



GENESEE COUNTY PLANNING BOARD REFERRALS NOTICE OF FINAL ACTION

GCDP Referral ID **T-01-PAV-2-22**
Review Date **2/10/2022**

Municipality	PAVILION, T.
Board Name	PLANNING BOARD
Applicant's Name	Suzanne and Douglas Waite
Referral Type	Special Use Permit
Variance(s)	
Description:	Special Use Permit and Site Plan Review for a 19.6 acre, 4.275 MW ground mounted commercial solar energy system.
Location	6464 Shepard Rd., Pavilion
Zoning District	Agricultural Residential-1(AR-1) District

PLANNING BOARD DECISION

APPROVAL

EXPLANATION:

Given that the applicant is committed to following the New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects and the Genesee County Soil and Water recommendations as it pertains to soil decompaction at decommissioning, the proposed solar energy system should pose no significant county-wide or intercommunity impact. It is recommended that the applicant submits the enclosed application for 9-1-1 Address Verification to the Genesee County Sheriff's Office to ensure that the address of the proposed solar energy system meets Enhanced 9-1-1 standards.

Director

February 10, 2022

Date

If the County Planning Board disapproved the proposal, or recommends modifications, the referring agency shall NOT act contrary to the recommendations except by a vote of a majority plus one of all the members and after the adoption of a resolution setting forth the reasons for such contrary action. Within 30 days after the final action the referring agency shall file a report of final action with the County Planning Board. An action taken form is provided for this purpose and may be obtained from the Genesee County Planning Department.

SEND OR DELIVER TO:

GENESEE COUNTY DEPARTMENT OF PLANNING
3837 West Main Street Road
Batavia, NY 14020-9404
Phone: (585) 815-7901

DEPARTMENT USE ONLY:
GCDP Referral # T-01-PAV-2-22



*** GENESEE COUNTY *
PLANNING BOARD REFERRAL**

**RECEIVED
Genesee County
Dept. of Planning
2/3/2022**

Required According to:
GENERAL MUNICIPAL LAW ARTICLE 12B, SECTION 239 L, M, N
(Please answer ALL questions as fully as possible)

1. REFERRING BOARD(S) INFORMATION

Board(s) Town of Pavilion Planning Board

Address One Woodrow Drive

City, State, Zip Pavilion, NY 14525

Phone (585) 584 - 3850 Ext. _____

2. APPLICANT INFORMATION

Name Suzanne and Douglas Waite

Address 6464 Shepard Rd

City, State, Zip Pavilion, NY 14525

Phone () _____ - Ext. _____ Email _____

MUNICIPALITY: City Town Village of Pavilion

3. TYPE OF REFERRAL: (Check all applicable items)

- Area Variance
- Use Variance
- Special Use Permit
- Site Plan Review

- Zoning Map Change
- Zoning Text Amendments
- Comprehensive Plan/Update
- Other: _____

- Subdivision Proposal
- Preliminary
- Final

4. LOCATION OF THE REAL PROPERTY PERTAINING TO THIS REFERRAL:

A. Full Address 6464 Shepard Rd Pavilion, NY 14525

B. Nearest intersecting road Roanoke Rd

C. Tax Map Parcel Number 15.-1-38.11

D. Total area of the property 39.8 Acres Area of property to be disturbed > 20 acres

E. Present zoning district(s) Ag-Res

5. REFERRAL CASE INFORMATION:

A. Has this referral been previously reviewed by the Genesee County Planning Board?

NO YES If yes, give date and action taken _____

B. Special Use Permit and/or Variances refer to the following section(s) of the present zoning ordinance and/or law

Town of Pavilion Zoning Law (Local Solar Energy Code)

C. Please describe the nature of this request Applicant is requesting to install a 4.275 MW Solar Farm

6. ENCLOSURES – Please enclose copy(s) of all appropriate items in regard to this referral

- Local application
- Site plan
- Subdivision plot plans
- SEQR forms
- Zoning text/map amendments
- Location map or tax maps
- Elevation drawings
- Agricultural data statement
- New or updated comprehensive plan
- Photos
- Other: _____

7. CONTACT INFORMATION of the person representing the community in filling out this form (required information)

Name Matthew Mahaney Title CEO Phone (585) 343 - 1729 Ext. 238

Address, City, State, Zip 3833 West Main St Rd Batavia, NY 14020 Email mmahaney@townofbatavia.com

Building and Zoning Application Permit No. _____

Town of Pavilion PO Box 126 Pavilion, NY 14525 ph. (585)584-3850 fax (585)584-8533

Date 01 / 26 / 22 Zone AR-1 Flood Zone C Wellhead Protection _____ Corner Lot _____

New Construction Fence Pond Sign Alteration(s) Addition Demolition

Accessory Bldg. Mobile Home Fill Permit Home Occupation Land Separation Site Plan Approval

Special Use Permit Temporary Use Subdivision Zoning Variance Request Other Specify: _____

Tax Map No. 15.-1-38.11

Owners Name Suzanee and Douglas Waite Phone No. (____) _____

Address 6464 Shepard Rd, Pavilion, 14525 Project Road Width _____ ft

Applicants Name NY CDG Genesee 4 LLC Project Address 6464 Shepard Rd, Pavilion, 14525

E Mail Address bogdan.dinu@bwsolar.com Phone No (416) 953-3495

Description of Project: NY CDG Genesee 4 LLC is proposing a 4.275 MW Solar Farm

Existing Use Agricultural Proposed Use Utility Solar

Estimated Cost Building _____ Plumbing _____ Mechanical _____ Miscellaneous \$6.5 million +/-

SEQR CLASSIFICATION Type 1 Type 2 Unlisted

Review completed by Planning Board Zoning Board of Appeals

Permit Fee \$ _____ Application Date ____/____/____ Permit Expires On ____/____/____

Issuing Officer _____ Date ____/____/____

IN SIGNING THIS DOCUMENT I HEARBY GIVE THE RIGHT OF AN ON SITE INSPECTION TO THE TOWN OF PAVILION CODE ENFORCEMENT OFFICIAL OR THEIR DESIGNE. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PREFORMANCE OF CONSTRUCTION.

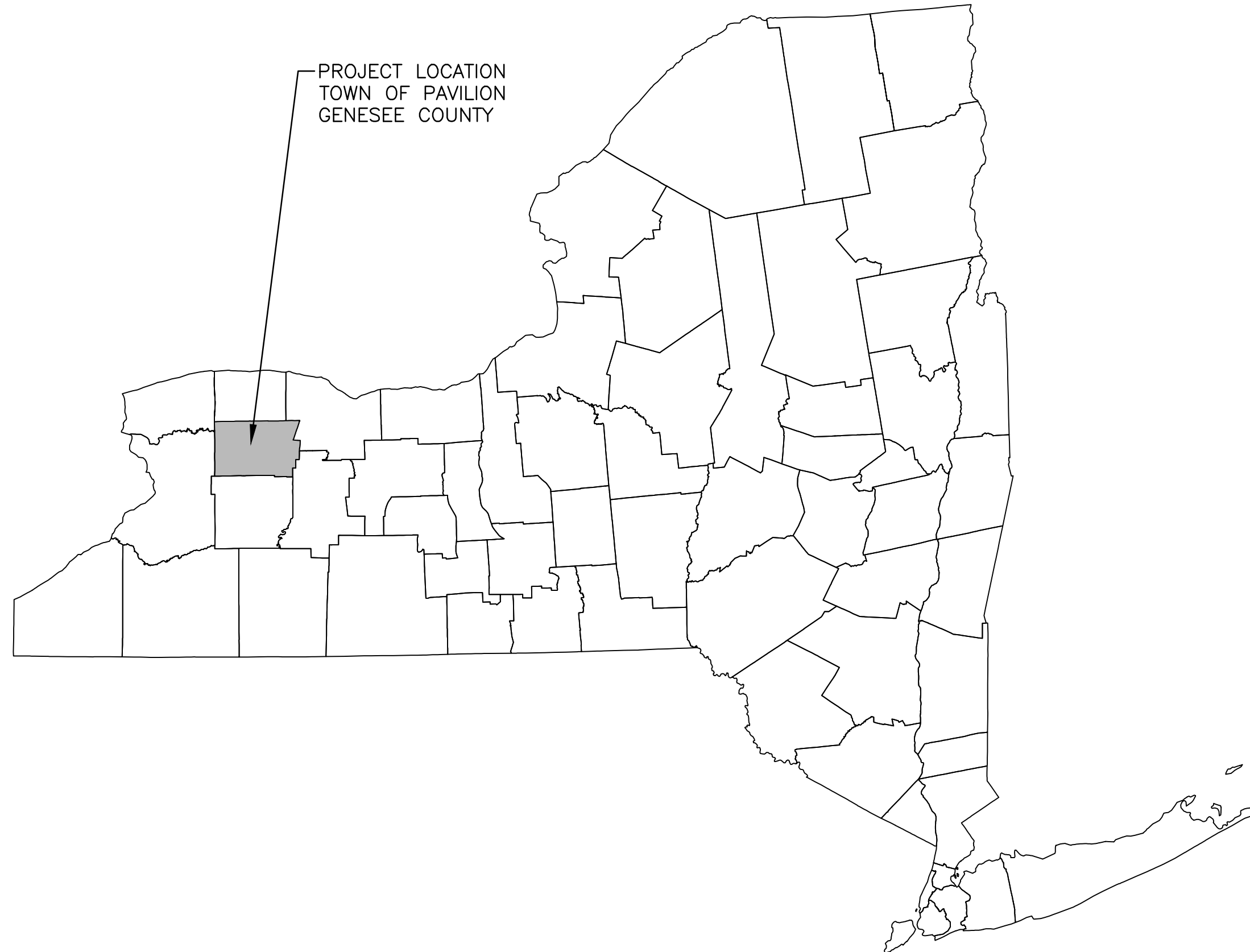
I, Bogdan Dinu, as Owner or Authorized Agent hereby declare that the statements and information on the foregoing application are true and accurate, to the best of my knowledge.

 _____ 2022-01-28 _____

Signature of Owner or Authorized Agent

Date

GENESEE 4 - 4.275 MW SOLAR PROJECT PRELIMINARY DESIGN SUBMITTAL



6464 SHEPARD RD
TOWN OF PAVILION
GENESEE COUNTY, NY 14525

PROJECT No. 210296-03

STEVEN MELLOTT, P.E. OF FISHER ASSOCIATES, P.E., L.S., L.A., D.P.C.	DATE
CHAIR OF THE TOWN PLANNING BOARD	DATE

NEW YORK STATE MAP N.T.S.

PROJECT SITE INFORMATION	
SITE ADDRESS	6464 SHEPARD RD
COUNTY PARCEL NUMBER	015.00-1-38.11
GPS COORDINATES	42°52'39.99" N, 78°03'12.40" W
SITE ELEVATION	1,150 FT
UTILITY NAME	
UTILITY ADDRESS	
UTILITY CONTACT INFORMATION	
DEVELOPER NAME	
DEVELOPER ADDRESS	
DEVELOPER CONTACT INFORMATION	
CIVIL ENGINEER OF RECORD (EOR) NAME	S. MELLOTT
CIVIL EOR ADDRESS	180 CHARLOTTE ST. ROCHESTER, NY
CIVIL EOR CONTACT INFORMATION	585-334-1310
APPLICABLE BUILDING PERMIT AUTHORITY	TOWN OF PAVILION

CIVIL SITE BASIS AND QUANTITY ESTIMATES	
PROJECT ZONING	AG/RES (AR-1)
CODE(S) APPLIED	AGRICULTURAL/SOLAR REGS.
SETBACK FRONT MIN. BY CODE (FT)	15 FT
SETBACK FRONT MIN. DESIGNED (FT)	101.7 FT MIN.
SETBACK REAR MIN. BY CODE (FT)	15 FT
SETBACK REAR MIN. DESIGNED (FT)	46.2 FT MIN.
SETBACK SIDE MIN. BY CODE (FT)	15 FT
SETBACK SIDE MIN. DESIGNED (FT)	199.7 FT MIN
MIN DIST. FROM SOLAR SYSTEM TO STRUCTURE (FT)	193 FT MIN
ROAD WIDTH DESIGNED (FT)	20 FT
MAX. STRUCTURE HEIGHT BY CODE (FT)	50 FT
MAX. STRUCTURE HEIGHT DESIGNED (FT)	15 FT +/-
MAX. FENCE HEIGHT BY CODE (FT)	6 FT
MAX. FENCE HEIGHT DESIGNED (FT)	7 FT
PROPERTY AREA (ACRES)	39.8 AC
FENCED AREA (ACRES)	19.6 AC
AREA OF PANELS (ACRES)	6.80 AC
PANEL COVERAGE PERCENTAGE	17.1%
LOT COVERAGE PERCENTAGE	17.7%
OPEN SPACE PERCENTAGE	82.3%
ROAD AREA (SF)	11,214 SF
AGGREGATE BASE MATERIAL (CY)	225 CY
CHAIN-LINK FENCE (LF)	3,797 LF
GATE COUNT	1

PROJECT SUMMARY	
SYSTEM AC SIZE (MW)	4.275
SYSTEM DC SIZE (DC)	5.61
MODULE COUNT	12,464
INVERTER COUNT	TBD
SWITCHGEAR COUNT	TBD
TRANSFORMER COUNT	TBD
EQUIPMENT PAD COUNT	1
POLE COUNT	6
PANEL WATTAGE	450



LOCATION MAP N.T.S.

INDEX OF DRAWINGS:		
DRAWING NO.	SHEET NO.	DESCRIPTION
C-001	1 OF 14	COVER
C-002	2 OF 14	CONSTRUCTION NOTES
C-100	3 OF 14	EXISTING CONDITIONS
C-101	4 OF 14	DRAINAGE PLAN
C-200	5 OF 14	OVERALL SITE PLAN
C-201	6 OF 14	CIVIL SITE PLAN - 1
C-202	7 OF 14	CIVIL SITE PLAN - 2
C-300	8 OF 14	OVERALL GRADING PLAN
C-301	9 OF 14	CIVIL GRADING PLAN - 1 MAIN ROAD
C-700	10 OF 14	ACCESS ROAD DETAILS
C-705	11 OF 14	FENCE CIVIL DETAILS
C-710	12 OF 14	EROSION CONTROL DETAILS
C-715	13 OF 14	DRAINAGE AND LANDSCAPE DETAILS
C-720	14 OF 14	EQUIPMENT DETAILS

PREPARED BY:



WWW.FISHERASSOC.COM

7	REV	DESCRIPTION	DATE	BY
6				
5				
4				
3				
2				
1	REVISED FENCE HEIGHT		2/4/22	SCM

CONSENT 2021
 FISHER ASSOCIATES
 P.E., L.S., L.A., D.P.C.
 New York State Education Law Section 2203(1)(a) requires that the design professional certify that the design is the work of the design professional or under the direct supervision and control of the design professional. If the firm bearing the seal of an engineer or land surveying professional is not the firm that prepared the design, the firm that prepared the design must also be a signatory to the design. The design professional's signature and the address of the office of the design professional must be included on the design.

FA PROJECT NO. 210296-03	PROJECT MANAGER S. MELLOTT	DRAWN BY B. KNIGHTON	SCALE AS SHOWN	ISSUE DATE 01/2022
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STATE OF NEW YORK
 SEVEN C. MELLOTT
 068072
 LICENSED PROFESSIONAL ENGINEER

FISHER ASSOCIATES
 WWW.FISHERASSOC.COM

PROJECT
 GENESEE 4 - 5 MW SOLAR PROJECT
 6464 SHEPARD ROAD
 TOWN OF PAVILION
 GENESEE COUNTY, NY 14525

TITLE OF DRAWING
 COVER SHEET

DRAWING NO.
C-001

SHEET 1 OF 14

SEQUENCE OF CONSTRUCTION:

- PRE-CONSTRUCTION MEETING HELD TO INCLUDE PROJECT MANAGER, OPERATOR'S ENGINEER, CONTRACTOR, TOWN MS4 REPRESENTATIVE, AND SUB-CONTRACTORS PRIOR TO LAND DISTURBING ACTIVITIES.
- INSTALL PERIMETER SILT FENCE.
- BEGIN CLEARING AND GRUBBING OPERATIONS. CLEARING AND GRUBBING SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND ONLY IN AREAS WHERE CONSTRUCTION IS PLANNED TO COMMENCE WITHIN 14 DAYS AFTER CLEARING AND GRUBBING.
- STRIP TOPSOIL AND STOCKPILE IN A LOCATION ACCEPTABLE TO CONSTRUCTION MANAGER. WHEN STOCKPILE IS COMPLETE, INSTALL PERIMETER SILT FENCE, SEED SURFACE WITH 100% PERENNIAL RYEGRASS MIXTURE AT A RATE OF 2-4 LBS. PER 1000 SF. APPLY 90-100 LBS PER 1000 SF OF MULCH.
- COMMENCE EARTHWORK CUT AND FILLS. THE WORK SHALL BE PROGRESSSED TO ALLOW A REASONABLE TRANSFER OF CUT AND FILL EARTH FOR ROUGH GRADING AND EARTH MOVING. THE CONTRACTOR WILL BE GIVEN SOME LATITUDE TO VARY FROM THE FOLLOWING SCHEDULE IN ORDER TO MEET THE FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL REVIEW VARIATIONS TO SWPPP WITH DESIGN ENGINEER AND QUALIFIED PROFESSIONAL PRIOR TO IMPLEMENTATION.
- AS ROADWAY AND ACCESS DRIVES ARE BROUGHT TO GRADE, THEY WILL BE STABILIZED WITH CRUSHED STONE SUBBASE AT A DEPTH SPECIFIED ON PLANS TO PREVENT EROSION AS SOON AS PRACTICABLE.
- STABILIZE ALL AREAS AS SOON AS PRACTICABLE, IDLE IN EXCESS OF 7 DAYS AND IN WHICH CONSTRUCTION WILL NOT COMMENCE WITHIN 14 DAYS.
- INSTALL UTILITIES. TRENCH EXCAVATION/BACKFILL AREAS SHOULD BE STABILIZED PROGRESSIVELY AT THE END OF EACH WORKDAY WITH SEED AND STRAW MULCH AT A RATE OF 100% PERENNIAL RYE GRASS AT 2-4 LBS/1000 SF MULCHED AT 90-100 LBS/1000 SF.
- STABILIZE ALL AREAS IDLE IN EXCESS OF 7 DAYS IN WHICH CONSTRUCTION WILL NOT COMMENCE WITHIN 14 DAYS.
- REMOVE TEMPORARY CONSTRUCTION EXITS AND PERIMETER SILT FENCE ONCE SITE HAS ACHIEVED 80% UNIFORM STABILIZATION.
- REMOVE SILT FENCE WITHIN WETLANDS DURING CONSTRUCTION, RETURN SILT FENCE AFTER CONSTRUCTION HAS BEEN FINALIZED.

GENERAL NOTES:

- THE EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THIS MAP HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORD MAPS AS PROVIDED, THEY ARE NOT CERTIFIED TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.
- HIGHWAY DRAINAGE ALONG ALL ROADS AND PRIVATE DRIVES SHALL BE KEPT CLEAN OF MUD, DEBRIS ETC. AT ALL TIMES.
- THE CONTRACTOR SHALL CONSULT THE OWNER OR THEIR REPRESENTATIVE BEFORE DEVIATING FROM THESE PLANS.
- IN ALL TRENCH EXCAVATIONS, CONTRACTOR MUST LAY THE TRENCH SIDE SLOPES BACK TO A SAFE SLOPE, USE A TRENCH SHIELD OR PROVIDE SHEETING AND BRACING.
- IF SUSPICIOUS AND/OR HAZARDOUS MATERIAL IS ENCOUNTERED DURING DEMOLITION/CONSTRUCTION, ALL WORK SHALL STOP AND THE CHAUTAUQUA COUNTY DEPARTMENT OF HEALTH AND THE NEW YORK STATE DEPARTMENT OF CONSERVATION SHALL BE NOTIFIED IMMEDIATELY. WORK SHALL NOT RESUME UNTIL THE DEVELOPER HAS OUTLINED APPROPRIATE ACTION FOR DEALING WITH THE WASTE MATERIAL AND THE DEVELOPMENT PLANS ARE MODIFIED AS MAY BE NECESSARY.
- EXCAVATED WASTE MATERIAL REMOVED FROM THE SITE SHALL BE PLACED AT A LOCATION ACCEPTABLE TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
- AREAS DISTURBED OR DAMAGED AS PART OF THIS PROJECTS CONSTRUCTION THAT ARE OUTSIDE OF THE PRIMARY WORK AREA SHALL BE RESTORED, AT THE CONTRACTORS EXPENSE, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- TREES MAY BE CLEARED WITHIN THE FLOODPLAIN OR WETLAND AREAS AS LONG AS THE STUMPS ARE NOT CLEARED OR GRUBBED. LOW GROUND PRESSURE CONSTRUCTION VEHICLES OR TIMBER MATTING MAY BE UTILIZED TO CUT TREES AND TO REMOVE DEBRIS WITHIN THE FLOODPLAIN OR WETLAND AREAS. CONSTRUCTION TRAFFIC WITHIN THE FLOODPLAIN OR WETLANDS SHALL BE MINIMIZED TO THAT WHICH IS NECESSARY FOR THE INSTALLATION OF THE PANELS, RACKING, AND OTHER PROJECT COMPONENTS. THE WETLAND AREAS SHALL BE PROTECTED AT ALL TIMES AS SHOWN ON THE PLANS WHEN INSTALLATION OF THE PROJECT COMPONENTS IS NOT ONGOING.

WASTE/HAZARDOUS MATERIAL PRACTICES:

- WHENEVER POSSIBLE COVERED TRASH CONTAINERS SHOULD BE USED.
- DAILY SITE CLEANUP IS REQUIRED TO REDUCE DEBRIS AND POLLUTANTS IN THE ENVIRONMENT.
- CONTRACTOR SHALL PROVIDE A SAFE STORAGE SPACE FOR ALL PAINTS, STAINS AND SOLVENTS INSIDE A COVERED STORAGE AREA.
- ALL FUELS, OILS AND GREASE MUST BE KEPT IN CONTAINERS AT ALL TIMES.

EROSION & SEDIMENT CONTROL NOTES:

- INSTALL EROSION CONTROL MEASURES AS INDICATED ON THE PLAN PRIOR TO THE START OF ANY EXCAVATION WORK. EROSION CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED NOVEMBER 2016.
- REFER TO STORM WATER POLLUTION PLAN NOTES FOR EROSION CONTROL MEASURE NOTES.

SITE STABILIZATION:

- WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON.
- MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN THE MULCH APPLICATION RATES TABLE. VERY LITTLE BARE GROUND SHOULD BE VISIBLE THROUGH THE MULCH.
- STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ALONG THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.
- BEFORE SEEDING IS APPLIED THE CONTRACTOR SHALL SPREAD SOIL TO PREVENT PONDING AND CONFIRM THAT SOIL WILL SUSTAIN THE SEED GERMINATION AND ESTABLISHMENT OF VEGETATION.
- GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE. COMPACTED SOILS SHOULD BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES, ALONG CONTOUR WHEREVER POSSIBLE, PRIOR TO SEEDING.
- TOPSOIL OR AMENDED SOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A MINIMUM DEPTH OF 6 INCHES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS.
- TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- WHEN USED AS A MULCH REPLACEMENT, THE APPLICATION RATE (THICKNESS) OF THE COMPOST SHOULD BE ½" TO ¾". COMPOST SHOULD BE PLACED EVENLY AND SHOULD PROVIDE 100% SOIL COVERAGE. NO SOIL SHOULD BE VISIBLE.
- POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45° F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.
- SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
- MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.
- LIME, FERTILIZER, SEED, AND MULCH DISTURBED AREAS PER THE EROSION AND SEDIMENT CONTROL PLANS. IN AREAS OF STEEP SLOPES OR OBVIOUS AREAS WHERE POTENTIAL EROSION MAY OCCUR, AN EROSION CONTROL MAT OR FLEXIBLE GROWTH MEDIUM (FGM) SHALL BE USED. FGM SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS.
- NO CONSTRUCTION TRAFFIC SHALL OCCUR TO REMOVE ANY B MPS UNTIL THE SECTION HAS ACHIEVED 80% PERENNIAL VEGETATIVE COVER. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM 80% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NONVEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

GRADING NOTES:

- ALL TOPSOIL TO REMAIN ON SITE OR TO BE DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL LAW.

STORM WATER POLLUTION PREVENTION PLAN NOTES:

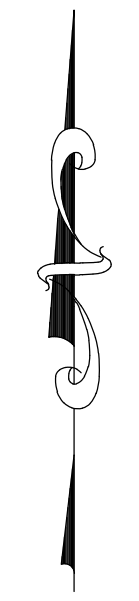
- REFER TO THE STORMWATER POLLUTION PREVENTION PLAN PREPARED FOR THE PROJECT FOR MORE INFORMATION.
- THE CONTRACTOR SHALL PROVIDE A QUALIFIED INSPECTOR TO INSPECT THE PROJECT AT THE END OF EACH WORK WEEK AND PROVIDE A REPORT AT LEAST ONCE PER WEEK.
- ALL INLETS TO THE STORM SEWER SHALL HAVE INLET PROTECTION. ADD INLET PROTECTION ON INLET NEXT TO ROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP'S) UNTIL GROUND COVER IS ESTABLISHED.
- REMOVE AND STOCKPILE TOPSOIL AS DIRECTED BY THE CONSTRUCTION MANAGER REPLACE TOPSOIL TO A MINIMUM 4" DEPTH. ALL DISTURBED AREAS TO BE HYDROSEED AS DIRECTED BY THE CONSTRUCTION MANAGER TO PROMOTE VEGETATION AS SOON AS PRACTICABLE.
- IF THE SEASONS PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE "STANDARDS", NETTING OR LIQUID MULCH BINDER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS. EROSION CONTROL MEASURES SHALL NOT BE REMOVED BEFORE 80% UNIFORM VEGETATION HAS BEEN ACHIEVED.
- ALL EROSION CONTROL MEASURES ARE TO BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE AND SHALL BE REPLACED WHEN THEY HAVE REACHED THE DESIGN LIFE INDICATED IN THE NYS GUIDELINES FOR URBAN EROSION SEDIMENT CONTROL DESIGN MANUAL OR EVERY THREE MONTHS..
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF TOPSOIL TO ALL DISTURBED AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES.
- THE CONTRACTOR SHALL DESIGNATE A MEMBER OF HIS/HER FIRM TO BE RESPONSIBLE TO MONITOR EROSION CONTROL, EROSION CONTROL STRUCTURES THROUGHOUT CONSTRUCTION.
- ALL DISTURBED AREAS SHALL BE FINISH GRADED TO PROMOTE VEGETATION ON ALL EXPOSED AREAS AS SOON AS PRACTICABLE. STABILIZATION PRACTICES (TEMPORARY/PERMANENT SEEDING, MULCHING, GEOTEXTILES, ETC.) MUST BE IMPLEMENTED WITHIN SEVEN (7) DAYS WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND NOT EXPECTED TO RESUME WITHIN FOURTEEN (14) DAYS.
- PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. ALL CONSTRUCTION DEBRIS AND SEDIMENT SPOILS, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
- DUST SHALL BE CONTROLLED BY WATERING.
- ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
- EROSION CONTROL MEASURES SHOULD BE RELOCATED INWARD AS PERMETER SLOPE CONSTRUCTION PROGRESSES AND RECONSTRUCTED TO THE NYS STANDARDS & SPECIFICATIONS AT THE END OF EACH DAY.
- PERIMETER AREAS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH PROGRESSIVELY A MINIMUM AT THE END OF EACH WEEK WITH 100% PERENNIAL RYEGRASS MIX AT A RATE OF 2-4 LBS PER 1000 SF AND MULCH 90-100 lbs/1000 SF OF WEED FREE STRAW.
- SLOPE TRACKING SHALL BE IMPLEMENTED ON ALL SLOPE 1 ON 3 OR GREATER AT THE END OF EACH WORK DAY AND PRIOR TO FINAL SLOPE GRADING AND STABILIZATION.

7	6	5	4	3	2	1	REV	DATE	DESCRIPTION
								2/4/22	REVISED FENCE HEIGHT
<p>CONTRACTOR'S CERTIFICATION: I, the undersigned, being a duly Licensed Professional Engineer in the State of New York, State Education Law Section 1202(1) and 1202(2), do hereby certify that I am the author of the design and drawings herein and that I am a duly Licensed Professional Engineer in the State of New York, State Education Law Section 1202(1) and 1202(2). I am hereby making the seal of an Engineer or Archt. Surveyor in the State of New York, State Education Law Section 1202(1) and 1202(2) a part of these drawings and the seal of such Engineer or Archt. Surveyor in the State of New York, State Education Law Section 1202(1) and 1202(2) a part of the certification.</p>									
FA PROJECT NO. 210296-03		PROJECT MANAGER S. MELLOTT		DRAWN BY B. KNIGHTON		SCALE AS SHOWN		ISSUE DATE 01/2022	
									
									
PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525									
TITLE OF DRAWING CONSTRUCTION NOTES									
DRAWING NO. C-002									
SHEET 2 OF 14									

FILE NAME: H:\Projects\21\210296-03-Genesee-4\Eng\CAD\CUT\210296 C-100 Existing Conditions.dwg
 DATE/TIME: 2/4/2022 1:36:49 PM
 USER: Steven Nelson

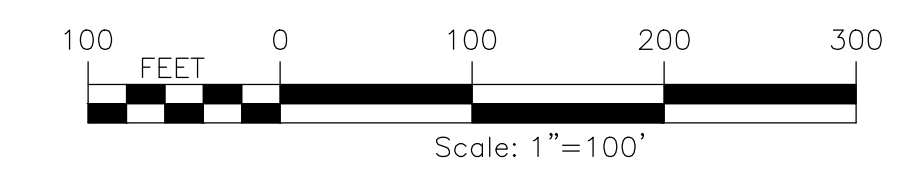


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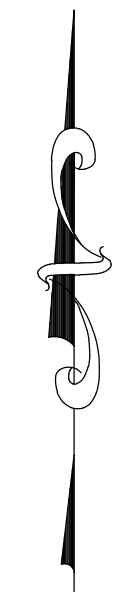
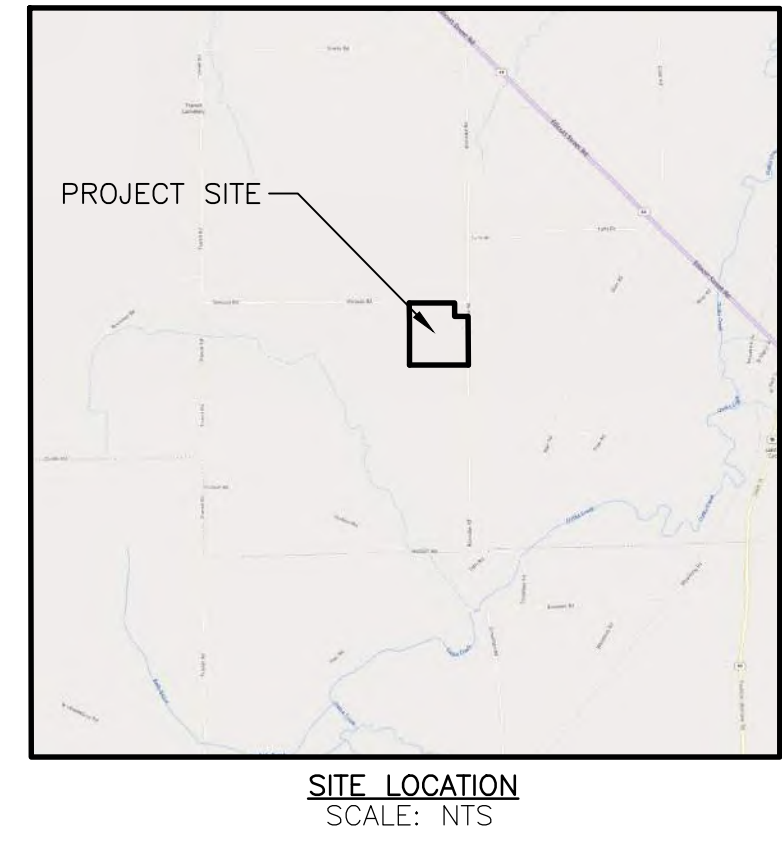
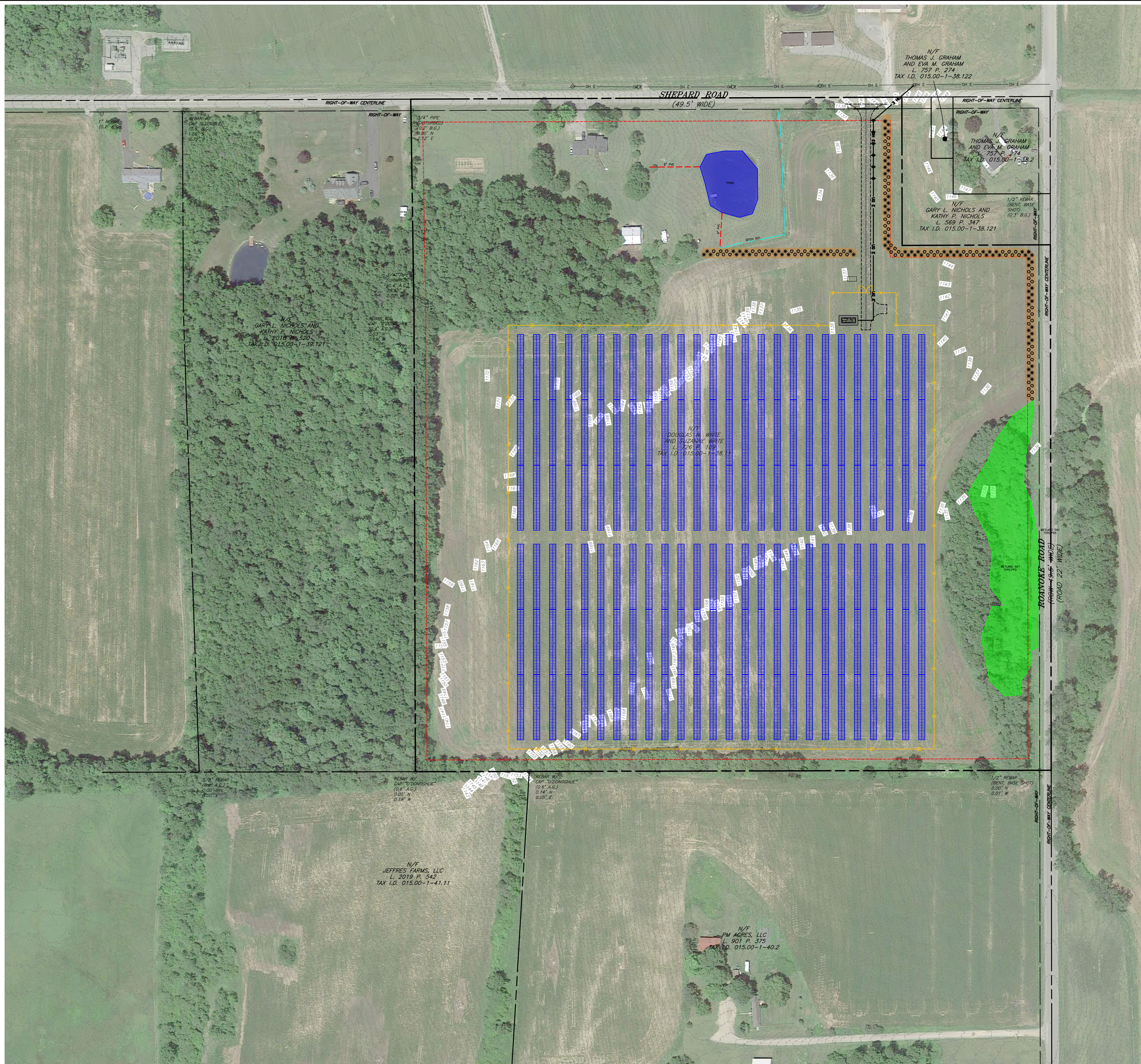
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	PARCEL LINE
	PROPERTY SETBACK
	ROW
	EASEMENT
	EXISTING FENCE
	EXISTING OVERHEAD UTILITY LINES
	EXISTING TREE/BRUSH LINE
	DELINEATED WETLANDS
	DELINEATED WATER BODY
	DELINEATED CULVERT
	DELINEATED DITCH
	CONTOUR LINES

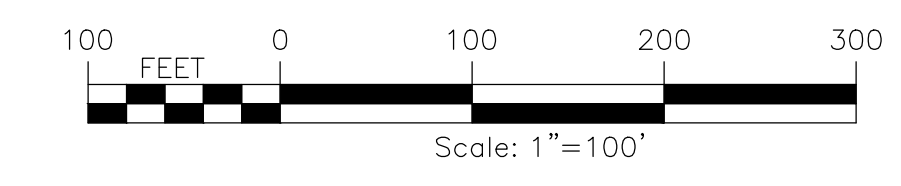


	FA PROJECT NO. 210296-03		PROJECT MANAGER S. MELLOTT		DRAWN BY B. KNIGHTON	
FISHER ASSOCIATES WWW.FISHERASSOC.COM		ISSUE DATE 01/2022		AS SHOWN		REV
PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525			TITLE OF DRAWING EXISTING CONDITIONS			DESCRIPTION
DRAWING NO. C-100			SHEET 3 OF 14			DATE 2/4/22
						BY SCM

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 DATE/TIME: 2/4/2022 1:37:38 PM
 USER: Steven Nelson



- LEGEND**
- PARCEL LINE
 - PROPERTY SETBACK
 - ROW
 - EASEMENT
 - EXISTING FENCE
 - EXISTING OVERHEAD UTILITY LINES
 - DELINEATED TREE/BRUSH LINE
 - DELINEATED WETLANDS
 - DELINEATED WATER BODY
 - DELINEATED CULVERT
 - DELINEATED DITCH
 - CONTOUR LINES



7	6	5	4	3	2	1	REV	
							REVISED FENCE HEIGHT	DATE
							2/4/22	BY
							DESCRIPTION	BY
							SCM	BY
							1	BY
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							5	BY
							6	BY
							7	BY

CONSENT 2021
 FISHER ASSOCIATES
 P.E. L.S. D.P.C.
 New York State Education Law Section 1405.4 requires that the design professional who prepares or issues a professional seal or stamp for a project, shall be the design professional who is responsible for the design of the project. The design professional shall be the design professional who is responsible for the design of the project.

FA PROJECT NO. 210296-03
 PROJECT MANAGER S. MELLOTT
 DRAWN BY B. KNIGHTON
 SCALE AS SHOWN
 ISSUE DATE 01/2022

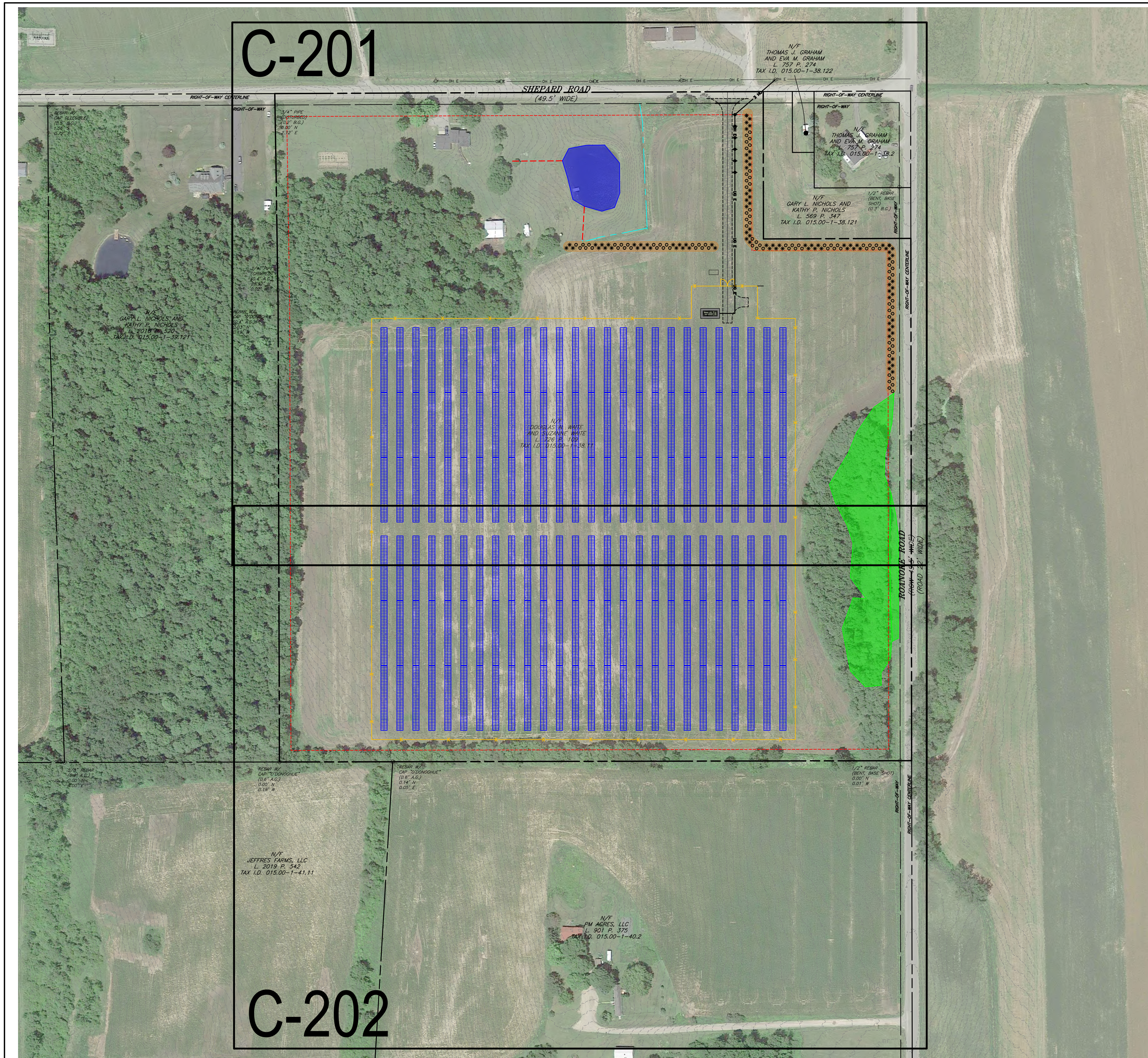
STEVEN C. MELLOTT
 LICENSED PROFESSIONAL ENGINEER

FISHER ASSOCIATES
 WWW.FISHERASSOC.COM

PROJECT: GENESSEE 4 - 5 MW SOLAR PROJECT
 6464 SHEPARD ROAD
 TOWN OF PAVILION
 GENESSEE COUNTY, NY 14525
 TITLE OF DRAWING: DRAINAGE PLAN

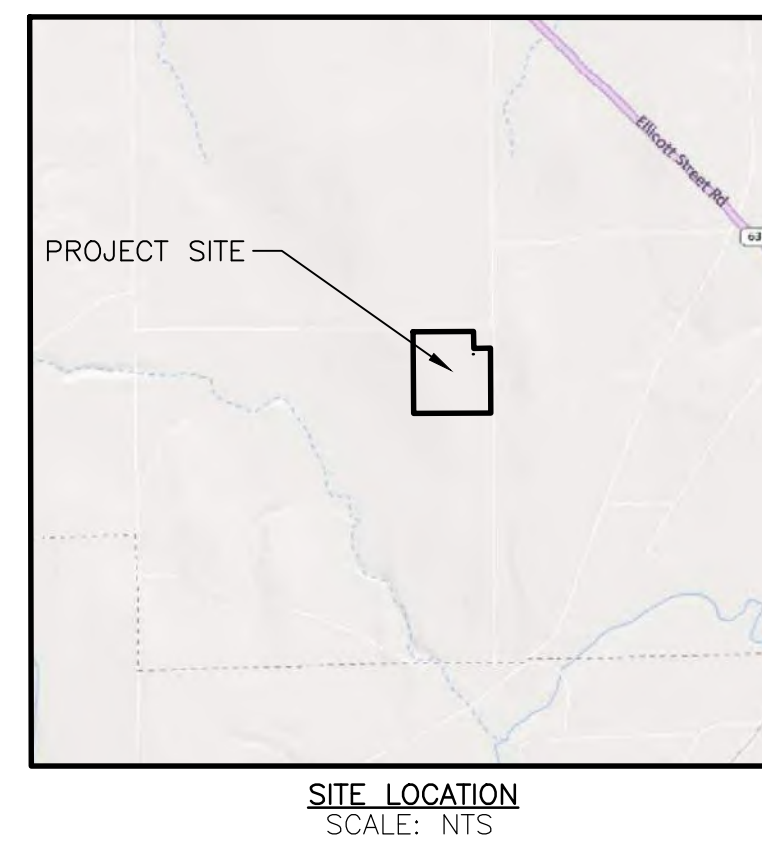
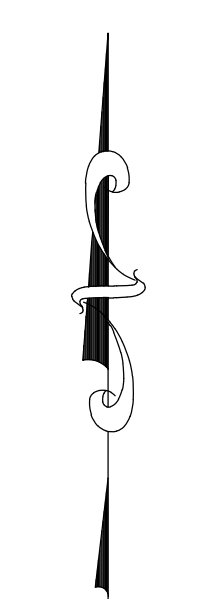
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 SHEET 4 OF 14

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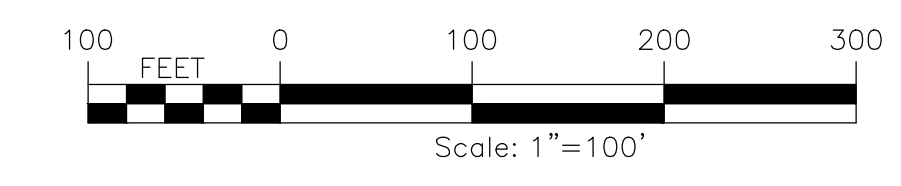


C-201

C-202



- LEGEND**
- — — — — PARCEL LINE
 - - - - - PROPERTY SETBACK
 - — — — — ROW
 - PE — PE — EASEMENT
 - UG E — UG E — PROPOSED UNDERGROUND ELECTRIC CONDUIT
 - UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
 - ▬▬▬▬▬▬▬ PROPOSED SOLAR PANEL ARRAY
 - IN-XX PROPOSED INVERTER
 - PROPOSED UTILITY POLE
 - x — x — PROPOSED FENCE
 - x — x — EXISTING FENCE
 - OH E — OH E — PROPOSED OVERHEAD UTILITY LINES
 - OH E — OH E — EXISTING OVERHEAD UTILITY LINES
 - UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
 - ~ ~ ~ ~ ~ EXISTING TREE/BRUSH LINE
 - ▬▬▬▬▬▬▬ DELINEATED WETLANDS
 - ▬▬▬▬▬▬▬ DELINEATED WATER BODY
 - - - - - DELINEATED CULVERT
 - - - - - DELINEATED DITCH
 - ● — ● — PROPOSED SILT FENCE/FILTER SOCK
 - ▬▬▬▬▬▬▬ GRAVEL ROAD
 - ▬▬▬▬▬▬▬ LANDSCAPING MULCH
 - ⊛ ⊛ ⊛ PROPOSED TREES/BUSHES



REV	DESCRIPTION	DATE	BY
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2			
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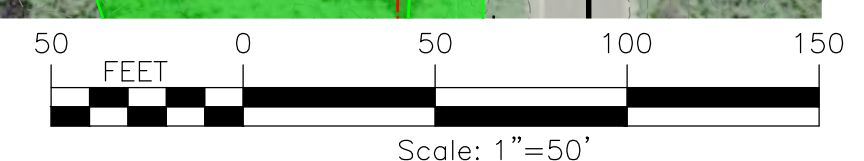
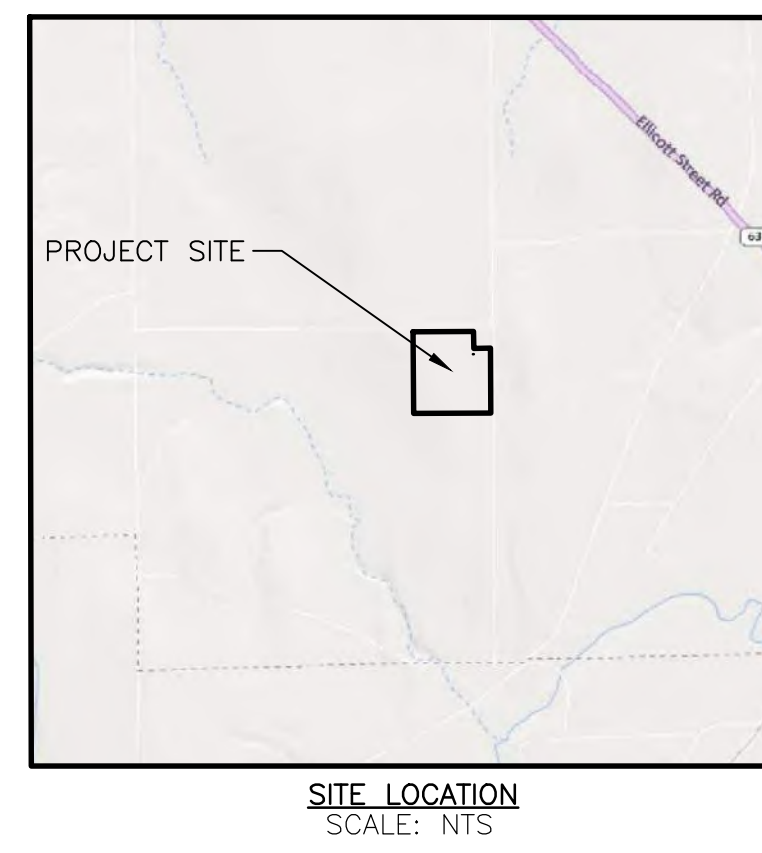
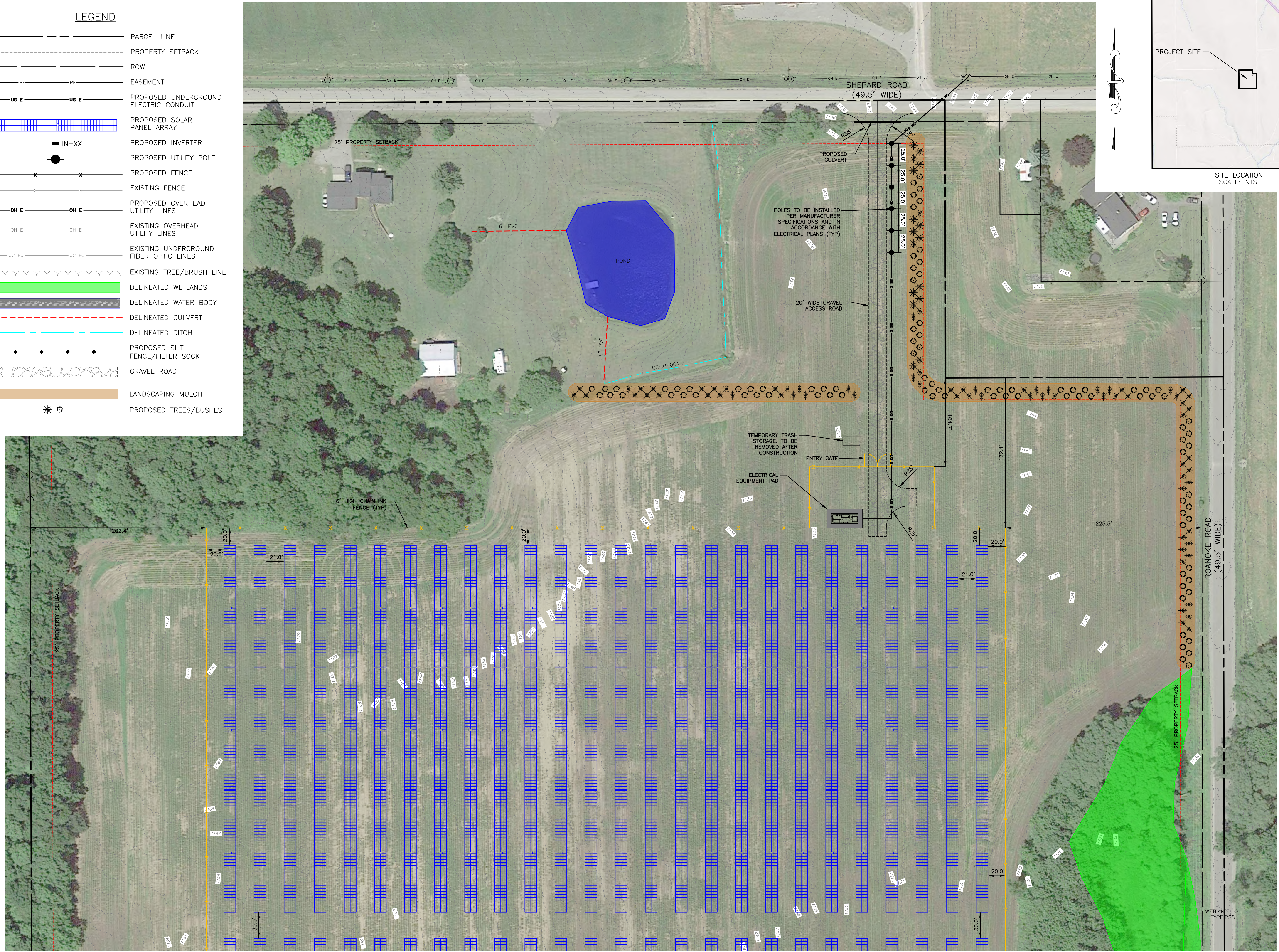
FA PROJECT NO. 210296-03	PROJECT MANAGER S. MELLOTT	ISSUE DATE 01/2022
DRAWN BY B. KNIGHTON	SCALE AS SHOWN	

FISHER ASSOCIATES WWW.FISHERASSOC.COM	

PROJECT GENESEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESEE COUNTY, NY 14525	TITLE OF DRAWING OVERALL SITE PLAN
DRAWING NO. C-200	SHEET 5 OF 14

LEGEND

- — — — — PARCEL LINE
- - - - - PROPERTY SETBACK
- — — — — ROW
- PE — PE — EASEMENT
- UG E — UG E — PROPOSED UNDERGROUND ELECTRIC CONDUIT
- [Blue Grid Pattern] PROPOSED SOLAR PANEL ARRAY
- IN-XX PROPOSED INVERTER
- PROPOSED UTILITY POLE
- x — x — PROPOSED FENCE
- x — x — EXISTING FENCE
- OH E — OH E — PROPOSED OVERHEAD UTILITY LINES
- OH E — OH E — EXISTING OVERHEAD UTILITY LINES
- UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
- [Wavy Line] EXISTING TREE/BRUSH LINE
- [Green Area] DELINEATED WETLANDS
- [Blue Area] DELINEATED WATER BODY
- [Red Dashed Line] DELINEATED CULVERT
- [Cyan Dashed Line] DELINEATED DITCH
- ● — ● — PROPOSED SILT FENCE/FILTER SOCK
- [Hatched Area] GRAVEL ROAD
- [Brown Area] LANDSCAPING MULCH
- ⊙ PROPOSED TREES/BUSHES



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 USER: Steven Nelson

REFER TO SHEET C-202

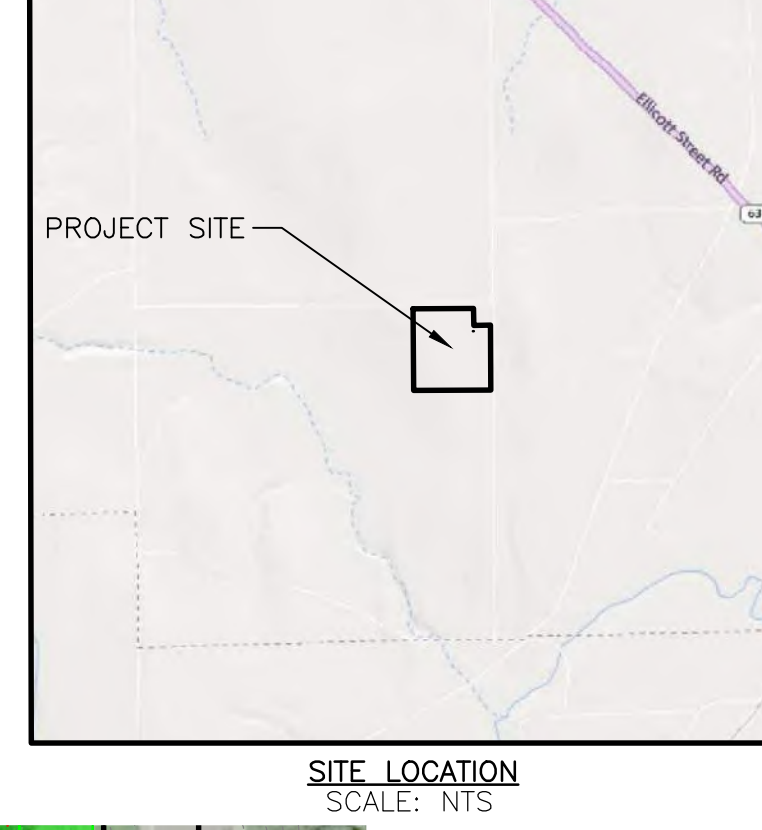
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TITLE OF DRAWING	CIVIL SITE PLAN - 1						DATE	2/4/22
DRAWING NO.							REV	BY
DRAWING NO.							1	SCM
DRAWING NO.							2	SCM
DRAWING NO.							3	SCM
DRAWING NO.							4	SCM
DRAWING NO.							5	SCM
DRAWING NO.							6	SCM
DRAWING NO.							7	SCM
DRAWING NO.							REV	DESCRIPTION
DRAWING NO.							1	REVISED FENCE HEIGHT
DRAWING NO.							2	REVISED FENCE HEIGHT
DRAWING NO.							3	REVISED FENCE HEIGHT
DRAWING NO.							4	REVISED FENCE HEIGHT
DRAWING NO.							5	REVISED FENCE HEIGHT
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DRAWING NO.							7	REVISED FENCE HEIGHT
DRAWING NO.							REV	DESCRIPTION
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DRAWING NO.							2	REVISED FENCE HEIGHT
DRAWING NO.							3	REVISED FENCE HEIGHT
DRAWING NO.							4	REVISED FENCE HEIGHT
DRAWING NO.							5	REVISED FENCE HEIGHT
DRAWING NO.							6	REVISED FENCE HEIGHT
DRAWING NO.							7	REVISED FENCE HEIGHT



PROJECT: GENESSEE 4 - 5 MW SOLAR PROJECT
 6464 SHEPARD ROAD
 TOWN OF PAVILION
 GENESSEE COUNTY, NY 14525
 TITLE OF DRAWING: CIVIL SITE PLAN - 1

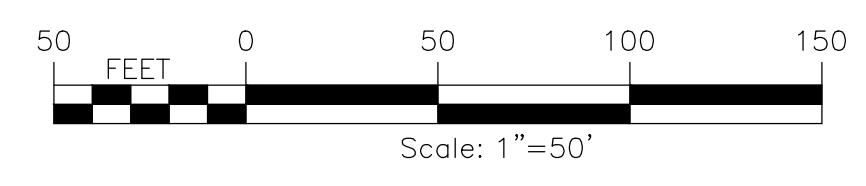
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 REPORT

REFER TO SHEET C-201



LEGEND

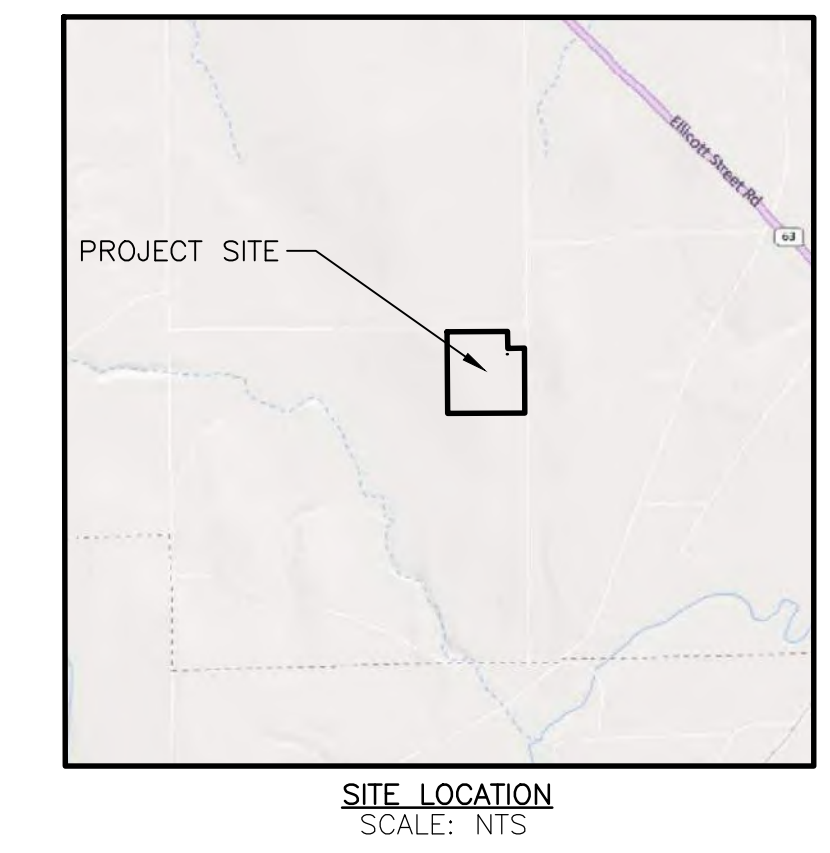
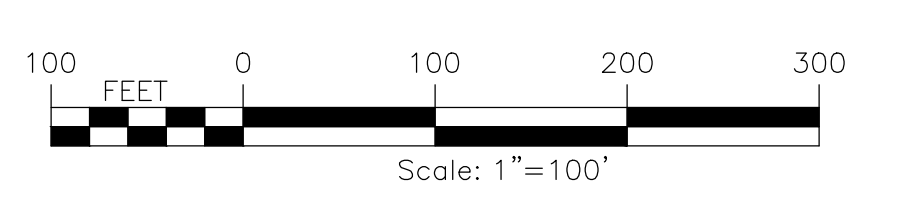
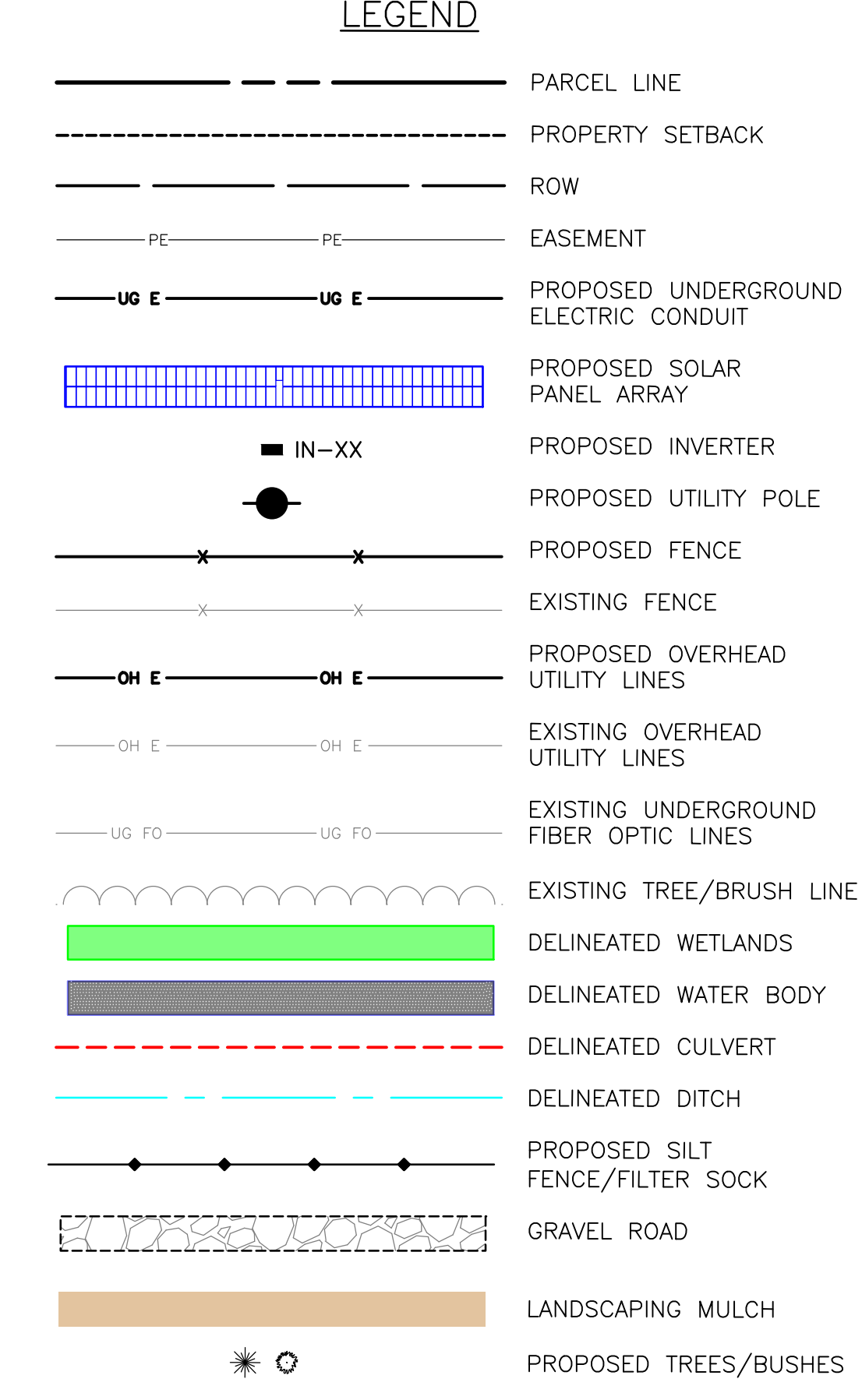
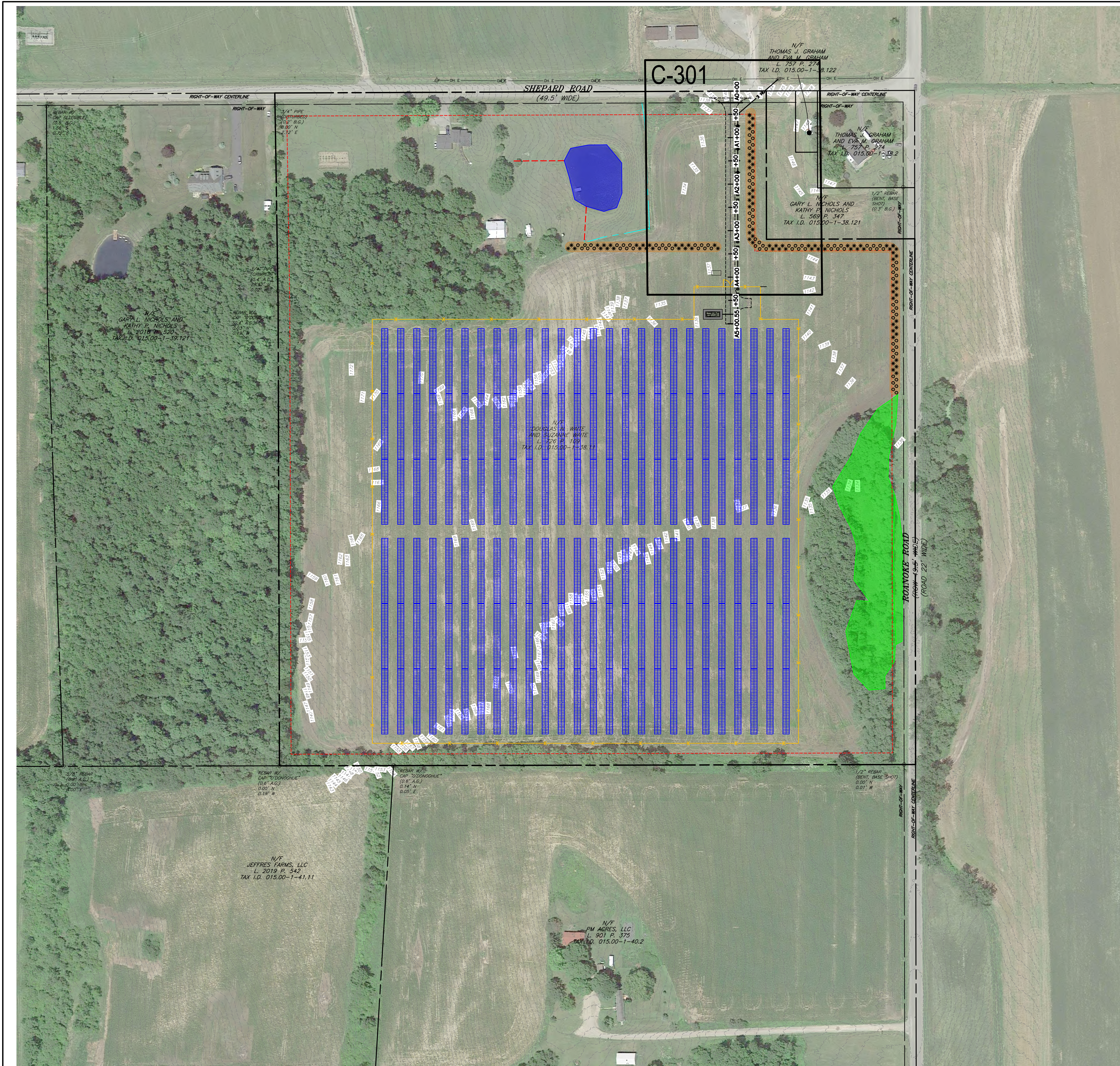
- PARCEL LINE
- - - - - PROPERTY SETBACK
- ROW
- PE — PE — EASEMENT
- UG E — UG E — PROPOSED UNDERGROUND ELECTRIC CONDUIT
- [Grid Pattern] PROPOSED SOLAR PANEL ARRAY
- IN-XX PROPOSED INVERTER
- PROPOSED UTILITY POLE
- X — X — PROPOSED FENCE
- X — X — EXISTING FENCE
- OH E — OH E — PROPOSED OVERHEAD UTILITY LINES
- OH E — OH E — EXISTING OVERHEAD UTILITY LINES
- UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
- ~ ~ ~ EXISTING TREE/BRUSH LINE
- [Green Shaded Area] DELINEATED WETLANDS
- [Blue Shaded Area] DELINEATED WATER BODY
- - - - - DELINEATED CULVERT
- - - - - DELINEATED DITCH
- ◆ — ◆ — PROPOSED SILT FENCE/FILTER SOCK



<p>PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525</p>		<p>TITLE OF DRAWING CIVIL SITE PLAN - 2</p>																																	
<p>DRAWING NO. C-202</p>		<p>SHEET 7 OF 14</p>																																	
<p>FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT</p>		<p>DRAWN BY B. KNIGHTON SCALE AS SHOWN</p>																																	
<p>ISSUE DATE 01/2022</p>		<p>REV</p> <table border="1"> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>REVISED FENCE HEIGHT</td> <td>2/4/22</td> <td>SCM</td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> </tr> </table>		REV	DESCRIPTION	DATE	BY	1	REVISED FENCE HEIGHT	2/4/22	SCM	2				3				4				5				6				7			
REV	DESCRIPTION	DATE	BY																																
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<p>CONTRACT NO. 2021 FISHER ASSOCIATES P.E. L.S. D.P.C.</p> <p>New York State Education Law Section 1703(2)(b) requires that the title of this drawing be the name of the project and the name of the professional engineer or land surveyor. If an item bearing the seal of an engineer or land surveyor is shown on this drawing, the name of the engineer or land surveyor and the date of such registration shall be indicated in the title of the drawing.</p>																																			

