum spacing between posts.
- ☐ ☐ ☐ Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
- ☐ ☐ ☐ Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation ____% of design capacity.

4. Temporary Sediment Trap**Yes No NA**

- ☐ ☐ ☐ Outlet structure is constructed per the approved plan or drawing.
- ☐ ☐ ☐ Geotextile fabric has been placed beneath rock fill.
- Sediment accumulation is ____% of design capacity.

5. Temporary Sediment Basin**Yes No NA**

- ☐ ☐ ☐ Basin and outlet structure constructed per the approved plan.
- ☐ ☐ ☐ Basin side slopes are stabilized with seed/mulch.
- ☐ ☐ ☐ Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
- Sediment accumulation is ____% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

b. Modifications to the SWPPP (To be completed as described below)

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
 - a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
 - b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

III. Monthly Summary of Site Inspection Activities

Name of Permitted Facility:	Today's Date:	Reporting Month:
Location:	Permit Identification #:	
Name and Telephone Number of Site Inspector:		

[illegible]

Owner/Operator Certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly 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 Law."

Signature of Permittee or Duly Authorized Representative

Name of Permittee or Duly Authorized Representative	Date
---	------

Duly authorized representatives must have written authorization, submitted to DEC, to sign any permit documents.

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Department of
Environmental
Conservation

MAINTENANCE GUIDANCE

Stormwater Management Practices

March 31, 2017



FINAL

Table of Contents

Section 1. Introduction	3
1.1. Stormwater Management Practice (SMP) Groups	3
1.2. Maintenance Hierarchy	4
1.3. Using the Remainder of this Chapter	6
Section 2. Level 1 Inspections	6
2.1. How to Use this Section	6
2.2. General Guidance for Level 1 Inspections	6
2.3. Rainwater Harvesting – Level 1 Inspections	8
2.4. Disconnection and Sheetflow	11
2.5. Swales	15
2.6. Tree Planting	21
2.7. Bioretention	23
2.8. Green Roof	30
2.9. Permeable Pavement	32
2.10. Ponds and Wetlands	35
2.11. Infiltration	41
2.12. Sand and Organic Filters	47
Section 3. Level 2 and 3 Inspections	52
3.1. How to Use this Section	52
3.2. General Guidance for Level 2 and 3 Inspections	53
3.3. Rainwater Harvesting – Level 2 Inspections and Triggers for Level 3	55
3.4. Disconnection & Sheet Flow – Level 2 Inspections and Triggers for Level 3	56
3.5. Swales – Level 2 Inspections and Triggers for Level 3	57
3.6. Tree Planting – Level 2 Inspections and Triggers for Level 3	59
3.7. Bioretention – Level 2 Inspections and Triggers for Level 3	59
3.8. Green Roof – Level 2 Inspections and Triggers for Level 3	61
3.9. Permeable Pavement – Level 2 Inspections and Triggers for Level 3	62
3.10. Ponds & Wetlands – Level 2 Inspections and Triggers for Level 3	64
3.11. Infiltration – Level 2 Inspections and Triggers for Level 3	66
3.12. Sand and Organic Filters – Level 2 Inspections and Triggers for Level 3	67
Section 4. Diagnostics and Maintenance Measures	69
4.1. About this Section	69
4.2. Contributing Drainage Area – Pollutant Sources	70
4.3. Physical Obstructions	72
4.4. Erosion	74
4.5. Departure from Design Dimensions	75

4.6. Improper Flow Paths.....	76
4.7. Sediment Buildup.....	79
4.8. Clogging.....	81
4.9. Vegetation.....	85
4.10. Embankment and Overflow Condition.....	87
4.11. Structural Damage.....	89
4.12. Pool Stability.....	90
4.13. Pool Quality.....	91
Section 5. Planning for Stormwater Maintenance.....	92
5.1. Program Models for Stormwater Maintenance.....	92
5.2. Inspection and Maintenance Checklists and Documentation.....	94
5.3. Budgeting for Maintenance.....	94
5.4. Planning for “Non-Routine” Maintenance.....	98

Section 1. Introduction

1.1. Stormwater Management Practice (SMP) Groups

Stormwater management has become an important function for municipalities to address the quality of local water resources and to adhere to state standards. Increasingly, stormwater management practices (SMPs) are constructed as part of new development or redevelopment projects as retrofits to existing infrastructure and/or as part of local watershed restoration plan efforts.

While SMPs are proliferating, municipalities are charged with a certain level of implementation and oversight. Whether this is a new function for a municipality or an expansion of existing programs, it is important for these local programs to have some degree of guidance to successfully meet the challenge. One important area where guidance has been lacking is how to properly operate and maintain the wide range of SMPs that are constructed. This chapter was developed to address this need. It is widely understood that SMPs will not function properly to protect water resources without attention to operation and maintenance (O&M), and that O&M tasks and responsibilities must be identified and assumed by various stakeholders.

The chapter is structured around a hierarchy concept where O&M responsibilities are addressed by SMP owners/property managers, municipal staff, landscape contractors and professionals with knowledge in stormwater management (Qualified Professional). The hierarchy approach, explained in more detail below in Section 1.2, strives for a cost-efficient way to ensure long-term performance of SMPs.

The maintenance procedures described in this chapter are applied to ten separate SMP groups (**Table 1.1**). These same ten groups are used to separate maintenance inspection guidance, costs, and other guidance in the chapter.

