

APPENDIX VOLUME 1

DRAFT ENVIRONMENTAL IMPACT STATEMENT

New Leaf Energy YMCA Road Wind Turbine Project

153 YMCA Road

Town of Florida, New York 12010

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APPENDIX 1: LAND TITLE SURVEY

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1. UNDERGROUND UTILITIES SHOWN HEREON BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE ANY REPRESENTATION OF ANY UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
2. THE OFFSETS OR DIMENSIONS SHOWN HEREON, FROM THE PROPERTY LINES TO THE STRUCTURES, ARE FOR A SPECIFIC PURPOSE AND USE, THEREFORE, THEY ARE NOT INTENDED TO MONUMENT THE PROPERTY LINES OR TO GUIDE THE ERECTION OF FENCES, ADDITIONAL STRUCTURES OR ANY OTHER IMPROVEMENTS.
3. EASEMENTS AND/OR SUBSURFACE STRUCTURES RECORDED OR UNRECORDED ARE NOT GUARANTEED UNLESS PHYSICALLY EVIDENT ON THE PREMISES AT THE TIME OF THE SURVEY.
4. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS AND RESTRICTIONS OF RECORD.
5. REFERENCE IS MADE TO STEWART TITLE INSURANCE COMPANY ALTA COMMITMENT FORM POLICY NUMBER "D-20-BEAN HILL, RI" EFFECTIVE DATE JULY 28, 2020.
6. BASIS OF BEARING IS NEW YORK STATE PLANE COORDINATE SYSTEM EAST ZONE. CONTROL WAS ESTABLISHED USING STATIC GNSS SURVEY METHODS. THE HORIZONTAL DATUM IS RELATIVE TO NAD83.
7. THE VERTICAL POSITION OF THE HEREIN SURVEY IS BASED ON THE STATIC GNSS SURVEY METHODS AND IS SUBJECT TO FURTHER ADJUSTMENT TO ANY LOCAL VGS BENCHMARKS. THE VERTICAL DATUM IS RELATIVE TO NAVD 1988.
8. PROPERTY ADDRESS: 6. 153 MYCAA ROAD AMSTERDAM, NY 12010.
9. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADJUSTMENTS WERE OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.
10. SURVEYOR WAS NOT NOTIFIED OF ANY PROPOSED CHANGES IN STREET RIGHT OF WAY LINES. NO EVIDENCE OF RECENT STREET OR SIGNALIZATION CONSTRUCTION OR REPAIRS WERE OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.
11. THE SUBJECT PROPERTY HAS ACCESS TO PUBLIC UTILITIES FROM THE PUBLIC STREETS ADJACENT TO THE SUBJECT PROPERTY.
12. THE SUBJECT PROPERTY ABUTS, WITHOUT GAS GORES OR STRIPS, AND HAS VEHICULAR AND PEDESTRIAN INGRESS TO AND EGRESS FROM SOUTH STREET, WHICH IS A COMPLETED, DEDICATED AND ACCEPTED PUBLIC RIGHT OF WAY.
13. THERE IS NO OBSERVED EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, PUMP OR SANITARY LANDFILL.
14. THE SUBJECT PROPERTY IS LOCATED IN FLOOD INSURANCE AREA X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) ACCORDING TO THE F.E.P.A. FLOOD INSURANCE RATE MAP OF FLORIDA, NEW YORK, MAP NUMBER 86057-0086, EFFECTIVE DATE JANUARY 9, 2018.
15. THE SURVEYOR WAS NOT PROVIDED ANY ZONING INFORMATION AT THE TIME OF THE SURVEY.
16. THERE ARE NO DEFINED PARKING SPACES ON THE SUBJECT PROPERTY.
17. NO OBSERVED EVIDENCE OF INHABITABLE BUILDINGS ON SUBJECT PROPERTY IN THE PROCESS OF CONDUCTING FIELD WORK.
18. LEASE PARCEL SHOWN HEREON HAS ACCESS TO A PUBLIC ROAD (MYCAA ROAD) AS SHOWN ON THIS MAP.
19. THE PROPERTY SURVEYED HEREIN IS THE SAME AS IS COVERED IN THE REFERENCED TITLE COMMITMENT.

I. THE TAX INFORMATION FOUND HEREIN IS IN ACCORDANCE WITH A MAP ENTITLED "MONTGOMERY COUNTY REAL PROPERTY TAX SERVICE AGENCY - SECTION NO. 102, TOWN OF FLORIDA" DATED MARCH 13, 2020.

BY GRAPHIC PLOTTING ONLY. THIS PROPERTY IS IN ZONE X. AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN, OF THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 36057C0380E WHICH BEARS AN EFFECTIVE DATE OF JANUARY 19, 2018. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE. A FLOOD ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

	SANITARY MANHOLE
	DRAIN MANHOLE
	FIRE HYDRANT
	WATER VALVE
	GAS VALVE
	UTILITY POLE
	SCHEDULE B EXCEPTIONS
	CONCRETE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	BOUNDARY LINE
	ADJACENT BOUNDARY LINE
	WIRE FENCE LINE
	CHAIN LINK FENCE LINE
	WOOD FENCE LINE
	OVERHEAD WIRES
	GAS LINE
	WATER LINE
	MAJOR CONTOUR
	MINOR CONTOUR

1. TAXES, TAX LIES, TAX SALES, WATER, SEWER, RENTS AND ASSESSMENTS SET FORTH IN SCHEDULE HEREIN. UNNOTICABLE

2. MORTGAGES (NONE - FOUND) HELD BY: SEE ATTACHED MORTGAGE SCHEDULE. UNNOTICABLE

3. INSTRUMENT(S) CREATING THE ESTATE OR INTEREST TO BE INSURED MUST BE REVIEWED BY THIS COMPANY. APPROVED, EXECUTED AND FILED FOR RECORD TO W/IT. RECORDATION AND RECEIPT OF PROPERLY EXECUTED DEED/MORTGAGE TO BE INSURED. UNNOTICABLE

4. PROOF PHOTO IDENTIFICATION OF THE PARTIES TO THE TRANSACTION TOGETHER WITH SOCIAL SECURITY NUMBERS MUST BE FURNISHED TO THE COMPANY AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF THE CLOSING. UNNOTICABLE

5. THE NATURE OF THE TRANSACTION TO BE INSURED HEREIN MUST BE DISCLOSED TO THE COMPANY PRIOR TO CLOSING. TITLE MAY BE SUBJECT TO ADDITIONAL EXCEPTIONS MAY BE APPROPRIATE AFTER DISCLOSURE OF THE TYPE OF TRANSACTION. UNNOTICABLE

6. WATER AND SEWER RENTS, NOT INCLUDED IN THE REGULAR TOWN, CITY, OR VILLAGE RATE, ESTATE TAX BILL, ARE NOT SEARCHED FOR UNLESS STREETS NAMES ARE NOT BEING REQUIRED AGAINST. UNNOTICABLE

7. SEARCHES HAVE BEEN RUN W/IT. THE CERTIFIED OWNERS (HEREIN FOR FEDERAL TAX LIES, RETURNS, IF ANY, APPEAR HEREIN. (NONE - FOUND) UNNOTICABLE

8. PATRIOT SEARCHES HAVE BEEN RUN W/IT. THE CERTIFIED OWNERS (HEREIN) RETURNED THE FOLLOWING: (NONE - FOUND) UNNOTICABLE

9. BANKRUPTCY SEARCH AGAINST THE PARTY(IES) NAMES OF RECORD RETURNED THE FOLLOWING RESULTS: (NONE - FOUND) SEE ATTACHED AT PAGE 389. UNNOTICABLE

10. ANY AND ALL LIEN/ TAX ASSESSMENTS, WATER CHARGES, SEWER RENTS, INTEREST AND PENALTIES-THEIR NAMES AND SALES THEREOF, IF ANY, THAT A GUARANTEED TAX SEARCH MIGHT DISCLOSE UPON PROOF OF PAYMENT OF SALES THE ABOVE EXCEPTION WILL BE REMOVED. UNNOTICABLE

11. UPON COMPLETION OF THE APPROPRIATE AFFIDAVITS, AND PAYMENT OF THE APPROPRIATE PREMIUM, WHERE APPLICABLE, THE FOLLOWING INDORSEMENTS(W/IT) WILL BE ADDED TO THE FINAL POLICIES: (NOT - APPLICABLE

12. IF PREMISES HEREIN ARE LETTED AS PARTIALLY EXEMPT FROM REAL ESTATE TAXES, PURSUANT TO SECTIONS 494 AND 530 OF THE REAL PROPERTY TAX LAW, THE SAID EXEMPTION TERMINATES IMMEDIATELY UPON THE TRANSFER OF TITLE TO THE OWNERS ENTITLED TO THE SAID EXEMPTION OR, IN THE EVENT OF THE SAID TRANSFER, THE SAID EXEMPTION SHALL BE TAXED THE SAME, REGARDLESS OF THE TAXABLE YEAR, AND SUBSEQUENT THEREOF, AT THE FULL VALUATION THEREOF WITHOUT BENEFIT OF SUCH TAX EXEMPTION. UNNOTICABLE

13. DUE TO THE ONGOING CORONAVIRUS DISEASE 2019 (COVID-19), THE ABILITY TO UPDATE THIS CERTIFICATE BEFORE CLOSING AND RECORD INSTRUMENTS MAY BE PREVENTED DUE TO RECORDING OFFICE CLOSURES. STEWARD MAY RAISE ADDITIONAL EXCEPTIONS AND/OR RECORD INSTRUMENTS IN COMPLIANCE WITH THE POLICIES. STEWARD MAY NOT BE REQUIRED TO INSURE. UNNOTICABLE

14. IF THE PROPOSED INSURED IS A LLC, CORPORATION, OR A GENERAL OR LIMITED PARTNERSHIP, PROOF OF ITS DUE DILIGENCE AND CONTINUED GOOD STANDING MUST BE SUBMITTED FOR CONSIDERATION PRIOR TO CLOSING. IN ADDITION THE ABOVE REQUIRED PROOF (IF APPLICABLE). UNNOTICABLE

15. ARTICLES OF ORGANIZATION, TOGETHER WITH ANY AMENDMENTS THEREON, UNNOTICABLE

16. A COPY OF CERTIFICATE OF INCORPORATION AS FILED, OR OTHER SATISFACTORY PROOF OF THE INCORPORATION, AND S-1, UNNOTICABLE

17. OPERATING AGREEMENT, TOGETHER WITH ANY AMENDMENTS THEREON, AND PROOF OF ADOPTION OF SAME AS THE CURRENT VERSION. UNNOTICABLE

18. RESOLUTION OF THE LIMITED LIABILITY COMPANY EXECUTED BY A DULY AUTHORIZED MEMBER AND MANAGING THE SUBJECT TRANSACTION, WHICH RESOLUTION INDENTIFIES THE PERSONS AUTHORIZED AND DIRECTED TO ACT FOR SAID LIMITED LIABILITY COMPANY TOGETHER WITH PROOF THAT THE RESOLUTION WAS ADOPTED IN ACCORDANCE WITH THE OPERATING AGREEMENT AND THE ARTICLES OF INCORPORATION, IF THE SUBJECT TRANSACTION INVOLVES THE SALE, EXCHANGE, LEASE OR MORTGAGE OF ALL OR SUBSTANTIALLY ALL OF THE ASSETS OF SAID LIMITED LIABILITY COMPANY, THEN ABSENT PROVISIONS TO THE CONTRARY IN THE OPERATING AGREEMENT, SUCH RESOLUTION MUST ALSO BE ADOPTED BY THE VOTE OF AT LEAST TWO-THIRDS OF THE MEMBERS ENTITLED TO VOTE THEREON. UNNOTICABLE

19. UNANIMOUS WRITTEN CONSENT OF SHAREHOLDERS TO THE PROPOSED SALE MUST BE SUBMITTED OR IN THE ALTERNATIVE PROOF MUST BE FURNISHED THAT HE HOLDERS OF TWO-THIRDS OF ITS STOCK HAVE CONSENTED TO THE SALE AT A MEETING DULY CALLED. UNNOTICABLE

20. PROOF OF PAYMENT OF NEW YORK STATE FRANCHISE TAXES THROUGHOUT THE DATE OF CLOSING. UNNOTICABLE

21. RIGHTS, EASEMENTS AND ENCROACHMENTS, IF ANY, FOR UTILITY POLES, WATER LINES, GUY WIRES, PILES, DRAINS, AND SIMILAR ITEMS, THAT HAVE SUCH RIGHTS AS TO BE AFFECTED BY THE TRANSACTION, UNNOTICABLE

22. ANY STATE OF FACTS WHICH AN ACCURATE SURVEY MIGHT SHOW, THE EXACT DISTANCES, DIMENSIONS AND LOCATIONS OF THE BOUNDARY LINES OF THE PREMISES HEREIN DESCRIBED CANNOT BE GUARANTEED WITHOUT A SURVEY ACCEPTABLE TO THE COMPANY. UNNOTICABLE

23. NOT TITLE IS INSURED TO ANY LAND LYING IN THE BED OF ANY STREET, ROAD OR AVENUE ADJOINING, ADJOINING, PASSING THROUGH OR CROSSING THE PREMISES HEREIN. UNNOTICABLE

24. RIGHTS OF TENANTS OR PARTIES IN POSSESSION, IF ANY. UNNOTICABLE

25. SUBJECT TO AN EASEMENT CONVEYED BY STEPHEN AND LOTTIE PAVATA TO NAGARA MOHAWK POWER CORP. RECORDED 6/19/19 IN BOOK 284-2 OF PAGE 33. SHOWN HEREIN

26. SUBJECT TO AN EASEMENT CONVEYED BY STELLA MATIAS TO NAGARA MOHAWK POWER CORPORATION RECORDED 38/19 IN BOOK 375 AT PAGE 393. SHOWN HEREIN

27. THE EXACT ACBAGE HEREIN IS NOT INSURED. SHOWN HEREIN

28. SUBJECT TO THE 2020-2021 SCHOOL TAX, A LENS AS OF JULY 1, 2020, DUE AND PAYABLE JULY 1 AND OCTOBER 1, 2020 AND JANUARY 1 AND APRIL 1, 2021. UNNOTICABLE

THE VARIATION IN THE BEARINGS BETWEEN THE VESTING/PROPERTY DESCRIPTION AND THOSE SHOWN ON THIS SURVEY ARE DUE TO THE USE OF DIFFERENT 'BEARING SYSTEMS.' BEARINGS SHOWN REFER TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE (NAD83). THEY DO IN FACT REPRESENT THE SAME PROPERTY.

ALL THAT TRACT OR PARCELS OF LAND SITUATED IN THE TOWN OF FLORIDA, COUNTY OF MONTGOMERY, STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE WESTERLY BOUNDARY OF LANDS NOW OR FORMERLY OF THE Y.M.C.A. OF AMSTERDAM, SAID POINT ALSO BEING IN THE FOLLOWING BOUNDARY OF Y.M.C.A. ROAD;

RUNNING THENCE ALONG SAID NORTHERLY BOUNDARY OF THE Y.M.C.A. ROAD, THE FOLLOWING 3 COURSES AND DISTANCES:

1. NORTH 47° 45' WEST, A DISTANCE OF 113.0 FEET TO A POINT;

2. NORTH 42° 30' WEST, A DISTANCE OF 148.3 FEET TO A POINT;

3. NORTH 68° 07' WEST, A DISTANCE OF 444.4 FEET TO A POINT IN THE SOUTHERLY BOUNDARY OF LANDS NOW OR FORMERLY OF G. WILLIAM AND ALICE GAUGLER;

THENCE NORTH 73° 35' EAST ALONG SAID SOUTHERLY BOUNDARY OF LANDS NOW OR FORMERLY OF GAUGLER, A DISTANCE OF 557.0 FEET TO A POINT IN THE AFORESAIDED WESTERLY BOUNDARY OF THE Y.M.C.A. OF AMSTERDAM;

THENCE SOUTH 14° 30' EAST ALONG SAID WESTERLY BOUNDARY OF LANDS OF SAID Y.M.C.A. OF AMSTERDAM, A DISTANCE OF 444.2 FEET TO THE POINT AND PLACE OF BEGINNING, CONTAINING 2.275 ACRES.

AND ALSO ALL THAT TRACT OR PARCEL OF LAND SITUATED IN THE TOWN OF FLORIDA, COUNTY OF MONTGOMERY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE EASTERLY BOUNDARY OF LANDS NOW OR FORMERLY OF G. WILLIAM AND ALICE GAUGLER, SAID POINT ALSO BEING IN THE SOUTHERLY BOUNDARY OF BEAN HILL ROAD;

RUNNING THENCE SAID SOUTHERLY BOUNDARY OF BEAN HILL ROAD, THE FOLLOWING 3 COURSES AND DISTANCES:

BEGINNING AT A POINT IN THE WESTERLY BOUNDARY OF LANDS NOW OR FORMERLY OF THE Y.M.C.A. OF AMSTERDAM, SAID POINT ALSO BEING IN THE NORTHERLY BOUNDARY OF Y.M.C.A. ROAD;

RUNNING THENCE ALONG SAID NORTHERLY BOUNDARY OF THE Y.M.C.A. ROAD, THE FOLLOWING COURSES AND DISTANCES:

1. N 87° 54' 31" W FOR A DISTANCE OF 113.00 FEET TO A POINT ON A LINE
2. N 82° 12' 31" W FOR A DISTANCE OF 168.30 FEET TO A POINT ON A LINE
3. N 88° 16' 31" W FOR A DISTANCE OF 444.40 FEET TO A POINT ON A LINE
4. N 55° 25' 29" E FOR A DISTANCE OF 557.00 FEET TO A POINT ON A LINE
5. S 36° 39' 31" E FOR A DISTANCE OF 444.20 FEET TO THE POINT OF BEGINNING

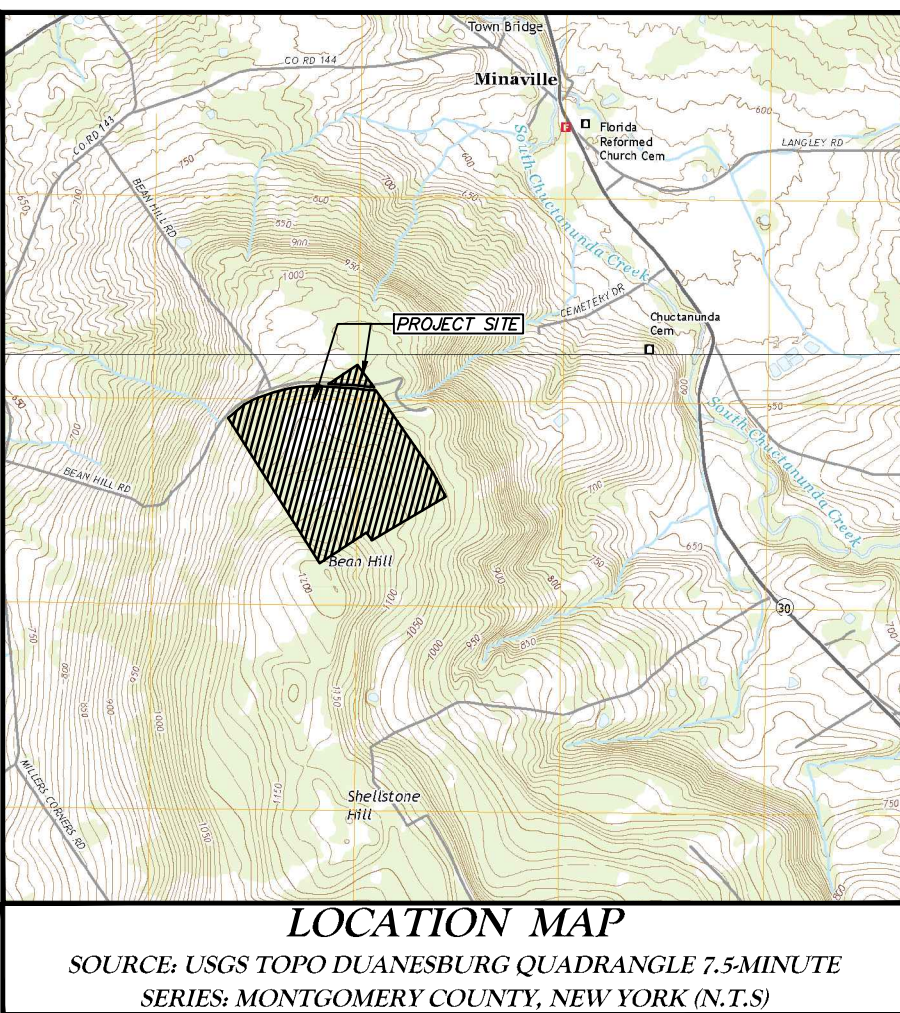
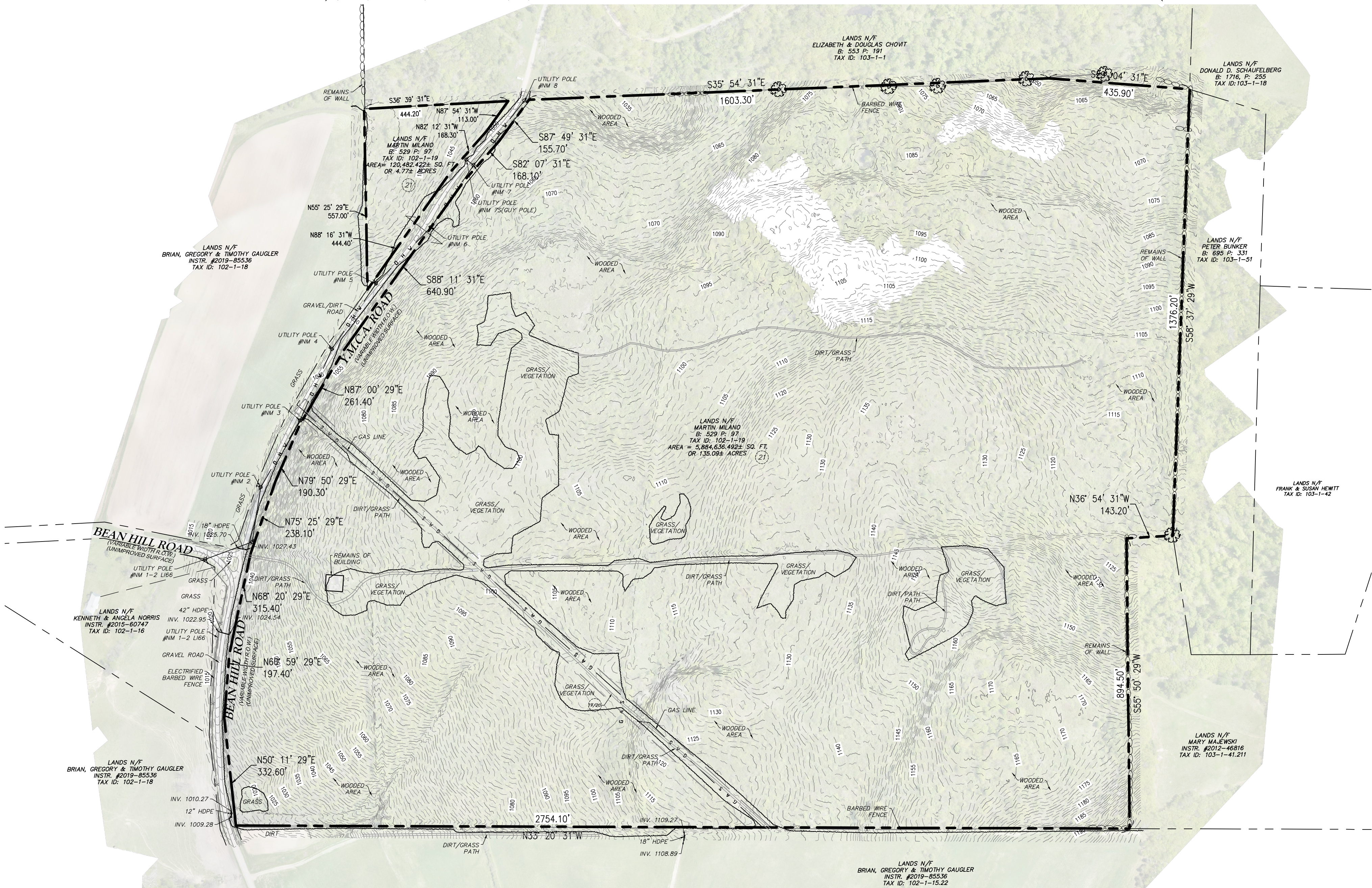
CONTAINING 120,482.422 SQUARE FEET OF LAND, MORE OR LESS

BEGINNING AT A POINT IN THE EASTERLY BOUNDARY OF LANDS NOW OR FORMERLY OF G. WILLIAM AND ALICE GAUGLER, SAID POINT ALSO BEING IN THE SOUTHERLY BOUNDARY OF BEAN HILL ROAD;

1. N 50° 11' 29" E FOR A DISTANCE OF 332.60 FEET TO A POINT ON A LINE
 2. N 59° 59' 29" E FOR A DISTANCE OF 197.40 FEET TO A POINT ON A LINE
 3. N 48° 20' 29" E FOR A DISTANCE OF 115.40 FEET TO A POINT ON A LINE
 4. N 75° 25' 29" E FOR A DISTANCE OF 138.00 FEET TO A POINT ON A LINE
 5. N 79° 59' 29" E FOR A DISTANCE OF 190.30 FEET TO A POINT ON A LINE
 6. N 87° 00' 29" E FOR A DISTANCE OF 140.40 FEET TO A POINT ON A LINE
 7. S 87° 11' 31" E FOR A DISTANCE OF 46.00 FEET TO A POINT ON A LINE
 8. S 88° 31' 31" E FOR A DISTANCE OF 168.00 FEET TO A POINT ON A LINE
 9. S 89° 41' 31" E FOR A DISTANCE OF 155.70 FEET TO A POINT ON A LINE
 10. S 93° 54' 31" E FOR A DISTANCE OF 140.30 FEET TO A POINT ON A LINE
 11. S 29° 04' 31" E FOR A DISTANCE OF 45.150 FEET TO A POINT ON A LINE
 12. S 58° 37' 39" W FOR A DISTANCE OF 137.620 FEET TO A POINT ON A LINE
 13. N 15° 54' 31" W FOR A DISTANCE OF 138.00 FEET TO A POINT ON A LINE
 14. N 33° 20' 31" W FOR A DISTANCE OF 89.50 FEET TO A POINT ON A LINE
 15. N 33° 20' 31" W FOR A DISTANCE OF 254.10 FEET TO THE POINT OF BEGINNING

CONTAINING 5884.66 SQUARE FEET OF LAND, MORE OR LESS

CONTAINING 5,884,636 SQUARE FEET OF LAND, MORE OR LESS



REV	DATE	DRAWN BY	DESCRIPTION
1	11-11-11	1	1
2	11-11-11	1	1
3	11-11-11	1	1
4	11-11-11	1	1
5	11-11-11	1	1
6	11-11-11	1	1
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8	11-11-11	1	1
9	11-11-11	1	1
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97	11-11-11	1	1
98	11-11-11	1	1
99	11-11-11	1	1
100	11-11-11	1	1

ALTA/NSPS LAND TITLE
SURVEY

153 YMCA ROAD
BLOCK 1, LOT 19
SECTION No. 102.00



ALBANY OFFICE
 18 Computer Drive East
 Suite 203
 Albany, NY 12205
 Phone: 518.459.3252
 Fax: 518.459.3284

ALTA/NSPS
LAND TITLE SURVEY

SHEET NUMBER:
01 of 01

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TO:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES 2,3,4,6(a),(b),7(a)(b),8,11,13,14,16,17,18,20 FOR LAND SURVEY OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MAY 4, 2021.