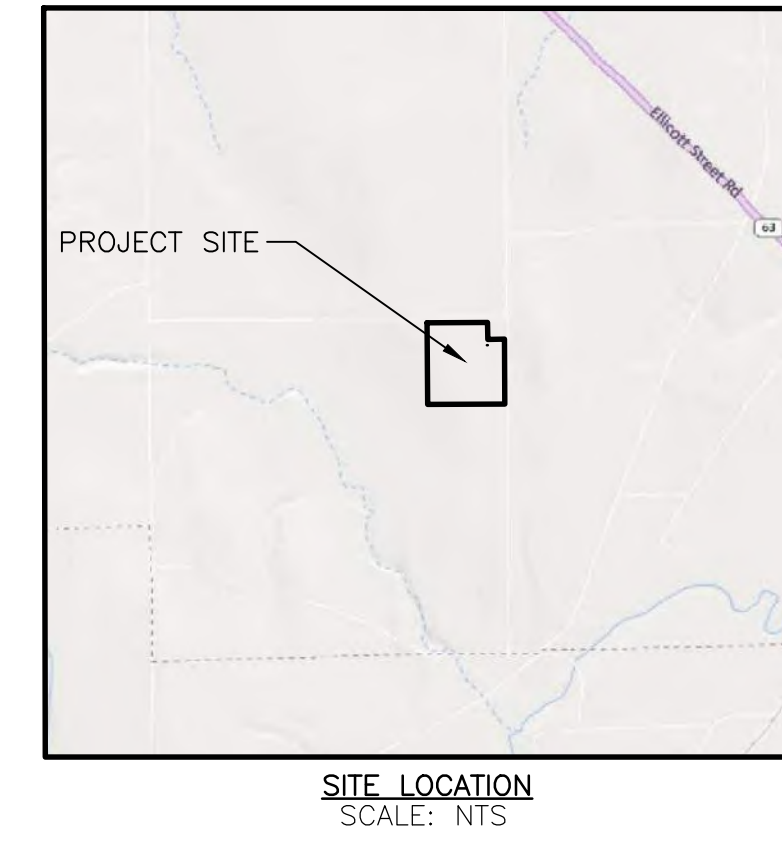
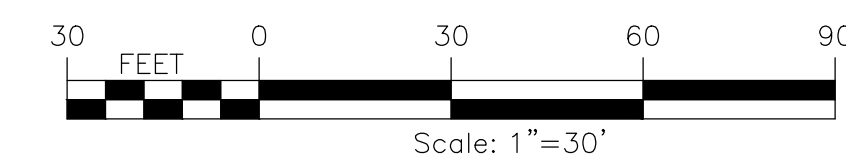
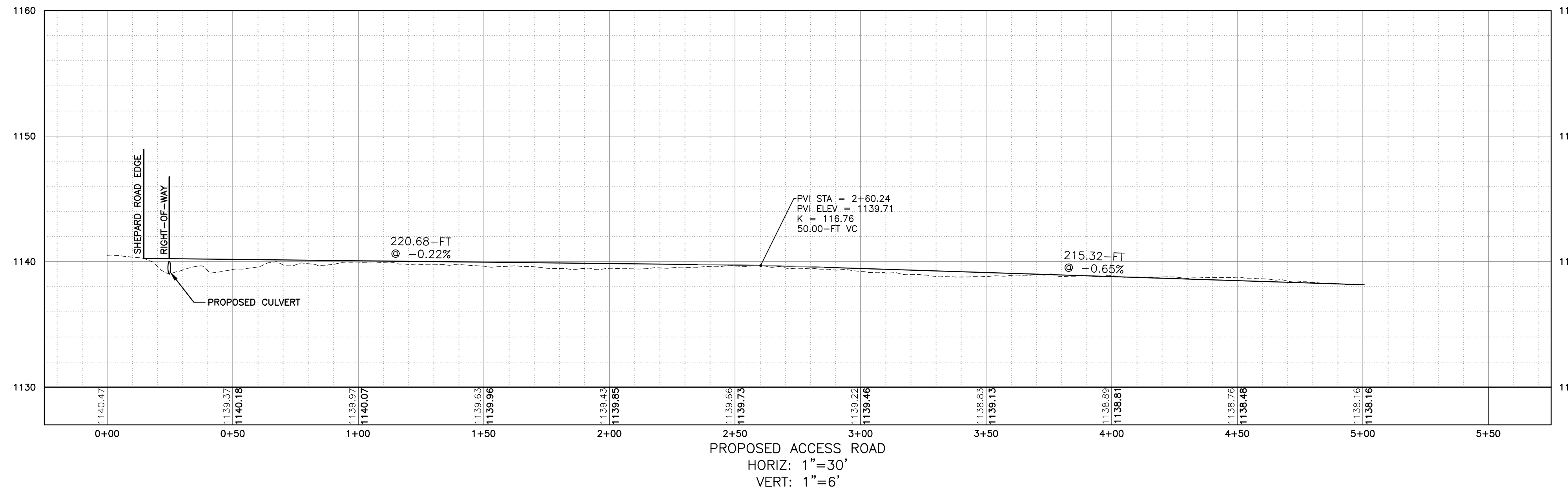
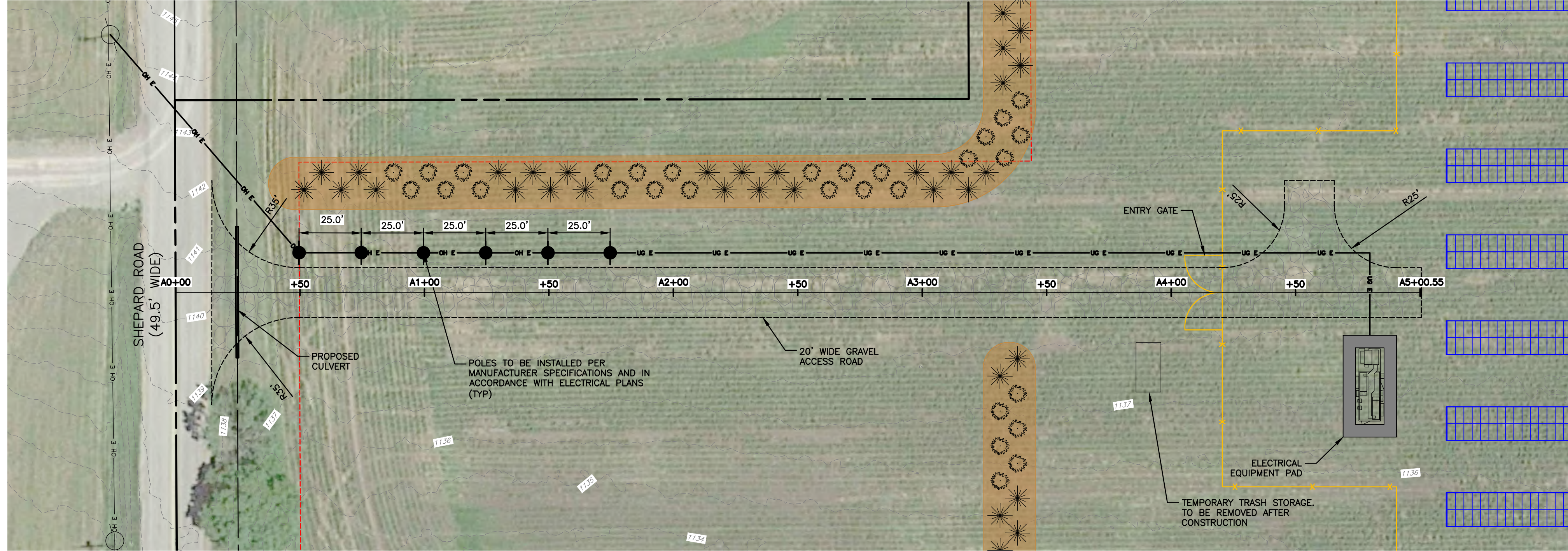


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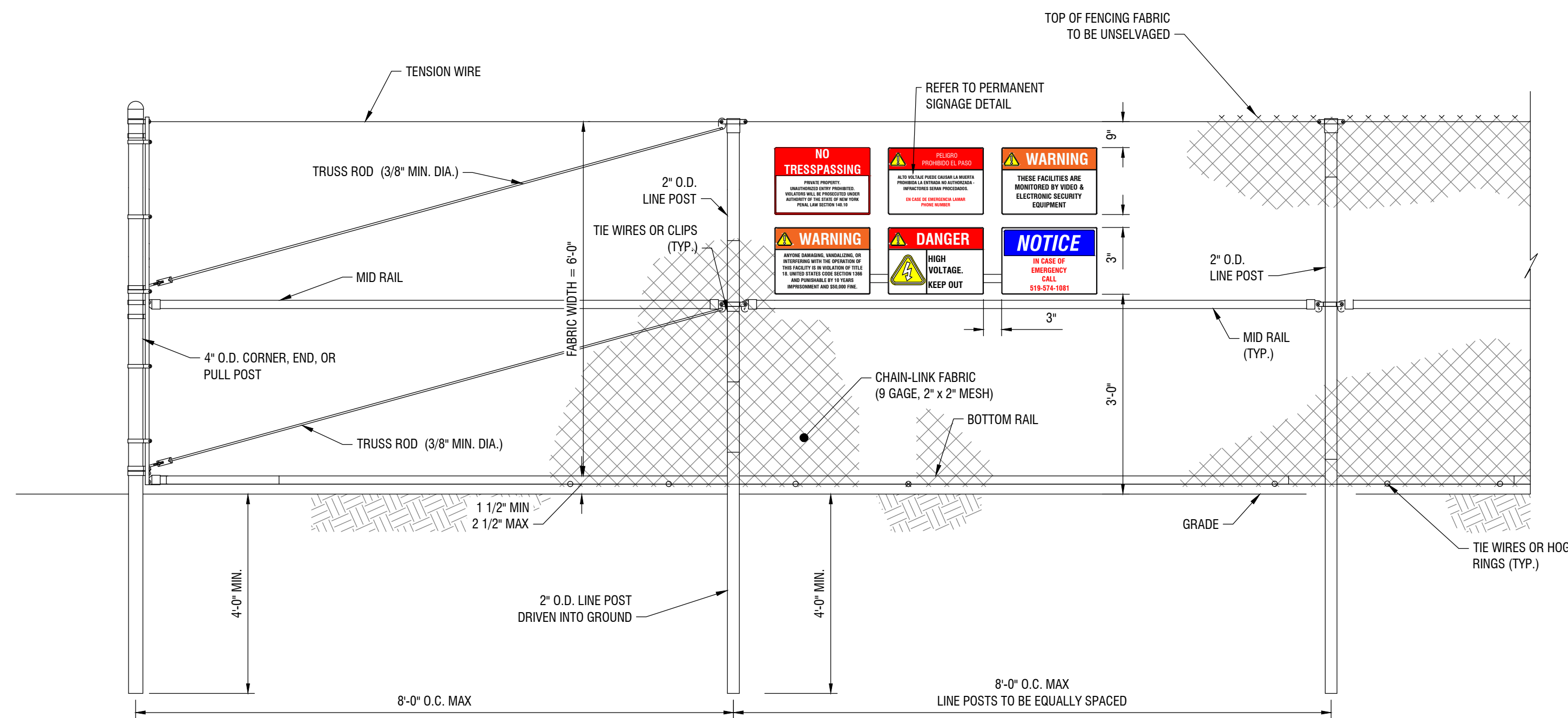
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DRAWING NO. C-300		SHEET 8 OF 14	
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN	ISSUED DATE 01/2022	REV 1	DESCRIPTION REVISED FENCE HEIGHT
STATE OF NEW YORK SEVEN C. MELLOTT LICENSED PROFESSIONAL ENGINEER 068072	FISHER ASSOCIATES WWW.FISHERASSOC.COM	DATE 2/4/22	BY SCM

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 USER: Steven Nelson



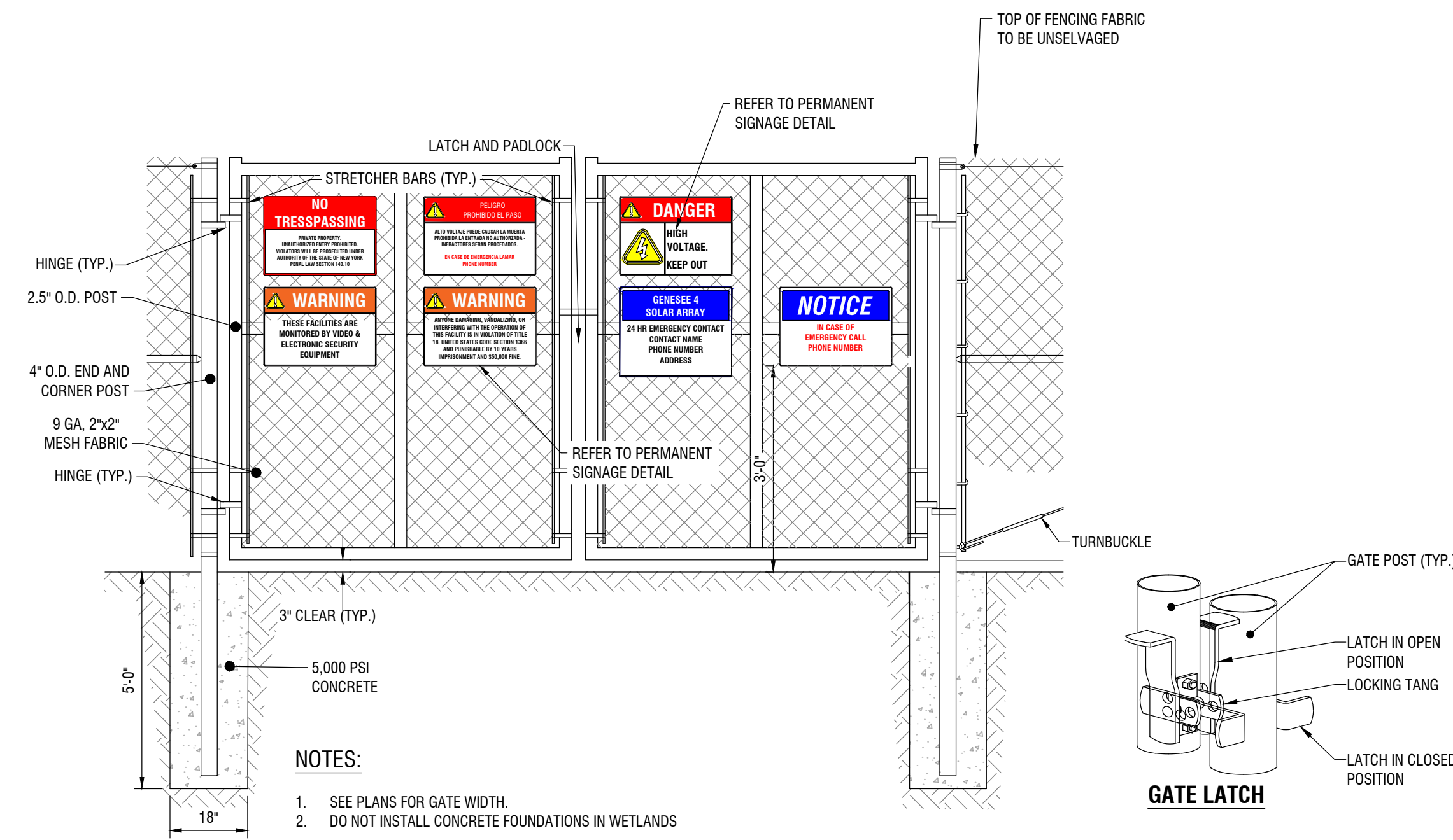
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DRAWING NO. C-301		SHEET 9 OF 14	
FISHER ASSOCIATES WWW.FISHERASSOC.COM		STATE OF NEW YORK STEVEN C. MELLOTT LICENSED PROFESSIONAL ENGINEER 068072	
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN		ISSUE DATE 01/2022	
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		DATE	BY

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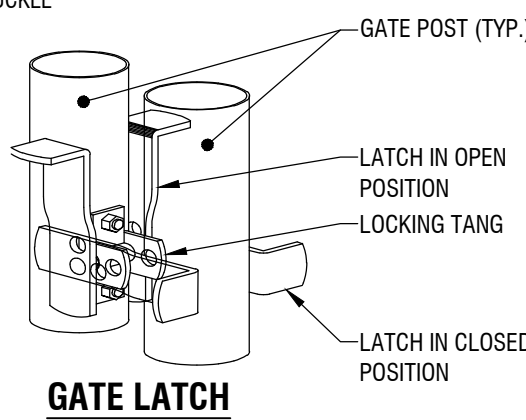
- NOTES:**
- SIGNS SHALL BE INSTALLED IN GROUPS EVERY 300'
 - DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

6' HIGH SECURITY FENCE (IN WETLANDS)
 NOT TO SCALE

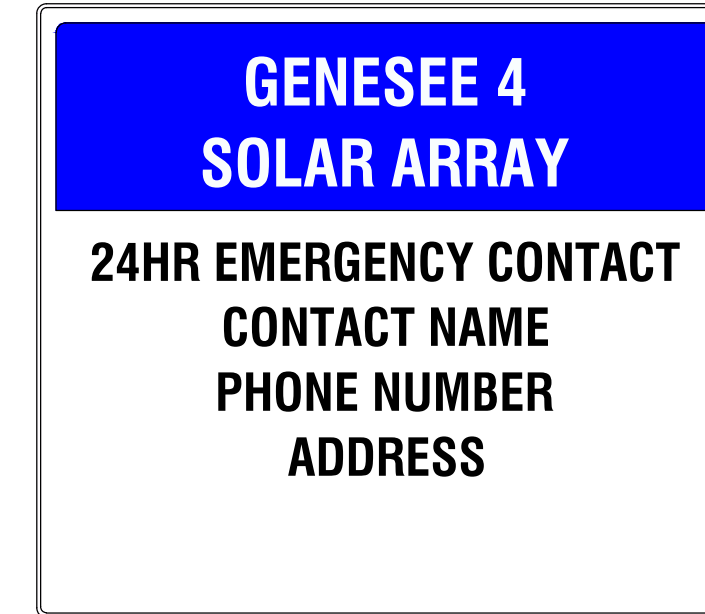
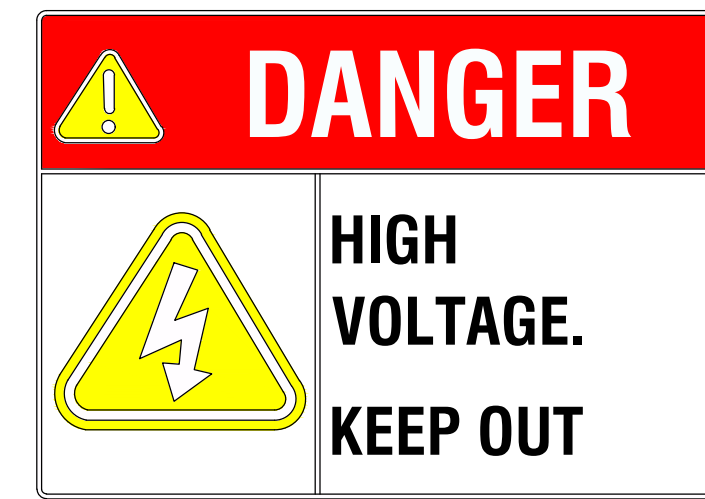
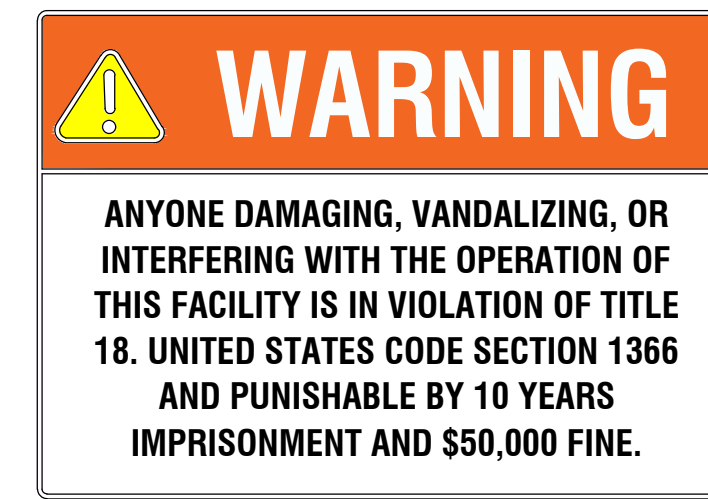


- NOTES:**
- SEE PLANS FOR GATE WIDTH.
 - DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

6' TALL DOUBLE SWING GATE
 NOT TO SCALE

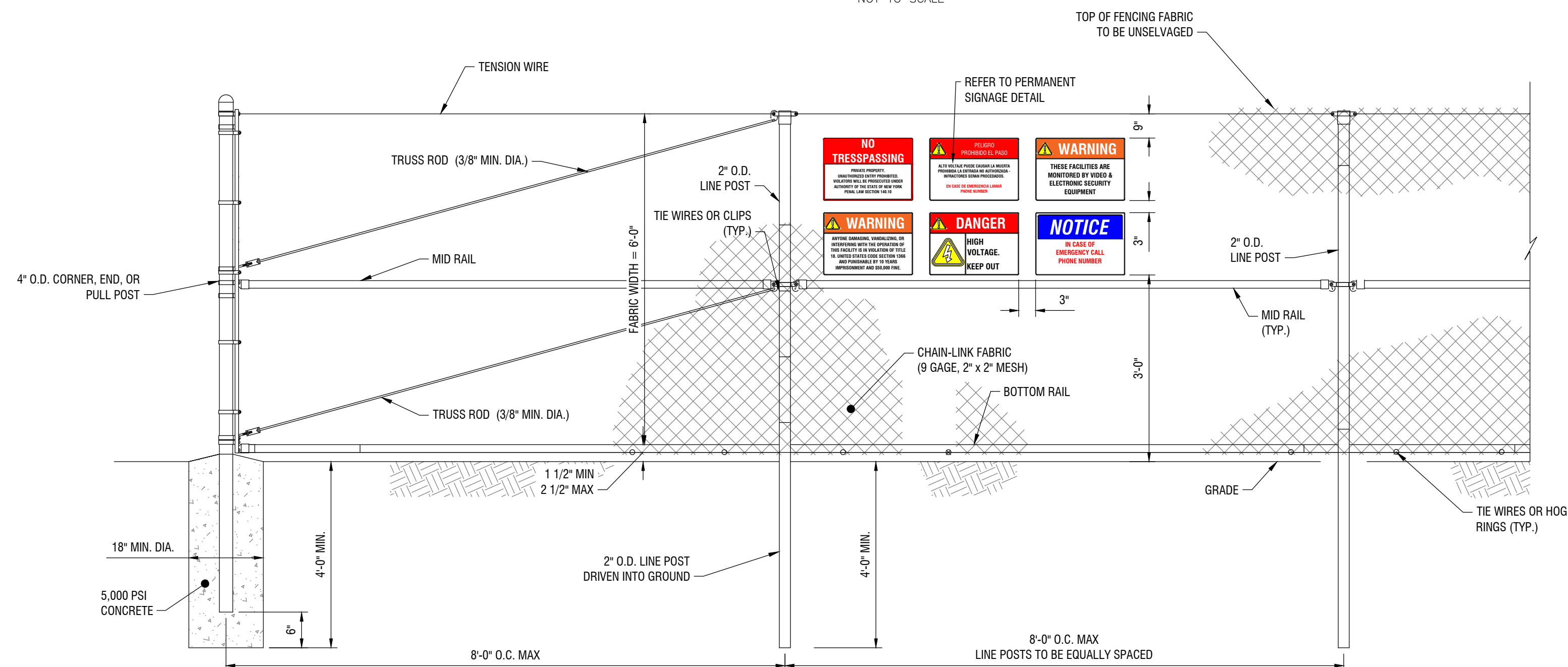


GATE LATCH



- NOTES:**
- ALL SIGNS TO BE 18" x 24" IN SIZE
 - SIGNS SHALL BE UV RESISTANT AND IN COLOR. SIGN MATERIAL SHALL BE HDPE OR LIGHT GAGE GALVANIZED STEEL.
 - SIGNS TO BE ATTACHED TO FENCING WITH PERMANENT FASTENERS.

PERMANENT SIGNAGE
 NOT TO SCALE



- NOTES:**
- SIGNS SHALL BE INSTALLED IN GROUPS EVERY 300'
 - DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

6' HIGH SECURITY FENCE
 NOT TO SCALE

NO.	REV.	DESCRIPTION	DATE	BY
7	1	REVISED FENCE HEIGHT	2/4/22	SCM
6	1			
5	1			
4	1			
3	1			
2	1			
1	1			

CONSENT TO POST
 FISHER ASSOCIATES
 P.E. L.S.A., D.P.C.

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PROJECT NO. 210296-03
 PROJECT MANAGER S. MELLOTT
 DRAWN BY B. KNIGHTON
 SCALE AS SHOWN
 ISSUE DATE 01/2022

STATE OF NEW YORK
 STEVEN C. MELLOTT
 068072
 LICENSED PROFESSIONAL ENGINEER

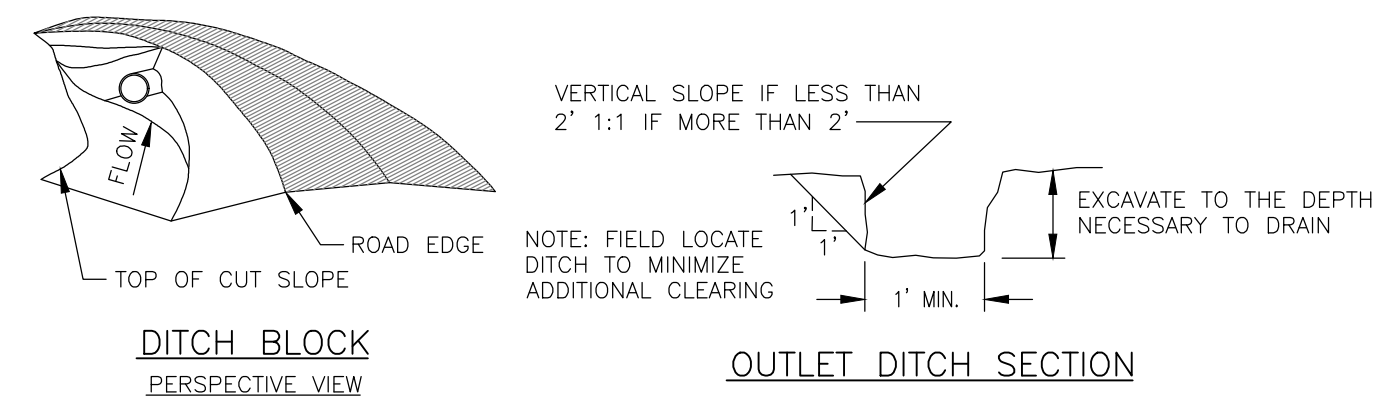
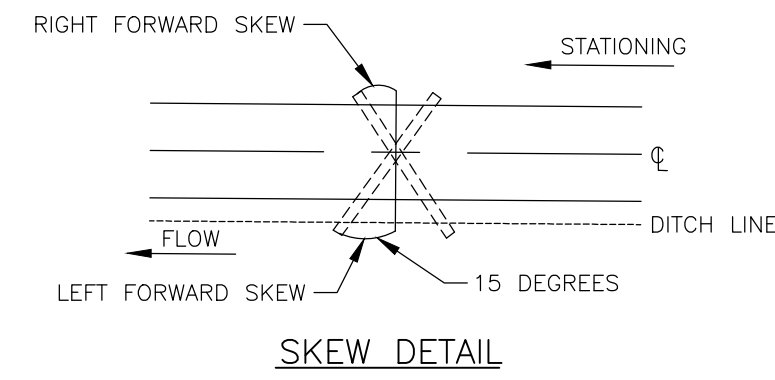
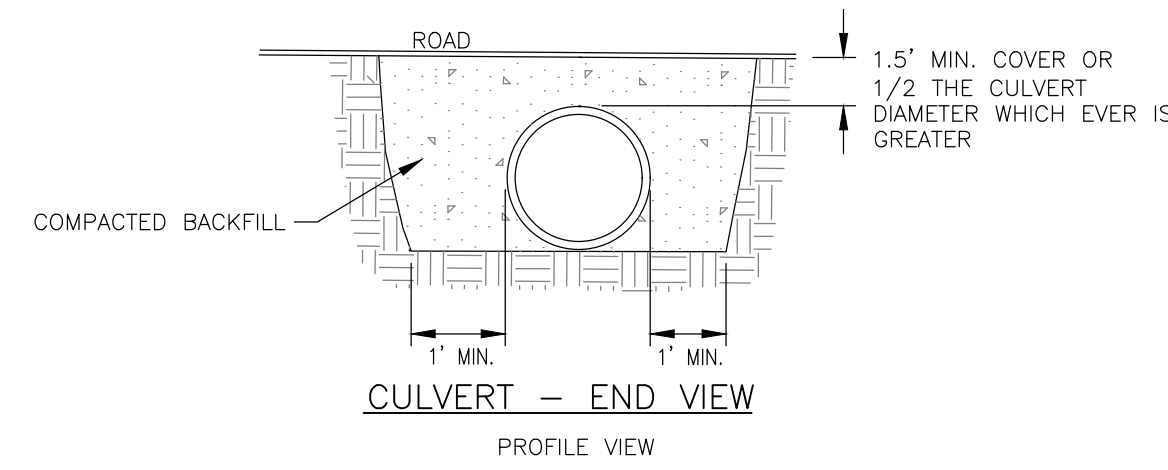
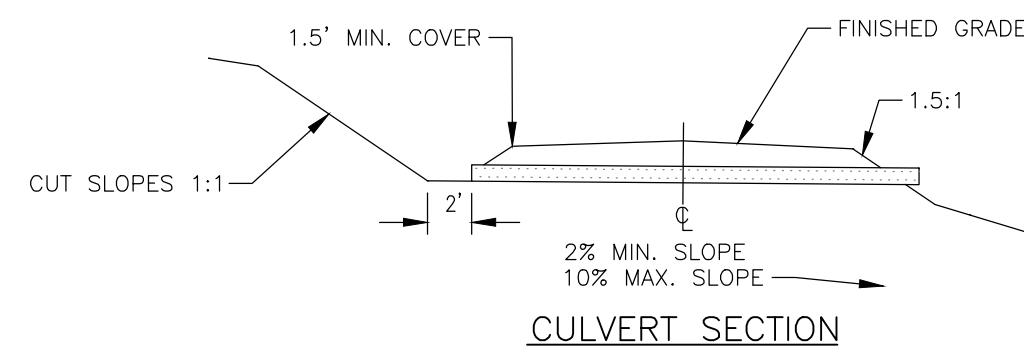
FISHER ASSOCIATES
 WWW.FISHERASSOC.COM

PROJECT: GENESEE 4 - 5 MW SOLAR PROJECT
 6464 SHEPARD ROAD
 TOWN OF PAVILION
 GENESEE COUNTY, NY 14525

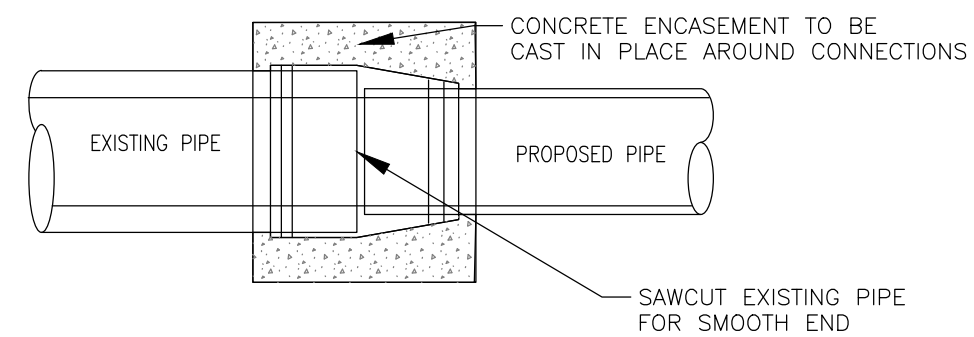
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DRAWING NO. C-705

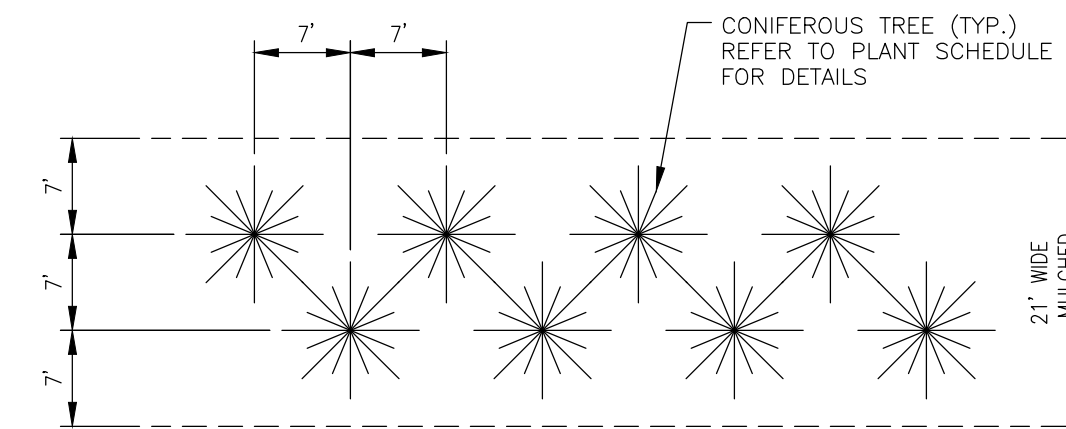
SHEET 11 OF 14



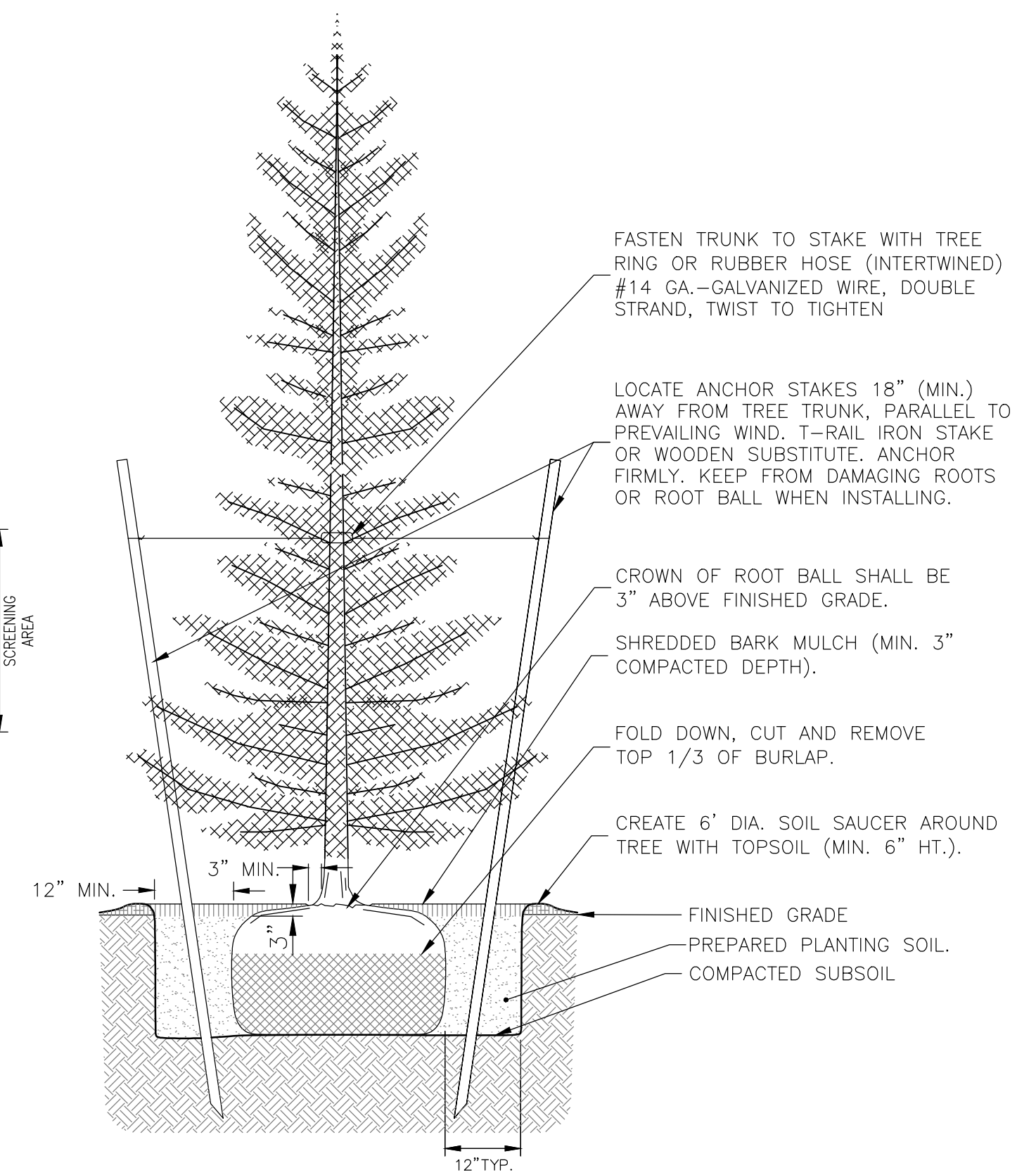
ROAD CULVERT
NOT TO SCALE



CONNECT PROPOSED STORM PIPE TO EXISTING STORM PIPE
NOT TO SCALE



MULCH AND CONIFEROUS TREE SCREENING AREA PLANTING DETAIL
NOT TO SCALE



CONIFEROUS TREE PLANTING DETAIL
NOT TO SCALE

PLANT SCHEDULE					
KEY	BOTANICAL NAME	COMMON NAME	SIZE & ROOT	SPACING	QUANTITY
	PICEA ABIES	NORWAY SPRUCE	TBD	7' O.C. (AS SHOWN)	89
	ABIES CONCOLOR	WHITE FIR	TBD	7' O.C. (AS SHOWN)	90

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DATE/TIME: 2/4/2022 1:03:12 PM
USER: Steven Nelson

7	REV	DESCRIPTION	DATE	BY
6	1	REVISED FENCE HEIGHT	2/4/22	SCM
5				
4				
3				
2				
1				

CONSULTANT: FISHER ASSOCIATES, P.E., L.L.C., D.P.C.
New York State Education Law Section 1703(2)(b) requires that the seal of the State of New York be placed on all drawings prepared by a professional engineer or surveyor. It is the responsibility of the engineer or surveyor to ensure that the seal is placed on all drawings prepared by the engineer or surveyor. The seal of the State of New York is a mark of the State of New York and is not to be used by anyone other than a duly licensed professional engineer or surveyor. The seal of the State of New York is a mark of the State of New York and is not to be used by anyone other than a duly licensed professional engineer or surveyor.

PROJECT NO.: 210296-03
PROJECT MANAGER: S. MELLOTT
DRAWN BY: B. KNIGHTON
SCALE: AS SHOWN
ISSUE DATE: 01/2022

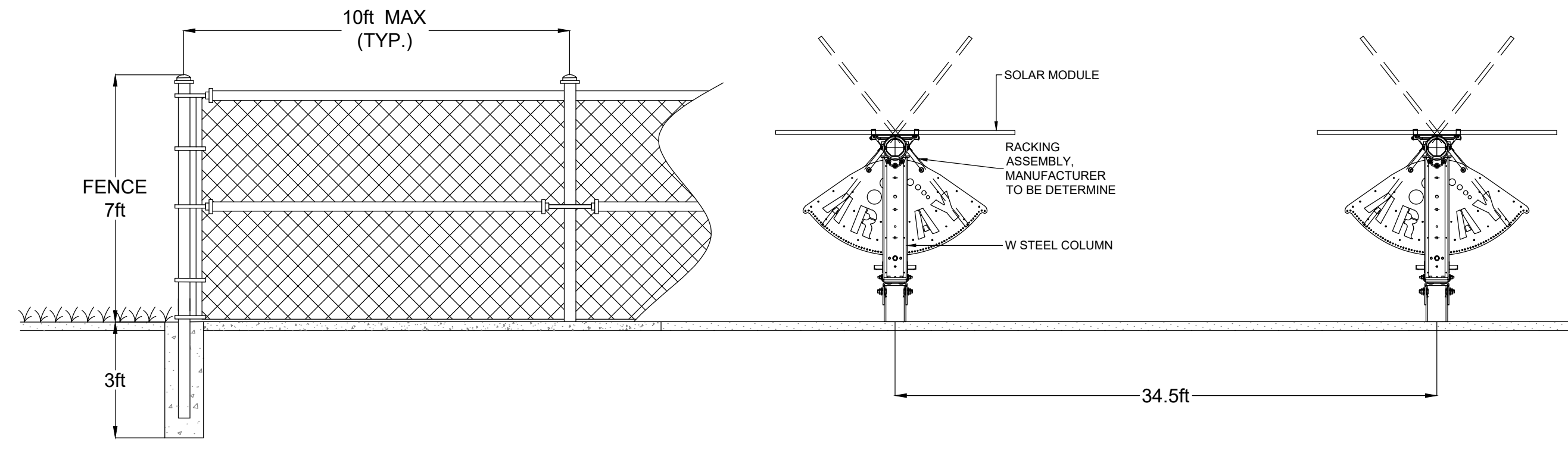
STATE OF NEW YORK
STEVEN C. MELLOTT
068072
REGISTERED PROFESSIONAL ENGINEER

FISHER ASSOCIATES
WWW.FISHERASSOC.COM

PROJECT: GENESEE 4 - 5 MW SOLAR PROJECT
6464 SHEPARD ROAD
TOWN OF PAVILION
GENESEE COUNTY, NY 14525
TITLE OF DRAWING: DRAINAGE AND LANDSCAPE DETAILS

DRAWING NO.: **C-715**
SHEET 13 OF 14

FILE NAME: H:\Projects\21\210296-03-Genesee-4\Eng\CAD\CUT\210296 C-700 Details.dwg
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 REPORT



SOLAR MODULE AND FRAME PROFILE
 NOT TO SCALE

PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		DRAWING NO. C-720		SHEET 14 OF 14	
TITLE OF DRAWING EQUIPMENT DETAILS		PROJECT MANAGER S. MELLOTT		DRAWN BY B. KNIGHTON	
PROJECT NO. 210296-03		SCALE AS SHOWN		ISSUE DATE 01/2022	
				CONSENT OF THE FISHER ASSOCIATES P.E. L.S.A. D.P.C. <small>New York State Education Law Section 1703(1)(b) requires that the seal of a professional engineer or architect be placed on all drawings and specifications prepared or supervised by the engineer or architect. The seal shall be placed on the drawing or specification at the location of the signature and the date of the preparation of the drawing or specification.</small>	
REV	DESCRIPTION	DATE	BY		
1	REVISED FENCE HEIGHT	2/4/22	SCM		
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Genesee 4 - 4.275MW AC Community Solar Decommissioning plan

February 7, 2022

Decommissioning plan for Genesee 4 Solar Project located at 6464 Shepard Road, Town of Pavilion.

Prepared and Submitted by NY CDG Genesee 4 LLC, the owner of Genesee 4 Solar Project.

As required by the Town of Pavilion, NY CDG Genesee 4 LLC present this decommissioning plan for Genesee 4 Solar project (the "Facility").

This Decommission Plan provides a description of decommissioning and restoration of 4.275MW Community Solar projects in NY. Start of Construction is planned for 2023 or 2024. The project will consist of perimeter fencing, solar arrays, single axis tracking racking structures and foundations, inverters, electrical collection system and gravel access roads.

For solar energy systems constructed on prime Farmland or Farmland of Statewide importance, such as this project, the restoration of such Farmland pursuant to the decommissioning and restoration guidelines of the NYS Ag and Markets Solar Energy Project Guidance should be followed.

Project lifetime is expected to be 35 years. The plan will need to be completely revised should there be an opportunity to extend the life or repower.

It is important to realize that the probability of an early decommissioning event that would lead to abandonment or long-term interruption is extremely low during the first 20 years of the Project life due to:

- Sophisticated financing and tax equity partners
- Equipment warranties
- Insurance and business interruption insurance for unforeseen failures
- Operations and maintenance planning
- Creation of a major equipment reserve fund for equipment failures
- Replacement costs declining steadily.

Decommissioning will occur as a result of any of the following conditions the land lease with the landowner at 6464 Shepard Road, Town of Pavilion ends. The lease could end for the following reasons:

1. The system is damaged and will not be repaired or replaced
2. The system does not produce power for 12 months
3. Any failures to meet obligations of the lease, local and utility regulations, or law.

The owner of the Facility, as provided for in its lease with the landowner, shall restore the property to its condition as it existed before the Facility was installed, pursuant to which may include the following:

1. Removal of all operator-owned equipment, concrete, conduits, structures, fencing, and foundations to a depth of 48 inches below the soil surface.
2. Removal of any solid and hazardous waste caused by the Facility in accordance with Local, State and Federal waste disposal regulations.

3. Removal of all graveled areas and access roads unless the landowner requests in writing for it to remain. These areas will be decompacted to a depth of 24" beneath the stone layer and that 12 inches of native topsoil is to be placed.
4. Disturbed soils must have subsoils buried and covered by at least 6 inches of native topsoil that is free of large rocks typical of subsoil and additional topsoil will be added as necessary to account for settlement.
5. All soil disturbed during decommissioning will be stabilized within two weeks with a perennial grass stabilization mix applied using standard NYSDEC erosion and sediment control methods and seeding rates applicable for the season, soil type, and slope.

All said removal and decommissioning shall occur within 12 months of the Facility ceasing to produce power for sale. Decommissioning tasks will be done over a period of 4-6 months.

Project stakeholders will be notified by the owner/operator a minimum of 6 months prior to initiating decommissioning activities. Local, County and State authorities will be notified, as needed, to discuss potential approvals required to complete decommissioning activities.

The deposit, executions, or filing with the Town of Pavilion Clerk of cash, a bond issued from a surety listed as acceptable sureties on Federal surety bonds in Circular 570 of the U.S. Department of the Treasury, letter of credit, or other form of security reasonably acceptable to the Town of Pavilion attorney and/or engineer, shall be in an amount sufficient to ensure the good faith performance of the terms and conditions of the permit issued pursuant hereto and to provide for the removal and restorations of the site subsequent to removal pursuant to the approved decommissioning plan. The amount of the bond or security shall be [X] of the cost of removal of the Tier 3 Solar Energy System and restoration of the property with an escalator of [X]% annually for the life of the Solar Energy System. In the event of default upon performance of such conditions, after proper notice and expiration of any cure periods, the cash deposit, bond, or security shall be forfeited to the Town of Pavilion, which shall be entitled to maintain an action thereon. The cash deposit, bond, or security shall remain in full force and effect until restoration of the property as set forth in the decommissioning plan is completed.

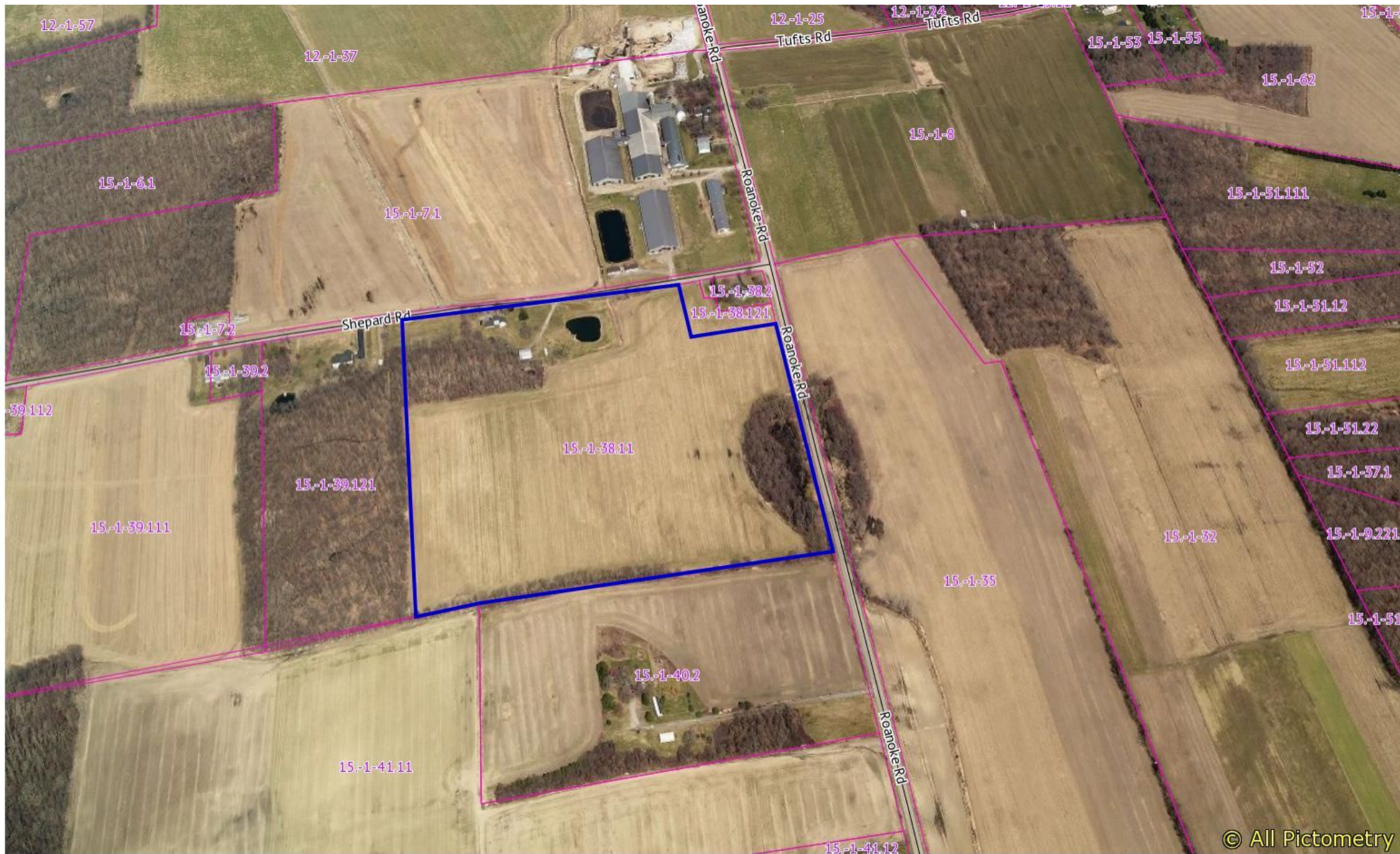
Summary of Decommissioning Costs

[Table of summary costs to be included at time of review and execution.]

The owner of the Facility, currently NY CDG Genesee 4 LLC, is responsible for this decommissioning.

Facility Owner Signature: _____ Date: _____

T-01-PAV-2-22



© All Pictometry

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either “Yes” or “No”. If the answer to the initial question is “Yes”, complete the sub-questions that follow. If the answer to the initial question is “No”, proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Genesee 4 Solar Project		
Project Location (describe, and attach a general location map): Located at 6464 Shepard Road, Pavilion, NY, 14525 within Genesee County (See attached map)		
Brief Description of Proposed Action (include purpose or need): The proposed Project involves the construction of an approximately 4.275-Megawatt (MWAC) solar facility in a fallow agricultural field located at 6464 Shepard Road in the Town of Pavilion (see Project Location Map). The Project Boundary is approximately 31.03-acres of a 39.8-acre parcel (parcel id# 15.-1-38.11). The facility will include one (1) porous gravel access road, ground-mounted solar photovoltaic (PV) arrays a perimeter fence, and an equipment pad for inverters/transformers. PV panels will be mounted on racking systems that will be pile-driven into the ground and then the solar facilities will be connected to the NYSEG electric grid. Existing roads will also be utilized to access the site. No cutting of trees is proposed for this project. Landscaping with proposed trees/bushes will be installed in the northeast portion of the Project to reduce the view of panels from the adjacent residences and public roads. The 31.03-acres Project Boundary includes all of the ancillary features such as the panel/array area, the fenced area, the access road, vegetative buffer/landscaping area, and work areas. However, the solar array area which includes the panel the fence area and panel/array area is only 19.6-acres of that. This is under the Town zoning limit of 20.0-acres and so the Project would not need a variance. The Project will provide clean, emission-free, renewable energy to the adjacent high-voltage electricity transmission grid.		
Name of Applicant/Sponsor: NY CDG Genesee 4 LLC		Telephone: 416-953-3495 E-Mail: bogdan.dinu@bwsolar.com
Address: 850 New Burton Road, Suite 201		
City/PO: Dover	State: Delaware	Zip Code: 19904
Project Contact (if not same as sponsor; give name and title/role): Bogdan Dinu, Director of Corporate Development at BW Solar		Telephone: 416-953-3495 E-Mail: bogdan.dinu@bwsolar.com
Address: 850 New Burton Road, Suite 201		
City/PO: Dover	State: Delaware	Zip Code: 19904
Property Owner (if not same as sponsor): Douglas and Suzanne Waite		Telephone: E-Mail:
Address: 6464 Shepard Road		
City/PO: Pavilion	State: New York	Zip Code:14525

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. (“Funding” includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No or Village Board of Trustees		
b. City, Town or Village Planning Board or Commission <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Town of Planning Board- Site Plan Approval, SEQR Negative Declaration	February 2022
c. City, Town or Village Zoning Board of Appeals <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Zoning Board of Appeals - Special Use Permit	February 2022
d. Other local agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
e. County agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	County Planning Board - Agricultural Statement	February 2022
f. Regional agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
g. State agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	General SPDES Permit; SHPO; NYSDAM;	February 2022
h. Federal agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
i. Coastal Resources. i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No iii. Is the project site within a Coastal Erosion Hazard Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? Yes No

- If Yes, complete sections C, F and G.
- If No, proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? Yes No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? Yes No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) Yes No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? Yes No

If Yes, identify the plan(s):

Parcel is within Agricultural District Genesee 3 (GENE003) under the Genesee County Agricultural and Farmland Protection Plan.

C.3. Zoning

- a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. Yes No
If Yes, what is the zoning classification(s) including any applicable overlay district?
The parcel is zoned as Agricultural Residential- 1 (AR-1)

- b. Is the use permitted or allowed by a special or conditional use permit? Yes No
- c. Is a zoning change requested as part of the proposed action? Yes No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

- a. In what school district is the project site located? Pavilion Central School District
- b. What police or other public protection forces serve the project site?
Le Roy Police Department
- c. Which fire protection and emergency medical services serve the project site?
Pavilion Fire Department
- d. What parks serve the project site?
Genesee County Park & Forest located approximately 3.5 miles from site

D. Project Details

D.1. Proposed and Potential Development

- a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial renewable solar energy utility project
- b. a. Total acreage of the site of the proposed action? _____ 31.03 acres
b. Total acreage to be physically disturbed? _____ 19.6 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 31.03 acres
- c. Is the proposed action an expansion of an existing project or use? Yes No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____
- d. Is the proposed action a subdivision, or does it include a subdivision? Yes No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? Yes No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____
- e. Will the proposed action be constructed in multiple phases? Yes No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
• Total number of phases anticipated _____
• Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
• Anticipated completion date of final phase _____ month _____ year
• Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion	_____	_____	_____	_____
of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? Yes No
 If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? Yes No
 If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

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

i. What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? Yes No
 If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? Yes No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? Yes No
 If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
 The Project has been designed to avoid all streams and wetlands. See Section F for more details.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres: The Project has been designed to avoid all streams and wetlands. See Section F for more details.

iii. Will the proposed action cause or result in disturbance to bottom sediments? Yes No
If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? Yes No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? Yes No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? Yes No
If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No
- Do existing lines serve the project site? Yes No

iii. Will line extension within an existing district be necessary to supply the project? Yes No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? Yes No
If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

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

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No

- Do existing sewer lines serve the project site? Yes No
- Will a line extension within an existing district be necessary to serve the project? Yes No

 If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? Yes No
 If Yes:

- How much impervious surface will the project create in relation to total size of project parcel?
 _____ Square feet or 0.02 acres (impervious surface)
 _____ Square feet or 31.03 acres (parcel size)
- Describe types of new point sources. Electrical equipment pads will be impervious.

- Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?
Existing drainage patterns will be retained for post-construct operations. Standard stormwater practices will be used (i.e. silt fence, all disturbed areas/soils will be stabilized according to the SWPPP) during construction. BMPs will be utilized.

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

- Will stormwater runoff flow to adjacent properties? Yes No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? Yes No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? Yes No
 If Yes, identify:

- Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

- Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

- Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? Yes No
 If Yes:

- Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) Yes No
- In addition to emissions as calculated in the application, the project will generate:
 - _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 - _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 - _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 - _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 - _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflouorocarbons (HFCs)
 - _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? Yes No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? Yes No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? Yes No

If Yes:

i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend
 Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? Yes No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____

vi. Are public/private transportation service(s) or facilities available within 1/2 mile of the proposed site? Yes No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? Yes No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Yes No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? Yes No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

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

iii. Will the proposed action require a new, or an upgrade, to an existing substation? Yes No

l. Hours of operation. Answer all items which apply.

<p>i. During Construction:</p> <ul style="list-style-type: none"> • Monday - Friday: _____ 7:00am-7:00pm • Saturday: _____ 7:00am-7:00pm • Sunday: _____ None under normal circumstance • Holidays: _____ None 	<p>ii. During Operations:</p> <ul style="list-style-type: none"> • Monday - Friday: _____ 24 hours • Saturday: _____ 24 hours • Sunday: _____ 24 hours • Holidays: _____ 24 hours
--	---

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? Yes No

If yes:

i. Provide details including sources, time of day and duration:
 Increase of noise will be temporary during Project construction time-frames on weekdays. After construction the Project will not produce discernible noise. See Section F for more details.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
 Describe: No tree clearing will be required for this Project. Additional landscaping of trees/bushes are proposed to be added in the site plan in the northeast corner of the Project.

n. Will the proposed action have outdoor lighting? Yes No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
 Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? Yes No
 If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? Yes No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? Yes No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? Yes No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? Yes No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____

- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? Yes No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? Yes No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: _____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

Urban Industrial Commercial Residential (suburban) Rural (non-farm)

Forest Agriculture Aquatic Other (specify): _____

ii. If mix of uses, generally describe:
 The project consists primarily of a fallow agricultural field located within the center of the parcel. Forested areas are located within the southeast and northwest corner, and a pond and wetland were observed on the overall parcel. The surrounding community is heavily agricultural with rural residential.

b. Land uses and coverytypes on the project site.

Land use or Coverytype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.0	0.02+/-	+0.02
• Forested	1.67+/-	1.67+/-	0.0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	29.36+/-	29.08+/-	-0.28
• Agricultural (includes active orchards, field, greenhouse etc.)	0.0	0.0	0.0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.0	0.0	0.0
• Wetlands (freshwater or tidal)	0.0	0.0	0.0
• Non-vegetated (bare rock, earth or fill)	0.0	0.0	0.0
• Other Describe: porous gravel access road	0.0	0.26+/-	+0.26

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

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? Yes No
If Yes,
i. Identify Facilities: _____

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:
• Dam height: _____ feet
• Dam length: _____ feet
• Surface area: _____ acres
• Volume impounded: _____ gallons OR acre-feet
ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection: _____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? Yes No
If Yes:
i. Has the facility been formally closed? Yes No
• If yes, cite sources/documentation: _____
ii. Describe the location of the project site relative to the boundaries of the solid waste management facility: _____
iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? Yes No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred: _____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? Yes No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: Yes No
 Yes – Spills Incidents database Provide DEC ID number(s): _____
 Yes – Environmental Site Remediation database Provide DEC ID number(s): _____
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures: _____
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? Yes No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s): _____

v. Is the project site subject to an institutional control limiting property uses? Yes No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? Yes No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ 6.6 feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Burdett silt loam, 3 to 8 % slopes	52.9 %
Nunda silt loam, 8 to 15 % slopes	18.3 %
Burdett silt loam, 0 to 3 % slopes	13.8 %

d. What is the average depth to the water table on the project site? Average: 0.5 - 2.0 feet

e. Drainage status of project site soils: Well Drained: _____ 0 % of site
 Moderately Well Drained: _____ 19.1 % of site
 Poorly Drained _____ 80.9 % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ 80.9 % of site
 10-15%: _____ 19.1 % of site
 15% or greater: _____ 0 % of site

g. Are there any unique geologic features on the project site? Yes No
 If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? Yes No

ii. Do any wetlands or other waterbodies adjoin the project site? See Section F Yes No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? Yes No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? Yes No
 If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? Yes No

j. Is the project site in the 100-year Floodplain? Yes No

k. Is the project site in the 500-year Floodplain? Yes No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? Yes No
 If Yes:
 i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site: See Section F. _____ _____ _____	_____ _____ _____
n. Does the project site contain a designated significant natural community? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. Describe the habitat/community (composition, function, and basis for designation): _____ _____ ii. Source(s) of description or evaluation: _____ iii. Extent of community/habitat: • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres	
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. Species and listing (endangered or threatened): _____ _____ _____	
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes: i. Species and listing: _____ See Section F. _____ _____	
q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, give a brief description of how the proposed action may affect that use: _____ _____	
E.3. Designated Public Resources On or Near Project Site	
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide county plus district name/number: <u>Genesee 003</u>	
b. Are agricultural lands consisting of highly productive soils present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No i. If Yes: acreage(s) on project site? <u>See Section F.</u> ii. Source(s) of soil rating(s): _____	
c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____ _____ _____	
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. CEA name: _____ ii. Basis for designation: _____ iii. Designating agency and date: _____	

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes:	
<i>i.</i> Nature of historic/archaeological resource: <input type="checkbox"/> Archaeological Site <input type="checkbox"/> Historic Building or District	
<i>ii.</i> Name: _____	
<i>iii.</i> Brief description of attributes on which listing is based: _____	
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
g. Have additional archaeological or historic site(s) or resources been identified on the project site?	
If Yes:	
<i>i.</i> Describe possible resource(s): _____	
<i>ii.</i> Basis for identification: _____	
h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes:	
<i>i.</i> Identify resource: _____	
<i>ii.</i> Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____	
<i>iii.</i> Distance between project and resource: _____ miles.	
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes:	
<i>i.</i> Identify the name of the river and its designation: _____	
<i>ii.</i> Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	
<input type="checkbox"/> Yes <input type="checkbox"/> No	

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Bogdan Dinu Date 2022-01-28

Signature  Title Director of Corporate Development



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



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	Yes

E.2.i. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	GENE003
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Full Environmental Assessment Form
Part 1 - Project and Setting

F. Additional Information

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- C.2. Adopted Land Use Plans..... 2
 - C.2.a. Comprehensive Plan..... 2
- C.3. Zoning..... 2
 - C.3.c. Zoning Variance 2

D. Project Details 2

- D.2. Project Operations..... 2
 - D.2.f. Air emissions and associated permits 2
 - D.2.m. Noise 2

E. Site and Setting of Proposed Development..... 3

- E.2. Natural Resources on or Near Project Site..... 3
 - E.2.a-f Bedrock, soils, water table, drainage, and slopes..... 3
 - E.2.h. Surface Water Features..... 5
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 - E.2.n. Significant Natural Community 5
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Tables:

Table 1: Soils Table

Figures:

- Figure 1: Project Location Map
- Figure 2: Agriculture Data Map
- Figure 3: NRCS Soils Map
- Figure 4: Wetland and Watercourse Map

Agency Consultations:

U.S. Fish and Wildlife Service, Information for Planning and Consultation
NYSDEC & Natural Heritage Program (NHP), Environmental Resource Mapper
NY State Historic Preservation Office (SHPO)

C. PLANNING AND ZONING

C.2. Adopted Land Use Plans

C.2.a. Comprehensive Plan

The Town of Pavilion adopted a new Comprehensive Plan in 2017, to address the long-range future of the community. According to the Zoning Map, the land use for this parcel is classified as Rural Agricultural. This Plan anticipates maintaining current levels of farming activity, support agricultural related businesses, and preserve open space and farmland throughout the Town. Additionally, as indicated in the Energy Section of the Plan, the Town encourages clean energy through the development of solar panels and wind technology. The Plan supports residents to install personal solar panels for personal use, and to take advantage of the is unique way of attaining clean energy.

Additionally, the Town of Pavilion has developed a specific Solar Policy. According to the Solar Policy, solar farms and solar energy systems may be allowed in Agricultural Residential 1 Zones with the issuance of a Special Use Permit. As mentioned previously the Project site is located within an Agricultural Residential 1 Zone, indicating that with an approval of a Special Use Permit, solar energy systems shall be allowed.

C.3. Zoning

C.3.c. Zoning Variance

The parcel is zoned as Agricultural Residential 1 (AR-1). The proposed development is a permitted use pursuant to the Town's issuance of a Special Use Permit based on Town Solar Policy. No zoning variances or changes are anticipated to be needed.

The 31.03-acres Project Boundary includes all of the ancillary features such as the panel/array area, the fenced area, the access road, vegetative buffer/landscaping area, and work areas. However, the solar array area which includes the panel the fence area and panel/array area is only 19.6-acres of that. This is under the Town zoning limit of 20.0-acres and so the Project would not need a variance.

D. PROJECT DETAILS

D.2. Project Operations

D.2.f. Air emissions and associated permits

The proposed action will involve the use of mobile construction equipment and vehicles that will emit a small amount of air pollutants during construction. Any potential air quality impacts will be de minimis and localized to the area of construction equipment. Construction equipment will use ultra-low sulfur diesel and, where practicable, diesel exhaust filters will be utilized. Once the Project has been completed, there will not be additional air emissions. Due to the nature of construction, a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit will not be required.

D.2.m. Noise

The proposed action will include the creation of noise or noise sources during construction. Noise sources are expected to be generated from construction equipment and vehicles during the weekdays Monday through Saturday, 7am – 7pm, as needed. Due to the temporary nature of the proposed action, noise barriers

or screens are not practical. Existing trees around the edge of the property will remain to the best extent practicable to act as a noise and visual barrier.

E. SITE AND SETTING OF PROPOSED DEVELOPMENT

E.1. Land Uses on and Surrounding the Project Site

E.2. Natural Resources on or Near Project Site

E.2.a-f Bedrock, soils, water table, drainage, and slopes

Table 1 displays the soil types that occur within the proposed Project area. Information was gathered from the USDA National Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database (see Figure 3 attached).

Table 1: Soils Table

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	Depth to Bedrock (inches)	Depth to Water Table (inches)	Drainage Class	Slope%	Prime Farmland?
ApA	Appleton silt loam, 0 to 3 percent slopes	1.83	5.9%	>80"	6-18"	Somewhat poorly drained	0-3%	Prime Farmland if Drained
BuA	Burdett silt loam, 0 to 3 percent slopes	4.28	13.8%	>80"	6-18"	Somewhat poorly drained	0-3%	Prime Farmland if Drained
BuB	Burdett silt loam, 3 to 8 percent slopes	16.41	52.9%	>80"	6-18"	Somewhat poorly drained	3-8%	Prime Farmland if Drained
CaA	Canandaigua silt loam, 0 to 2 percent slopes	1.12	3.6%	>80"	0-6"	Poorly drained	0-2%	Farmland of Statewide Importance
CoC	Conesus silt loam, 8 to 15 percent slopes	0.25	0.8%	>80"	18-24"	Moderately well drained	8-15%	Farmland of Statewide Importance
DaA	Darien silt loam, 0 to 3 percent slopes	1.09	3.5%	>80"	6-18"	Somewhat poorly drained	0-3%	Prime Farmland if Drained
DaB	Darien silt loam, 3 to 8 percent slopes	0.34	1.1%	>80"	6-18"	Somewhat poorly drained	3-8%	Prime Farmland if Drained
NuC	Nunda silt loam, 8 to 15 percent slopes	5.66	18.3%	>80"	18-24"	Moderately well drained	8-15%	Farmland of Statewide Importance
Pd	Palms muck	0.03	0.1%	>80"	0-12"	Very poorly drained	0-6%	Not prime farmland
Totals for Area of Interest		31.03	100.00%					

Note: these are the soils within the Project Boundary area.

E.2.h. Surface Water Features

Based on a review of the NYSDEC Environmental Resource Mapper there are no NYSDEC mapped wetlands and streams on the project parcel. There are two (2) USFWS National Wetland Inventory (NWI) wetlands mapped within the parcel (see Figure 4 attached). According to aerial image review and a field delineation conducted in September 2021 there is one (1) wetland and one (1) waterbody (pond) located on the parcel. None of the identified aquatic resources fall under NYSDEC jurisdiction. There are no recorded NYS water quality-impaired waterbodies on or within the vicinity of the Project parcel.

Even though, one wetland and one pond were delineated during the field survey on the parcel, the site plans show that the project boundary is excluding these areas thus there are no wetland nor streams within the project boundary. According to the Site Plans, there will be no impacts to the wetlands or streams.

E.2.m. Predominant wildlife species

Wildlife species likely to occur within the Project include common mammals, amphibians, and birds found in forested and rural settings including eastern chipmunk (*Tamias striatus*), eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), northern raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), woodchuck (*Marmota monax*), American toad (*Bufo americanus*), green frog (*Rana clamitans*), American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), American robin (*Turdus migratorius*), barn swallow (*Hirundo rustica*), blue jay (*Cyanocitta cristata*), Canada goose (*Branta canadensis*), downy woodpecker (*Picoides pubescens*), eastern bluebird (*Sialia sialis*), field sparrow (*Spizella pusilla*), northern cardinal (*Cardinalis cardinalis*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and wild turkey (*Meleagris gallopavo*).

E.2.n. Significant Natural Community

According to NYSDEC Environmental Resource Mapper there are no significant natural communities on or in the vicinity of the Project Boundary.

E.2.o-p. Endangered, Threatened and Rare Plants and Animals

According to NYSDEC Environmental Resource Mapper there are no New York State rare or species of concern plants or animals in the vicinity of the Project Boundary. According to a review of the USFWS Information for Planning and Consultation (IPaC) on January 21, 2022, there are no federal endangered or threatened species in the vicinity of the Project Boundary.

E.3. Designated Public Resources on or Near Project Site

E.3.b Agricultural lands consisting of highly productive soil.

According to the USDA NRCS Soil Survey Geographic (SSURGO) Database, the Project Boundary consists of 31.00+/- acres (99.9%) of land with highly productive soils. These soils include farmland classifications of “all areas are prime farmland”, “farmland of statewide importance”, and “prime farmland if drained”. An Agricultural Data Statement has been completed for the Project.