Table 1.1 Practices Discussed in this Chapter, by Group

SMP Group	Practices Included
Rainwater Harvesting	• Rain Barrel • Cistern
Disconnection and Sheetflow	• Rooftop Disconnection • Sheetflow to Filter Strip • Sheetflow to Riparian Buffers
Swales	• Vegetated Swale • Wet Swale
Tree Planting	• Tree Planting
Bioretention	• Bioretention Cell • Dry Swale • Rain Garden • Stormwater Planters • Tree Pits
Green Roofs	• Green Roofs
Permeable Pavements	• Permeable Pavers • Porous Asphalt/Concrete
Ponds and Wetlands	• Wet Pond Design Options • Stormwater Wetland Design Options
Infiltration	• Infiltration Trench • Infiltration Basin • Dry Well
Sand and Organic Filters	• Surface Sand Filters • Underground Sand Filters • Underground Organic Filters

1.2. Maintenance Hierarchy

SMPs require inspections and maintenance to identify small problems before they become more serious and expensive to repair. For example, removing a small amount of sediment from a filtering medium or permeable pavement surface is much less expensive than replacing a surface that has already become clogged. However, it can be cost prohibitive for most communities or SMP owners to hire highly trained staff or contractors to inspect these practices or to carry out the actual maintenance tasks. This can be especially true with the advent of “micro-scale” Green Infrastructure practices, which may be distributed across many individual public and private properties, and where the absolute number of SMPs within a municipality may exceed local government inspection and maintenance capabilities.

Many SMP maintenance problems start out as fairly small, easily rectified issues as long as they are detected early enough through an inspection. For these issues, property owners or managers can likely take care of the issue in an expedient and cost-effective manner.

However, at some point, property owners or managers will encounter an issue where diagnosing the problem and knowing the appropriate remedy will exceed their technical capabilities. At this point, an individual with training in SMP inspection, operation and maintenance, such as a municipal inspector or landscape contractor, may have to be called in for assistance.

Similarly, some problems escalate to the point where a Qualified Professional (i.e. professional engineer or landscape architect) is needed to bring the SMP back to a good functioning condition. The Qualified Professional may need to bring in other experts to assess problems with the SMP. For instance, they may call in a horticulturalist to assess problems with the planting plan.



Figure 1.1 The SMP Maintenance Hierarchy Pyramid

Acknowledging this step-wise approach to SMP inspection and maintenance, the SMP Maintenance Hierarchy concept was developed. The concept uses a combination of skill levels (**Figure 1.1**) as explained in more detail below.

Level 1: Property Owners and Managers, Interns, etc.

This category includes property owners, property managers, or HOA representatives, for privately owned SMPs. For municipally owned SMPs, this could include municipal maintenance staff or interns, and volunteers. These individuals would typically have no or only very limited training in stormwater maintenance and inspection but can use available guidance to quickly identify and rectify common and simple issues with SMP performance. This level completes routine inspections and maintenance activities. For most SMPs, the majority of inspection and maintenance activities can be conducted at this skill level, thus Level 1 forms the base of the Maintenance Hierarchy pyramid. Many well-functioning SMPs can be adequately maintained for long periods of time using Level 1 capabilities.

Although many issues can be addressed at Level 1, these inspectors and maintainers need a relief valve when the SMP problems become harder to diagnose and/or the remedies require a higher level of resources and expertise. Such issues are referred to in this chapter as “kick-outs to Level 2.” For instance, an SMP may have a minor amount of sediment that has accumulated at inlets or on the practice bottom. A Level 1 person may be able to take care of this with a flat shovel and wheel barrow. However, a Level 2 inspection would be triggered if the sediment is deep, widespread, keeps recurring, and/or requires more sophisticated equipment to remove.

Level 2: Trained Municipal Staff

This level of inspection and maintenance is conducted primarily by municipal employees or landscape contractors who have completed training on SMP, inspection, operation and maintenance. Level 2 inspections can take place in response to two circumstances:

1. As part of an ongoing, routine municipal inspection program whereby SMPs are visited on a rotating basis at a frequency established by the local program, or

2. In response to a “kick-out” from a Level 1 inspector based on a specific problem or problems.

Circumstance #2 obviously will require coordination and communication between the Level 1 and Level 2 inspectors, with documentation and background provided by the Level 1 inspector. This is an essential part of making the hierarchy approach successful. In the example above, the Level 2 inspector can better diagnose the sources of the sediment, whether the sediment is affecting performance of the SMP, and the specific tasks needed to remove the sediment and abate the source.

As with kick-outs from Level 1 to Level 2, the same can exist from Level 2 to Level 3. It may be that the Level 2 inspector encounters a problem where a Qualified Professional is needed to re-design certain components of the SMP, and a qualified contractor is needed to undertake a more serious repair. This is when Level 3 is activated.

Level 3: Qualified Professionals

Qualified professionals include professional engineers and landscape architects, who can revisit design issues associated with chronic or serious problems. For repair and maintenance of the SMPs at this level, individuals with specific skills and certifications, such as a certified plumber who has experience working with rainwater harvesting practices or a horticulturalist with knowledge on proper plantings may need to be called in by the Qualified Professional. Level 3 inspection or maintenance is triggered in response to specific problems identified during a Level 2 inspection.

Continuing with the example above, the Level 2 inspector identifies that the sediment is accumulating in the SMP because of the lack of pre-treatment or that the practice is not sized properly for its drainage area. The Level 2 inspector at this point should consult a Qualified Professional (Level 3) who can go back to the original or as-built plan and develop workable solutions.

Table 1.2 further describes how maintenance and inspection activities differ among the three levels of the SMP Maintenance Hierarchy.

Table 1.2 Maintenance/Inspection Hierarchy Levels			
	Level 1: Owners and Untrained Staff	Level 2: Trained Municipal Staff	Level 3: Qualified Professionals
Qualifications/ Training of Inspectors	No special training, but person is provided educational materials	On-the-job training and/or short workshops Define adequate training or provide examples	Professional License such as a PE or RLA
Frequency of Inspection	At least annually	Routine as determined by the local program OR as kick-out from Level 1 inspection	Only as needed from Level 2 inspection
Inspection Guidance	Checklists are included for each practice group in Section 2 of this chapter and in Appendix A .	Guidance for the inspection is included in Section 3 , and checklists are included in Appendix B .	Section 4 includes guidance for diagnosing typical problems.
Typical Maintenance Activities	Routine mowing. Trash removal. Plant care and upkeep. Mulching as needed. Removal of small amounts of sediment from pretreatment areas of the practice.	Removal of larger amounts of sediment. Structural damage repair. Minor regrading and scarification of soil surface to restore permeability.	Redesign an improperly functioning practice. Includes re-grading of the contributing drainage area, replacing soil media and plantings (new planting plan), or modifying conveyance structures.
Triggers for Inspection or Maintenance by this Level	Regular inspection (no trigger)	Level 1 Inspection Sheets (Section 2) describe triggers that warrant a Level 2 Inspection.	Level 2 Inspection Guidance (Section 3) describes triggers that warrant a Level 3 Inspection.