PATRICK T. VANHAVERBEKE, P.L.S.
NEW YORK LICENSED LAND SURVEYOR LICENSE NUMBER 050931

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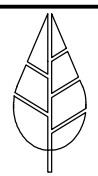
APPENDIX 2: SITE PLANS

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GENERAL CIVIL NOTES

ABBREVIATIONS

THIS DOCUMENT IS PROVIDED BY BORRERO
SOLAR SYSTEMS, INC. TO FACILITATE THE SALE
OF THE RENEWABLE ENERGY PROJECT
REPRESENTED HEREIN. REPRODUCTION, RELEASE
OR UTILIZATION FOR ANY OTHER PURPOSE,
WITHOUT PRIOR WRITTEN CONSENT IS STRICTLY
PROHIBITED.



BORREGO

100 CENTURY HILL DRIVE, SUITE 300
LATHAM, NY 12110
PHONE: (888) 898-6273
FAX: (888) 843-6778
WWW.BORREGOSOLAR.COM

NOT FOR
CONSTRUCTION

PLAN SET
153 YMCA RD
AMSTERDAM, NY, 12010

PROJECT NUMBER:
XXX-XXXX

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	7/22/21	CRR	CLJ	ISSUED FOR CLIENT REVIEW
	2/23/22	CRR	CLJ	JOINT APPLICATION FOR WETLAND PERMIT
	4/4/22	CRR	CLJ	TOWN ENGINEER CONSULTANT COMMENTS
	12/18/22	SRP	CLJ	WETLAND PERMITTING REVISIONS

SCALES STATED ON DRAWING
ARE VALID ONLY WHEN PLOTT
ARCH D 24" X 36"

C-0.0
CIVIL NOTES

- APPROVALS
1. SITE PLAN APPROVAL DATED MONTH DAY, 20__.
2. SEQR NEGATIVE DECLARATION DATED MONTH DAY, 20__.

GENERAL NOTES

1. EXISTING CONDITIONS SURVEY INFORMATION WAS PREPARED BY MASER CONSULTING PERFORMED IN JUNE 2021. HORIZONTAL DATUM IS REFERENCED TO THE NAD83 NEW YORK STATE EAST ZONE. VERTICAL DATUM IS REFERENCED TO NAVD 1988.
2. THERE IS NO GUARANTEE THAT ALL THE EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT LIMITS ARE ON THIS DRAWING. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK. A DIG SAFELY NEW YORK TICKET NUMBER INDICATING ALL EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED SHALL BE OBTAINED PRIOR TO COMMENCING WORK. CONTACT "DIG SAFELY NEW YORK" AT 1-800-962-7962 AND PROVIDE 72 HOURS NOTICE TO RECEIVE A TICKET NUMBER.
3. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE ELECTRIC UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTIONS WITH THE RESPECTIVE COMPANIES PRIOR TO ANY UTILITY CONSTRUCTION.
4. THE SUBCONTRACTORS SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT TO THE CONTRACTOR.
5. TOWN APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES.
6. SUBCONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
7. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE CONTRACTOR/CEOR FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
8. AREAS USED AS FOR PARKING DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS INCLUDING, BUT NOT LIMITED TO, REGRADING, LOAMING AND SEEDING. IN NO CASE SHALL PARKING AREAS, LAYDOWN AREAS, CONSTRUCTION TRAILERS, AND PORTABLE TOILETS BE LOCATED WITHIN A WETLAND RESOURCE AREA AND/OR ANY BUFFER ZONES.

SITE PREPARATION NOTES

1. NO TOPSOIL WILL BE ALLOWED TO LEAVE THE PROPERTY. EXCESS TOPSOIL SHALL BE DISTRIBUTED INTO A THIN LAYER ON LAND IMMEDIATELY ADJACENT TO WHERE THE TOPSOIL ORIGINATED.
2. TREE CLEARING AND STUMP REMOVAL SHALL BE IN ACCORDANCE WITH APPROVED LOCAL, STATE, AND FEDERAL PERMITS. TREES TO BE REMOVED SHALL BE MARKED BY THE CONTRACTOR'S PROJECT MANAGER OR SITE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORK ON-SITE.
3. SEASONAL TREE CLEARING RESTRICTIONS MAY BE REQUIRED FOR ENDANGERED SPECIES PROTECTION. THE CONTRACTOR SHALL REFER TO THE TREE CLEARING PLAN FOR ANY RESTRICTIONS.
4. ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE SUBCONTRACTOR(S).
5. THE SUBCONTRACTOR(S) SHALL BE RESPONSIBLE FOR COORDINATING THEIR EFFORTS WITH ALL TRADES.
6. THE SUBCONTRACTOR(S) SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.

EROSION AND SEDIMENT CONTROL MEASURES

1. A SPDES PERMIT SHALL BE IN PLACE PRIOR TO COMMENCING ANY EARTH DISTURBANCE.
2. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
3. SEDIMENT BARRIERS SHALL BE INSPECTED AND APPROVED BY THE TOWN OF DERUYTER OR THEIR REPRESENTATIVE AND THE CONTRACTOR/CEOR BEFORE CONSTRUCTION BEGINS.
4. STRAW BALES AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY WHEN INSTALLED.
5. DISTURBED AREAS SHALL BE BLANKETED OR SEEDED AND MULCHED AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE CONCLUDED. ALL ERODABLE/BARE AREAS SHALL BE BLANKETED OR SEEDED AND MULCHED WITHIN 7 DAYS WITH TEMPORARY EROSION CONTROL SEEDING.
6. STABILIZE SLOPES GREATER THAN 3:1 (HORIZONTAL: VERTICAL) WITH SEED, SECURED GEOTEXTILE FABRIC, SPRAYED COMPOST BLANKET, OR RIP-RAP AS REQUIRED TO PREVENT EROSION DURING CONSTRUCTION.
7. SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL SOIL STOCKPILE AREAS.
8. CLEAN OUT PROJECT DRAINAGE FEATURES AND STRUCTURES (I.E. CULVERTS, BASINS, SWALES, ETC.) AFTER COMPLETION OF CONSTRUCTION.
9. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE SEDIMENT CONTROL MEASURE.
10. AFTER ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED, THE SUBCONTRACTOR(S) SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AT THE CONTRACTOR/CEOR DIRECTION.
11. AFTER THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES, THE SUBCONTRACTOR(S) SHALL GRADE AND SEED AREA OF TEMPORARY EROSION CONTROL MEASURE.
12. DAMAGED OR DETERIORATED EROSION AND SEDIMENT CONTROL ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION OR AS DIRECTED BY THE CONTRACTOR/CEOR.
13. THE TRAINED CONTRACTOR SHALL INSPECT 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.

14. THE OWNER/OPERATOR SHALL HAVE THE QUALIFIED INSPECTOR CONDUCT INSPECTIONS ONCE EVERY SEVEN CALENDAR DAYS FOR SITE DISTURBANCES LESS THAN FIVE ACRES. FOR SITES WHICH HAVE RECEIVED AUTHORIZATION FROM NYSDEC TO DISTURB FIVE ACRES OR MORE, THE QUALIFIED INSPECTOR SHALL CONDUCT INSPECTIONS TWICE EVERY SEVEN CALENDAR DAYS WITH NO LESS THAN TWO DAYS SEPARATING THE INSPECTIONS.
15. PIPE OUTLETS (IF ANY) SHALL BE STABILIZED WITH STONE. REFER TO DETAILS.
16. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE DISCHARGED TO AN APPROPRIATE SEDIMENT TRAPPING DEVICE.
17. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION/SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY CONTRACTOR/CEOR.
18. GRAVEL ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASH DOWN FACILITIES, SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY.
19. NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. NO RE-FUELING SHALL OCCUR WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA AND 200 FEET FROM RIVERFRONT. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
20. THE COST OF REPAIRING EROSION CONTROL MEASURES OR REMOVING SEDIMENT FROM EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE EROSION CONTROL ITEM.
21. EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
22. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DUST FROM FORMING.
23. EROSION CONTROL MEASURES AS SHOWN ON THESE DRAWINGS IS INTENDED TO CONVEY MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO PREVENT SOIL EROSION AND TO COMPLY WITH THE PROJECT'S SPDES PERMIT AND STORMWATER POLLUTION PREVENTION PLAN.
24. A CONCRETE WASH OUT AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS.

LAYOUT AND MATERIAL NOTES

1. THE CONTRACTOR SHALL HAVE SITE FEATURES STAKED OUT BY A LICENSED LAND SURVEYOR PRIOR TO ANY INSTALLATION OF RACKING OR TRENCHES.
2. EXCESS TRENCH MATERIAL SHALL BE PLACED ON THE SIDES OF THE TRENCH AND PLACED AT OR NEAR THE SAME LOCATION AS WHERE EXCAVATED. AFTER TRENCH HAS BEEN BACKFILLED TOPSOIL REMOVED SHALL BE PLACED ON TOP AND LIGHTLY COMPACTED.
3. SUBCONTRACTOR SHALL INSTALL CONDUITS FOR ALL ELECTRIC CONDUIT CROSSINGS PRIOR TO INSTALLATION OF ROADWAY SUBBASE.

GRADING NOTES

1. WHERE PROPOSED GRADES MEET EXISTING GRADES, SUBCONTRACTOR(S) SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
2. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL TURBINE FOUNDATIONS, PUBLIC ROADWAYS, AND WORK AREAS.
3. THE ELEVATIONS SHOWN ON THESE DRAWINGS ARE TO BE CONSIDERED GUIDANCE AND SHOULD BE ADJUSTED TO FIT ACTUAL FIELD CONDITIONS DURING CONSTRUCTION. THE CONTRACTOR SHALL USE JUDGEMENT WHEN ESTABLISHING CONSTRUCTION GRADES AND ELEVATIONS.
4. THE FINISHED SURFACE OF CRANE PAD SHALL NOT SLOPE MORE THAN 1% IN ANY DIRECTION. THE CRANE PAD SHALL BE CONSTRUCTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. CONTRACTOR SHALL FIELD VERIFY THE LENGTHS OF ALL PIPE CULVERTS TO BE REMOVED AND INSTALLED PRIOR TO ORDERING THE PIPE.
6. THE CONTRACTOR SHALL BE REQUIRED TO RELOCATE OR TO REMOVE AND RE-INSTALL ALL ROAD SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. ALL OTHER EXISTING ROW MARKERS AND/OR PROPERTY PINS SHALL BE MAINTAINED OR REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH NEW YORK LAW.

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR AGRICULTURAL MITIGATION FOR WIND POWER PROJECTS

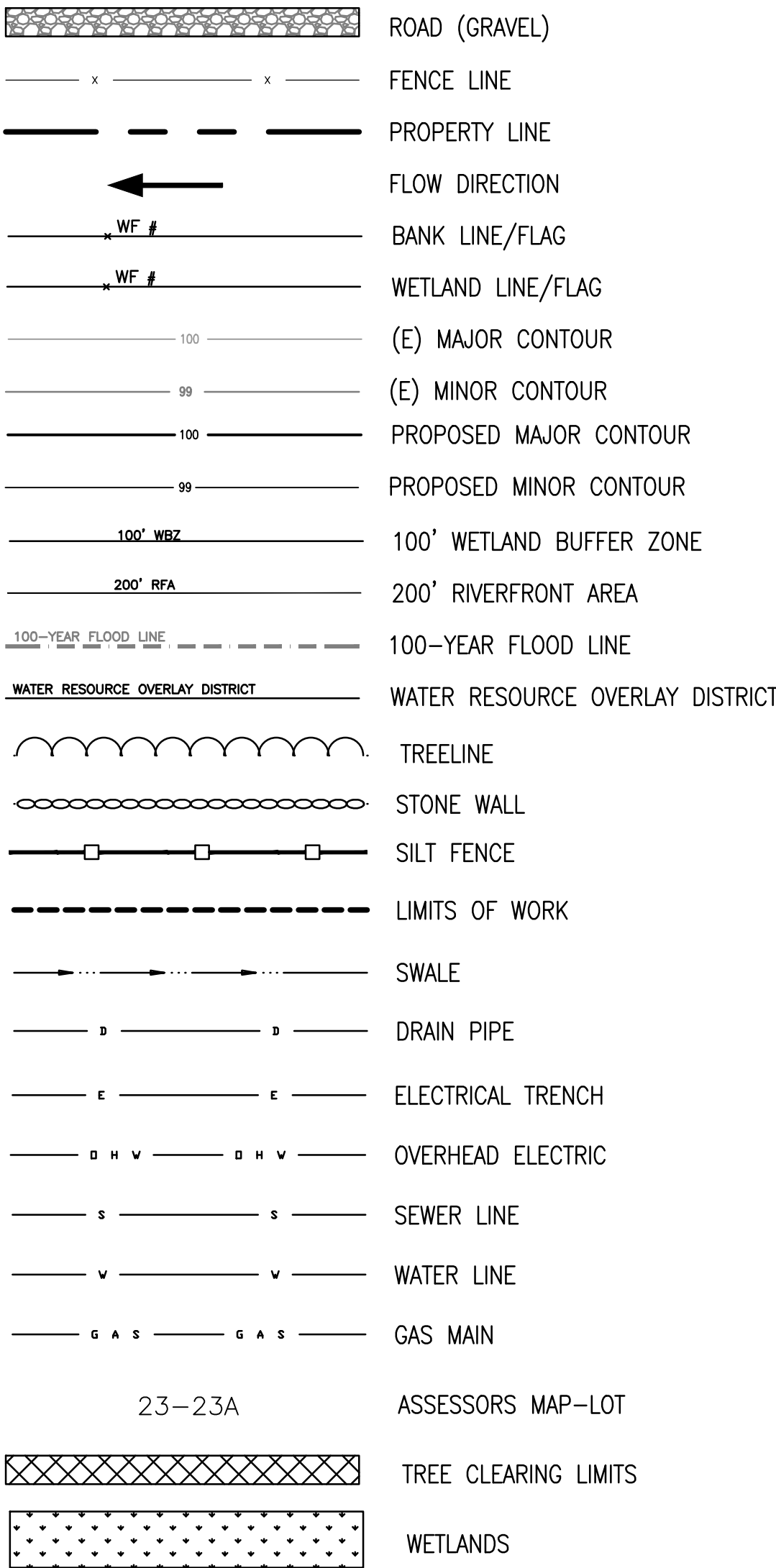
1. THE FOLLOWING GUIDELINES SHALL APPLY TO CONSTRUCTION AREAS FOR WIND POWER CONSTRUCTION PROJECTS IMPACTING AGRICULTURAL LAND. THE PROJECT SPONSOR SHALL COORDINATE WITH THE NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS (AG, AND MARKETS) TO DEVELOP AN APPROPRIATE SCHEDULE FOR INSPECTIONS TO ASSURE THAT THE GOALS OF THESE GUIDELINES ARE BEING MET. THE PROJECT SPONSOR SHALL HIRE AN ENVIRONMENTAL MONITOR TO OVERSEE THE CONSTRUCTION AND RESTORATION IN AGRICULTURAL FIELDS. THE ENVIRONMENTAL MONITOR SHALL BE ON SITE WHENEVER CONSTRUCTION OR RESTORATION WORK IS OCCURRING ON AGRICULTURAL LAND. THE ENVIRONMENTAL MONITOR SHALL MAINTAIN REGULAR CONTACT WITH THE AFFECTED FARMERS AND AG, AND MARKETS CONCERNING FARM RESOURCES AND MANAGEMENT MATTERS PERTINENT TO THE AGRICULTURAL OPERATIONS AND THE SITE-SPECIFIC IMPLEMENTATION OF THE CONSTRUCTION AND RESTORATION GUIDELINES.
2. ALL AGRICULTURAL AREAS SHALL BE RESTORED IN ACCORDANCE WITH DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR WIND ENERGY PROJECTS.
3. COMMON ELECTRICAL TRENCHING, SOIL DISTURBANCE MINIMIZATION AND SOIL RESTORATION/RELATED SHOULD COMPLY WITH "GUIDELINES FOR AGRICULTURAL MITIGATION FOR WIND POWER PROJECTS LAST REVISED 4-17-2018 AS PREPARED BY NYS AGRICULTURAL AND MARKETS.

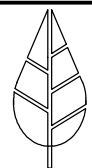
- | | |
|------|--|
| BIT | BITUMINOUS |
| BMP | BEST MANAGEMENT PRACTICE |
| BWV | BORDERING VEGETATED WETLANDS |
| CB | CONCRETE BOUND |
| CONC | CONCRETE |
| CMP | CORRUGATED METAL PIPE |
| CPP | CORRUGATED PLASTIC PIPE |
| DH | DRILL HOLE |
| DIP | DUCTILE IRON PIPE |
| DMH | DRAIN MANHOLE |
| ECB | EROSION CONTROL BARRIER |
| FES | FLARED END SECTION |
| FH | FIRE HYDRANT |
| FND | FOUND |
| GG | GAS GATE |
| HDPE | HIGH-DENSITY POLYETHYLENE |
| HW | HEADWALL |
| ILSF | ISOLATED LANDS SUBJECT TO FLOODING |
| ISW | IRON PIPE |
| ISW | ISOLATED WETLANDS (FEDERAL JURISDICTION) |
| LA | LANDSCAPED AREA |
| LOW | LIMIT OF WORK |
| N/F | NOW OR FORMERLY |
| NTS | NOT TO SCALE |
| OCS | OUTLET CONTROL STRUCTURE |
| OHW | OVERHEAD WIRE |
| RCP | REINFORCED CONCRETE PIPE |
| RET | RETAINING |
| ROW | RIGHT-OF-WAY |
| SB | STONE BOUND |
| TEL | TELEPHONE CABLE |
| TYP | TYPICAL |
| UP | UTILITY POLE |
| WG | WATER GATE |

REV 1.1

LEGEND

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AMSTERDAM, NY, 12010

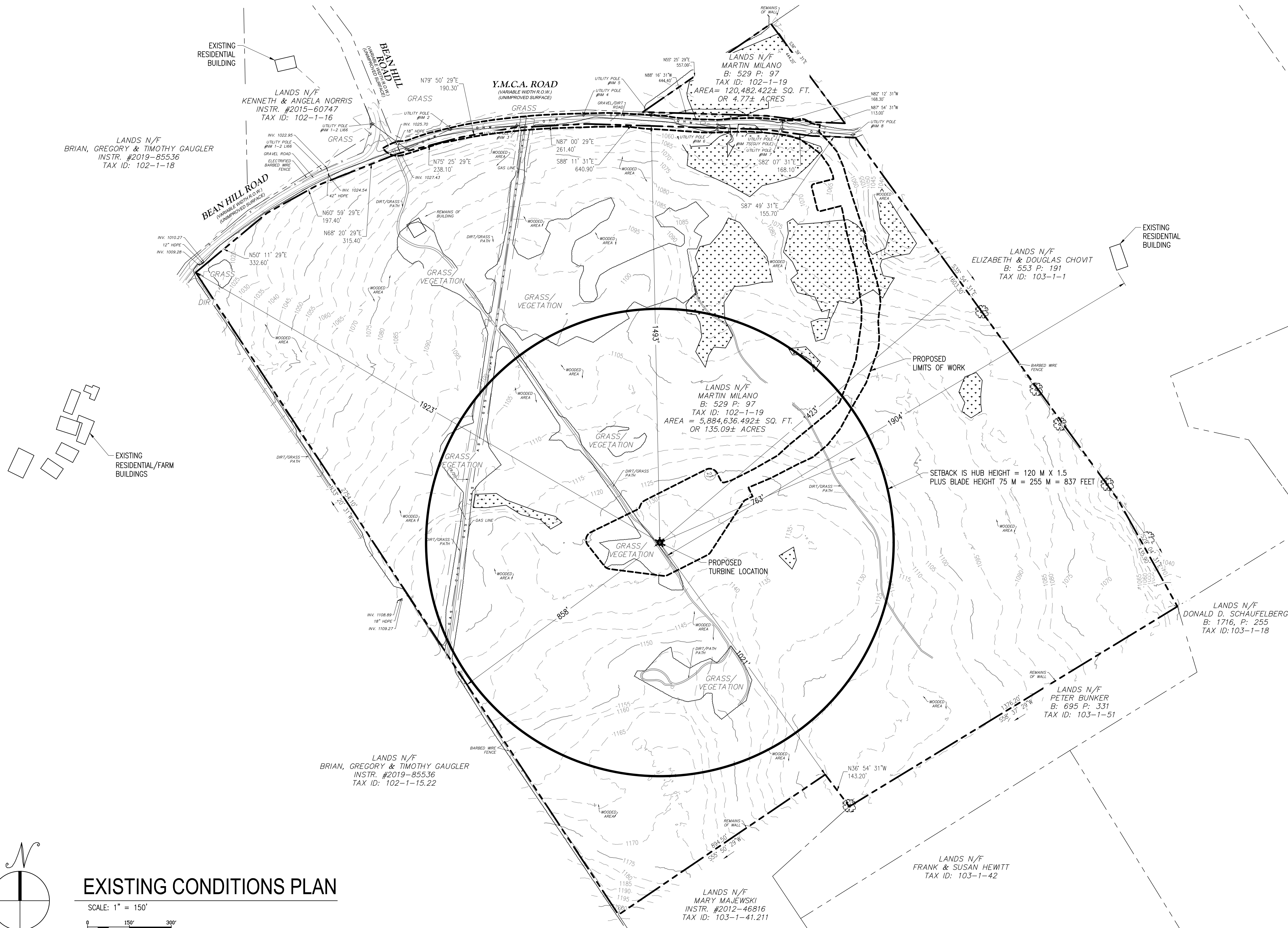
PROJECT NUMBER:
XXX-XXXX

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL	ISSUED FOR CLIENT REVIEW	JOINT APPLICATION FOR WETLAND PERMIT	TOWN ENGINEER CONSULTANT COMMENTS	WETLAND PERMITTING REVISIONS
	7/22/21	CRR	CLJ					
	2/23/22	CRR	CLJ					
	4/4/22	CRR	CLJ					
	12/18/22	SRP	CLJ					

SCALES STATED ON DRAWINGS
ARE VALID ONLY WHEN PLOTTED
ARCH D 24" X 36"

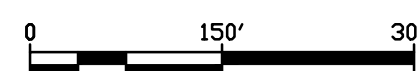
C-1.0

EXISTING CONDITIONS PLAN



EXISTING CONDITIONS PLAN

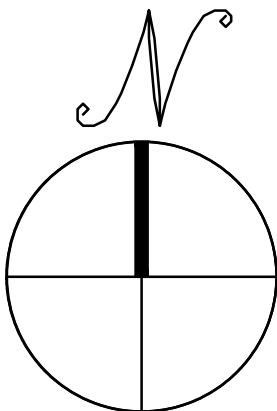
SCALE: 1" = 150'





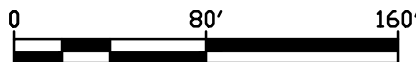
NOTES:

1. TREE CLEARING LIMITS SHOWN ARE APPROXIMATE AND BASED ON AERIAL MAPPING OF THE SITE. ACTUAL TREE CLEARING SHALL BE DETERMINED IN THE FIELD AND SHALL BE MINIMIZED TO THE EXTENT NECESSARY TO INSTALL PROJECT FEATURES.
2. THE WORK MAY REQUIRE THE REMOVAL OF INDIVIDUAL TREES AND BRUSH CLEARING TO ALLOW FOR CONSTRUCTION.
3. RIGHT-OF-WAY TREES ALONG YMCA ROAD SHALL BE TRIMMED AS NEEDED FOR TRUCK CLEARANCE.