Figures



Project USGS Quad(s):
Stafford

Project Watershed(s):
Lower Genesee (HUC 04130003)

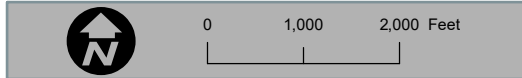
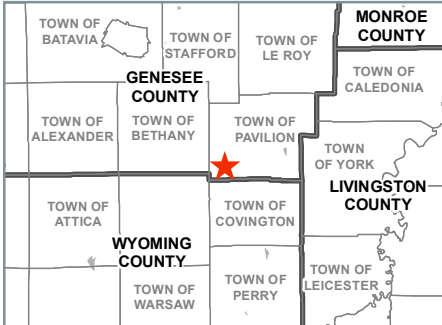
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North American Datum 1983



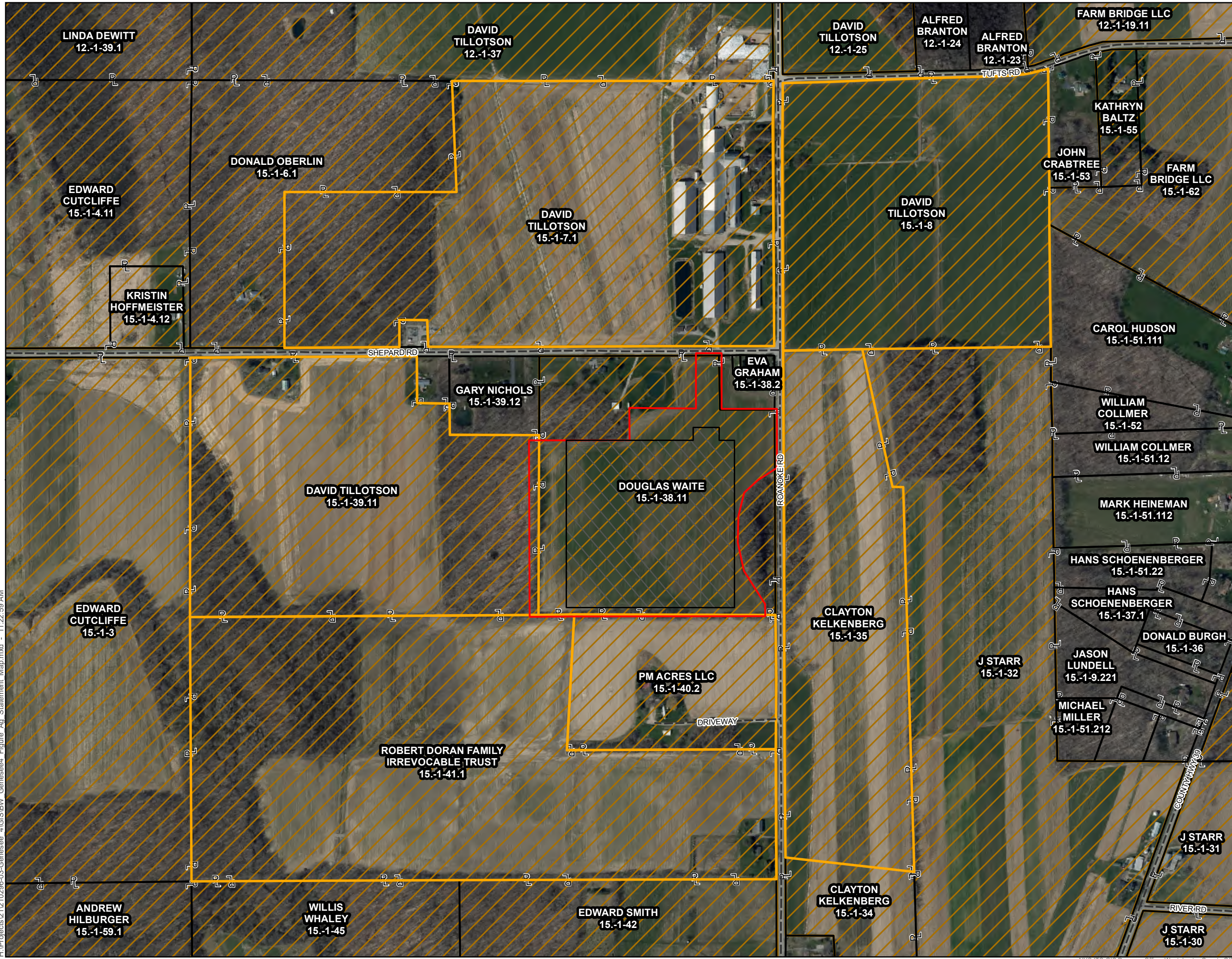
Project Area
 USGS 24K Quad Boundary

Data Sources:
United States Geological Survey 24k Topo Quad Map - usgs.gov

Author: CM Revision Date: 1/25/2022



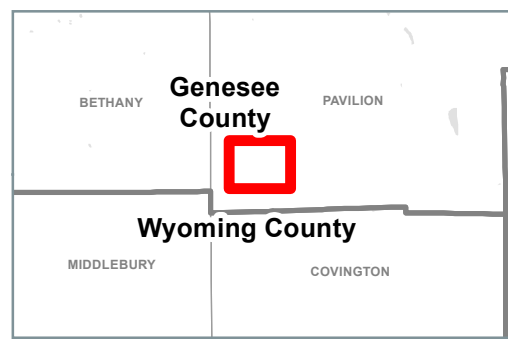
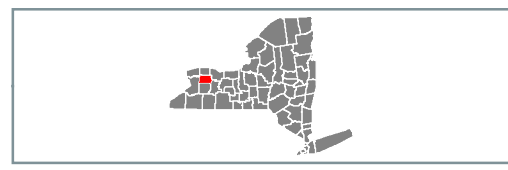
FISHER
 ASSOCIATES
NY CDG GENESEE 4 LLC
GENESEE 4 SOLAR PROJECT
PROJECT LOCATION MAP
GENESEE COUNTY, NY



- Road
- Project Boundary
- Parcel Boundary
- Parcels with Agriculture within 500' of Project
- Array Workspace
- Agricultural District (GENE003)










Map Revision Date: 1/25/2022 Map Author: CM

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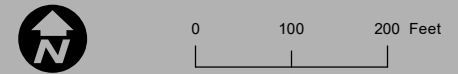
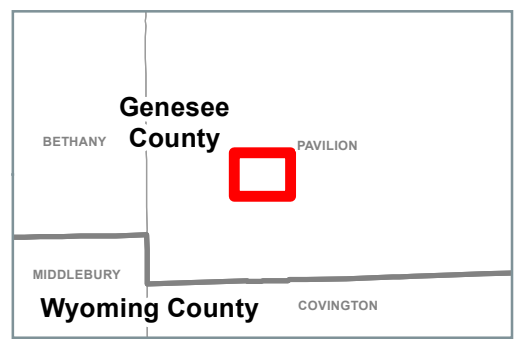
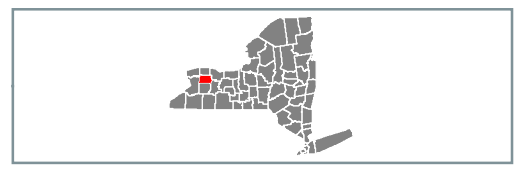


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**NY CDG GENESEE 4 LLC
GENESEE 4 SOLAR PROJECT
NRCS SOILS MAP
GENESEE COUNTY, NY**

-  Local Road
-  County Route
-  State Highway
-  Interstate Highway
-  NRCS Soils
-  Project Boundary
-  Towns
-  Villages
-  Counties

Map Revision Date: 1/25/2022 Map Author: CM

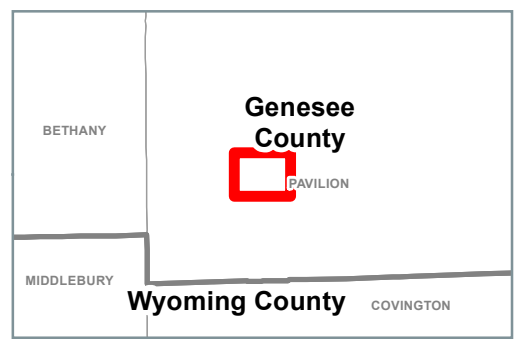
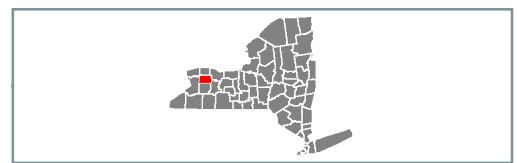
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**NY CDG GENESEE 4 LLC
GENESEE 4 SOLAR PROJECT
WETLAND AND WATERCOURSE MAP
GENESEE COUNTY, NY**



	Local Road
	County Route
	State Highway
	Interstate Highway
	Delineated Continuation Line
	NWI Wetland
	NYSDEC Wetland
	NYSDEC Wetland 100' Adjacent Area
	Delineated Waterbody
	Delineated Wetland
	Project Boundary
	Towns
	Villages
	Counties

Map Revision Date: 1/25/2022 | Map Author: CM



Notes:

1. Project located in the Lower Genesee (HUC 04130003)
2. Parcel was delineated in September 2021

Data Sources:

Aerial: NYSGIS Clearinghouse Othoimagery, 2021

H:\Projects\1210206-03-Genesee 4\GIS\BW_Genesee 4\GIS\BW_Genesee 4\Wetland Watercourse_Map.mxd - 11:26:19 AM

Agency Consultations

**U.S. Fish and Wildlife Service,
Information for Planning and Consultation**



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385

Phone: (607) 753-9334 Fax: (607) 753-9699

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

In Reply Refer To:

January 21, 2022

Consultation Code: 05E1NY00-2022-SLI-1019

Event Code: 05E1NY00-2022-E-03869

Project Name: BW Genesee 4 Solar

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <http://www.fws.gov/northeast/nyfo/es/section7.htm>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind

energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9385

(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2022-SLI-1019

Event Code: Some(05E1NY00-2022-E-03869)

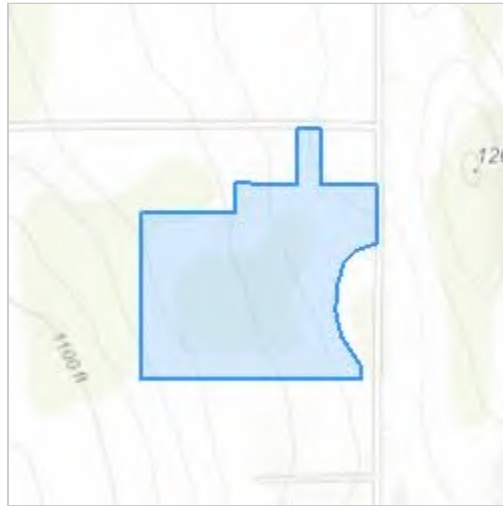
Project Name: BW Genesee 4 Solar

Project Type: ** OTHER **

Project Description: The project area is located in the Town of Pavilion, in Genesee County, NY. The project involves the construction of a new solar array. The existing site consists of agricultural lands. Proposed improvements include the installation of the solar arrays, and associated electrical equipment, gravel access roads, and perimeter fencing.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.8780101,-78.05375584237737,14z>



Counties: Genesee County, New York

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Agency Consultations

**NYSDEC & Natural Heritage Program (NHP),
Environmental Resource Mapper**

BW Genesee 4 Solar Project
Town of Pavilion, Genesee County, NY

NYSDEC Environmental Resource Mapper
Review of Rare Plants or Animals, Significant Natural Communities, and Imperiled Mussels



Agency Consultations

NY State Historic Preservation Office (SHPO)

**BW Solar
Genesee 4 Solar Project (Project)**

NY SHPO Cultural Resources Inventory System (CRIS)

CRIS
Cultural Resource Information System

HOME SUBMIT **SEARCH** COMMUNICATE

- Buildings
- LPC Landmarks
- Cemeteries
- DOT BINs
- Building Footprints
- National Register Building Listings
- Building Districts
- Archaeology Surveys
- Building Surveys
- Consultation Projects
- LPC Historic Districts
- Archaeological Sensitive Areas
- Certified Local Governments
- Qualifying Census Tracts
- State Park Land
- Adirondack Forest Preserve NHL Boundary
- Bedrock Geology
- 117th Congressional Districts
- Minor Civil Divisions

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Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applicable]

Project :
 Date :

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer “**Yes**” to a numbered question, please complete all the questions that follow in that section.
- If you answer “**No**” to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box “Moderate to large impact may occur.”
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the “whole action”.
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) <i>If “Yes”, answer questions a - j. If “No”, move on to Section 2.</i>			
	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

NO

YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

NO

YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input type="checkbox"/>	<input type="checkbox"/>

I. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. NO YES
(See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)
If “Yes”, answer questions a - h. If “No”, move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. NO YES
(See Part 1. E.2)
If “Yes”, answer questions a - g. If “No”, move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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6. Impacts on Air			
The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) <i>If "Yes", answer questions a - f. If "No", move on to Section 7.</i>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO ₂) ii. More than 3.5 tons/year of nitrous oxide (N ₂ O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF ₆) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2h	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

7. Impact on Plants and Animals			
The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) <i>If "Yes", answer questions a - j. If "No", move on to Section 8.</i>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input type="checkbox"/>	<input type="checkbox"/>

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____	E1b	<input type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

8. Impact on Agricultural Resources			
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.)		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
<i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: <u>Solar arrays will be temporary and not cause a permanent ag land conversion.</u>		<input type="checkbox"/>	<input type="checkbox"/>

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) <i>If "Yes", answer questions a - g. If "No", go to Section 10.</i>			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) <i>If "Yes", answer questions a - e. If "No", go to Section 11.</i>			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical 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.	E3e	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input type="checkbox"/>	<input type="checkbox"/>

d. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
e. If any of the above (a-d) are answered “Moderate to large impact may occur”, continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property’s setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. NO YES
(See Part 1. C.2.c, E.1.c., E.2.q.)
If “Yes”, answer questions a - e. If “No”, go to Section 12.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or “ecosystem services”, provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) NO YES
If “Yes”, answer questions a - c. If “No”, go to Section 13.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems.

 NO YES

(See Part 1. D.2.j)

If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy.

 NO YES

(See Part 1. D.2.k)

If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting.

 NO YES

(See Part 1. D.2.m., n., and o.)

If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.)
If "Yes", answer questions a - m. If "No", go to Section 17.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans.
 (See Part 1. C.1, C.2. and C.3.)
 If “Yes”, answer questions a - h. If “No”, go to Section 18.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action’s land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character.
 (See Part 1. C.2, C.3, D.2, E.3)
 If “Yes”, answer questions a - g. If “No”, proceed to Part 3.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>



Agricultural Data Statement

Date 01/28/2022

Instructions: This form must be completed for any application for a special use permit, site plan approval, use variance or a subdivision approval requiring municipal review that would occur on property within 500 feet of a farm operation located in a NYS Dept. of Ag & Markets certified Agricultural District.

Applicant	Owner if Different from Applicant
Name: <u>NY CDG Genesee 4 LLC</u> Address: <u>850 New Burton Road, Suite 201</u> <u>Dover, Delaware 19904</u>	Name: <u>Douglas and Suzanne Waite</u> Address: <u>6464 Shepard Road</u> <u>Pavilion, NY 14525</u>

1. Type of Application: Special Use Permit; Site Plan Approval ; Use Variance;
(circle one or more) Subdivision Approval

2. Description of proposed project: The proposed Project involves the construction of an approximately 4.275-Megawatt (MWAC) solar facility in a fallow agricultural field located at 6464 Shepard Road in the Town of Pavilion. The Project Boundary is approximately 31.03-acres, of the total 39.8-acre parcel. The facility will include one (1) porous gravel access road, ground-mounted solar photovoltaic (PV) arrays a perimeter fence, and an equipment pad for inverters/transformers.

3. Location of project: Address: 6464 Shepard Road, Pavilion, NY 14525
Tax Map Number (TMP) 15.-1-38.11


4. Is this parcel within an Agricultural District? NO YES (Check with your local assessor if

5. If YES, Agricultural District Number Genesee 3 you do not know)

6. Is this parcel actively farmed? NO YES

7. List all farm operations within 500 feet of your parcel. Attach additional sheets if necessary.

Name: <u>See Attached</u> Address: _____ Is this parcel actively farmed? <input type="checkbox"/> NO <input type="checkbox"/> YES	Name: _____ Address: _____ Is this parcel actively farmed? <input type="checkbox"/> NO <input type="checkbox"/> YES
Name: _____ Address: _____ Is this parcel actively farmed? <input type="checkbox"/> NO <input type="checkbox"/> YES	Name: _____ Address: _____ Is this parcel actively farmed? <input type="checkbox"/> NO <input type="checkbox"/> YES


Signature of Applicant

Signature of Owner (if other than applicant)

Reviewed by: _____
Signature of Municipal Official

Date

NOTE TO REFERRAL AGENCY: County Planning Board review is required. A copy of the Agricultural Data Statement must be submitted along with the referral to the County Planning Department.

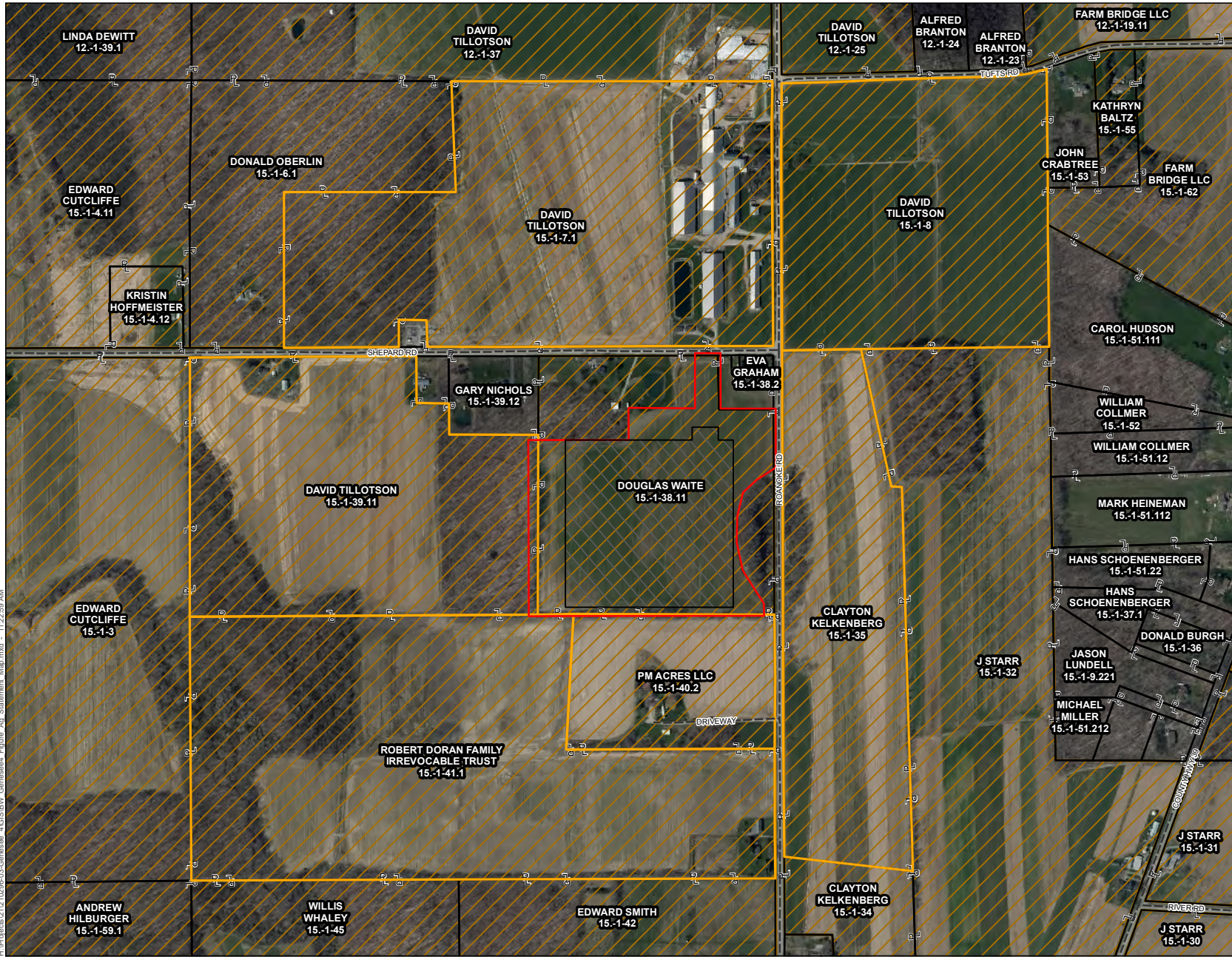
***Agricultural Data Statement
Additional Information***

Question 7: List all farm operations within 500-feet of your parcel.

Parcel Id #	Property Owner Name	Parcel Street Address	Owner Mailing Address	Parcel Acres
15.-1-35	Clayton Kelkenberg	Roanoke Rd	11304 Starr Rd Wyoming, NY 14591	41.1
15.-1-39.11	David Tillotson	6360 Shepard Rd	11129 River Rd Pavilion, NY 14525	54.6
15.-1-7.1	David Tillotson	10972 Roanoke Rd	11129 River Rd Pavilion, NY 14525	75.1
15.-1-8	David Tillotson	Roanoke Rd	11129 River Rd Pavilion, NY 14525	49.4
15.-1-40.2	PM Acres LLC	11132-36 Roanoke Rd	3825 Tuttle Rd Piffard, NY 14533	19.1
15.-1-41.1	Robert Doran Family Irrevocable Trust	11184 Roanoke Rd	5866 North Byron Rd Byron, NY 14422	87.3

Agricultural Data Statement Figure

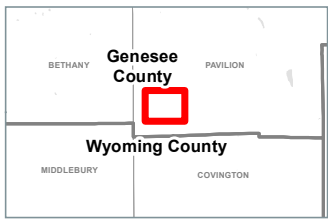
NY CDG GENESEE 4 LLC
GENESEE 4 SOLAR PROJECT
AGRICULTURAL DATA MAP
GENESEE COUNTY, NY



- Road
- Project Boundary
- Parcel Boundary
- Parcels with Agriculture within 500' of Project
- Array Workspace
- Agricultural District (GENE003)

Map Revision Date: 1/25/2022 Map Author: CM

0 255 510 Feet



H:\Projects\1210206\03-Genesee 4\GIS\BW_Genesee 4\GIS\BW_Genesee 4_Equip_Ag_Statement_Map.mxd - 11/22/2021 11:22:59 AM

PREPARED FOR:



BW SOLAR
1800 WEST LOOP SOUTH
Houston, TX 77027

GENESEE 4 SOLAR PROJECT

TOWN OF PAVILION, GENESEE COUNTY, NEW YORK

WETLAND AND WATERCOURSE DELINEATION REPORT

October 2021



PREPARED BY:



180 CHARLOTTE STREET
ROCHESTER, NEW YORK 14607
FISHER ASSOCIATES PROJECT NO. 210296.03

EXECUTIVE SUMMARY

On behalf of BW Solar, Fisher Associates' Environmental Scientists conducted a field delineation on September 27, 2021, to identify potentially jurisdictional federal Waters of the U.S. (WOTUS) and potentially jurisdictional state waters, including wetlands and watercourses within the Project Study Limits defined to support the Genesee 4 Solar Project. The Project Study Limits consist of a 39.59-acre area, which encompasses potential construction and limits of disturbance required for the Project. The Project Study Limits are depicted on the attached Wetland and Watercourse Delineation mapping.

The Project Study Limits are located off of Shepard Road and Roanoke Road in the Town of Pavilion, Genesee County, New York. The majority of the Project Study Limits consist of an open, active agricultural corn field, deciduous forested areas, and a residential home. They are bounded by Shepard Road to the north, Transit Road to the west, Roanoke Road to the east, and Hudson Road to the south. They are located within the Lower Genesee Watershed (HUC04130003) and is drained by an unnamed tributary of Oatka Creek that flows south and ultimately flowing into the Genesee River.

The Project Study Limits were delineated based upon the methodology outlined in the *1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (2012 Regional Supplement), and the *1995 New York State Freshwater Wetlands Delineation Manual*. Using these methodologies, preliminary delineation mapping was produced and is included along with the attached investigation description, mapping and discussion. During the delineation, One (1) wetland, totaling 1.33-acres, that consisted of 1.22-acres of PFO and 0.11-acre of PSS wetlands was delineated within the Project Study Limits. In addition, one (1) intermittent agricultural/roadside ditch totaling 416-linear feet was delineated within the Project Study Limits.

Based on conditions observed, the USACE will likely take jurisdiction over Wetland 001 due to its apparent connection to an unnamed tributary of Oatka Creek that flows south and eventually contributes flow to the Genesee River which is a traditional navigable water (TNW). Additionally, the USACE is not anticipated to take jurisdiction over delineated Ditch 001 due to being an agricultural/roadside ditch within an upland area.

It is not anticipated that the New York State Department of Environmental Conservation (NYSDEC) will invoke jurisdiction over Wetland 001 as it is not within proximity (i.e., less than 50 meters) of a NYSDEC wetland or their regulated 100-foot adjacent areas. It is also anticipated that the NYSDEC will not invoke jurisdiction over delineated Ditch 001 since NYSDEC typically does not regulate roadside or agricultural ditches.

WETLAND AND WATERCOURSE DELINEATION REPORT

GENESEE 4 SOLAR PROJECT

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GENESEE 4 SOLAR PROJECT
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PROJECT INFORMATION SHEET

General

Project Name: Genesee 4 Solar Project
State: New York
County: Genesee County
Town: Pavilion

Latitude: 42.877835 North
Longitude: -78.053574 West

Project Study Limit Size: 39.59-acres

HUC Code: 04130003 (Lower Genesee Watershed)

Waterbodies (TNW): Palustrine forested and scrub-shrub wetland.

Corresponding Information

USGS Quad Map: Stafford, New York

USDA Soils Map: Genesee County

Owner/Applicant

Name: BW Solar
Address: 1800 West Loop South
Houston, Texas 77027

Contact: Dan Huntington: (585) 727-9918

Consultant

Name: Fisher Associates
Address: 180 Charlotte Street
Rochester, NY 14607

Contact: Nicole Lake, WPIT: (585) 334-1310

1.0 INTRODUCTION

On behalf of BW Solar, Fisher Associates' Environmental Scientists conducted a field delineation on September 27, 2021, to identify potentially jurisdictional federal Waters of the U.S. (WOTUS) and potentially jurisdictional state waters, including wetlands and watercourses within the Project Study Limits defined to support the Genesee 4 Solar Project. The Project Study Limits consist of a 39.59-acre area, which encompasses potential construction and limits of disturbance required for the Project. The Project Study Limits are depicted on the attached Wetland and Watercourse Delineation mapping.

2.0 SITE INFORMATION

2.1 Site Location

The Project Study Limits are located off of Shepard Road and Roanoke Road in the Town of Pavilion, Genesee County, New York (see *Figure 1: Project Vicinity and Index Map*). They are located within the Lower Genesee Watershed (HUC04130003) and is drained by an unnamed tributary of Oatka Creek that flows south and ultimately flowing into the Genesee River. The Project is in the Glaciated Allegheny Plateau and Catskill Mountains Region of the Northeastern Forage and Forest Region.

2.2 Site Description

The majority of the Project Study Limits consist of an open, active agricultural corn field, deciduous forested areas, and a residential home. They are bounded by Shepard Road to the north, Transit Road to the west, Roanoke Road to the east, and Hudson Road to the south (see *Figure 2: Wetland and Watercourse Delineation Map*).

3.0 REGULATORY INFORMATION

Both New York State and the U.S. federal government have rules and regulations that must be followed when it comes to defining wetlands and watercourses and which features are determined to be regulated.

3.1 Regulatory Definitions

A “tributary” is defined by the USACE as a water that contributes flow, either directly or through another water (including an impoundment) to a water that is characterized by the presence of the physical indicators of a bed and bank and an ordinary high-water mark (OHWM). Watercourse flow regimes of either perennial, intermittent or ephemeral were noted for each channel based on the U.S. Environmental Protection Agency's (EPA) stream definitions (U.S. EPA, 2013) as noted below.

- Perennial (year-round) – Those streams that typically have flowing water in them year-round. Most of the water comes from smaller upstream waters or groundwater while runoff from rainfall or other precipitation is supplemental.
- Intermittent (seasonal) – Those streams that flow during certain time of the year when smaller upstream waters are flowing and when groundwater provides enough water for stream flow. Runoff from rainfall or other precipitation supplements the flow of a seasonal stream. During dry periods, seasonal streams may not have flowing surface water.
- Ephemeral (precipitation dependent) – Those streams which only flow after precipitation. Runoff from rainfall is the primary source of water for these streams.

Additionally, these definitions are based on the understanding of conditions in a “typical year”. Which is the normal periodic range of precipitation and other climactic variables for a waterbody. “Typical year” is a term that ensures agencies are considering normal (i.e. typical) hydrologic flows or surface water connections that occur under normal conditions rather than making jurisdictional determinations based on conditions that are abnormally wet or dry.

3.2 Federal Agency Regulations

As of August 30, 2021, waters of the United States (WOTUS) that are regulated and jurisdictional by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), under the Clean Water Act, are based on the rules and guidelines are based on the “Recodification of Pre-Existing Rules” (pre-2015) as stated in 33CFR Part 328 of the Federal Register (October 22, 2019). Outlined below are the agencies interpretation of WOTUS consistent with the pre-2015 regulatory regime:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
4. All impoundments of waters otherwise defined as WOTUS under this definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act (other than cooling ponds which also meet the criteria of this definition) are not WOTUS.

WOTUS do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean water Act jurisdiction remains with the EPA.

3.3 New York State Department of Environmental Conservation Regulations

The NYSDEC has separate regulations when it comes to determining jurisdiction of wetlands and watercourses within the states borders.

3.3.1 Freshwater Wetlands

Under Article 24: Freshwater Wetlands Act of the NYS Environmental Conservation Law (ECL) (6NYCRR Part 663, Part 664 and Part 665), the NYSDEC is charged with preventing despoliation and destruction of freshwater wetlands. NYSDEC defines freshwater wetlands as lands and submerged lands, commonly called marshes, swamps, sloughs, bogs, and flats, supporting aquatic or semi-aquatic vegetation. NYSDEC has classified regulated wetlands according to their respective functions, values and benefits into Class I, II, III or IV. Class I wetlands are the most valuable. Except in the Adirondack Park, a freshwater wetland would be regulated by the NYSDEC if it is at least 12.4-acres or an already mapped NYSDEC wetland (see Section 5.1.1). Additionally, upland areas within a 100-feet of a NYSDEC jurisdictional wetland are also regulated.

3.3.2 State Protected Waterways

Under Article 15: Protection of Waters Program of the NYS ECL (6NYCRR Part 608), the NYSDEC is charged with preserving and protecting the states lakes, rivers, streams and ponds. All waters of the state are provided a class and standard designation based on existing or expected best usage of each water or waterway segment. These are:

- Classification AA or A is assigned to waters used as a source of drinking water.
- Classification B indicates a best usage for swimming and other contact recreation, but not for drinking water.
- Classification C is for waters supporting fisheries and suitable for non-contact activities.
- The lowest Classification and standard is D.

Waters with Classifications A, B, and C may also have a standard designation of (T), indicating that it may support trout population, or (TS) indicating that it may support trout spawning. Small waterbodies (ponds and lakes) with a surface area of less than 10-acres, located within the stream course are considered part of the stream and subject to regulation. Streams and small waterbodies with a Classification of AA, A or B, or with a Classification C with a standard designation of (T) or (TS) are collectively referred to as “protected streams” and are subject to the stream protection provisions of the Protection of Waters regulation.

4.0 **METHODOLOGY**

4.1 **Preliminary Offsite Investigation / Data Review**

A review of publicly available resources was performed prior to the onsite field investigation in order to determine if there is the potential for jurisdictional areas, and if present, the extent of these areas located within the Project Study Limits. These mapping resources are represented on *Figure 2: Wetland and Watercourse Delineation Map* and generally include but are not limited to:

- New York State Freshwater Wetlands Mapping (NYSFW);
- New York State Protection of Waters Regulatory Program Streams Mapping (NYSS);
- U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Database;
- U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soils Database; and
- United States Geographical Survey (USGS) Mapping.

4.2 **Wetland Field Investigations**

Wetland boundaries were field delineated according to the routine onsite methodology described in the *1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (2012 Regional Supplement) (2012 Regional Supplement), and the *1995 New York State Freshwater Wetlands Delineation Manual*.

Wetlands were identified based on the presence of hydric soils; a vegetative community dominated by hydrophytes, and inundated or saturated conditions, and/or indicators of hydrologic patterns. Wetlands within the Project Study Limits were classified according to the USFWS *Classification of Wetland and Deepwater Habitats of the United States*. Wetland classifications were based on vegetation type and dominance: palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO), and

palustrine open-water (POW). A project-specific identification number was given to the delineated wetland. Wetland delineation data relative to vegetation, hydrology, soils and general observations was documented on routine wetland data forms consistent with the guidance of the 2012 Regional Supplement.

If observed, wetland boundaries were flagged in the field and the flagged locations were recorded with a sub-meter accuracy global positioning system (GPS) unit to further clarify their locations. Wetland field data points were established within close proximity to flagged wetland boundaries in order to document upland/ dryland and wetland conditions existing along wetland boundaries. Mapping depicting the location of the delineated wetlands within the Project Study Limits are provided as an attachment (see *Figure 2: Wetland and Watercourse Delineation Map*). Photographs were taken at the field data points to document conditions along the delineation boundary. Supporting wetland and upland/ dryland determination data forms are provided in *Appendix A*. Representative Site photographs are provided in *Appendix C*.

4.3 Watercourse Field Investigations

Watercourses such as stream channels, tributaries, ditches and linear conveyance features were identified based on the recognition of field indicators of bed, bank, and an OHWM coupled with an evaluation of flow type (perennial, intermittent or ephemeral) and connectivity.

If observed, Fisher Associates' environmental scientists delineated and flagged watercourse boundaries in the field and the flagged locations were recorded with a sub-meter accuracy GPS unit to further clarify their locations. Top of Bank widths as well as OHWM widths were recorded throughout the length of the watercourse. Mapping depicting the location of the delineated watercourses, including streams and ditches, identified within the Project Study Limits are provided as an appendix (see *Figure 2: Wetland and Watercourse Delineation Map*). Observed watercourse characteristics were recorded on supporting ditch data forms and are provided in *Appendix B*. Representative Site photographs are provided in *Appendix C*.

5.0 DELINEATION FINDINGS

5.1 Preliminary Offsite Investigation / Data Review

5.1.1 NYS Freshwater (NYSFW) Wetland Mapping

The NYSFW maps were developed by the NYSDEC pursuant to Article 24: Freshwater Wetlands of the NYS ECL. These maps depict the approximate boundaries of freshwater wetlands regulated by the NYSDEC. These layers are available through the NYSDEC Environmental Resource Mapper (ERM) and the NYS Clearinghouse. In most instances, the State-mapped boundaries are based on aerial photographs and soil survey interpretation and, therefore, require site-specific field verification. Freshwater wetland mapping information identified for the Project Study Limits was obtained from online Geographic Information System (GIS) mapping resources made available by the NYSDEC (NYSDEC, 2021). Based on reviewed mapping information publicly available, no NYSDEC wetlands are mapped within the Project Study Limits or within the immediate vicinity.

5.1.2 NYS Streams (NYSS) Mapping

The NYSS maps were developed by the NYSDEC pursuant to Article 15: Protection of Waters Program of the NYS ECL. These maps depict the approximate locations of streams mapped by NYSDEC and identify their respective state water quality classification and standard designations based on existing or expected best usage of each water segment. These stream layers are available through the NYSDEC ERM and the NYS Clearinghouse. In most instances, the mapped stream locations are based on aerial photographs and topographic map interpretation and, therefore, require site-specific field verification. Stream mapping

information identified for the Project Study Limits was obtained from online GIS mapping resources made available by the NYSDEC (NYSDEC, 2021). Based on reviewed mapping information publicly available through the ERM, no NYSS mapped streams are present within the Project Study Limits. There is an unnamed tributary to Oatka Creek just outside the Project Study Limits to the southeast.

5.1.3 National Wetlands Inventory (NWI) Mapping

NWI mapping information for the Project Study Limits was obtained from online GIS mapping resources made available by the USFWS (USFWS, 2020). A review of this information was completed which indicated that two (2) mapped NWI wetlands, with the following Cowardin Classifications are mapped within the Project Study Limits.

- PFO1E – Palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated
- PUBHh – Palustrine, unconsolidated bottom, permanently flooded, diked/impounded

However, it is understood that this mapping is provided as a reference and is not necessarily indicative of the presence or absence of wetlands in an area.

5.1.4 Soils Mapping

Soil types identified for the Project Study Limits were obtained from online GIS mapping resources made available by the NRCS (USDA-NRCS, 2021). A review of this information was completed to evaluate the soil types within the Project Study Limits to determine the possible presence of hydric soils.

Soil types of predominantly hydric soils were identified within the Project Study Limits and are listed below. Percent hydric ratings are determined by NRCS according to the percentage of map unit components for a soil that meet NRCS’ hydric soils definition. The mapped soils at the wetland location, including instances where there may be more than one (1) soil map unit identified at a given wetland location, are described in *Table 1: Wetland Delineation Summary*. Mapped soils present within the Project Study Limits are depicted on *Figure 2: Wetland and Watercourse Delineation Map*.

List of NRCS Soil Types within the Project Study Limits		
Map Unit Symbol	Map Unit Name	Percent Hydric
ApA	Appleton silt loam, 0 to 3 percent slopes	4
BuA	Burdett silt loam, 0 to 3 percent slopes	5
BuB	Burdett silt loam, 3 to 8 percent slopes	5
CaA	Canandaigua silt loam, 0 to 2 percent slopes	95
CoC	Conesus silt loam, 8 to 15 percent slopes	0
DaA	Darien silt loam, 0 to 3 percent slopes	5
DaB	Darien silt loam, 3 to 8 percent slopes	5
NuC	Nunda silt loam, 8 to 15 percent slopes	0
Pd	Palms muck	100

5.2 Wetland Field Investigation Findings

5.2.1 Wetland Area Summary

The onsite delineation verified the presence of a wetland and confirmed the presence of hydric soils depicted on the NRCS soils mapping. One (1) wetland, totaling 1.33-acres, was delineated within the Project Study Limits. Wetland 001 is comprised of 1.22-acres of PFO and 0.11-acre of PSS wetlands. Wetland 001 is in the southwest portion of the project parcel along Roanoke Road and within a deciduous wooded area. It is presumed that Wetland 001 will be federally jurisdictional due to a shared surface water connection with the unnamed tributary to Oatka Creek off the Project Study Limits which eventually contributes flow to a traditional navigable water (TNW). A summary of the wetlands identified, the location (latitude/longitude) and total wetland area delineated within the Project Study Limits is provided in Table 1: Wetland Delineation Summary. The location and size of wetlands delineated onsite are shown on Figure 2: Wetland and Watercourse Delineation Map.

5.2.2 Wetland Vegetation

The criterion for wetland vegetation is a dominance of hydrophytic species. A species is considered hydrophytic per USACE (1987 and 2012) if it is classified either as obligate (OBL), facultative wet (FACW), or facultative (FAC) in *The National Wetland Plant List, version 3.4 (USACE, 2018)*. A dominance of hydrophytes requires that more than 50% of the vegetative species in an area are classified as hydrophytic.

The single delineated wetland consisted of a PFO and PSS cover. Dominant species observed within the PFO consisted of black willow (*Salix nigra*) (OBL), sugar maple (*Acer saccharum*) (FACU), green ash (*Fraxinus pennsylvanica*) (FACW), spotted touch-me-not (*Impatiens capensis*) (FACW), and buttonbush (*Cephalanthus occidentalis*) (OBL). Dominant species observed within the PSS portion include silky dogwood (*Cornus amomum*) (FACW) and riverbank grape (*Vitis riparia*) (FAC). The wetland determination data forms which provide expanded detail of the wetlands identified within the Project Study Limits can be found in Appendix A. Wetland vegetation community types observed at each wetland are summarized in Table 1: Wetland Delineation Summary.

5.2.3 Wetland Hydrology

The Project Study Limits were examined for field indicators of wetland hydrology. According to USACE (1987 and 2012), wetland hydrology consists of permanent or periodic inundation, or soil saturation to the surface during the growing season. If these indicators were present within the sample plots, the hydrology criterion was met.

Generally, the wetland identified within the Project Study Limits receives hydrologic input from surface water runoff. Due to being at the bottom of a slight hillslope, water drains down the slope and creates pools within depression areas of the wetland. The hydrologic indicators observed at Wetland 001 include high water table (A2), saturation (A3), water-stained leaves (B9), drainage patterns (B10), moss trim lines (B16), oxidized rhizospheres on living roots (C3), stunned or stressed plants (D1), geomorphic position (D2), and microtopographic relief (D4). Hydrologic indicators observed at each delineated wetland were recorded on the wetland determination data forms presented in Appendix A.

5.2.4 Wetland Soils

Soil physical characteristics were evaluated during the field delineations by excavating to a depth appropriate to evaluate potential hydric soil indicators below ground surface. Soil color was evaluated using *Munsell Soil Color Charts* (Munsell, 2000). Soils that exhibited hydric soil indicators, such as low chroma colors and/or evidence of reducing conditions met the hydric soil criterion per USACE (1987 and 2012).

Wetland soils observed during the excavations within the Project Study Limits generally consisted of a muck texture with a black (10YR 2/1) matrix or a silty clay loam texture with a dark gray (10YR 3/1) matrix and reddish gray (2.5YR 5/1) redox concentration. Soil samples within wetland areas possessed redox dark surface (F6) and loamy mucky mineral (F1) soil indicator conditions within their profiles. Characteristics observed at each data point are summarized in the wetland determination data forms included in *Appendix A*.

5.3 Watercourse Field Investigation Findings

5.3.1 Ditch Summary

One (1) intermittent ditch, totaling 416-linear feet, was delineated within the Project Study Limits. Due to it being an agricultural/roadside ditch in an upland area, it is presumed that this ditch will not be federally jurisdictional. A summary of the ditches identified within the Project Study Limits is provided in *Table 2: Ditch Delineation Summary* and on the data forms provided in *Appendix B*. The locations of ditches delineated onsite are shown on *Figure 2: Wetland and Watercourse Delineation Map*.

5.4 Upland/ Dryland Area Summary

During the field investigation of the Project Study Limits, approximately 38.26 acres of upland/ dryland or non-jurisdictional areas were identified. The majority of the identified upland/ dryland areas are characterized by an active agricultural corn field throughout, a deciduous forested area and residential property in the northern portion of the project by Shepard Road. The primary vegetation within upland/dryland areas consisted of sugar maple (*Acer saccharum*) (FACU), corn (*Zea mays*) (UPL), and Virginia creeper (*Parthenocissus quinquefolia*) (FACU). Upland/ dryland soils were generally a silt loam texture with a consistent dark brown (10YR 3/3 and 3/2) matrix throughout the soil profile to twenty inches below ground surface. No hydrology indicators of wetland hydrology were observed within the upland/ dryland areas. The location and size of upland/ dryland areas are depicted on *Figure 2: Wetland and Watercourse Delineation Map*.

6.0 SUMMARY AND CONCLUSIONS

Fisher Associates conducted a wetland and watercourse delineation associated with the Project on September 27, 2021. One (1) wetland, totaling 1.33-acres, that consisted of 1.22-acres of PFO and 0.11-acre of PSS wetlands was delineated within the Project Study Limits. In addition, one (1) intermittent agricultural/roadside ditch totaling 416-linear feet was delineated within the Project Study Limits.

Based on conditions observed, the USACE will likely take jurisdiction over Wetland 001 due to its apparent connection to an unnamed tributary of Oatka Creek that flows south and eventually contributes flow to the Genesee River which is a TNW. Additionally, the USACE is not anticipated to take jurisdiction over delineated Ditch 001 due to being an agricultural/roadside ditch within an upland area.

It is not anticipated that the NYSDEC will invoke jurisdiction over Wetland 001 as its not within proximity (i.e., less than 50 meters) of a NYSDEC wetland or their regulated 100-foot adjacent areas. It is also anticipated that the NYSDEC will not invoke jurisdiction over delineated Ditch 001 since NYSDEC typically does not regulate roadside or agricultural ditches.

7.0 STATEMENT OF LIMITATIONS

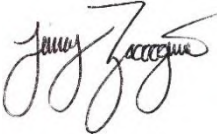
This investigation was limited to the Project Study Limits defined for this Project and which are depicted on *Figure 1: Project Vicinity and Index Map* and *Figure 2: Wetland and Watercourse Delineation Map*.

Fisher Associates' did not examine areas outside of the Project Study Limits, thus no information is provided regarding the presence or absence of regulated or non-regulated wetlands and watercourses outside of the Project Study Limits.

This investigation was conducted on September 27, 2021, by Fisher Associate's environmental scientists. Human-induced or natural changes at the site may occur after this date which may cause changes in the presence and extent of regulated and non-regulated wetlands and watercourses.

8.0 SIGNATURES

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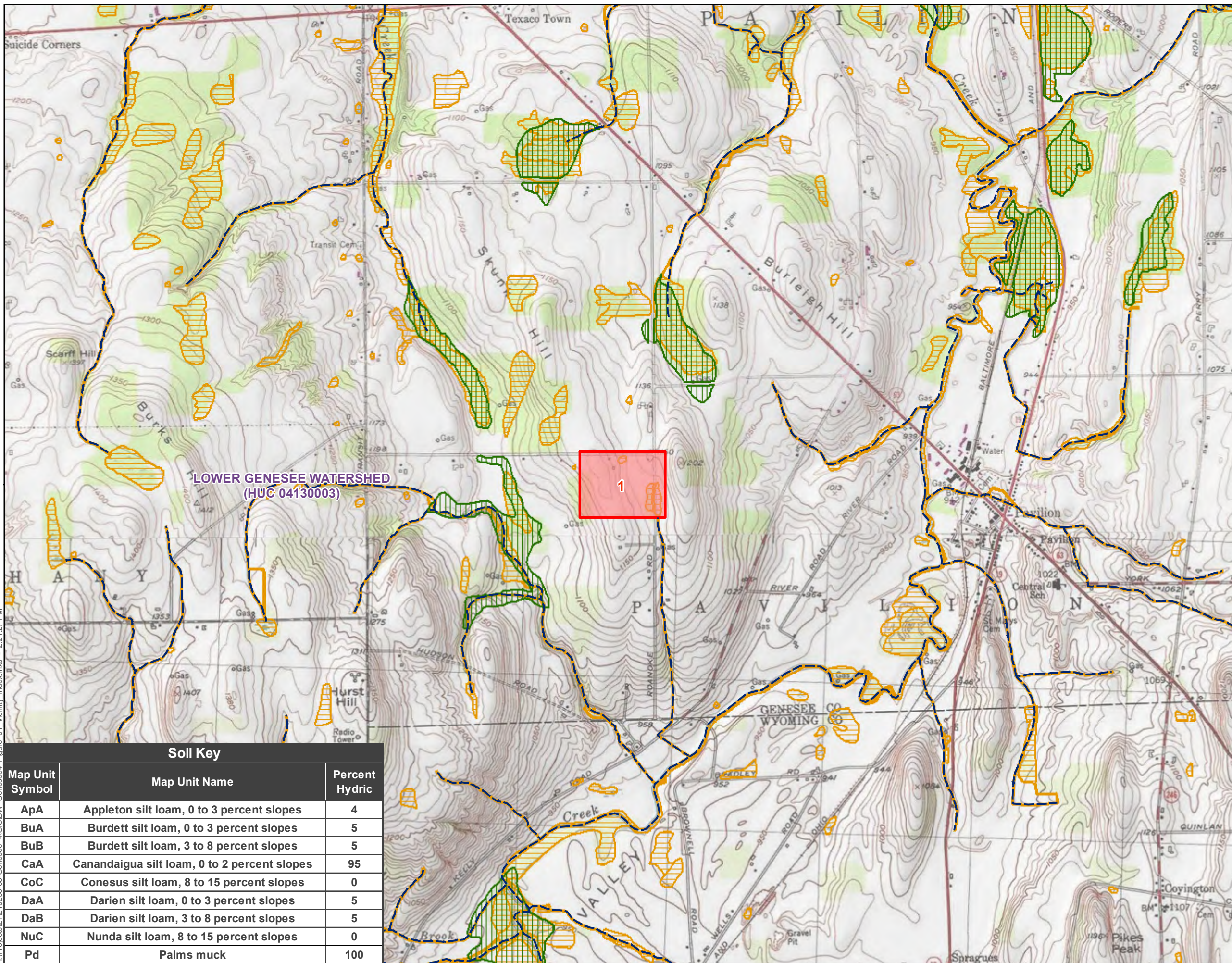
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FIGURES

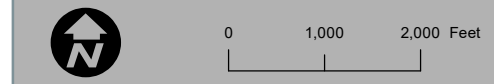


- NYSDEC Streams
- Mapsheet
- NYSDEC Wetland
- NWI Wetlands
- Watershed Boundary
- PSL

Project USGS Quad(s):
 Stafford

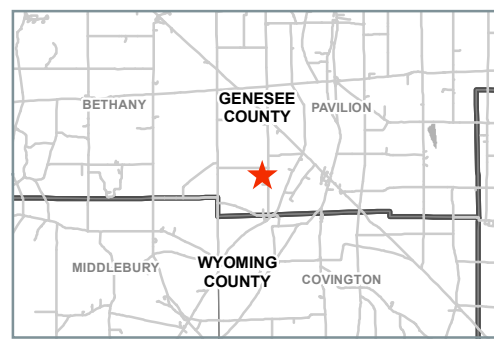
Project Watershed(s):
 Lower Genesee (HUC 04130003)

Map Revision Date: 10/26/2021 | Map Author: CM



Project Study Limits:
 39.59 Acres

Center of Project Study Limits:
 42.877835 N, 78.053574 W
 North American Datum 1983



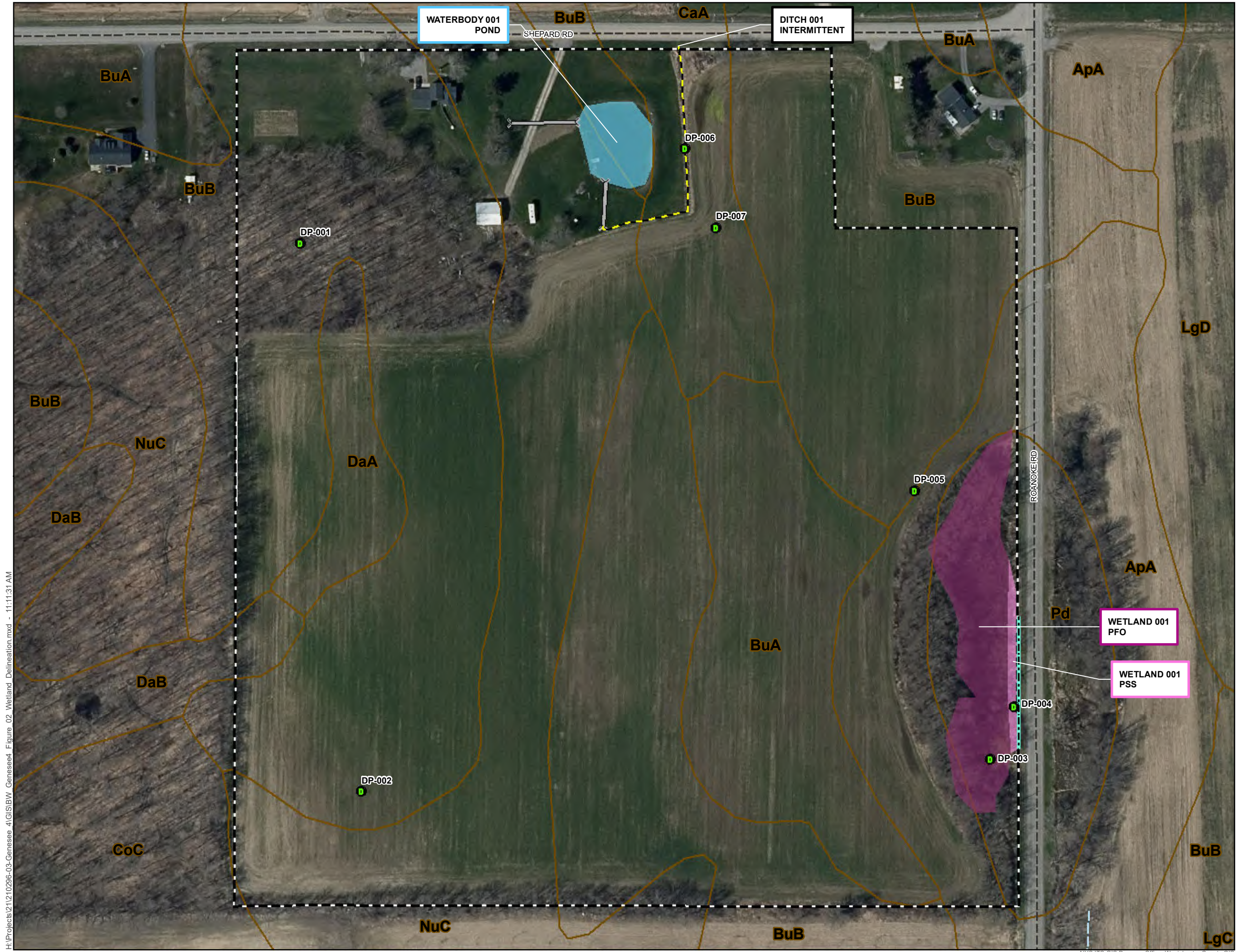
Data Sources:

United States Geological Survey 24k Topo Quad Map - usgs.gov
 Aerial Photography: ESRI World Imagery - arcgis.com
 Wetlands: National Wetland Inventory (5/1/2014) - fws.gov/wetlands/
 Soils: NRCS Soil Survey (8/24/2015) - gdg.sc.egov.usda.gov
 Watersheds: USGS NHD (3/9/2015) - nhd.usgs.gov
 Contours: US Geological Survey (4/14/2008) - <http://nationalmap.gov/elevation.html>

Soil Key

Map Unit Symbol	Map Unit Name	Percent Hydric
ApA	Appleton silt loam, 0 to 3 percent slopes	4
BuA	Burdett silt loam, 0 to 3 percent slopes	5
BuB	Burdett silt loam, 3 to 8 percent slopes	5
CaA	Canandaigua silt loam, 0 to 2 percent slopes	95
CoC	Conesus silt loam, 8 to 15 percent slopes	0
DaA	Darien silt loam, 0 to 3 percent slopes	5
DaB	Darien silt loam, 3 to 8 percent slopes	5
NuC	Nunda silt loam, 8 to 15 percent slopes	0
Pd	Palms muck	100

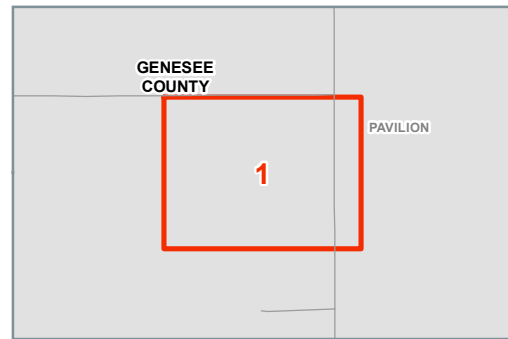
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- Data Point
- Road
- NYSDEC Non-Regulated Stream
- NYSDEC Regulated Stream
- Delineated Non-Jurisdictional Ditch
- Delineated Continuation Line
- Delineated Culvert
- Delineated Waterbody
- Delineated PFO Wetland
- Delineated PSS Wetland
- NYSDEC Wetland
- NYSDEC Wetland 100ft Adjacent
- NRCS Soil Complex Boundary
- Project Study Limits

Map Revision Date: 9/30/2021 Aerial Date: 2020

0 75 150 Feet



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TABLES

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Point #	Associated Photo #	Presumed Federal / State Jurisdiction ²	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
						Latitude	Longitude	Square Feet ³	Acres ³	Soil Symbol	Hydric Component Percentage
001	1	003 & 005	05, 06, 09, 10	Federal	PFO	42.876760	-78.051437	53,201	1.22	ApA	4
		004 & 005	07-10		PSS	42.877140	-78.051087	4,603	0.11	Pd	100
					Totals:³					57,804	1.33

Notes:

1. A field delineation was performed by Fisher Associates on September 27, 2021.
2. Federal / State Jurisdiction and Connectivity classifications provided represent the professional opinion of Fisher Associates and the interpretation of the U.S. Navigable Waters Protection Rule under the Clean Water Act and NYS ECL Article 24: Freshwater Wetlands Program. For approval of these classifications, a request for Jurisdictional Determination should be made to the US Army Corps of Engineers and/or the NYS Department of Environmental Conservation.
3. Square feet and acreage were calculated in ArcGIS and Excel with more significant figures than are shown. Square footage is displayed as the nearest whole number, and acreage is displayed as either the nearest tenth or significant figure. Values may not entirely add up based

**Table 2
Ditch Delineation Summary**

Ditch ID	Map Sheet #	Associated Data Point #	Associated Photolog #	Flow Regime	Presumed Federal / State Jurisdiction^{2,4}	Latitude	Longitude	Ditch Width (Average OHWM, Ft.)	Ditch Width (Average Top of Bank, Ft.)	Ditch Reach Length (Within Project Study Limits, Linear Ft.)
001	1	006	11, 12 & 13	Intermittent	-----	42.879155	-78.053332	1-4	2-5	416
									Totals:⁵	416

Notes:

1. A field delineation was performed by Fisher Associates on September 27, 2021.
2. Jurisdiction classifications provided represent the professional opinion of Fisher Associates. For approval of these classifications, a request for Jurisdictional Determination should be made to the US Army Corps of Engineers.
3. In accordance with the Clean Water Act, ditches/tributaries that are perennial and/or intermittent and contribute surface flow to WOTUS are federally jurisdictional by the EPA and USACE (see Section 3.0 for more information).
4. Ditches are not regulated by the New York State Department of Environmental Conservation unless they are determined to be altered natural tributaries possessing a state-regulated classification and/or standard designation.
5. Ditch Reach Length in linear feet was calculated in ArcGIS and Excel with more significant figures than are shown. Linear feet is displayed as the nearest whole number. Values may not entirely add up based on what is displayed because the total sums are based on the full value of each cell.

APPENDIX A
WETLAND DETERMINATION DATA

VEGETATION – Use scientific names of plants.

Sampling Point: DP-001

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>70</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	No	FACW		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>420</u> (B) Prevalence Index = B/A = 3.81	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. <u>Acer saccharum</u>	<u>10</u>	Yes	FACU		
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>10</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Parthenocissus quinquefolia</u>	<u>15</u>	Yes	FACU		
2. <u>Acer saccharum</u>	<u>5</u>	Yes	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>20</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. _____					
2. _____					
3. _____					
4. _____					
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.)					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-002

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>100</u> x 5 = <u>500</u> Column Totals: <u>100</u> (A) <u>500</u> (B) Prevalence Index = B/A = 5	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Zea mays</u>	<u>100</u>	<u>Yes</u>	<u>UPL</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>100</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.) Corn field, no hydrophytic vegetation present at data point					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-003

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Salix nigra</u>	40	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.6</u> (A/B)	
2. <u>Acer saccharum</u>	20	Yes	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>60</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>90</u> x 1 = <u>90</u> FACW species <u>45</u> x 2 = <u>90</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>165</u> (A) <u>300</u> (B) Prevalence Index = B/A = 1.81	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. <u>Fraxinus pennsylvanica</u>	25	Yes	FACW		
2. <u>Acer saccharum</u>	10	Yes	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>35</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Impatiens capensis</u>	20	Yes	FACW		
2. <u>Cephalanthus occidentalis</u>	50	Yes	OBL		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>70</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. _____					
2. _____					
3. _____					
4. _____					
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-004

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>95</u> x 2 = <u>190</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>125</u> (A) <u>290</u> (B) Prevalence Index = B/A = 2.32	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Cornus amomum</u>	<u>75</u>	<u>Yes</u>	<u>FACW</u>		
2. <u>Impatiens capensis</u>	<u>20</u>	<u>No</u>	<u>FACW</u>		
3. <u>Solidago canadensis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>105</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. <u>Vitis riparia</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>		
2. _____	_____	<u>No</u>	_____		
3. _____	_____	<u>No</u>	_____		
4. _____	_____	_____	_____		
<u>20</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-005

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>100</u> x 5 = <u>500</u> Column Totals: <u>100</u> (A) <u>500</u> (B) Prevalence Index = B/A = 5	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Zea mays</u>	<u>100</u>	<u>Yes</u>	<u>UPL</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>100</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: B.W. Genesee Solar City/County: Genesee Sampling Date: September 27, 2021
 Applicant/Owner: BW State: NY Sampling Point: DP-007
 Investigator(s): Tristen Peterson Section, Township, Range: Pavilion
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 42.879125°N Long: 78.052882°W Datum: NAD83
 Soil Map Unit Name: CaA- Canandaigua silt loam, 0 to 2 percent slopes NWI classification: Not Mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Upland Data Point located within corn field	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Corn field	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-007

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>100</u> x 5 = <u>500</u> Column Totals: <u>100</u> (A) <u>500</u> (B) Prevalence Index = B/A = 5	
Sapling/Shrub Stratum (Plot size: 15 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5 ft.)					
1. <u>Zea mays</u>	<u>100</u>	<u>Yes</u>	<u>UPL</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>100</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: 30 ft.)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.)					
Corn field					

APPENDIX B
WATERCOURSE DATA FORMS – DITCHES



Ditch Data Form

Ditch Field ID: Ditch 001

Data Point ID: DP-006

Project Name: B.W. Genesee Solar

Evaluator(s): Tristen Peterson

County: Genesee

Jurisdictional: Yes No

Date: September 27, 2021

Project #: 210296.03

State: NY

Lat: 42.879442 °N Long: 78.053118 °W

Federal Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute (Must Satisfy All 1 thru 4, and at least one under 5)
X		1) Defined Bed and Bank/Channel Present
X		2) Ordinary High Water Mark Present
	X	3) Direct or Indirect Connection to a Traditional Navigable Water
X		4) Contains Either Perennial or Intermittent Flow
		5) Supplementing Attributes (Must Satisfy At Least 1 of 3 Below)
	X	a) Constructed in or Relocates Another Tributary
	X	b) A Natural Stream That Has Been Altered
	X	c) Constructed in an Adjacent Wetland and Contributes flow to a Traditional Navigable Water
Yes	No	Additional Jurisdictional Qualifiers (if Yes then it is not Federally Jurisdictional)
X	X	Is the Ditch an Agricultural Ditch?
	X	Is the Ditch a Roadside Ditch Constructed Solely in Uplands?

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral

Surface Water: Present Absent

Perceptible Flow: Present Absent

Has Defined Banks: Yes No

Water Depth at Thalweg: 6 inches

Wetted Perimeter Width: 5 feet

Flow/Gradient Direction: Northeast

Geomorphologic Characteristics

Primary Substrate Class: Silt

	Width (feet)		
	at DP	Min	Max
OHWM	4	2	6
Top of Bank	5	3	7

Ditch Data Form

Data Point ID: DP-006

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 50 degrees

Right: 45 degrees

Bank Stability Summary

Right Bank: Unstable, undercut and erosion occurring along bank slope

Left Bank: Unstable, undercut and erosion occurring along bank slope

Habitat Characteristics

Aquatic Vegetation Present: Yes No
If Yes, Describe: _____

Aquatic Organisms Observed: Yes No
If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No
If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
Right: Cattail, Canadian Goldenrod, Aster, Corn Field
Left: Residential Yard

Associated Wetland Present: Yes No
If Yes, ID: _____

Associated Artificial Drain(s) Present: Yes No
If Yes, ID: AD-002, AD-003

Supplemental Notes & Comments:

Agricultural ditch that flows east then north between agricultural field and residential yard. Intermittent ditch that receives flows from pond connected by AD-002.

APPENDIX C
REPRESENTATIVE SITE PHOTOGRAPHS

Project Name:
BW Solar
Genesee 4 Solar Project
Wetland and Watercourse Delineation Report

Site Location:
Town of Pavilion, Genesee County, New York

Project No.
210296.03

Photo No. 01

Facing:
North

Description:
Data Point 001
Upland Data Point located within a wooded area adjacent to a residential yard and corn field.

When:
September 27, 2021



Photo No. 02

Facing:
South

Description:
Data Point 001
Overview of Upland Data Point located within a wooded area adjacent to a residential yard and corn field.

When:
September 27, 2021



<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 03</p>	
<p>Facing: North</p>	
<p>Description: Data Point 002 Upland Data point located within an active corn field.</p> <p>When: September 27, 2021</p>	

<p>Photo No. 04</p>	
<p>Facing: South</p>	
<p>Description: Data Point 002 Overview of Upland Data point located within an active corn field.</p> <p>When: September 27, 2021</p>	

<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 05</p>	
<p>Facing: North</p>	
<p>Description: Data Point 003 PFO Data Point for Wetland 001 located within a forested area between an agricultural field and Roanoke Road.</p> <p>When: September 27, 2021</p>	

<p>Photo No. 06</p>	
<p>Facing: South</p>	
<p>Description: Data Point 003 Overview of PFO Data Point for Wetland 001 located within a forested area between an agricultural field and Roanoke Road.</p> <p>When: September 27, 2021</p>	

<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 07</p>
<p>Facing: North</p>
<p>Description: Data Point 004 PSS Data Point for Wetland 001 located between Roanoke Road and a forested, PFO area.</p> <p>When: September 27, 2021</p>



<p>Photo No. 08</p>
<p>Facing: South</p>
<p>Description: Data Point 004 Overview of PSS Data Point for Wetland 001 located between Roanoke Road and a forested, PFO area.</p> <p>When: September 27, 2021</p>



<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 09</p>	
<p>Facing: North</p>	
<p>Description: Data Point 005 Upland Data Point for Wetland 001 located on the edge of a corn field and adjacent to a wooded area.</p> <p>When: September 27, 2021</p>	

<p>Photo No. 10</p>	
<p>Facing: South</p>	
<p>Description: Data Point 005 Overview of Upland Data Point for Wetland 001 located on the edge of a corn field and adjacent to a wooded area.</p> <p>When: September 27, 2021</p>	

<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 11</p>	
<p>Facing: South / Upstream</p>	
<p>Description: Data Point 006 Ditch Data Point for non-jurisdictional intermittent agricultural Ditch 001 that flows east, then north between an agricultural field and residential yard. Ditch 001 receives flow from Artificial Drain 002, connecting to Waterbody 001.</p> <p>When: September 27, 2021</p>	

<p>Photo No. 12</p>	
<p>Facing: North / Downstream</p>	
<p>Description: Data Point 006 Ditch Data Point for non-jurisdictional intermittent agricultural Ditch 001 that flows east, then north between an agricultural field and residential yard. Ditch 001 receives flow from Artificial Drain 002, connecting to Waterbody 001.</p> <p>When: September 27, 2021</p>	

<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 13</p>	 <p style="text-align: right;">Sep 27, 2021 at 12:58:12</p>
<p>Facing: East / Left to Right Bank</p>	
<p>Description: Data Point 006 Ditch Data Point for non-jurisdictional intermittent agricultural Ditch 001 that flows east, then north between an agricultural field and residential yard. Ditch 001 receives flow from Artificial Drain 002, connecting to Waterbody 001.</p> <p>When: September 27, 2021</p>	

<p>Photo No. 14</p>	 <p style="text-align: right;">Sep 27, 2021 at 13:10:29</p>
<p>Facing: North</p>	
<p>Description: Data Point 007 Upland Data Point located within a corn field adjacent to Ditch 001.</p> <p>When: September 27, 2021</p>	

<p>Project Name: BW Solar Genesee 4 Solar Project Wetland and Watercourse Delineation Report</p>	<p>Site Location: Town of Pavilion, Genesee County, New York</p>	<p>Project No. 210296.03</p>
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<p>Photo No. 15</p>
<p>Facing: South</p>
<p>Description: Data Point 007 Overview of Upland Data Point located within a corn field adjacent to Ditch 001.</p> <p>When: September 27, 2021</p>



STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

FOR COMPLIANCE WITH THE SPDES GENERAL PERMIT FOR CONSTRUCTION (GP-0-20-001)

**GENESEE 4 SOLAR
Town of Pavilion, NY**

Genesee County, New York

Owner/Operator:
NY CDG Genesee 4 LLC
850 New Burton Road
Suite 201
Dover, Delaware 19904

Published: January 2022

Prepared By:



180 Charlotte Street
Rochester, NY 14607

FA No.: 210296-03

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References

- 1) “Genesee 4” Civil Design Plans, prepared by Fisher Associates PE, LS, LA, DPC, dated January 2022.

I. Introduction

According to Part 1, Section A of the New York State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-20-001, construction activities involving soil disturbances of one or more acres will require the drafting and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

The following SWPPP addresses the proposed storm water mitigation measures and pollution prevention devices in conjunction with the proposed Genesee 4 Solar Project located in the Town of Pavilion, Genesee County, New York.

According to New York State Department of Environmental Conservation (NYSDEC) guidance in Appendix B of the New York SPDES General Permit GP-0-20-001, permanent access roads and staging areas that are constructed as part of a solar power project require a SWPPP that includes both Erosion and Sediment Controls and Post Construction Stormwater Management Practices in order to be in compliance for storm water discharges associated with construction activity.

The SWPPP includes the following:

- a. Stormwater Management Plans and Details
- b. Erosion and Sedimentation Control Plans and Details
- c. Notice of Intent
- d. General Permit
- e. Notice of Termination
- f. All records of inspections and activities which are created during the course of the project
- g. Other documents as may be included by reference to this SWPPP.

Changes, modifications, revisions, additions, or deletions shall become part of the SWPPP as they occur.

This SWPPP was created with the guidance of the New York State Storm Water Management Design Manual (NYS SMDM), January 2015 and documents the ability of the pollution prevention devices to comply with the SPDES requirements. The SWPPP will terminate when all disturbed areas are stabilized, permanent erosion and sedimentation controls installed, temporary erosion and sedimentation controls removed, all construction activities have ceased, and a completed Notice of Termination has been filed.

The general contractor and all sub-contractors involved in construction activities that disturb soil or implement pollution prevention controls must sign the Contractor Certification Forms. The certification forms are included in *Exhibit 5*.

II. Background Information

A. Project Contact Information

Owner/Operator: NY CDG Genesee 4 LLC
850 New Burton Road
Suite 201
Dover, Delaware 19904

Person of Contact: Bogdan Dinu
(226) 753-2847

B. Project Description

The project area is located in the Town of Pavilion, in Genesee County, NY. A location map of the project area is included in *Exhibit 1*. The project involves the construction of a new solar array. The existing site consists of agricultural lands. Proposed improvements include the installation of the solar arrays, and associated electrical equipment, gravel access roads, and perimeter fencing.

The access roads will be constructed using a porous gravel section that will account for water quality and water quantity for the project. No other stormwater management practice is proposed for this project.

The project is located north, off Shepard Rd in the Town of Pavilion, Genesee County, New York. The parcel's centroid Universal Transverse Mercator (UTM) easting was determined to be 250680.64 (x) and its northing to be 4751832.15 (y) from the NYS Interactive Stormwater map (*Exhibit 10*).

III. Stormwater Management Planning

As noted in Chapter 3 of the 2015 NYS SMDM, planners and designers must use the following six-step process in stormwater management planning:

1. Site planning,
2. Determine Water Quality Treatment Volume (WQv),
3. Apply Runoff Reduction Techniques and Standard Stormwater Management Practices (SMPs) with Runoff Reduction Volume (RRv) Capacity to Reduce Total WQv,
4. Determine the minimum RRv required,
5. Apply Standard SMPs to Address Remaining WQv
6. Apply Volume and Peak Rate Control Practices if Still Needed to Meet Requirements.

According to Chapter 4 of the NYS SMDM, the SWPPP must demonstrate that all green infrastructure planning and design options are evaluated to meet the runoff reduction requirement and provide documentation if any components of the approach are not technically feasible. Thus, the following sections of this report address the above requirements with respect to site constraints and requirements for development of the project.

A. Step 1: Site Planning

In accordance with Chapter 3 of the SMDM, wetlands, waterways, buffers, floodplains, forested, critical areas, topography, soils, and bedrock or significant geology features have been mapped on the Civil Design Plans developed by Fisher Associates as referenced in this document.

1. Preservation of Natural Resources

- Preservation of Undisturbed Areas – Delineate and place into permanent conservation easement undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.
 - This project is located on land that has been previously disturbed. Access roads and solar panels have been located to avoid the maximum amount of forested areas as practicable.
- Preservation of Buffers – Define, delineate and place in permanent conservation easement naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.
 - There are no streams, rivers, etc. at the project site that can be placed in a permanent conservation easement. There is a man-made pond and a wetland close to the site, although they will not be disturbed. Refer to the Environmental Resource Map shown in *Exhibit 10*.
- Reduction of Clearing and Grading – Limit clearing and grading to the minimum amount needed for roads, driveways, foundation, utilities, and stormwater management facilities.