1.3. Using the Remainder of this Chapter

This chapter provides guidance for maintaining SMPs, including inspection, maintenance activities, and maintenance planning. The chapter includes four sections as follows:

- **Section 2** outlines Level 1 inspection and maintenance procedures in the form of visual checklists. This includes guidance for inspection of each of the 10 SMP groups/categories included in this chapter, as well as specific kick-outs for Level 2.
- **Section 3** provides guidance for Level 2 inspections as to observed conditions, remedies, and triggers for Level 3.
- **Section 4** is most relevant to Level 3 and includes diagnostic measures for specific problems, as well as guidance for performing repair activities.
- **Section 5** provides an overview of planning for maintenance, including techniques for estimating maintenance costs and elements of a maintenance plan.

Section 2. Level 1 Inspections

2.1. How to Use this Section

Section 2 provides guidance for Level 1 inspections of 10 groups of stormwater management practices (SMPs). See Section 1 of this chapter for an explanation of Level 1 in the Maintenance Hierarchy.

- **Section 2.2** provides general guidance for Level 1 inspections.
- **Sections 2.3 through 2.12** provide detailed Level 1 inspection guidance and inspection forms for each of the 10 practice categories:
 - 2.3 Rainwater Harvesting
 - 2.4 Disconnection and Sheetflow
 - 2.5 Swales
 - 2.6 Tree Planting
 - 2.7 Bioretention
 - 2.8 Green Roofs
 - 2.9 Permeable Pavement
 - 2.10 Ponds and Wetlands
 - 2.11 Infiltration
 - 2.12 Sand and Organic Filters

2.2. General Guidance for Level 1 Inspections

Regardless of which practice you are inspecting, some key procedures and equipment are necessary. Read through this guidance before going on an inspection, and use the specific guidance in **Sections 2.3 through 2.12** for the particular practice type you are inspecting. The Level 1 Inspection can be completed with minimal previous training. Typical Level 1 inspectors may include a property owner or manager (for private SMPs) or perhaps an intern or maintenance or landscape crew members in the case of a publicly owned practice. Level 1 inspections are the most frequent inspections. They are designed to identify key maintenance issues before they become more serious and to help keep up with routine maintenance tasks.

When to Conduct a Level 1 Inspection

The Level 1 Inspection should be conducted at least annually for all practices and is often supplemented with additional visits after large storms, winter salting and sanding, or other seasonal changes. In addition, it is recommended that inspections take place more frequently during the first few years after installation of an SMP. Many issues can be identified and corrected during this early period so that they do not lead to larger problems in subsequent years. Plant establishment and health is one of these key issues. Once the SMP is stable and seems to be functioning properly, the inspections can become less frequent.

What to Take into the Field

The Level 1 Inspection is fairly simple, and it is assumed that very little measurement will be needed. However, the inspector should take pictures to document findings and should also keep a record of the inspections. The list of needs for the Level 1 Inspection includes the following:

1. Safety vest (if SMP is located in an area near traffic)
2. Notes or records from past inspections
3. Digital camera or phone
4. Clipboard and pencils (if using paper forms), or Tablet or smartphone if using digital forms
5. Bug spray (if needed)
6. Sun block (if needed)
7. Tape measure (optional, to measure pipe sizes and SMP dimensions)
8. Letter of permission to access property if the inspector is from an outside agency (e.g., summer intern working for the municipality)
9. Site Plan showing SMPs, Planting Plan (includes planting/seed mixes) and details
10. Engineers scale
11. Flagging/stakes and waterproof marker (to mark problem areas that need to be visited again)

Checklist and Follow-Up Actions

The Level 1 Inspection checklists included in **Sections 2.3 through 2.12** describe follow-up actions for each observed condition (See **Figure 2.2.1** for an example). A Level 1 Inspection Table is available for each component or key area of the particular SMP group. Use as follows:

- Check the box in the LEFT column if the problem is present at the site.
- Check the appropriate follow-up actions in the RIGHT column, or add your own as needed to fix the problem.
- DOCUMENT all your actions. Keep copies of the Level 1 inspection tables, plus notes, photos, or other documentation of corrective measures to fix problems. Record dates of actions and any follow-up inspections. This will be important for communicating with Level 2 inspectors and/or the local stormwater program.
- Activate a Level 2 Inspection (**Section 3**) as guided by the table (shown in blue cells): These blue cells identify conditions when a more detailed inspection will be needed to further diagnose problems. As the problem becomes more severe, it will be necessary to activate a Level 2 inspection. Consult the local stormwater program authority for the most appropriate Level 2 inspection option.

Infiltration Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		SMP Owner		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		Longitude	
Party Responsible for Maintenance	System Type			Type of Site
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State	
Inspection Date			Inspection Time	
Inspector				
Date of Last Inspection				

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and straw areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to get vegetation established. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		Follow-Up Actions
		☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
☐ For Dry Wells: Leaves, sticks, or other debris in gutters and downspouts		☐ Remove all debris by hand. ☐ Other:
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

IN Inlets

Look for all the places where water flows into the Infiltration practice.