TREE CLEARING PLAN

SCALE: 1" = 80'



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PROJECT NUMBER:
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	7/22/21	CRR	CLJ					
	2/23/22	CRR	CLJ					
	4/4/22	CRR	CLJ					
	12/16/22	SRP	CLJ					

SCALES STATED ON DRAWINGS
ARE VALID ONLY WHEN PLOTTED
ARCH D 24" X 36"

C-2.0

TREE CLEARING PLAN

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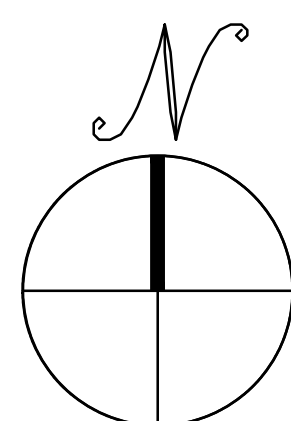
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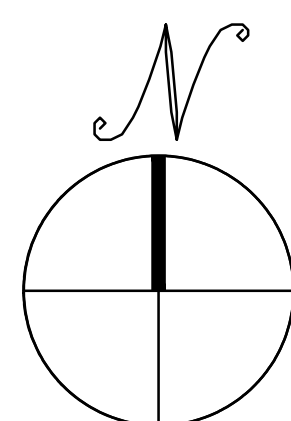
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	7/22/21	CRR	CLJ	ISSUED FOR CLIENT REVIEW
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	4/4/22	CRR	CLJ	TOWN ENGINEER CONSULTANT COMMENTS
	12/18/22	SRP	CLJ	WETLAND PERMITTING REVISIONS

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C-3.0



A horizontal graphic scale bar with three segments. The first segment is white, the second is black, and the third is white. Above the bar, the numbers 0, 40', and 80' are marked at the beginning, middle, and end respectively.

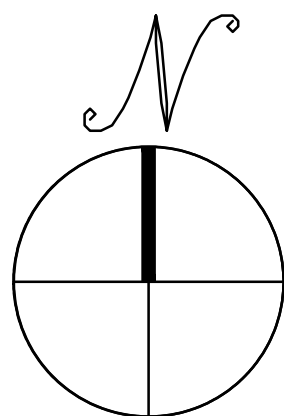


1. TOTAL ACREAGE OF IMPACTED WETLANDS = 0.229 ACRES
2. PERMANENT DISTURBANCE = 0.215 ACRES
3. TEMPORARY DISTURBANCE = 0.014 ACRES

PERMANENT DISTURBANCE

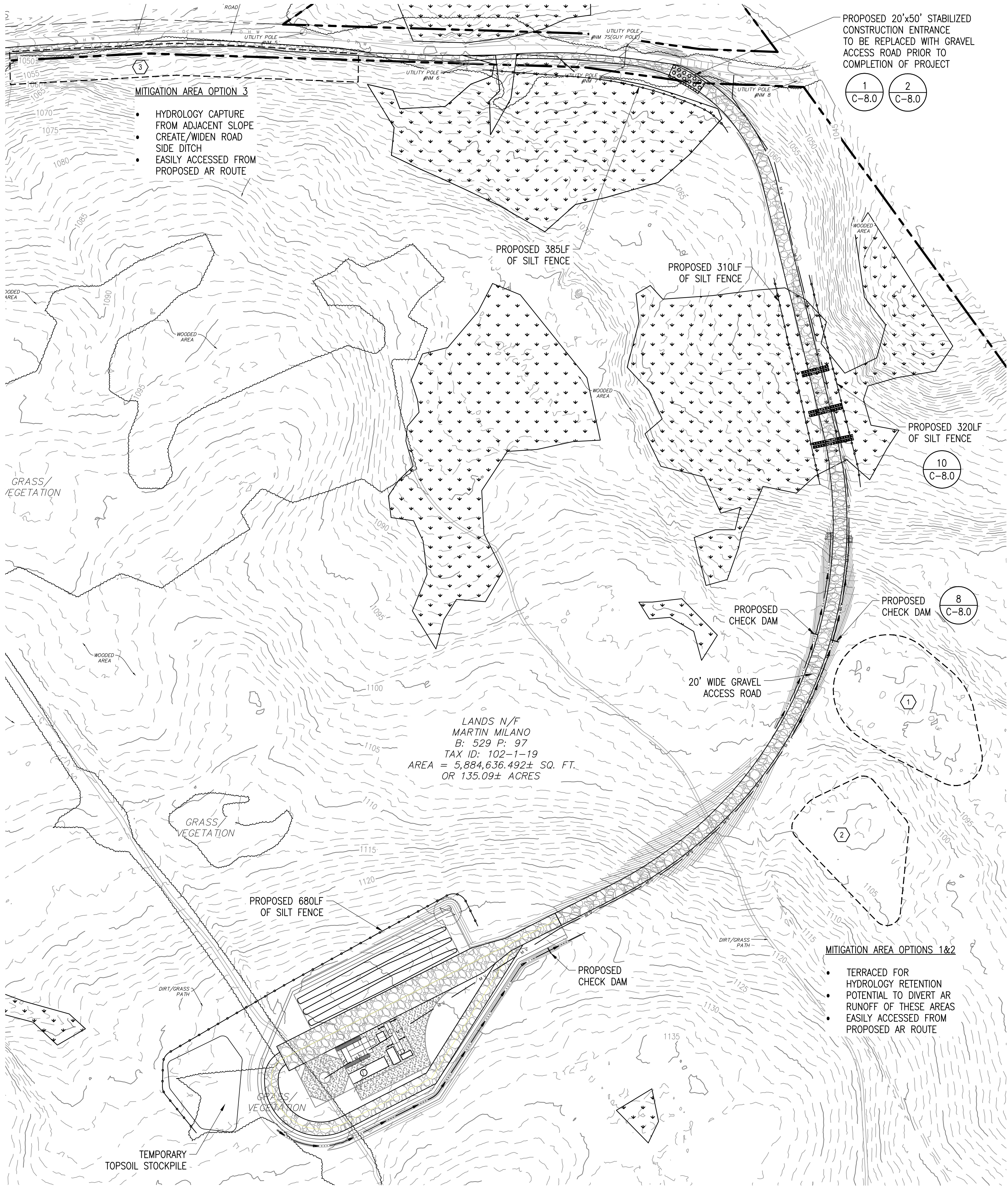
TEMPORARY DISTURBANCE

PROPOSED PERMANENT IMPACTS = 0.13 AC.
MAXIMUM MITIGATION RATIO 3:1
MAXIMUM MITIGATION AREA NEEDED = 0.39 AC.

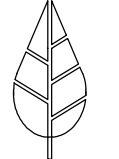


EROSION CONTROL PLAN

SCALE: 1" = 80'



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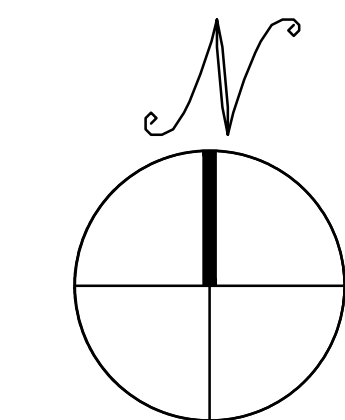
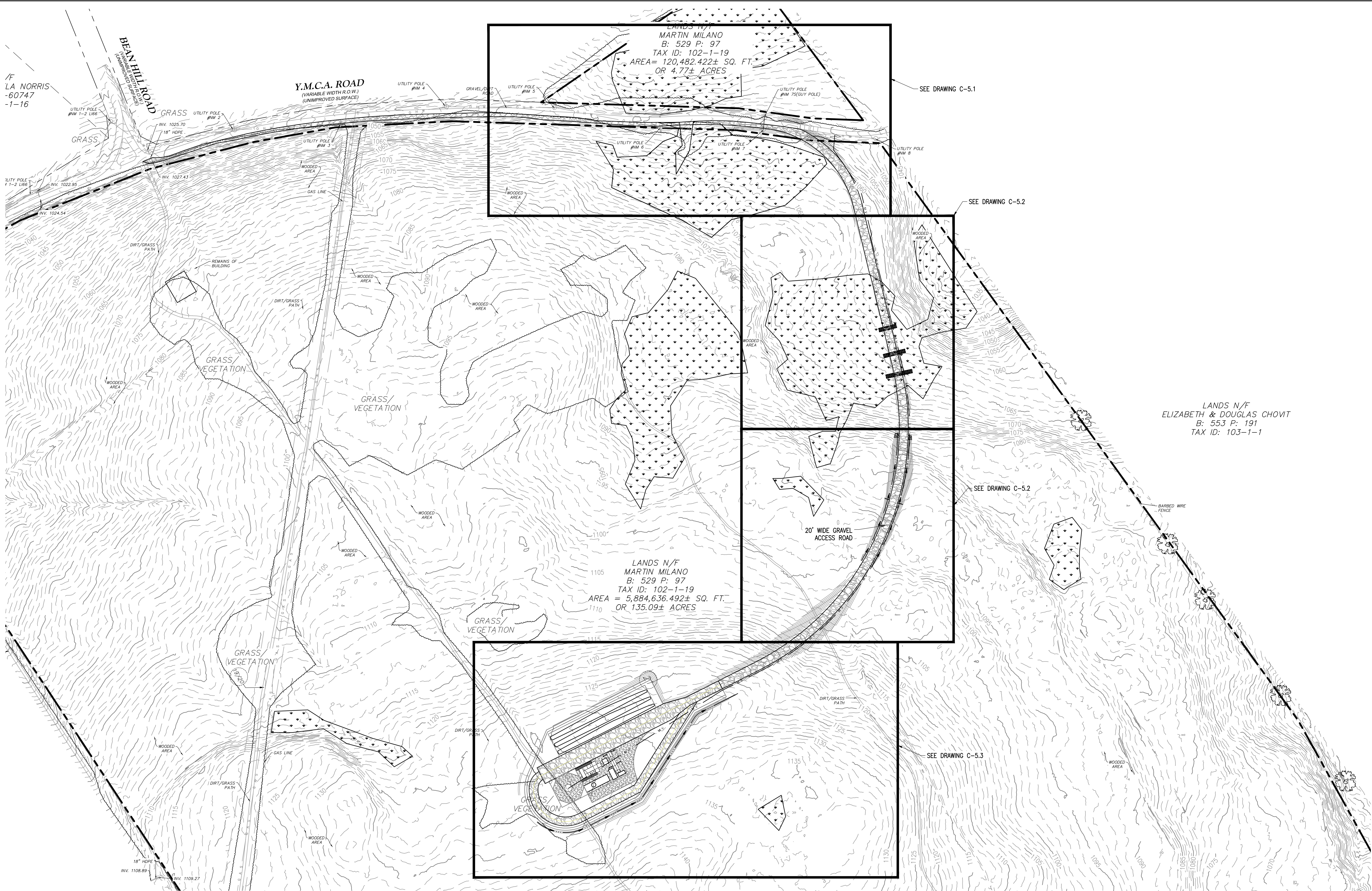
PROJECT NUMBER:
XXX-XXXX

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL	
	7/22/21	CRR	CLJ	ISSUED FOR CLIENT REVIEW	
	2/23/22	CRR	CLJ	JOINT APPLICATION FOR WETLAND PERMIT	
	4/4/22	CRR	CLJ	TOWN ENGINEER CONSULTANT COMMENTS	
	12/18/22	SRP	CLJ	WETLAND PERMITTING REVISIONS	

SCALES STATED ON DRAWINGS
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ARCH D 24" X 36"

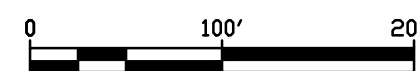
C-4.0

EROSION CONTROL PLAN



OVERALL GRADING AND DRAINAGE PLAN

SCALE: 1" = 100'



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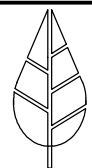
PROJECT NUMBER:
XXX-XXXX

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	4/4/22	CRR	CLJ	TOWN ENGINEER CONSULTANT COMMENTS	
	12/18/22	SRP	CLJ	WETLAND PERMITTING REVISIONS	

SCALES STATED ON DRAWINGS
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INCH @ 24" X 36"

C-5.0

OVERALL GRADING AND
DRAINAGE PLAN



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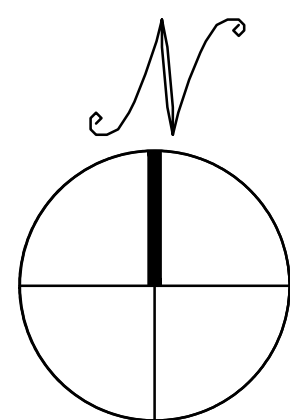
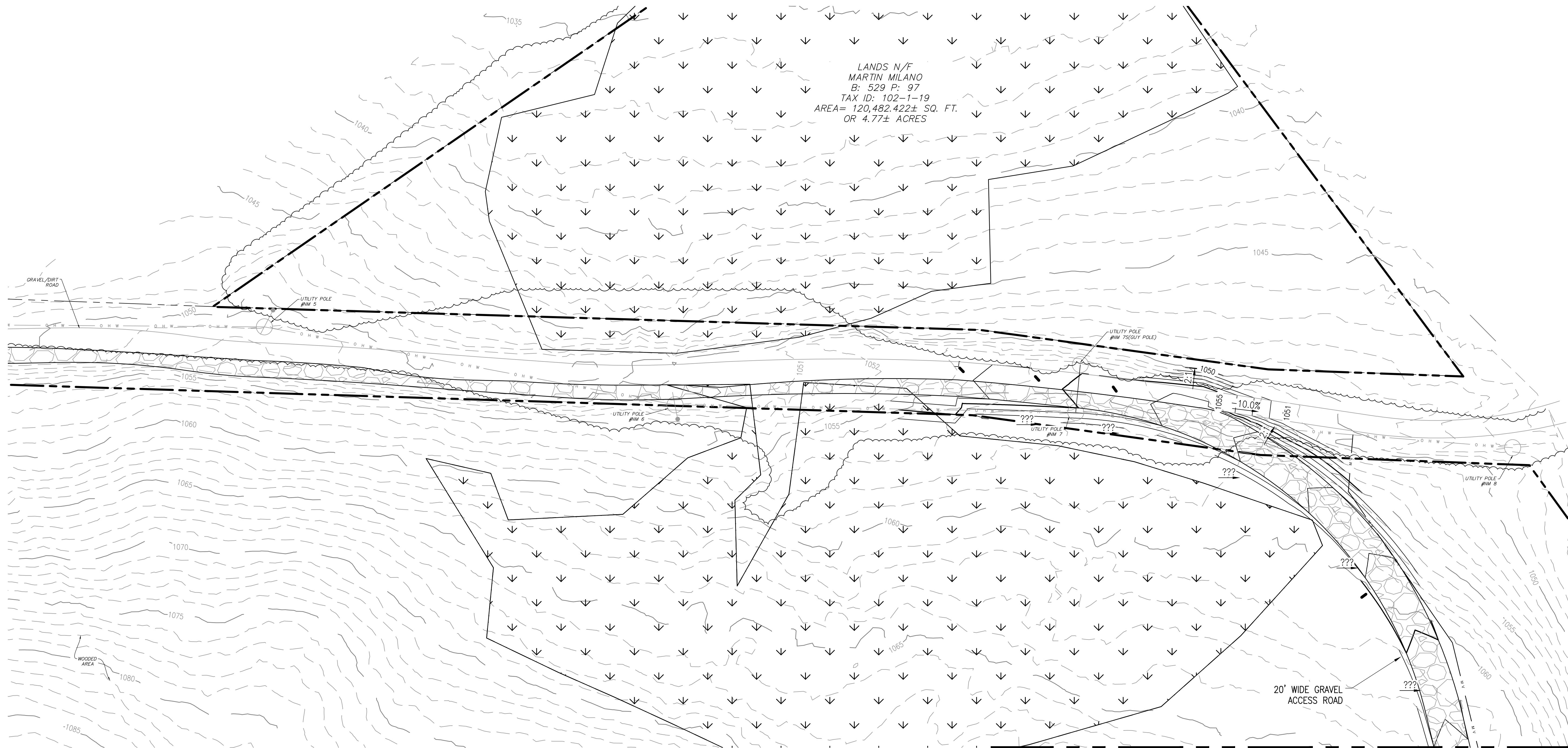
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XXX-XXXX

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	2/23/22	CRR	CLJ					
	4/4/22	CRR	CLJ					
	12/18/22	SRP	CLJ					

SCALES STATED ON DRAWINGS
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ARCH D 24" X 36"

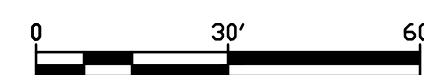
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GRADING AND DRAINAGE
PLAN

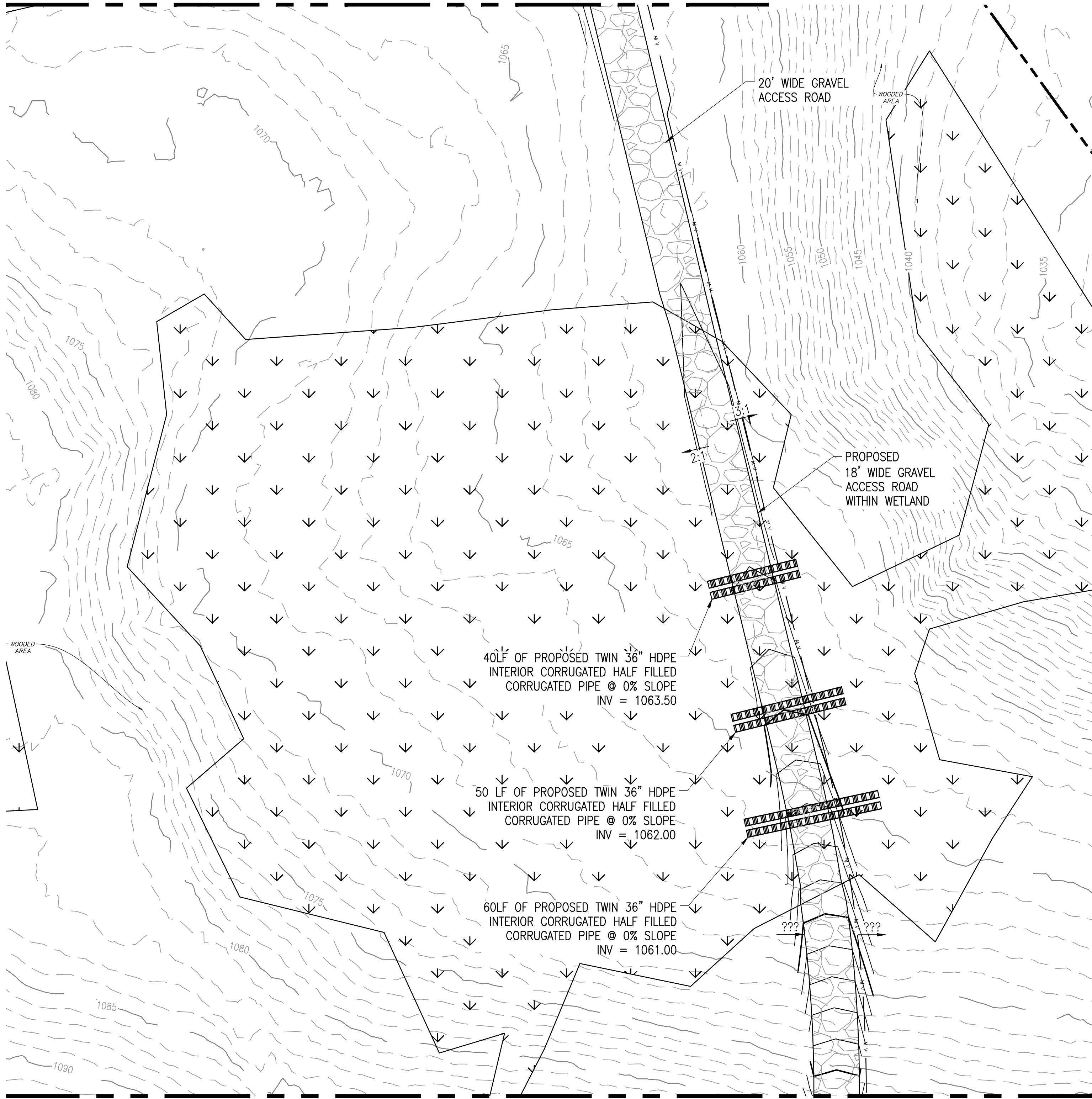


GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'