- The limit of disturbance is clearly shown on the construction documents and has been limited to include the minimum area necessary for the construction of the project. No work outside of these limits shall take place.
- Locating Development in Less Sensitive Areas – Avoid sensitive resource areas such as floodplain, steep slopes, erodible soils, wetlands, mature forests, and critical habitats by locating development to fit the terrain in areas that will create the least impact.
 - Slope – The project has been planned to avoid existing steep slopes as much as practicable. In areas where it is not feasible to avoid steep slopes, appropriate erosion and sediment control measures will be utilized to stabilize the disturbed areas.
 - Soil Erodibility - There are soils that are moderately susceptible to erosion within the project limits. Appropriate erosion and sediment control measures will be used to minimize the effects of construction.
 - Sinkholes/Karst – According to the U.S. Geological Survey Open-File Report 2004-1352, Caves and Karst in the U.S. National Park Service, AGI Karst Map of the U.S., this project is not located within a Karst Area.
 - Depth to Bedrock – According to the Natural Resources Conservation Service (NRCS) Web Soil Survey 3.0, the depth to bedrock is greater than 80”.
 - Water Table - According to the NRCS Web Soil Survey 3.0, the depth to the groundwater table ranges from being 6-80” across the site.
 - Historic and Archeological Resources – The potential historical and archaeological impacts of the proposed project will be submitted accordingly under the State Environmental Quality Review Act (SEQRA).
 - Watershed - This project is located within the Lower Genesee, New York, Watershed (USGS Cataloging Unit: 04130003), as shown on the watershed profile included as part of *Exhibit 10*.
 - Impaired Waters - The project does not directly discharge to a watercourse listed as a 303(d) stream according to Appendix E of the General Permit.
 - Total Maximum Daily Load Water bodies - The project does not involve a watercourse that is on Appendix E list of the General Permit having TMDL limits within the Hudson-Hoosic Watershed.
 - Municipal Separate Storm Sewer System (MS4) - The project is located within the Town of Pavilion, which is not a regulated MS4.
 - Aquifers – The project is not located within an EPA Sole Source Aquifer. Although, the project is located over the Tonawanda Primary Aquifer according to the NYS Primary Aquifers Map.

- Wetlands –Wetlands have been field delineated by Fisher Associates. The project does not fall within a NYSDEC surveyed area according to the NYSDEC Environmental Resource Map. The wetlands have been avoided as much as practicable, and total impacts will be determined at a later time. A copy of the NYSDEC Environmental Resource Map is also included as part of *Exhibit 10*.
- Floodplain – The entire project is not within a 100-year flood plain, as determined from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), Town of Pavilion, New York, Genesee County, Community Number 360282B. The floodplain maps are included as part of *Exhibit 10*.
- Stormwater Hotspot - This project is not classified as a Stormwater Hotspot, as it does not involve any land uses or activities in Table 4.3 of the SMDM.
- Open Space Design - Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.
 - This project utilizes existing roads for access to the solar array where possible to minimize the construction of new roads. The amount of new impervious surfaces has been kept to the minimal amount necessary to accommodate the construction and delivery traffic to and from the project.
- Soil Restoration – Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of practices such as downspout disconnection, grass channels, filter strips, and tree clusters.

All disturbed areas that are to be permanently vegetated shall have soil restoration applied in accordance with Table 5.3 of the NYSDEC SMDM and the NYSDEC Deep-Ripping and Decompaction Manual.

2. Reduction of Impervious Cover

- Roadway Reduction – Minimize roadway widths and lengths to reduce site impervious area.
 - All proposed gravel access roads will be 20 feet wide, which is the minimum access width for construction vehicles and fire access.
- Sidewalk Reduction – Minimize sidewalk lengths and widths to reduce site impervious area.
 - There are no sidewalks as part of this project.
- Driveway Reduction – Minimize driveway lengths and widths to reduce site impervious area.
 - There are no driveways as part of this project.
- Cul-de-sac Reduction - Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious area.
 - There are no cul-de-sacs as a part of this project.

- Building Footprint Reduction – Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.
 - There are no buildings or structures as a part of this project.

- Parking Reduction – Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimension, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.
 - There are no proposed parking areas as a part of this project.

B. Step 2: Determine Water Quality Treatment Volume (WQv)

1. Soils

Based on The National Cooperative Soil Survey (NCSS) Web Soil Survey 3.1 (WSS), the site contains Hydrologic Soil Groups “HSG” D soils. A copy of the soils map is included as part of *Exhibit 10*.

2. Proposed Surface Drainage & Covers

The project includes the construction of a new solar array of approximately 5.0 MW located throughout the project limits. In addition to the arrays, the project will also include access roads, gravel aprons for electrical components, underground electrical systems, and overhead electric lines. The following describes the proposed project components and the stormwater management practice utilized:

- Solar Arrays – The solar panels are constructed on post systems and elevated off the ground surface. The panels are spaced apart and installed along the contour so that rainwater can flow off the down gradient side of the panel and continue as sheet flow down slope across the ground surface. The ground surface below the panels consists of a well-established vegetative cover. This eliminates the requirements to consider the solar panels as impervious, as the construction of the solar panels will not alter the hydrology from pre-to-post development conditions.
- Access Roads and Culverts - Approximately 480 feet of gravel access road are required for installation and maintenance of the solar arrays. The access roads consist of a permanent 20-foot wide road to accommodate construction vehicles, fire equipment, and operation and maintenance activities during the life of the project. The intent is to grade access road at existing grade level to the greatest extent practicable in order to minimize disturbances. Culverts will be installed at existing ditches to maintain the existing drainage conditions of the site. The access roads will be constructed with a porous gravel section that will meet the runoff reduction, water quality, and water quantity requirements of the Stormwater Management Design Manual (SMDM).

The following table summarizes the total site area, existing impervious area, and proposed impervious area resulting from this project:

Estimated Project Areas – Table 1			
Location	Total Property Area (ac)		Proposed Project Area (ac)
Overall Site	36.40 (+/-)		31.2 (+/-)
Existing Conditions			
Existing Drainage Areas	Impervious Area (ac)	Pervious Area (ac)	Total Area (ac)
DA-1	0.00	9.91	9.91
DA-2	0.00	8.77	8.77
DA-3	0.00	15.07	15.07
DA-4	0.00	15.31	15.31
TOTAL	0.00	49.06	49.06
Proposed Conditions			
Proposed Drainage Areas	Impervious Area (ac)	Pervious Area (ac)	Total Area (ac)
DA-1	0.00	9.91	9.91
DA-2	0.02	8.75	8.77
DA-3	0.00	15.07	15.07
DA-4	0.00	15.31	15.31
TOTAL			49.06
Existing Versus Proposed Comparison			
	Impervious Area (ac)	Pervious Area (ac)	
Total Change	+0.02	-0.02	

Refer to the project drawings, referenced in the Table of Contents, for further information.

3. Stormwater Quality

According to the guidance from the NYSDEC, runoff reduction and water quality volume for the linear access roads is achieved by utilizing a porous gravel section. No other runoff reduction or water quality practice is proposed for these areas. The calculations that were used to determine the required WQv are included as part of *Exhibit 8*. The following is a summary of the proposed water quality volume for the project:

Proposed Water Quality Summary - Table 2		
Water Quality Results		
Location	Required Water Quality Volume (cf)	Provided Water Quality Volume (cf)
100% of New Impervious	897	-
Porous Gravel Section	-	See Table 3

C. Step 3: Runoff Reduction by Applying Green Infrastructure Techniques and Standard SMPs with Runoff Reduction Volume (RRv) Capacity

According to Chapter 4 of the NYS SMDM, Runoff Reduction shall be achieved by infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration to replicate pre-development hydrology. This requirement can be accomplished by application of on-site green infrastructure practices, standard stormwater management practices with runoff reduction capacity, and good operation and maintenance.

The table below summarizes how the WQv is reduced by Runoff Reduction. After Runoff Reduction, the project achieves 100% of the required WQv for the site.

Proposed Runoff Reduction Summary - Table 3		
Runoff Reduction Results		
Location	Required Water Quality Volume (cf)	Reduced Water Quality Volume (cf)
100% of New Impervious	897	-
Porous Gravel Section		897

Below are the RRv practices available for consideration. Each item has been assessed for practicality and feasibility.

1. Conservation of Natural Areas

There are no forests, native vegetated areas, riparian corridors, wetlands, or other natural terrain within the project area that can be placed within a permanent conservation easement.

2. Sheetflow to Riparian Buffers or Filter Strips

Although the areas adjacent to the access roads and equipment pads will be vegetated, the SWPPP is not taking credit for the runoff reduction, water quality, or water quantity benefits of these areas.

3. Vegetated Open Swales

Existing drainage conveyance swales will remain as much as practicable. The access roads will be placed at existing grade and no additional swales are proposed.

4. Tree Planting/Tree Box

Tree plantings are not proposed as a part of this project. The existing trees on the site will remain to the best extent as practicable and will be protected through construction.

5. Disconnection of Rooftop Runoff

There are no buildings or structures proposed for this project.

6. Disconnection of Non-Rooftop Runoff

Disconnections can be utilized on the site where the area receiving runoff is equal to or greater than the disconnected surface. Filter socks may be utilized to filter sheet flow downslope. Construction vehicles should avoid compacting areas to be used for disconnection during installation of the panels. Groundcover vegetation is to be maintained and should be protected from future compaction by planting shrubs or trees around the perimeter.

7. Stream Daylighting

There are no existing enclosed streams that can be daylighted within the project limits.

8. Rain Garden

Rain gardens are not needed for this project because the contributing drainage areas are treated by other methods.

9. Green Roof

Green roof practices are not feasible for any building or structure in this project.

10. Stormwater Planters

There are no locations throughout the project where stormwater planters can be utilized.

11. Rain Tanks/Cisterns

Because there is not a planned use for collected rainwater at this site, rain tanks/cisterns are not technically feasible.

12. Porous Pavement

The access roads will be constructed utilizing a porous gravel section to meet the runoff reduction, water quality, and water quantity requirements of the General Permit.

13. Standard SMPs with RRv Capacity

Additional SMP's are not required for this project.

D. Step 4: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

The porous gravel section addresses the full water quality requirements and no other stormwater management practices will be needed for the project.

E. Step 5: Apply Volume and Peak Rate Control Practices if Still Needed to Meet Requirements

1. Existing Runoff

HydroCAD version 10.00, which utilizes the Soil Conservation Service (SCS) method, was used to model the existing conditions for the individual sites under the National Weather Service (NWS) 24-hour 1-year, 10-year, and 100-year frequency peak flow, in accordance with the standards set forth in the NYS SMDM. The resulting flow information is included as part of *Exhibit 8*. The following is a summary of the results:

Existing Stormwater Quantity Results – Table 4				
Location	Area (acres)	1-Year Peak Flow (cfs)	10-Year Peak Flow (cfs)	100-Year Peak Flow (cfs)
Drainage Area 1	9.91	6.62	16.66	34.49
Drainage Area 2	8.77	7.18	15.86	30.47
Drainage Area 3	15.06	4.29	14.18	33.71
Drainage Area 4	15.31	14.20	30.50	57.48

2. Proposed Runoff

HydroCAD version 10.00, which utilizes the SCS method, was used to model the proposed conditions under the National Weather Service (NWS) 24-hour 1-year, 10-year, and 100-year frequency peak flow, in accordance with the standards set forth in the NYS SMDM. The resulting flow information is included as part of *Exhibit 8*. The following is a summary of the results:

Proposed Stormwater Quantity Results – Table 5				
Location	Area (acres)	1-Year Peak Flow (cfs)	10-Year Peak Flow (cfs)	100-Year Peak Flow (cfs)
Drainage Area 1	9.91	6.62	16.66	34.49
Drainage Area 2	8.77	6.99	15.41	29.59
Drainage Area 3	15.06	4.29	14.18	33.71
Drainage Area 4	15.31	14.20	30.50	57.48

IV. Pollution Prevention Measures

The primary goal of pollution prevention efforts during project construction is to control soil and pollutants that originate on the site and prevent them from flowing to surface waters. The purpose of this SWPPP is to provide guidelines for achieving that goal. A successful pollution prevention program also relies upon careful inspection and adjustments during the construction process in order to enhance its effectiveness. Prior to the commencement of construction of the development, a Notice of Intent (NOI) shall be filed with the NYSDEC to obtain coverage under SPDES General Permit GP-0-20-001 for storm water discharges from construction activity. The NOI shall be signed by the owner/operator and SWPPP Preparer and submitted to the NYSDEC.

Note that temporary stabilization of the project shall be employed to the fullest extent practicable prior to freezing conditions. This shall include temporary seeding and establishment of vegetation wherever possible or other methods approved by the Qualified Professional, such as rolled erosion control products. If this is achieved, winter shutdown observations can be limited to one time per 30 calendar days.

A. Erosion and Sedimentation Control

The areas of disturbance are to be minimized as much as practicable and are limited to the areas depicted on the project drawings. Permission from the Regional NYSDEC Office is required if it is deemed necessary to disturb more than 5 acres at any one time. The erosion and sediment control plan is included within the referenced construction plans.

A summary of the construction sequencing for erosion control features is as follows:

- a. Evaluate, mark and protect, with appropriate erosion control measures, important trees, associated rooting zones, and other existing site features designated to remain.
- b. Construct stabilized construction entrances as depicted on the plans to capture mud and debris from construction vehicles before they enter the public highway.
 - Stabilize bare areas (entrances, construction routes, equipment areas) immediately as work takes place. Top these areas with gravel or maintain vegetative cover.
 - Sediment tracked onto public streets shall be removed or cleaned on a daily basis and as necessary throughout the day.
- c. Construct temporary erosion and sediment control measures (silt fencing, tree protection, etc.).
 - Silt fence and tree protection material and installation must comply with the standard drawing and specifications.
 - Install silt fence based on appropriate spacing intervals. Decrease this interval as the slope increases. The area below the silt fence should be undisturbed ground.
- d. Remove and stockpile topsoil and vegetation from areas to be impacted by the construction activities. No organic debris shall be buried on site. The topsoil stockpile should be stabilized by seed, mulch, or other appropriate measures as soon as possible.
- e. Commence construction activities.

f. For portions of the site that directly discharge to the 303(d) stream and where soil disturbance activities have temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased.

- For the remainder of the site, stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the most recent soil disturbance activity ceased.
- If the site is snow covered and/or frozen then stabilization measures shall be implemented as soon as practicable.
- Acknowledgement that where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures, in conformance with the New York State Standards and Specifications for Erosion and Sediment Control, shall be installed within seven (7) days from the date the soil disturbance activity ceased.

B. Other Pollution Prevention Controls

1. Dust and Mud Control

Construction traffic must enter and exit the site at the stabilized construction entrances as depicted on the plan sheets and in accordance with the NYSDEC Standards and Specifications for Erosion and Sediment Control (SSESC). The purpose is to trap dust and mud that would otherwise be carried off-site by construction traffic. Water trucks or other dust control agents may be used as needed during construction to reduce dust generated on the site. After construction, the site will be stabilized (as described elsewhere), which will reduce the potential for dust generation.

2. Solid Waste Disposal

No solid materials, including building materials, are allowed to be discharged from the site with storm water. All solid waste, including disposable materials incidental to the major construction activities, must be collected and placed in containers. The containers will be emptied as necessary by a contract trash disposal service and hauled away from the site. Containers shall remain closed at all times. Substances that have the potential for pollution of surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site.

3. Sanitary Facilities

All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities shall be provided at the site throughout the construction phase. They must be utilized by all construction personnel and shall be serviced by a commercial operator.

4. Water Source

Non-storm water components of site discharge must be clean water. Water used for construction, which discharges from the site must originate from a public water supply or private well approved by the State Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site.

5. Concrete Waste from Concrete Ready-Mix Trucks

Discharge of excess or waste concrete and/or wash water from concrete trucks will be allowed on the construction site, but only in specifically designated diked areas prepared to prevent contact between the concrete and/or wash water and storm water that will be discharged from the site. Alternatively, waste concrete can be placed into forms to make riprap or other useful concrete products. The cured residue from the concrete washout diked areas shall be disposed in accordance with applicable state and federal regulations.

6. Fuel Tanks

Temporary on-site fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment with the capacity required by the applicable regulations. The tank shall be in sound condition free of rust or other damage, which might compromise containment. Hoses, valves, fittings, caps, filler nozzles, and associated hardware shall be maintained in proper working condition at all times. Refueling shall take place 100 ft minimum outside of natural resources areas.

7. Hazardous Waste Management and Spill Reporting

Any hazardous or potentially hazardous waste that is brought onto the construction site will be handled properly in order to reduce the potential for storm water pollution. All materials used on this construction site will be properly stored, handled and dispensed following any applicable label directions. Material Safety Data Sheets (MSDS) information will be kept on site for any and all applicable materials.

- In the event of an accidental spill immediate action shall be taken by the General Contractor to contain and remove the spilled material. All hazardous materials shall be disposed of by the Contractor in the manner specified by local, state, and federal regulations and by the manufacturer of such products. As soon as possible, the spill shall be reported to the appropriate state and local agencies. As required under the provisions of the Clean Water Act, any spill or discharge entering the waters of the United States shall be properly reported.

Any spills of hazardous materials in quantities in excess of Reportable Quantities as defined by EPA or the State Agency regulations, shall be immediately reported to the EPA National Response Center (1-800-424-8802) and the NYSDEC Division of Environmental Remediation (NYS Spill Hotline, 1-800-457-7362). The reportable quantity for petroleum products is 5-gal. Refer to Exhibit 1.1-1 of the NYSDEC Division of Environmental Remediation Technical Field Guidance Spill Reporting and Initial Notification Requirements for hazardous materials spill reportable quantities and procedures.

In order to minimize the potential for a spill of hazardous materials to come in contact with storm water, the following steps will be implemented:

- a. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) shall be stored in a secure location, under cover, when not in use.
- b. The minimum practicable quantity of all such materials shall be kept on the job site and scheduled for delivery as close to time of use as practicable.
- c. A spill control and containment kit (containing for example, absorbents, such as kitty litter or sawdust, acid neutralizing agents, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) shall be provided at the site.
- d. All of the product in a container shall be used before the container is disposed of. All such containers shall be triple rinsed, with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with state and federal regulations and shall not be allowed to mix with storm water discharges.
- e. All products shall be stored in and used from the original container with the original product label.
- f. All products shall be used in strict compliance with instructions on the product label.
- g. The disposal of excess or used products shall be in strict compliance with instructions on the product label.

8. Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowed as indicated in this SWPPP:

- Vehicle wash water if no detergents are used
- Firefighting activities
- Fire hydrant flushing, with chlorine residuals of 0.2-ppm or less
- Potable water sources including water line flushing, with chlorine residuals of 0.2-ppm or less
- Uncontaminated groundwater or spring water (with geotechnical evaluation only)
- Water used to control dust
- Uncontaminated excavation dewatering (with geotechnical evaluation only)

V. Construction Phasing and Sequence of Activities

A. Phasing

In accordance with the GP-0-20-001, the Owner/Operator shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or MS4 as applicable. Note that the GP-0-20-001 requires construction observations to occur 2 times per week if the 5 acre threshold is exceeded.

B. Sequence of Construction Activities

In general, the proposed construction sequence shall consist of installation of all perimeter E&S Control and Green Practices prior to starting the tasks listed below, unless indicated otherwise on the construction documents. In addition, all disturbed areas are to be vegetated prior to commencement of subsequent tasks.

1. Box out, Compact Subgrade, and Install Access Roads;
2. Construct solar panel arrays;
3. Install Underground Electrical Collection System;
4. Remove Temporary E&S devices after final stabilization of each area is declared by the Qualified Professional;
5. Restore any disturbed area due to removal of temporary measures.

All cleared areas are to be reclaimed and allowed to revegetate. Refer to the information listed below for a detailed description of the proposed construction sequencing for each of the various project components.

1. Access Roads - The items below provide a generalized construction sequence for the control of erosion and sedimentation during the construction of the access roadways.
 - Install stabilized construction entrance at entrances from County or Town roads.
 - Install erosion and sediment controls at the locations shown on the construction drawings.
 - Complete clearing and grubbing.
 - In agricultural areas, remove topsoil for the width of the access roadways.
 - Place geotextile (as determined by design) and place gravel over the geotextile.
 - Use the roadways to deliver equipment and materials to the solar sites.
 - Stabilize according to temporary/permanent stabilization methods.
 - After the access roadways have been stabilized, remove all erosion and sediment control structures.
2. Underground Electric System and Overhead Electric Lines- The following provides a generalized construction sequence of the construction and implementation of the erosion and sediment controls during construction of the collection system:
 - Install the erosion and sediment controls around perimeter of areas to be disturbed.
 - Complete clearing along the cable route.
 - Install and backfill trench in one operation.
 - Replace topsoil and place seed and mulch.
 - After the site is stabilized remove erosion and sediment controls.

VI. Construction Observation & Maintenance Procedures

A. Inspection Schedule

The Owner/Operator shall have a Qualified Professional conduct an assessment of the site prior to the commencement of any non-erosion and sediment control construction work and report that the appropriate erosion and sediment controls described herein have been installed adequately for construction of the project to begin.

Construction observations shall be completed upon commencement of disturbance at least 1 time every 7 days or 2 times every 7 days in the event that disturbances are 5 acres or more at any one time until final stabilization of the site is achieved. Construction observation reports shall be performed by the Qualified Inspector after each observation and filed with the SWPPP. A digital photograph, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions shall be included with the inspection report. In addition, the Qualified Inspector shall take a digital photograph, with date stamp, that clearly shows the condition of the practice after the corrective action has been completed. A copy of each required report form is included as part of *Exhibit 6*.

B. Observation and Maintenance Practices

The following observation and maintenance practices shall be used to maintain the proposed erosion and sediment controls and all post construction stormwater management practices identified herein throughout construction:

1. Construction Entrances are to be inspected for evidence of off-site sediment tracking where vehicles exit the project area. Each contractor and subcontractor is responsible for maintaining the construction entrance and other controls as previously described.
2. Material storage areas that are exposed to precipitation are to be inspected. Offsite storage areas for materials used exclusively for the project are to be included in the inspections and inspections reports are to be completed.
3. Swales shall be observed for breaches and they shall be repaired when found.
4. Check Dams shall be inspected for depth of sediment and built-up sediment shall be removed prior to it exceeding a depth of one-third the height of the dam.
5. Sediment Traps, if required, shall be inspected for depth of sediment and built-up sediment shall be removed prior to it exceeding a depth greater than 50-percent of the basin, as measured at the outlet of the structure. Vegetation within the structure shall be limited to a maximum height of 18-inches. The outlet device shall be cleaned when drawdown time exceeds 36 hours and repaired as necessary. Note that these devices shall be used for snow storage, if required, during construction.
6. All sediment and debris removed from a practice shall be disposed of in accordance with all applicable waste disposal regulations.
7. Temporary and Permanent Seeding, as well as Plantings shall be inspected for washouts, bare spots, and healthy growth. Washout areas shall be stabilized by jute-mesh, sod, or other approved energy dissipation means. Bare spots and unhealthy growth areas shall be re-established, as required.

8. All measures shall be maintained in good working order and in accordance with the latest edition of the NYSSESC. If a repair is necessary, it shall be initiated within 24 hours of report and completed within 48-hours thereafter.

C. Inspection Reporting

Construction observation reports shall be performed by a Qualified Inspector and review by a Qualified Professional after each observation and filed with the SWPPP.

Additional forms, which can be found on the NYSDEC webpage, such as the “NYSDEC Inspection Checklist”, should be reviewed by the Owner/Operator or a duly authorized representative, prior to allowing commencement of construction. Note that a duly authorized representative must have written authorization from the Owner/Operator to sign documents and that a copy of the authorization must be submitted to the NYSDEC. The forms shall be posted on-site in a publicly-accessible location.

D. Site Stabilization Inspections

The site shall be cleaned of all construction debris prior to demobilization. Temporary erosion and sediment control practices shall be removed when soils are stabilized, as determined by the Qualified Professional. After the Qualified Professional declares final stabilization of the site and reports that all temporary controls have been removed, the NOT shall be signed by the Owner/Operator and filed with the NYSDEC. Note that all permanent stormwater management structures, including required structures due to modifications of the SWPPP, shall be listed on the NOT.

E. Modifications/Revisions

Any necessary modifications to this SWPPP shall be implemented within 7 calendar days of an inspection. Modifications are necessary if a control measure or procedure does not provide adequate pollutant control. All revisions are to be recorded in the Construction Log Book, included in *Exhibit 6* within 7 calendar days of an inspection.

VII. Post-Construction Operation & Maintenance Procedures

In accordance with the SPDES GP, the SWPPP shall include a maintenance schedule to achieve continuous and effective operation of each post-construction erosion and sediment control practice and stormwater control practice. In addition, the Owner/Operator shall at all times properly operate and maintain, which includes adequate laboratory controls and appropriate quality assurance procedures, all facilities, systems of treatment, systems of control, and related appurtenances that were installed as a requirement of the SWPPP. Thus, the following post-construction operation and maintenance plan, which also includes the maintenance requirements included in the SMDM for the proposed facilities, has been prepared to fulfill the above referenced provisions:

1. Inspect the proposed erosion and sediment control practices at the end of each spring and during dry times of the year, as summarized below:
 - a. Lawn- Observe areas for bare spots, washouts, and healthy growth. Apply topsoil, seed, and mulch to areas, as necessary. Water as required to reestablish lawn as quick as possible. In highly erodible areas, install sod or an approved energy dissipating device until re-establishment is achieved.
 - b. Plantings- Observe for weak and unhealthy species. Prune and replace as necessary.
 - c. Mulch- Observe areas for bare and thin spots. Re-apply mulch, as necessary, to obtain a minimum depth of 4-inches over the entire area.

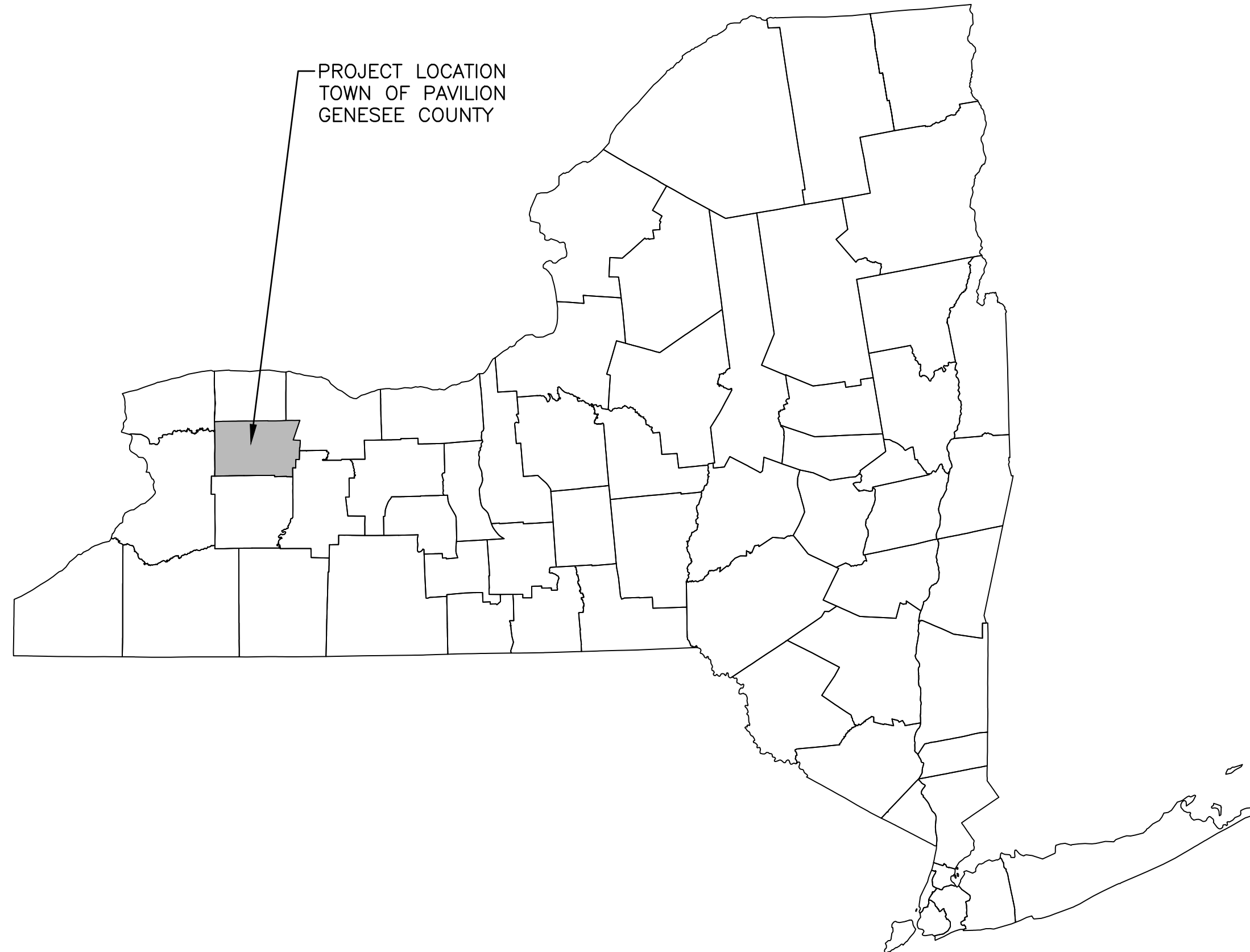
Operation, maintenance, and management reports should be made by the Owner/Operator after each inspection and filed with the SWPPP. Copies of each suggested report form to be used for the proposed practices are included in this report.

Note that this plan shall be updated, as necessary, to include all permanent stormwater management structures listed on the NOT and that the plan shall include the operation and maintenance procedures necessary for the structures to function as designed after final stabilization, as described in the SPDES GP.

APPENDIX A

Exhibit 1: Project Location Maps

GENESEE 4 - 4.275 MW SOLAR PROJECT PRELIMINARY DESIGN SUBMITTAL



6464 SHEPARD RD
TOWN OF PAVILION
GENESEE COUNTY, NY 14525

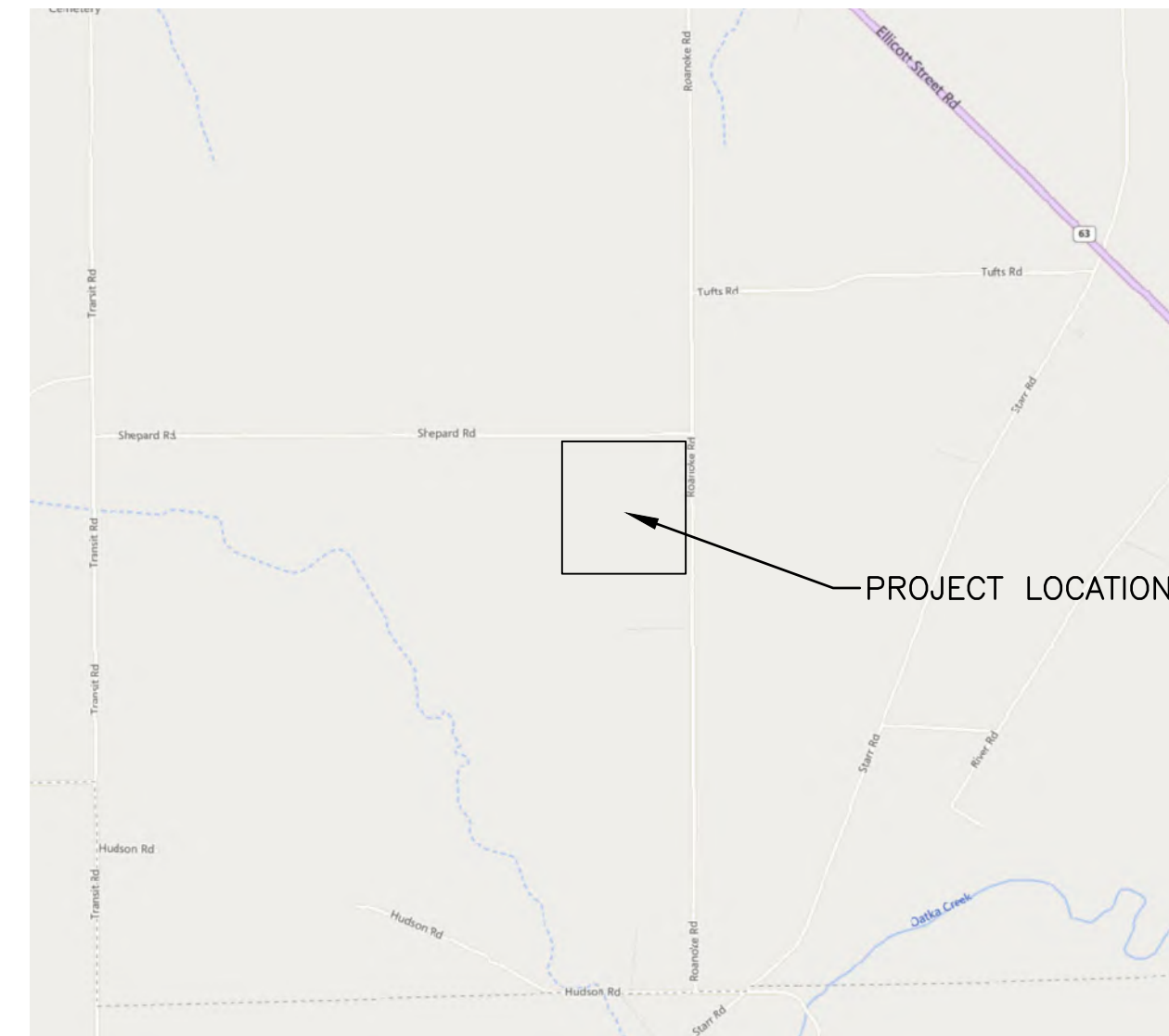
PROJECT No. 210296-03

NEW YORK STATE MAP N.T.S.

PROJECT SITE INFORMATION	
SITE ADDRESS	6464 SHEPARD RD
COUNTY PARCEL NUMBER	015.00-1-38.11
GPS COORDINATES	42°52'39.99" N, 78°03'12.40" W
SITE ELEVATION	1,150 FT
UTILITY NAME	
UTILITY ADDRESS	
UTILITY CONTACT INFORMATION	
DEVELOPER NAME	
DEVELOPER ADDRESS	
DEVELOPER CONTACT INFORMATION	
CIVIL ENGINEER OF RECORD (EOR) NAME	S. MELLOTT
CIVIL EOR ADDRESS	180 CHARLOTTE ST. ROCHESTER, NY
CIVIL EOR CONTACT INFORMATION	585-334-1310
APPLICABLE BUILDING PERMIT AUTHORITY	TOWN OF PAVILION

CIVIL SITE BASIS AND QUANTITY ESTIMATES	
PROJECT ZONING	AG/RES (AR-1)
CODE(S) APPLIED	AGRICULTURAL/SOLAR REGS.
SETBACK FRONT MIN. BY CODE (FT)	15 FT
SETBACK FRONT MIN. DESIGNED (FT)	101.7 FT MIN.
SETBACK REAR MIN. BY CODE (FT)	15 FT
SETBACK REAR MIN. DESIGNED (FT)	46.2 FT MIN.
SETBACK SIDE MIN. BY CODE (FT)	15 FT
SETBACK SIDE MIN. DESIGNED (FT)	199.7 FT MIN
MIN DIST. FROM SOLAR SYSTEM TO STRUCTURE (FT)	193 FT MIN
ROAD WIDTH DESIGNED (FT)	20 FT
MAX. STRUCTURE HEIGHT BY CODE (FT)	50 FT
MAX. STRUCTURE HEIGHT DESIGNED (FT)	15 FT +/-
MAX. FENCE HEIGHT BY CODE (FT)	6 FT
MAX. FENCE HEIGHT DESIGNED (FT)	7 FT
PROPERTY AREA (ACRES)	36.4 AC
FENCED AREA (ACRES)	19.42 AC
AREA OF PANELS (ACRES)	6.80 AC
ROAD AREA (SF)	11,214 SF
AGGREGATE BASE MATERIAL (CY)	225 CY
CHAIN-LINK FENCE (LF)	3,797 LF
GATE COUNT	1

PROJECT SUMMARY	
SYSTEM AC SIZE (MW)	4.275
SYSTEM DC SIZE (DC)	5.61
MODULE COUNT	12,464
INVERTER COUNT	TBD
SWITCHGEAR COUNT	TBD
TRANSFORMER COUNT	TBD
EQUIPMENT PAD COUNT	1
POLE COUNT	6
PANEL WATTAGE	450



LOCATION MAP N.T.S.

INDEX OF DRAWINGS:		
DRAWING NO.	SHEET NO.	DESCRIPTION
C-001	1 OF 13	COVER
C-002	2 OF 13	CONSTRUCTION NOTES
C-100	3 OF 13	EXISTING CONDITIONS
C-200	4 OF 13	OVERALL SITE PLAN
C-201	5 OF 13	CIVIL SITE PLAN - 1
C-202	6 OF 13	CIVIL SITE PLAN - 2
C-300	7 OF 13	OVERALL GRADING PLAN
C-301	8 OF 13	CIVIL GRADING PLAN - 1 MAIN ROAD
C-700	9 OF 13	ACCESS ROAD DETAILS
C-705	10 OF 13	FENCE CIVIL DETAILS
C-710	11 OF 13	EROSION CONTROL DETAILS
C-715	12 OF 13	DRAINAGE DETAILS
C-720	13 OF 13	EQUIPMENT DETAILS

PREPARED BY:



WWW.FISHERASSOC.COM

REV	DESCRIPTION	DATE	BY
7			
6			
5			
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3			
2			
1			

<small> CONSENT: 2021 FISHER ASSOCIATES P.E. L.S., L.A., D.P.C. New York State Education Law Section 1405.4 requires that the design professional seal and signature be placed on all drawings prepared by a design professional. If an item bearing the seal of an engineer or land surveyor is altered, the date, the name of the engineer or land surveyor and the date of such alteration shall be noted on the drawing of the alteration. </small>	<small> PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN ISSUE DATE 12/21 </small>
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	<small> PROJECT GENESEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESEE COUNTY, NY 14525 TITLE OF DRAWING COVER SHEET </small>
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<small> DRAWING NO. C-001 </small>	<small> SHEET 1 OF 13 </small>
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SEQUENCE OF CONSTRUCTION:

1. PRE-CONSTRUCTION MEETING HELD TO INCLUDE PROJECT MANAGER, OPERATOR'S ENGINEER, CONTRACTOR, TOWN MS4 REPRESENTATIVE, AND SUB-CONTRACTORS PRIOR TO LAND DISTURBING ACTIVITIES.
2. INSTALL PERIMETER SILT FENCE.
3. BEGIN CLEARING AND GRUBBING OPERATIONS. CLEARING AND GRUBBING SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND ONLY IN AREAS WHERE CONSTRUCTION IS PLANNED TO COMMENCE WITHIN 14 DAYS AFTER CLEARING AND GRUBBING.
4. STRIP TOPSOIL AND STOCKPILE IN A LOCATION ACCEPTABLE TO CONSTRUCTION MANAGER. WHEN STOCKPILE IS COMPLETE, INSTALL PERIMETER SILT FENCE, SEED SURFACE WITH 100% PERENNIAL RYEGRASS MIXTURE AT A RATE OF 2-4 LBS. PER 1000 SF. APPLY 90-100 LBS PER 1000 SF OF MULCH.
5. COMMENCE EARTHWORK CUT AND FILLS. THE WORK SHALL BE PROGRESSED TO ALLOW A REASONABLE TRANSFER OF CUT AND FILL EARTH FOR ROUGH GRADING AND EARTH MOVING. THE CONTRACTOR WILL BE GIVEN SOME LATITUDE TO VARY FROM THE FOLLOWING SCHEDULE IN ORDER TO MEET THE FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL REVIEW VARIATIONS TO SWPPP WITH DESIGN ENGINEER AND QUALIFIED PROFESSIONAL PRIOR TO IMPLEMENTATION.
6. AS ROADWAY AND ACCESS DRIVES ARE BROUGHT TO GRADE, THEY WILL BE STABILIZED WITH CRUSHED STONE SUBBASE AT A DEPTH SPECIFIED ON PLANS TO PREVENT EROSION AS SOON AS PRACTICABLE.
7. STABILIZE ALL AREAS AS SOON AS PRACTICABLE, IDLE IN EXCESS OF 7 DAYS AND IN WHICH CONSTRUCTION WILL NOT COMMENCE WITHIN 14 DAYS.
8. INSTALL UTILITIES. TRENCH EXCAVATION/BACKFILL AREAS SHOULD BE STABILIZED PROGRESSIVELY AT THE END OF EACH WORKDAY WITH SEED AND STRAW MULCH AT A RATE OF 100% PERENNIAL RYE GRASS AT 2-4 LBS/1000 SF MULCHED AT 90-100 LBS/1000 SF.
9. STABILIZE ALL AREAS IDLE IN EXCESS OF 7 DAYS IN WHICH CONSTRUCTION WILL NOT COMMENCE WITHIN 14 DAYS.
10. REMOVE TEMPORARY CONSTRUCTION EXITS AND PERIMETER SILT FENCE ONCE SITE HAS ACHIEVED 80% UNIFORM STABILIZATION.
11. REMOVE SILT FENCE WITHIN WETLANDS DURING CONSTRUCTION, RETURN SILT FENCE AFTER CONSTRUCTION HAS BEEN FINALIZED.

GENERAL NOTES:

1. THE EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THIS MAP HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORD MAPS AS PROVIDED, THEY ARE NOT CERTIFIED TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.
2. HIGHWAY DRAINAGE ALONG ALL ROADS AND PRIVATE DRIVES SHALL BE KEPT CLEAN OF MUD, DEBRIS ETC. AT ALL TIMES.
3. THE CONTRACTOR SHALL CONSULT THE OWNER OR THEIR REPRESENTATIVE BEFORE DEVIATING FROM THESE PLANS.
4. IN ALL TRENCH EXCAVATIONS, CONTRACTOR MUST LAY THE TRENCH SIDE SLOPES BACK TO A SAFE SLOPE, USE A TRENCH SHIELD OR PROVIDE SHEETING AND BRACING.
5. IF SUSPICIOUS AND/OR HAZARDOUS MATERIAL IS ENCOUNTERED DURING DEMOLITION/CONSTRUCTION, ALL WORK SHALL STOP AND THE CHAUTAQUA COUNTY DEPARTMENT OF HEALTH AND THE NEW YORK STATE DEPARTMENT OF CONSERVATION SHALL BE NOTIFIED IMMEDIATELY. WORK SHALL NOT RESUME UNTIL THE DEVELOPER HAS OUTLINED APPROPRIATE ACTION FOR DEALING WITH THE WASTE MATERIAL AND THE DEVELOPMENT PLANS ARE MODIFIED AS MAY BE NECESSARY.
6. EXCAVATED WASTE MATERIAL REMOVED FROM THE SITE SHALL BE PLACED AT A LOCATION ACCEPTABLE TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
7. AREAS DISTURBED OR DAMAGED AS PART OF THIS PROJECTS CONSTRUCTION THAT ARE OUTSIDE OF THE PRIMARY WORK AREA SHALL BE RESTORED, AT THE CONTRACTORS EXPENSE, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
8. TREES MAY BE CLEARED WITHIN THE FLOODPLAIN OR WETLAND AREAS AS LONG AS THE STUMPS ARE NOT CLEARED OR GRUBBED. LOW GROUND PRESSURE CONSTRUCTION VEHICLES OR TIMBER MATTING MAY BE UTILIZED TO CUT TREES AND TO REMOVE DEBRIS WITHIN THE FLOODPLAIN OR WETLAND AREAS. CONSTRUCTION TRAFFIC WITHIN THE FLOODPLAIN OR WETLANDS SHALL BE MINIMIZED TO THAT WHICH IS NECESSARY FOR THE INSTALLATION OF THE PANELS, RACKING, AND OTHER PROJECT COMPONENTS. THE WETLAND AREAS SHALL BE PROTECTED AT ALL TIMES AS SHOWN ON THE PLANS WHEN INSTALLATION OF THE PROJECT COMPONENTS IS NOT ONGOING.

WASTE/HAZARDOUS MATERIAL PRACTICES:

1. WHENEVER POSSIBLE COVERED TRASH CONTAINERS SHOULD BE USED.
2. DAILY SITE CLEANUP IS REQUIRED TO REDUCE DEBRIS AND POLLUTANTS IN THE ENVIRONMENT.
3. CONTRACTOR SHALL PROVIDE A SAFE STORAGE SPACE FOR ALL PAINTS, STAINS AND SOLVENTS INSIDE A COVERED STORAGE AREA.
4. ALL FUELS, OILS AND GREASE MUST BE KEPT IN CONTAINERS AT ALL TIMES.

EROSION & SEDIMENT CONTROL NOTES:


1. INSTALL EROSION CONTROL MEASURES AS INDICATED ON THE PLAN PRIOR TO THE START OF ANY EXCAVATION WORK. EROSION CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED NOVEMBER 2016.
2. REFER TO STORM WATER POLLUTION PLAN NOTES FOR EROSION CONTROL MEASURE NOTES.

SITE STABILIZATION:

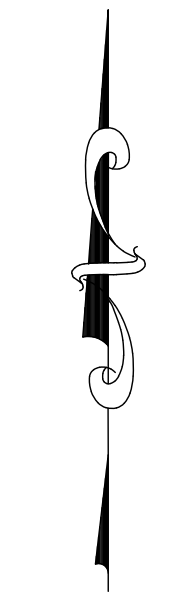
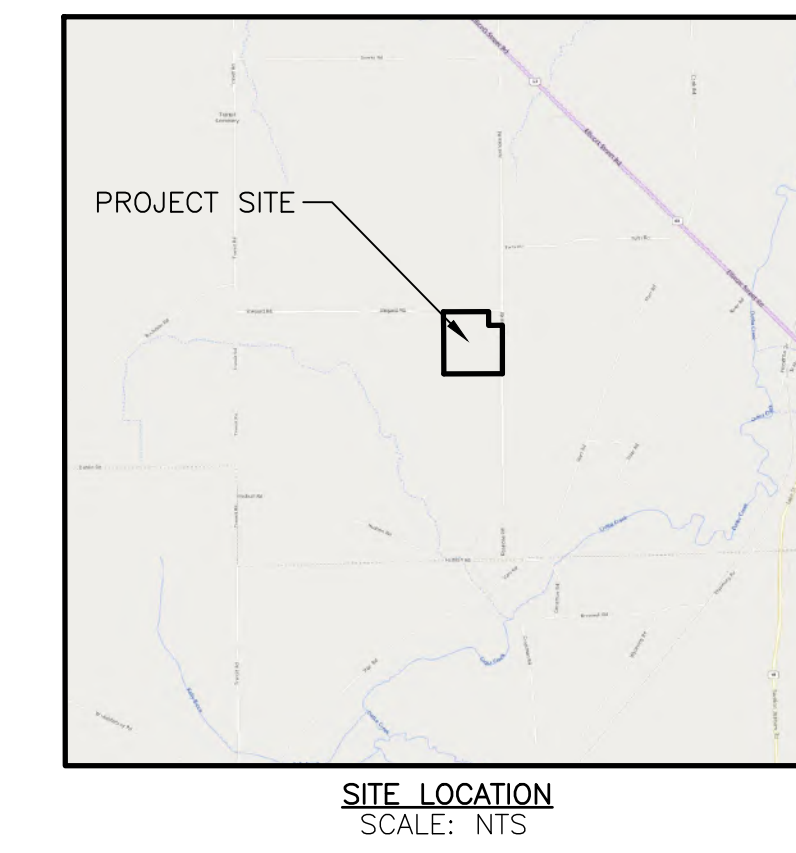
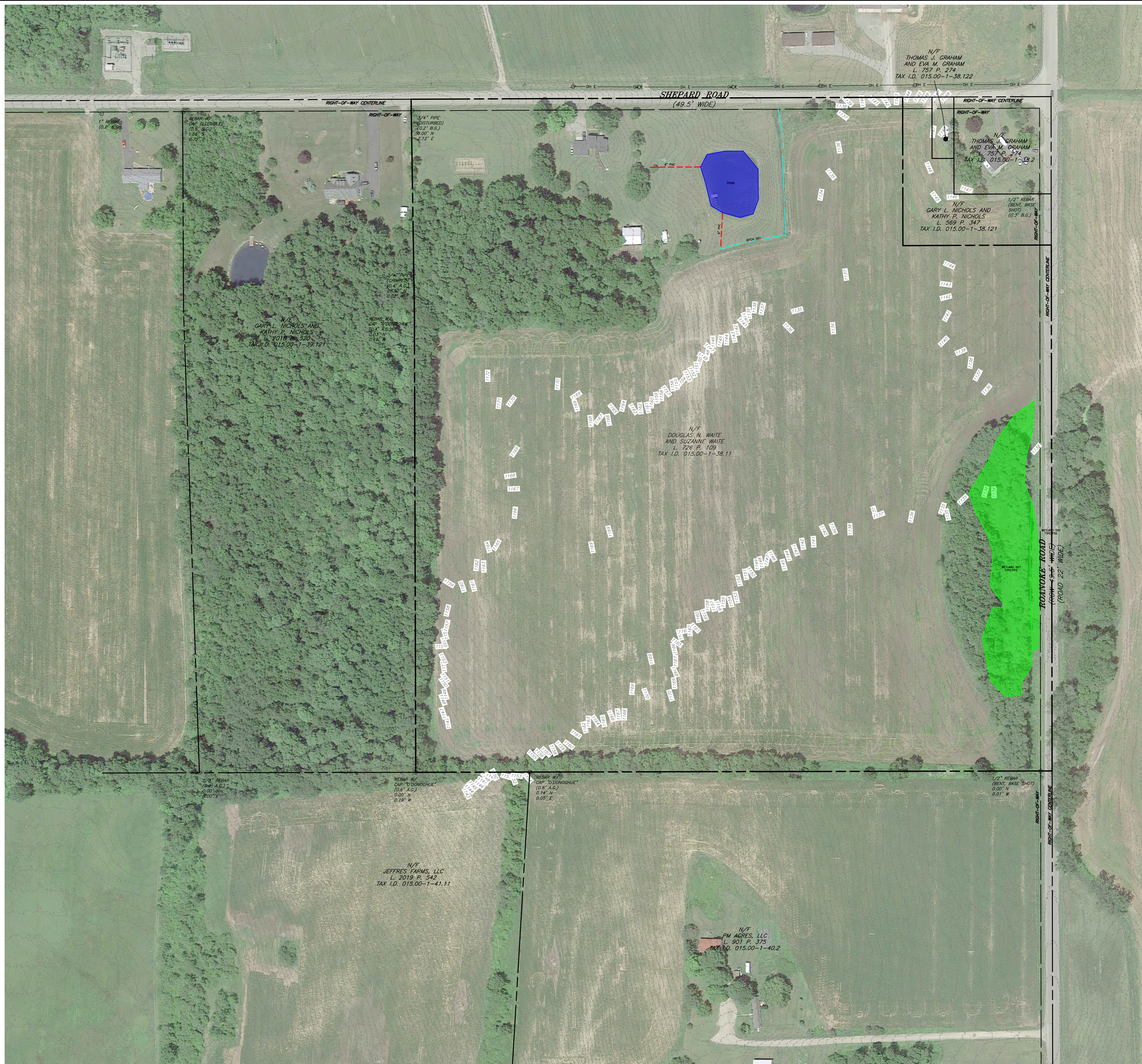
1. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON.
2. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN THE MULCH APPLICATION RATES TABLE. VERY LITTLE BARE GROUND SHOULD BE VISIBLE THROUGH THE MULCH.
3. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ALONG THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.
4. BEFORE SEEDING IS APPLIED THE CONTRACTOR SHALL SPREAD SOIL TO PREVENT PONDING AND CONFIRM THAT SOIL WILL SUSTAIN THE SEED GERMINATION AND ESTABLISHMENT OF VEGETATION.
5. GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE. COMPACTED SOILS SHOULD BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES, ALONG CONTOUR WHEREVER POSSIBLE, PRIOR TO SEEDING.
6. TOPSOIL OR AMENDED SOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A MINIMUM DEPTH OF 6 INCHES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS.
7. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
8. WHEN USED AS A MULCH REPLACEMENT, THE APPLICATION RATE (THICKNESS) OF THE COMPOST SHOULD BE ½" TO ¾". COMPOST SHOULD BE PLACED EVENLY AND SHOULD PROVIDE 100% SOIL COVERAGE. NO SOIL SHOULD BE VISIBLE.
9. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45° F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.
10. SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
11. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
12. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.
13. LIME, FERTILIZER, SEED, AND MULCH DISTURBED AREAS PER THE EROSION AND SEDIMENT CONTROL PLANS. IN AREAS OF STEEP SLOPES OR OBVIOUS AREAS WHERE POTENTIAL EROSION MAY OCCUR, AN EROSION CONTROL MAT OR FLEXIBLE GROWTH MEDIUM (FGM) SHALL BE USED. FGM SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS.
14. NO CONSTRUCTION TRAFFIC SHALL OCCUR TO REMOVE ANY Bmps UNTIL THE SECTION HAS ACHIEVED 80% PERENNIAL VEGETATIVE COVER. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM 80% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NONVEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

STORM WATER POLLUTION PREVENTION PLAN NOTES:

1. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN PREPARED FOR THE PROJECT FOR MORE INFORMATION.
2. THE CONTRACTOR SHALL PROVIDE A QUALIFIED INSPECTOR TO INSPECT THE PROJECT AT THE END OF EACH WORK WEEK AND PROVIDE A REPORT AT LEAST ONCE PER WEEK.
3. ALL INLETS TO THE STORM SEWER SHALL HAVE INLET PROTECTION. ADD INLET PROTECTION ON INLET NEXT TO ROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP'S) UNTIL GROUND COVER IS ESTABLISHED.
4. REMOVE AND STOCKPILE TOPSOIL AS DIRECTED BY THE CONSTRUCTION MANAGER REPLACE TOPSOIL TO A MINIMUM 4" DEPTH. ALL DISTURBED AREAS TO BE HYDROSEED AS DIRECTED BY THE CONSTRUCTION MANAGER TO PROMOTE VEGETATION AS SOON AS PRACTICABLE.
5. IF THE SEASONS PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE "STANDARDS", NETTING OR LIQUID MULCH BINDER.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS. EROSION CONTROL MEASURES SHALL NOT BE REMOVED BEFORE 80% UNIFORM VEGETATION HAS BEEN ACHIEVED.
7. ALL EROSION CONTROL MEASURES ARE TO BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE AND SHALL BE REPLACED WHEN THEY HAVE REACHED THE DESIGN LIFE INDICATED IN THE NYS GUIDELINES FOR URBAN EROSION SEDIMENT CONTROL DESIGN MANUAL OR EVERY THREE MONTHS..
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF TOPSOIL TO ALL DISTURBED AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES.
9. THE CONTRACTOR SHALL DESIGNATE A MEMBER OF HIS/HER FIRM TO BE RESPONSIBLE TO MONITOR EROSION CONTROL, EROSION CONTROL STRUCTURES THROUGHOUT CONSTRUCTION.
10. ALL DISTURBED AREAS SHALL BE FINISH GRADED TO PROMOTE VEGETATION ON ALL EXPOSED AREAS AS SOON AS PRACTICABLE. STABILIZATION PRACTICES (TEMPORARY/PERMANENT SEEDING, MULCHING, GEOTEXTILES, ETC.) MUST BE IMPLEMENTED WITHIN SEVEN (7) DAYS WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND NOT EXPECTED TO RESUME WITHIN FOURTEEN (14) DAYS.
11. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. ALL CONSTRUCTION DEBRIS AND SEDIMENT SPOILS, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
12. DUST SHALL BE CONTROLLED BY WATERING.
13. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
14. EROSION CONTROL MEASURES SHOULD BE RELOCATED INWARD AS PERMETER SLOPE CONSTRUCTION PROGRESSES AND RECONSTRUCTED TO THE NYS STANDARDS & SPECIFICATIONS AT THE END OF EACH DAY.
15. PERIMETER AREAS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH PROGRESSIVELY A MINIMUM AT THE END OF EACH WEEK WITH 100% PERENNIAL RYEGRASS MIX AT A RATE OF 2-4 LBS PER 1000 SF AND MULCH 90-100 lbs/1000 SF OF WEED FREE STRAW.
16. SLOPE TRACKING SHALL BE IMPLEMENTED ON ALL SLOPE 1 ON 3 OR GREATER AT THE END OF EACH WORK DAY AND PRIOR TO FINAL SLOPE GRADING AND STABILIZATION.

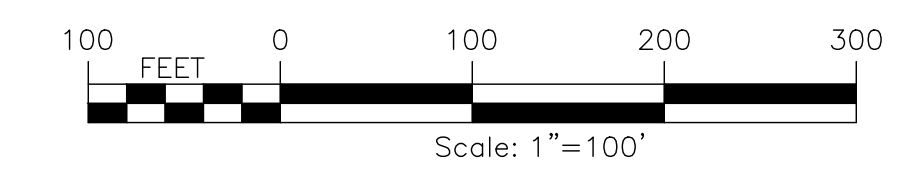
PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		TITLE OF DRAWING CONSTRUCTION NOTES	
DRAWING NO. C-002		SHEET 2 OF 13	
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN		ISSUE DATE 12/21	
			
CONSTRUCTION NOTES			
CONSTRUCTION NOTES		CONSTRUCTION NOTES	
7	6	5	4
3	2	1	REV
DESCRIPTION			DATE BY

FILE NAME: H:\Projects\21\210296-03-Genesee-4\Eng\CAD\CUT\210296 C-100 Existing Conditions.dwg
 DATE/TIME: 12/28/2021 12:12:48 PM
 USER: Brian Damm



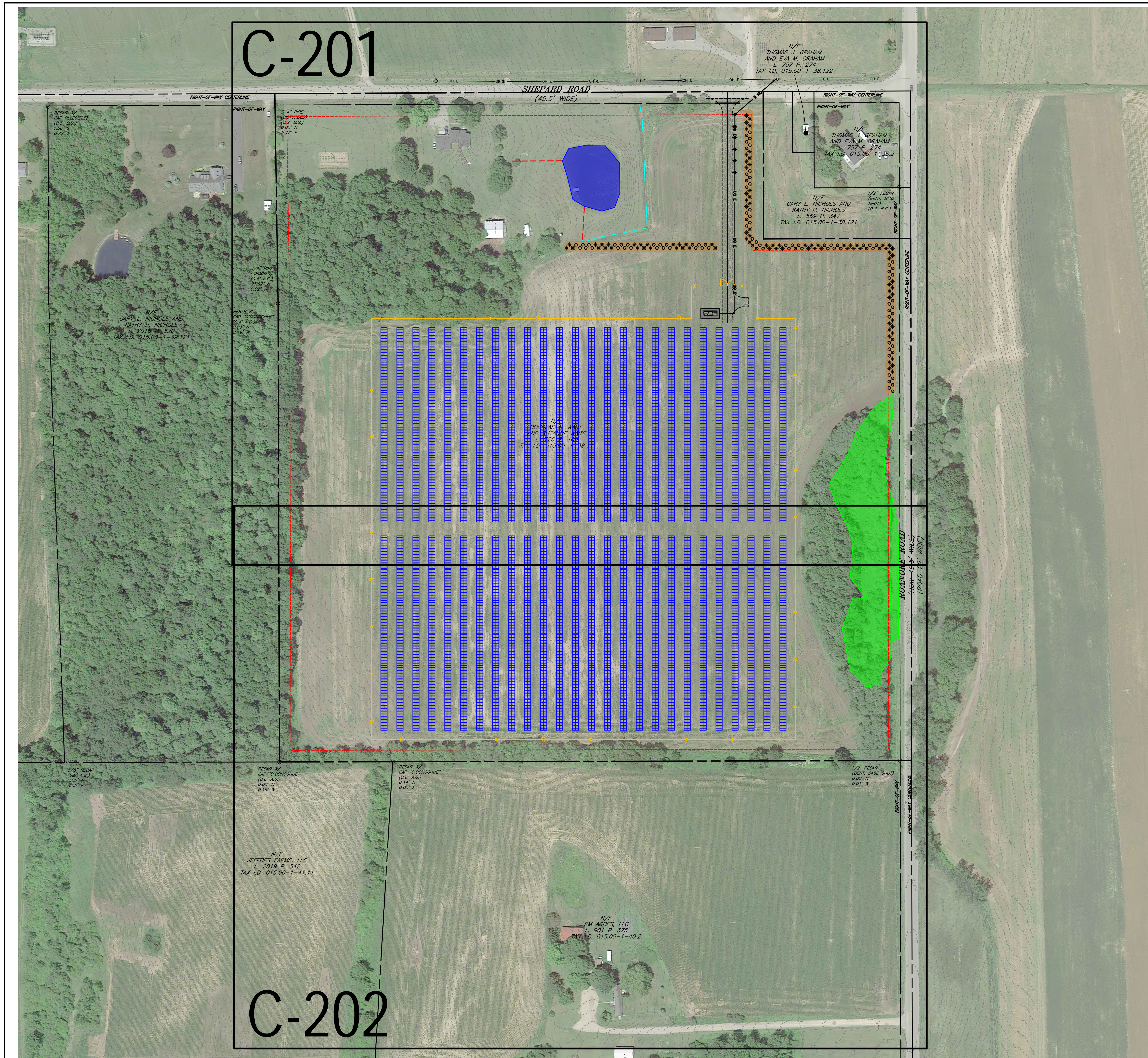
LEGEND

	PARCEL LINE
	PROPERTY SETBACK
	ROW
	EASEMENT
	EXISTING FENCE
	EXISTING OVERHEAD UTILITY LINES
	EXISTING TREE/BRUSH LINE
	DELIMITED WETLANDS
	DELIMITED WATER BODY
	DELIMITED CULVERT
	DELIMITED DITCH
	CONTOUR LINES



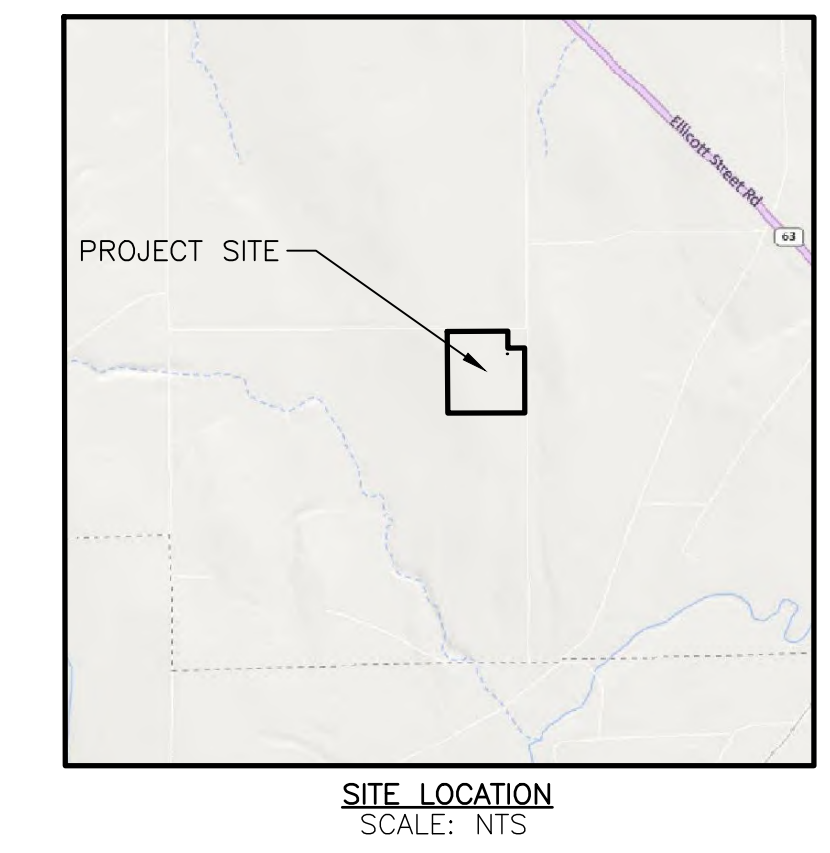
PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		TITLE OF DRAWING EXISTING CONDITIONS															
DRAWING NO. C-100		SHEET 3 OF 13															
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN		ISSUE DATE 12/21															
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 USER: Brian Dunn

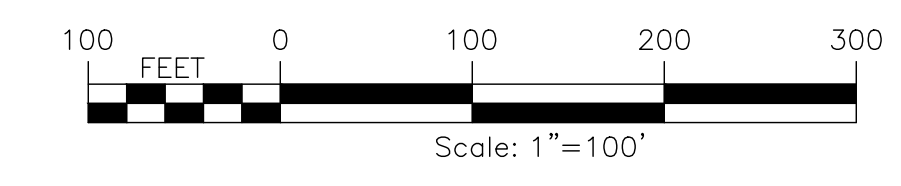


C-201

C-202



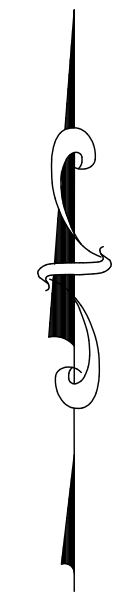
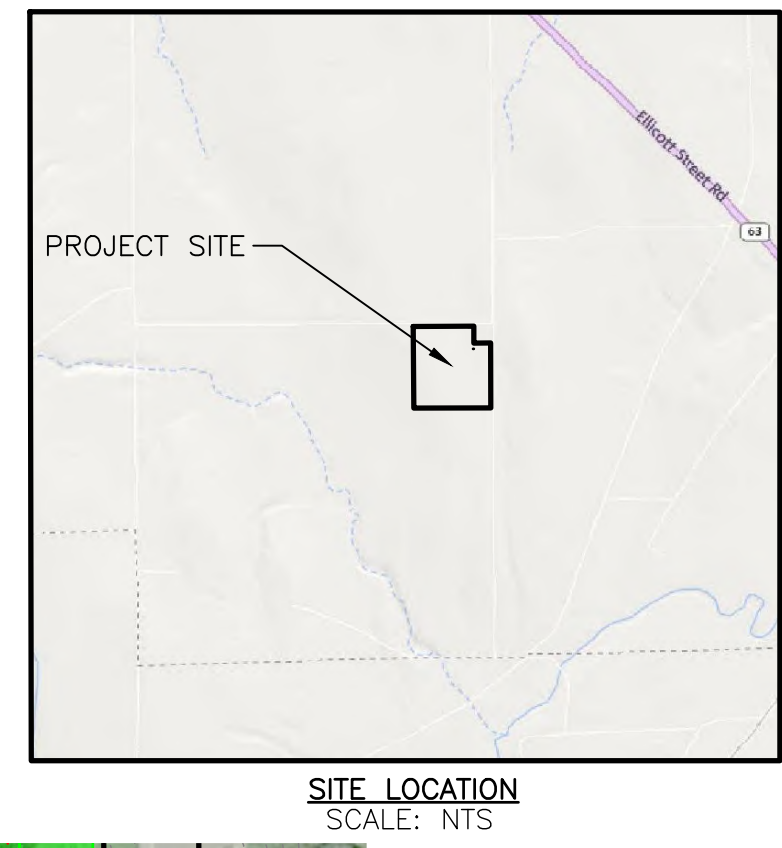
- LEGEND**
- — — — — PARCEL LINE
 - - - - - PROPERTY SETBACK
 - — — — — ROW
 - PE — PE — EASEMENT
 - UG E — UG E — PROPOSED UNDERGROUND ELECTRIC CONDUIT
 - UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
 - OH E — OH E — PROPOSED OVERHEAD UTILITY LINES
 - OH E — OH E — EXISTING OVERHEAD UTILITY LINES
 - UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
 - — — — — EXISTING TREE/BRUSH LINE
 - — — — — DELINEATED WETLANDS
 - — — — — DELINEATED WATER BODY
 - — — — — DELINEATED CULVERT
 - — — — — DELINEATED DITCH
 - — — — — PROPOSED SILT FENCE/FILTER SOCK
 - — — — — GRAVEL ROAD
 - — — — — LANDSCAPING MULCH
 - — — — — PROPOSED TREES/BUSHES



PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		TITLE OF DRAWING OVERALL SITE PLAN	
DRAWING NO. C-200		SHEET 4 OF 13	
PROJECT NO. 210296-03	PROJECT MANAGER S. MELLOTT	DRAWN BY B. KNIGHTON	ISSUE DATE 12/21
AS SHOWN		SCALE	
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BY		DATE	

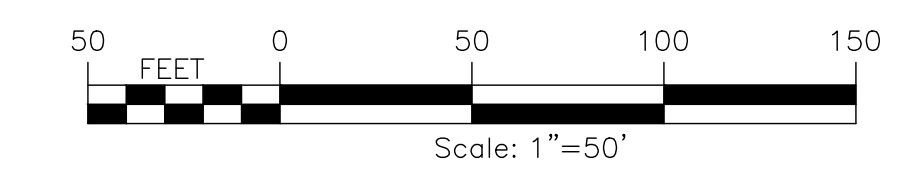
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 USER: Brian Dunn