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets are collecting grit and debris or grass/weeds are growing. Some water may not be getting into the Infiltration practice.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Infiltration practice. ☐ Dispose of all material properly in an area where it will not re-enter the practice. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Infiltration practice.
☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Infiltration practice.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ For grass-covered Infiltration practices: grass has grown very tall, <i>Photo credit: Stormwater Maintenance, LLC</i>	☐ Mow infiltration area at least twice per year. ☐ Other:
 ☐ For grass-covered Infiltration practices: sparse vegetation cover or bare spots	☐ Add topsoil (as needed), grass seed, straw, and water during the growing season to re-establish consistent grass coverage. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sparse vegetation cover can be a sign that the infiltration area is not infiltrating at the proper rate and water is standing too long after a storm. The surface may be saturated or squishy, and the conditions do not enable grass to grow. This situation should be evaluated by a Level 2 Inspection and likely corrected by a qualified contractor.
☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the surface.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Infiltration practice. ☐ If removing the material creates a hole or low area, rake the surface smooth and level. ☐ Remove trash, debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the surface of the Infiltration area.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion on the surface; water seems to be carving out rills as it flows across the surface of the Infiltration area or sinkholes are forming in certain areas.	☐ For minor areas of erosion, try filling the eroded areas with clean topsoil, sand, or stone (whatever the existing cover is). ☐ If the problem recurs, you may have to use larger stone (e.g., river cobble) to fill in problem areas. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the infiltration area. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water but a collapse or sinking of the surface (e.g., "sinkhole") due to some underground problem.
 ☐ Observation well is damaged or cap is missing	☐ Kick-Out to Level 2 Inspection: Requires replacing pipes or caps.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ Water still visible in the observation well more than 72 hours after a rain storm. The Infiltration practice does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

IN Outlets

Locate and inspect all outlets.

Problem (Check if Present)	Follow-Up Actions
 ☐ Outlet obstructed with sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the infiltration area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely obstructed; there is too much material to remove by hand or with simple hand tools.
☐ Rills or gullies are forming at outlet.	☐ For minor rills, fill in with soil, compact, and seed and straw to establish vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills are more than 2" to 3" deep and require more than just hand raking and re-seeding.

Additional Notes:

Inspector: _____

Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____

Date: _____

Infiltration Stormwater Management Practices Level 2 Inspection Checklist

SMP ID #		SMP Owner		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		Longitude	
Party Responsible for Maintenance	System Type		Type of Site	
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State	
Inspection Date			Inspection Time	
Inspector				
Date of Last Inspection				

Level 2 Inspection: INFILTRATION

Recommended Repairs

Triggers for Level 3 Inspection

Observed Condition: Water Stands on Surface for More than 72 Hours after Storm

☐ Condition 1: Small pockets of standing water

For infiltration basins with soil, use a soil probe or auger to examine the soil profile. For gravel infiltration trenches or basins, use a shovel to dig into the gravel layer where the problem is occurring. If isolated areas have accumulated grit, fine silt, or vegetative debris or have bad soil or clogged gravel, try removing and replacing with clean material. If the practice is supposed to have grass cover, it will likely be necessary to replant once the problem is resolved.

☐ Condition 2: Standing water is widespread or covers entire surface

Look in the observation well (if it exists) and use a tape measure to estimate the depth of water standing in the soil or gravel. Requires diagnosis and resolution of problem:

- Too much sediment/grit washing in from drainage area?
- Too much ponding depth?
- Improper infiltration media?
- Underlying soil not suitable for infiltration?

As above, the resolution will likely require replanting and re-establishment of good grass cover if this is part of the design.

- Infiltration media is clogged and problem cannot be diagnosed from Level 2 inspection.
- Level 2 inspection identifies problem, but it cannot be resolved easily or it is associated with the original design of the practice.

☐ Level 3 Inspection necessary

Observed Condition: Severe erosion of infiltration bed, inlets, or around outlets

☐ Condition 1: Erosion at inlets

The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a less erosive lining and/or extending the lining further down to where inlet slopes meet the infiltration surface. If problem persists, analysis by a Qualified Professional is warranted.

☐ Condition 2: Erosion of infiltration bed

This is often caused by "preferential flow paths" along the surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads).

- Erosion (rills, gullies) is more than 12 inches deep
- The issue is not caused by moving water but some sort of subsurface defect, which may manifest as a sinkhole or linear depression and be associated with problems with the underlying stone or soil.

☐ Level 3 Inspection necessary

Notes:

Inspector: _____

Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____

Date: _____

Infiltration Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (IN1), Inlets (IN2), Infiltration Area (IN3), and Outlets (IN4). The purpose of an infiltration practice is to temporarily store collected runoff so that it can percolate into the underlying soil. Using this practice is dependent on having a good on-site soil that is capable of infiltrating the amount of runoff generated by the drainage area. The Level 1 Inspection should be conducted at least twice a year, especially in early spring, to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow.

IN 1. Drainage Area

Description: The drainage area conveys runoff to and is uphill from the Infiltration cell. When it rains, water runs off and flows to the Infiltration cell and soaks into its underlying layers.

Instruction: Look for both pervious and impervious areas that are uphill from the Infiltration cell. Consult **Table 11.1.1** below.

Table 11.1.1 IN Drainage Area

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and straw areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to get vegetation established. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
☐ For Dry Wells: Leaves, sticks, or other debris in gutters and downspouts		☐ Remove all debris by hand. ☐ Other:
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

IN 2. Inlets

Description: The inlets to an Infiltration practice are where water flows into the cell. Depending on the design, inlets can be:

- *Curb cuts or openings* in a parking lot or roadway
- *Downspouts* that deliver runoff directly from a rooftop to the Infiltration practice
- *Pipes or ditches* that carry water into the Infiltration practice from the drainage area
- *Flow directly over the land surface* (known as “sheetflow”), sometimes across a strip of rock or stone

Instruction: Look for all the places where water flows into the Infiltration practice. Consult **Table 11.1.2** below for possible problems.