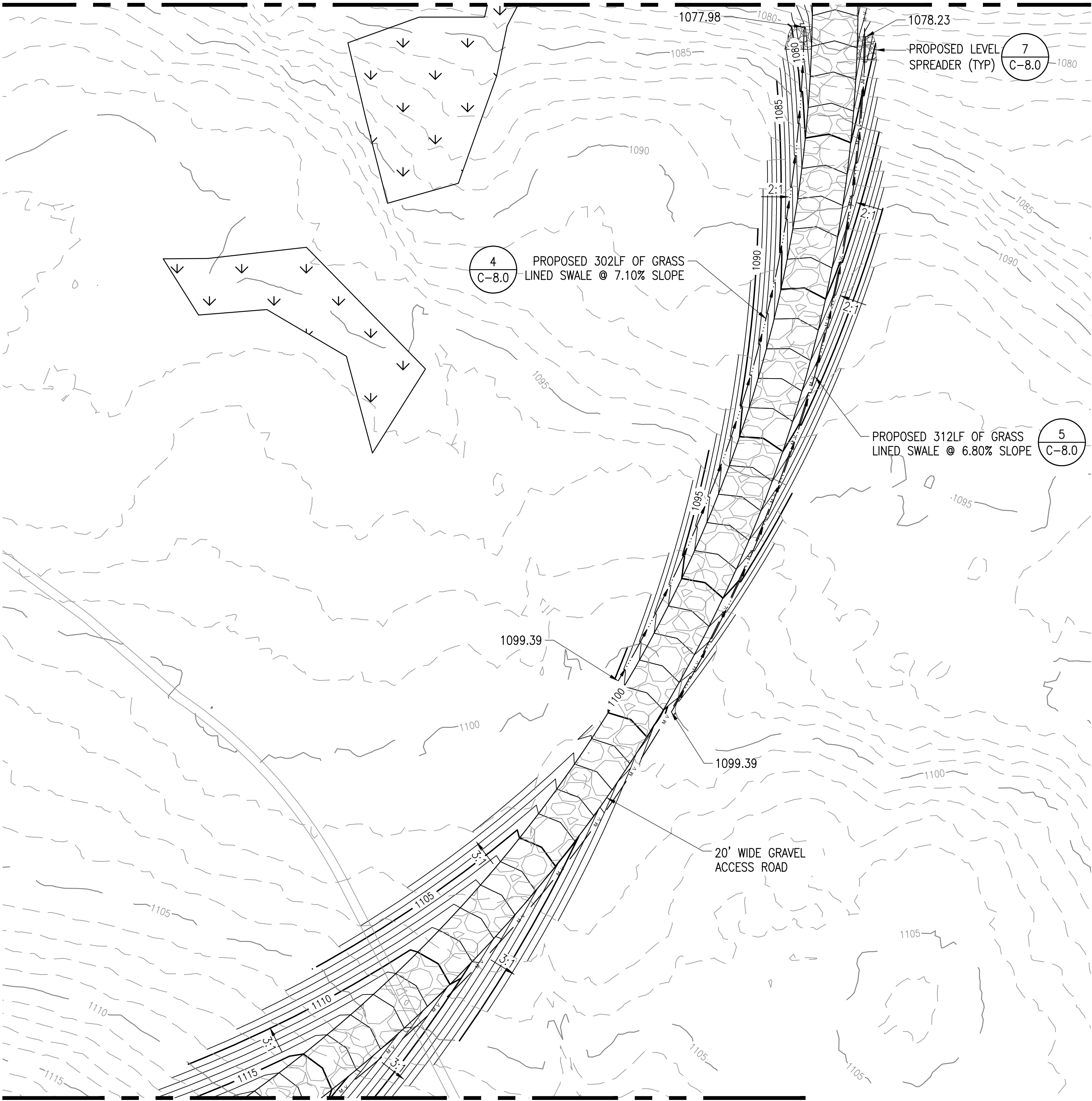


MATCHLINE SEE DRAWING C-5.2

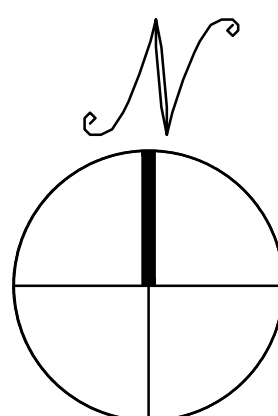


MATCHLINE SEE THIS DRAWING

MATCHLINE SEE THIS DRAWING



MATCHLINE SEE DRAWING C-5.3



GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'
0 30' 60'

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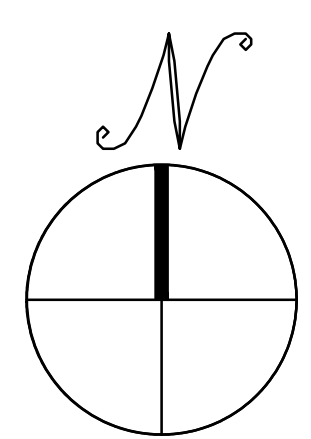
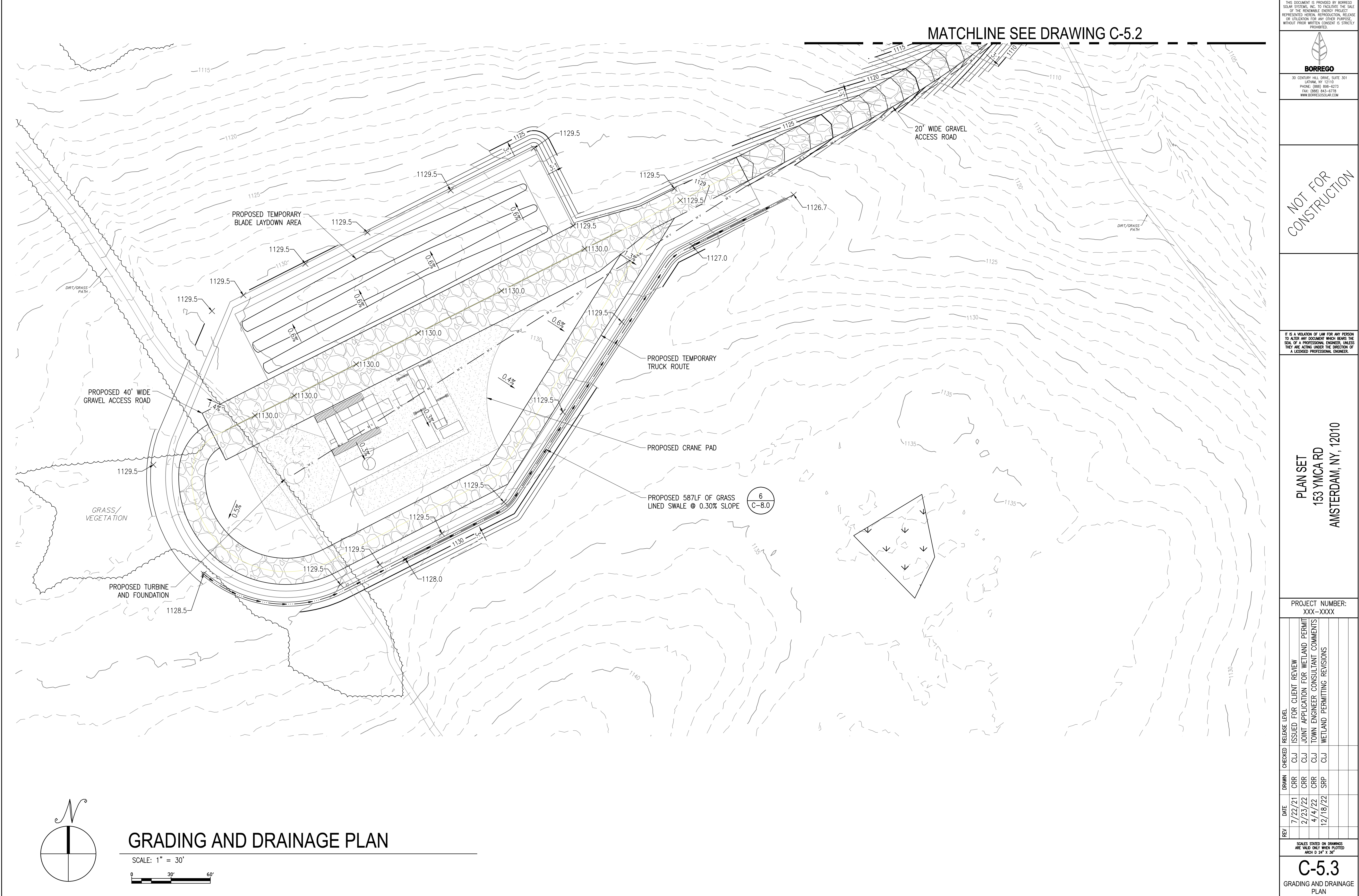
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	4/4/22	CRR	CLJ					
	12/18/22	SRP	CLJ					

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C-5.2

GRADING AND DRAINAGE PLAN



GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'

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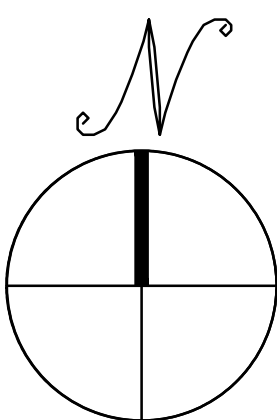
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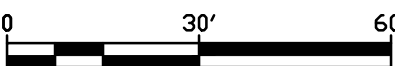
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C-5.3
GRADING AND DRAINAGE PLAN



ACCESS ROAD PLAN

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MATCHLINE SEE DRAWING C-6.1

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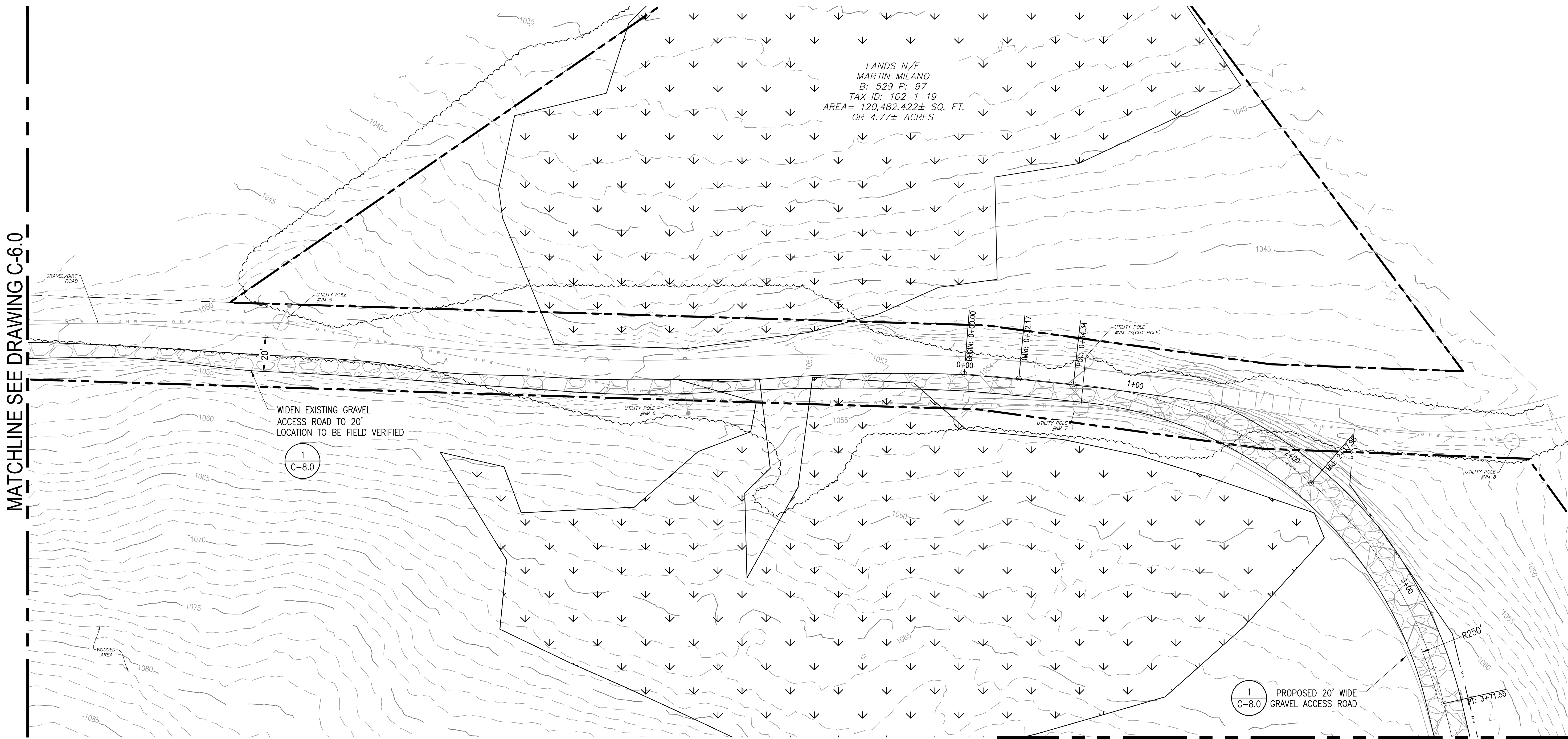
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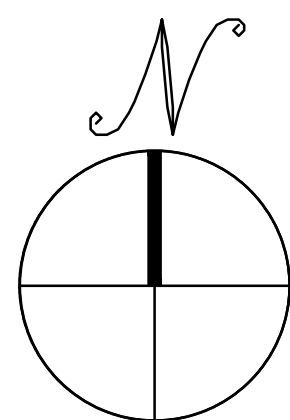
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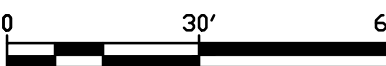


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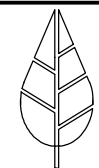


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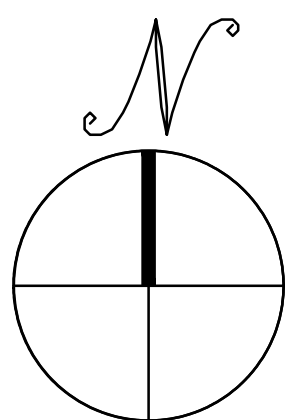
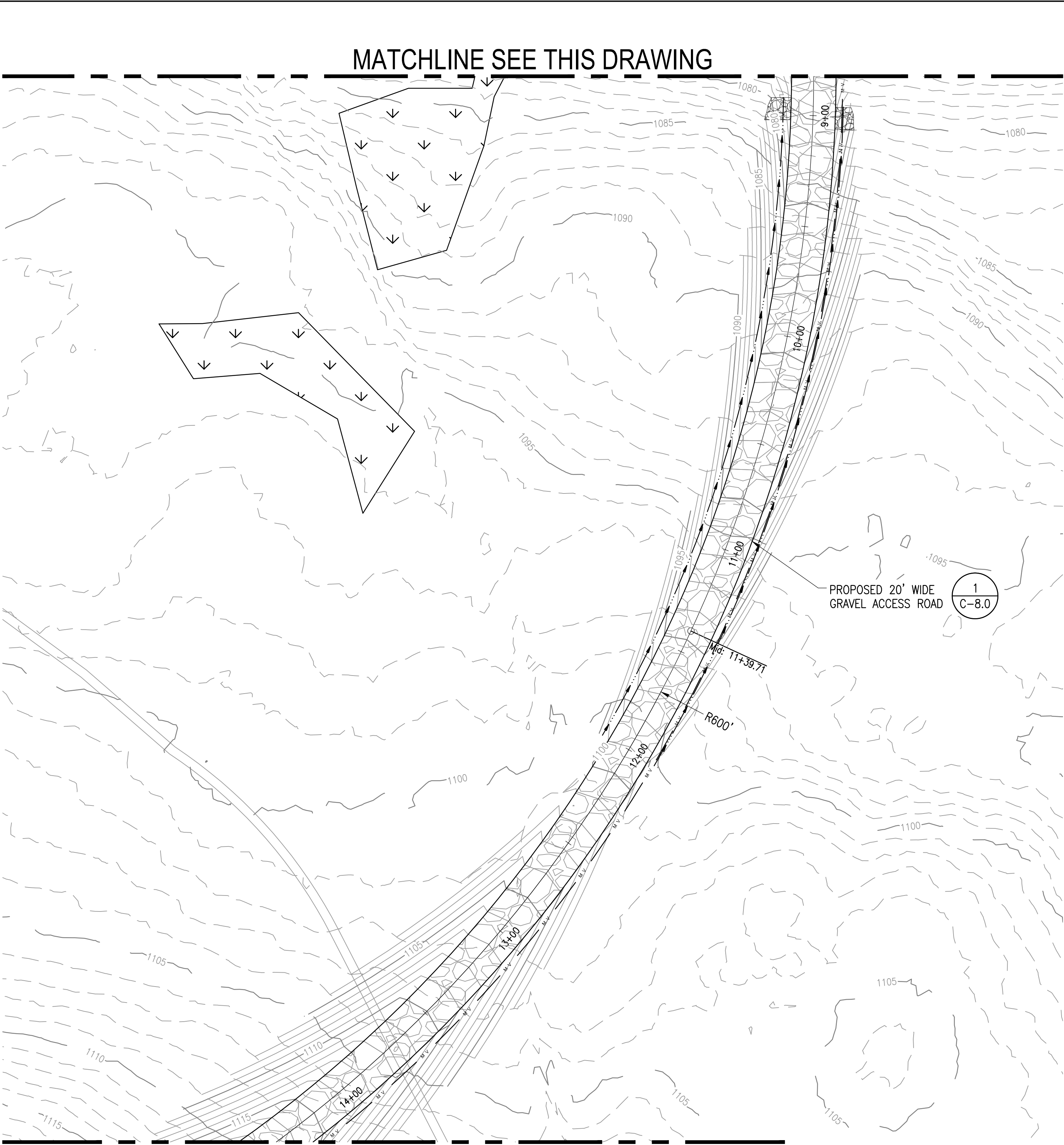
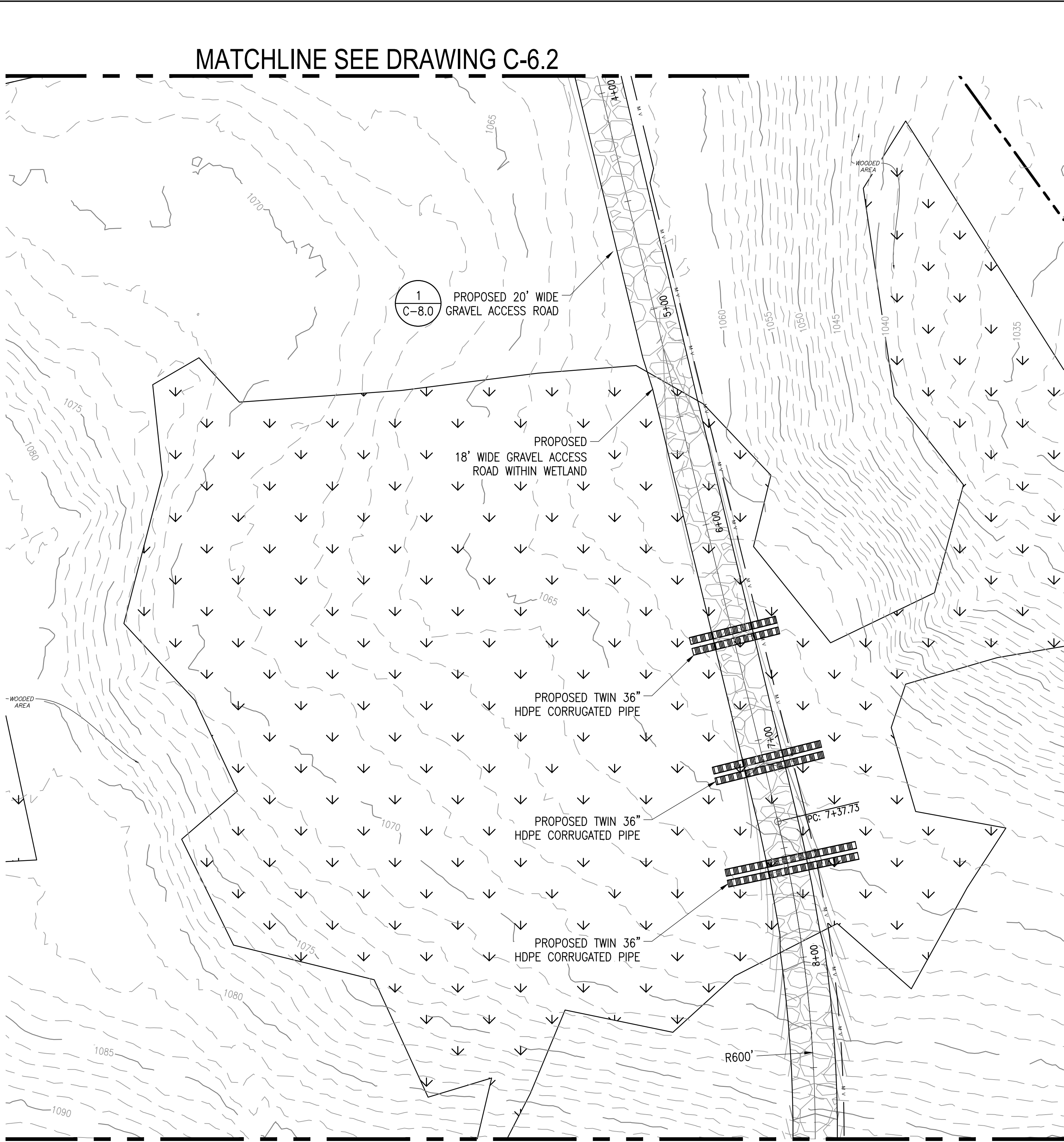
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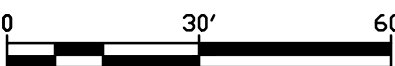
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ACCESS ROAD PLAN



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SCALE: 1" = 30'