REFER TO SHEET C-201



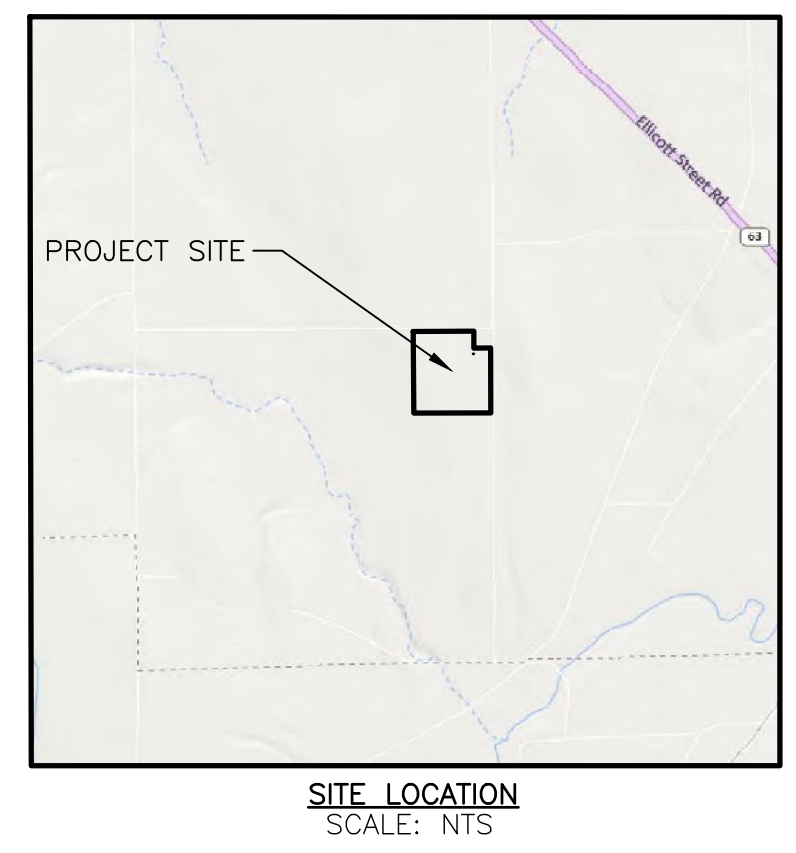
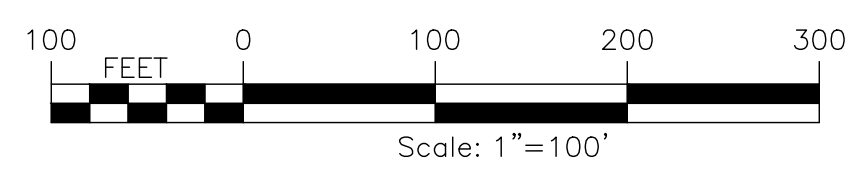
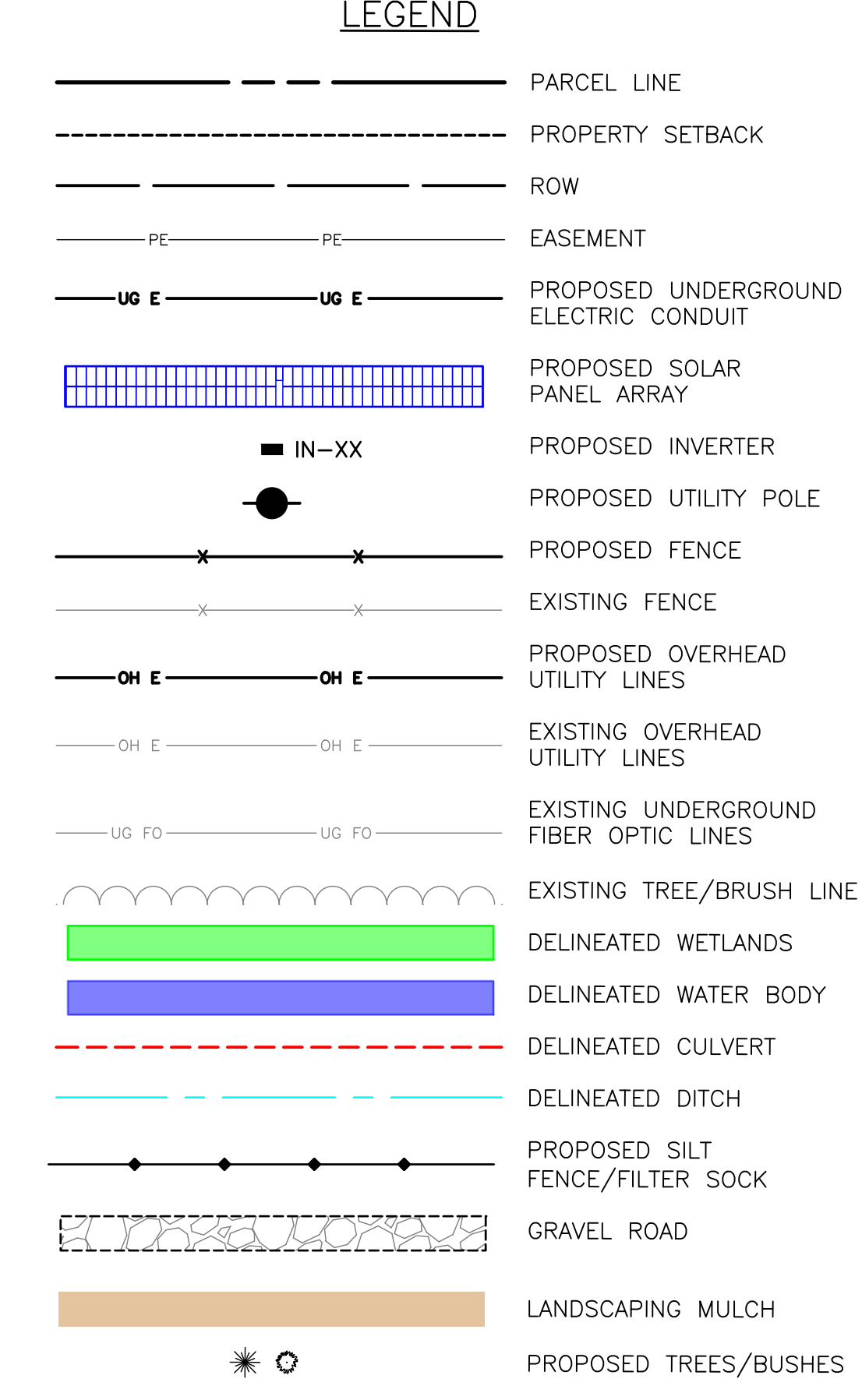
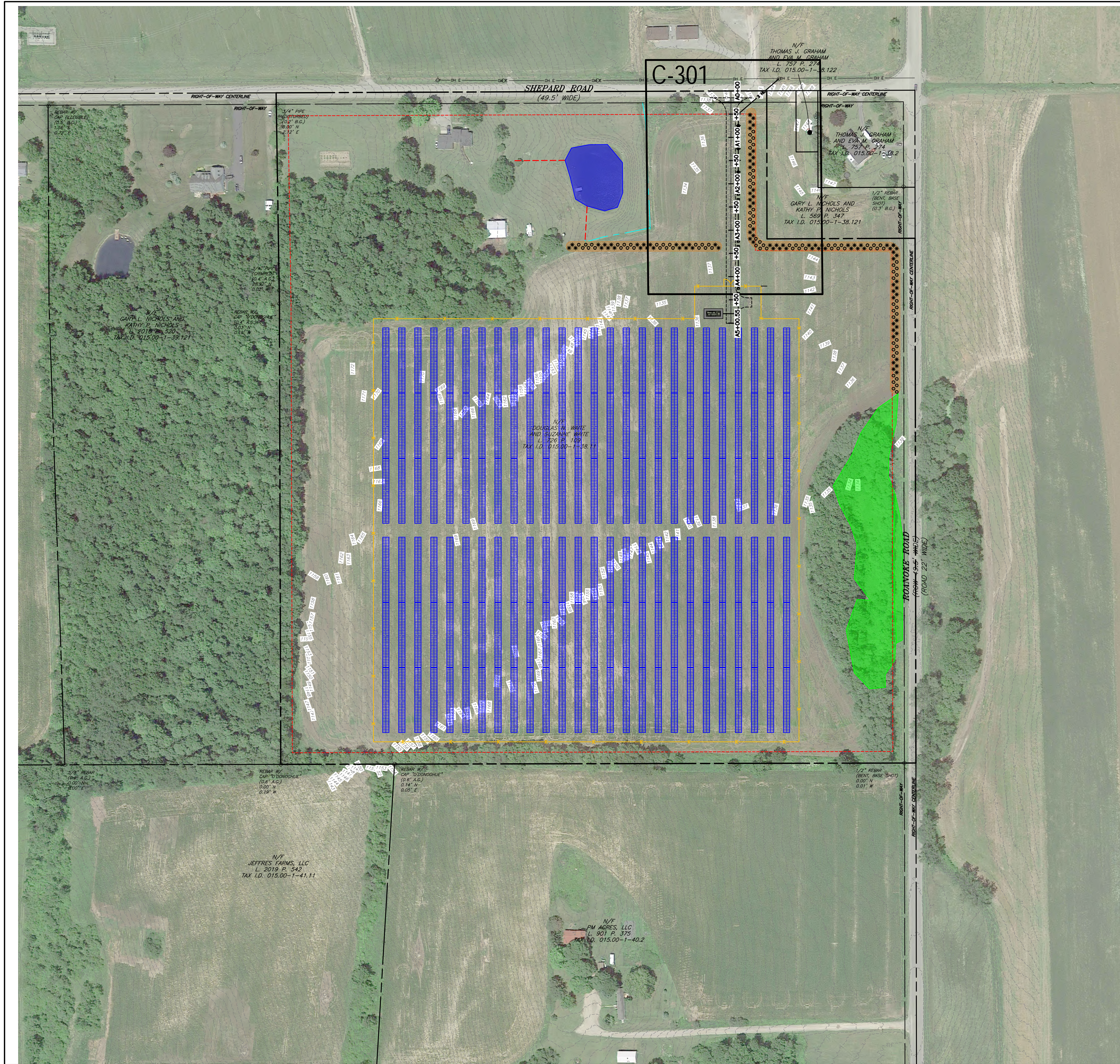
LEGEND

- PARCEL LINE
- - - - - PROPERTY SETBACK
- ROW
- PE — PE — EASEMENT
- UG E — UG E — PROPOSED UNDERGROUND ELECTRIC CONDUIT
- [Grid Pattern] PROPOSED SOLAR PANEL ARRAY
- IN-XX PROPOSED INVERTER
- PROPOSED UTILITY POLE
- X — X — PROPOSED FENCE
- X — X — EXISTING FENCE
- OH E — OH E — PROPOSED OVERHEAD UTILITY LINES
- OH E — OH E — EXISTING OVERHEAD UTILITY LINES
- UG FO — UG FO — EXISTING UNDERGROUND FIBER OPTIC LINES
- ~ ~ ~ EXISTING TREE/BRUSH LINE
- [Green Area] DELINEATED WETLANDS
- [Blue Area] DELINEATED WATER BODY
- - - - - DELINEATED CULVERT
- - - - - DELINEATED DITCH
- ◆ — ◆ — PROPOSED SILT FENCE/FILTER SOCK



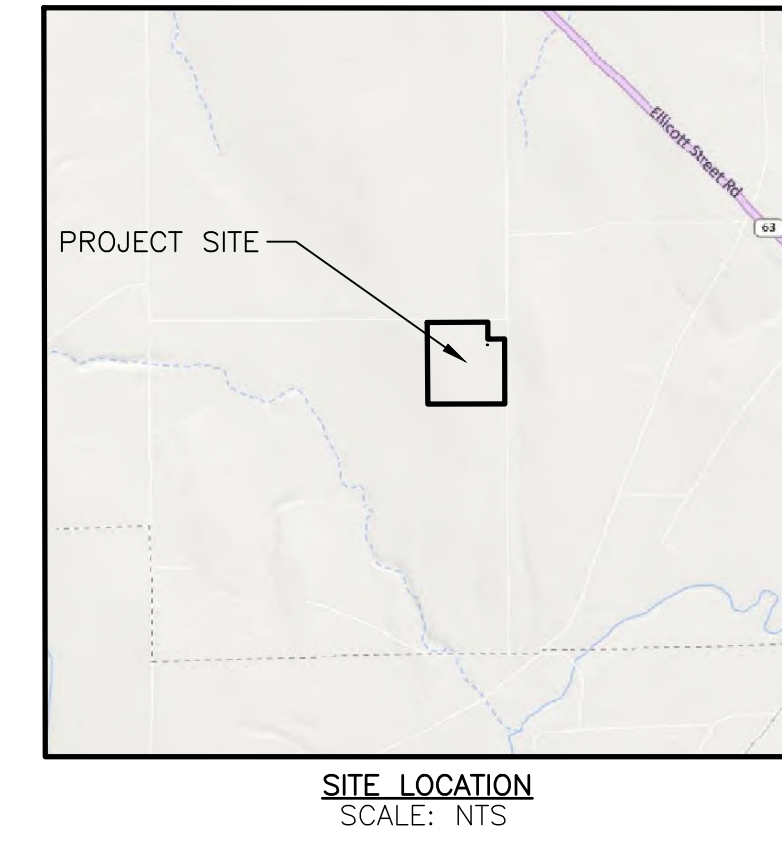
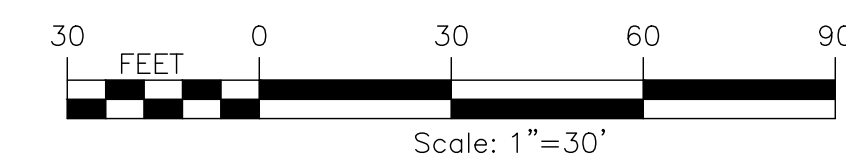
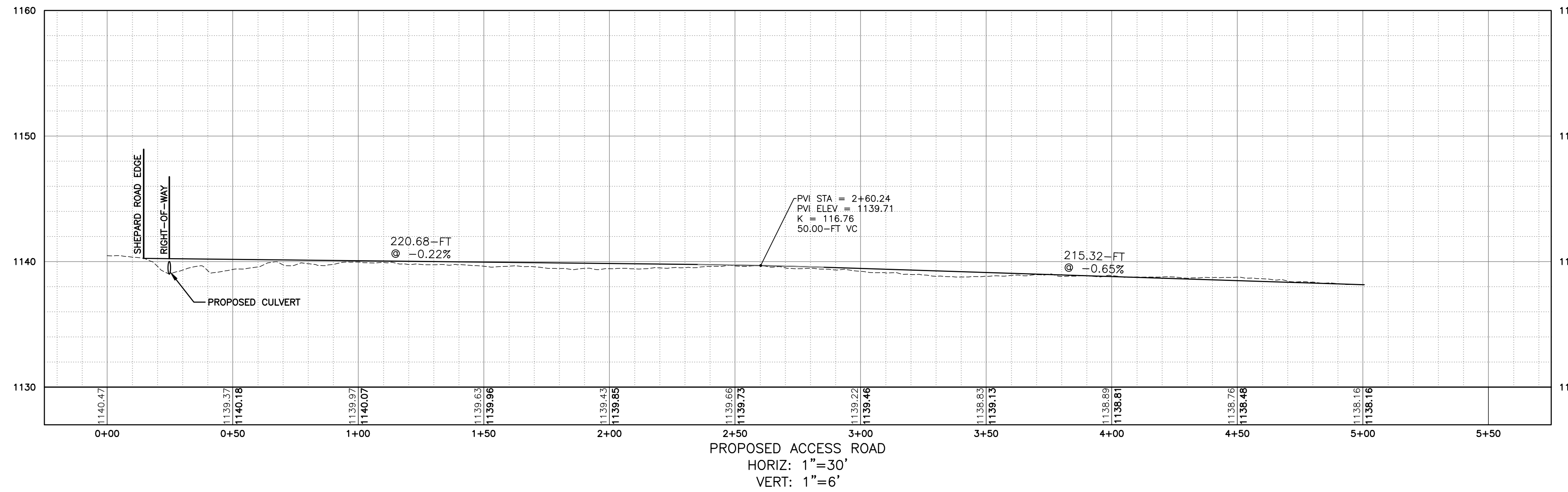
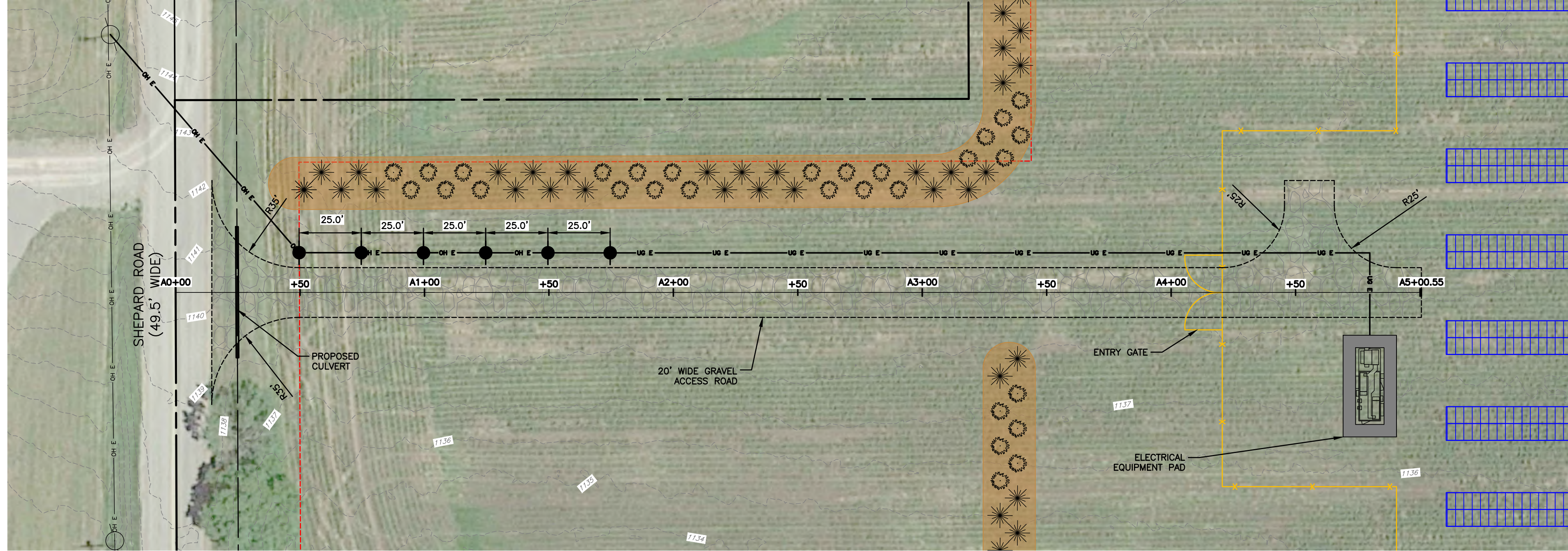
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DRAWING NO. C-202		SHEET 6 OF 13	
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN	ISSUE DATE 12/21	REV 1 DESCRIPTION	DATE BY
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FILE NAME: H:\Projects\21\210296-03-Genesee-4\Eng\CAD\CUT\210296 C-300 Overall Grading Plan(6).dwg
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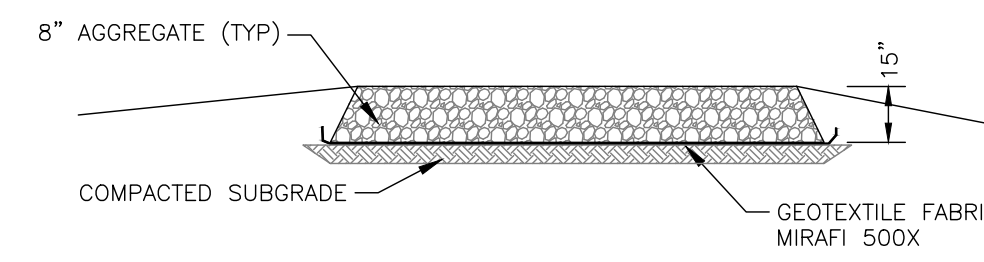
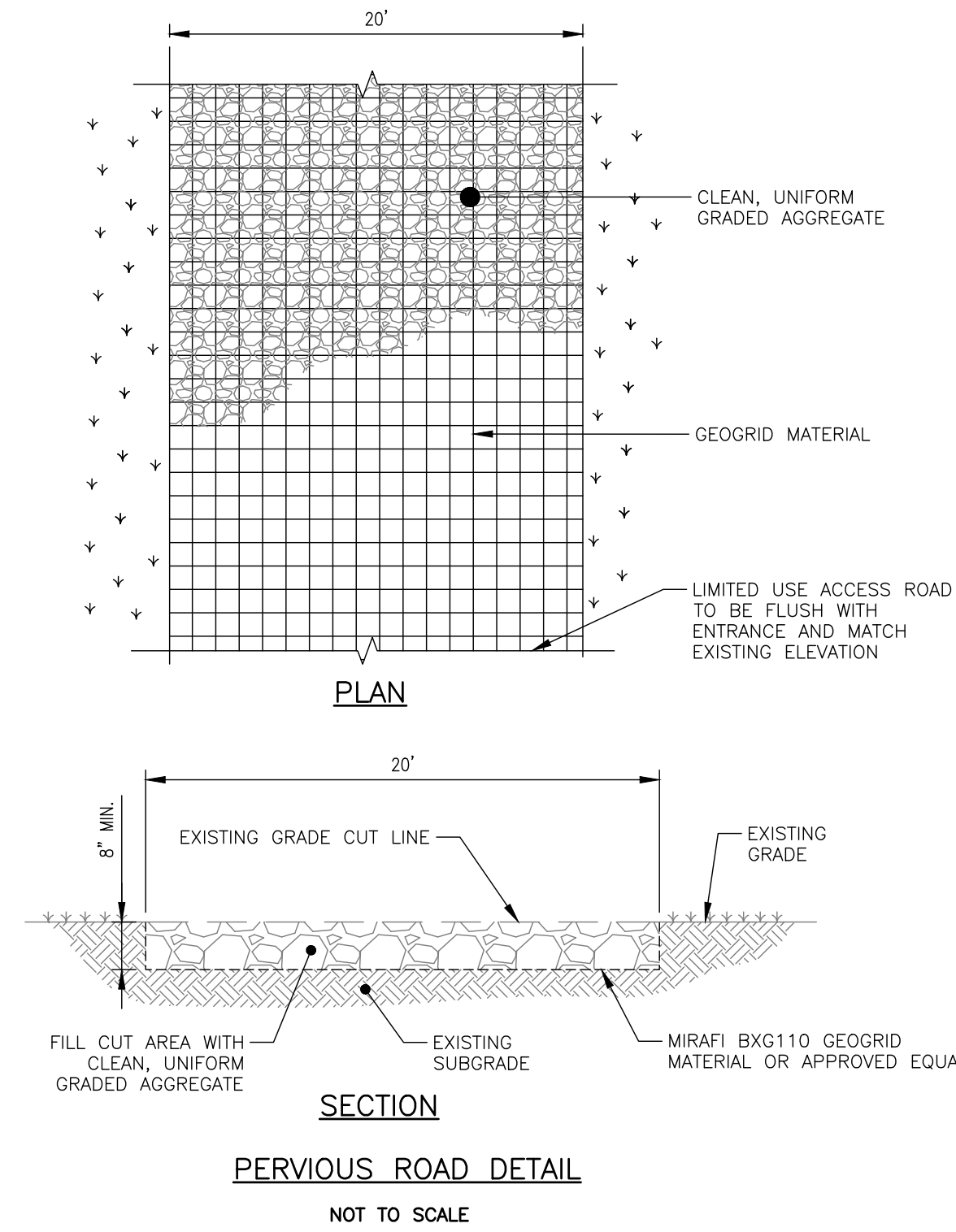


PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		TITLE OF DRAWING OVERALL GRADING PLAN	
DRAWING NO. C-300		SHEET 7 OF 13	
PROJECT NO. 210296-03	PROJECT MANAGER S. MELLOTT	DRAWN BY B. KNIGHTON	ISSUE DATE 12/21
AS SHOWN		SCALE	
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CONSENT: C-301 FISHER ASSOCIATES P.E. L.S. L.A. D.P.C.		DESCRIPTION	
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 USER: Brian Damm



PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		TITLE OF DRAWING CIVIL GRADING PLAN - MAIN ROAD ACCESS	
DRAWING NO. <h1 style="text-align: center;">C-301</h1>			
SHEET 8 OF 13			
FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN		ISSUE DATE 12/21	
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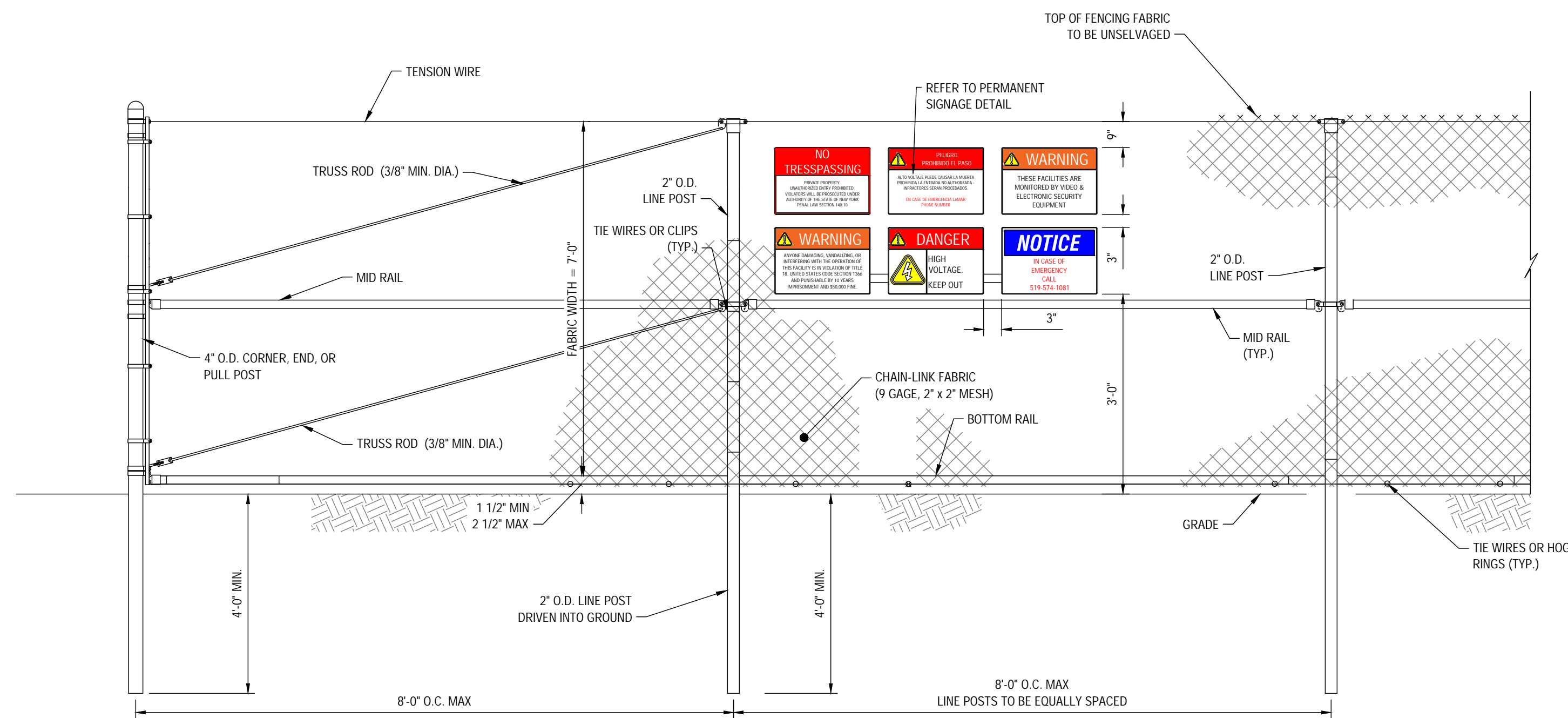
STAGING AREA NOTES:

1. STRIP AND STOCKPILE TOPSOIL.
2. INSTALL STAGING AREA.
3. REMOVE STONE WHEN STAGING AREA IS NO LONGER NEEDED.
4. DECOMPACT SUBGRADE SOILS PER NYSDEC SWDM TABLE 5.3 SOIL RESTORATION REQUIREMENTS.
5. REINSTALL STOCKPILED TOPSOIL.
6. SEED AND MULCH THE DISTURBED AREA.

TEMPORARY STAGING AREA
 NOT TO SCALE

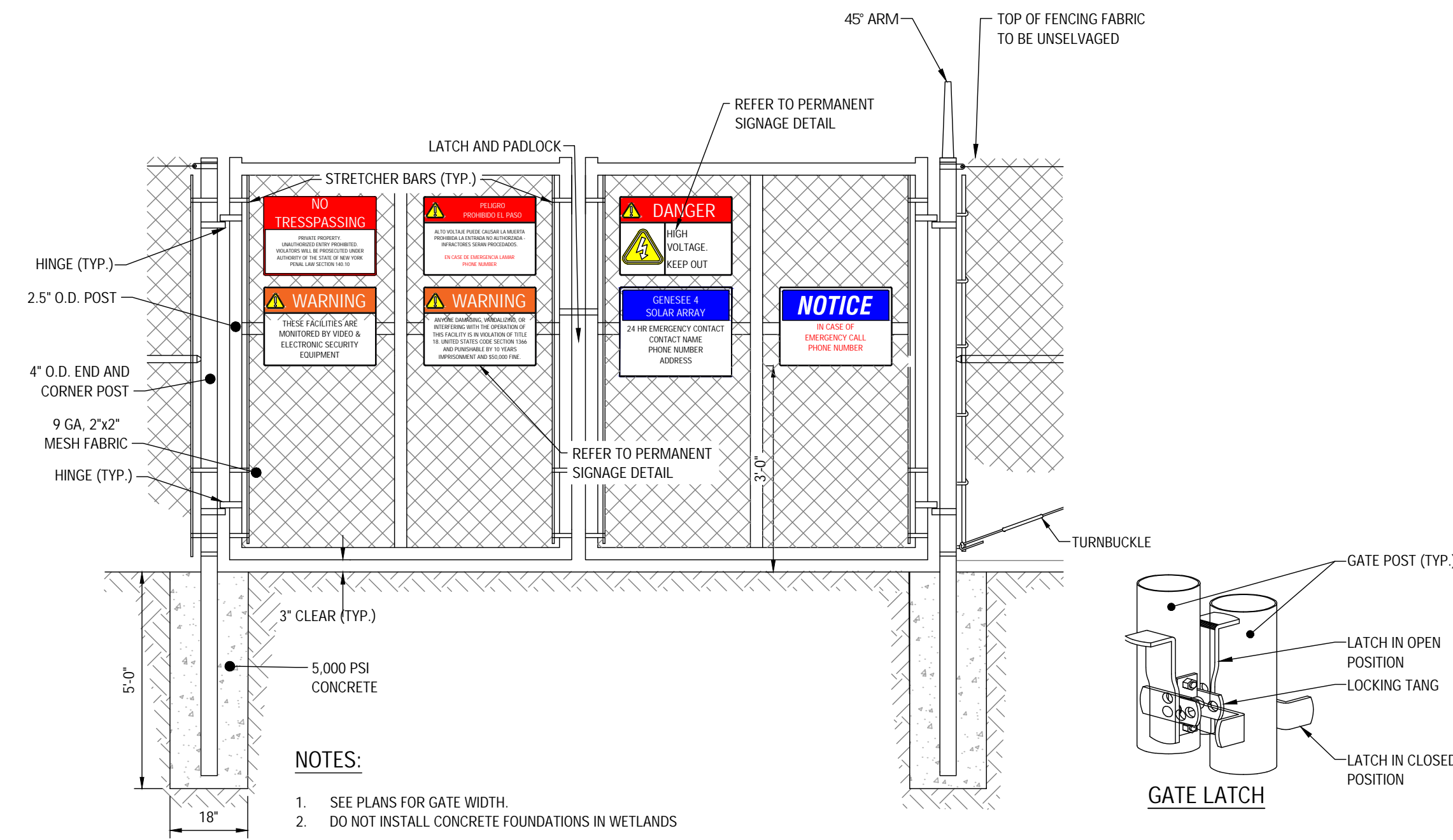
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TITLE OF DRAWING ACCESS ROAD DETAILS		PROJECT MANAGER S. MELLOTT		ISSUE DATE 12/21	
DRAWN BY B. KNIGHTON		SCALE AS SHOWN		FA PROJECT NO. 210296-03	
FISHER ASSOCIATES WWW.FISHERASSOC.COM		CORPSEPT 6, 2021 FISHER ASSOCIATES P.E. L.S., L.A., D.P.C.		New York State Education Law Section 1703.0(2) requires that the seal of a professional engineer or land surveyor be placed on any drawing or plan prepared by such professional engineer or land surveyor in the performance of his or her duties. The seal of the professional engineer or land surveyor shall be placed on the drawing or plan at the time of the execution of the drawing or plan.	
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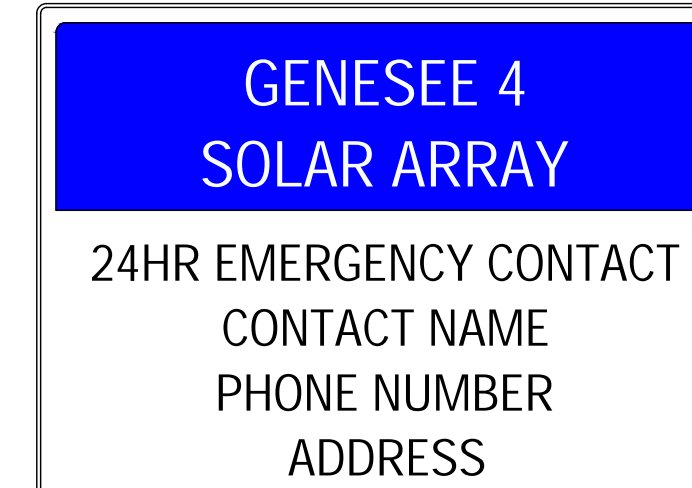
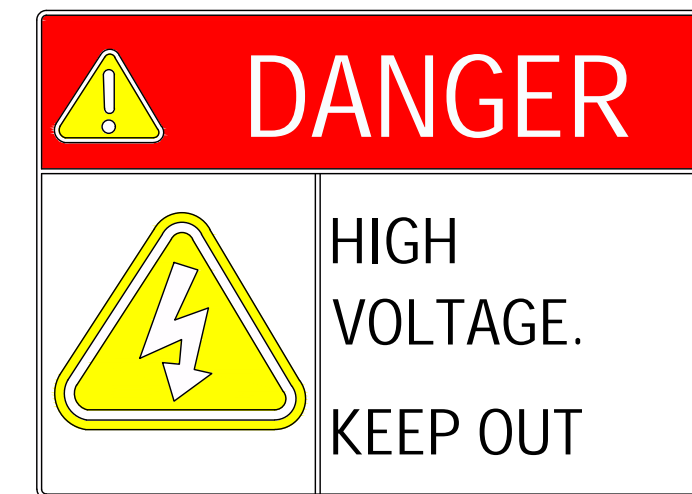
- NOTES:
1. SIGNS SHALL BE INSTALLED IN GROUPS EVERY 300'
 2. DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

7' HIGH SECURITY FENCE (IN WETLANDS)
 NOT TO SCALE



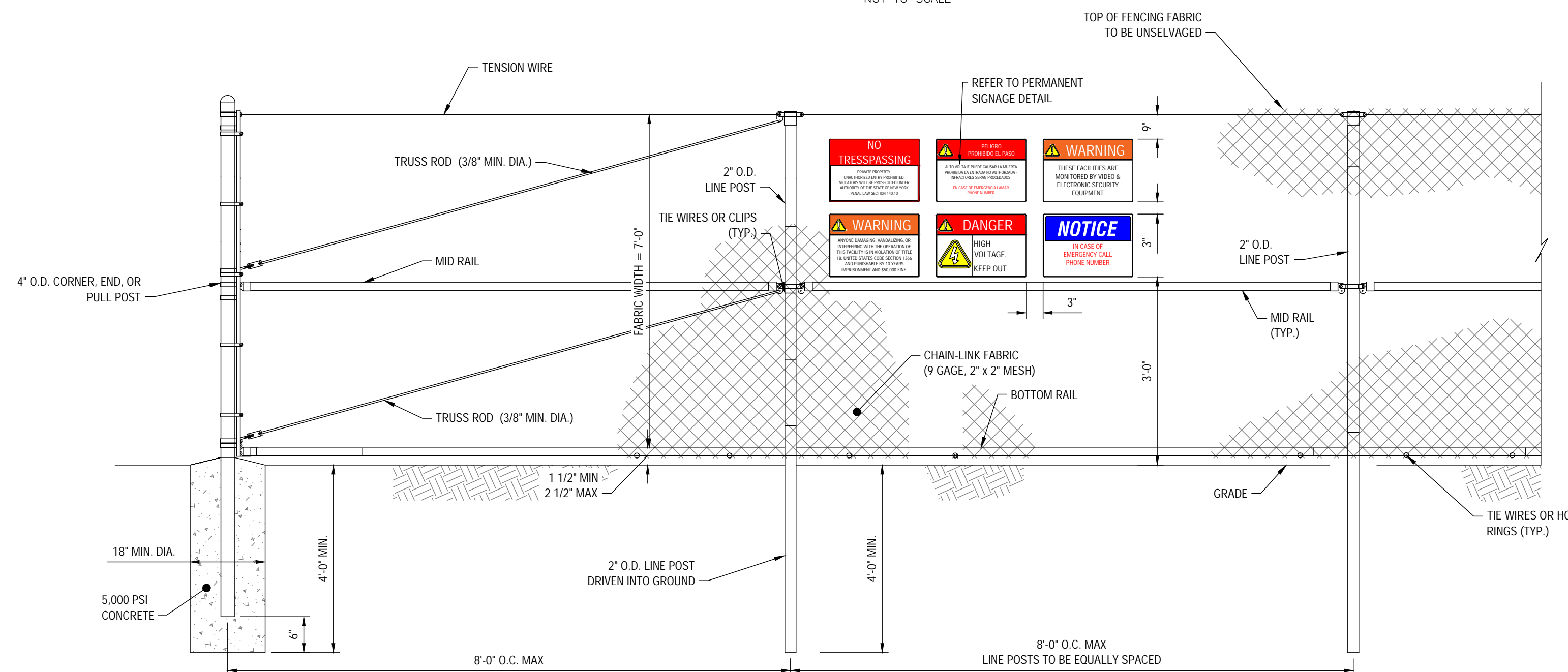
- NOTES:
1. SEE PLANS FOR GATE WIDTH.
 2. DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

7' TALL DOUBLE SWING GATE
 NOT TO SCALE



- NOTES:
1. ALL SIGNS TO BE 18" x 24" IN SIZE
 2. SIGNS SHALL BE UV RESISTANT AND IN COLOR. SIGN MATERIAL SHALL BE HOPE OR LIGHT GAUGE GALVANIZED STEEL.
 3. SIGNS TO BE ATTACHED TO FENCING WITH PERMANENT FASTENERS.

PERMANENT SIGNAGE
 NOT TO SCALE



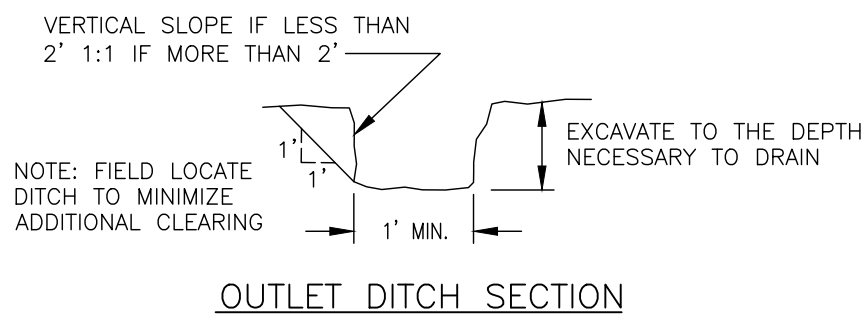
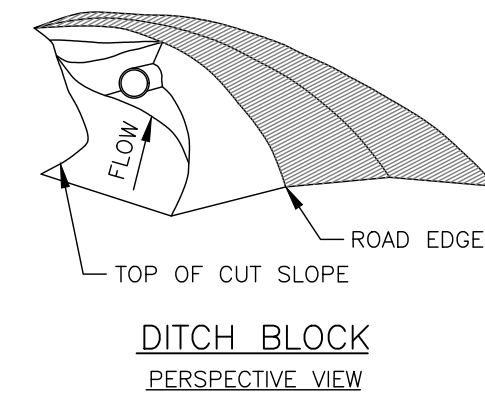
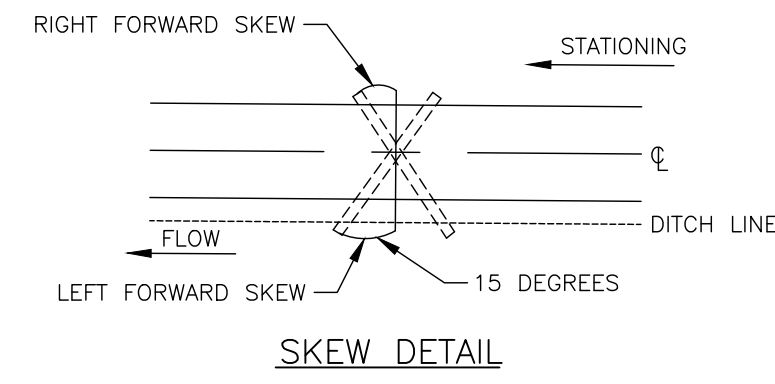
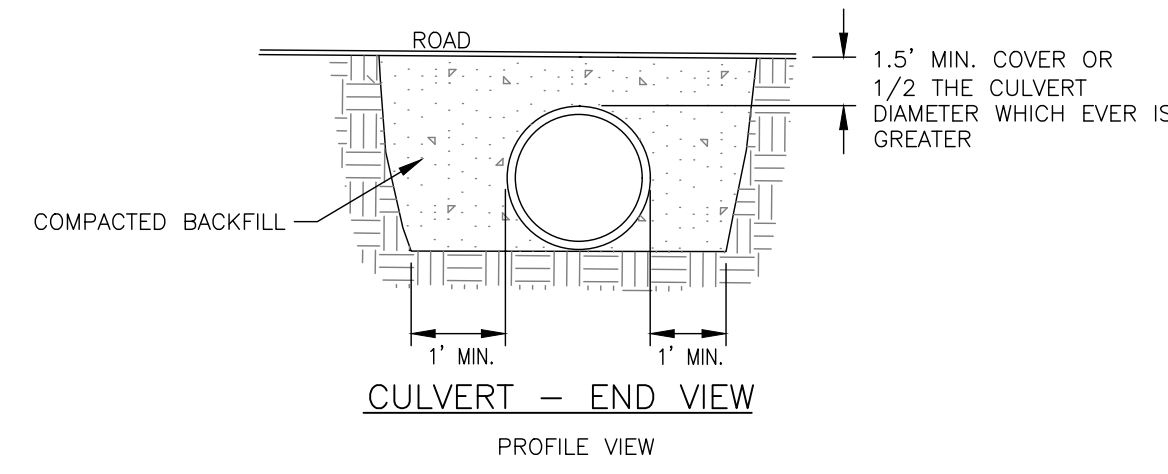
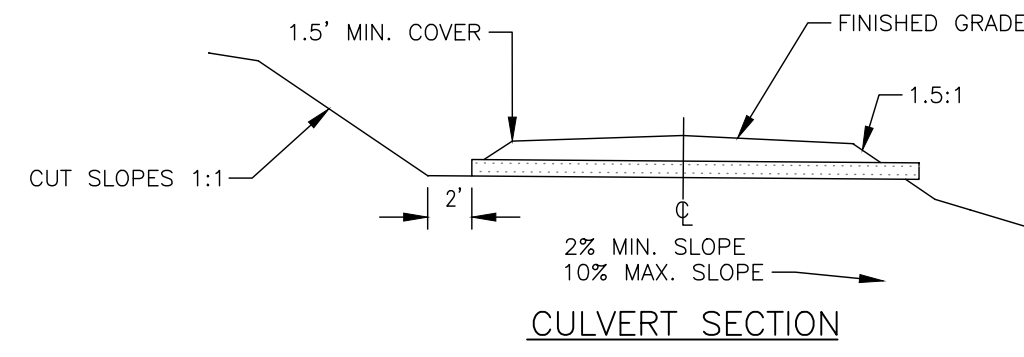
- NOTES:
1. SIGNS SHALL BE INSTALLED IN GROUPS EVERY 300'
 2. DO NOT INSTALL CONCRETE FOUNDATIONS IN WETLANDS

7' HIGH SECURITY FENCE
 NOT TO SCALE

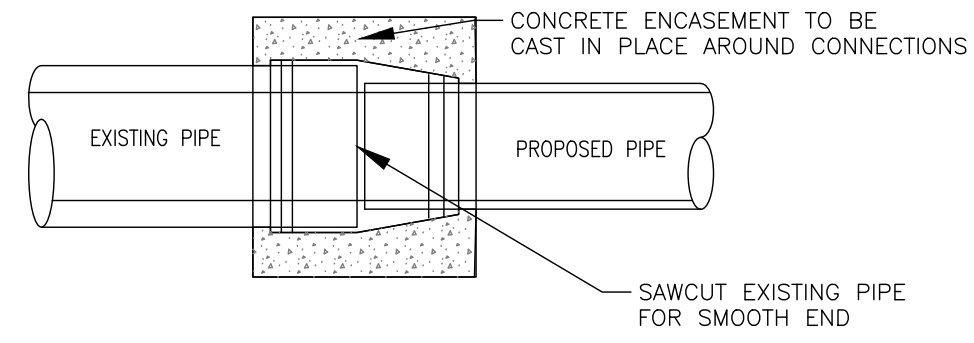
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FA PROJECT NO. 210296-03	PROJECT MANAGER S. MELLOTT	ISSUE DATE 12/21
DRAWN BY B. KNIGHTON	SCALE AS SHOWN	

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PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525	TITLE OF DRAWING FENCE CIVIL DETAILS
DRAWING NO. C-705	
SHEET 10 OF 13	

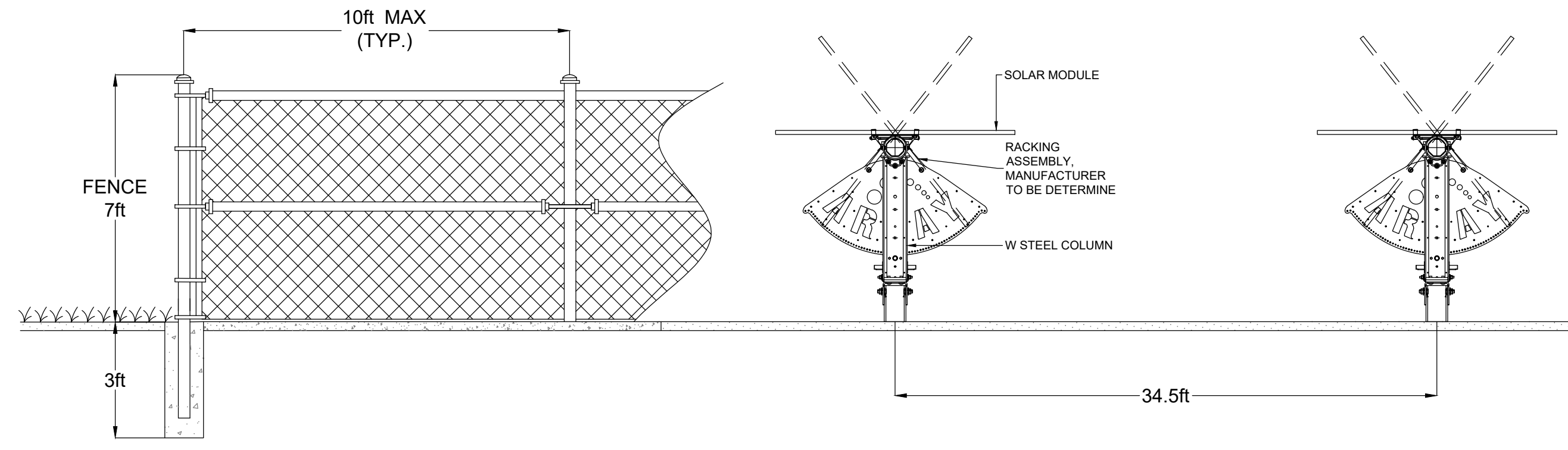


ROAD CULVERT
NOT TO SCALE



CONNECT PROPOSED STORM PIPE TO EXISTING STORM PIPE
NOT TO SCALE

<p>PROJECT GENESEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESEE COUNTY, NY 14525</p>		<p>FA PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN</p>		<p>ISSUE DATE 12/21</p>	
<p>TITLE OF DRAWING DRAINAGE DETAILS</p>		<p>COMPANY & 201 FISHER ASSOCIATES P.E./S.L.A./D.P.C. New York State Education Law Section 1703.0(2) requires that the seal of a professional engineer or land surveyor be placed on all drawings prepared or land surveying and related work. The seal must be placed on the drawing and the signature of the drafter.</p>		<p>REV</p>	
<p>DRAWING NO. C-715</p>		<p>DATE</p>		<p>BY</p>	
<p>SHEET 12 OF 13</p>		<p>DESCRIPTION</p>		<p>DATE</p>	



SOLAR MODULE AND FRAME PROFILE
 NOT TO SCALE

PROJECT GENESSEE 4 - 5 MW SOLAR PROJECT 6464 SHEPARD ROAD TOWN OF PAVILION GENESSEE COUNTY, NY 14525		PROJECT NO. 210296-03 PROJECT MANAGER S. MELLOTT DRAWN BY B. KNIGHTON SCALE AS SHOWN		CONSENT 0201 FISHER ASSOCIATES P.E. L.S.A., D.P.C. <small>New York State Education Law Section 1703.0(2) requires that the seal of a professional engineer or land surveyor be placed on all drawings prepared or based thereon and that the seal be in the form of a circular emblem containing the name of the professional engineer or land surveyor and the date of the expiration of the certificate.</small>		ISSUE DATE 12/21	
DRAWING NO. C-720		TITLE OF DRAWING EQUIPMENT DETAILS		REV		DESCRIPTION	
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				REV		DATE	
						BY	

Exhibit 2: Notice of Intent (NOI) Application

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.32

(Submission #: HPE-QFFA-VWW0Z, version 1)

Details

Submission Alias	Genesee 4 Solar NOI for coverage under Stormwater General Permit for Construction Activity
Originally Started By	Carolina Castro
Alternate Identifier	Genesee 4 Solar
Submission ID	HPE-QFFA-VWW0Z
Submission Reason	New
Status	Draft

Form Input

Owner/Operator Information

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

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

Owner/Operator Contact Person First Name
Dan

Owner/Operator Mailing Address
1800 West Loop South

City
Houston

State
Texas

Zip
77027

Phone
(585) 727-9918

Email
NONE PROVIDED

Federal Tax ID
NONE PROVIDED

Project Location

Project/Site Name
Genesee 4 Solar

Street Address (Not P.O. Box)
6464 Shepard Rd

Side of Street
South

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Town of Pavilion

State
NY

Zip
14525

DEC Region
8

County
GENESEE

Name of Nearest Cross Street
Shepard Rd and Roanoke Rd

Distance to Nearest Cross Street (Feet)
300

Project In Relation to Cross Street
North

Tax Map Numbers Section-Block-Parcel
NONE PROVIDED

Tax Map Numbers
NONE PROVIDED

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are:

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

Navigate to your location and click on the map to get the X,Y coordinates
42.87823527118028,-78.05296097271412

Project Details

2. What is the nature of this project?
New Construction

3. Select the predominant land use for both pre and post development conditions.

Pre-Development Existing Landuse

Pasture/Open Land

Post-Development Future Land Use

Other: Solar Farm

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

NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area.

*** ROUND TO THE NEAREST TENTH OF AN ACRE. ***

Total Site Area (acres)

39.59

Total Area to be Disturbed (acres)

.871

Existing Impervious Area to be Disturbed (acres)

0

Future Impervious Area Within Disturbed Area (acres)

.02

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

No

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

A (%)

0

B (%)

0

C (%)

0

D (%)

100

7. Is this a phased project?

No

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

Start Date

4/1/2022

End Date

10/1/2022

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

local pond, and PFO wetlands

9a. Type of waterbody identified in question 9?

Other Type On Site

Wetland/State Jurisdiction On Site (Answer 9b)

Other Waterbody Type Off Site Description

Pond

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

Delineated by Consultant

10. Has the surface waterbody(ies in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001?

No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?

No

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

No

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey?

NONE PROVIDED

If Yes, what is the acreage to be disturbed?

NONE PROVIDED

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

No

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

No

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

NONE PROVIDED

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

No

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

No

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

No

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

No

Required SWPPP Components**21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?**

Yes

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)?

Yes

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

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?

Yes

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

Professional Engineer (P.E.)

SWPPP Preparer

Fisher Associates

Contact Name (Last, Space, First)

Mellott Steven

Mailing Address

180 Charlotte Street

City

Rochester

State

NY

Zip

14607

Phone

585-750-4730

Email

smellott@fisherassoc.com

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

- 1) Click on the link below to download a blank certification form
- 2) The certified SWPPP preparer should sign this form
- 3) Scan the signed form
- 4) Upload the scanned document

[Download SWPPP Preparer Certification Form](#)

Please upload the SWPPP Preparer Certification

[swppp_preparer.pdf - 01/17/2022 11:31 AM](#)

Comment

NONE PROVIDED

Erosion & Sediment Control Criteria

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

Yes

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

Temporary Structural

Dust Control

Silt Fence

Stabilized Construction Entrance

Biotechnical

None

Vegetative Measures

Mulching
Seeding
Topsoiling

Permanent Structural

None

Other

Porous pavement

Post-Construction Criteria

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

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

Preservation of Undisturbed Area
Roadway Reduction
Preservation of Buffers
Locating Development in Less Sensitive Areas

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

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

.021

29. Post-construction SMP Identification

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

Identify the SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use the Post-Construction SMP Identification section to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

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

.021

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

Yes

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

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

.004

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

Yes

If Yes, go to question 33.

Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. SMPs

Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

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

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

NONE PROVIDED

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

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

NONE PROVIDED

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)?

NONE PROVIDED

If Yes, go to question 36.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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

CPv Required (acre-feet)

.24

CPv Provided (acre-feet)

2.80

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

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

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

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)

77.2

Post-Development (CFS)

76.75

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)

156.15

Post-Development (CFS)

155.27

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

Downstream analysis reveals that the Qp and Qf controls are not required.

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

Yes

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

BW Solar

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

This project involves a solar array installation, while maintaining the existing pervious area. However, a gravel access road will be installed for construction and maintenance, using porous pavement for water quality. This is a scenario 2 project.

Post-Construction SMP Identification**Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs**

Identify the Post-construction SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

RR Techniques (Area Reduction)

Round to the nearest tenth

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

RR Techniques (Volume Reduction)

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

NONE PROVIDED

Total Contributing Impervious Acres for Vegetated Swale (RR-5)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Garden (RR-6)
NONE PROVIDED

Total Contributing Impervious Acres for Stormwater Planter (RR-7)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)
NONE PROVIDED

Total Contributing Impervious Acres for Porous Pavement (RR-9)
.26

Total Contributing Impervious Acres for Green Roof (RR-10)
NONE PROVIDED

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1)
NONE PROVIDED

Total Contributing Impervious Acres for Infiltration Basin (I-2)
NONE PROVIDED

Total Contributing Impervious Acres for Dry Well (I-3)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Infiltration System (I-4)
NONE PROVIDED

Total Contributing Impervious Acres for Bioretention (F-5)
NONE PROVIDED

Total Contributing Impervious Acres for Dry Swale (O-1)
NONE PROVIDED

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Extended Detention (P-3)
NONE PROVIDED

Total Contributing Impervious Acres for Multiple Pond System (P-4)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Pond (P-5)
NONE PROVIDED

Total Contributing Impervious Acres for Surface Sand Filter (F-1)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Sand Filter (F-2)
NONE PROVIDED

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3)
NONE PROVIDED

Total Contributing Impervious Acres for Organic Filter (F-4)
NONE PROVIDED

Total Contributing Impervious Acres for Shallow Wetland (W-1)
NONE PROVIDED

Total Contributing Impervious Acres for Extended Detention Wetland (W-2)
NONE PROVIDED

Total Contributing Impervious Acres for Pond/Wetland System (W-3)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Wetland (W-4)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Swale (O-2)
NONE PROVIDED

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

Total Contributing Impervious Area for Hydrodynamic
NONE PROVIDED

Total Contributing Impervious Area for Wet Vault
NONE PROVIDED

Total Contributing Impervious Area for Media Filter
NONE PROVIDED

"Other" Alternative SMP?
NONE PROVIDED

Total Contributing Impervious Area for "Other"
NONE PROVIDED

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

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

Manufacturer of Alternative SMP
NONE PROVIDED

Name of Alternative SMP
NONE PROVIDED

Other Permits

40. Identify other DEC permits, existing and new, that are required for this project/facility.
None

If SPDES Multi-Sector GP, then give permit ID
NONE PROVIDED

If Other, then identify
NONE PROVIDED

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

No

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

NONE PROVIDED

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

NONE PROVIDED

MS4 SWPPP Acceptance

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

No

If No, skip question 44

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

NONE PROVIDED

MS4 SWPPP Acceptance Form Download

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

[MS4 SWPPP Acceptance Form](#)

MS4 Acceptance Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download

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

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

Upload Owner/Operator Certification Form

[swppp owner certification.pdf - 01/17/2022 11:36 AM](#)

Comment

NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
1/17/2022 11:36 AM	swppp owner certification.pdf	Attachment	Carolina Castro
1/17/2022 11:31 AM	swppp preparer.pdf	Attachment	Carolina Castro

Exhibit 3: SPDES GP-0-20-001



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

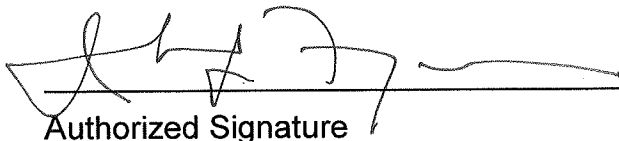
Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator



Authorized Signature

1-23-20

Date

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

PREFACE

Pursuant to Section 402 of the Clean Water Act (“CWA”), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System (“NPDES”)* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of “*construction activity*”, as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

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

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

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

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants to surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize the discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

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

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
- (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
 - (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;
 - (iii) *Minimize* the amount of soil exposed during *construction activity*;
 - (iv) *Minimize* the disturbance of *steep slopes*;
 - (v) *Minimize* sediment *discharges* from the site;
 - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
 - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
 - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

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

- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

- d. **Pollution Prevention Measures.** Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - (i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

 - (ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

 - (iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

- e. **Prohibited Discharges.** The following *discharges* are prohibited:
 - (i) Wastewater from washout of concrete;

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

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
 - (iv) Soaps or solvents used in vehicle and equipment washing; and
 - (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator of a construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual (“Design Manual”), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (“SMPs”) are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator of a construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume (“RRv”): Reduce the total Water Quality Volume (“WQv”) by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual.

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

- (iii) Channel Protection Volume (“Cpv”): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site discharges directly to tidal waters, or fifth order or larger streams.

- (iv) *Overbank* Flood Control Criteria (“Qp”): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

- (v) Extreme Flood Control Criteria (“Qf”): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed

- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

- (ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site *discharges* directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
- (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
 - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
 - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
 - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.
7. *Construction activities* for linear transportation projects and linear utility projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase “D” (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
- a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
 - 1-5 acres of disturbance - 20 feet
 - 5-20 acres of disturbance - 50 feet
 - 20+ acres of disturbance - 100 feet, or
 - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
 - (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
 - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
 - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
 - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or

d. Documentation that:

- (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.
9. *Discharges from construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the “MS4 SWPPP Acceptance” form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (<http://www.dec.ny.gov/>). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

**NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505**

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.
3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
 - a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<http://www.dec.ny.gov/>) for more information,
 - b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

- c. the final SWPPP has been prepared, and
 - d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
 - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
 - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed “MS4 SWPPP Acceptance” form, or
 - (ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed “MS4 SWPPP Acceptance” form.
4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor’s or subcontractor’s certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
3. The *owner or operator of a construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

- use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:*
- a. The *owner or operator* shall have a *qualified inspector* conduct **at least two** (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
 - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
 - d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
 - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
 5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
 6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4*, the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority; and
 - d. to document the final construction conditions.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
 - a. Background information about the scope of the project, including the location, type and size of project

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge(s)*;
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
 - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
 - l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
 - (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;
 - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria*, Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators of the construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
 - Certified Professional in Erosion and Sediment Control (CPESC),
 - New York State Erosion and Sediment Control Certificate Program holder
 - Registered Landscape Architect, or
 - someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:
 - a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
 - c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
 - d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
 - b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice*” certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
 - e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
 4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:
 - a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
 - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.
 - d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the “*Final Stabilization*” and “Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.
4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the “MS4 Acceptance” statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) required in Part V.A.3. of this permit.
5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:
 - a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

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

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:
 - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge(s)*, the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer

BMP – Best Management Practice

CPESC – Certified Professional in Erosion and Sediment Control

Cpv – Channel Protection Volume

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DOW – Division of Water

EAF – Environmental Assessment Form

ECL - Environmental Conservation Law

EPA – U. S. Environmental Protection Agency

HSG – Hydrologic Soil Group

MS4 – Municipal Separate Storm Sewer System

NOI – Notice of Intent

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

OPRHP – Office of Parks, Recreation and Historic Places

Qf – Extreme Flood

Qp – Overbank Flood

RRv – Runoff Reduction Volume

RWE – Regional Water Engineer

SEQR – State Environmental Quality Review

SEQRA - State Environmental Quality Review Act

SHPA – State Historic Preservation Act

SPDES – State Pollutant Discharge Elimination System

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

UPA – Uniform Procedures Act

USDA – United States Department of Agriculture

WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State” prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for “*Commence (Commencement of) Construction Activities*” and “*Larger Common Plan of Development or Sale*” also.

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department’s rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a *combined sewer*, and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the “Required Elements” sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and *Extreme Flood* (Qf).

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

Steep Slope – means land area designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

<p>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</p> <ul style="list-style-type: none">• Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> to one of the 303(d) segments listed in Appendix E• Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E• Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen.
<p>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</p> <p>All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.</p>
<p>The following construction activities that involve soil disturbances of one (1) or more acres of land:</p> <ul style="list-style-type: none">• Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains• Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects• Pond construction• Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover• Cross-country ski trails and walking/hiking trails• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.• Slope stabilization projects• Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State”, excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual (“Design Manual”).

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

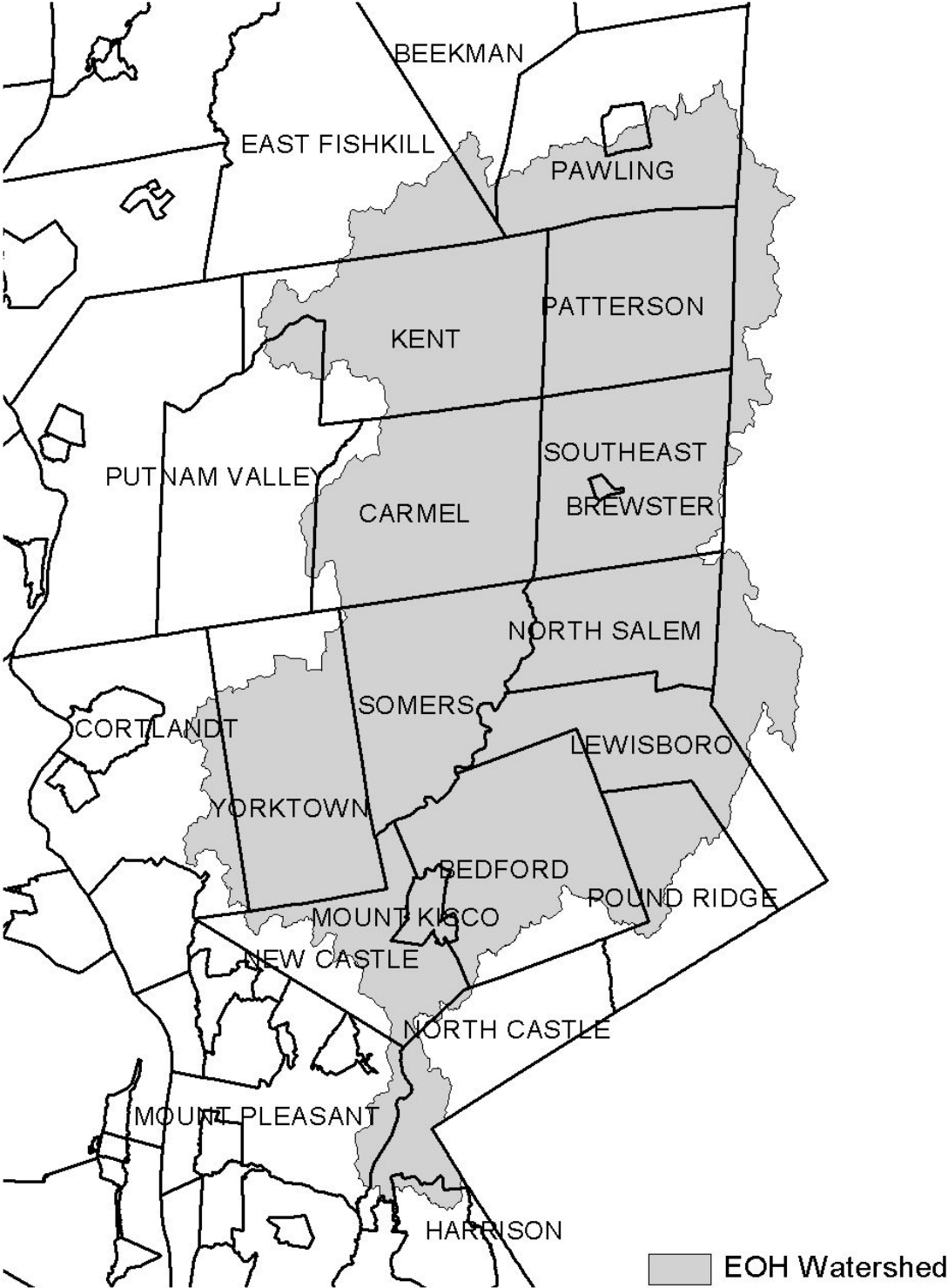


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

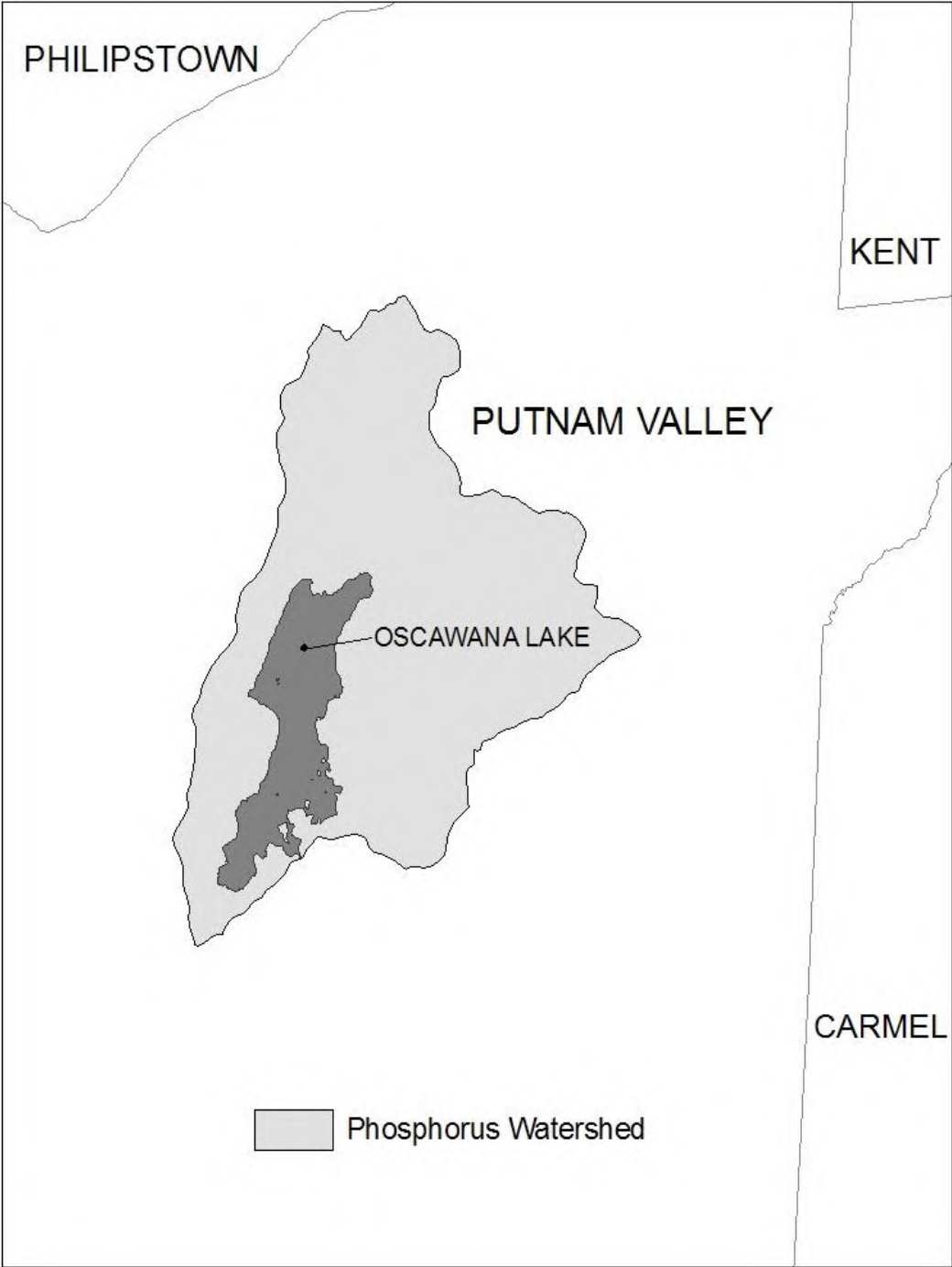
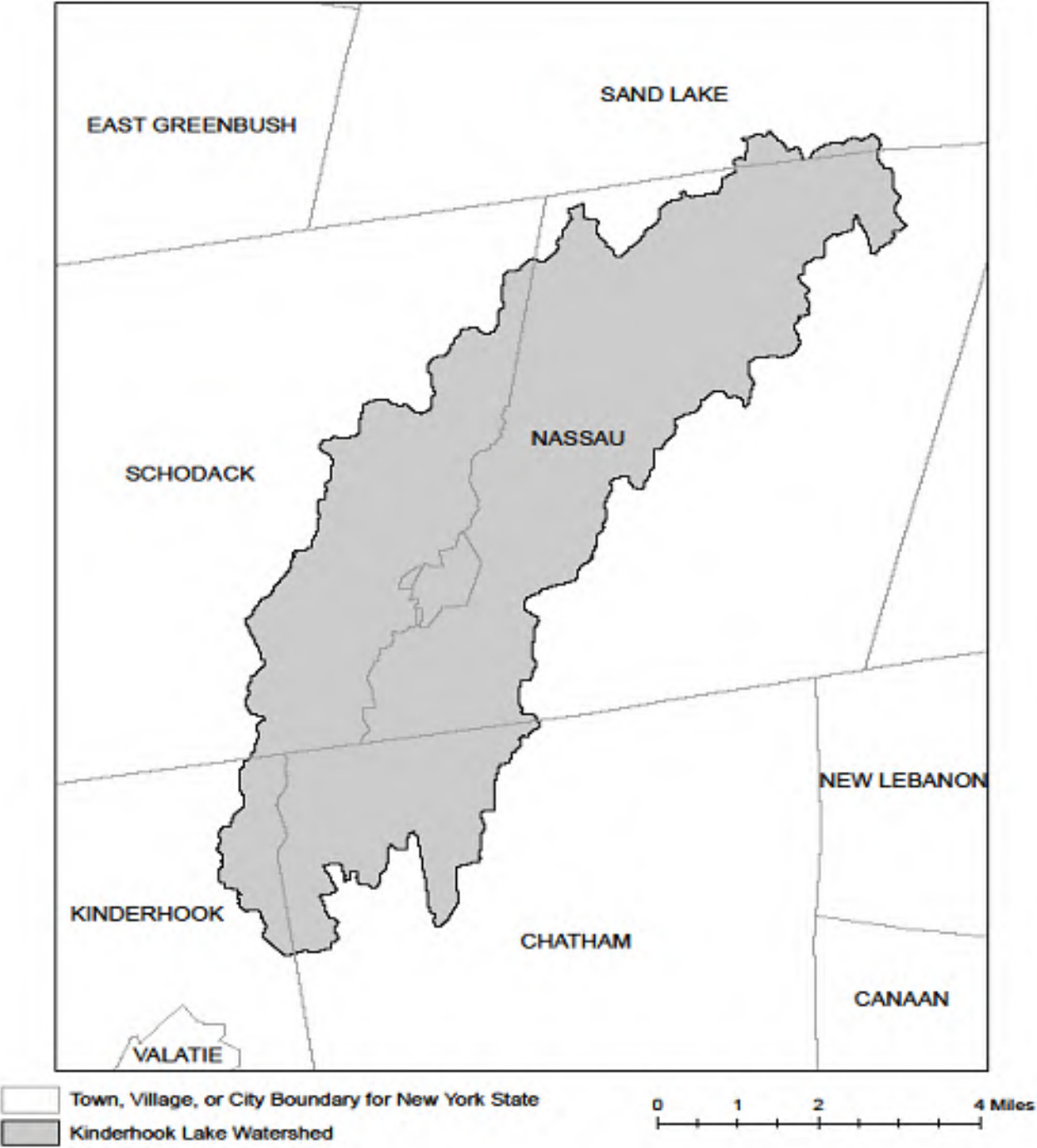


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices


<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

MEMORANDUM

TO: Regional Water Engineers

FROM: Robert Wither, Chief, South Permit Section 

SUBJECT: Solar Panel Construction Stormwater Permitting/SWPPP Guidance

DATE: April 5, 2018

Issue

The Department is seeing an increase in the number of solar panel construction projects across New York State. This has resulted in an increase in the number of questions on Construction General Permit (CGP) and Stormwater Pollution Prevention Plan (SWPPP) requirements from design professionals because the current CGP (GP-0-15-002) does not include a specific reference to the SWPPP requirements for solar panel projects in Tables 1 and 2 of Appendix B. To address this issue, the Division of Water (DOW) has developed the following guidance on CGP/SWPPP requirements for the different types of solar panel projects.

Scenario 1

The DOW considers solar panel projects designed and constructed in accordance with the following criteria to be a “*Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields)*” type project as listed in Table 1, Appendix B of the CGP. Therefore, the SWPPP for this type of project will typically just need to address erosion and sediment controls.