Table 11.1.2 IN Inlets

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets are collecting grit and debris or grass/weeds are growing. Some water may not be getting into the Infiltration practice.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Infiltration practice. ☐ Dispose of all material properly in an area where it will not re-enter the practice. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Infiltration practice.
☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Infiltration practice.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

IN 3. Infiltration Area

Description: The infiltration area is the area that collects water and allows it to seep into the underlying soil. Some infiltration areas also have a vertical perforated pipe called an *observation well*, which is used to view the water level in the infiltration practice after a storm. If the infiltration practice is working properly, the water in the observation well should be completely drained down within 2 to 3 days of a storm. Depending on the design, the infiltration area can be covered with grass, gravel, or stone.

Instruction: Examine the surface of the infiltration area and the observation well. Consult **Table 11.1.3** below for possible problems. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Table 11.1.3 IN Infiltration Area

Problem (Check if Present)	Follow-Up Actions
 ☐ For grass-covered Infiltration practices: grass has grown very tall, (Photo credit: Stormwater Maintenance, LLC)	☐ Mow infiltration area at least twice per year. ☐ Other:
 ☐ For grass-covered Infiltration practices: sparse vegetation cover or bare spots	☐ Add topsoil (as needed), grass seed, straw, and water during the growing season to re-establish consistent grass coverage. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sparse vegetation cover can be a sign that the infiltration area is not infiltrating at the proper rate and water is standing too long after a storm. The surface may be saturated or squishy, and the conditions do not enable grass to grow. This situation should be evaluated by a Level 2 Inspection and likely corrected by a qualified contractor.
☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the surface.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Infiltration practice. ☐ If removing the material creates a hole or low area, rake the surface smooth and level. ☐ Remove trash, debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the surface of the Infiltration area.

Table 11.1.3 IN Infiltration Area

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion on the surface; water seems to be carving out rills as it flows across the surface of the Infiltration area or sinkholes are forming in certain areas.	☐ For minor areas of erosion, try filling the eroded areas with clean topsoil, sand, or stone (whatever the existing cover is). ☐ If the problem recurs, you may have to use larger stone (e.g., river cobble) to fill in problem areas. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the infiltration area. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water but a collapse or sinking of the surface (e.g., "sinkhole") due to some underground problem.
 ☐ Observation well is damaged or cap is missing	☐ Kick-Out to Level 2 Inspection: Requires replacing pipes or caps.
 ☐ Water still visible in the observation well more than 72 hours after a rain storm. The Infiltration practice does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

IN 4. Outlets

Description: Outlets are where water exits the surface of the infiltration area during larger storms when the underground infiltration reservoir fills up and the excess water needs somewhere to go. Note that not all infiltration practices will have an identifiable outlet if the design is for all the water to infiltrate into the ground. Outlets may be a berm, stone weir, or pipe.

Instruction: Locate and inspect all outlets. Consult **Table 2.11.4** below for possible problems.

Table 2.11.4 IN Outlets

Problem (Check if Present)	Follow-Up Actions
 ☐ Outlet obstructed with sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the infiltration area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely obstructed; there is too much material to remove by hand or with simple hand tools.
☐ Rills or gullies are forming at outlet.	☐ For minor rills, fill in with soil, compact, and seed and straw to establish vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills are more than 2" to 3" deep and require more than just hand raking and re-seeding.

3.11. Infiltration – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Infiltration practices are:

- Standing water, clogged media
- Severe erosion of infiltration area, inlets, or around outlets
- Significant sediment accumulation, indicating an uncontrolled source of sediment

Table 3.11.1 Level Inspection: INFILTRATION

Recommended Repairs	Triggers for Level 3 Inspection
<i>Observed Condition: Water Stands on Surface for More than 72 Hours after Storm</i>	
Condition 1: Small pockets of standing water For infiltration basins with soil, use a soil probe or auger to examine the soil profile. For gravel infiltration trenches or basins, use a shovel to dig into the gravel layer where the problem is occurring. If isolated areas have accumulated grit, fine silt, or vegetative debris or have bad soil or clogged gravel, try removing and replacing with clean material. If the practice is supposed to have grass cover, it will likely be necessary to replant once the problem is resolved. Condition 2: Standing water is widespread or covers entire surface Look in the observation well (if it exists) and use a tape measure to estimate the depth of water standing in the soil or gravel. Requires diagnosis and resolution of problem: • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper infiltration media? • Underlying soil not suitable for infiltration? As above, the resolution will likely require replanting and re-establishment of good grass cover if this is part of the design.	• Infiltration media is clogged and problem cannot be diagnosed from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or it is associated with the original design of the practice.
<i>Observed Condition: Severe erosion of infiltration bed, inlets, or around outlets</i>	
Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a less erosive lining and/or extending the lining further down to where inlet slopes meet the infiltration surface. If problem persists, analysis by a Qualified Professional is warranted. Condition 2: Erosion of infiltration bed This is often caused by “preferential flow paths” along the surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads).	• Erosion (rills, gullies) is more than 12 inches deep • The issue is not caused by moving water but some sort of subsurface defect, which may manifest as a sinkhole or linear depression and be associated with problems with the underlying stone or soil.

Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment

Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep

Sediment source may be from a one-time or isolated event. For practices with soil cover, remove accumulated sediment and top 2 to 3 inches of soil; replace with clean material. Check drainage area for any ongoing sources of sediment.

Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more

This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of infiltration practice) or another chronic source of sediment in the drainage area. For infiltration basins with soil, augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long the problem does not recur.

- Trenches or dry wells with stone or gravel at surface may need to be cleaned out with a vacuum truck because the process of removing the top layer of stone may cause fine silt to drop further down.
- More than 2 inches of accumulated sediment cover 25% or more of the infiltration surface area.
- “Hard pan” of thin, crusty layer covers majority of Infiltration surface area and seems to be impeding flow of water down through the soil media.
- New sources of sediment seem to be accumulating with each significant rainfall event.