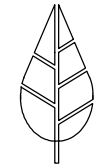
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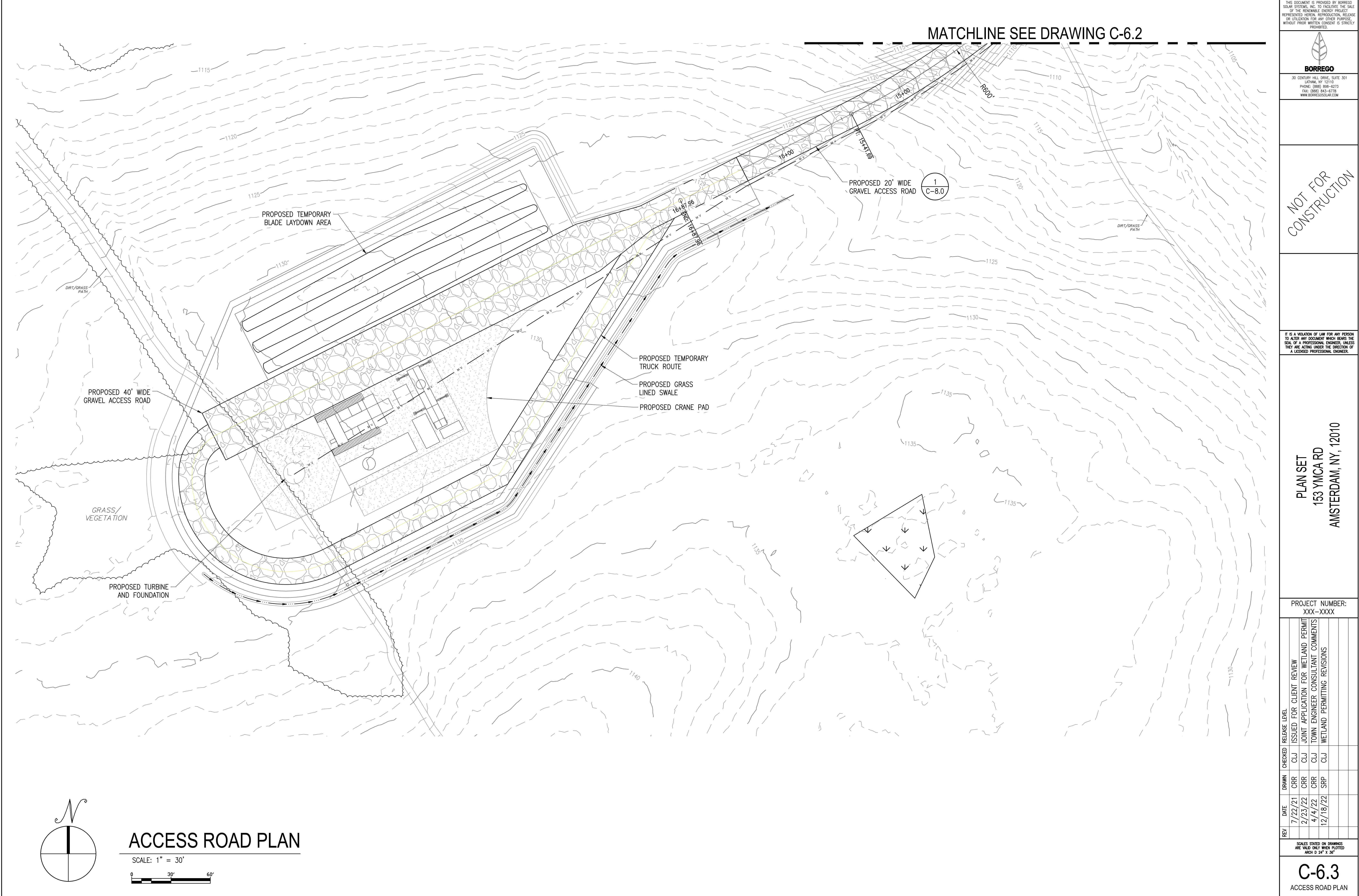
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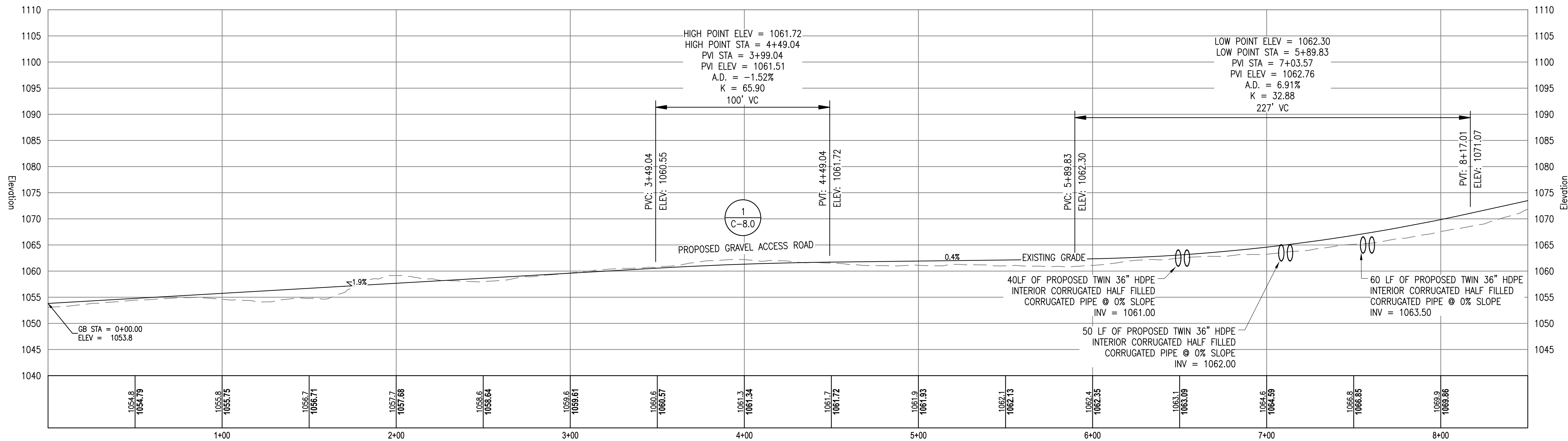
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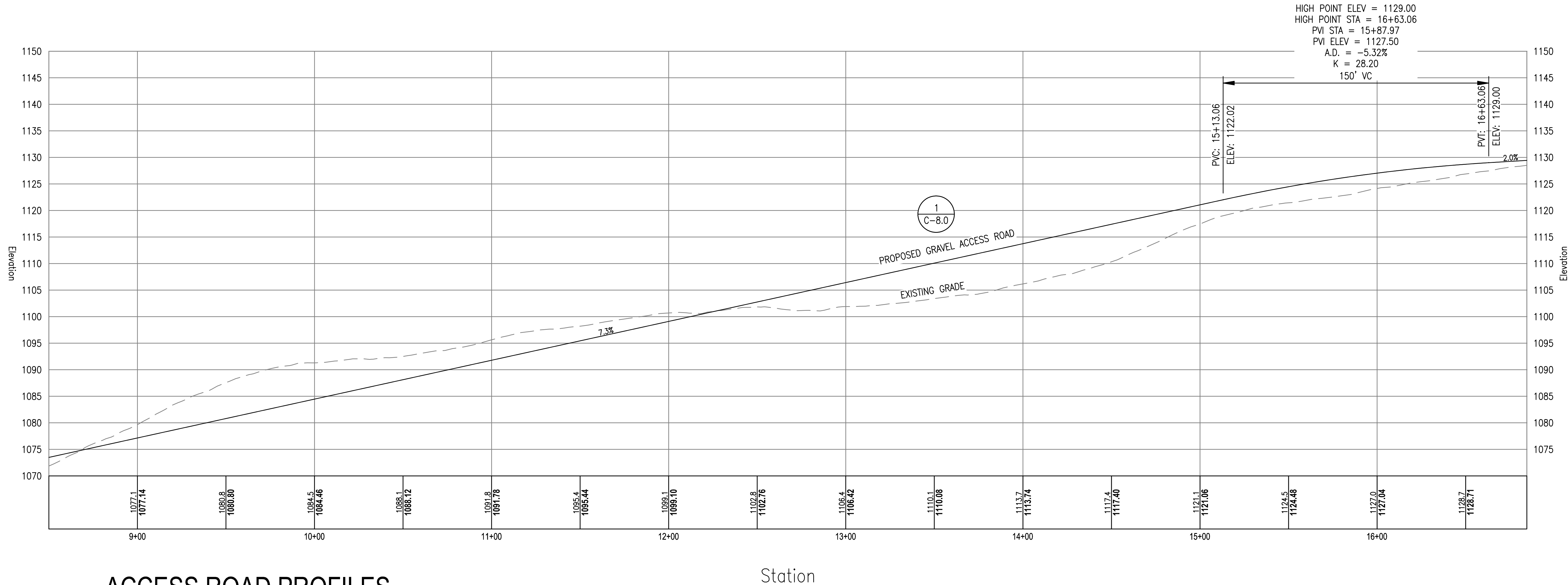
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C-6.3
ACCESS ROAD PLAN



PROPOSED GRAVEL ACCESS ROAD PROFILE

SCALE: H: 1"=30' V: 1"=10'



ACCESS ROAD PROFILES

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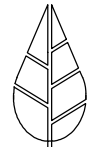
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C-7.0
ACCESS ROAD PROFILES



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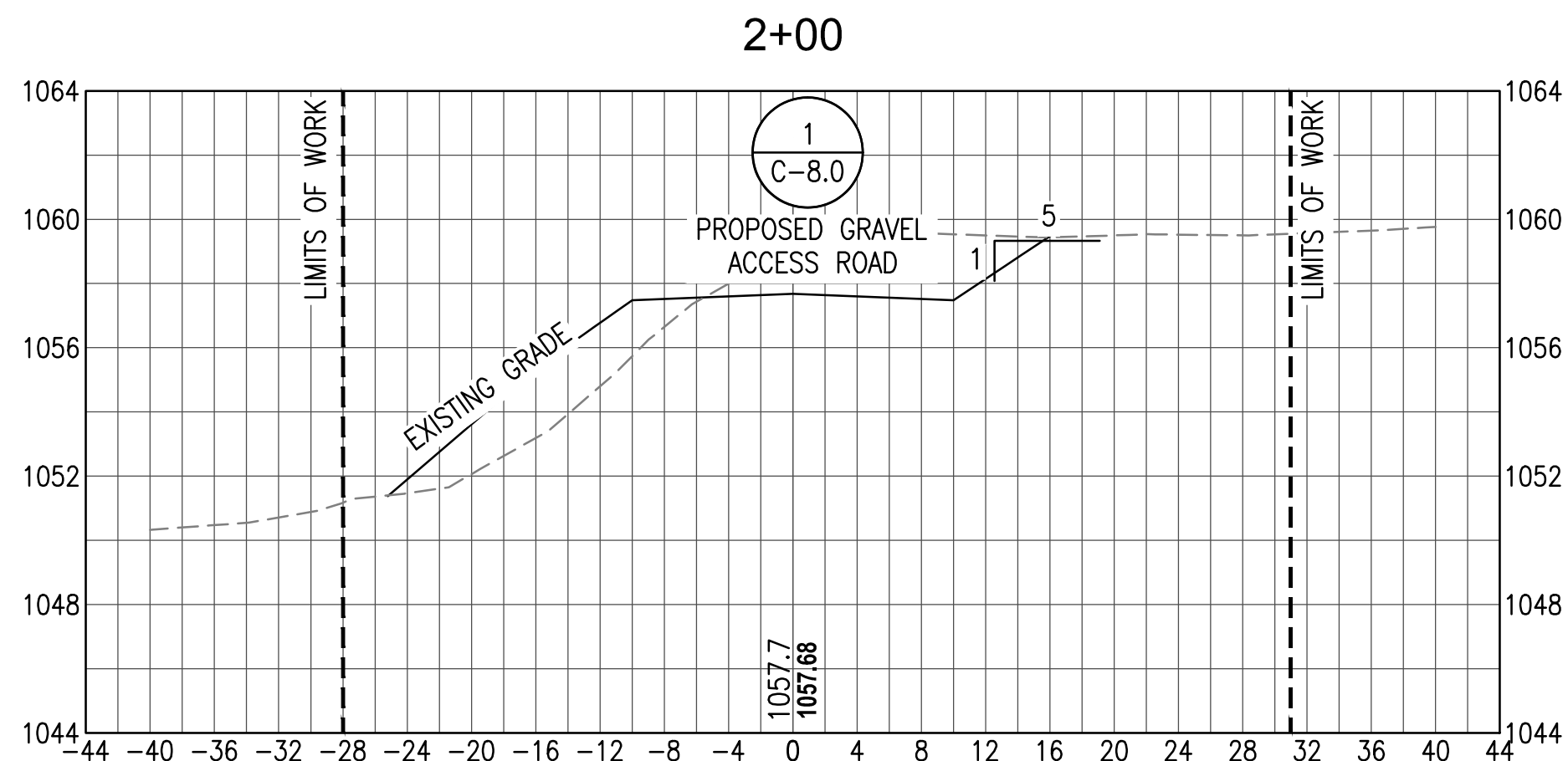
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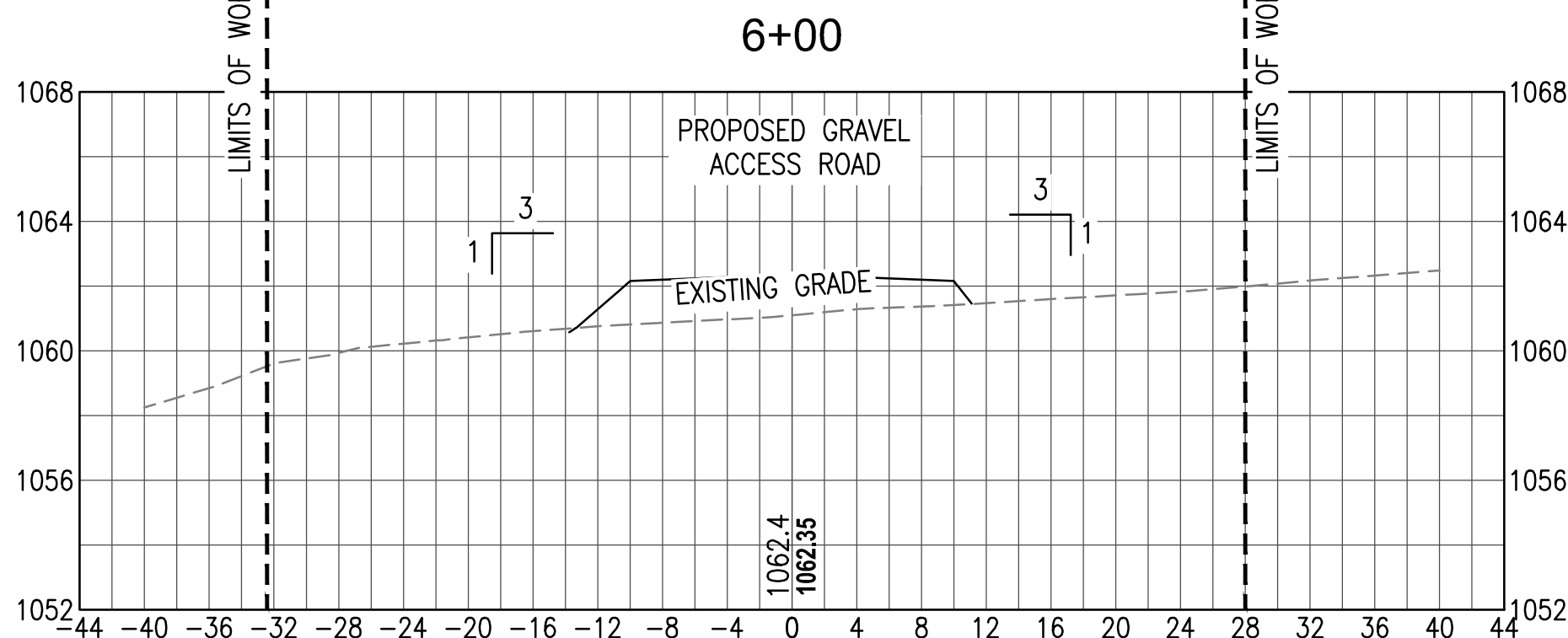
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ACCESS ROAD SECTIONS