1. Solar panels are constructed on post or rack systems and elevated off the ground surface,
2. The panels are spaced apart so that rain water can flow off the down gradient side of the panel and continue as sheet flow across the ground surface*,
3. For solar panels constructed on slopes, the individual rows of solar panels are generally installed along the contour so rain water sheet flows down slope*,
4. The ground surface below the panels consist of a well-established vegetative cover (see “Final Stabilization” definition in Appendix A of the CGP),
5. The project does not include the construction of any traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.),
6. Construction of the solar panels will not alter the hydrology from pre-to post development conditions (see Appendix A of the CGP, for definition of “Alter the hydrology...”). Note: The design professional shall perform the necessary site assessment/hydrology analysis to make this determination.

*Refer to Maryland's "Stormwater Design Guidance- Solar Panel Installations" attached for guidance on panel installation.

**See notes below for additional criteria.

Scenario 2

If the design and construction of the solar panels meets all the criteria above, except for item 6, the project will fall under the "*All other construction activities that include the construction or reconstruction of impervious area or alter the hydrology from pre-to post development conditions, and are not listed in Table 1*" project type as listed in Table 2, Appendix B of the CGP. Therefore, the SWPPP for this type of project must address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed). The Water Quality Volume (WQv)/Runoff Reduction Volume (RRv) sizing criteria can be addressed by designing and constructing the solar panels in accordance with the criteria in items 1 – 4 above, however, the quantity control sizing criteria (Cpv, Qp and Qf) from Chapter 4 (or 10) of the Design Manual must still be addressed, unless one of the waiver criteria from Chapter 4 can be applied. **See notes below for additional criteria.

**** Notes**

- **Item 1:** For solar panel projects where the panels are mounted directly to the ground (i.e. no space below panel to allow for infiltration of runoff), the SWPPP must address post-construction stormwater management controls designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed).

- **Item 5:** For solar panel projects that include the construction of traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.), the SWPPP must address post-construction stormwater management controls for those areas of the project. This applies to both Scenario 1 and 2 above.

cc: Carol Lamb-Lafay, BWP
Dave Gasper, BWP



Stormwater Design Guidance – Solar Panel Installations

Revisions to Maryland's stormwater management regulations in 2010 require that environmental site design (ESD) be used to the maximum extent practicable (MEP) to mimic natural hydrology, reduce runoff to reflect forested wooded conditions, and minimize the impact of land development on water resources. This applies to any residential, commercial, industrial, or institutional development where more than 5,000 square feet of land area is disturbed. Consequently, stormwater management must be addressed even when permeable features like solar panel installations exceed 5,000 square feet of land disturbance.

Depending on local soil conditions and proposed imperviousness, the amount of rainfall that stormwater requirements are based on varies from 1.0 to 2.6 inches. However, addressing stormwater management does not mean that structural or micro-scale practices must be constructed to capture and treat large volumes of runoff. Using nonstructural techniques like disconnecting impervious cover reduces runoff by promoting overland filtering and infiltration. Commonly used with smaller or narrower impervious areas like driveways or open roads, the Disconnection of Non-Rooftop Runoff technique (see pp. 5.61 to 5.65 of the **2000 Maryland Stormwater Design Manual**¹) is a low cost alternative for treating runoff in situations like rows of solar panels.

When non-rooftop disconnection is used to treat runoff, the following factors should be considered:

- The vegetated area receiving runoff must be equal to or greater in length than the disconnected surface (e.g., width of the row of solar panels)
- Runoff must sheet flow onto and across vegetated areas to maintain the disconnection
- Disconnections should be located on gradual slopes ($\leq 5\%$) to maintain sheetflow. Level spreaders, terraces, or berms may be used to maintain sheetflow conditions if the average slope is steeper than 5%. However, installations on slopes greater than 10% will require an engineered plan that ensures adequate treatment and the safe and non-erosive conveyance of runoff to the property line or downstream stormwater management practice.
- Disconnecting impervious surfaces works best in undisturbed soils. To minimize disturbance and compaction, construction vehicles and equipment should avoid areas used for disconnection during installation of the solar panels.
- Groundcover vegetation must be maintained in good condition in those areas receiving disconnected runoff. Typically this maintenance is no different than other lawn or landscaped areas. However, areas receiving runoff should be protected (e.g., planting shrubs or trees along the perimeter) from future compaction.

Depending on the layout and number of panels installed, the disconnection of non-rooftop runoff technique may address some or all of the stormwater management requirements for an individual project. Where the imperviousness is high or there is other infrastructure (e.g., access roads, transformers), additional runoff may need to be treated. In these situations, other ESD techniques or micro-scale practices may be needed to provide stormwater management for these features.

Example 1 – Using Non-Rooftop Disconnection Where the Average Slope $\leq 5\%$

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope does not exceed 5%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed according to Figure 1 below. In this scenario, the disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). Therefore, each row of panels is adequately disconnected and the runoff from 1.0 inch of rainfall is treated.

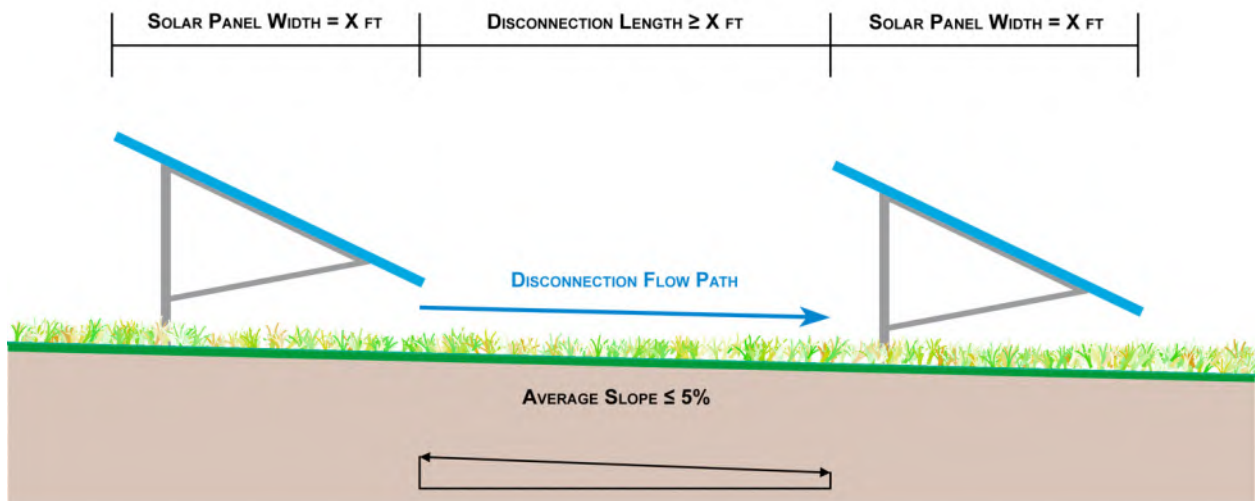


Figure 1. Typical Installation - Slope $\leq 5\%$

Example 2 – Using Non-Rooftop Disconnection Where the Average Slope $\geq 5\%$ but $\leq 10\%$

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope is greater than 5% but less than 10%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed as shown in Figure 2 below. The disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). However, in this example, a level spreader (typically 1 to 2-foot wide and 1 foot deep) has been located at the drip edge of each row of panels to dissipate energy and maintain sheetflow.

Discussion

To meet State and local stormwater management requirements, ESD must be used to the MEP to reduce runoff to reflect forested conditions. While all reasonable options for implementing ESD must be investigated, minimally, the runoff from 1 inch of rainfall must be treated. In each of the examples above, there may be additional opportunities to implement ESD techniques or practices and reduce runoff that should be explored. However, simply disconnecting the runoff from the solar panel arrays captures and treats the runoff from 1.0 inch of rainfall. Where imperviousness is low and soil conditions less optimal (e.g., HSG C or D), this may be sufficient to completely address stormwater management requirements. In more dense applications or in sandy soils, additional stormwater management may be required.

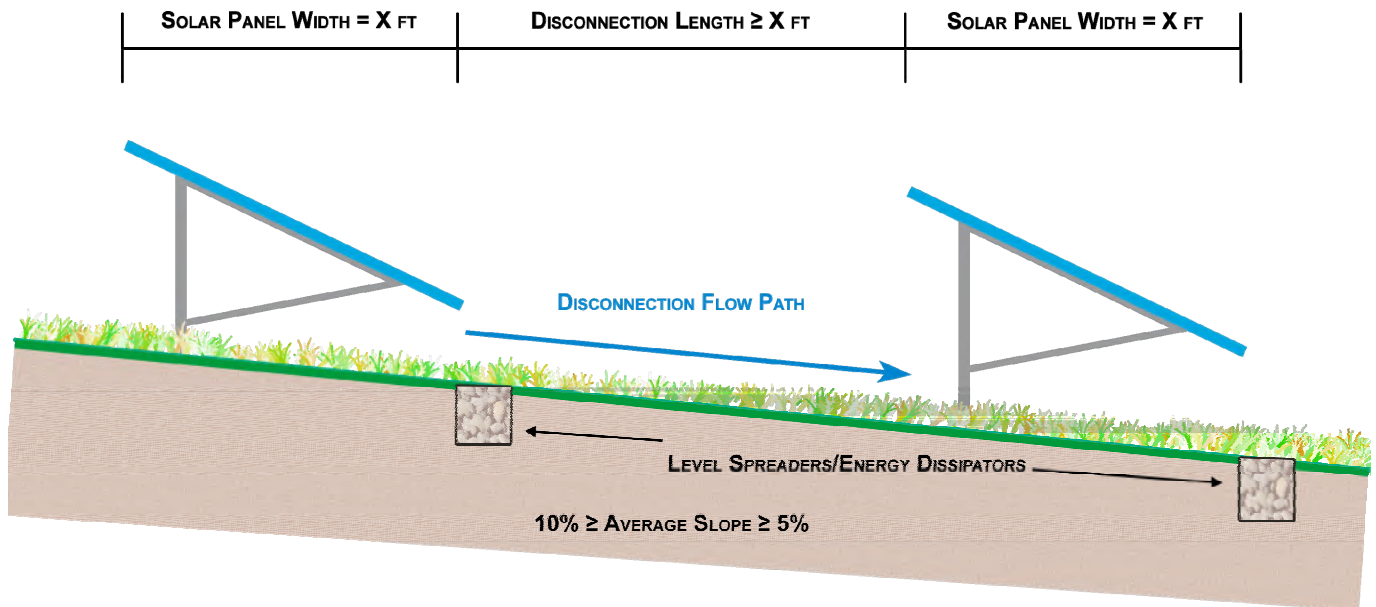


Figure 2. Typical Installation – Slope $\geq 5\%$ but $\leq 10\%$

Conclusion

The primary purpose of Maryland's stormwater management program is to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources. Any land development project that exceeds 5,000 square feet of disturbance, including solar panel projects, must address stormwater management. However, for solar panels, stormwater management may be provided in a cost-effective manner by disconnecting each row of panels and directing runoff over the vegetated areas between the individual rows.

Resources

¹ [2000 Maryland Stormwater Design Manual, Volumes I and II](http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.aspx), MDE, October 2000
 (http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.aspx)

Exhibit 4: Notice of Termination (NOT) Form

**New York State Department of Environmental Conservation
 Division of Water
 625 Broadway, 4th Floor
 Albany, New York 12233-3505
 *(NOTE: Submit completed form to address above)***

**NOTICE OF TERMINATION for Storm Water Discharges Authorized
 under the SPDES General Permit for Construction Activity**

Please indicate your permit identification number: NYR _____

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR _____
 (Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? yes no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? yes no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? yes no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? yes
 no
(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

Exhibit 5: Contractor Certification(s)

CONTRACTOR & SUBCONTRACTOR
CERTIFICATION(S)

“I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the Owner/Operator must comply with the terms and conditions of the New York State Pollution Discharge Elimination System (SPDES) General Permit # GP-0-20-001 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.”

General Contractor

Company Name: _____ Phone No: _____
Company Address: _____
Signature: _____ Date: _____
Print Name & Title _____

Subcontractor

Company Name: _____ Phone No: _____
Company Address: _____
Company Address: _____
Signature: _____ Date: _____
Print Name & Title _____

Subcontractor

Company Name: _____ Phone No: _____
Company Address: _____
Signature: _____ Date: _____
Print Name & Title _____

Subcontractor

Company Name: _____ Phone No: _____
Company Address: _____
Signature: _____ Date: _____
Print Name & Title _____

Subcontractor

Company Name: _____ Phone No: _____
Company Address: _____
Signature: _____ Date: _____
Print Name & Title _____

Signature-

- a. For a corporation: by (1) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person authorized to and who performs similar policy or decisions making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$250,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- c. For a municipality, State, Federal, or other public agency: by either a principal executive office or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer or the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA)

Exhibit 6: Construction Inspection Reports

SPDES STORMWATER INSPECTION REPORT

Clear Form

JOB STAMP

Date: _____

Day of Week: S M T W T F S

Sheet No. ____ of ____

	AM	PM
Weather		
Temperature	° F	° F
Soil Condition		

This inspection and maintenance form is to be used on contracts covered by SPDES General Permit for Construction Activity (GP-0-20-001) . The completed inspection form must be filed in the Engineer's Field Office.

- Reason for this Inspection:**
- Standard 7 calendar day inspection
 - Subsequent inspection in 7 calendar day period due to soil disturbance exceeding 5 acres
 - Received 0.5 in or more of rain in a 24 hour period

Codes for erosion and sediment control measures to be inspected: [Use the following codes in the table below] (1) mulch, (2) seed and mulch, (3) check dams, (4) strawbales, (5) silt fence, (6) sediment trap, (7) turbidity curtains, (8) pipe slope drains, (9) drainage structure inlet protection, (10) rolled erosion control products, (11) soil stabilizers, (12) construction entrances, (13) pipe inlet/outlet protection, (14) water diversion structures, (15) sedimentation basins, (16) cofferdams, (17) Other _____

List ONLY those erosion & sediment control and/or stormwater management practices that require repair, maintenance, reinstallation or replacement.

ID	Location of Practice (Use stations or descriptions)	Practice		Describe Specific Maintenance Required (Including sediment removal, replacement or installation of practice)	Remarks
		Code #	Temp or Perm? (T,P or NA)		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Print Form

ID	Location of Practice (Use stations or descriptions)	Practice		Describe Specific Maintenance Required (Including sediment removal, replacement or installation of practice)	Remarks
		Code #	Temp or Perm? (T,P or NA)		
11					
12					
13					
14					
15					

Have areas been disturbed or stabilized since the last inspection? Yes No

If YES, attach a location map showing all disturbed areas and areas stabilized since the last inspection.

Identify outlet points of stormwater from the project site to Waters of the US (e.g. streams, rivers, lakes, wetlands, etc.) and describe the condition of the stormwater (add additional pages as necessary to include all outlets points to Waters of the US):

	Location of Outlet (STA / OFFSET)	Type of Outlet (e.g. pipe, ditch, overland flow, etc.)	Is Runoff from Site Outletting to Water of the US?	Describe Runoff (if any) (e.g. clear, turbid)
1				
2				
3				

Are more than 5 acres of soil disturbed at this site at any one time? _____

If YES, was a notification form sent to NYSDEC? _____

Describe Existing Deficiencies in the SWPPP. Specify for each location using row ID number, if applicable.

Qualified Inspector Name/Title
(w/ Firm Name, If Consultant) _____

Qualified
Inspector

Signature: _____

Prepared: _____
(Date)

Copy to
Contractor: _____
(Date)

Reviewed By: _____

- Engineer-in-Charge
- Resident Engineer

Date
Reviewed: _____
(Date)

MURK 6-1 SPDES Stormwater Inspection Report - Continuation attached

Print Form

SPDES STORMWATER INSPECTION REPORT - CONTINUATION

Clear Form

JOB STAMP

Date: _____ Sheet No. ____ of ____

Codes for erosion and sediment control measures to be inspected: [Use the following codes in the table below] (1) mulch, (2) seed and mulch, (3) check dams, (4) strawbales, (5) silt fence, (6) sediment trap, (7) turbidity curtains, (8) pipe slope drains, (9) drainage structure inlet protection, (10) rolled erosion control products, (11) soil stabilizers, (12) construction entrances, (13) pipe inlet/outlet protection, (14) water diversion structures, (15) sedimentation basins, (16) cofferdams, (17) Other _____

List ONLY those erosion & sediment control and/or stormwater management practices that require repair, maintenance, reinstallation or replacement.

ID	Location of Practice (Use stations or descriptions)	Practice		Describe Specific Maintenance Required (Including sediment removal, replacement or installation of practice)	Remarks
		Code #	Temp or Perm? (T,P or NA)		
1					
2					
3					
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9					
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11					
12					
13					
14					
15					
16					
17					

Print Form

Clear Form

ID	Location of Practice (Use stations or descriptions)	Practice		Describe Specific Maintenance Required (Including sediment removal, replacement or installation of practice)	Remarks
		Code #	Temp or Perm? (T,P or NA)		
18					
19					
20					
21					
22					
23					
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39					
40					
41					
42					

Qualified Inspector Initials: _____

Print Form

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6. Pond, toe & chimney drains clear and functioning		
7. Seeps/leaks on downstream face		
8. Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam "As-Built"		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____		
1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1. Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4. Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3. Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

Sand/Organic Filter Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
Filtration facility clean of debris		
Inlet and outlets clear of debris		
2. Oil and Grease (Monthly)		
No evidence of filter surface clogging		
Activities in drainage area minimize oil and grease entry		
3. Vegetation (Monthly)		
Contributing drainage area stabilized		
No evidence of erosion		
Area mowed and clipping removed		
4. Water Retention Where Required (Monthly)		
Water holding chambers at normal pool		
No evidence of leakage		
5. Sediment Deposition (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Filter chamber free of sediments		
Sedimentation chamber not more than half full of sediments		
6. Structural Components (Annual)		
No evidence of structural deterioration		
Any grates are in good condition		
No evidence of spalling or cracking of structural parts		
7. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion (if draining into a natural channel)		
8. Overall Function of Facility (Annual)		
Evidence of flow bypassing facility		
No noticeable odors outside of facility		

Comments:

Actions to be Taken:

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
 Location:
 Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaterers between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Exhibit 7: Permanent SMP Maintenance Checklists and Agreement

Permanent SMP Maintenance Agreement

I accept responsibility for ownership and proper maintenance of each permanent Stormwater Management Practice (SMP) located at (Address) _____ and I will update the maintenance plan, as required by the Stormwater Pollution Prevention Plan (SWPPP) upon final stabilization of the site.

I will complete any necessary repairs and, or preventative maintenance procedures in a timely manner to achieve proper functioning of each SMP, as recommended by the SWPPP.

It is my understanding that the maintenance plan may be amended/revised at any time by the New York State Department of Environmental Conservation (DEC) and I will abide by any reasonable prescribed changes.

I will continue to own and maintain the stormwater practice until the New York State DEC is notified in writing of a transfer in ownership and maintenance responsibility. The notification will include a date for the transfer of responsibility and a letter of acceptance from the new owner.

Signature

Printed Name

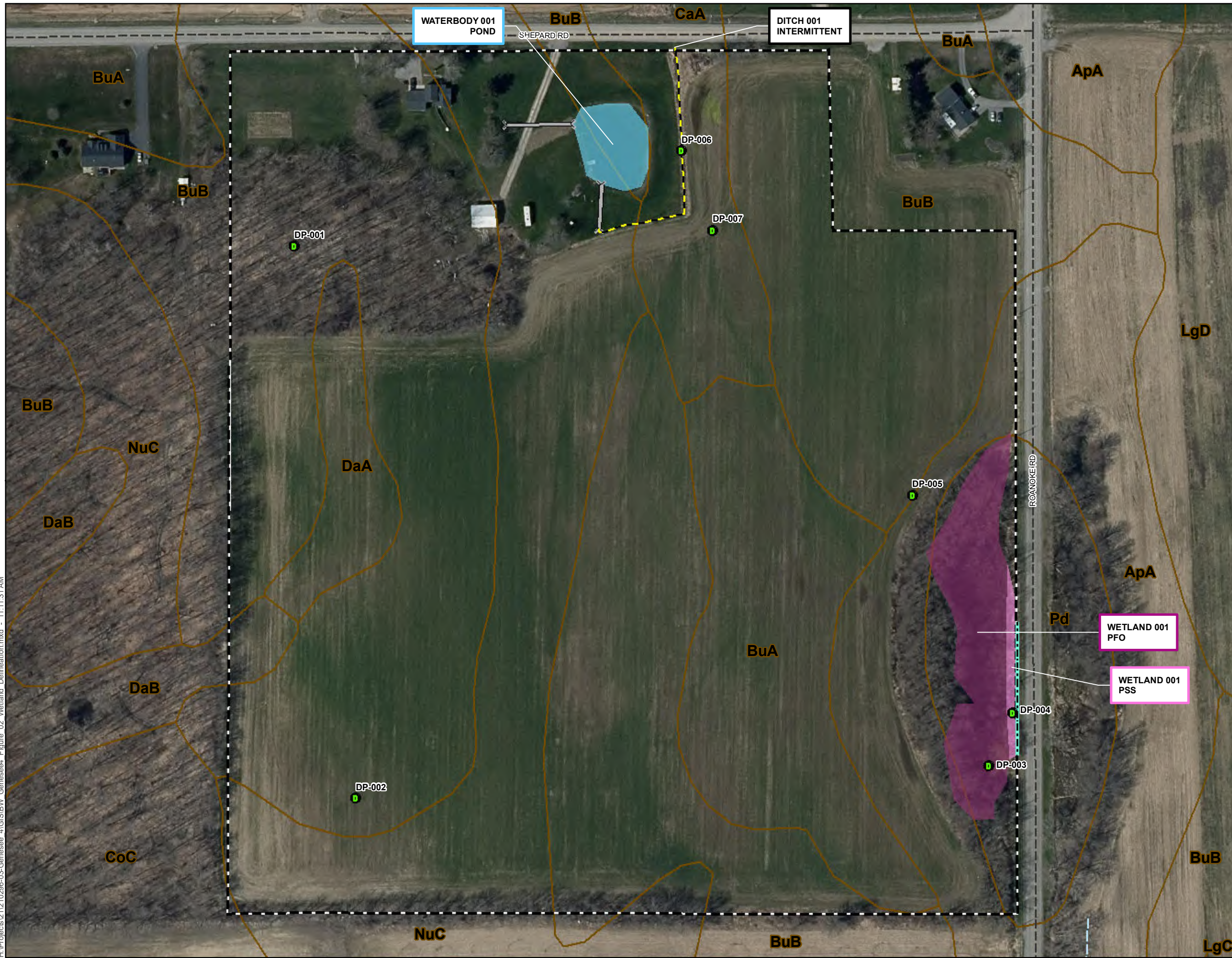
Address

Phone Number

Date

Exhibit 8: Stormwater Calculations

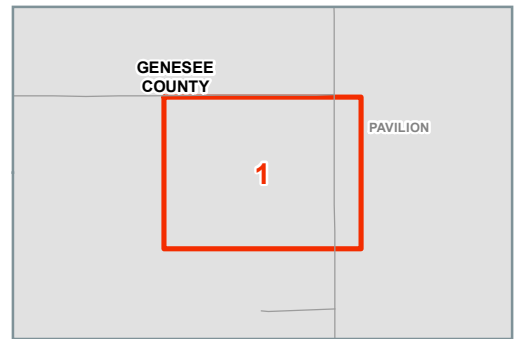
- Water Quality Calculations
- Water Quantity HydroCAD Calculations



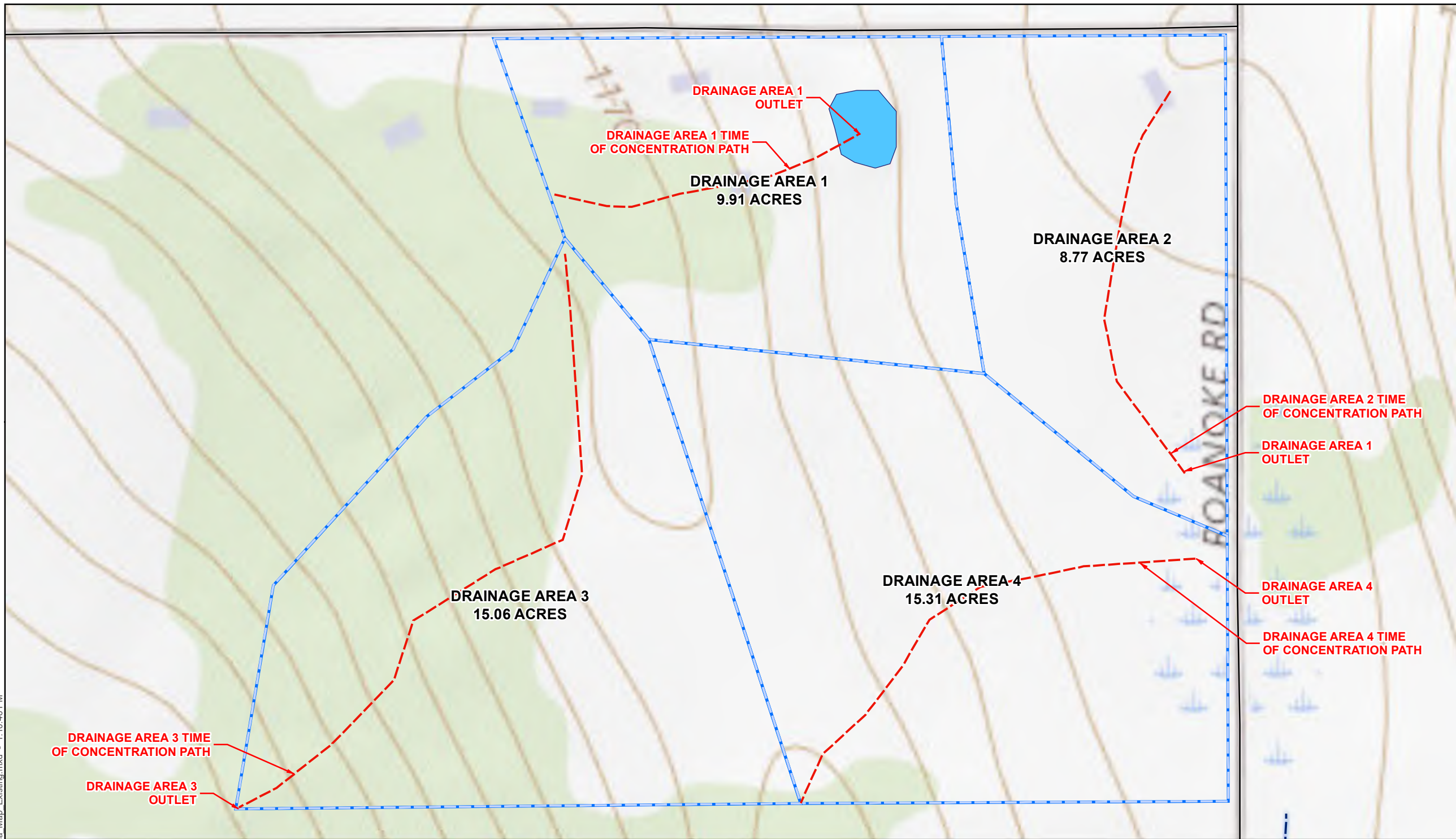
- Data Point
- Road
- NYSDEC Non-Regulated Stream
- NYSDEC Regulated Stream
- Delineated Non-Jurisdictional Ditch
- Delineated Continuation Line
- Delineated Culvert
- Delineated Waterbody
- Delineated PFO Wetland
- Delineated PSS Wetland
- NYSDEC Wetland
- NYSDEC Wetland 100ft Adjacent
- NRCS Soil Complex Boundary
- Project Study Limits

Map Revision Date: 9/30/2021 Aerial Date: 2020

0 75 150 Feet

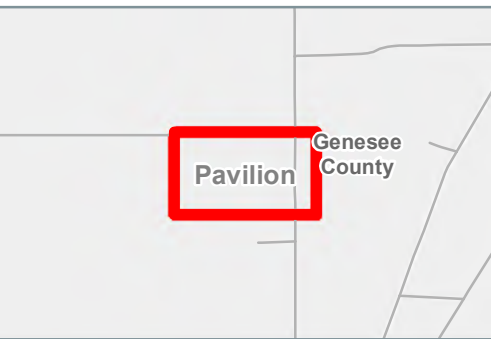


H:\Projects\1210296-03-Genesee 4\GIS\BW_Genesees4\Figure 02_Wetland Delineation.mxd - 11:11:31 AM



- Existing Pond
- Road
- - - NYSDEC Stream
- - - Time of Concentration
- Drainage Area

Map Revision Date: 1/18/2022



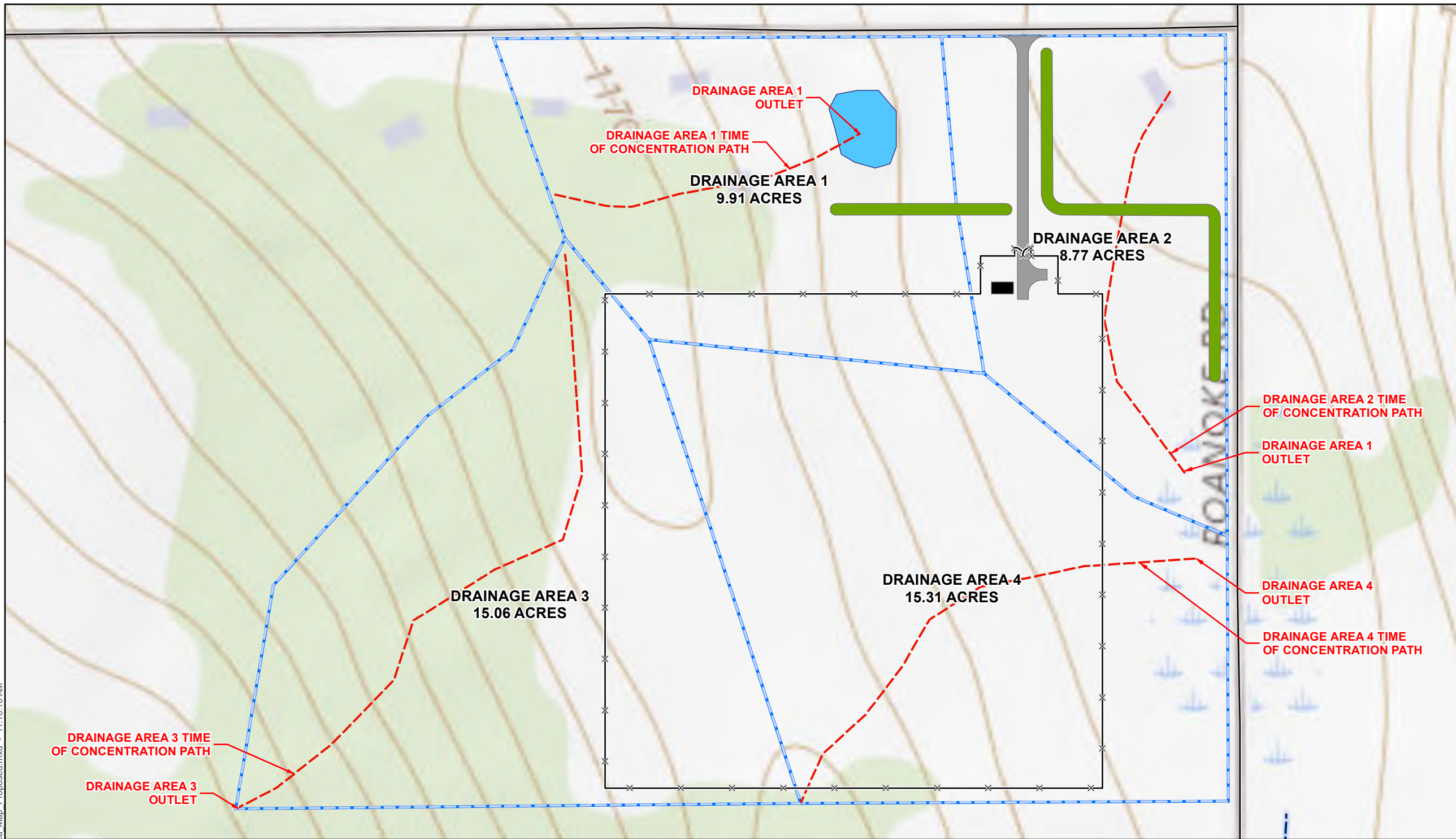
DRAINAGE AREA 1			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.90	39000.70
	Developed, Low Intensity	0.00	144.46
	Deciduous Forest	2.10	91265.63
	Pasture/grassland/range	2.08	90728.97
	Cultivated Crops	4.83	210599.80
Total		9.91	431739.56

DRAINAGE AREA 2			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.62	27125.62
	Developed, Low intensity	0.52	22829.96
	Cultivated Crops	7.07	307908.65
	Woody Wetlands	0.56	24318.97
Total		8.77	382183.20

DRAINAGE AREA 3			
Type	Description	Area (ac)	SF
Soil Type D	Developed Open Space	6.70	291686.95
	Deciduous Forest	8.37	364394.85
Total		15.06	656081.80

DRAINAGE AREA 4			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.48	20785.13
	Cultivated Crops	13.51	588478.37
	Woody Wetlands	1.10	47742.11
	Emergent Herbaceous wetland	0.22	9686.72
	Total		15.31

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Map Revision Date: 1/26/2022

0 100 200 Feet

Legend:

- Fence
- Impervious Area
- Porous Pavement
- Existing Pond
- Landscaping
- Road
- NYSDEC Stream
- Time of Concentration
- Drainage Area



DRAINAGE AREA 1			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.90	39000.70
	Developed, Low Intensity	0.00	144.46
	Deciduous Forest	2.10	91265.53
	Pasture/grassland/range	2.08	90728.97
	Cultivated Crops	4.72	205730.89
	Meadow/grassland	0.11	4868.91
Total		9.91	431739.56

DRAINAGE AREA 2			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.48	21053.82
	Developed, Low intensity	0.52	22829.96
	Cultivated Crops	6.45	280925.87
	Woody Wetlands	0.56	24318.97
	Meadow/grassland	0.48	20964.20
	Impervious Area	0.02	876.54
	Porous Pavement	0.26	11213.84
	Total		8.77

DRAINAGE AREA 3			
Type	Description	Area (ac)	SF
Soil Type D	Developed Open Space	6.70	291686.95
	Deciduous Forest	8.37	364394.85
Total		15.06	656081.80

DRAINAGE AREA 4			
Type	Description	Area (ac)	SF
Soil Type D	Developed, Open Space	0.48	20785.13
	Cultivated Crops	13.51	588478.37
	Woody Wetlands	1.10	47742.11
	Emergent Herbaceous wetland	0.22	9686.72
	Total		15.31

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

Design Point: *Manually enter P, Total Area and Impervious Cover.*

P= 1.00 inch

Breakdown of Subcatchments

Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Description
1	0.26	0.26	100%	0.95	897	Porous Pavement
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-10)	0.26	0.26	100%	0.95	897	Subtotal 1
Total	0.26	0.26	100%	0.95	897	Initial WQv

0.02 af

Identify Runoff Reduction Techniques By Area

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

Recalculate WQv after application of Area Reduction Techniques

	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Runoff Coefficient Rv	WQv (ft ³)
"<<Initial WQv"	0.26	0.26	100%	0.95	897
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	0.26	0.26	100%	0.95	897
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.26	0.26	100%	0.95	897
WQv reduced by Area Reduction techniques					0

0.02 af
0.00 af

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techniques/Standard SMPs		Total Contributing Area	Total Contributing Impervious Area	WQv Reduced (RRv)	WQv Treated
			(acres)	(acres)	cf	cf
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.26	0.26	897	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRV Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00			
	Bioretention & Infiltration Bioretention	F-5	0.00	0.00	0	0
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4)	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2)	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
Wet Swale (O-2)	O-2					
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			0.26	0.26	897	
Totals by Standard SMP w/RRV →			0.00	0.00	0	0
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			0.26	0.26	897	0
	Impervious Cover v	okay				
	Total Area v	okay				

Minimum RRv

Enter the Soils Data for the site

Soil Group	Acres	S
A		55%
B		40%
C		30%
D	49.05	20%
Total Area	49.05	

Calculate the Minimum RRv

S =	0.20	
Impervious =	0.26	<i>acre</i>
Precipitation	1	<i>in</i>
Rv	0.95	
Minimum RRv	179	<i>ft3</i>
	0.00	<i>af</i>

NOI QUESTIONS

#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	897	0.021
30	Total RRV Provided	897	0.021
31	Is RRV Provided \geq WQv Required?	Yes	
32	Minimum RRV	179	0.004
32a	Is RRV Provided \geq Minimum RRV Required?	Yes	
33a	Total WQv Treated	0	0.000
34	Sum of Volume Reduced & Treated	897	0.021
34	Sum of Volume Reduced and Treated	897	0.021
35	Is Sum RRV Provided and WQv Provided \geq WQv Required?	Yes	

100.00%

Apply Peak Flow Attenuation			
36	Channel Protection	<i>C_{pv}</i>	
37	Overbank	<i>Q_p</i>	
37	Extreme Flood Control	<i>Q_f</i>	
	Are Quantity Control requirements met?	Yes	Plan Completed

Porous Pavement Worksheet

$$A_p = V_w / (n \times dt)$$

A_p Required porous pavement surface area ft^2
 V_w Design Volume ft^3
 n porosity of gravel bed/resevoir
 dt depth of gravel bed/resevoir

Assume .4 for gravel

Design Point:							
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft^3)	Precipitation (in)	Description
1	0.26	0.26	1.00	0.95	896.61	1.00	Porous Pavement
Enter Soil Infiltration Rate							
Soil Infiltration Rate		0.50	$in/hour$				
Calculate Required Surface Area							
Design Volume		Vw	897	ft^3			
Are underdrains being used?			No	-			
Porosity of Gravel Bed		n	0.40	-			
Gravel Bed Depth		dt	0.67	ft			
Required Surface Area		A_p	3,346	sf			
Surface Area Provided			11,326	sf	<i>Dimensions of pavement can be provided here</i>		
Storage Volume Provided			3,035	ft^3			
Determine the Runoff Reduction							
RRv	897	ft^3					

REQUIRED CHANNEL PROTECTION VOLUME (CP_v) CALCULATIONS

PROJECT NAME: Genesee 4 Solar
 FA PROJECT #: 210296 - 03
 DATE: 1/14/2022
 CALCULATED BY: M. Rusinski



CHANNEL PROTECTION SUMMARY

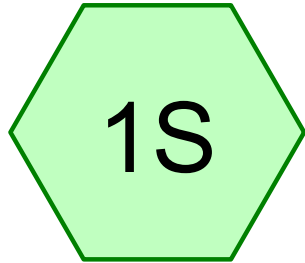
Individual Drainage Area Required Channel Protection Volumes

Drainage Area 1	0.05 ac-ft	*From CP _v Sheet for Drainage Area 1
Drainage Area 2	0.04 ac-ft	*From CP _v Sheet for Drainage Area 2
Drainage Area 3	0.07 ac-ft	*From CP _v Sheet for Drainage Area 1
Drainage Area 4	0.08 ac-ft	*From CP _v Sheet for Drainage Area 2
TOTAL CP_v REQUIRED	0.24 ac-ft	

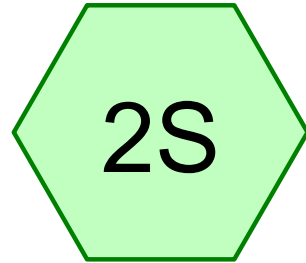
Individual Drainage Area Provided Channel Protection Volumes

Drainage Area 1	0.523 ac-ft	*Computed using HydroCAD
Drainage Area 2	0.61 ac-ft	*Computed using HydroCAD
Drainage Area 3	0.508 ac-ft	*Computed using HydroCAD
Drainage Area 4	1.161 ac-ft	*Computed using HydroCAD
TOTAL CP_v PROVIDED	2.80 ac-ft	

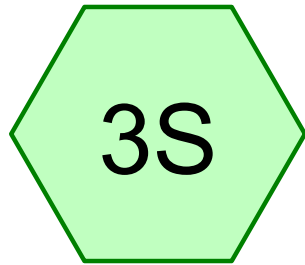
CP_v PROVIDED > CP_v REQUIRED *OK*



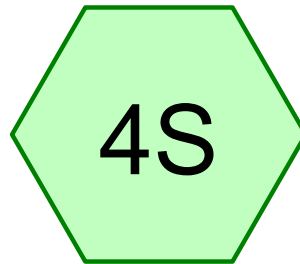
DA1 - EX



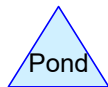
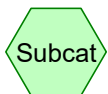
DA2 - EX



DA3 - EX



DA4 - EX



Routing Diagram for Genesee_EX

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Genesee_EX

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Page 2

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 7050 NY Genesee

Genesee_EX

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Page 3

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NRCC 24-hr	A	Default	24.00	1	1.86	2
2	10-Year	NRCC 24-hr	A	Default	24.00	1	3.07	2
3	100-Year	NRCC 24-hr	A	Default	24.00	1	5.02	2

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Page 4

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
25.410	89	crops (1S, 2S, 4S)
0.520	82	developed low (2S)
7.800	80	developed open (2S, 3S, 4S)
0.003	82	developed, low (1S)
0.900	80	developed, open (1S)
0.220	95	emergent wetlands (4S)
10.470	77	forest (1S, 3S)
2.080	80	pasture (1S)
1.660	90	woody wetlands (2S, 4S)
49.063	84	TOTAL AREA

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Page 5

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
49.063	Other	1S, 2S, 3S, 4S
49.063		TOTAL AREA

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Page 6

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	25.410	25.410	crops	1S, 2S, 4S
0.000	0.000	0.000	0.000	0.520	0.520	developed low	2S
0.000	0.000	0.000	0.000	7.800	7.800	developed open	2S, 3S, 4S
0.000	0.000	0.000	0.000	0.003	0.003	developed, low	1S
0.000	0.000	0.000	0.000	0.900	0.900	developed, open	1S
0.000	0.000	0.000	0.000	0.220	0.220	emergent wetlands	4S
0.000	0.000	0.000	0.000	10.470	10.470	forest	1S, 3S
0.000	0.000	0.000	0.000	2.080	2.080	pasture	1S
0.000	0.000	0.000	0.000	1.660	1.660	woody wetlands	2S, 4S
0.000	0.000	0.000	0.000	49.063	49.063	TOTAL AREA	

Genesee_EX

NRCC 24-hr A 1-Year Rainfall=1.86"

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Page 7

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - EX

Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>0.64"
Flow Length=593' Tc=16.7 min CN=84 Runoff=6.62 cfs 0.532 af

Subcatchment 2S: DA2 - EX

Runoff Area=8.770 ac 0.00% Impervious Runoff Depth>0.85"
Flow Length=772' Tc=20.6 min CN=88 Runoff=7.18 cfs 0.621 af

Subcatchment 3S: DA3 - EX

Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>0.40"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=4.29 cfs 0.508 af

Subcatchment 4S: DA4 - EX

Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>0.91"
Flow Length=933' Tc=18.3 min CN=89 Runoff=14.20 cfs 1.161 af

Total Runoff Area = 49.063 ac Runoff Volume = 2.822 af Average Runoff Depth = 0.69"
100.00% Pervious = 49.063 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA1 - EX

Runoff = 6.62 cfs @ 12.27 hrs, Volume= 0.532 af, Depth> 0.64"

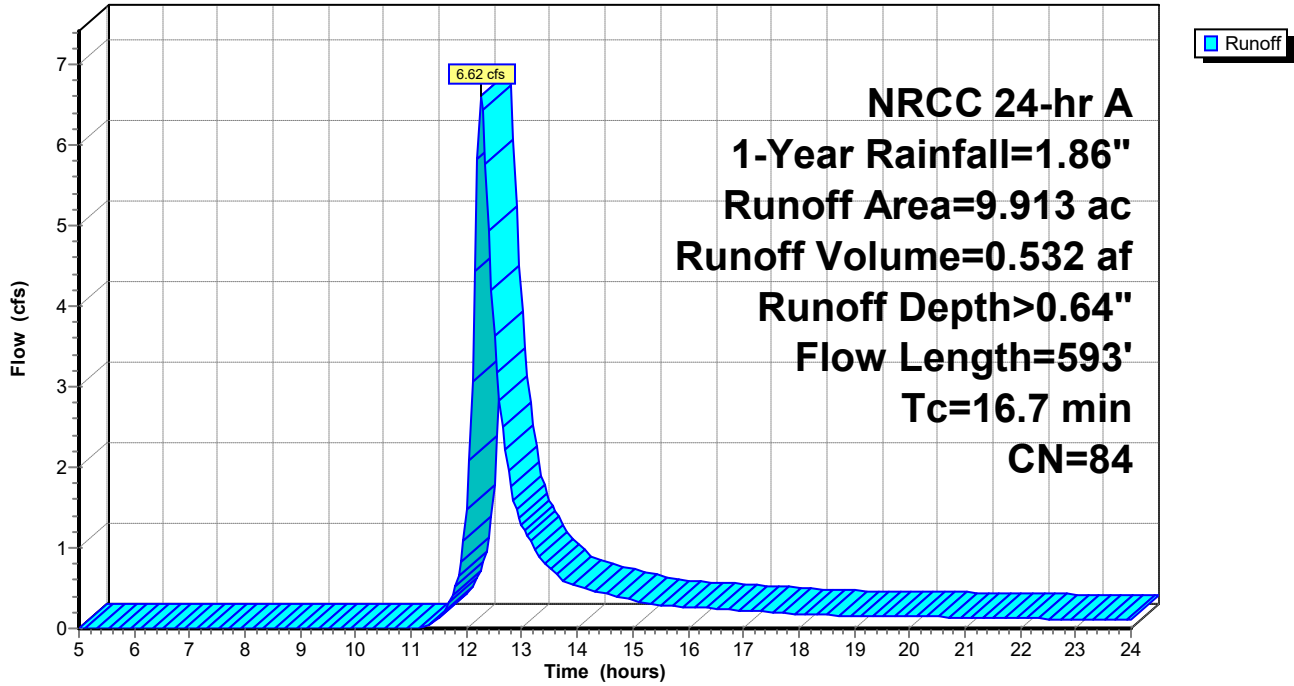
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.830	89	crops
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - EX

Hydrograph



Summary for Subcatchment 2S: DA2 - EX

Runoff = 7.18 cfs @ 12.31 hrs, Volume= 0.621 af, Depth> 0.85"

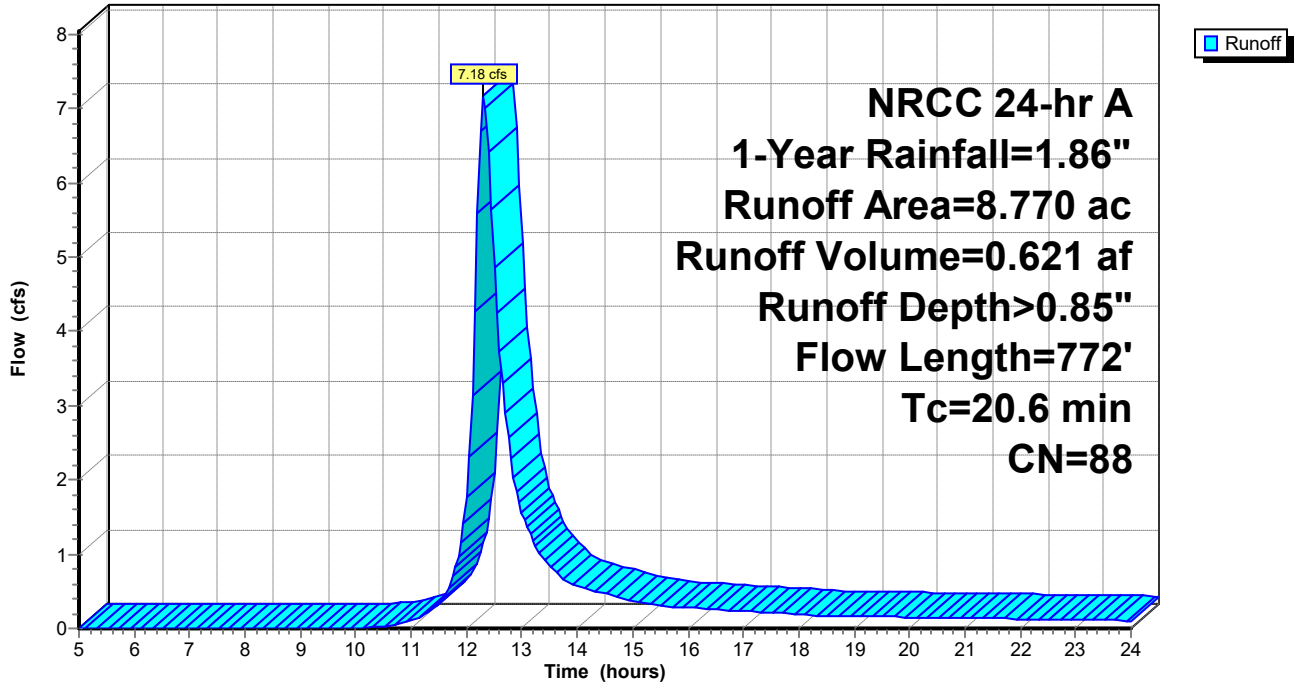
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.620	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 7.070	89	crops
* 0.560	90	woody wetlands
8.770	88	Weighted Average
8.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - EX

Hydrograph



Summary for Subcatchment 3S: DA3 - EX

Runoff = 4.29 cfs @ 12.46 hrs, Volume= 0.508 af, Depth> 0.40"

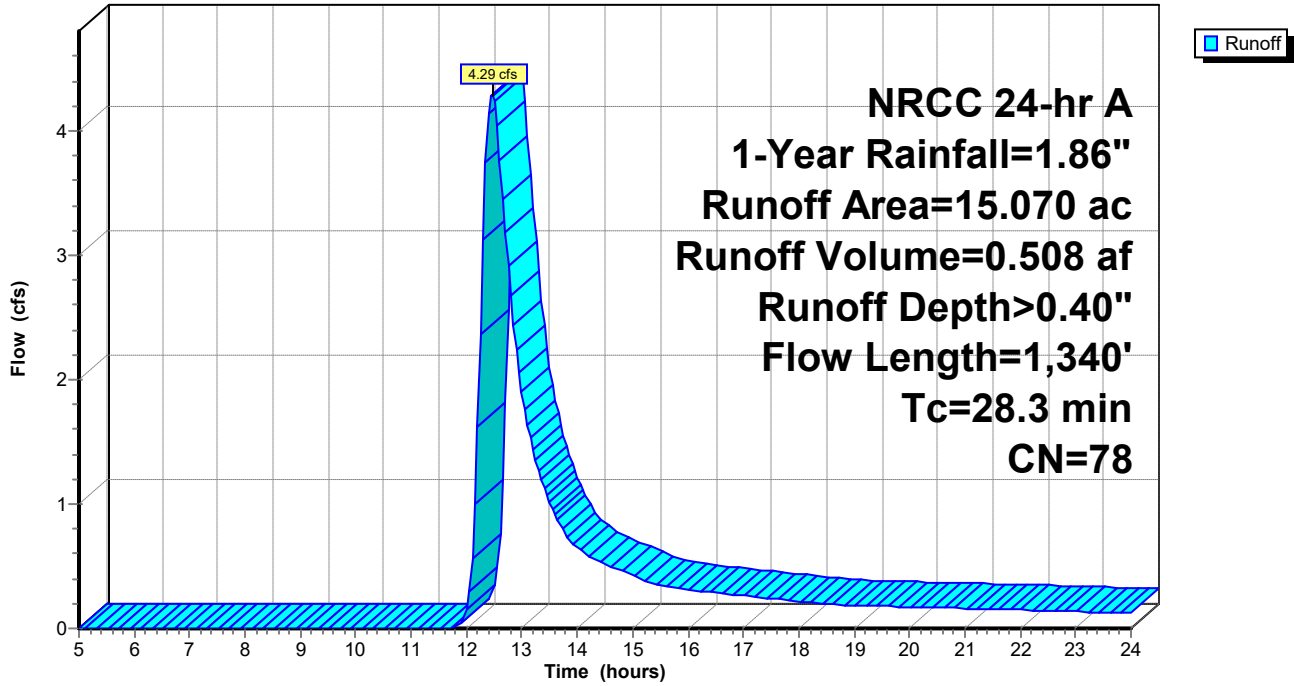
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - EX

Hydrograph



Summary for Subcatchment 4S: DA4 - EX

Runoff = 14.20 cfs @ 12.28 hrs, Volume= 1.161 af, Depth> 0.91"

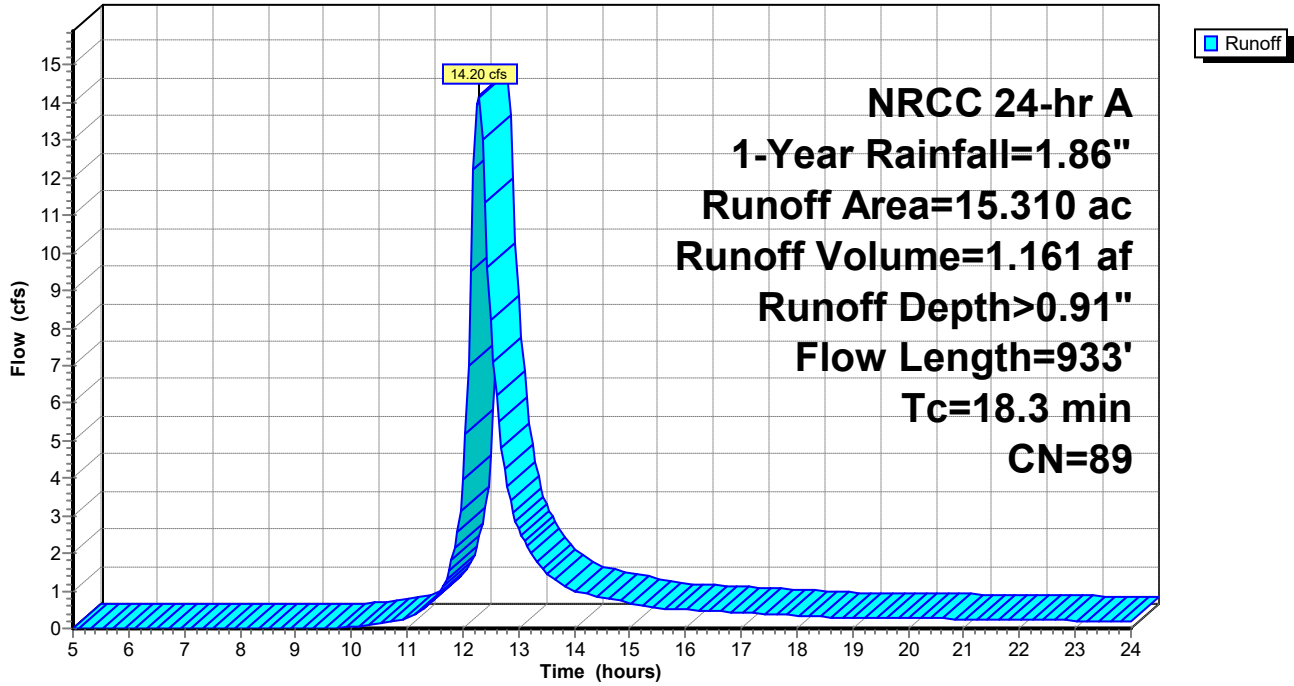
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - EX

Hydrograph



Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - EX

Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>1.57"
Flow Length=593' Tc=16.7 min CN=84 Runoff=16.66 cfs 1.296 af

Subcatchment 2S: DA2 - EX

Runoff Area=8.770 ac 0.00% Impervious Runoff Depth>1.87"
Flow Length=772' Tc=20.6 min CN=88 Runoff=15.86 cfs 1.369 af

Subcatchment 3S: DA3 - EX

Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>1.17"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=14.18 cfs 1.471 af

Subcatchment 4S: DA4 - EX

Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>1.96"
Flow Length=933' Tc=18.3 min CN=89 Runoff=30.50 cfs 2.497 af

Total Runoff Area = 49.063 ac Runoff Volume = 6.633 af Average Runoff Depth = 1.62"
100.00% Pervious = 49.063 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA1 - EX

Runoff = 16.66 cfs @ 12.26 hrs, Volume= 1.296 af, Depth> 1.57"

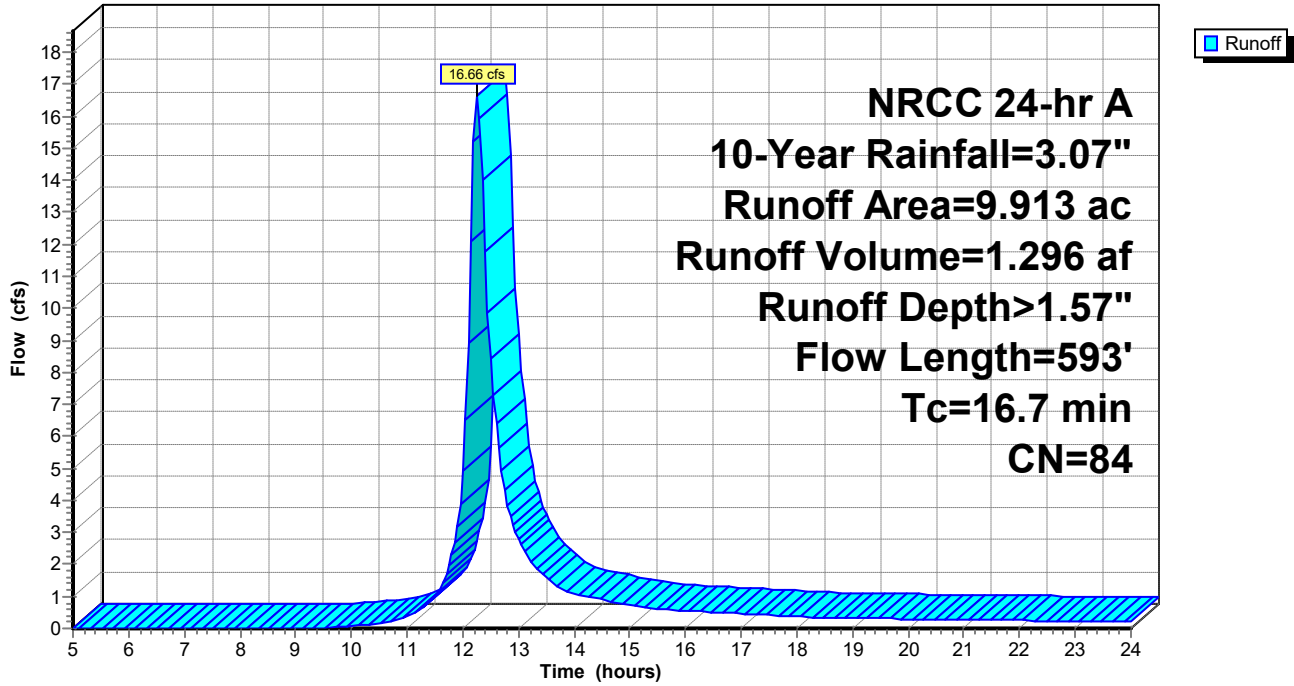
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.830	89	crops
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - EX

Hydrograph



Summary for Subcatchment 2S: DA2 - EX

Runoff = 15.86 cfs @ 12.30 hrs, Volume= 1.369 af, Depth> 1.87"

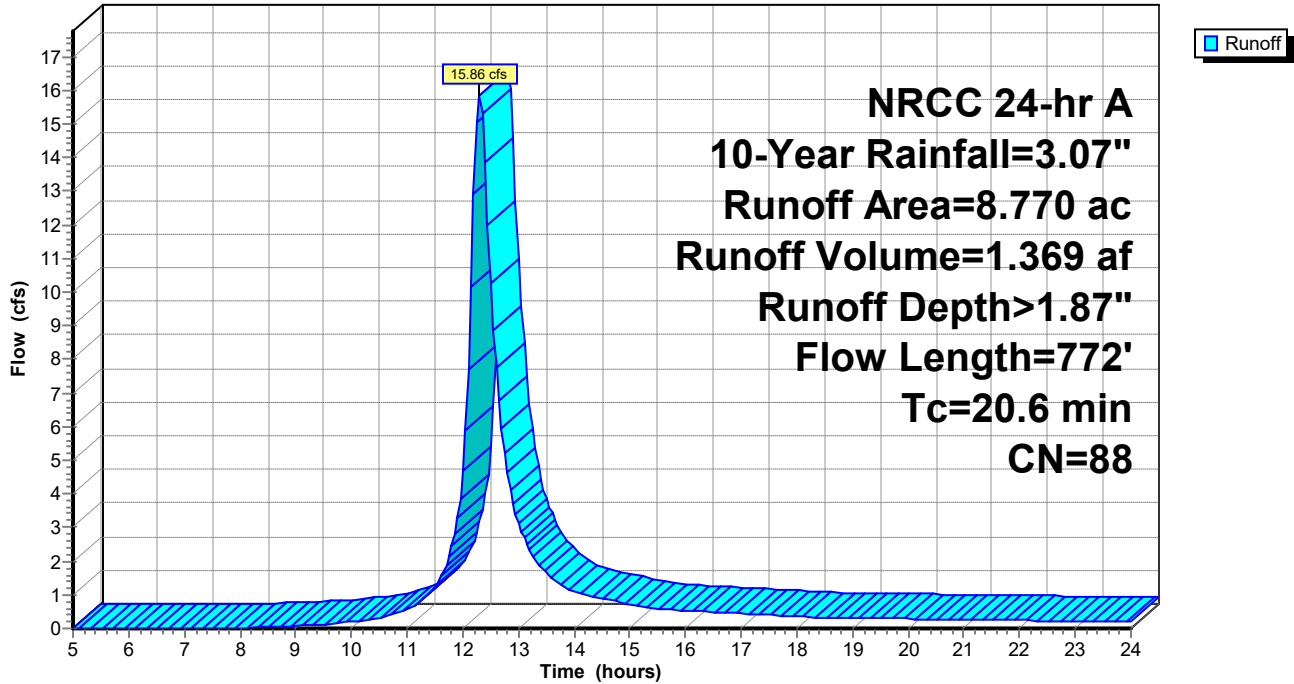
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.620	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 7.070	89	crops
* 0.560	90	woody wetlands
8.770	88	Weighted Average
8.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - EX

Hydrograph



Summary for Subcatchment 3S: DA3 - EX

Runoff = 14.18 cfs @ 12.42 hrs, Volume= 1.471 af, Depth> 1.17"

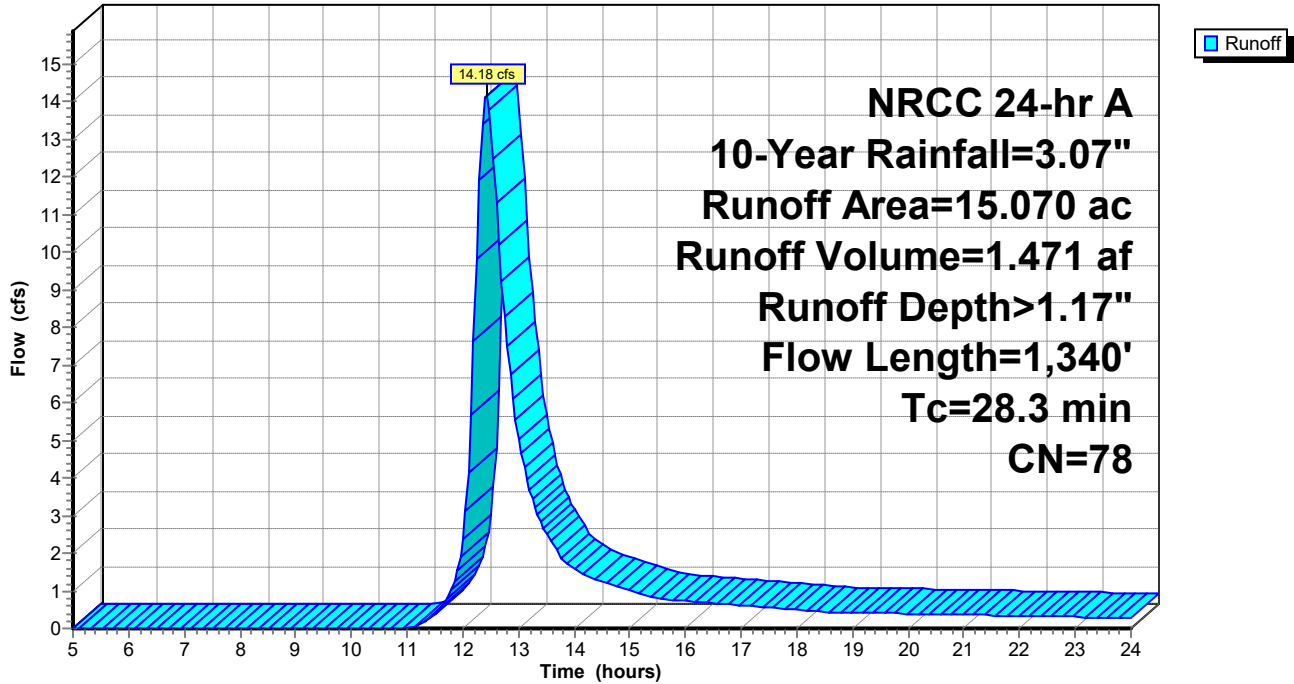
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - EX

Hydrograph



Summary for Subcatchment 4S: DA4 - EX

Runoff = 30.50 cfs @ 12.27 hrs, Volume= 2.497 af, Depth> 1.96"

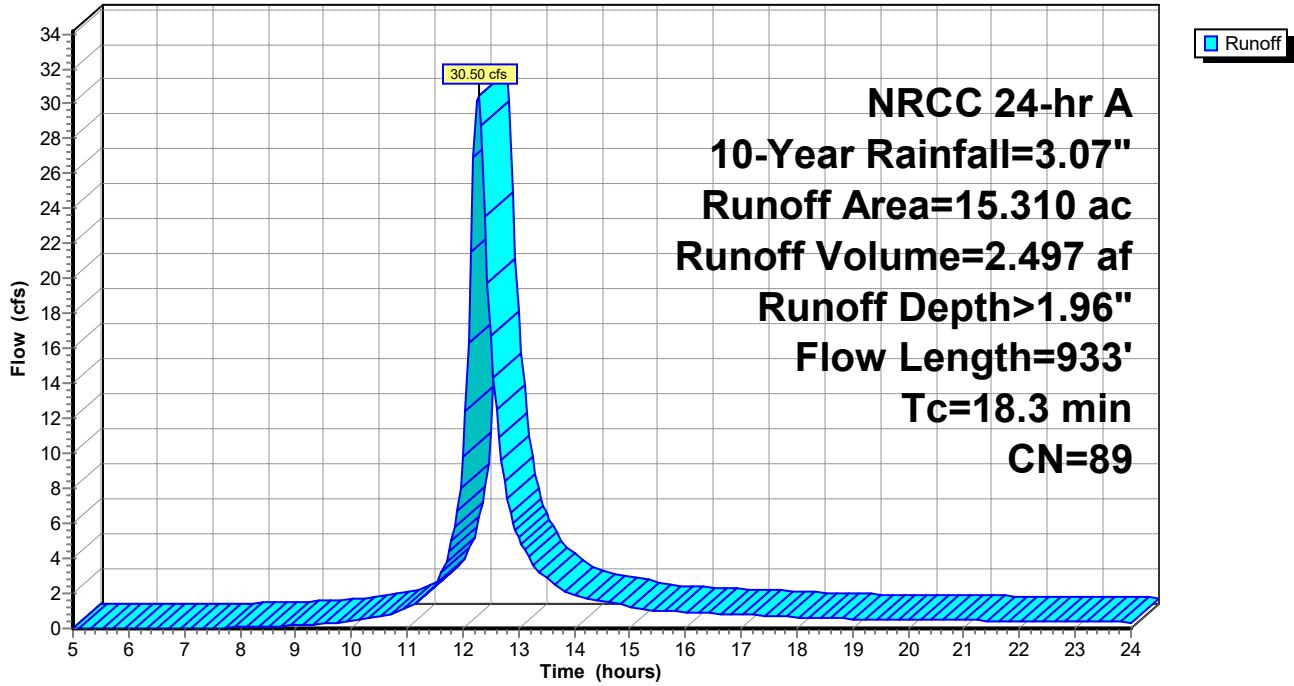
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - EX

Hydrograph



Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - EX

Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>3.28"
Flow Length=593' Tc=16.7 min CN=84 Runoff=34.49 cfs 2.709 af

Subcatchment 2S: DA2 - EX

Runoff Area=8.770 ac 0.00% Impervious Runoff Depth>3.68"
Flow Length=772' Tc=20.6 min CN=88 Runoff=30.47 cfs 2.686 af

Subcatchment 3S: DA3 - EX

Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>2.71"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=33.71 cfs 3.408 af

Subcatchment 4S: DA4 - EX

Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>3.78"
Flow Length=933' Tc=18.3 min CN=89 Runoff=57.48 cfs 4.823 af

Total Runoff Area = 49.063 ac Runoff Volume = 13.627 af Average Runoff Depth = 3.33"
100.00% Pervious = 49.063 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA1 - EX

Runoff = 34.49 cfs @ 12.25 hrs, Volume= 2.709 af, Depth> 3.28"

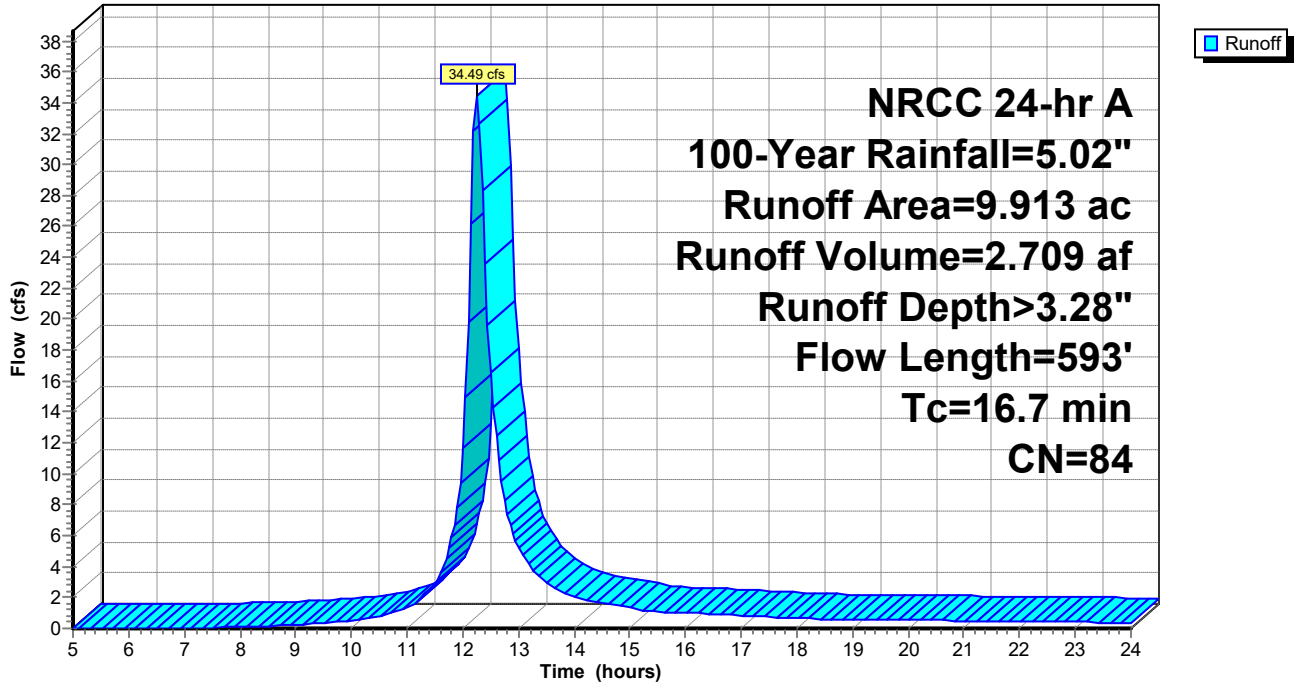
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.830	89	crops
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - EX