3.12. Sand and Organic Filters – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Sand and Organic Filters are:

- Standing water, clogged filter media
- Need to pump out sedimentation chamber
- Response to fuel or other spills that make it into the filter

Table 3.12.1 Level 2 Inspection: SAND AND ORGANIC FILTERS

Recommended Repairs

Triggers for Level 3 Inspection

Observed Condition: Water Stands on Surface for More than 72 Hours after Storm

Condition 1: Small pockets of standing water

Use a soil probe or auger to examine the sand or filter profile. If isolated areas have accumulated grit, fine silt, vegetative debris, oily sludge or bad sand media, try scraping off top 3 inches of media and replacing with clean, coarse construction sand.

Condition 2: Standing water is widespread or covers entire surface

Look in the underdrain cleanout (if present) and use a tape measure to estimate the depth of water standing in the sand layer. Requires diagnosis and resolution of problem:

- Clogged underdrain
- Filter fabric between the sand layer and underdrain gravel OR on top of the sand filter layer (usually held in place by a thin layer of gravel)
- Too much sediment/grit/vegetative debris/oily sludge washing in from drainage area
- Too much ponding depth
- Improper sand media

- Sand or organic media is clogged, but problem was not evident from Level 2 inspection.
- Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice.
- The problem seems to be filter fabric placement, but this is specified in the original design.
- The entire filter media layer or filter cartridges need to be replaced.
- The problem is associated with improper configuration of underdrain pipes or outlet structures.

StormTech Isolator Row® Plus

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance.

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, DC-780, SC-800, MC-3500, MC-4500 or MC-7200 models, that has a continuous layer of ADS Plus fabric between the foundation stone and the chambers and is connected to a closely located manhole for easy access. The chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers allow stormwater to flow out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS geotextile fabric is placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting.



The Isolator Row Plus is designed to capture the “first flush” runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

The Isolator Row Plus FLAMP™ (patent pending) is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber’s end. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

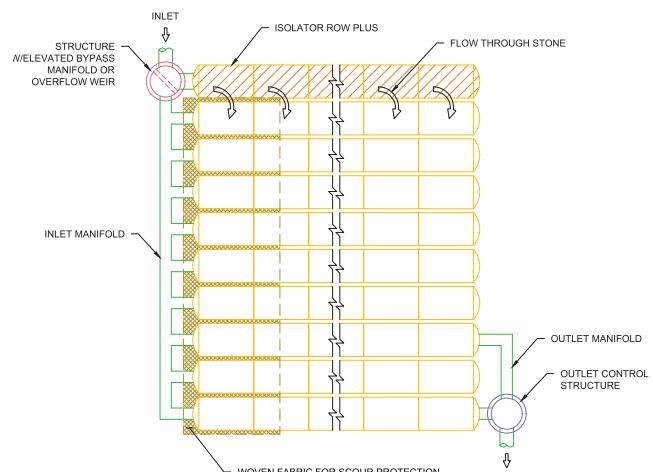
Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

StormTech Isolator Row Plus Schematic (not to scale)



The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

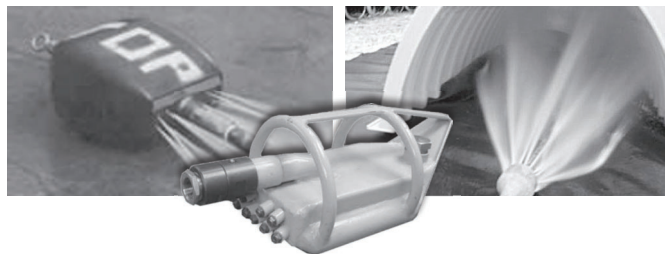
If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row Plus, clean-out should be performed.

Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in

length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200’ (61 m). The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.

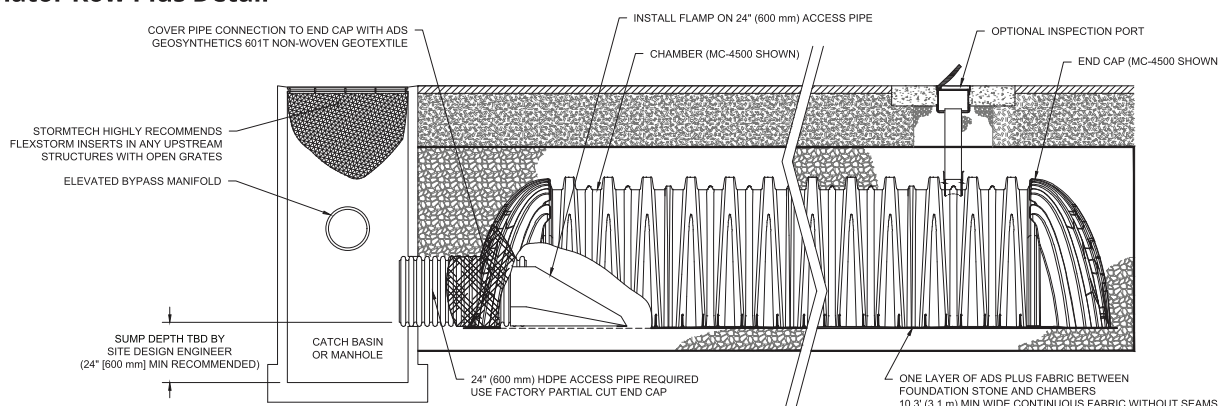


Examples of culvert cleaning nozzles appropriate for Isolator Row PLUS maintenance. (These are not StormTech products.)