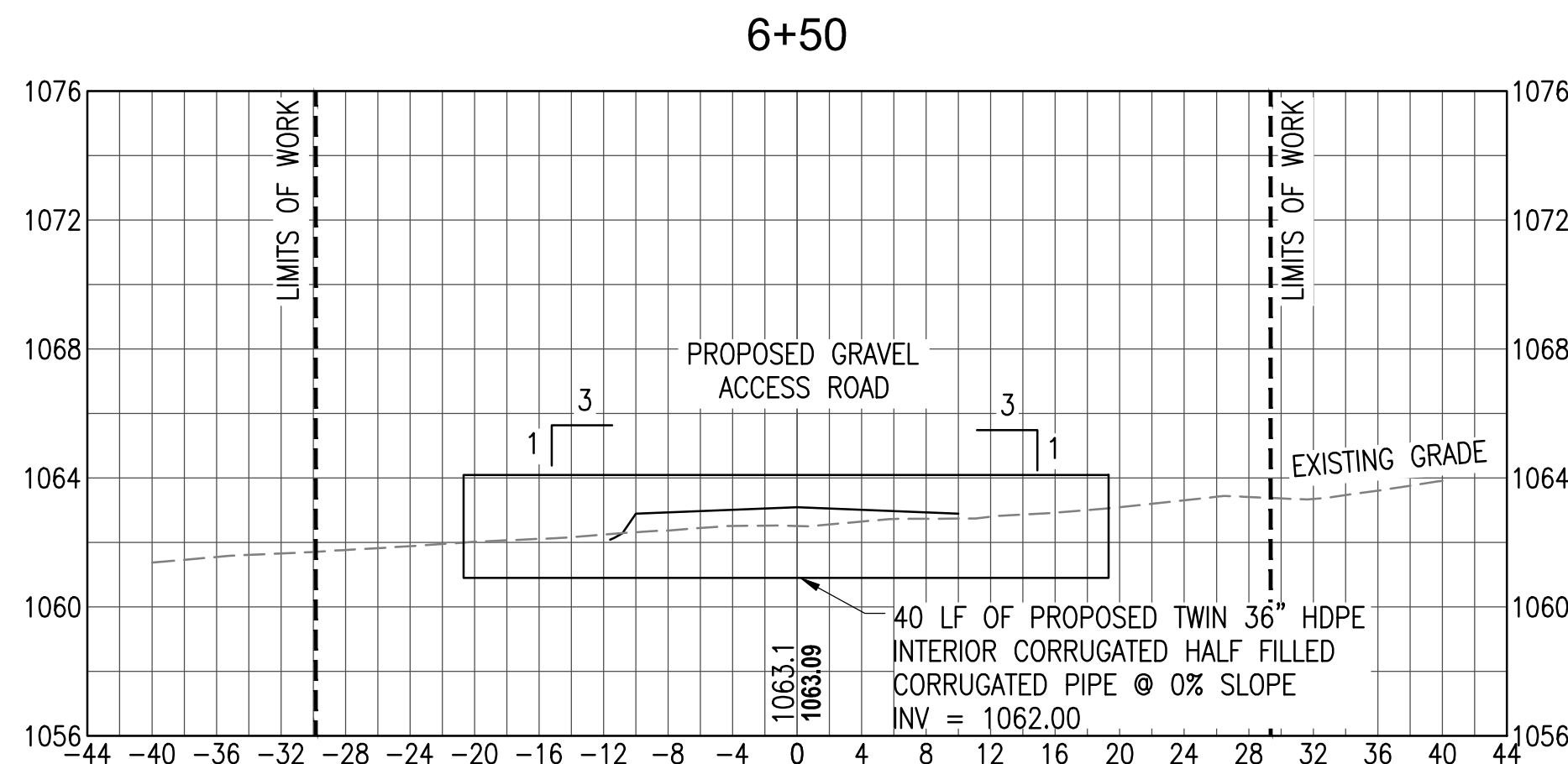
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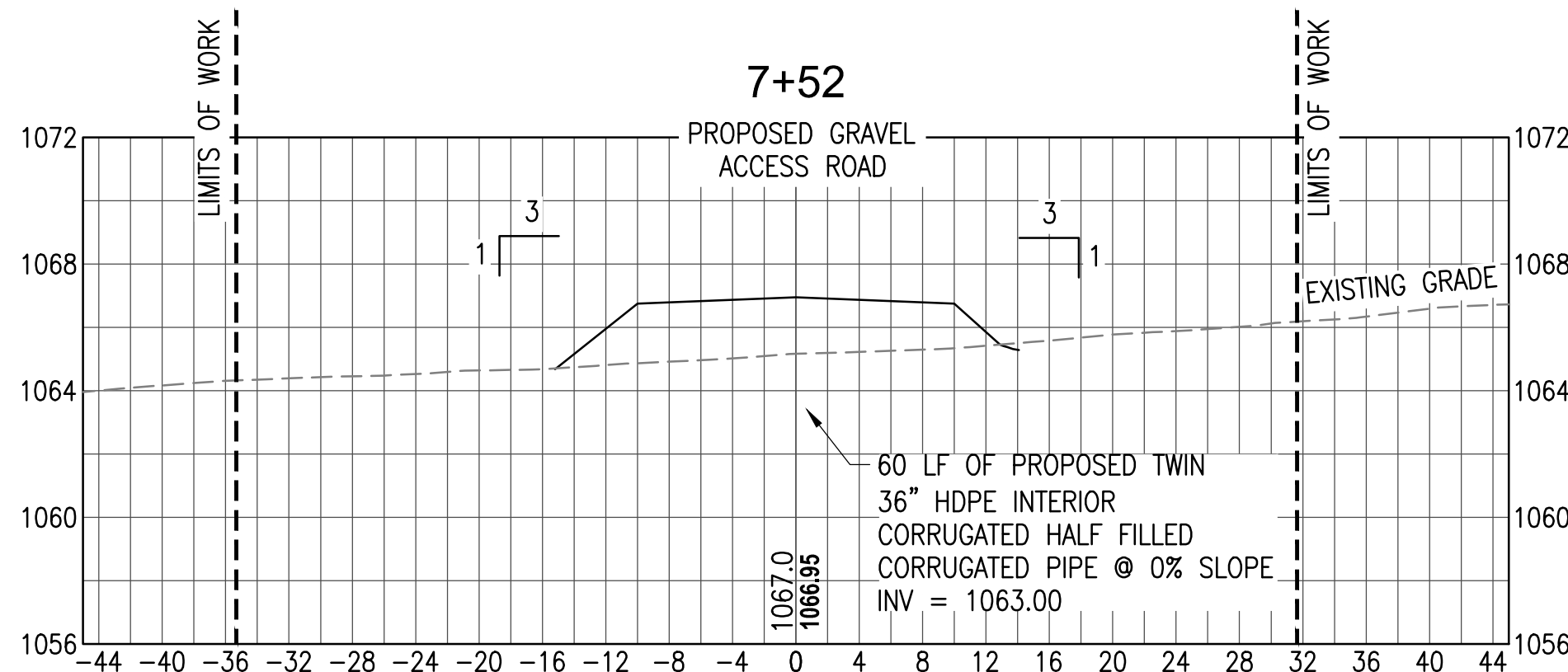
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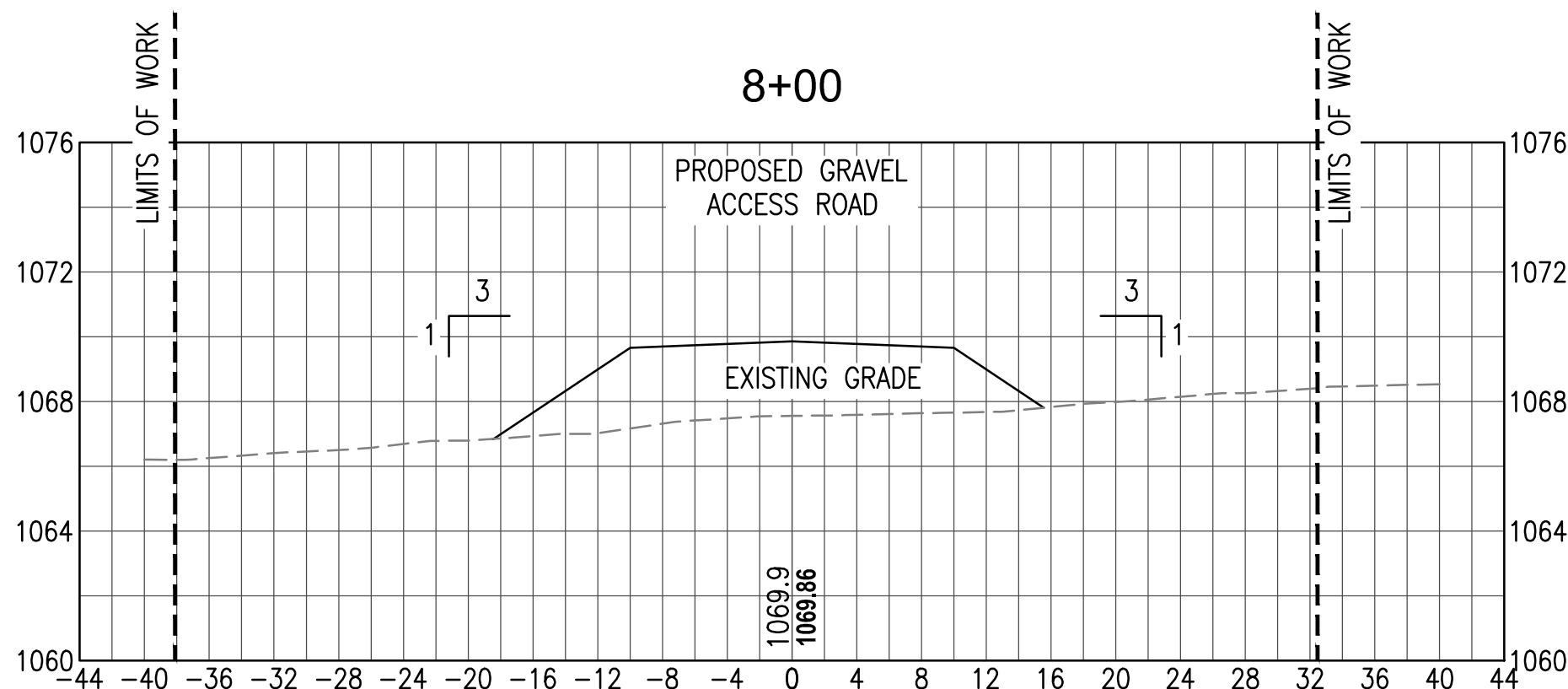
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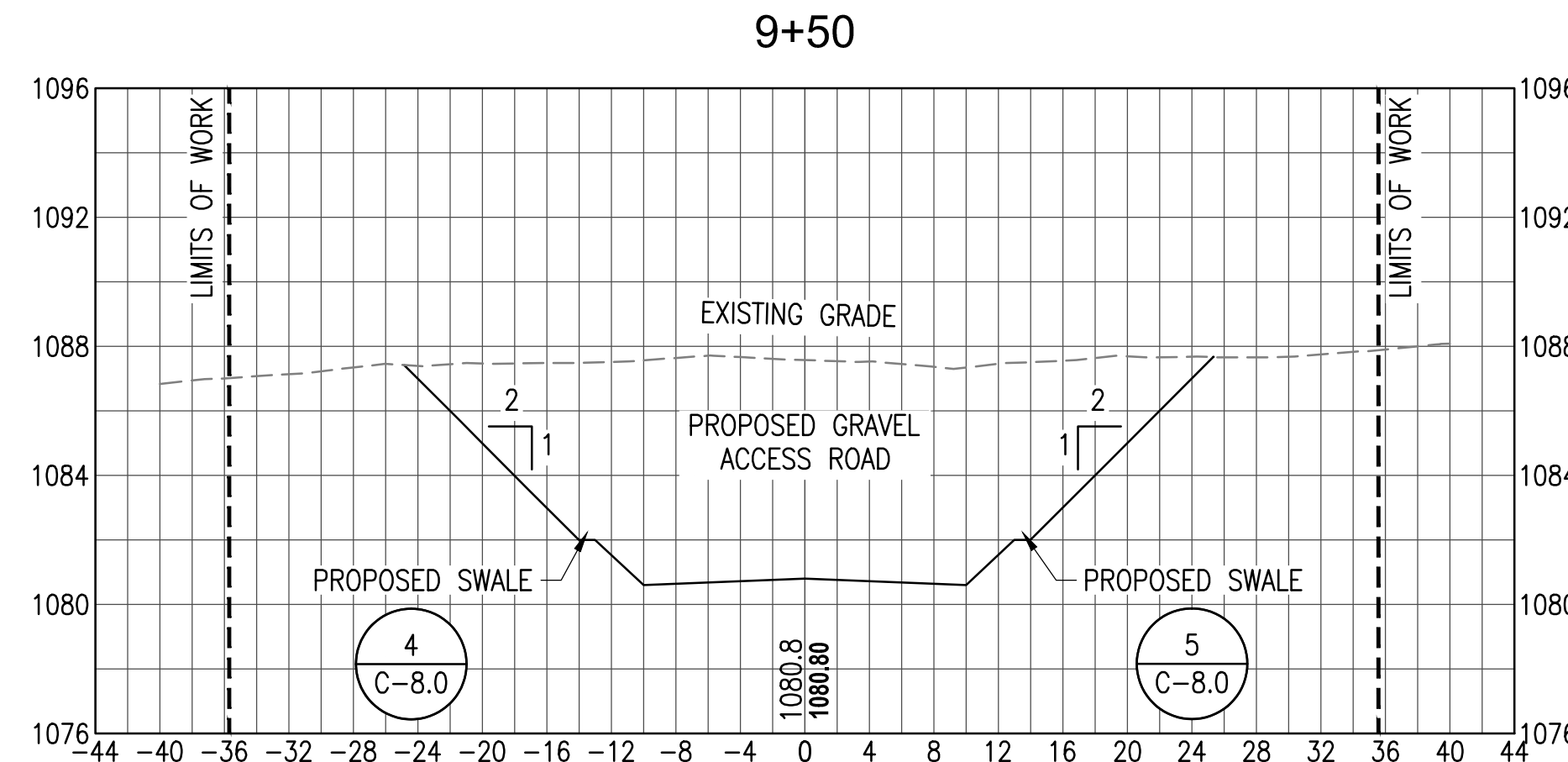
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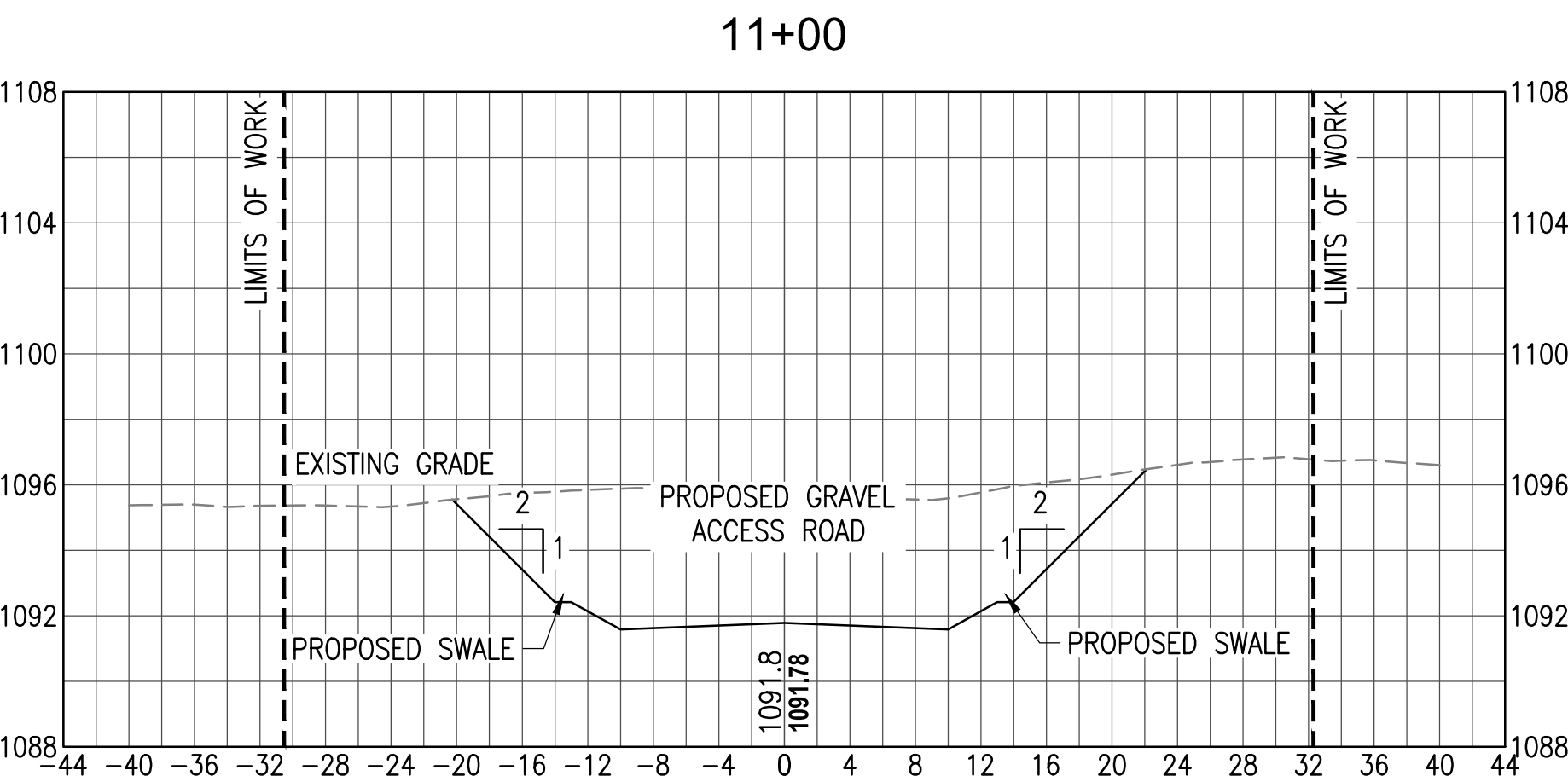
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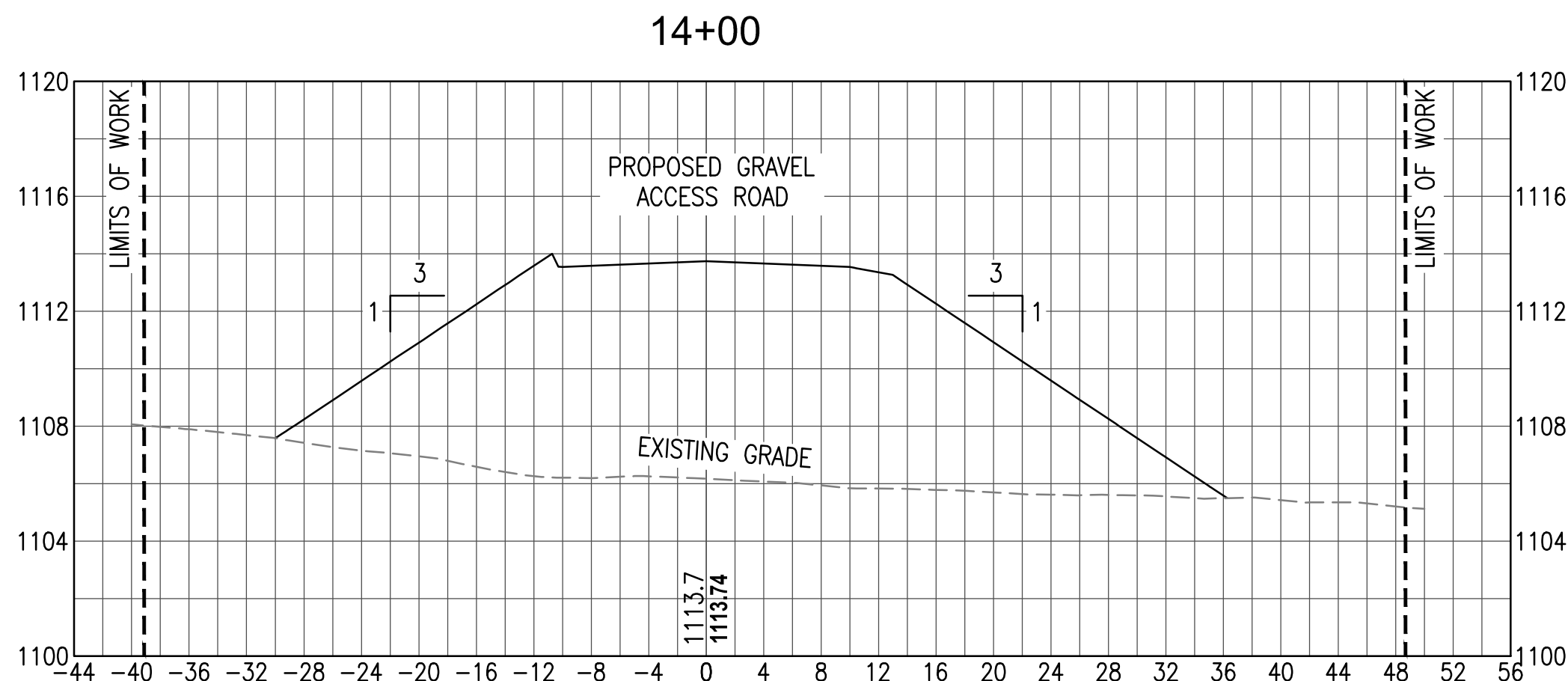
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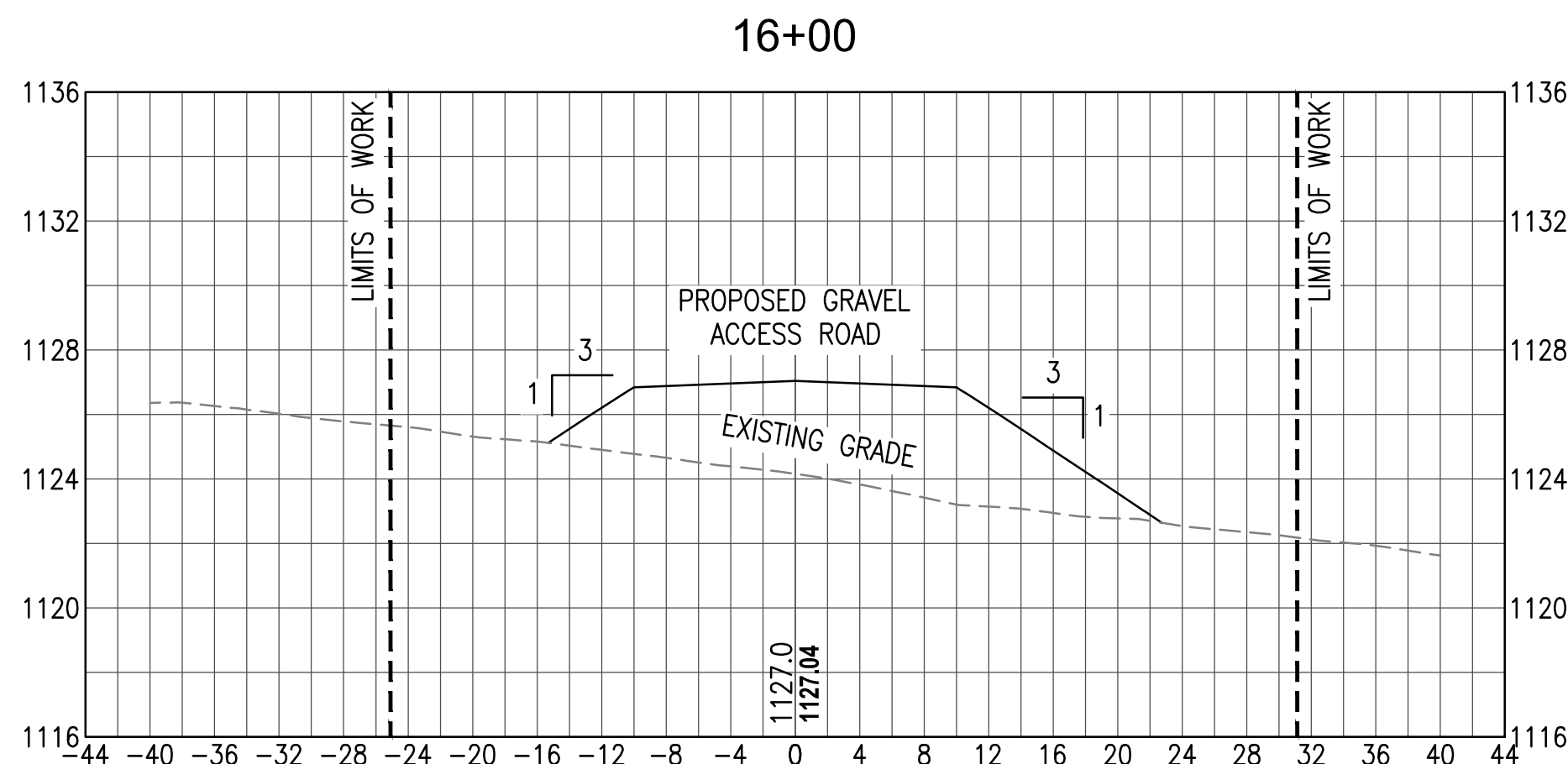
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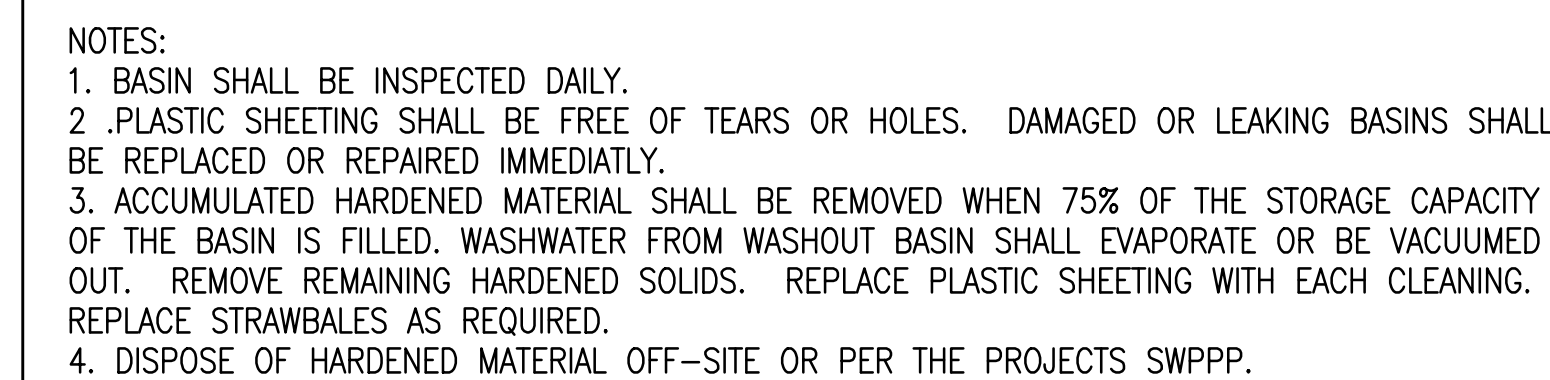
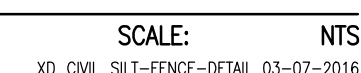
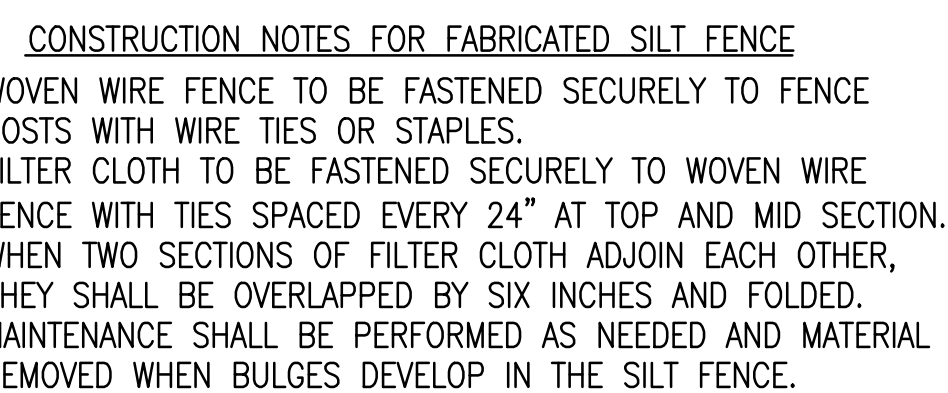
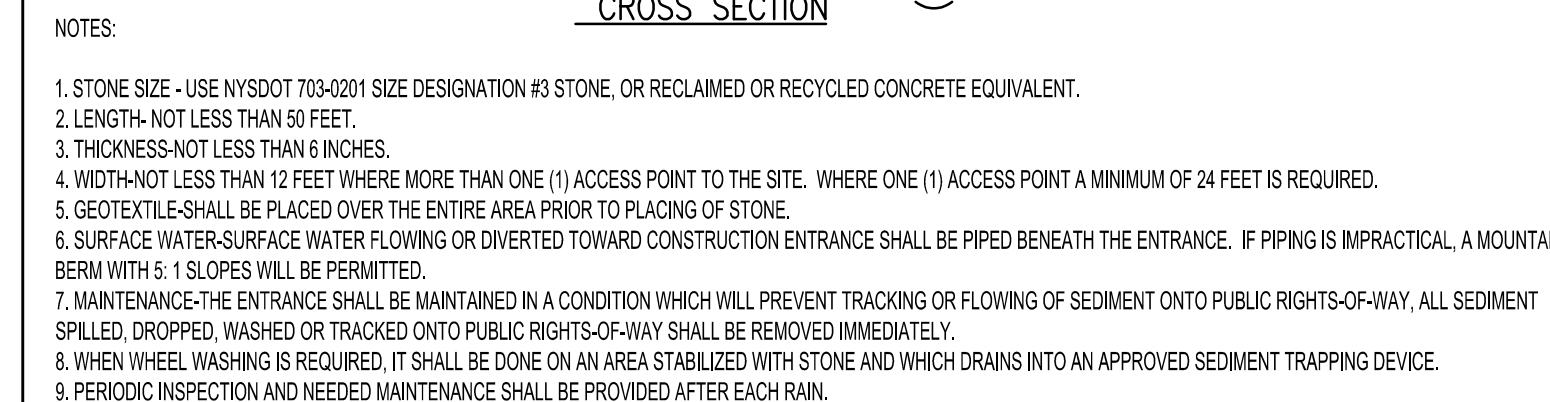
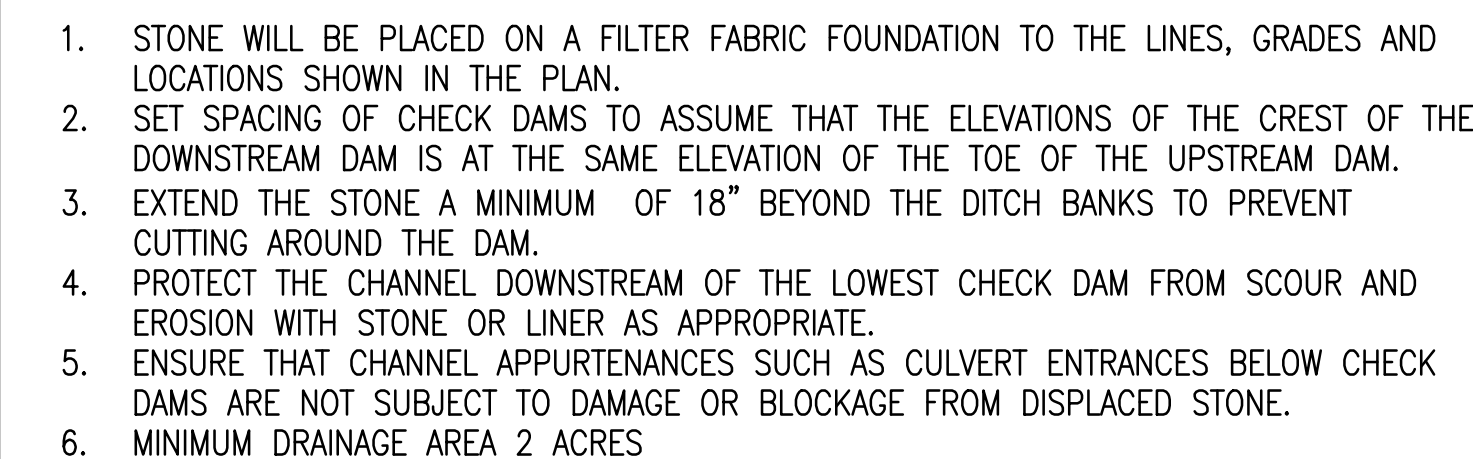
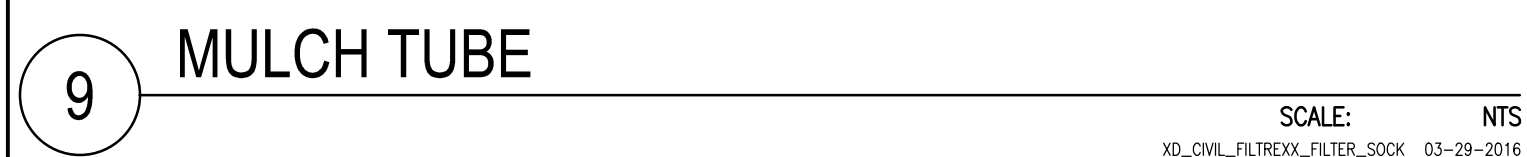
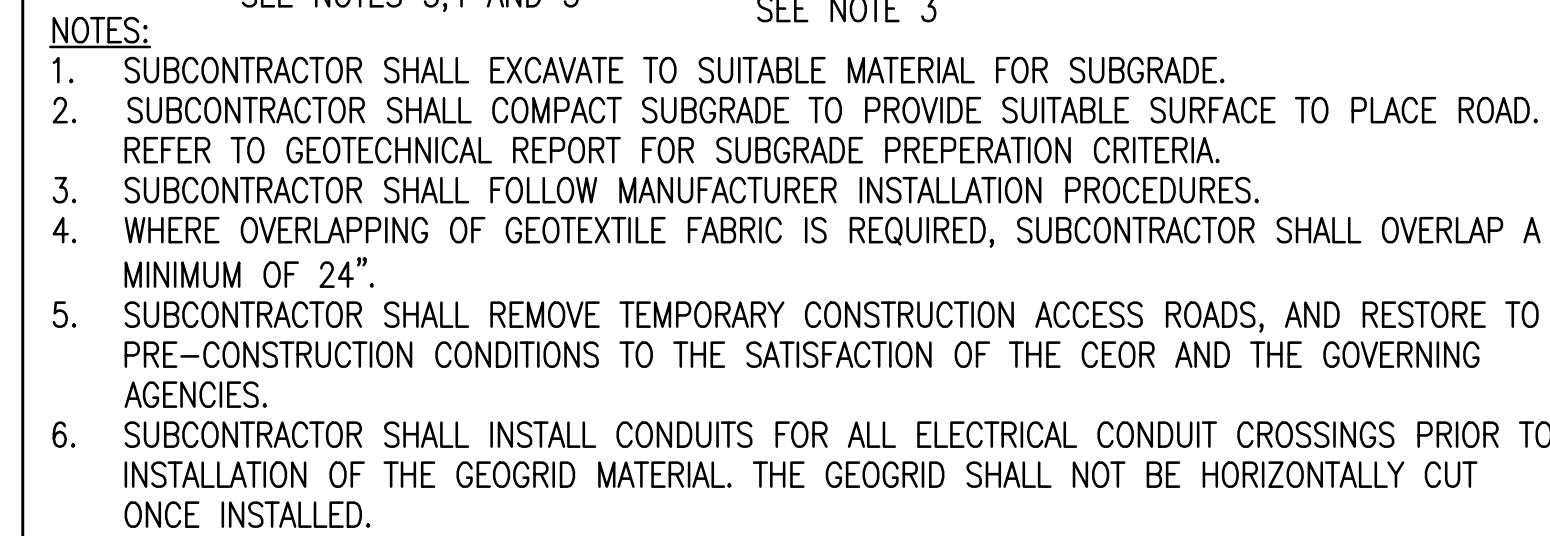
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STATION 16+00

SCALE: H: 1"=10' V: 1"=5'

ACCESS ROAD SECTIONS



APPENDIX 3: TURBINE DETAILS

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Technical Documentation

Wind Turbine Generator Systems

Sierra Platform - 60Hz



Technical Description and Data

Weights and Dimensions

Applicable for Sierra-140 Wind Turbine Generator

Rev. 05 - Doc-0075748 - EN 2021-04-29



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3	Hub Assembly	6
4	Blades	6
5	Machine Head Components.....	7
6	Down Tower Assembly Components	8
7	Medium Voltage Transformer	8

Document Revision Table

Rev.	Date (YYYY/MM/DD)	Affected Pages	Change Description
06	2021-04-29	6	EDITED Column header "Mass (kg)" to "Weight (kg)"
		8	UPDATED values in tables 8 & 9

1 Introduction

This document provides the estimated weights and dimensions of the Sierra-140m rotor wind turbine generator system. The weights and dimensions herein do not include the weights and dimensions of the shipping frames, fixtures, securements or protective shipping materials unless stated otherwise. Actual weights may vary depending on final configuration. All weights must be verified prior to installation and transportation.