Hydrograph



Summary for Subcatchment 2S: DA2 - EX

Runoff = 30.47 cfs @ 12.30 hrs, Volume= 2.686 af, Depth> 3.68"

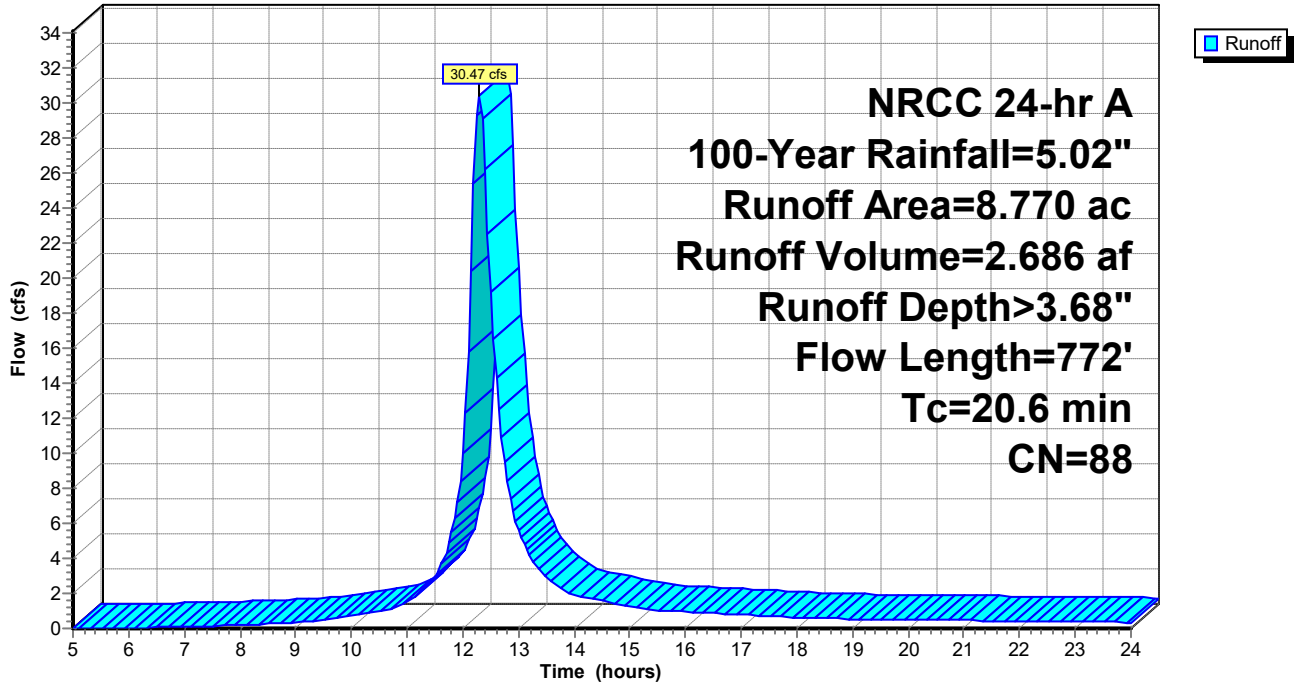
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 0.620	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 7.070	89	crops
* 0.560	90	woody wetlands
8.770	88	Weighted Average
8.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - EX

Hydrograph



Summary for Subcatchment 3S: DA3 - EX

Runoff = 33.71 cfs @ 12.41 hrs, Volume= 3.408 af, Depth> 2.71"

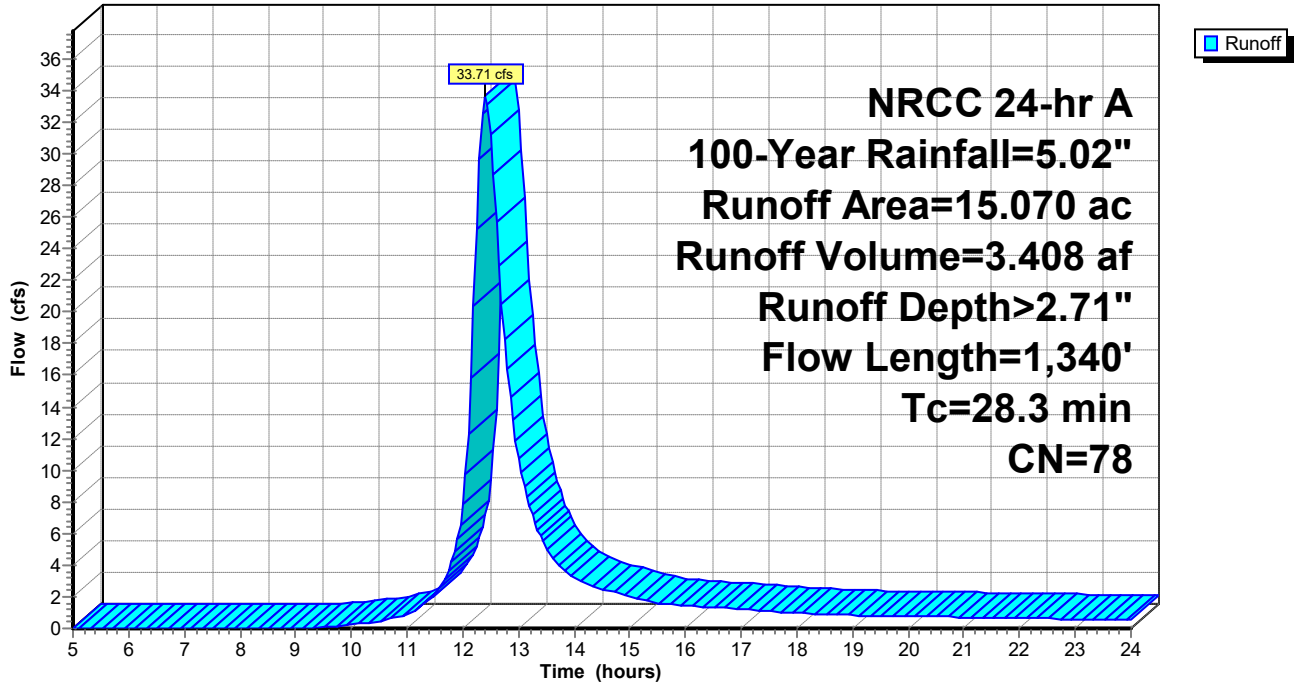
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - EX

Hydrograph



Summary for Subcatchment 4S: DA4 - EX

Runoff = 57.48 cfs @ 12.27 hrs, Volume= 4.823 af, Depth> 3.78"

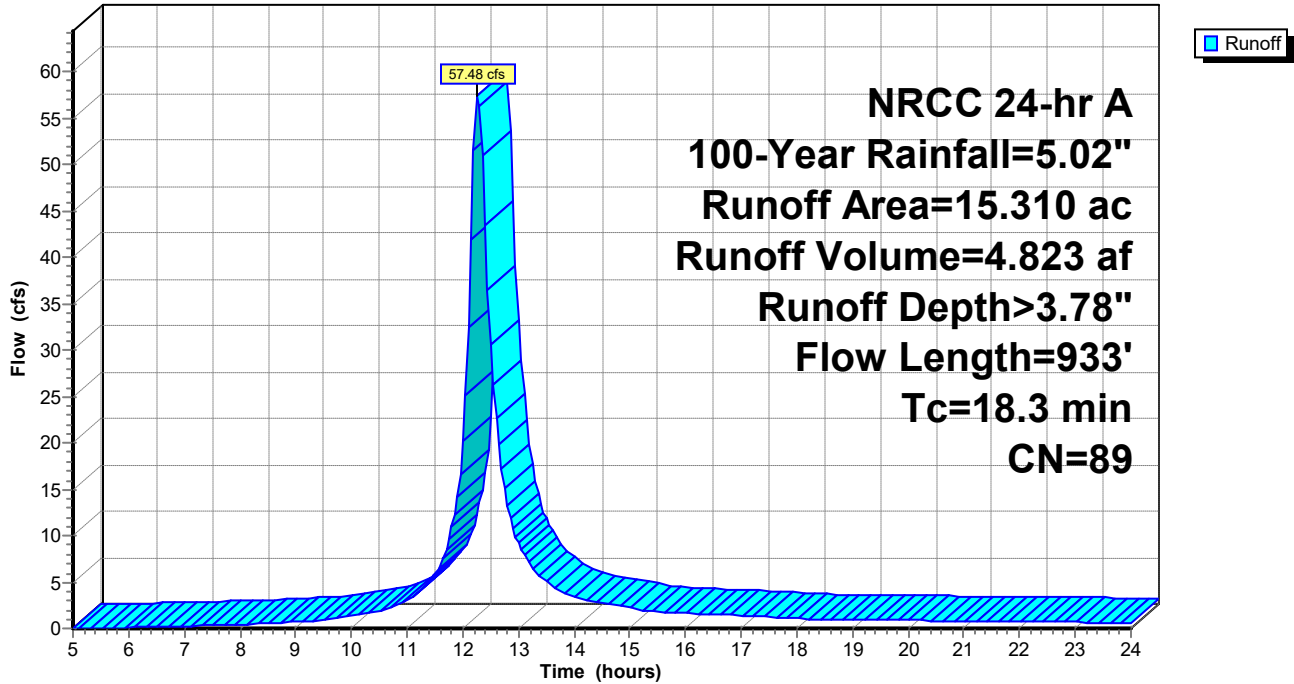
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

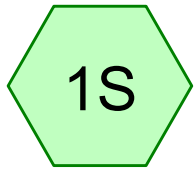
Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet
					Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1
					Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2
					Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3
					Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4
					Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5
					Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6
					Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - EX

Hydrograph

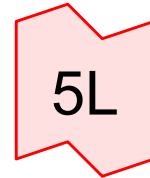




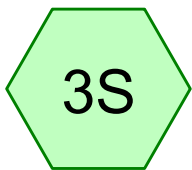
DA1 - PR



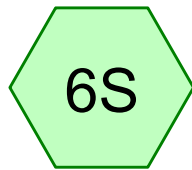
DA2 - PR



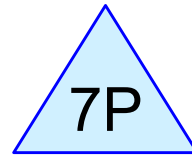
outlet



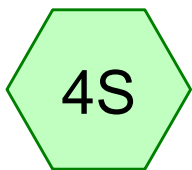
DA3 - PR



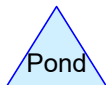
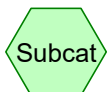
DA2 - impervious area



Porous Pavement



DA4 - PR



Routing Diagram for Genesee_PR

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Genesee_PR

Prepared by {enter your company name here}

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Page 2

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 7050 NY Genesee

Genesee_PR

Prepared by {enter your company name here}

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NRCC 24-hr	A	Default	24.00	1	1.86	2
2	10-Year	NRCC 24-hr	A	Default	24.00	1	3.07	2
3	100-Year	NRCC 24-hr	A	Default	24.00	1	5.02	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.110	80	>75% Grass cover, Good, HSG D (1S)
0.260	76	Gravel roads, HSG A (6S)
0.480	80	MEADOW (2S)
24.680	89	crops (1S, 2S, 4S)
0.520	82	developed low (2S)
7.660	80	developed open (2S, 3S, 4S)
0.003	82	developed, low (1S)
0.900	80	developed, open (1S)
0.220	95	emergent wetlands (4S)
10.470	77	forest (1S, 3S)
0.020	98	impervious area (2S)
2.080	80	pasture (1S)
1.660	90	woody wetlands (2S, 4S)
49.063	84	TOTAL AREA

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.260	HSG A	6S
0.000	HSG B	
0.000	HSG C	
0.110	HSG D	1S
48.693	Other	1S, 2S, 3S, 4S
49.063		TOTAL AREA

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.110	0.000	0.110	>75% Grass cover, Good	1S
0.260	0.000	0.000	0.000	0.000	0.260	Gravel roads	6S
0.000	0.000	0.000	0.000	0.480	0.480	MEADOW	2S
0.000	0.000	0.000	0.000	24.680	24.680	crops	1S, 2S, 4S
0.000	0.000	0.000	0.000	0.520	0.520	developed low	2S
0.000	0.000	0.000	0.000	7.660	7.660	developed open	2S, 3S, 4S
0.000	0.000	0.000	0.000	0.003	0.003	developed, low	1S
0.000	0.000	0.000	0.000	0.900	0.900	developed, open	1S
0.000	0.000	0.000	0.000	0.220	0.220	emergent wetlands	4S
0.000	0.000	0.000	0.000	10.470	10.470	forest	1S, 3S
0.000	0.000	0.000	0.000	0.020	0.020	impervious area	2S
0.000	0.000	0.000	0.000	2.080	2.080	pasture	1S
0.000	0.000	0.000	0.000	1.660	1.660	woody wetlands	2S, 4S
0.260	0.000	0.000	0.110	48.693	49.063	TOTAL AREA	

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - PR Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>0.64"
Flow Length=593' Tc=16.7 min CN=84 Runoff=6.62 cfs 0.532 af

Subcatchment 2S: DA2 - PR Runoff Area=8.510 ac 0.24% Impervious Runoff Depth>0.85"
Flow Length=772' Tc=20.6 min CN=88 Runoff=6.97 cfs 0.603 af

Subcatchment 3S: DA3 - PR Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>0.40"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=4.29 cfs 0.508 af

Subcatchment 4S: DA4 - PR Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>0.91"
Flow Length=933' Tc=18.3 min CN=89 Runoff=14.20 cfs 1.161 af

Subcatchment 6S: DA2 - impervious area Runoff Area=0.260 ac 0.00% Impervious Runoff Depth>0.34"
Flow Length=772' Tc=20.6 min CN=76 Runoff=0.07 cfs 0.007 af

Pond 7P: Porous Pavement Peak Elev=500.02' Storage=87 cf Inflow=0.07 cfs 0.007 af
Outflow=0.02 cfs 0.007 af

Link 5L: outlet Inflow=6.97 cfs 0.603 af
Primary=6.97 cfs 0.603 af

Total Runoff Area = 49.063 ac Runoff Volume = 2.811 af Average Runoff Depth = 0.69"
99.96% Pervious = 49.043 ac 0.04% Impervious = 0.020 ac

Summary for Subcatchment 1S: DA1 - PR

Runoff = 6.62 cfs @ 12.27 hrs, Volume= 0.532 af, Depth> 0.64"

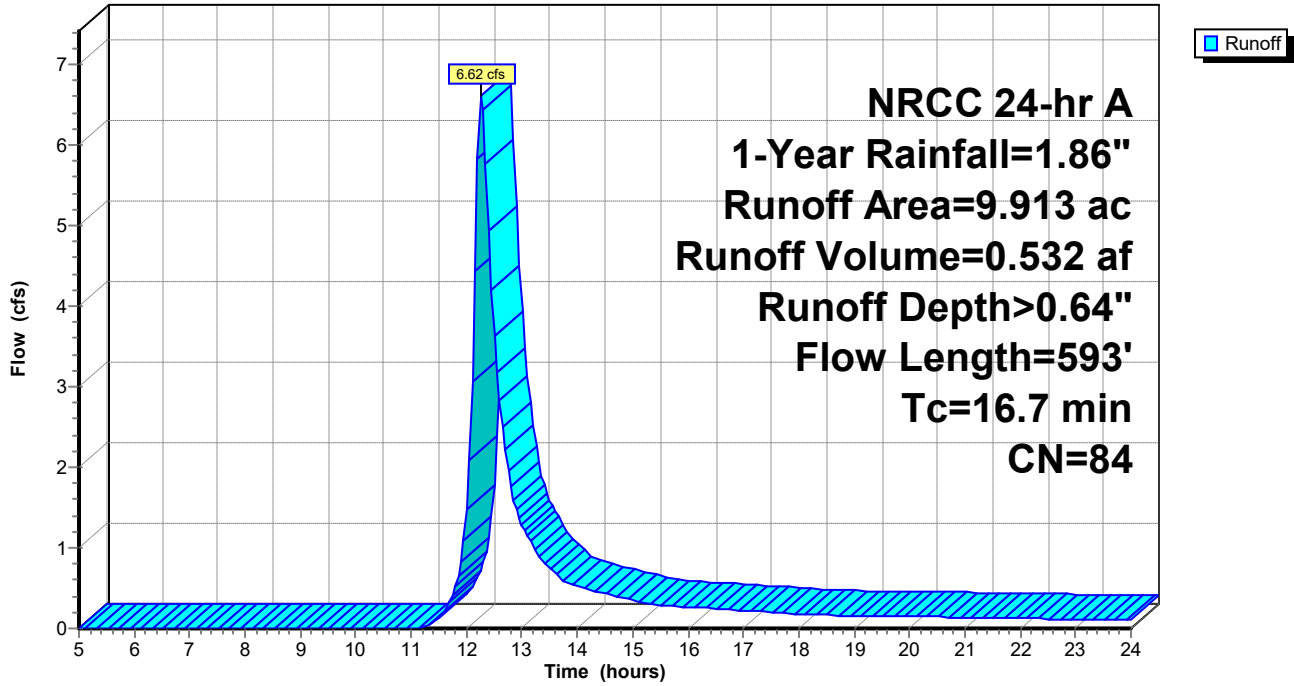
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.720	89	crops
0.110	80	>75% Grass cover, Good, HSG D
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - PR

Hydrograph



Summary for Subcatchment 2S: DA2 - PR

Runoff = 6.97 cfs @ 12.31 hrs, Volume= 0.603 af, Depth> 0.85"
 Routed to Link 5L : outlet

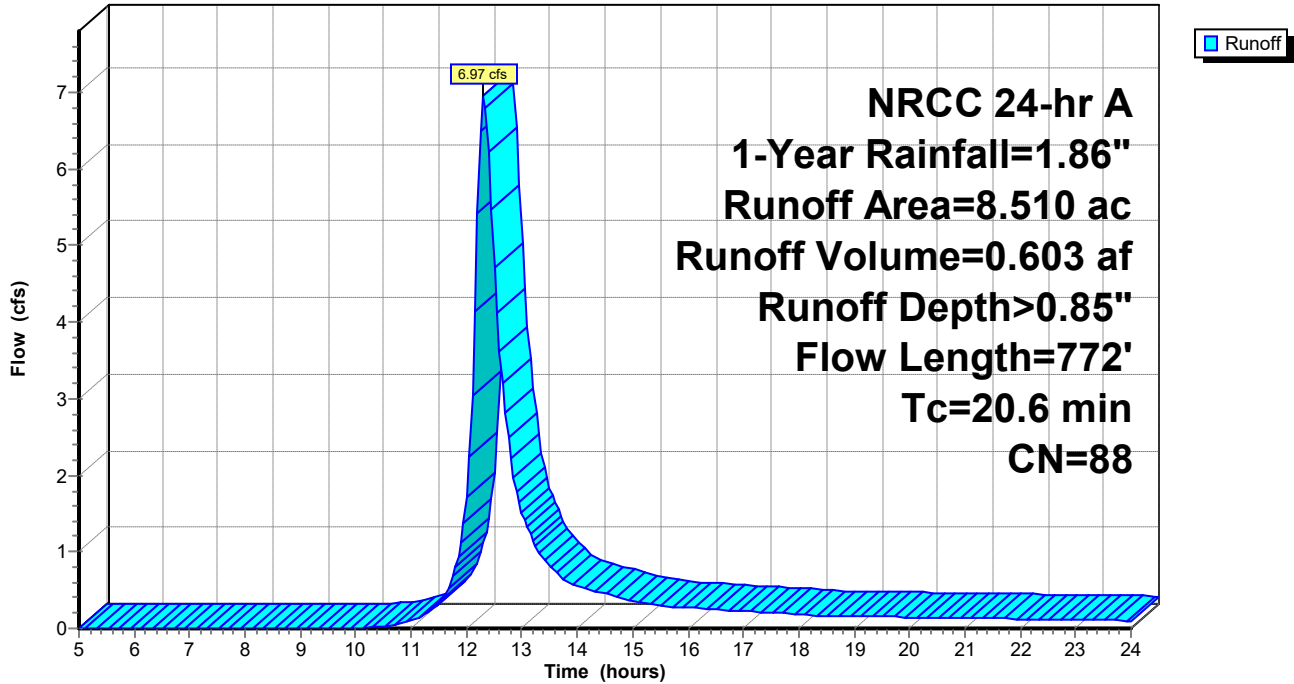
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.480	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 6.450	89	crops
* 0.560	90	woody wetlands
* 0.480	80	MEADOW
* 0.020	98	impervious area
8.510	88	Weighted Average
8.490		99.76% Pervious Area
0.020		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - PR

Hydrograph



Summary for Subcatchment 3S: DA3 - PR

Runoff = 4.29 cfs @ 12.46 hrs, Volume= 0.508 af, Depth> 0.40"

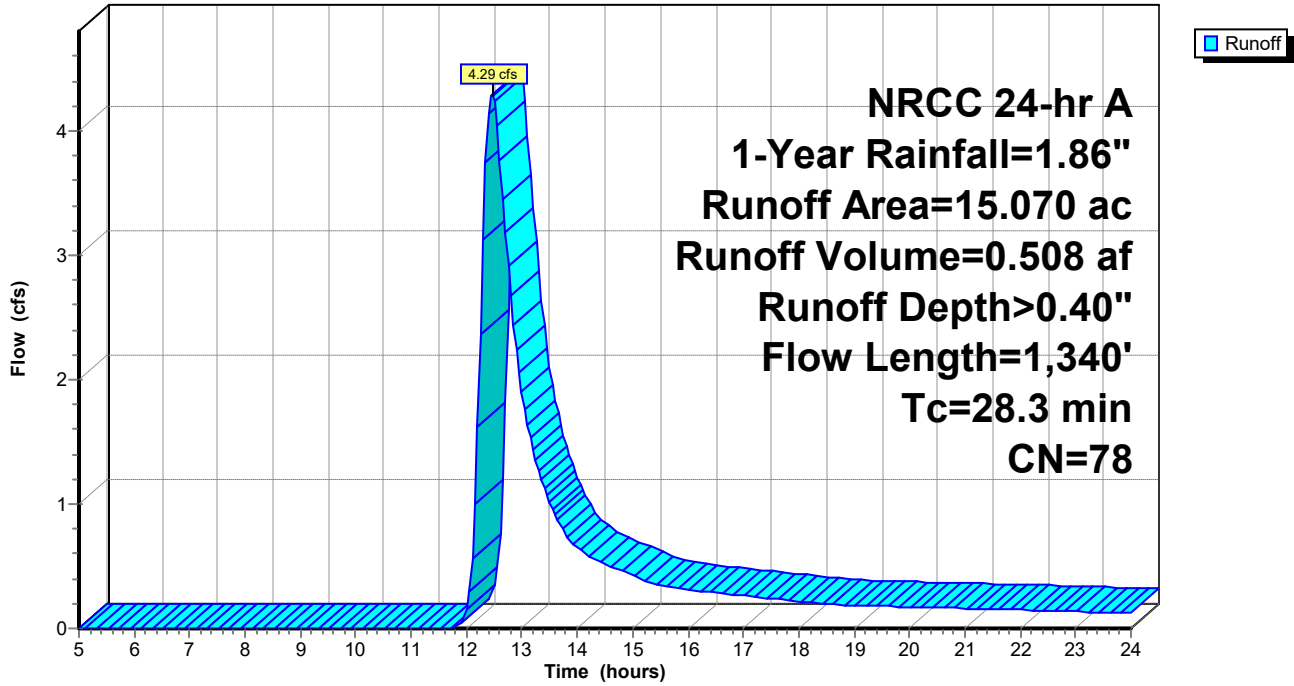
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - PR

Hydrograph



Summary for Subcatchment 4S: DA4 - PR

Runoff = 14.20 cfs @ 12.28 hrs, Volume= 1.161 af, Depth> 0.91"

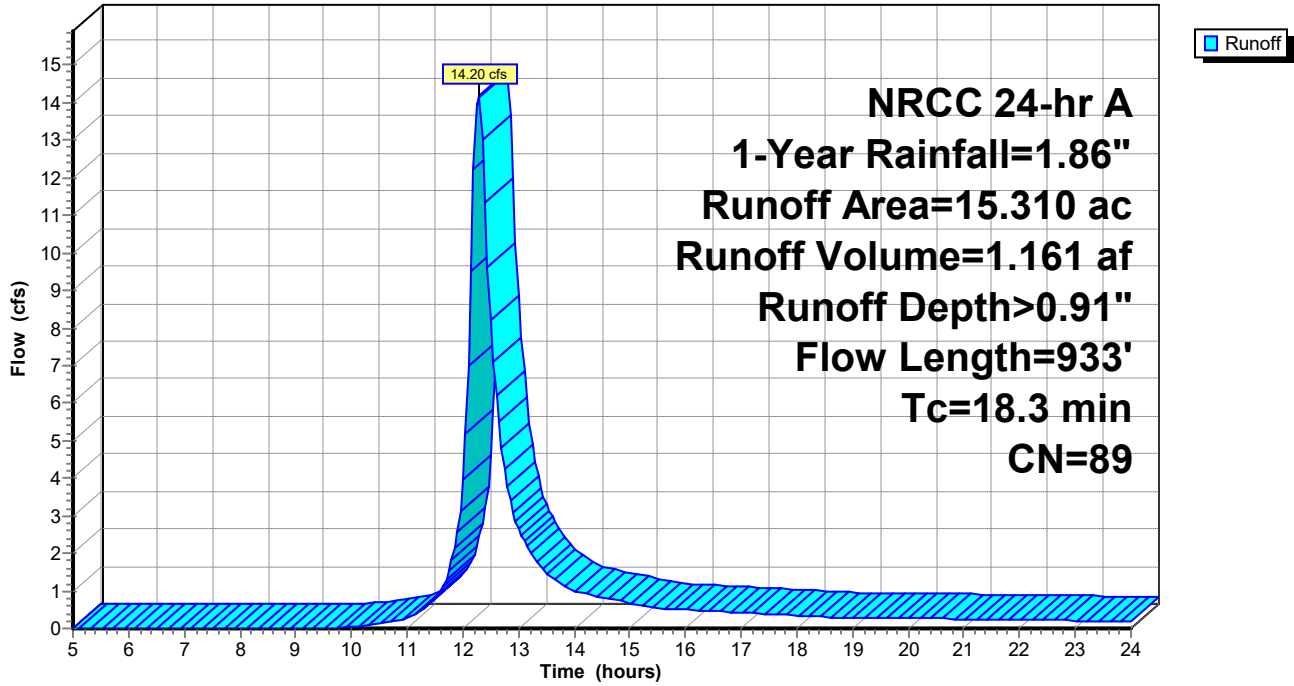
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - PR

Hydrograph



Summary for Subcatchment 6S: DA2 - impervious area

Runoff = 0.07 cfs @ 12.36 hrs, Volume= 0.007 af, Depth> 0.34"
 Routed to Pond 7P : Porous Pavement

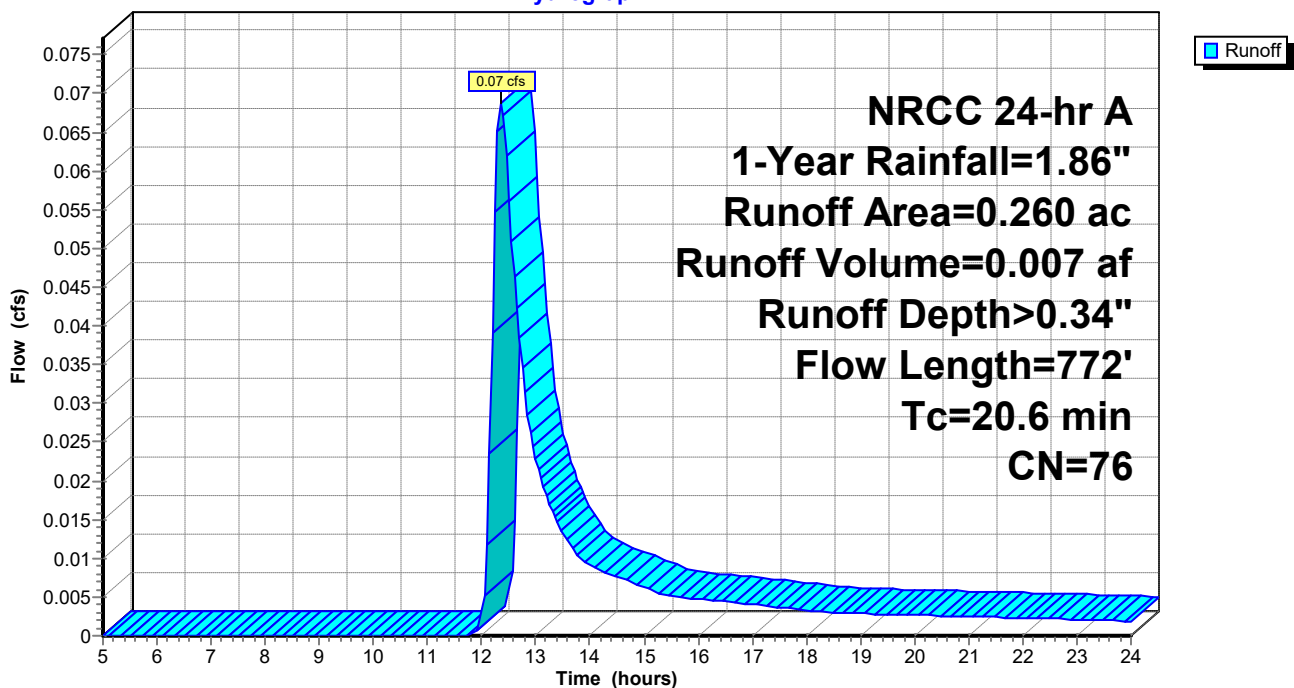
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-Year Rainfall=1.86"

Area (ac)	CN	Description
0.260	76	Gravel roads, HSG A
0.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 6S: DA2 - impervious area

Hydrograph



Summary for Pond 7P: Porous Pavement

Inflow Area = 0.260 ac, 0.00% Impervious, Inflow Depth > 0.34" for 1-Year event
 Inflow = 0.07 cfs @ 12.36 hrs, Volume= 0.007 af
 Outflow = 0.02 cfs @ 12.35 hrs, Volume= 0.007 af, Atten= 71%, Lag= 0.0 min
 Primary = 0.02 cfs @ 12.35 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 500.02' @ 13.12 hrs Surf.Area= 11,326 sf Storage= 87 cf

Plug-Flow detention time= 42.1 min calculated for 0.007 af (99% of inflow)
 Center-of-Mass det. time= 37.0 min (923.3 - 886.3)

Volume	Invert	Avail.Storage	Storage Description
#1	500.00'	3,035 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

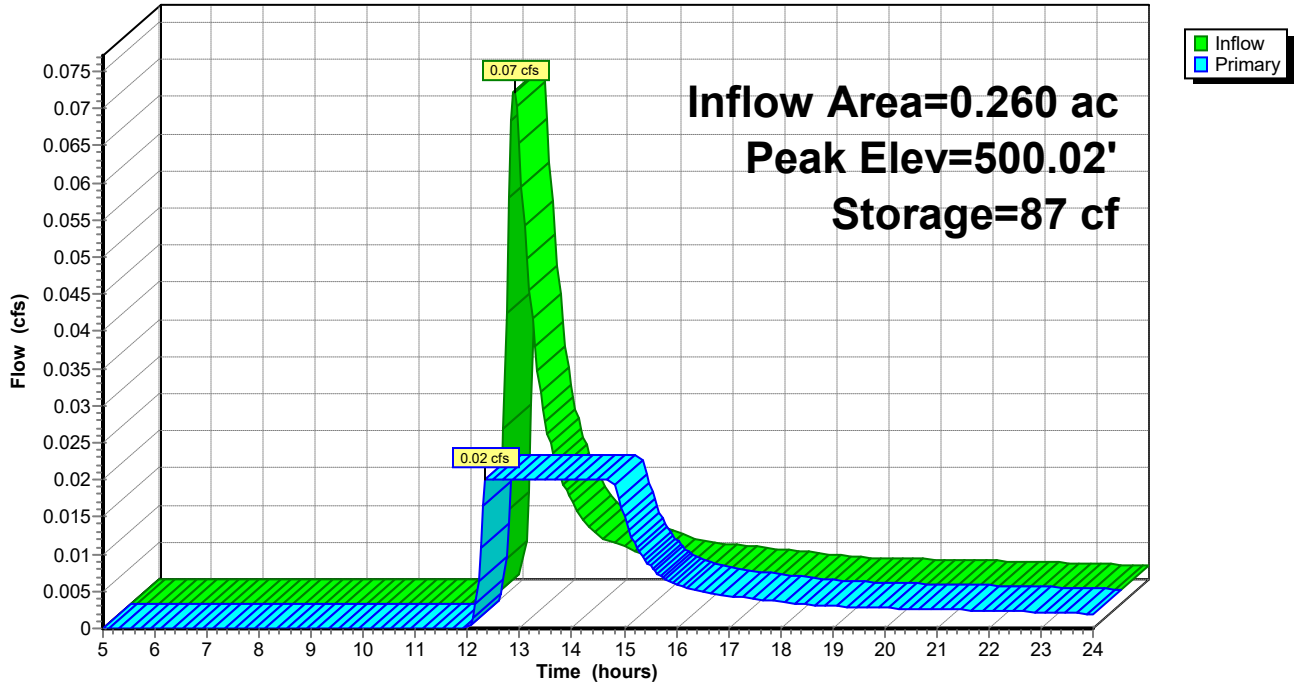
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	11,326	0.0	0	0
500.33	11,326	40.0	1,495	1,495
500.67	11,326	40.0	1,540	3,035

Device	Routing	Invert	Outlet Devices
#1	Primary	500.00'	0.02 cfs Exfiltration at all elevations

Primary OutFlow Max=0.02 cfs @ 12.35 hrs HW=500.01' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 7P: Porous Pavement

Hydrograph



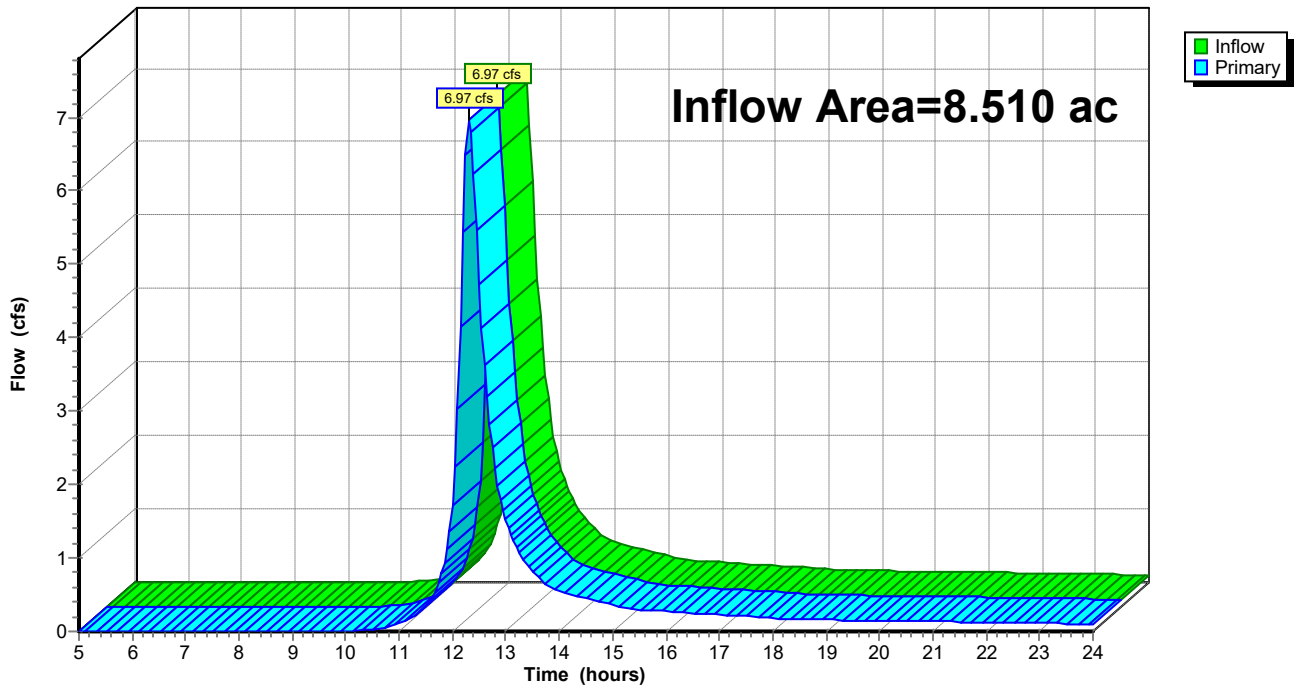
Summary for Link 5L: outlet

Inflow Area = 8.510 ac, 0.24% Impervious, Inflow Depth > 0.85" for 1-Year event
Inflow = 6.97 cfs @ 12.31 hrs, Volume= 0.603 af
Primary = 6.97 cfs @ 12.31 hrs, Volume= 0.603 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs

Link 5L: outlet

Hydrograph



Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - PR

Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>1.57"
Flow Length=593' Tc=16.7 min CN=84 Runoff=16.66 cfs 1.296 af

Subcatchment 2S: DA2 - PR

Runoff Area=8.510 ac 0.24% Impervious Runoff Depth>1.87"
Flow Length=772' Tc=20.6 min CN=88 Runoff=15.39 cfs 1.329 af

Subcatchment 3S: DA3 - PR

Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>1.17"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=14.18 cfs 1.471 af

Subcatchment 4S: DA4 - PR

Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>1.96"
Flow Length=933' Tc=18.3 min CN=89 Runoff=30.50 cfs 2.497 af

Subcatchment 6S: DA2 - impervious area

Runoff Area=0.260 ac 0.00% Impervious Runoff Depth>1.06"
Flow Length=772' Tc=20.6 min CN=76 Runoff=0.26 cfs 0.023 af

Pond 7P: Porous Pavement

Peak Elev=500.12' Storage=531 cf Inflow=0.26 cfs 0.023 af
Outflow=0.02 cfs 0.020 af

Link 5L: outlet

Inflow=15.39 cfs 1.329 af
Primary=15.39 cfs 1.329 af

Total Runoff Area = 49.063 ac Runoff Volume = 6.615 af Average Runoff Depth = 1.62"
99.96% Pervious = 49.043 ac 0.04% Impervious = 0.020 ac

Summary for Subcatchment 1S: DA1 - PR

Runoff = 16.66 cfs @ 12.26 hrs, Volume= 1.296 af, Depth> 1.57"

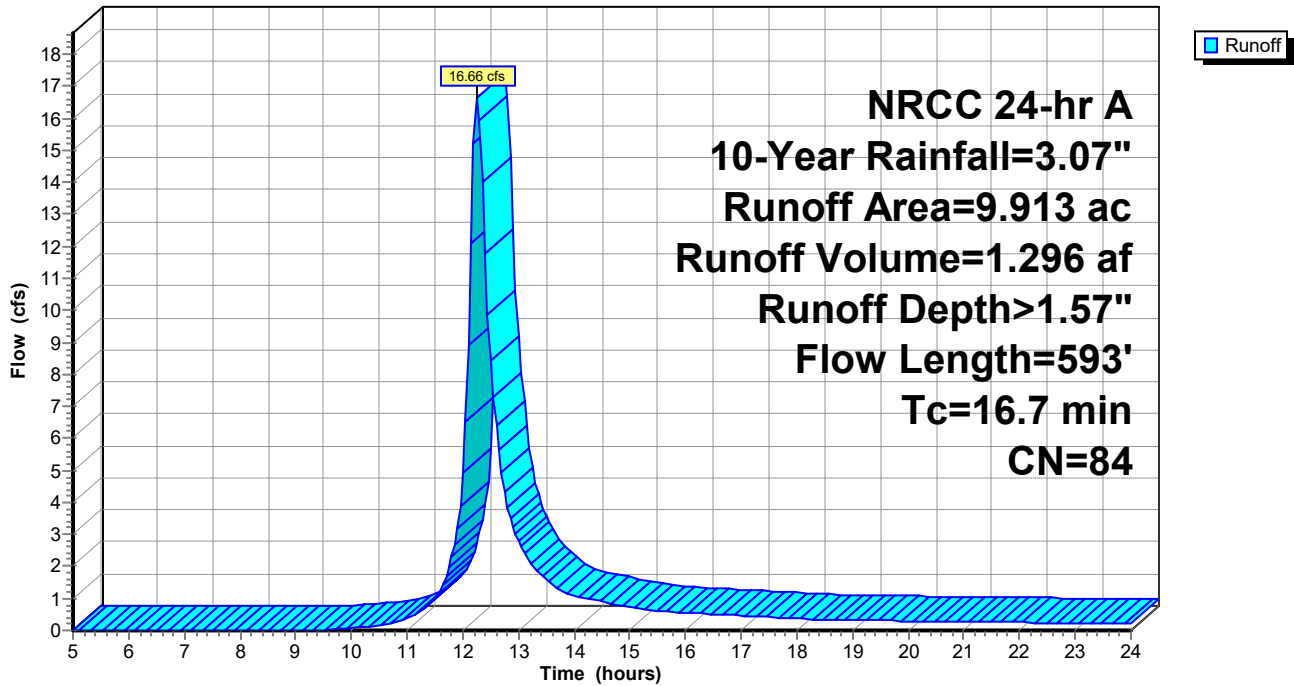
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.720	89	crops
0.110	80	>75% Grass cover, Good, HSG D
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - PR

Hydrograph



Summary for Subcatchment 2S: DA2 - PR

Runoff = 15.39 cfs @ 12.30 hrs, Volume= 1.329 af, Depth> 1.87"
 Routed to Link 5L : outlet

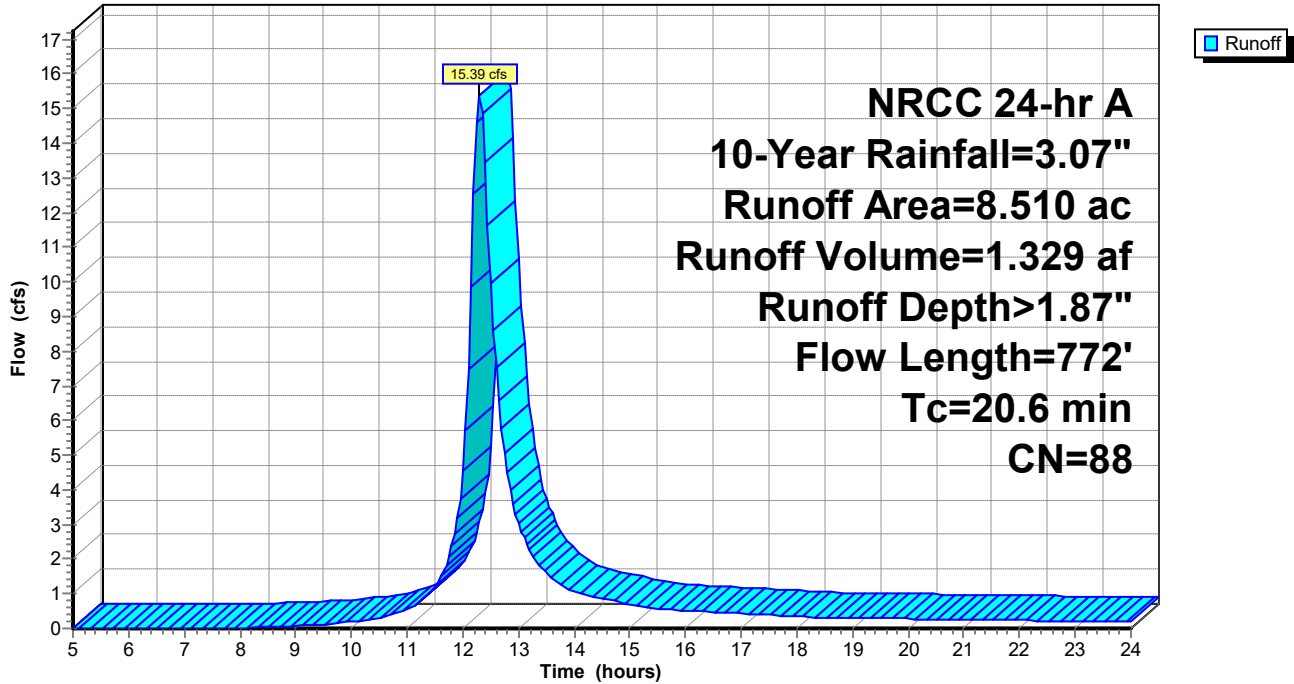
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.480	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 6.450	89	crops
* 0.560	90	woody wetlands
* 0.480	80	MEADOW
* 0.020	98	impervious area
8.510	88	Weighted Average
8.490		99.76% Pervious Area
0.020		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - PR

Hydrograph



Summary for Subcatchment 3S: DA3 - PR

Runoff = 14.18 cfs @ 12.42 hrs, Volume= 1.471 af, Depth> 1.17"

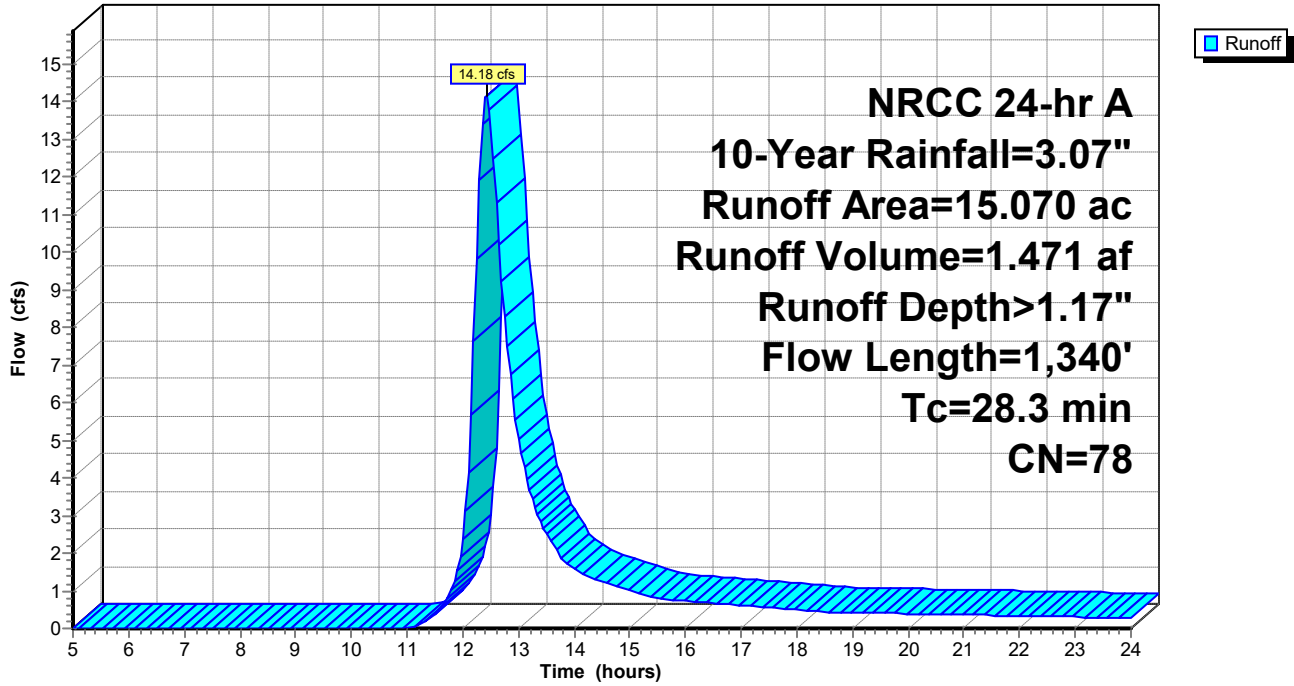
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - PR

Hydrograph



Summary for Subcatchment 4S: DA4 - PR

Runoff = 30.50 cfs @ 12.27 hrs, Volume= 2.497 af, Depth> 1.96"

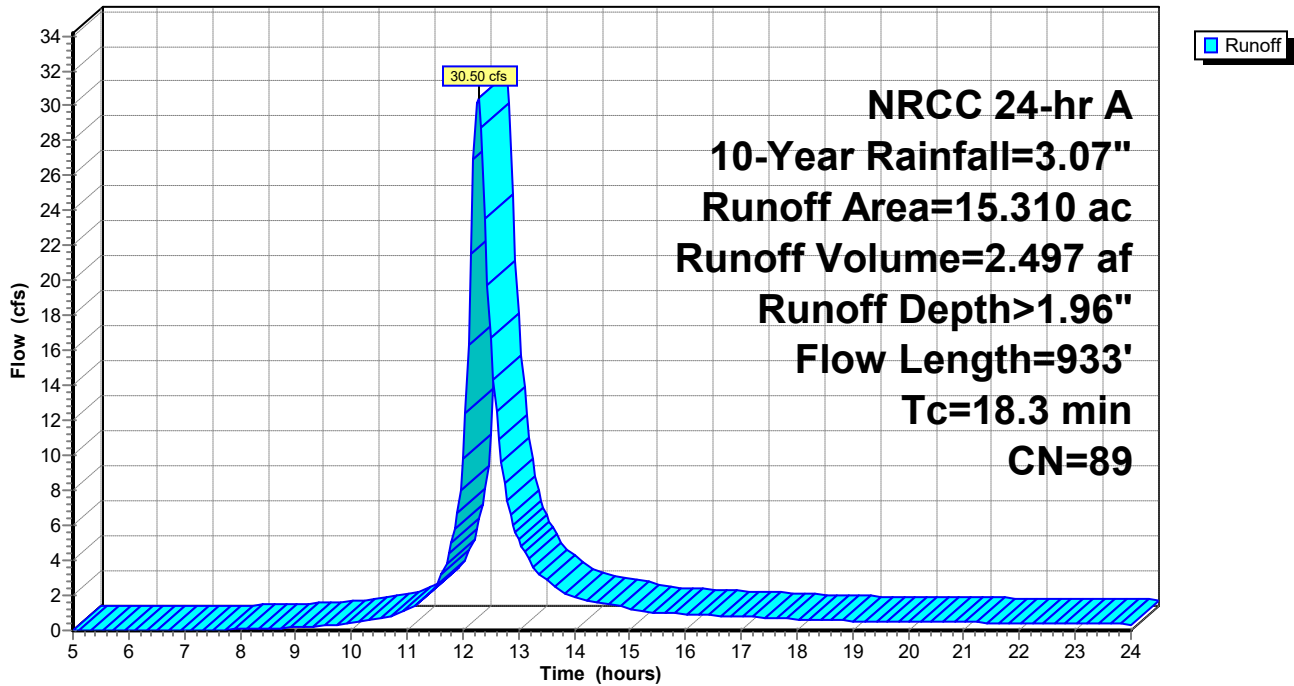
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - PR

Hydrograph



Summary for Subcatchment 6S: DA2 - impervious area

Runoff = 0.26 cfs @ 12.32 hrs, Volume= 0.023 af, Depth> 1.06"
 Routed to Pond 7P : Porous Pavement

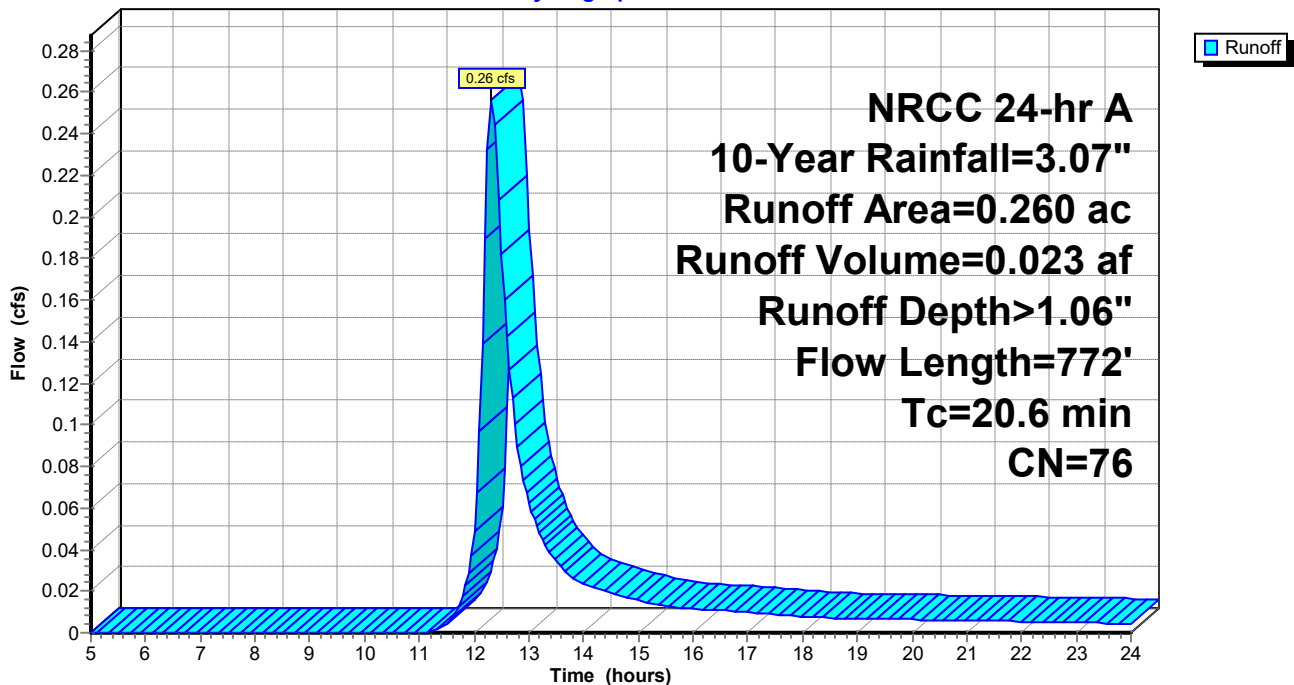
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-Year Rainfall=3.07"

Area (ac)	CN	Description
0.260	76	Gravel roads, HSG A
0.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 6S: DA2 - impervious area

Hydrograph



Summary for Pond 7P: Porous Pavement

Inflow Area = 0.260 ac, 0.00% Impervious, Inflow Depth > 1.06" for 10-Year event
 Inflow = 0.26 cfs @ 12.32 hrs, Volume= 0.023 af
 Outflow = 0.02 cfs @ 12.05 hrs, Volume= 0.020 af, Atten= 92%, Lag= 0.0 min
 Primary = 0.02 cfs @ 12.05 hrs, Volume= 0.020 af

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 500.12' @ 14.38 hrs Surf.Area= 11,326 sf Storage= 531 cf

Plug-Flow detention time= 278.5 min calculated for 0.020 af (88% of inflow)
 Center-of-Mass det. time= 223.2 min (1,076.3 - 853.2)

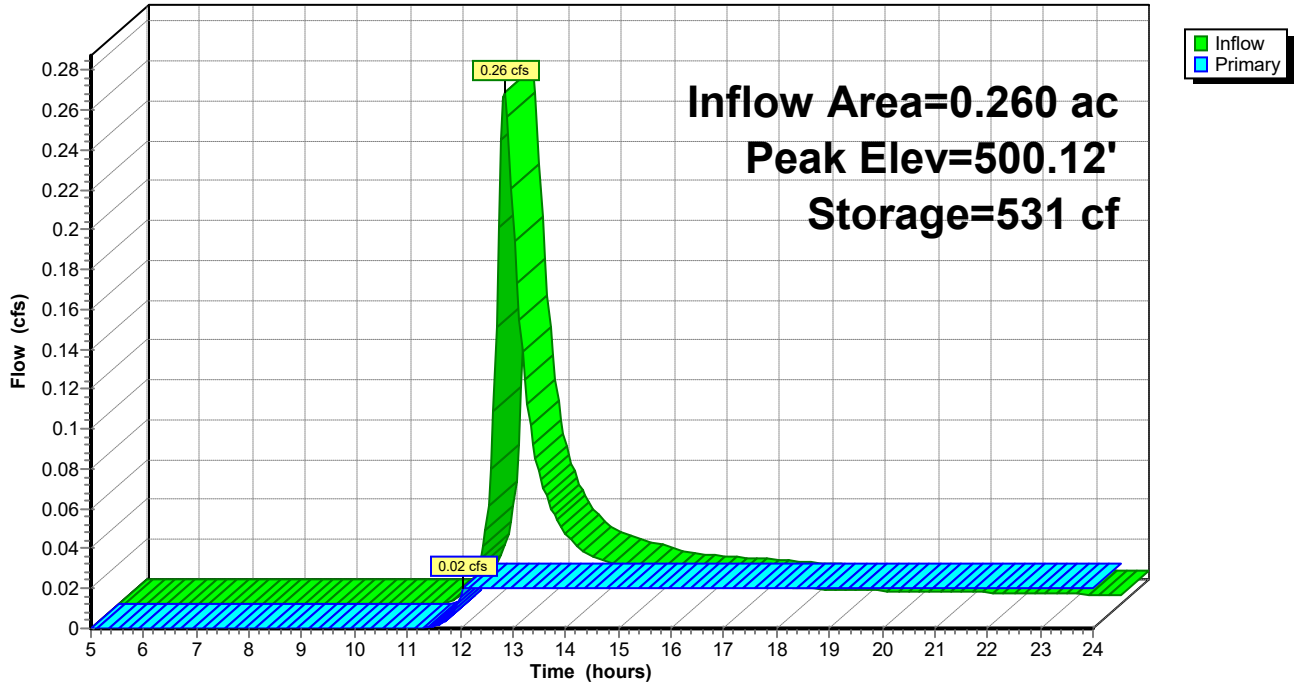
Volume	Invert	Avail.Storage	Storage Description	
#1	500.00'	3,035 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	11,326	0.0	0	0
500.33	11,326	40.0	1,495	1,495
500.67	11,326	40.0	1,540	3,035

Device	Routing	Invert	Outlet Devices
#1	Primary	500.00'	0.02 cfs Exfiltration at all elevations

Primary OutFlow Max=0.02 cfs @ 12.05 hrs HW=500.01' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 7P: Porous Pavement

Hydrograph



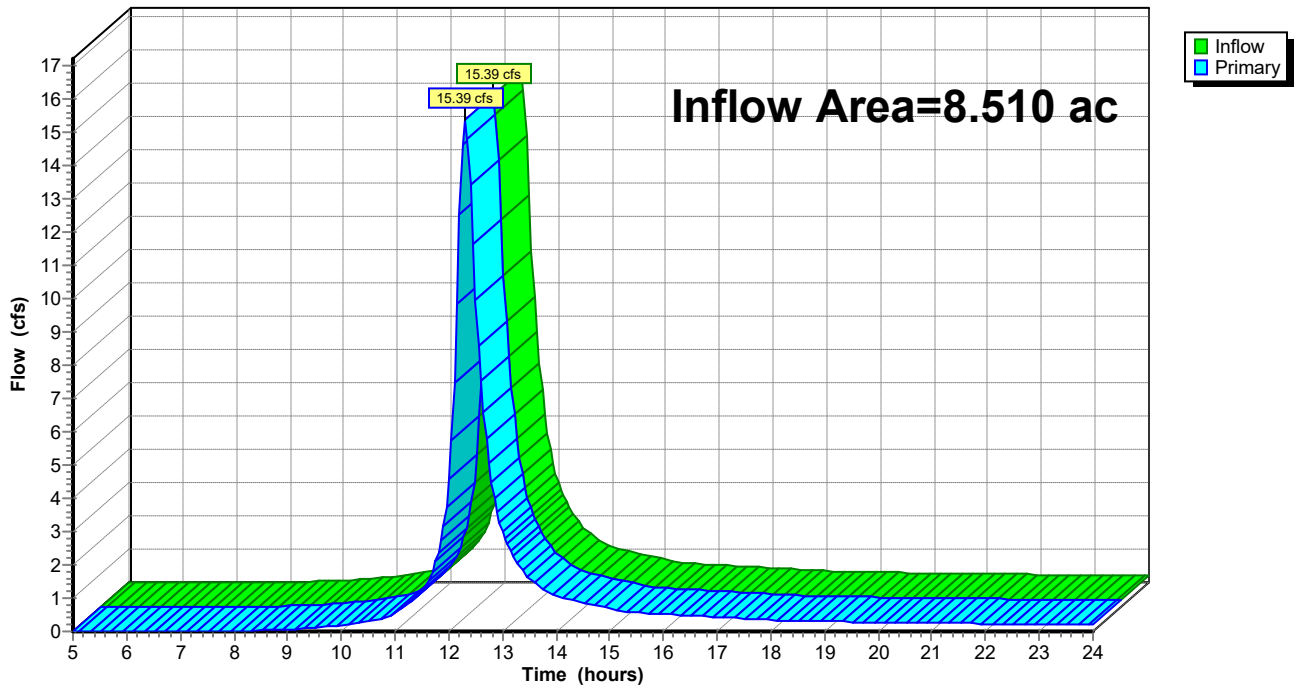
Summary for Link 5L: outlet

Inflow Area = 8.510 ac, 0.24% Impervious, Inflow Depth > 1.87" for 10-Year event
Inflow = 15.39 cfs @ 12.30 hrs, Volume= 1.329 af
Primary = 15.39 cfs @ 12.30 hrs, Volume= 1.329 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs

Link 5L: outlet

Hydrograph



Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA1 - PR Runoff Area=9.913 ac 0.00% Impervious Runoff Depth>3.28"
Flow Length=593' Tc=16.7 min CN=84 Runoff=34.49 cfs 2.709 af

Subcatchment 2S: DA2 - PR Runoff Area=8.510 ac 0.24% Impervious Runoff Depth>3.68"
Flow Length=772' Tc=20.6 min CN=88 Runoff=29.57 cfs 2.607 af

Subcatchment 3S: DA3 - PR Runoff Area=15.070 ac 0.00% Impervious Runoff Depth>2.71"
Flow Length=1,340' Tc=28.3 min CN=78 Runoff=33.71 cfs 3.408 af

Subcatchment 4S: DA4 - PR Runoff Area=15.310 ac 0.00% Impervious Runoff Depth>3.78"
Flow Length=933' Tc=18.3 min CN=89 Runoff=57.48 cfs 4.823 af

Subcatchment 6S: DA2 - impervious area Runoff Area=0.260 ac 0.00% Impervious Runoff Depth>2.54"
Flow Length=772' Tc=20.6 min CN=76 Runoff=0.64 cfs 0.055 af

Pond 7P: Porous Pavement Peak Elev=500.36' Storage=1,644 cf Inflow=0.64 cfs 0.055 af
Outflow=0.02 cfs 0.022 af

Link 5L: outlet Inflow=29.57 cfs 2.607 af
Primary=29.57 cfs 2.607 af

Total Runoff Area = 49.063 ac Runoff Volume = 13.602 af Average Runoff Depth = 3.33"
99.96% Pervious = 49.043 ac 0.04% Impervious = 0.020 ac

Summary for Subcatchment 1S: DA1 - PR

Runoff = 34.49 cfs @ 12.25 hrs, Volume= 2.709 af, Depth> 3.28"

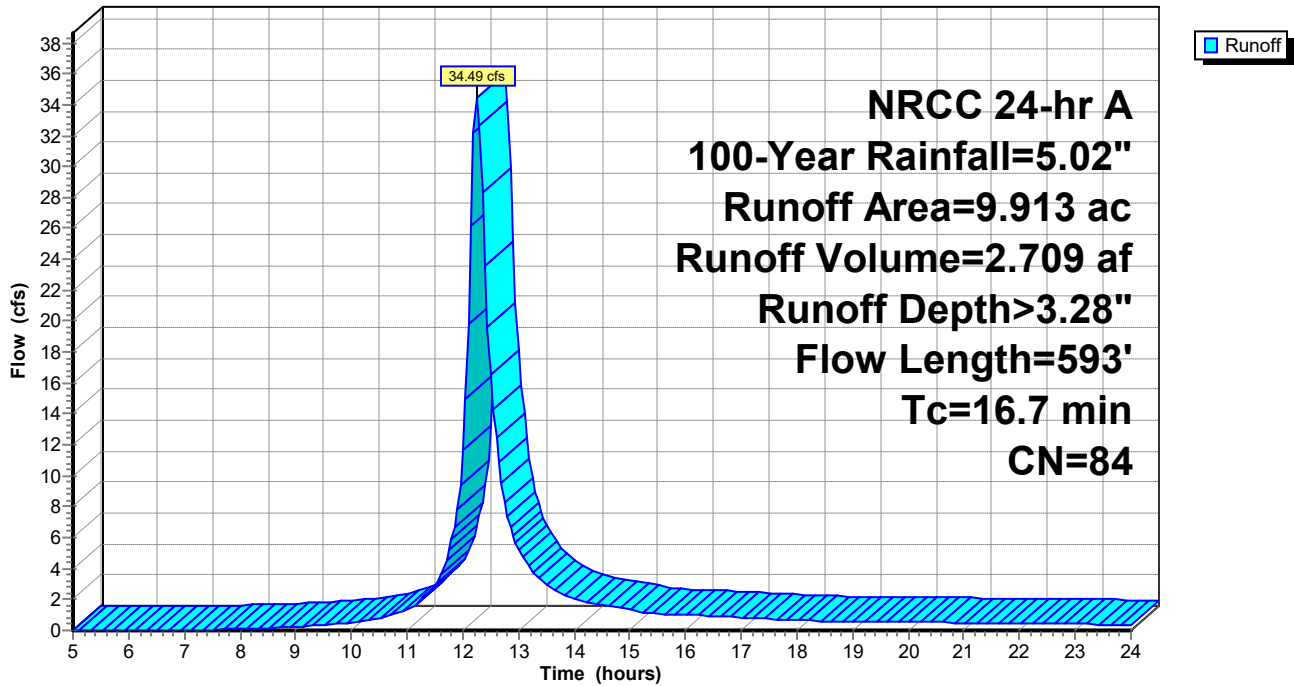
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 0.900	80	developed, open
* 0.003	82	developed, low
* 2.100	77	forest
* 2.080	80	pasture
* 4.720	89	crops
0.110	80	>75% Grass cover, Good, HSG D
9.913	84	Weighted Average
9.913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	99	0.0202	0.13		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
1.0	133	0.0601	2.21		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.1	138	0.0580	2.17		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.6	88	0.0682	2.35		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.4	67	0.0896	2.69		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.6	68	0.0441	1.89		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
16.7	593	Total			

Subcatchment 1S: DA1 - PR

Hydrograph



Summary for Subcatchment 2S: DA2 - PR

Runoff = 29.57 cfs @ 12.30 hrs, Volume= 2.607 af, Depth> 3.68"
 Routed to Link 5L : outlet

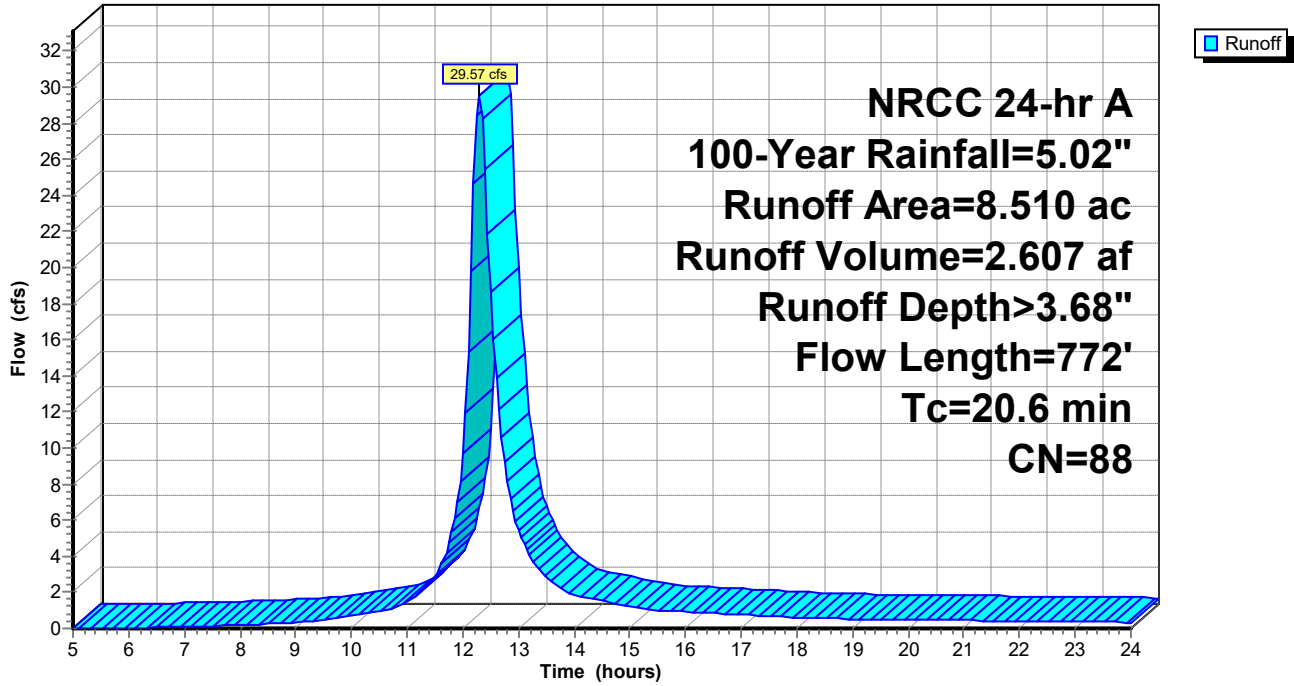
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 0.480	80	developed open
* 0.520	82	developed low
* 0.000	85	developed med
* 6.450	89	crops
* 0.560	90	woody wetlands
* 0.480	80	MEADOW
* 0.020	98	impervious area
8.510	88	Weighted Average
8.490		99.76% Pervious Area
0.020		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 2S: DA2 - PR

Hydrograph



Summary for Subcatchment 3S: DA3 - PR

Runoff = 33.71 cfs @ 12.41 hrs, Volume= 3.408 af, Depth> 2.71"

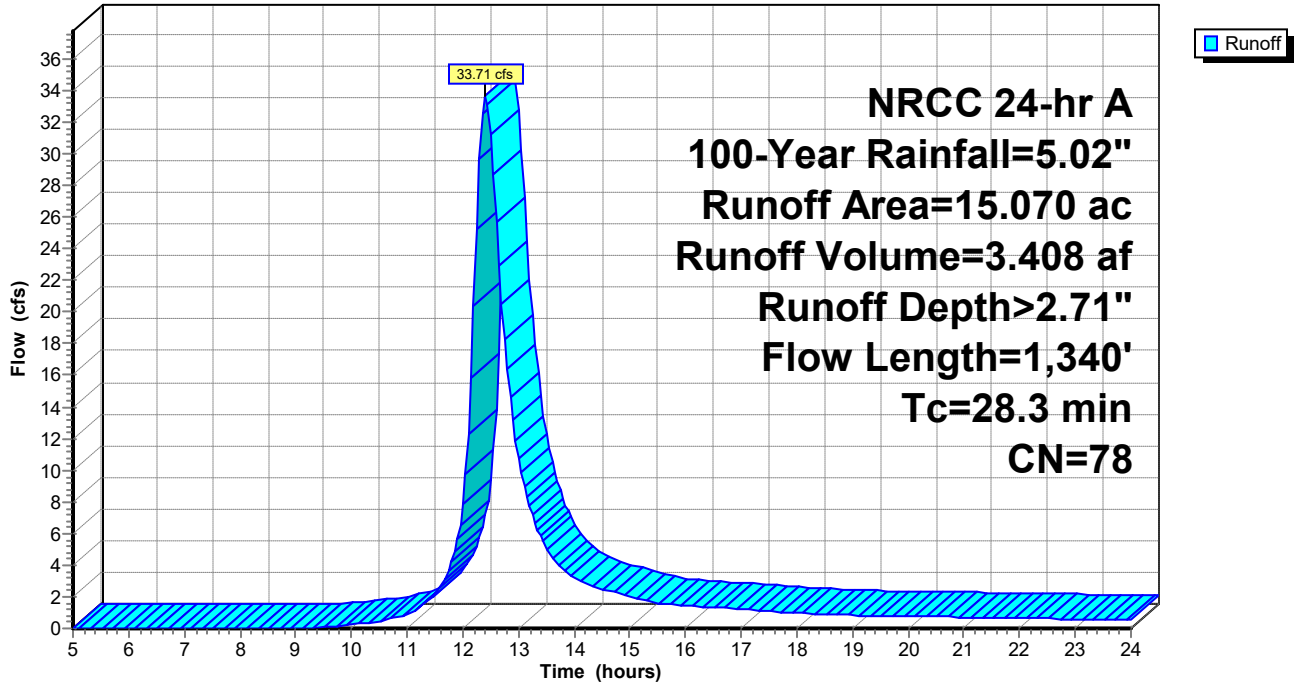
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 6.700	80	developed open
* 8.370	77	forest
15.070	78	Weighted Average
15.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	99	0.0101	0.10		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
4.2	249	0.0120	0.99		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
1.6	183	0.0437	1.88		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.1	129	0.0465	1.94		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
0.6	110	0.1091	2.97		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
0.5	75	0.0800	2.55		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
0.9	115	0.0522	2.06		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
0.7	130	0.1077	2.95		Shallow Concentrated Flow, 7 Cultivated Straight Rows Kv= 9.0 fps
0.4	81	0.1235	3.16		Shallow Concentrated Flow, 8 Cultivated Straight Rows Kv= 9.0 fps
0.7	95	0.0632	2.26		Shallow Concentrated Flow, 9 Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0811	2.56		Shallow Concentrated Flow, 10 Cultivated Straight Rows Kv= 9.0 fps
28.3	1,340	Total			