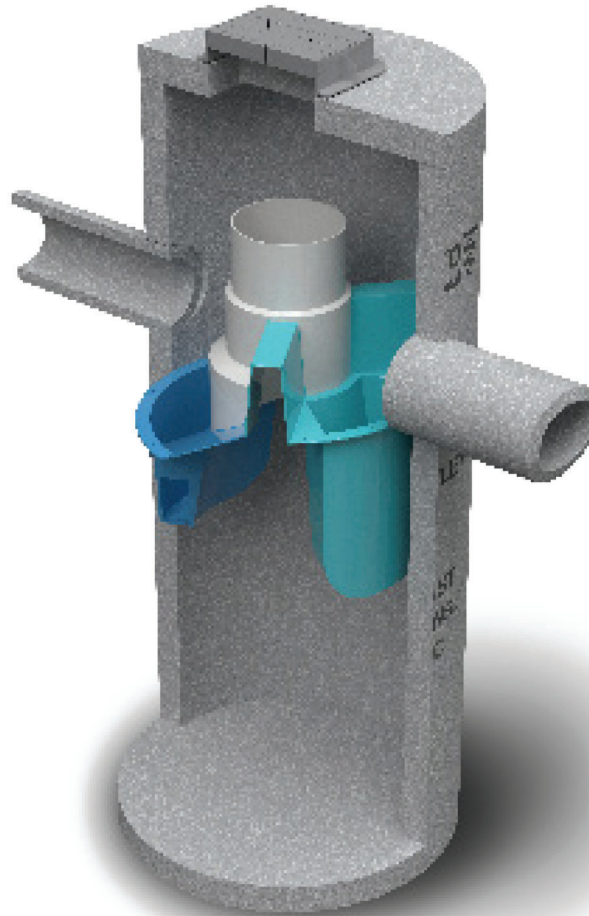
A Flamp (fared end ramp) is attached to the inlet pipe on the inside of the chamber end cap to provide a smooth transition from pipe invert to fabric chamber bottom. It is configured to improve chamber function performance over time by distributing sediment and debris that would otherwise collect at the inlet. It also serves to improve the fluid and solid flow back into the inlet pipe during maintenance and cleaning, and to guide cleaning and inspection equipment back into the inlet pipe when complete.



Isolator Row Plus Detail



Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500, MC-4500 and MC-7200 chamber models and is not required over the entire Isolator Row PLUS.



Operation and Maintenance Manual

First Defense[®] High Capacity and First Defense[®] Optimum

Vortex Separator for Stormwater Treatment

Table of Contents

3	FIRST DEFENSE® BY HYDRO INTERNATIONAL - INTRODUCTION - OPERATION - POLLUTANT CAPTURE AND RETENTION
4	MODEL SIZES & CONFIGURATIONS - FIRST DEFENSE® COMPONENTS
5	MAINTENANCE - OVERVIEW - MAINTENANCE EQUIPMENT CONSIDERATIONS - DETERMINING YOUR MAINTENANCE SCHEDULE
6	MAINTENANCE PROCEDURES - INSPECTION - FLOATABLES AND SEDIMENT CLEAN OUT
8	FIRST DEFENSE® INSTALLATION LOG
9	FIRST DEFENSE® INSPECTION AND MAINTENANCE LOG

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I. First Defense® by Hydro International

Introduction

The First Defense® is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® is available in several model configurations to accommodate a wide range of pipe sizes, peak flows and depth constraints.

The two product models described in this guide are the First Defense® High Capacity and the First Defense® Optimum; they are inspected and maintained identically.

Operation

The First Defense® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense® has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

Pollutant Capture and Retention

The internal components of the First Defense® have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense® retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

Applications

- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for "offline" arrangements using separate junction manholes
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

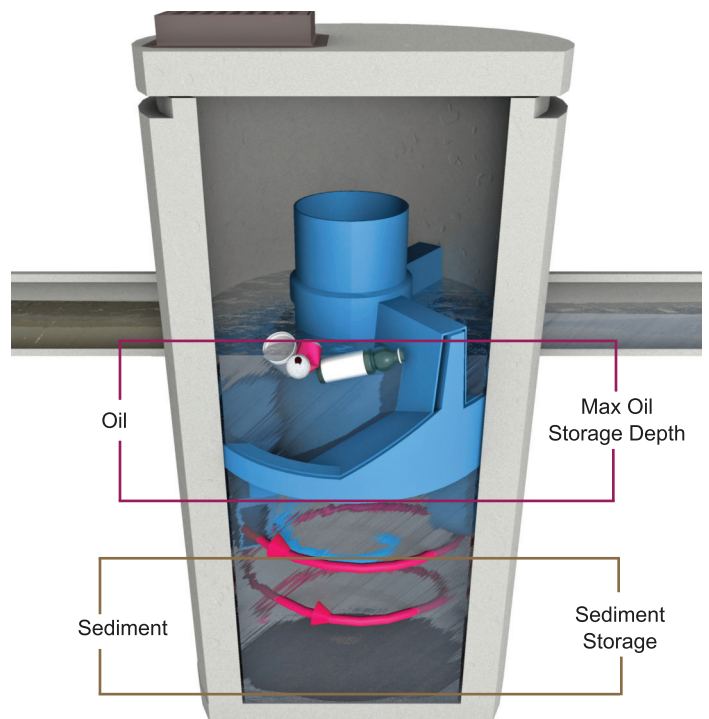


Fig.1 Pollutant storage volumes in the First Defense®.

II. Model Sizes & Configurations

The First Defense® inlet and internal bypass arrangements are available in several model sizes and configurations. The components have modified geometries allowing greater design flexibility to accommodate various site constraints.

All First Defense® models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2). First Defense® model sizes (diameter) are shown in Table 1.