2 Tower Sections

The following table gives the maximum weights and dimensions of the tower sections for a hub height of 81 m.

Section	Total Weight (kg)	Total Length (m)	Max Diameter (m)
Top	42500	31.520	3.400
Mid A	49700	31.105	4.300
Base	39000	15.757	4.556

Table 1: Tower section weights and dimensions for an 81 m hub height

The following table gives the maximum weights and dimensions of the tower sections for a hub height of 98 m.

Section	Total Weight (kg)	Total Length (m)	Max Diameter (m)
Top	51470	36.000	3.400
Mid A	69200	35.557	4.300
Base	68580	23.597	4.556

Table 2: Tower section weights and dimensions for an 98 m hub height

The following table gives the maximum weights and dimensions of the tower sections for a hub height of 117 m.

Section	Total Weight (kg)	Total Length (m)	Max Diameter (m)
Top	51470	36.000	3.400
Mid A	69200	35.557	4.300
Mid B	61840	23.520	4.300
Base	68890	19.677	4.556

Table 3: Tower section weights and dimensions of a 117 m hub height

3 Hub Assembly

This section gives the maximum weights and dimensions of the hub assembly.

Turbine	Weight (kg)	Length (m)*	Width (m)*	Height (m)*
Rotor Hub	34000	4.00	3.60	3.40
Rotor Hub, as shipped	36350	4.00	3.60	3.80

Table 4: Weights and dimensions of hub assembly

4 Blades

This section gives the maximum weight of a single blade including the bolts. The length dimension is for the blade only.

The following table gives the maximum weights and dimensions of a 68.6 m blade.

Configuration	Weight (kg)	Length (m)	Max Width (m)	Diameter (m)	Spanwise Center of Gravity, Z (mm)
Root Section	15023	60.6	3.63	2.70	18820
Tip Section	502	10.3	1.62	1.62	62367
Fully Assembled	15524	68.6	3.63	2.70	20229

Table 5: Weights and dimensions of a single blade

* Dimensions reflective of vertical "as shipped" position

5 Machine Head Components

This section gives the maximum weights and dimensions for the machine head components. Drivetrain includes gearbox. The hub and blades are not included unless otherwise stated.

Component	Weight (kg)	Length (m)	Width (m)	Height (m)
Machine Head, without drivetrain and generator, as shipped	32900	10.60	3.90	3.80
Drivetrain, as shipped	47100	5.3	3.2	2.7
Generator, as shipped	10425	3.5	2.1	1.9
Generator	9900	3.1	1.8	1.4
Machine Head with drivetrain and generator fully assembled	87650	10.60	3.90	5.15**
Machine Head and Hub with drivetrain and generator fully assembled	121650	13.83	3.90	5.15**

Table 6: Weights and dimensions of the machine head components.

** Full assembled height includes passive cooler. Maximum height with lightning rod is 6.92m

6 Down Tower Assembly Components

This section gives the weights and dimensions for the down tower assembly.

Component	Weight (kg)	Length (m)	Width (m)	Height (m)
DTA DFIG Converter, as shipped	3800	3.0	1.2	2.6
DTA DFIG Converter	3500	2.86	1.10	2.38

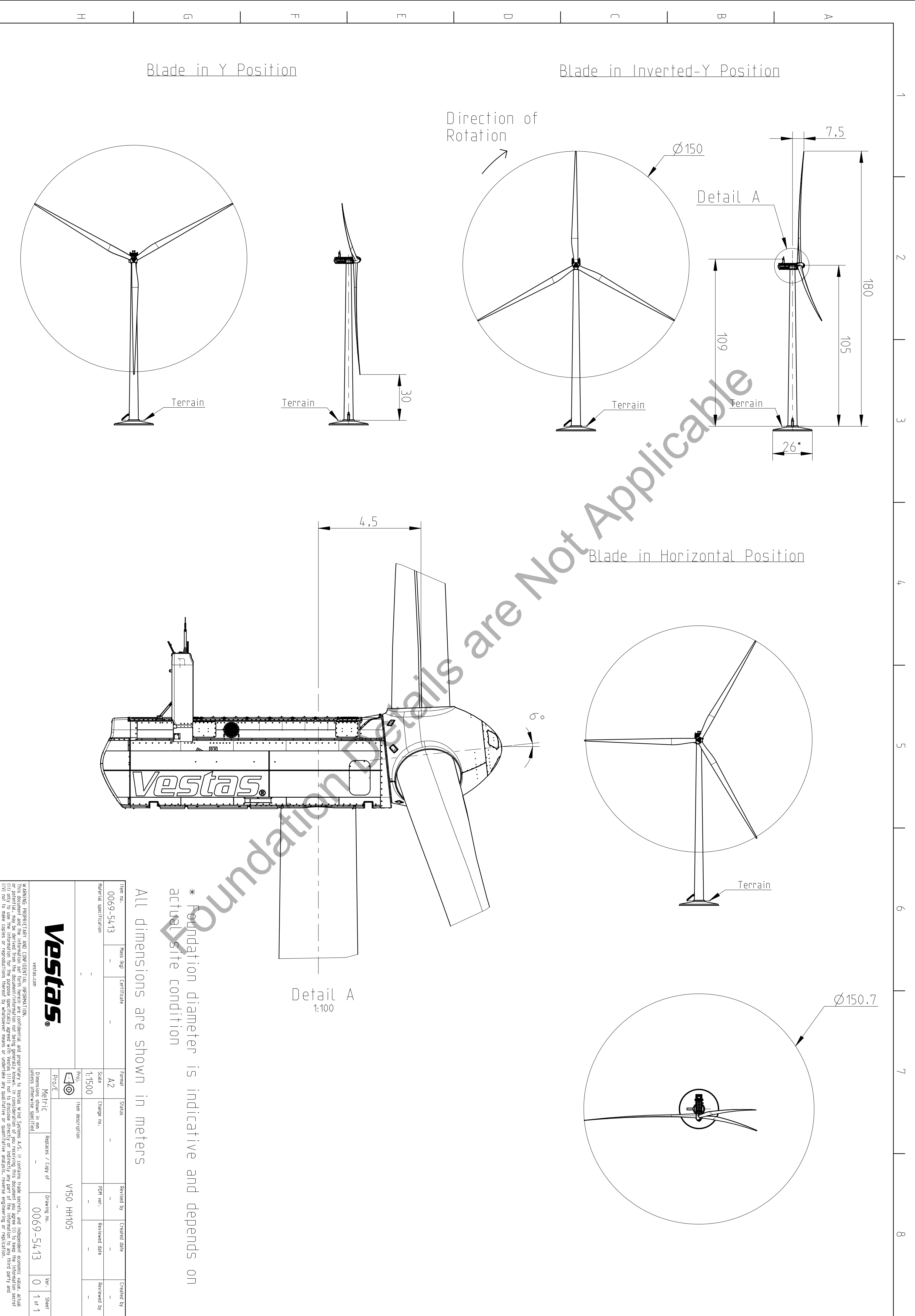
Table 8: Weights and dimensions of the down tower assembly components

7 Medium Voltage Transformer

This section gives the weights and dimensions for the medium voltage transformer that is pad-mounted next to the wind turbine generator.

Component	Weight (kg)	Length (m)	Width (m)	Height (m)
Transformer	14000	2.93	2.85	2.5

Table 9: Weights and dimensions of the pad mount transformer



* Foundation diameter is indicative and depends on actual site condition

All dimensions are shown in meters

Item no.	Mass (kg)	Certificate	Format	Status	Revised by	Created date	Created by
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Material specification	-	-	Scale	Change no.	PPM ver.	Reviewed date	Reviewed by
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	-	-	Proj.	Item description			
				V150 HH105			
			Pro/E	-			
			Metric	-			
			Dimensions shown in mm unless otherwise specified	-			
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WARNING: PROPRIETARY AND CONFIDENTIAL INFORMATION.

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General Description

Ice Impact on operation of Wind Turbines

- Risk and Mitigation -



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See general reservations, notes and disclaimers (including, Section 8 General Reservations, Notes and Disclaimers) to this general specification.

1 References

Ref.	Document title
[1]	<i>Wind Turbine Icing and Public Safety – a Quantifiable Risk?</i> . Colin Morgan and Ervin Bossanyi, Garrad Hassan, 1996.
[2]	<i>Risk Analysis of Ice Throw From Wind Turbines</i> . Henry Seifert, Annette Westerhellweg and Jürgen Kröning, DEWI, 2003.
[3]	<i>Wind Energy Projects in Cold Climates</i> . IEA Wind – Expert Group Study on Recommended Practices May 22, 2012
[4]	<i>Wind Energy Production in Cold Climate</i> . Tammelin, Cavaliere, Holttinen, Hannele, Morgan, Seifert and Sääntti, 1997.
[5]	<i>General Specification VID</i> . Vestas Wind Systems A/S, DMS 0049-7921.
[6]	<i>General Description VAS</i> Vestas Wind Systems A/S, DMS 0068-6577
[7]	<i>General Specification VDS</i> . Vestas Wind Systems A/S, DMS 0060-8398.

2 General Description

Modern wind turbines are large structures with large surface areas where ice can form and accumulate under certain atmospheric conditions, such as ambient temperatures near 0°C, in combination with high relative humidity and precipitation. This is no different than for other large structures, such as transmission lines, bridges, buildings etc. The adhesion of the ice to the surface of the wind turbine varies depending on the formation conditions and the surface state, but since tower, nacelle, hub and blade surfaces are smooth, accumulated ice can shed from the turbine and fall to ground due to gravity. Accumulated ice can impact the power performance of the wind turbine.

In addition, and specifically for the blades of the wind turbine, ice accumulation is accelerated if the required atmospheric conditions are present and the turbine is in operation (i.e. the rotor is turning). This is because in rotation, the blades are forced into contact with increased amounts of moisture in the air and experience an increased surface wind chill. Ice accumulation on the blades can lead to ice throw in addition to ice shedding, where ice is not only falling approximately vertically down from the turbine, depending on wind speeds, but is also sliding off the rotating blades due to the rotational forces and thrown some distance from the wind turbine. This distance depends on the rotor speed, the wind speed and the constitution of the ice accumulation.

The related safety aspects of ice shedding and ice throw must be taken into account during project development, site operation and service.

The purpose of this General Description is to present information on the risk and offer recommendations for how to mitigate the risk, including explaining what turbine options are available for ice performance impact and ice risk mitigation

3 Icing Risk

Formation and accumulation of ice on the wind turbine structure is dependent on atmospheric conditions at the wind turbine installation site and the operation mode of the wind turbine. Fall of accumulated ice from a wind turbine at standstill or ice throw from a wind turbine in operation, can be caused by sudden changes in atmospheric conditions, such as ambient temperature, precipitation, wind or solar radiation.

It can also be caused by mechanical movement of the wind turbine structure due to vibrations, operating mode state changes, such as acceleration/deceleration, emergency stops etc. and it is impossible to predict when the individual discrete ice fall event or ice throw event occurs. Ice fragments, blocks, sheets or icicles may loosen and fall or slide off the turbine, making the area directly under the nacelle and rotor the highest risk zone [1].

The second highest risk zone is a surrounding circular area around the wind turbine, where ice throw may propel ice fragments away from the turbine. While the turbine will yaw around its tower vertical axis 360 degrees, there is typically a predominant wind direction for a given site and installation pad, so the ice throw risk is not uniform 360 degrees around the turbine but will be higher in some wind sectors than others. General guidance about this risk distribution is not possible since it depends on the site conditions for each project.

The distance ice fragments may be thrown from the wind turbine can be up to several hundred meters, depending on the conditions [1,2]. Any persons (general public or site personnel), buildings, installations, infrastructure, transport equipment etc. that are hit by falling ice fragments may sustain injury or damage respectively, if adequate protective measures are not ensured.

4 Icing Risk Mitigation

Risk of ice fall and ice throw must be considered during project scoping, project planning, project permitting as well as wind power plant operation and service. This includes wind power plants installed in densely populated areas, recreational areas, near roads, industrial areas etc.

Vestas has installed more than 69,000 wind turbines in more than 80 countries over the last 40 years (per September 2019), many of which are experiencing icing conditions for significant parts of the year. With this field experience combined with guidance from recognized industry practice [3], Vestas proposes the following actions to minimize the risk and impact of ice fall and ice throw for ice-prone wind power plant sites:

4.1 Managing Turbine Location

In the siting and permitting phase of a project, it should be made sure that the individual turbines are located a safe distance from general public recreational or occupational use areas, roads, buildings, installations, infrastructure, etc, or mitigations are in place to reduce risk under icing conditions to an acceptable level. Vestas always recommends a site-specific icing risk assessment, but if this is not possible, then general guidelines may be useful.

Certifying bodies DNVGL and DEWI recommend use of the reference "Wind Energy Production in Cold Climate" [4], which proposes the following rule for calculating a safe distance "d" for ice fall and ice throw, respectively:

$$\text{Ice fall: } d = v \cdot (D/2 + H) / 15$$

$$\text{Ice throw: } d = (D + H) \cdot 1.5$$

where d = safe radial, horizontal distance from turbine tower in m, D = rotor diameter in m, v = wind speed at hub height in m/s and H = hub height in m.

Site-specific safe distances may deviate from this general rule, depending on the design of the turbine, wind speed, rotor speed, blade surface state, atmospheric conditions and many other factors. The siting restrictions that an icing risk

assessment may infer or which this general rule may infer, can be reduced by implementing an ice detection system to the turbine, which allows the turbine to be shut down in the event ice build-up is detected on specific locations of the turbine structure. The extent of such a reduction depends on the local conditions at a specific site.

4.2 Applying Guards and Visual Warnings

Shielding off a wind turbine or wind power plant with fences and warning signs can be a means of providing appropriate protection of site personnel and the general public [3]. Only a full access restriction with a surrounding fence will provide physical protection but may not be feasible for certain sites. Hence, site-specific risk assessments with appropriately scaled, site-specific risk mitigation measures should always be undertaken.

4.3 Assuring Safety of Operators

Accessing and working in and around a wind turbine under icing conditions always have to be based on a risk assessment and should be limited to the largest possible extent to minimize risk. Appropriate safety precautions for accessing a wind turbine under icing conditions include:

- Shutting down the wind turbine remotely
- Yawing nacelle to position the rotor opposite the side of the tower where the tower door is placed
- Observe if and where the ice is built up, taking this into consideration together with the direction of the wind, when approaching the turbine
- Starting the wind turbine remotely when work is complete.

4.4 Vestas Ice Detection™ System

To reduce the risk of ice throw (but not ice fall), the wind turbine can be shut down remotely when site personnel observe icing conditions and ice formation on the wind turbine. In practise, turbines are not subject to onsite surveillance so Vestas also offers automatic detection and shutdown of a wind turbine, through installation of either a conventional nacelle-based ice detector such as Goodrich or Labkotec or Vestas Ice Detection™ system (VID).

Vestas Ice Detection™ system (VID) employs state-of-the-art DNV-GL certified sensing technology including full integration with VestasOnline® SCADA for operation and alarm. A master-slave functionality is offered such that one ice detection system can control the automatic shutdown and restart of all wind turbines in a wind power plant. Master-slave functionality is available for use in regions where regulations permit it.

Ice detection is offered in two variants: a nacelle based system and a blade based system: Vestas Ice Detection™ system (VID). While the nacelle based system is simple, it does not provide the same detection level as a blade based system, because the correlation between nacelle ice formation and blade ice formation is weak. For this reason, nacelle based ice detection is only recognized

in some countries. Also the nacelle based ice detection does not have the same DNVGL certification as Vestas Ice Detection™ system (VID).

The blade based ice detection is more sophisticated. It comprises an accelerometer in each blade which is connected to a hub mounted control box (Ice Detection Cabinet), which in turn is connected to the turbine's hub controller. The system will provide information on ice build-up on the full blade and stop the turbine operation (production) when certain conditions are met, primarily that the ice build-up is above an adjustable threshold and the temperature is below 5°C.

Ice detection on the blade is measured as a mass increase of the blade. Mass changes lead to deviations of natural frequencies of lower modes of the blade. With the accelerometers in each rotor blade, the system continuously and automatically monitors specific natural blade frequencies. When the detected frequency deviations exceed predefined thresholds, warning and alert signals are issued to the turbine controller.

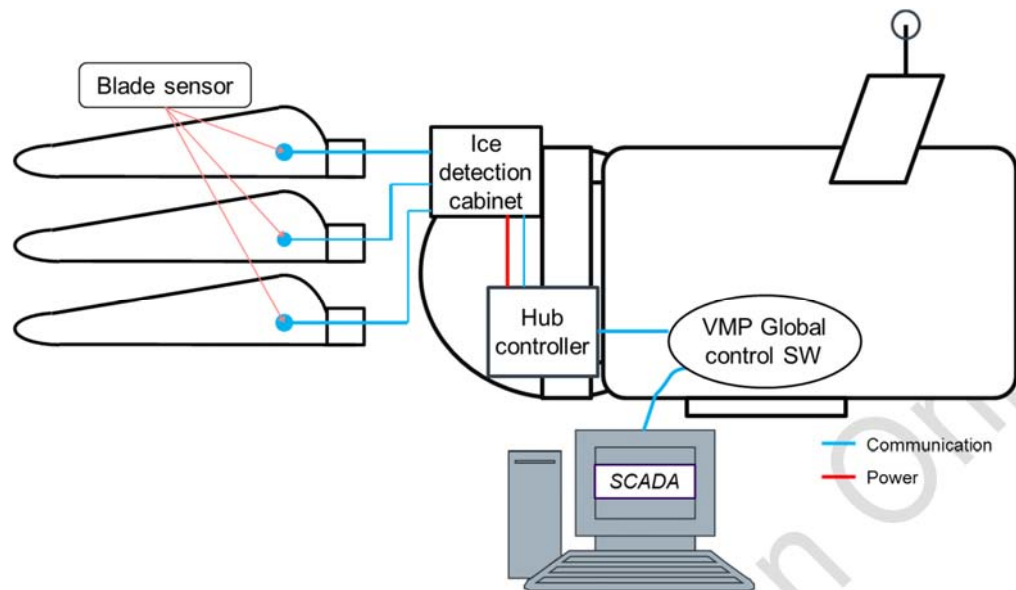
Ice detection thresholds based on the achievable frequency resolution of the system is set to default values, but may be adjusted to local climatic characteristics and regulations to further reduce ice throw risk.

Ice detection is executed continuously with the turbine in operation / production and at standstill, leading to a real-time detection of ice formation on the blades.

The blade based ice detection system continuously signals the icing condition of the blades as well as its own system status to the turbine controller. According to these signals the controller can automatically shut-down the turbine in the case of an ice alert signal and automatically restart the turbine after the ice-alert has been lifted. Via the provided signals the controller can also check the validity of the received ice status signals and react accordingly.

After turbine shutdown due to detected ice formation, the system continues its measurements at standstill. Thus, prior to a restart of the turbine, the absence (or just a noncritical remainder) of ice can be confirmed and the controller can then automatically start-up the turbine.

The layout of the blade based ice detection system is shown in the figure below.



Other means of ice detection exists, such as power curve degradation monitoring, detection of rotor imbalance caused by blade ice formation by a main shaft vibration sensor, but since ice can build up in a symmetrical manner such a situation will not trigger the sensor. Since, Vestas' blade based ice detection system has an individual sensor in each blade, symmetric ice formation will still be detected.

IMPORTANT Ice detection technology is still new and relatively immature, so despite carrying certification, ice detection systems that cause the turbine to shut down do not provide a detectability of 100%. Therefore, equipping a wind turbine with an ice detection system cannot be regarded as a guarantee of prevention of ice throw. It will, however, reduce the ice throw risk as also recognized by authorities in several countries.

When ice formation is detected and trigger levels exceeded, the turbine performs the following actions:

1. Ice warning to wind turbine controller and VestasOnline® SCADA but no change of wind turbine operating mode.
2. Ice alarm to wind turbine controller and VestasOnline® SCADA triggering shutdown of the wind turbine.
3. Revocation of the ice alarm state when icing conditions disappear and blade mass is reduced below triggering threshold and automatic or manual restart of the wind turbine, depending on the control settings.
4. Optionally, and provided that either the Vestas Anti-icing™ system or the Vestas De-icing™ system is installed, the ice detection signal can be used by the turbine controller to trigger their activation.

The ice detection system signals the hub controller to shut down the turbine. If the ice detection system is not able to measure ice (for example due to a sensor

failure) the turbine will be stopped automatically if the ambient temperature is below 5°C.

A 24 VDC output is available in the ground controller which can signal to connected customer installed external equipment (warning sound, warning light etc.) when the wind turbine is stopped by the ice detection system.

For further details on Vestas Ice Detection™ system, please refer to the General Specification [5] or contact Vestas.

5 Cold Climate Effects on the Wind Turbine

Vestas has wind turbines that are designed for survival in temperatures as low as -40°C and operation down to -20°C. A Low Temperature package is available as an option that allows the wind turbine to operate down to -30°C. These temperature ranges are applicable irrespective of icing.

Ice loads are considered in the wind turbine design loads according to DIBt 2012 and reflected in the loads evaluation. The DIBt 2012 ice load cases are also applied to the IEC design loads.

The wind turbine is equipped as standard with a tower top accelerometer that protects the structure from overloads. Similarly, each blade is equipped with load sensors that will stop the turbine if loads or rotor balance are not within threshold limits. While these protection features are in place and will protect the turbine from all load events, including icing, they are not expected to be triggered by icing events as it is very unlikely that ice accumulation can be severe enough to approach the trigger levels of the tower and blade load sensors.

Icing on wind sensors or blades will affect the power production of the turbine. Icing on wind sensors will lead to a wrong measurement and correspondingly wrong operating response from the wind turbine that affects power production negatively. Ice build-up on the blades will affect the lift and drag coefficients of the blade and reduce the power production.

For mitigating power production deterioration due to icing on wind sensors, Vestas employs heating elements in the ultrasonic wind sensors.

For mitigating power production deterioration due to icing on blades Vestas offers either the Vestas Anti-icing™ system (VAS), or the Vestas De-icing™ system (VDS) – dependent on turbine model. These are explained in further detail in the next sections.

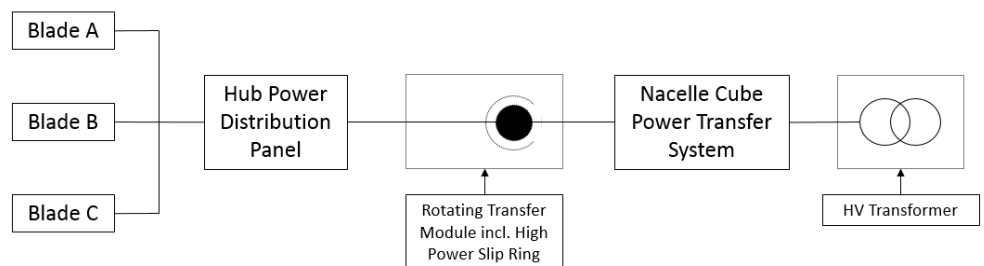
6 Vestas Anti-icing™ System

The Vestas Anti-icing System™ (VAS) is a fully integrated turbine system designed to prevent and actively remove ice build-up on wind turbine blades. The VAS heats targeted areas of the blade to prevent and remove any ice accretion when activated, thereby limiting blade aerodynamic performance degradation and consequent sub-optimal wind turbine generator (WTG) power production.

IMPORTANT The Vestas Anti-icing™ system is designed to improve turbine power production in cold climate conditions and is a performance enhancement. It is not designed for eliminating or reducing ice fall and ice throw risks.