Subcatchment 3S: DA3 - PR

Hydrograph



Summary for Subcatchment 4S: DA4 - PR

Runoff = 57.48 cfs @ 12.27 hrs, Volume= 4.823 af, Depth> 3.78"

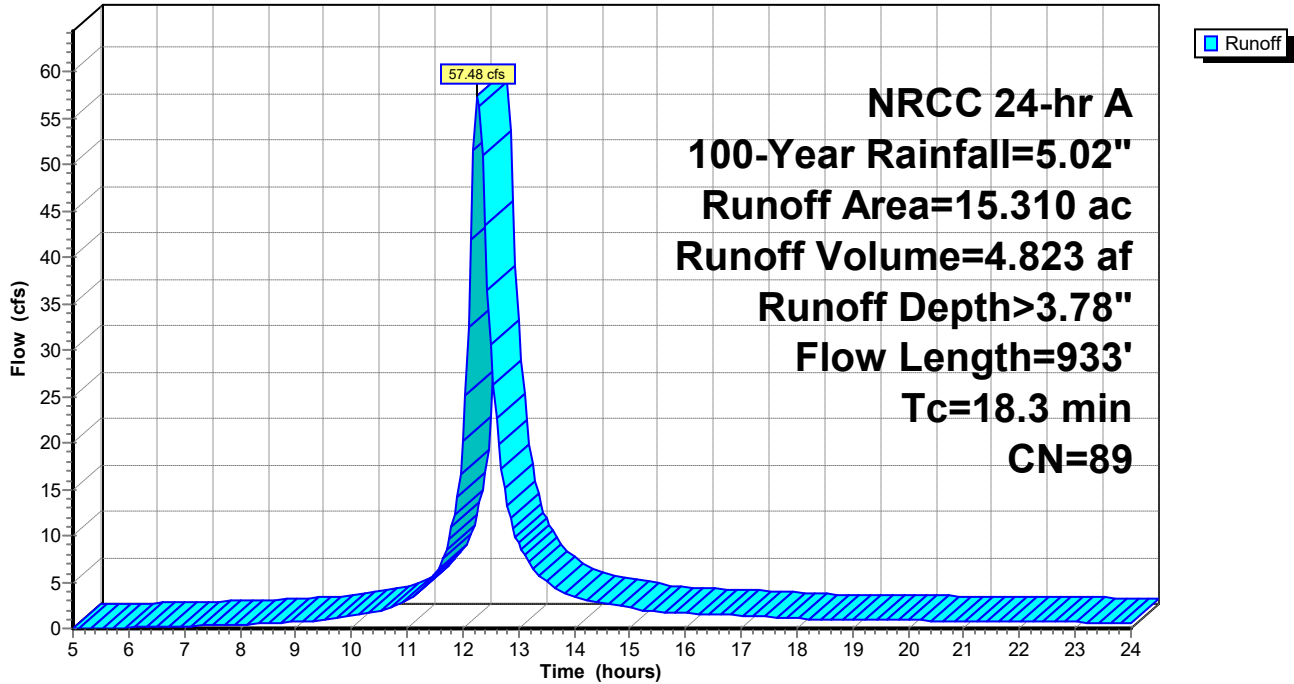
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
* 0.480	80	developed open
* 13.510	89	crops
* 1.100	90	woody wetlands
* 0.220	95	emergent wetlands
15.310	89	Weighted Average
15.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	99	0.0505	0.18		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
0.7	107	0.0841	2.61		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
0.7	112	0.0893	2.69		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
0.9	100	0.0400	1.80		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
1.1	112	0.0357	1.70		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
2.0	194	0.0309	1.58		Shallow Concentrated Flow, 5 Cultivated Straight Rows Kv= 9.0 fps
3.9	209	0.0097	0.89		Shallow Concentrated Flow, 6 Cultivated Straight Rows Kv= 9.0 fps
18.3	933	Total			

Subcatchment 4S: DA4 - PR

Hydrograph



Summary for Subcatchment 6S: DA2 - impervious area

Runoff = 0.64 cfs @ 12.31 hrs, Volume= 0.055 af, Depth> 2.54"
 Routed to Pond 7P : Porous Pavement

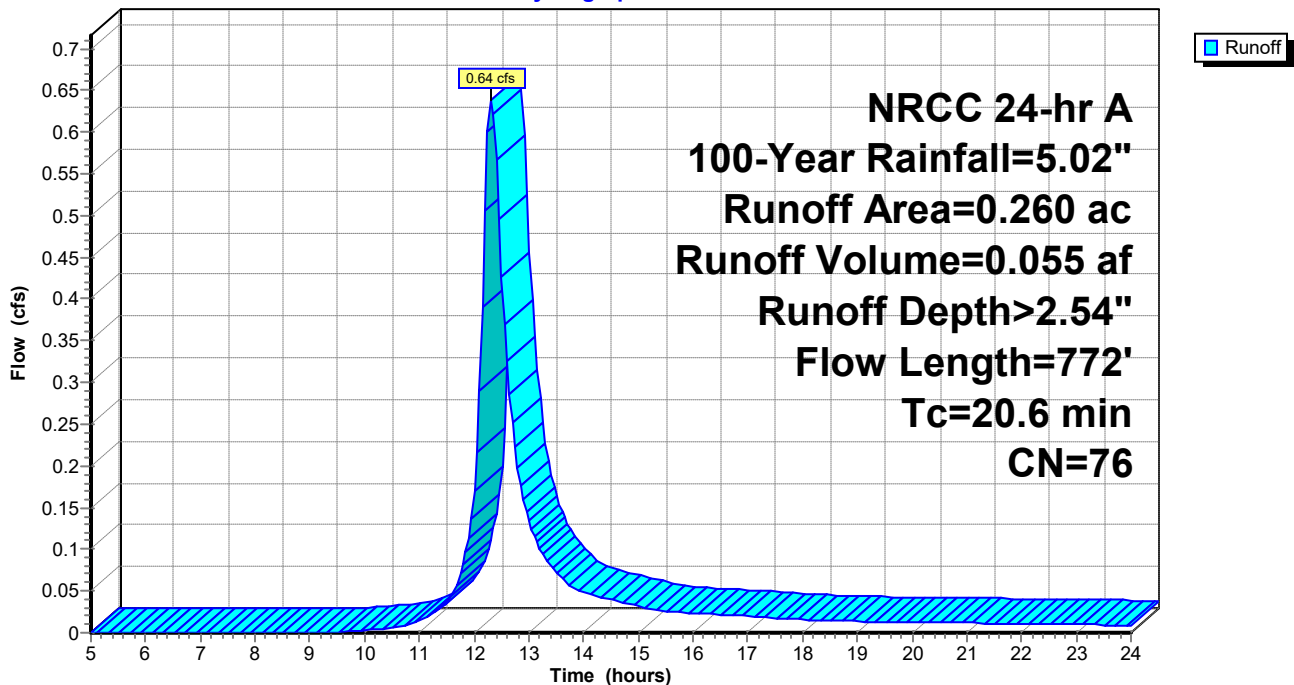
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-Year Rainfall=5.02"

Area (ac)	CN	Description
0.260	76	Gravel roads, HSG A
0.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	99	0.0253	0.14		Sheet Flow, 99ft sheet Cultivated: Residue>20% n= 0.170 P2= 2.18"
2.2	171	0.0205	1.29		Shallow Concentrated Flow, 1 Cultivated Straight Rows Kv= 9.0 fps
2.3	184	0.0217	1.33		Shallow Concentrated Flow, 2 Cultivated Straight Rows Kv= 9.0 fps
1.6	112	0.0179	1.20		Shallow Concentrated Flow, 3 Cultivated Straight Rows Kv= 9.0 fps
2.7	206	0.0194	1.25		Shallow Concentrated Flow, 4 Cultivated Straight Rows Kv= 9.0 fps
20.6	772	Total			

Subcatchment 6S: DA2 - impervious area

Hydrograph



Summary for Pond 7P: Porous Pavement

Inflow Area = 0.260 ac, 0.00% Impervious, Inflow Depth > 2.54" for 100-Year event
 Inflow = 0.64 cfs @ 12.31 hrs, Volume= 0.055 af
 Outflow = 0.02 cfs @ 11.50 hrs, Volume= 0.022 af, Atten= 97%, Lag= 0.0 min
 Primary = 0.02 cfs @ 11.50 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 500.36' @ 16.94 hrs Surf.Area= 11,326 sf Storage= 1,644 cf

Plug-Flow detention time= 322.2 min calculated for 0.022 af (39% of inflow)
 Center-of-Mass det. time= 217.3 min (1,048.8 - 831.5)

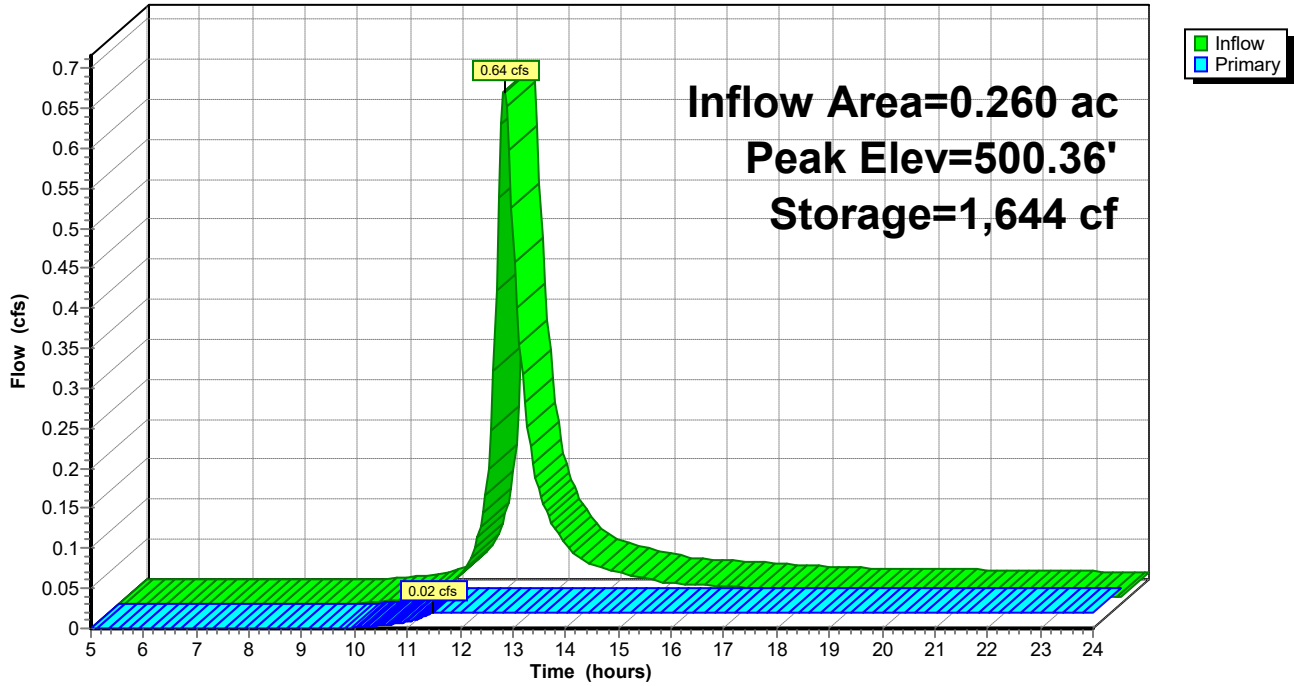
Volume	Invert	Avail.Storage	Storage Description	
#1	500.00'	3,035 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	11,326	0.0	0	0
500.33	11,326	40.0	1,495	1,495
500.67	11,326	40.0	1,540	3,035

Device	Routing	Invert	Outlet Devices
#1	Primary	500.00'	0.02 cfs Exfiltration at all elevations

Primary OutFlow Max=0.02 cfs @ 11.50 hrs HW=500.01' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 7P: Porous Pavement

Hydrograph



Summary for Link 5L: outlet

Inflow Area = 8.510 ac, 0.24% Impervious, Inflow Depth > 3.68" for 100-Year event
Inflow = 29.57 cfs @ 12.30 hrs, Volume= 2.607 af
Primary = 29.57 cfs @ 12.30 hrs, Volume= 2.607 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs

Link 5L: outlet

Hydrograph

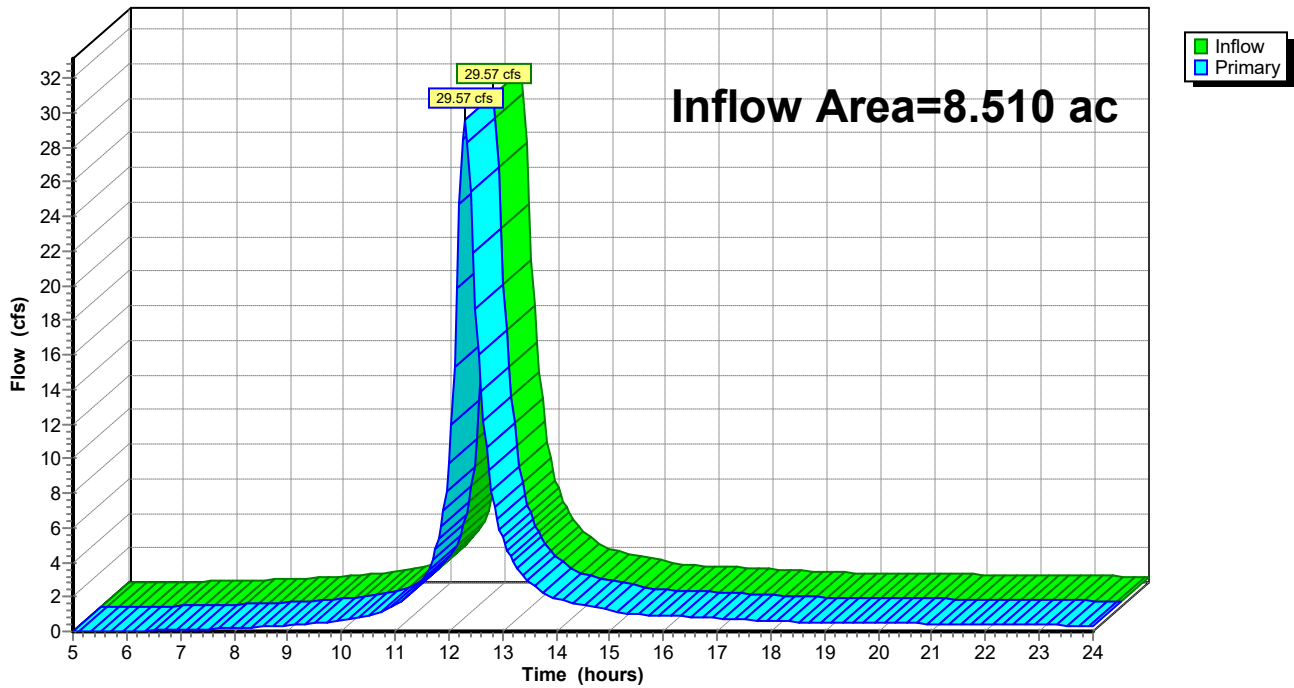


Exhibit 9: Erosion and Sediment Control Details

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE



Definition

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

Purpose

The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction entrance shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 5A.35 on page 5A.76 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile

The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties ³	Light Duty ¹	Heavy Duty ²	Test Method
	Roads Grade Subgrade	Haul Roads Rough Graded	
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Brust Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 modified
Equivalent Opening Size	40-80	40-80	US Std Sieve CW-02215
Aggregate Depth	6	10	--

¹Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

²Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

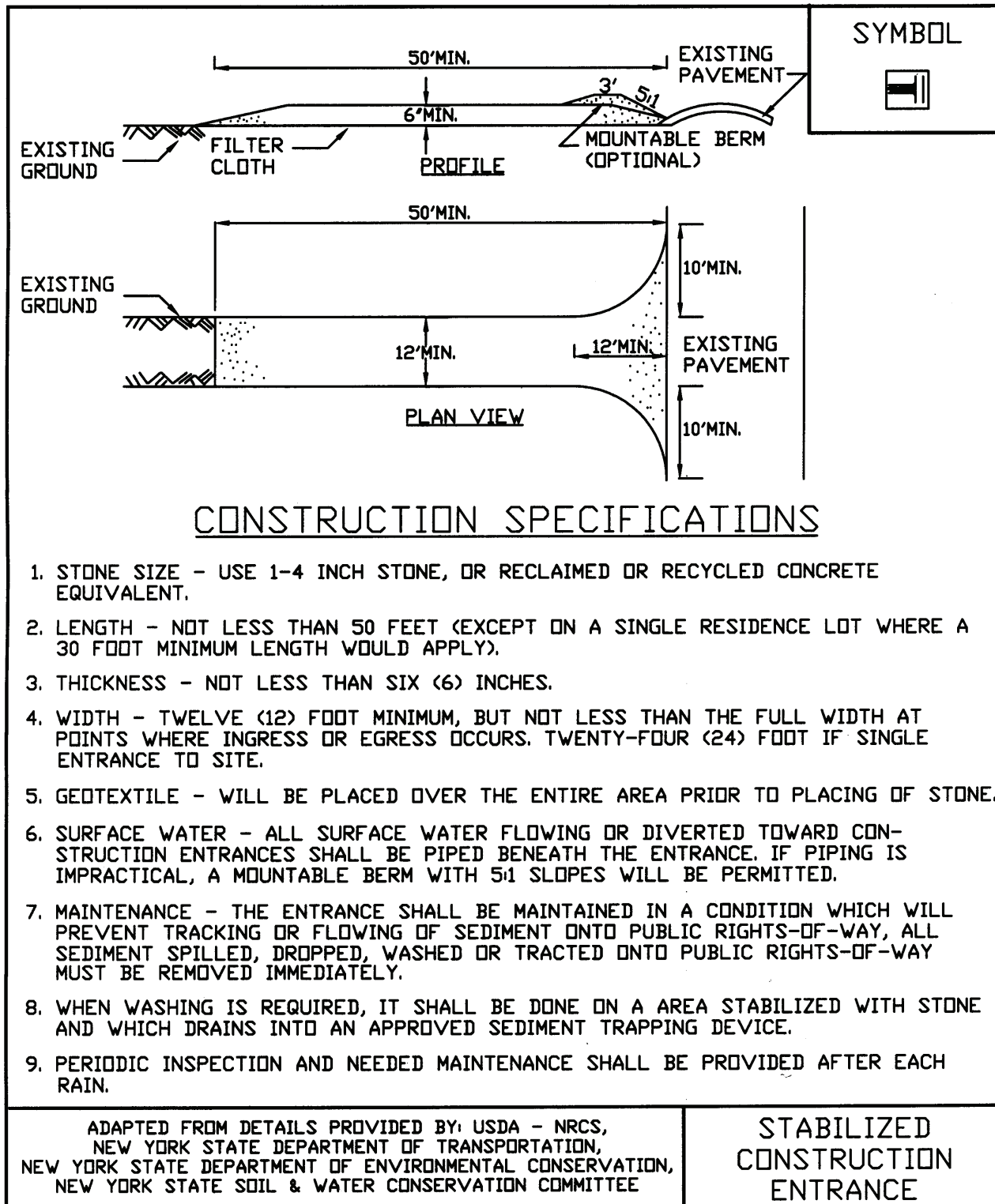
³Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

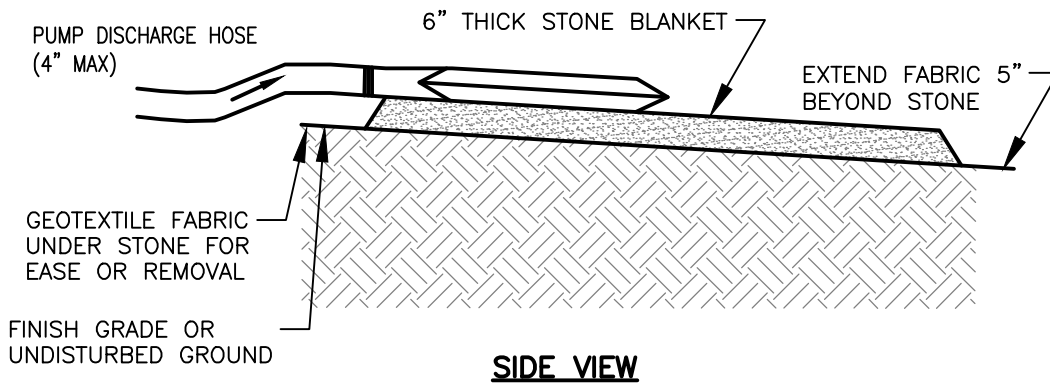
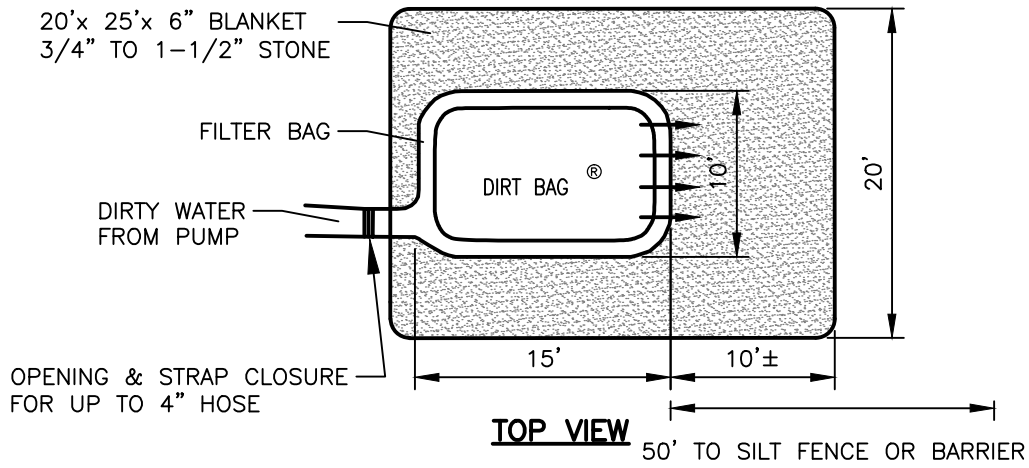
Maintenance

The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 5A.35
Stabilized Construction Entrance



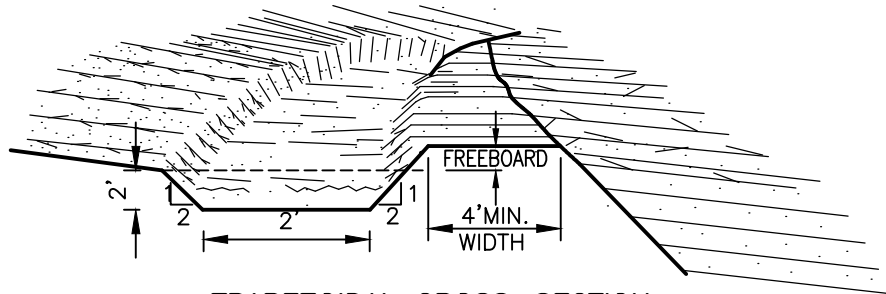


NOTES:

1. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, I.E. FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON-WOVEN MATERIAL.
2. DO NOT OVER PRESSURIZE DIRT BAG OR USE BEYOND CAPACITY.
3. LOCATE DISCHARGE SITE ON FLAT UPLAND AREAS AS FAR AWAY AS POSSIBLE FROM STREAMS, WETLANDS, OTHER RESOURCES AND POINTS OF CONCENTRATED FLOW.
4. DOWN GRADIENT RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION. E.G. FOREST FLOOR OR COARSE GRAVEL/STONE.
5. DISCHARGE NOT PERMITTED WITHIN 25' OF A STREAM OR WETLAND. CONSULT DEP IF STRUCTURE MUST BE WITHIN 75' OF STREAM OR WATER BODY. SECONDARY CONTAINMENT MAY BE NECESSARY.

PUMPED DISCHARGE SEDIMENT CONTROL DEVICE ("DIRT BAG")

N.T.S.



TRAPEZOIDAL CROSS-SECTION

CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE DIVERSION.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
 - 5.A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE DIVERSION DURING THE ESTABLISHMENT OF THE VEGETATION.
 - 5.B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE DIVERSION SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.

DIVERSION SWALE DETAIL

N.T.S.

STANDARD AND SPECIFICATIONS FOR DUST CONTROL



Definition

The control of dust resulting from land-disturbing activities.

Purpose

To prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the local permitting authority.

Construction Specifications

A. Non-driving Areas – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

B. Driving Areas – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access routes.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geotextiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

All Stormwater Pollution Prevention Plans must contain the NYS DEC issued “Conditions for Use” and “Application Instructions” for any polymers used on the site. This information can be obtained from the NYS DEC website.

Maintenance

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.

STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition

A temporary, somewhat permeable barrier, installed around inlets in the form of a fence, berm or excavation around an opening, trapping water and thereby reducing the sediment content of sediment laden water by settling.

Purpose

To prevent heavily sediment laden water from entering a storm drain system through inlets.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are four (4) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

- I. Excavated Drop Inlet Protection
- II. Fabric Drop Inlet Protection
- III. Stone & Block Drop Inlet Protection
- IV. Curb Drop Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

See details for Excavated Drop Inlet Protection in Figure 5A.11 on page 5A.29.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved. This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection

See Figure 5A.12 for details on Filter Fabric Drop Inlet Protection on page 5A.30.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as

necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface. Straw bales will be replaced every 4 months until the area is stabilized.

Type III – Stone and Block Drop Inlet Protection

See Figure 5A.13 for details on Stone and Block Drop Inlet Protection on page 5A.31.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet (“doughnut”). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet.

A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.

Type IV – Curb Drop Inlet Protection

See Figure 5A. 14 for details on Curb Drop Inlet Protection on page 5A.32.

The drainage area should be limited to 1 acre at the drop inlet. The wire mesh must be of sufficient strength to support the filter fabric and stone with the water fully impounded against it. Stone is to be 2 inches in size and clean. The filter fabric must be of a type approved for this purpose with an equivalent opening size (EOS) of 40-85. The protective structure will be constructed to extend beyond the inlet 2 feet in both directions. Assure that storm flow does not bypass the inlet by installing temporary dikes (such as sand bags) directing flow into the inlet. Make sure that the overflow weir is stable. Traffic safety shall be integrated with the use of this practice.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any stone missing should be replaced. Check materials for proper anchorage and secure as necessary.

**Figure 5A.11
Excavated Drop Inlet Protection**

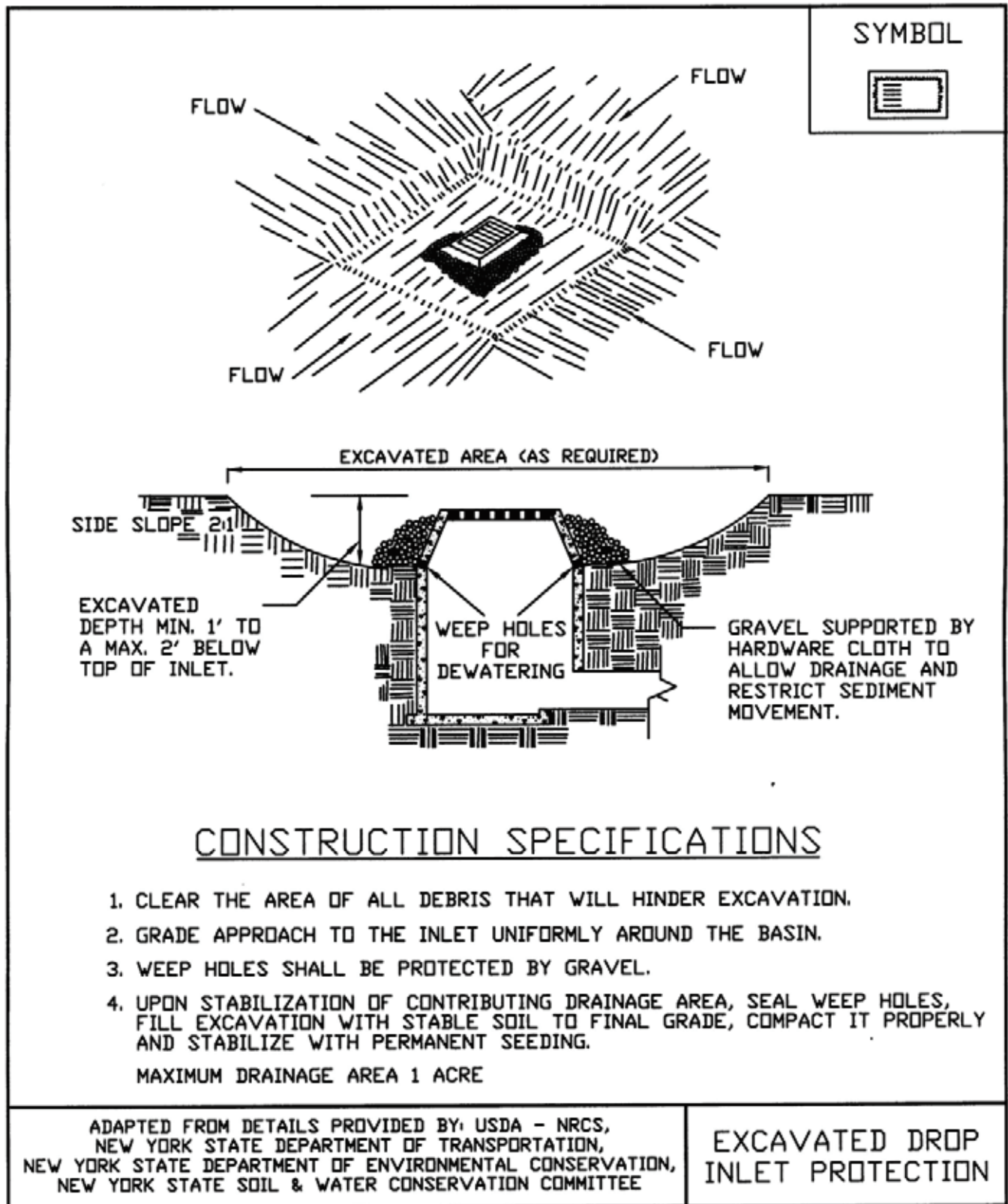


Figure 5A.12
Filter Fabric Drop Inlet Protection

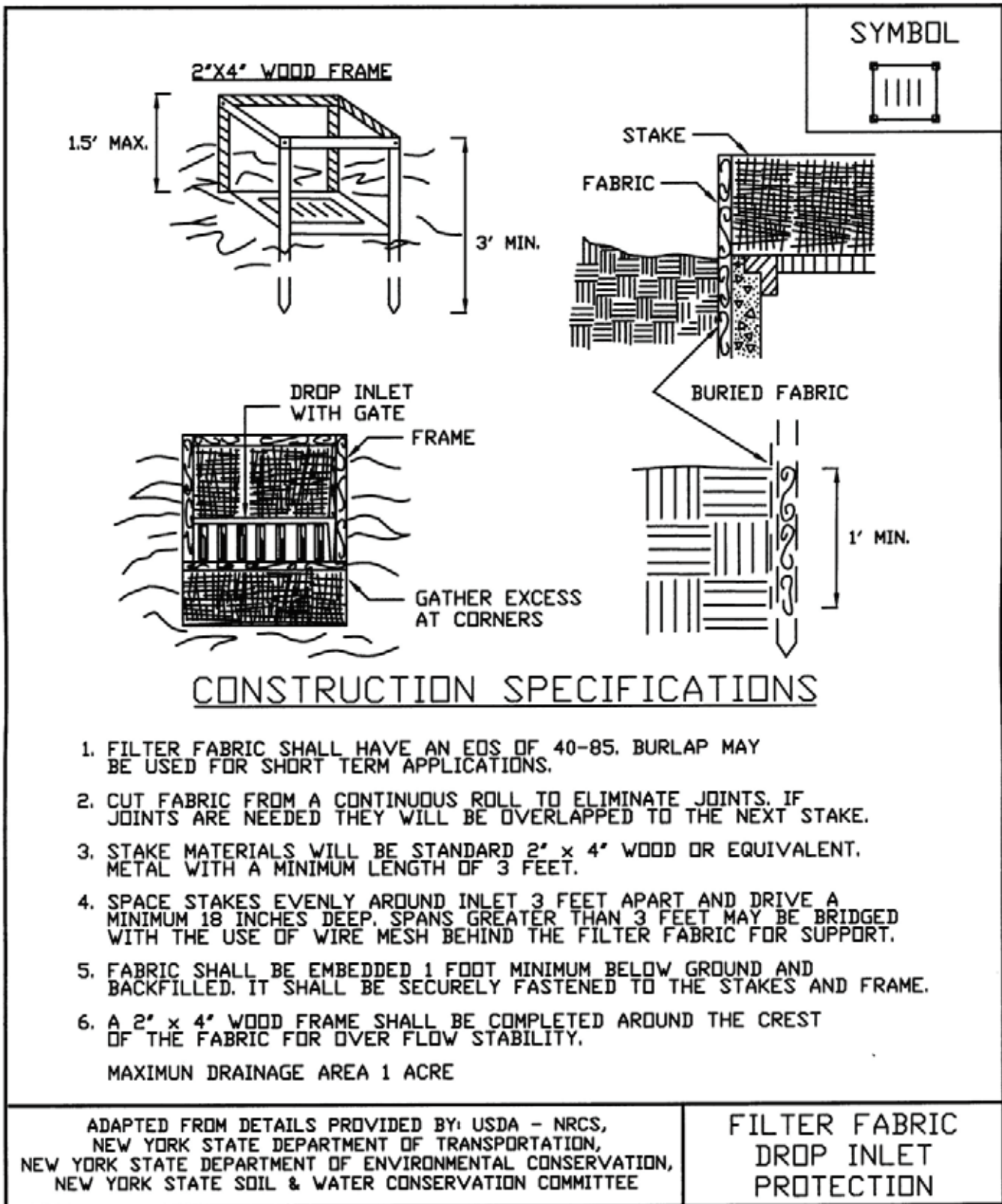
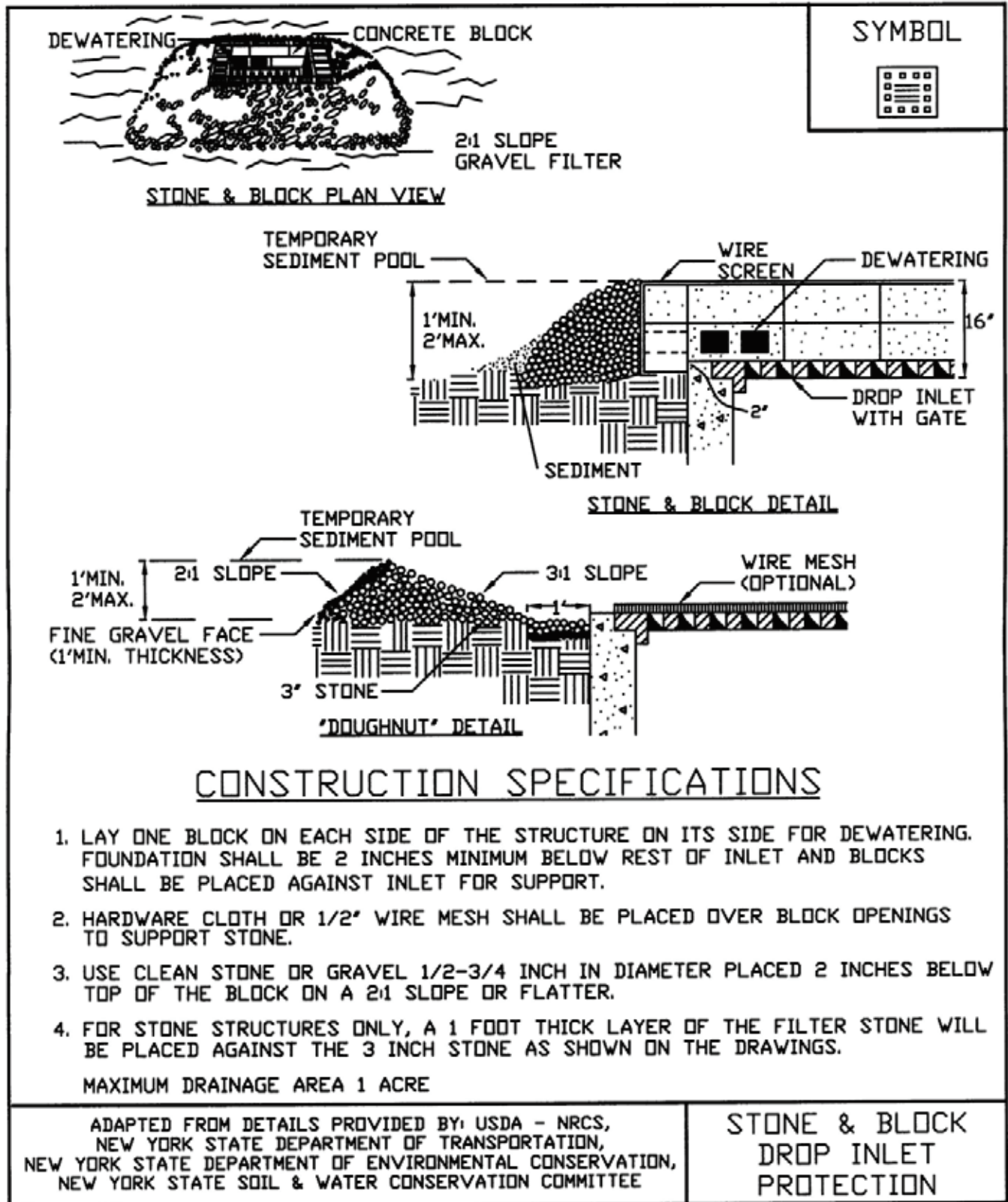
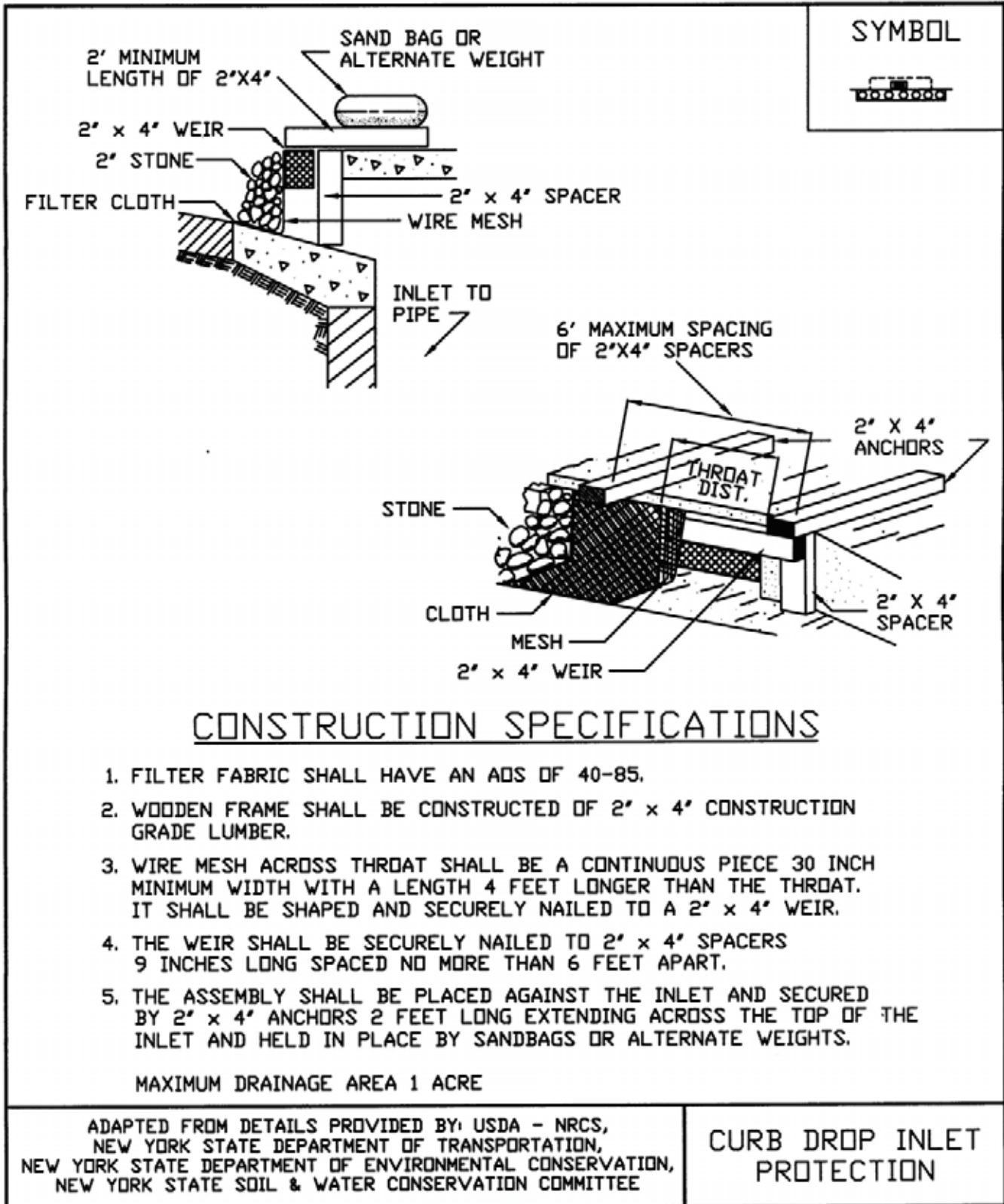


Figure 5A.13
Stone & Block Drop Inlet Protection



**Figure 5A.14
Curb Drop Inlet Protection**



STANDARD AND SPECIFICATIONS FOR MULCHING



Definition

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface.

Purpose

The primary purpose is to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch is also used alone for temporary stabilization in non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedlings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

Table 3.7
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/ yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	8" x 100" 2-sided plastic, 48" x 180" 1-sided plastic	—	—	Use without additional mulch. Excellent for seeding establishment. Tie down as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Compost	Up to 3" pieces, moderately to highly stable	3-9 cu. yds.	134-402 cu. yds.	1-3"	Coarser textured mulches may be more effective in reducing weed growth and wind erosion.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

Table 3.8
Mulch Anchoring Guide

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45 ^o Fahrenheit are required.

STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.

Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. A detail of the silt fence shall be shown on the plan. See Figure 5A.8 on page 5A.21 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682

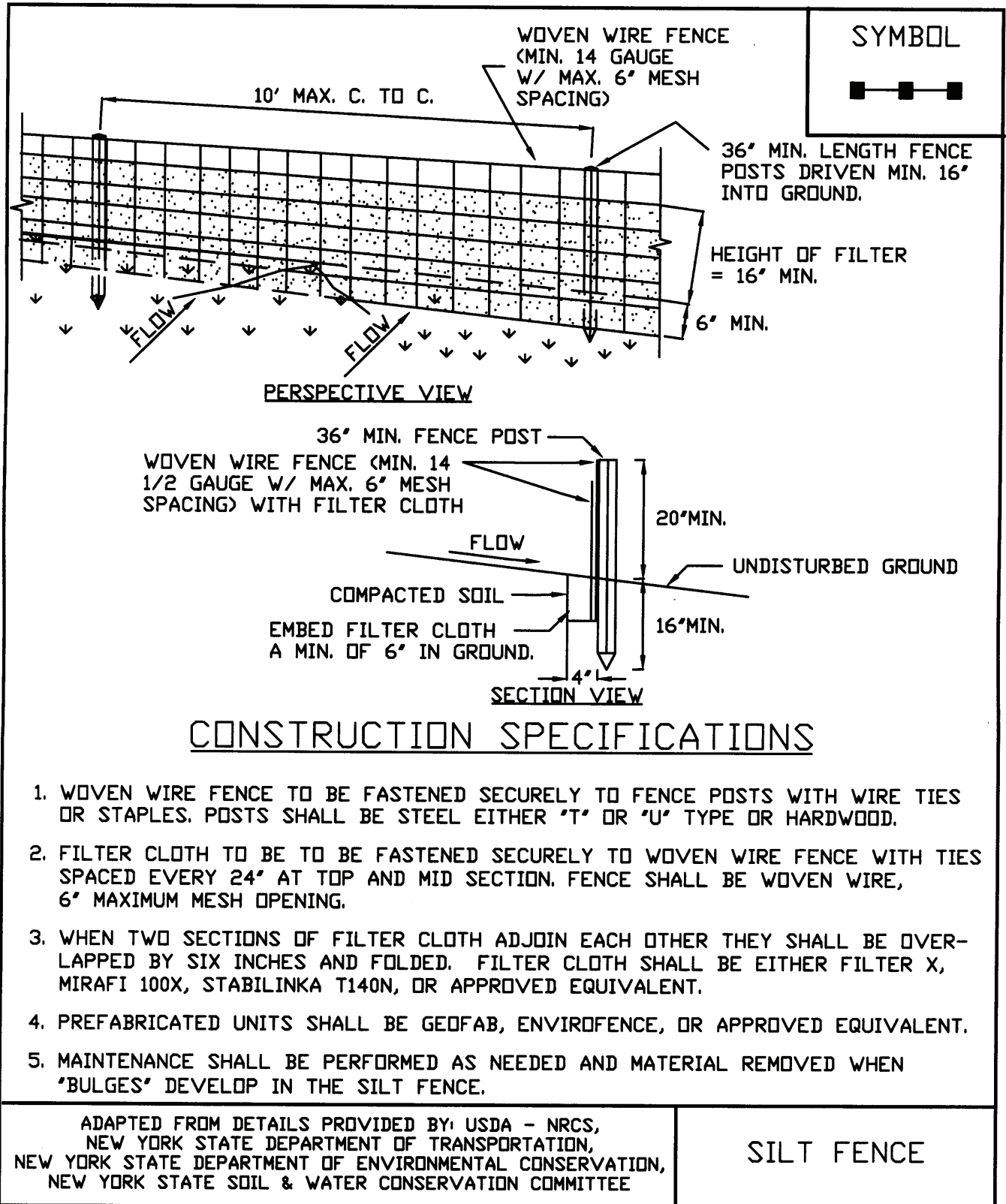
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

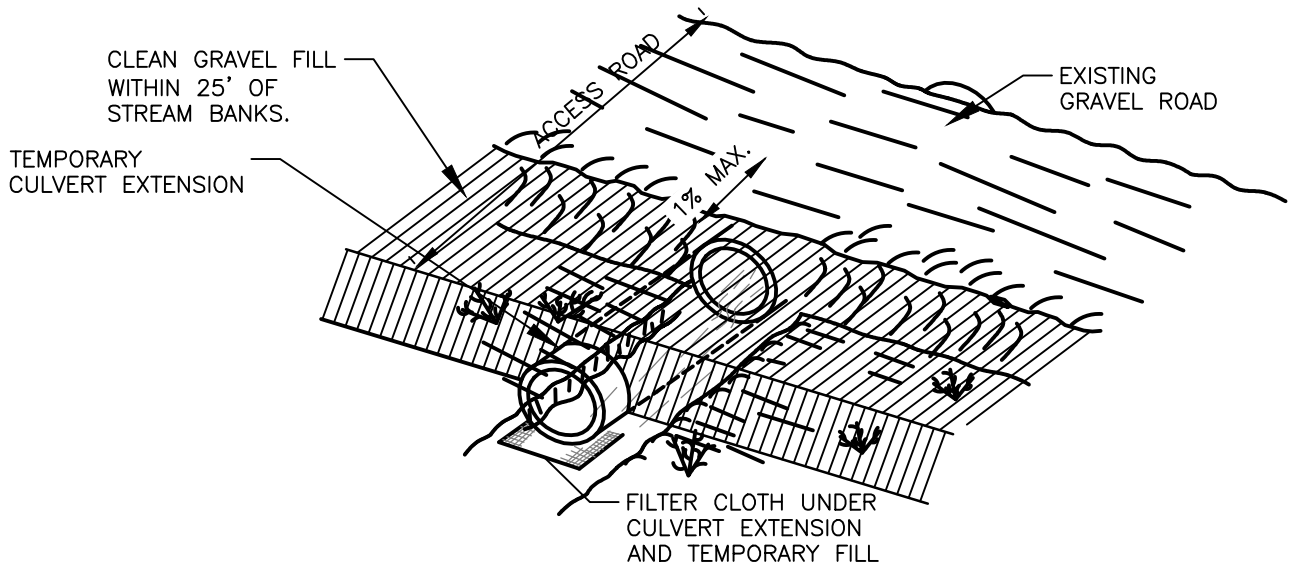
2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot.

3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated Units: Envirofence, Geofab, or approved equal, may be used in lieu of the above method providing the unit is installed per details shown in Figure 5A.8.

Figure 5A.8
Silt Fence





NOTES:

1. EXISTING CULVERT SHALL BE EXTENDED ON THE SIDE OF ROAD RESULTING IN THE LEAST AMOUNT OF WETLAND AND/OR STREAM IMPACTS.
2. TEMPORARY CULVERT SHALL BE INSTALLED NO SOONER THAN 4 WEEKS PRIOR TO THE CRANE CROSSING AND SHALL BE REMOVED WITHIN 5 MONTHS AFTER THE CROSSING.
3. THE CULVERT SHALL EXTEND A MINIMUM OF 1' BEYOND THE TOE OF SLOPE.
4. IN AREAS THAT HAVE LESS THAN 1' OF COVER OVER THE EXISTING CULVERT, A STEEL PLATE MAY BE UTILIZED IN CONJUNCTION WITH THE TEMPORARY CULVERT EXTENSIONS TO SPAN THE CULVERT AND PROVIDE FOR CONSTRUCTION LOADING.
5. THE MINIMUM DIAMETER OF THE TEMPORARY CULVERT SHALL EQUAL THE SIZE OF THE EXISTING CULVERT.

TEMPORARY CULVERT EXTENSION

N.T.S.

STANDARD AND SPECIFICATIONS FOR TOPSOILING



Definition

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas.

Purpose

To provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

Conditions Where Practice Applies

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

Design Criteria

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.
2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established.
3. Refer to USDA Soil Conservation Service (presently Natural Resource Conservation Service) soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

Site Preparation

1. As needed, install erosion control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.
2. Complete rough grading and final grade, allowing for depth of topsoil to be added.
3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompacted to a minimum depth of 12 inches with a deep ripper or chisel plow prior to topsoiling.
4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

Topsoil Materials

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.
2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.
3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.
4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.
5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Application and Grading

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.
2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by "tracking" with suitable equipment.

3. Apply topsoil in the following amounts:

Site Conditions	Intended Use	Minimum Topsoil Depth
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

STANDARD AND SPECIFICATIONS FOR PROTECTING VEGETATION DURING CONSTRUCTION



Definition

The protection of trees, shrubs, ground cover and other vegetation from damage by construction equipment.

Purpose

To preserve existing vegetation determined to be important for soil erosion control, water quality protection, shade, screening, buffers, wildlife habitat, wetland protection, and other values.

Condition Where Practice Applies

On planned construction sites where valued vegetation exists and needs to be preserved.

Design Criteria

1. Planning Considerations

A. Inventory:

- 1) Property boundaries, topography, vegetation and soils information should be gathered. Identify potentially high erosion areas, areas with tree windthrow potential, etc. A vegetative cover type map should be made on a copy of a topographic map which shows other natural and manmade features. Vegetation that is desirable to preserve because of its value for screening, shade, critical erosion control, endangered species, aesthetics, etc., should be identified and marked on the map.
- 2) Based upon this data, general statements should be prepared about the present condition, potential problem areas, and unique features of the property.

B. Planning:

- 1) After engineering plans (plot maps) are prepared, another field review should take place and recommendations made for the vegetation to be saved. Minor adjustments in location of roads, dwellings, and utilities may be needed. Construction on steep slopes, erodible soils, wetlands, and streams should be avoided. Clearing limits should be delineated (See Section 2).
- 2) Areas to be seeded and planted should be identified. Remaining vegetation should blend with their surroundings and/or provide special function such as a filter strip, buffer zone, or screen.
- 3) Trees and shrubs of special seasonal interest, such as flowering dogwood, red maple, striped maple, serviceberry, or shadbush, and valuable potential shade trees should be identified and marked for special protective treatment as appropriate.
- 4) Trees to be cut should be marked on the plans. If timber can be removed for salable products, a forester should be consulted for marketing advice.
- 5) Trees that may become a hazard to people, personal property, or utilities should be removed. These include trees that are weak-wooded, disease-prone, subject to windthrow, or those that have severely damaged root systems.
- 6) The vigor of remaining trees may be improved by a selective thinning. A forester should be consulted for implementing this practice.

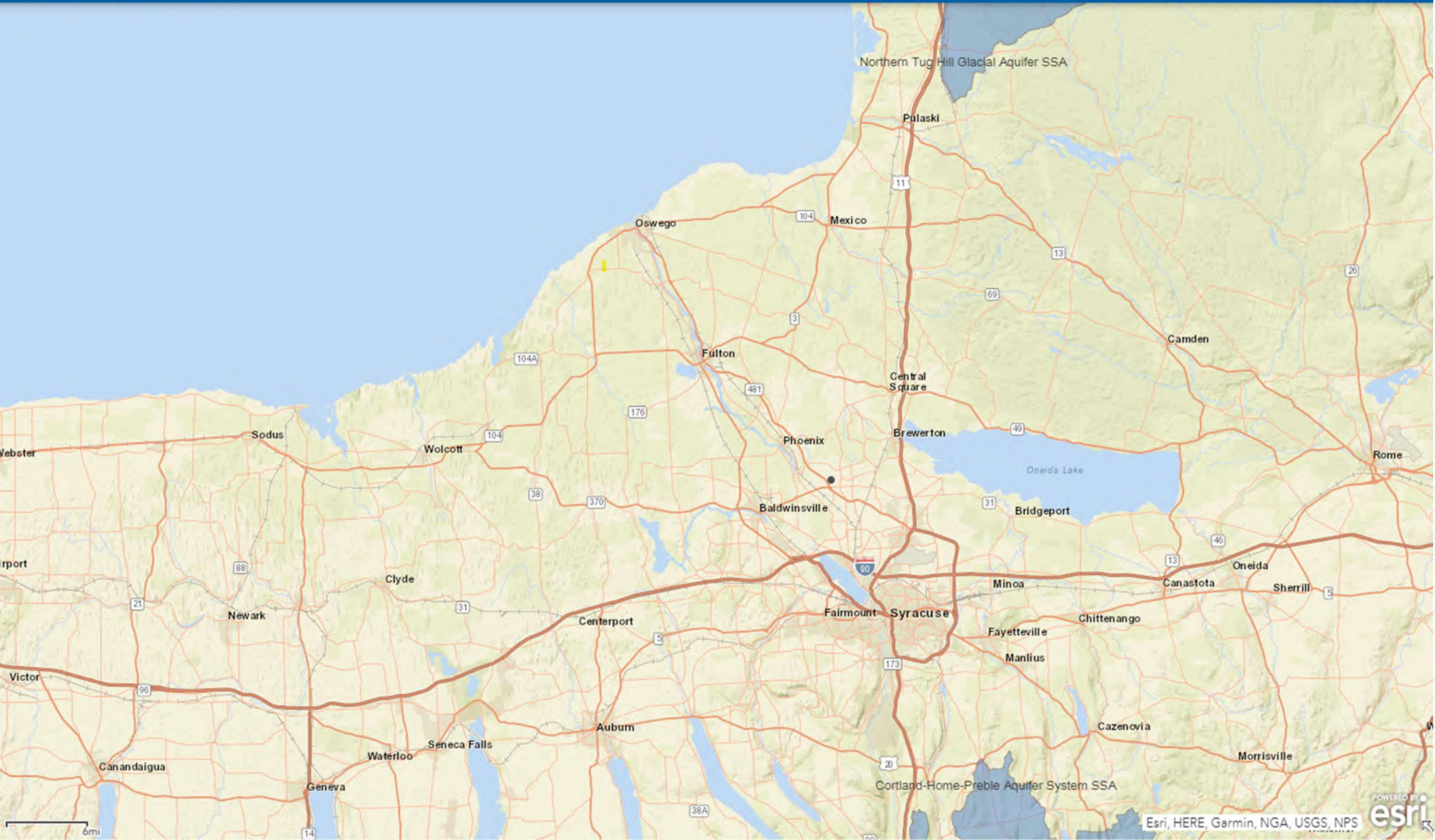
2. Measures to Protect Vegetation

- A. Limit soil placement over existing tree and shrub roots to a maximum of 3 inches. Soils with loamy texture and good structure should be used.
- B. Use retaining walls and terraces to protect roots of trees and shrubs when grades are lowered. Lowered grades should start no closer than the dripline of the tree. For narrow-canopied trees and shrubs, the stem diameter in inches is converted to feet and doubled, such that a 10 inch tree should be protected to 20 feet.

- C. Trenching across tree root systems should be the same minimum distance from the trunk, as in "B". Tunnels under root systems for underground utilities should start 18 inches or deeper below the normal ground surface. Tree roots which must be severed should be cut clean. Backfill material that will be in contact with the roots should be topsoil or a prepared planting soil mixture.
- D. Construct sturdy fences, or barriers, of wood, steel, or other protective material around valuable vegetation for protection from construction equipment. Place barriers far enough away from trees, but not less than the specifications in "B", so that tall equipment such as backhoes and dump trucks do not contact tree branches.
- E. Construction limits should be identified and clearly marked to exclude equipment.
- F. Avoid spills of oil/gas and other contaminants.
- G. Obstructive and broken branches should be pruned properly. The branch collar on all branches whether living or dead should not be damaged. The 3 or 4 cut method should be used on all branches larger than two inches at the cut. First cut about one-third the way through the underside of the limb (about 6-12 inches from the tree trunk). Then (approximately an inch further out) make a second cut through the limb from the upper side. When the branch is removed, there is no splintering of the main tree trunk. Remove the stub. If the branch is larger than 5-6 inches in diameter, use the four cut system. Cuts 1 and 2 remain the same and cut 3 should be from the underside of the limb, on the outside of the branch collar. Cut 4 should be from the top and in alignment with the 3rd cut. Cut 3 should be 1/4 to 1/3 the way through the limb. This will prevent the bark from peeling down the trunk. Do not paint the cut surface.
- H. Penalties for damage to valuable trees, shrubs, and herbaceous plants should be clearly spelled out in the contract.

Exhibit 10: Miscellaneous Mapping and Documentation

- EPA Designated Sole Source Aquifer Map and Information
- New York State Primary Aquifer Map
- National Wetland Inventory Maps
- NYSDEC Environmental Resource Map
- SHPO CRIS Map
- NYSDEC Stormwater Resource Map
- NRCS Web Soil Survey Soil Maps
- Watershed Maps and Information
- FEMA Flood Maps



Primary Aquifers in New York State



Key



Primary Aquifer

Clicking on an aquifer loads its hydrogeologic report from the USGS website. These large PDF files might require several minutes to load. .



January 17, 2022

Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Environmental Resource Mapper

Base Map: Satellite with Labels [Using this map](#)

Search

Tools

Layers and Legend

All Layers

Unique Geological Features

Waterbody Classifications for Rivers/Streams

Waterbody Classifications for Lakes

State Regulated Freshwater Wetlands (Outside of the Adirondack Park)

State Regulated Wetland Checkzone

Imperiled Mussels

Mussel Screening Ponded Waters

Mussel Screening Streams

Significant Natural Communities

Natural Communities Near This Location

Rare Plants or Animals

Other Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

Contacts





Criteria **Spatial** Results

1. Navigate to your area of interest

Option A: Zoom to a County or Municipality
 Select County... Select Municipality... Zoom

Option B: Find an Address Location
 type address here Find Address

2. Define or refine the location/area for your search

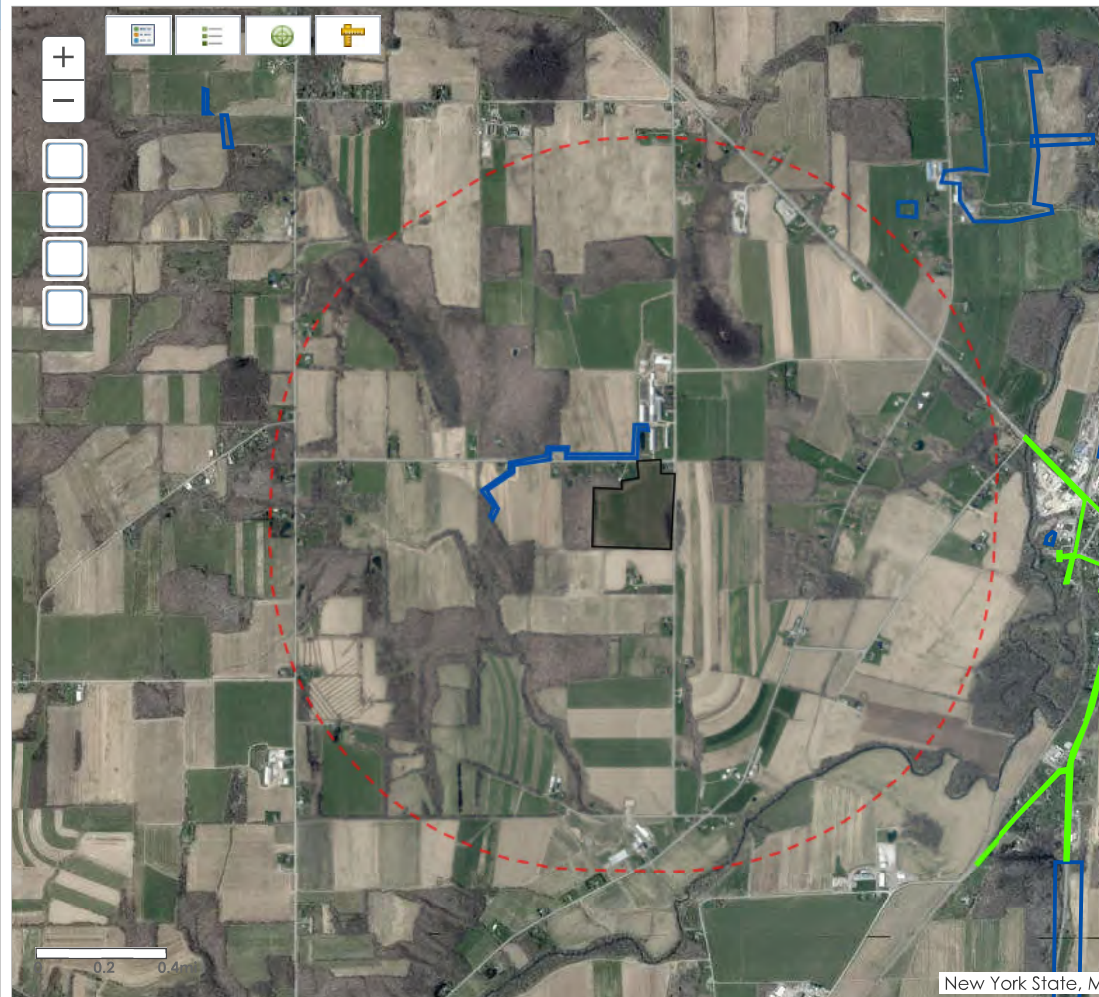
Click a button below to activate the draw tool and draw the shape on the map

Point Line Rectangle Circle Polygon

3. Generate a search radius around your graphic (Optional)

Generate a 1 Mile buffer Generate Buffer

Search Reset



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Stormwater Interactive Map



The coordinates of the point you clicked on are:

UTM 18	Easting: 250680.642	Northing: 4751832.145
Longitude/Latitude	Longitude: -78.053	Latitude: 42.878

The approximate address of the point you clicked on is:

Town of Pavilion, New York

County: Genesee

Town: Pavilion

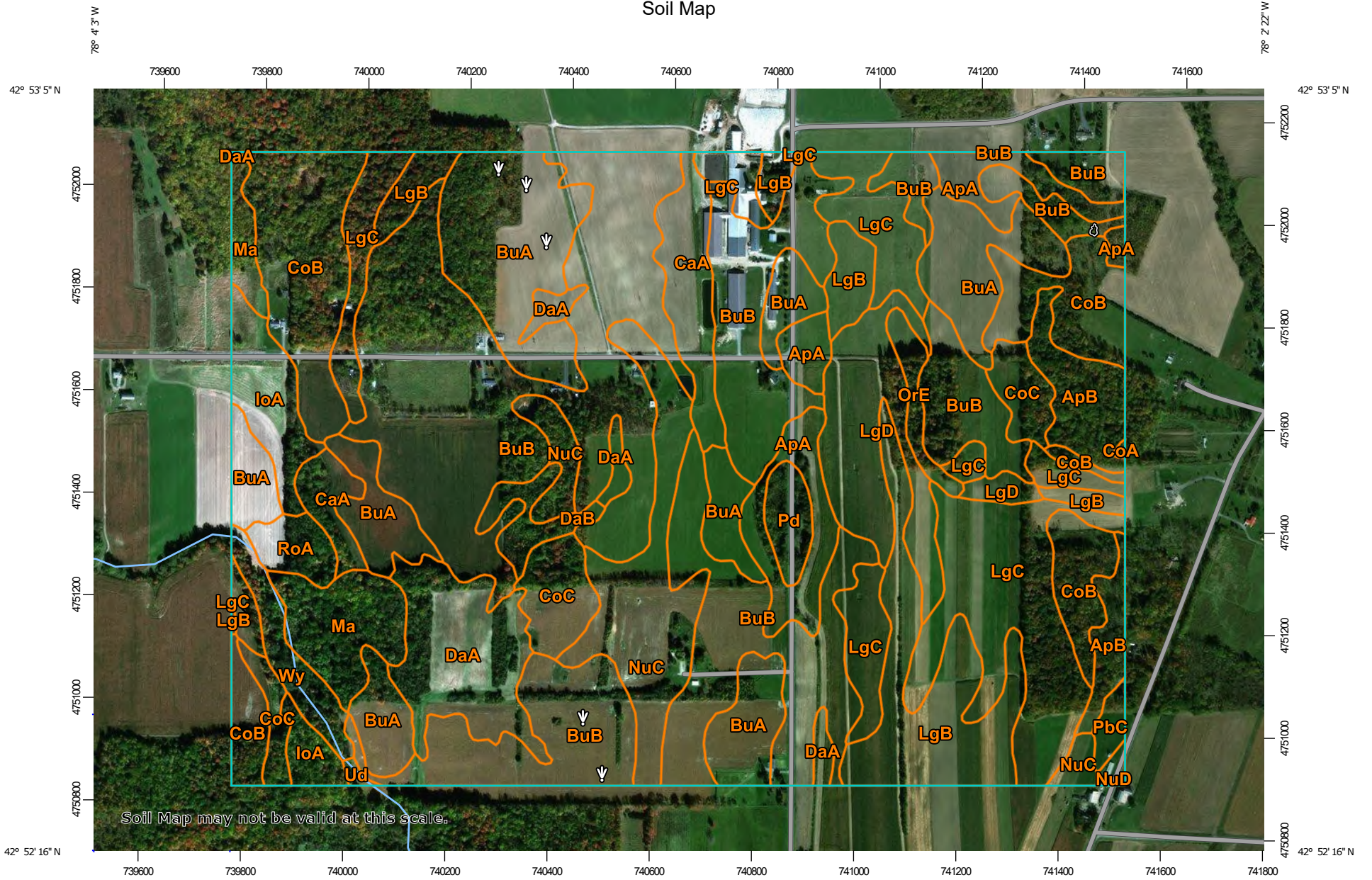
USGS Quad: STAFFORD

DEC Administrative Boundaries

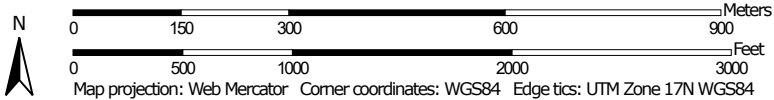
Region 8:

(Western Finger Lakes) Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates counties. For more information visit <http://www.dec.ny.gov/about/617.html>.

Custom Soil Resource Report Soil Map



Map Scale: 1:10,500 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 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: Genesee County, New York
 Survey Area Data: Version 22, Aug 29, 2021

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

Date(s) aerial images were photographed: Jul 29, 2011—Oct 18, 2016

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.

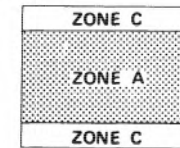
Subregion 0413 -- Southwestern Lake Ontario: The drainage into Lake Ontario from the Niagara River Basin boundary to and including the Genesee River Basin. New York, Pennsylvania.
Area = 3540 sq.mi.

Accounting Unit 041300 -- Southwestern Lake Ontario. New York, Pennsylvania.
Area = 3540 sq.mi.

Cataloging Units 04130001 -- Oak Orchard-Twelvemile. New York.
Area = 1040 sq.mi.
04130002 -- Upper Genesee. New York, Pennsylvania.
Area = 1430 sq.mi.
04130003 -- Lower Genesee. New York.
Area = 1070 sq.mi.



KEY TO SYMBOLS



ZONE DESIGNATIONS*

- Base Flood Elevation Line with elevation in feet 513
- Base Flood Elevation where uniform within zone (EL 987)
- Elevation Reference Mark RM7_x
- River Mile • M1.5

***EXPLANATION OF ZONE DESIGNATIONS**

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FEMA are


Zone	Explanation
A	Areas of 100-year flood, base flood elevations and flood hazard factors not determined
A0	Areas of 100-year shallow flooding, flood depth 1 to 3 feet, product of flood depth (feet) and velocity (feet per second) less than 15
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet, base flood elevations are shown, but no flood hazard factors are determined
A1-A30	Areas of 100-year flood, base flood elevations and flood hazard factors determined
A99	Areas of 100-year flood to be protected by a flood protection system under construction, base flood elevations and flood hazard factors not determined
B	Area between limits of 100-year flood and 500-year flood, areas of 100-year shallow flooding where depths less than 1 foot
C	Areas outside 500-year flood
D	Areas of undetermined, but possible, flood hazards
V	Areas of 100-year coastal flood with velocity (wave action), base flood elevations and flood hazard factors not determined
V1-V30	Areas of 100-year coastal flood with velocity (wave action), base flood elevations and flood hazard factor determined

NOTES TO USER

Certain areas not in the special flood hazard areas (Zones A and V) may be protected by flood control structures.
 This map is for flood insurance purposes only, it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.
 Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.
 To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

INITIAL IDENTIFICATION: MARCH 29, 1974
 FLOOD HAZARD BOUNDARY MAP REVISIONS: APRIL 16, 1976
 FLOOD INSURANCE RATE MAP EFFECTIVE: FEBRUARY 27, 1984
 FLOOD INSURANCE RATE MAP REVISIONS:

federal emergency management agency



FIRM
FLOOD INSURANCE RATE MAP 01-04
MAP INDEX

TOWN OF PAVILION, NY
 (GENESSEE COUNTY)

COMMUNITY NUMBER 360282 B

Exhibit 11: SWPPP Amendments