III. Maintenance

First Defense® Components

1. Built-In Bypass

2. Inlet Pipe

3. Inlet Chute
4. Floatables Draw-off Port

5. Outlet Pipe

6. Floatables Storage
7. Sediment Storage

8. Inlet Grate or Cover

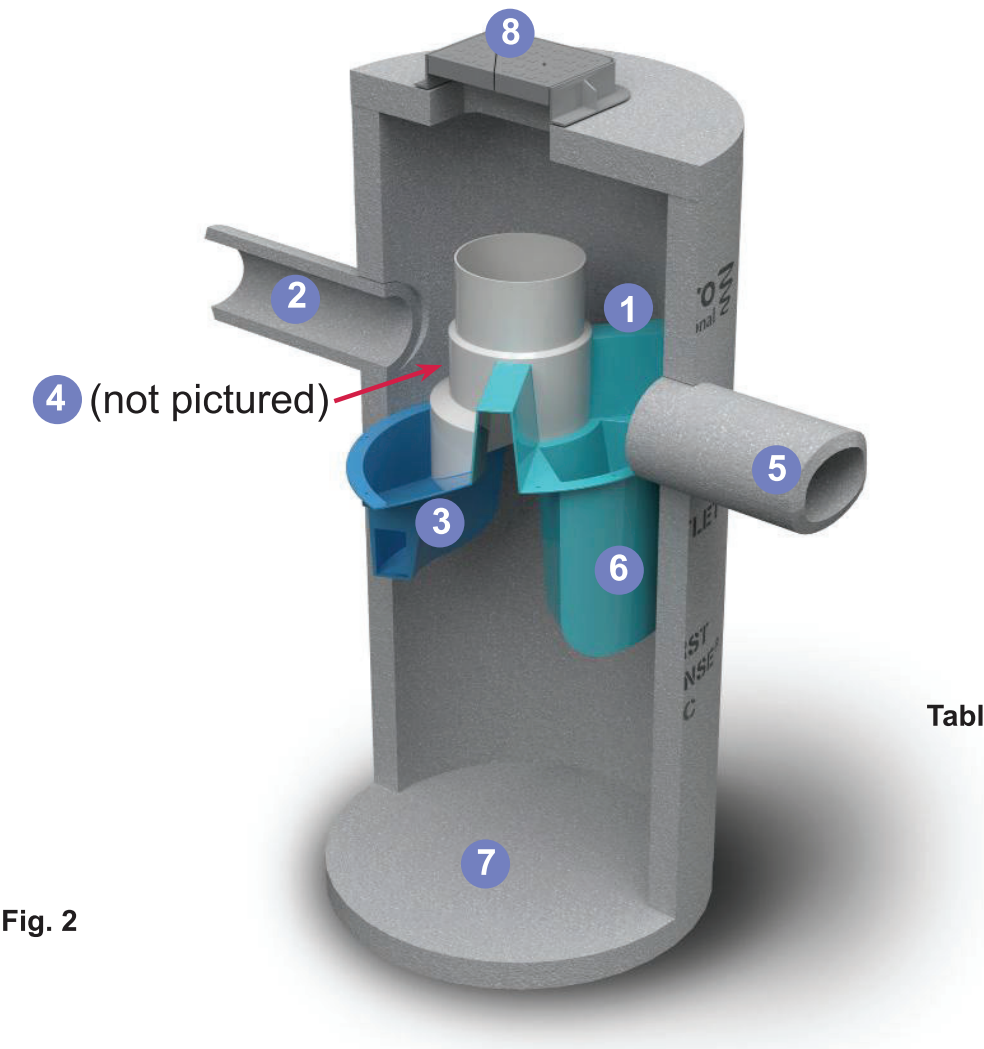


Fig. 2

Table 1

First Defense® Model Sizes
(ft / m) diameter
3 / 0.9
4 / 1.2
5 / 1.5
6 / 1.8
7 / 2.1
8 / 2.4
10 / 3.0

Overview

The First Defense® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense®. The First Defense® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense® will no longer be able to store removed sediment and oil.

The First Defense® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense®, nor do they require the internal components of the First Defense® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

Maintenance Equipment Considerations

The internal components of the First Defense® have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.

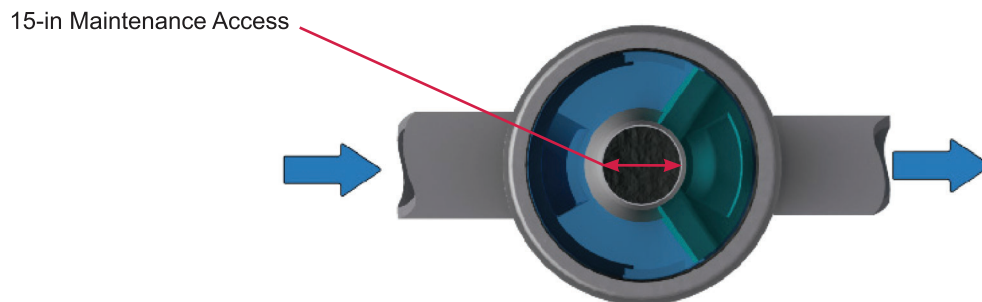


Fig.3 The central opening to the sump of the First Defense® is 15 inches in diameter.

Determining Your Maintenance Schedule

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / floatables removal, for First Defense® typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel.
6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
7. Securely replace the grate or lid.
8. Take down safety equipment.
9. Notify Hydro International of any irregularities noted during inspection.

Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.4).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vector hose to be lowered to the base of the sump.

Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.
- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.



Fig.4 Floatables are removed with a vector hose

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vector truck (flexible hose recommended)
- First Defense® Maintenance Log

Floatables and Sediment Clean Out Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Remove oil and floatables stored on the surface of the water with the vactor hose or with the skimmer or net
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.
9. Securely replace the grate or lid.

Maintenance at a Glance

Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area

NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.



First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE: / /

MODEL SIZE (CIRCLE ONE): [3-FT] [4-FT] [5-FT] [6-FT] [7-FT] [8-FT] [10-FT]

INLET (CIRCLE ALL THAT APPLY): GRATED INLET (CATCH BASIN) INLET PIPE (FLOW THROUGH)

First Defense® Inspection and Maintenance Log

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Stormwater Solutions

94 Hutchins Drive
Portland, ME 04102

Tel: (207) 756-6200

Fax: (207) 756-6212

stormwaterinquiry@hydro-int.com

www.hydro-int.com