The VAS comprises of:

- A number of electro-thermal heating (ETH) elements embedded within the blade shell laminate in targeted areas.
- The ETH elements are controlled by the turbine controller in the WTG, which will identify and switch on and control the power the ETH elements dependent on the severity of the icing conditions.
- The control method permits the opportunity to vary the power dependent on the environmental conditions in which the WTG operates.
- The VAS is activated automatically based on a detected degradation in turbine performance (Power Curve Ice Detection (PCID)) and environmental factors (e.g. below a threshold operating temperature), a signal is sent to the turbine in order to activate the heating system. Provision of manual activation is provided for specific operational needs.
- The system operates while the WTG is in production and rotating, so called anti-ice mode, or in the most severe conditions the WTG is stopped and the heating performed on the stationary rotor, so called de-ice mode.
- The power is provided by the turbine through a nacelle-hub power transfer system that allows the ETH elements to be powered whilst the rotor is spinning or when it is stationary.



- The control and monitoring of the VAS is fully integrated into the turbine controller. Safety monitoring functions run continuously in parallel to ensure that the VAS operates within appropriate heating and environmental limits.

The VAS is automatically triggered via the use of Power Curve Ice Detection (PCID), with an additional option for manual activation by the operator.

The PCID is a software (SW) algorithm that is located in the VestasOnline® Supervisory Control and Data Acquisition (SCADA) system which compares the current WTG power performance to a nominal reference power curve delivered by Vestas, ambient conditions (i.e. temperature and wind speed), and general logging information from the WTG.

The reference curve, is configured to match individual turbine performance, and is based on ice-free data.

Based on a detected degradation in WTG power performance compared to the reference power curve, an activation command is sent to the WTG. This feature can be both enabled and disabled. In cases where it is disabled, it is possible to send a manual activation trigger signal from SCADA to the WTG.

The power curve degradation level at which the system will trigger an anti-icing command is configurable, together with the minimum wind speed and maximum ambient temperature at which automatic triggers can happen. The degradation level can be configured for individual wind speed intervals, to allow for lower trigger levels at low wind speeds, to compensate for increased statistical variance in the power curve.

The sequence of operation of the VAS (Operational Mode):

1. A Power Curve based Ice Detection (PCID) operating via the VestasOnline® SCADA system, detects a reduction in turbine performance below a set threshold.
2. The park level VestasOnline® SCADA system issues an anti-icing command to the turbine.
3. Based on the anti-icing command, the turbine controller activates the anti-ice heating.
4. At recovery of the grid power production to a defined fraction of the nominal reference power curve, the turbine will halt the heating process.

The anti-icing system can operate within the following ambient conditions:

- Ambient temperature between -20°C and +10°C.
- Wind speed below WTG cut-out - 25 m/s (anti-ice operational mode)
- Wind speed below 13m/s (de-ice operational mode).

7 Vestas De-icing™ System

Vestas De-icing™ system (VDS) maximizes energy production in icy conditions, by employing air heaters to force hot air through the blade interior volume heat up the blade surface. With full VestasOnline® SCADA integration, the system continuously monitors turbine power curve performance. Via the systems'

automatic control, the wind turbine will only engage in de-icing when there is a net power production gain from doing so.

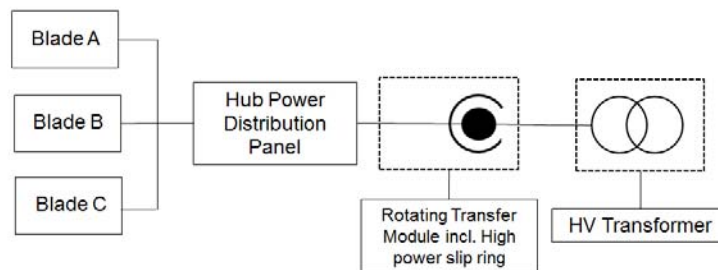
The basis for a de-icing blade is a standard blade. Modifications are made to allow for circulating hot air inside the blade cavities. Additionally a Hot Air Installation unit (HAI) is integrated in the root of each blade. The HAI unit comprises of ducting, a fan unit and heater units. Air inlet and outlet from the HAI are connected via flexible ducting to the blade cavities of the de-icing blades. To ensure optimal efficiency, the Vestas De-icing™ system is designed to de-ice the outer third of the turbine blade full chord and the remaining two-thirds of the leading edge towards the tip.

IMPORTANT

The Vestas De-icing™ system is designed to improve turbine power production in cold climate conditions and is a performance enhancement. It is not designed for eliminating or reducing ice fall and ice throw risks.

All mechanical and electrical parts of the system are accessible from the turbine hub and root of the blade itself, making it safer and more convenient from a service perspective to maintain the system. The fan and heaters are serviceable parts, each of them individually removable from the HAI. Service can be bundled into the annual service schedule of the turbine.

The de-icing system draws power directly from the high voltage transformer (a step-down transformer is used in the Mk3E to allow for the increase in voltage on the HV transformer on that platform). The layout of the VDS power system is as indicated in the figure below:



The VDS can be configured for automatic activation via VestasOnline® SCADA, with an additional option to activate manually by a VestasOnline® SCADA operator. The automatic activation is based on a power curve degradation algorithm, comparing current turbine power performance to a previously defined turbine-specific reference curve, which is delivered by Vestas. Based on a detected degradation in turbine performance compared to the reference curve, a de-icing command is sent to the turbine, provided all turbine safety and operational envelope checks are okay.

The reference curve can be configured to match individual turbine performance, and is based on ice-free data.

The power curve degradation level at which the system will trigger a de-icing command is configurable, together with the minimum wind speed and maximum ambient temperature at which automatic triggers can happen. The degradation level can be configured for individual wind speed intervals, to allow for lower trigger levels at low wind speeds, to compensate for increased statistical variance in the power curve.

Additional to VestasOnline® SCADA activation, the VDS can be activated locally in the turbine, via the turbines operator panel.

The turbine will be paused with the rotor stationary during a de-icing cycle. All three blades will be heated up at the same time.

The sequence of operation of the VDS is as follows:

1. A Power Curve based Ice Detection (PCID) operating via the VestasOnline® SCADA system, detects a reduction in turbine performance below a set threshold.
2. The park level VestasOnline® SCADA system issues a de-icing command to the turbine.
3. Based on the de-icing command, the turbine enters into its de-icing cycle.
4. After the end of the de-icing cycle, the turbine may be manually or automatically put back into operation (Customer setting).

The de-icing system can only be activated when the following conditions are met:

- Ambient temperature between -15°C and +7°C.
- Wind speed below 13 m/s.

Automatic activation of the de-icing system will only allow 3 de-icing cycles within a 24 hours period; however manual activation can be done more frequently.

For more information about the Vestas De-icing™ system and the operational envelope, please refer to the General Specification [6] or contact Vestas.

8 General Reservations, Notes and Disclaimers

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- This document, General Description, is not an offer for sale, and does not contain any guarantee, warranty, promise, commitment, representation and/or verification by Vestas, whether express or implied, including, without limitation, in respect of the effect of icing events on the wind turbine performance and structural integrity, are hereby expressly disclaimed by Vestas.
- Images and illustrations in this document may differ from the actual design.
- VID supports reducing the risk of ice throw, but is not designed to reduce the risk of ice fall, ice drops and/or ice fall; any use of, or reliance on, the system for such purpose is at recipients own risk. The risk of ice throw, ice drops and/or ice fall caused by operation of the wind turbine and operation of the VID is solely the responsibility of the customer.
- VAS and VDS are not designed to reduce the risk of ice throw, ice drops and/or ice fall; any use of, or reliance on, the system for such purpose is at recipients own risk. The risk of ice throw, ice drops and/or ice fall caused by operation of the turbine and operation of the VAS or VDS is solely the responsibility of the customer.
- For VID, actual icing and site conditions have many variables and states (for instance ice storms or ice due to rime accretion) and these differences when compared to the threshold level of VID may have an impact on VID performance.
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APPENDIX 4: TRANSPORTATION STUDY

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MEMORANDUM



ENGINEERS
PLANNERS
SURVEYORS

Date: April 13, 2022

To: Lydia Lake, P.E. – Borrego
From: Matthew Van Wie, IE | Dan Berkowsky, P.E. – Creighton Manning Engineering
cc: Don Adams, P.E. – Creighton Manning Engineering

Project: Wind Transport Studies – 153 YMCA Road, Amsterdam, NY
Re: Preferred Delivery Routes and Temporary Roadway Improvements

Creighton Manning Engineering (CM) was retained by Borrego Solar Systems (Borrego) to assess road conditions between a proposed wind turbine installation in Amsterdam, New York and the proximate interstate highway. The address of record for this project is 153 YMCA Road, Amsterdam, New York. The purpose of this assessment was to develop and recommend a feasible delivery route for delivery of oversized turbines and other components. Delivery routes were selected to prioritize NY State roadways, avoid underpasses and overhead obstructions, and minimize acute angle turns. One potential delivery route was identified for turbine delivery vehicles using these criteria and with use of aerial and street-level imagery. Additional routing alternatives were identified that would be appropriate for typical, standard-height construction and delivery vehicles.

To confirm feasibility, identify potential road obstructions or features not readily apparent on satellite imagery, and document potential temporary roadway improvements and/or widening required to accommodate large delivery vehicles, a field visit was conducted by CM staff Engineers on December 10, 2021 and March 4, 2022. The observations and data collected was then used to further analyze and refine the routing alternatives, confirm vehicle maneuverability, and provide Borrego with further insight into potential temporary improvements that would be required along each route.

Delivery Vehicles

Borrego provided CM the dimensions of the various delivery vehicles to be used to transport turbine components to the site. The dimensions of the largest of these delivery vehicles are described and illustrated in Figure 1 below.

- Maximum Length – 267'
- Maximum Height – 15'-6"
- Maximum Width – 14'

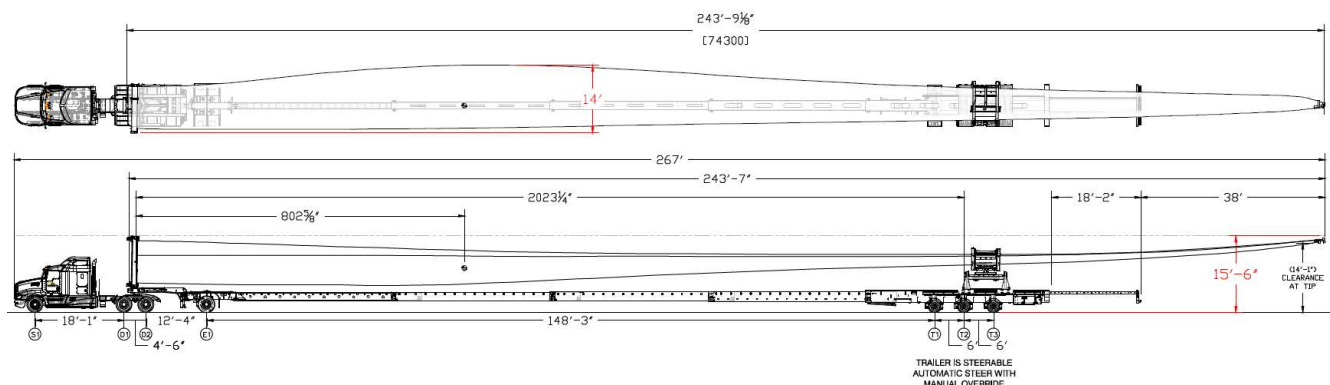


Figure 1 - Preliminary Delivery Vehicle and Largest Anticipated Delivery Load

MEMORANDUM

153 YMCA Road, Amsterdam, NY – Preferred Delivery Routes and Temporary Roadway Improvements
April 13, 2022

Figure 2 illustrates the turning template for a 90-degree turn provided by the vendor. This analysis assumes use of the largest turbines (V150) for which dimensions are provided.

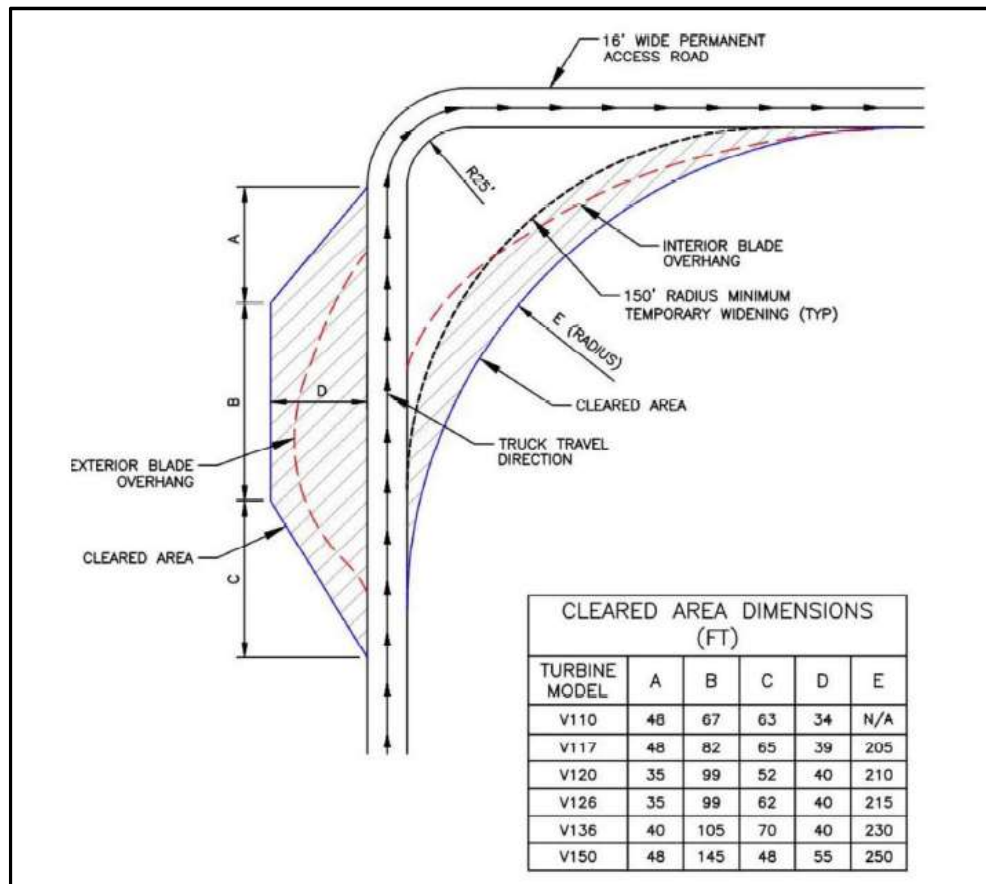


Figure 2 - Vendor Supplied Turning Template Quantifying Dimensions for Roadway Widening and Vertical Clearance Requirements

Based on the above delivery vehicle dimensions and CM's previous experience with turbine delivery vehicles, an assumed 165' inside turning radius and a 290' outside overhang radius was utilized to verify intersection geometry and any potential improvements needed. Above-ground street furniture and other obstructions more than 10 feet tall located within the 290' radius on the inside of turns and the area indicated on the outside of turns may require temporary removal or relocation to provide necessary clearance of rigid-body turbines as the vehicle navigates through turns at intersections.

Overheight (15'-6") Vehicle Routing Alternative Evaluated

A delivery route alternative for delivery vehicles with turbine loads with heights of 15'-6" was developed for access to the project site from Interstate I-88. The route developed and evaluated during the field visit is as follows:

- A. I-88 Exist 24, to NY-7 westbound, to NY-395 northbound, to NY-20 westbound, to NY-30 northbound, to CR-147 northbound, to CR-149 northbound, to CR-140 northbound, to Bean Hill Road, to YMCA Road

A map illustrating this route is attached to this memo for reference.

MEMORANDUM

153 YMCA Road, Amsterdam, NY – Preferred Delivery Routes and Temporary Roadway Improvements

April 13, 2022

Standard-Sized Vehicle Routing Alternatives Evaluated

Two delivery route alternatives for standard-sized delivery trucks and construction vehicles were developed for the delivery vehicles to access 153 YMCA Road from Interstate I-90. These routes will not require any road modifications or intersection improvements. The routes developed and evaluated during the field visit are as follows:

- B. I-90 Exit 28, to NY-920P eastbound, to NY-5S eastbound, to CR-164 southbound, to NY-161 eastbound, to CR-143 (Youngs Corners Road) southbound / westbound, to Bean Hill Road southbound, to YMCA Road.
- C. I-90 Exit 27, to NY-30 southbound, to NY-161 westbound, to CR-143 (Youngs Corners Road) southbound / westbound, to Bean Hill Road southbound, to YMCA Road.

A map illustrating these route alternatives is attached to this memo for reference.

Field Visit Findings

Prior to the field visit, figures of each intersection along the proposed delivery route was created which overlaid the inside and outside turn radii of the large turbine delivery vehicles. These figures were then referenced by staff engineers in the field to identify potential improvements or other obstructions that would need to be relocated, such as utility poles, or removed, such as trees and vegetation. The general roadway condition along each route was also evaluated to identify and avoid segments with significant asphalt deterioration, culverts, or other conditions that may be unfavorable to oversized and overheight vehicles. Further, existing utilities, roadside drainage and other potential conflicts visible during the field visit were noted. As shown in the attached figure and described below, the overheight vehicle route will likely require some roadway modifications such as above ground clearing and temporary road widening at specific locations. The two route alternatives for standard-sized vehicles will likely not require any type of roadway modifications.

Route A (Overheight Vehicles): I-88 Exit 24 Alternative (Red Route)

Routing Alternative A was specifically analyzed for compatibility with overheight vehicles with heights of 15'-6" when transporting the turbine blades. The route utilizes I-88 Exit 24 from either the eastbound or westbound directions. From I-88 Exit 24, delivery vehicles would travel on NY-7 westbound, to NY-395 northbound, to NY-20 westbound, to NY-30 northbound, to CR-147 (Eaton Corners Road) northbound, to CR-149 (Mill Point Road) northbound, to CR-140 (Peck Road) northbound, to Bean Hill Road, to YMCA Road. The field data collected for this alternative is shown in the attached intersection figures and the following items were identified:

Improvements Anticipated:

- Intersection of CR-147 (Eaton Corners Road) and NY-50 (Figure Y1) – This intersection will likely require ground clearance at the apex of McGuire School Road and NY-50. Additionally, vertical clearance should be confirmed to accommodate overhead wires that span the intersection. It is assumed that the required clearance of obstructions at this location would be minimal.
- McKinney Road Curve north of CR-140 (Figure Y2) – Temporary roadway widening will likely be required along the inside radius of the roadway curve of McKinney Road to accommodate delivery vehicles. The amount of roadway widening is relatively minor and constructability will be of minimal complication.

MEMORANDUM

153 YMCA Road, Amsterdam, NY – Preferred Delivery Routes and Temporary Roadway Improvements

April 13, 2022

Two existing culverts pass beneath McKinney Road around this routing segment. Potential reinforcement of these culverts will require structural evaluation in subsequent phases of this effort. Clearance of vertical obstructions will likely be required at both the inside and outside radii of this turn. Several existing trees may need to be removed or pruned to facilitate the maneuver.

- Intersection of McKinney Road and CR-142 (Millers Corners Road) (Figure Y3) – This intersection will likely require ground clearance along the northwestern curve of McKinney Road as it transitions into CR-142 (Millers Corners Road). Additional ground clearance is necessary along the southern side of McKinney Road as it approaches CR-142 (Millers Corners Road). There are currently several sign posts and one utility pole within the area of ground clearance that will require temporary removal. It is assumed the temporary clearance of obstructions and tree removal would be of minimal complications.
- Intersection of Bean Hill Road and CR-142 (Millers Corners Road) (Figure Y4) – This intersection will require both ground clearance and road widening along both CR-142 (Millers Corners Road) and Bean Hill Road. To facilitate this turn, temporary widening of the inside radius is proposed to allow vehicles to cut through the edge of the empty field at the southeast corner of this intersection. This maneuver will require transversal of drainage ditches along the east side of Millers Corners Road and the south side of Bean Hill Road. A culvert will need to be installed at both locations with temporary roadway treatments above to facilitate this path. These will be designed in subsequent phases of this project. Additional ground clearance will be required to facilitate this turn, but no obstructions were observed within this area at this side of the intersection. An area requiring the clearance of obstructions would also be needed along the west side of Millers Corner Road to facilitate the rear overhang of turbines. Several existing trees are located within this area that will need to be removed. It is assumed that the constructability of temporary roadway widening and above ground clearing is feasible and would be of minimal complication.
- Bean Hill Road, from CR-142 (Millers Corners Road) to YMCA Road (Figures Y5 & Y6) – This segment of Bean Hill Road is an unpaved seasonal road. During field observations a large portion of the road was not paved and covered with snow. It may be necessary to pave and/or stabilize the roadway with temporary materials to accommodate heavier loads. This improvement should be investigated during design. Additional improvements will likely be required, namely ground clearance along an approximately 800' strip of roadway. The northern side of the improvement area abuts woodlands while the southern borders a field lined with trees. Most of the ground clearance is required along the southern side of the roadway to accommodate exterior blade overhang. It is assumed that the constructability of clearance of obstructions and tree removal would be of minimal complications.

Overall, Route A appears to be feasible for use by overheight delivery vehicles with five intersections/road segments requiring improvements. Of these five locations, all require some form of ground clearance, two require roadway widening, and one will likely require additional surficial or structural improvements that should be assessed during design. Additionally, vertical clearance should be confirmed at the intersection of CR-147 (Eaton Corners Road) and NY-50

Next Steps – Permitting and Coordination

The proposed vehicle route utilizes several types of roadways that are each owned and maintained by variety of agencies. The tables below provides a summary of roadways utilized for the route and the agencies that own and maintain each roadway segment utilized. Overhead utilities and/or span wires may need to be temporarily

MEMORANDUM

153 YMCA Road, Amsterdam, NY – Preferred Delivery Routes and Temporary Roadway Improvements
April 13, 2022

relocated / removed to facilitate the transport of turbine components. This work may require work agreements and coordinating with the utilities impacted. Further coordination will be required in order to determine the extent of permits and coordination actually required to facilitate the transport of turbine components.

Alternative A (Overheight Vehicles): I-88 Exit 24 Alternative (Red Route)

<u>Road Name</u>	<u>Start Point</u>	<u>End Point</u>	<u>Maintenance Jurisdiction</u>
NY-7 (Duanesburg Road)	I-90 Exit 24	NY-395 (Main Street)	NYS Department of Transportation
NY-395 (Main Street)	NY-7 (Duanesburg Road)	NY-20 (Western Turnpike)	NYS Department of Transportation
NY-20 (Western Turnpike)	NY-395 (Main Street)	NY-30	NYS Department of Transportation
NY-30	NY-20 (Western Turnpike)	CR-147 (Eaton Corners Rd)	NYS Department of Transportation
CR-147 (Eaton Corners Rd)	NY-30	CR-149 (Mill Point Road)	Montgomery County
CR-149 (Mill Point Road)	CR-147 (Eaton Corners Rd)	CR-140 (Peck Road)	Montgomery County
CR-140 (Peck Road)	CR-149 (Mill Point Road)	McKinnney Road	Montgomery County
McKinnney Road	CR-140 (Peck Road)	CR-142 (Millers Corners Road)	Town of Florida
CR-142 (Millers Corners Road)	McKinnney Road	Bean Hill Road	Montgomery County
Bean Hill Road	CR-142 (Millers Corners Road)	YMCA Road	Town of Florida
YMCA Road	Bean Hill Road	154 YMCA Road	Private

Alternative B: I-90 Exit 27 Alternative (Green Route)

<u>Road Name</u>	<u>Start Point</u>	<u>End Point</u>	<u>Maintenance Jurisdiction</u>
NY-30 (Minaville Road)	I-90 Exit 27	NY-161 (Mill Point Road)	NYS Department of Transportation
NY-161 (Mill Point Road)	NY-30 (Minaville Road)	CR-143 (Youngs Corners Road)	NYS Department of Transportation
CR-143 (Youngs Corners Road)	NY-161 (Mill Point Road)	Bean Hill Road	Montgomery County
Bean Hill Road	CR-143 (Youngs Corners Road)	YMCA Road	Town of Florida
YMCA Road	Bean Hill Road	153 YMCA Road	Private

MEMORANDUM

153 YMCA Road, Amsterdam, NY – Preferred Delivery Routes and Temporary Roadway Improvements
April 13, 2022

Alternative C: I-90 Exit 28 Alternative (Blue Route)

<u>Road Name</u>	<u>Start Point</u>	<u>End Point</u>	<u>Maintenance Jurisdiction</u>
NY-920P (Riverside Road)	I-90 Exit 28	NY-5S	NYS Department of Transportation
NY-5S	NY-920P (Riverside Road)	CR-164 (Noeltner Road)	NYS Department of Transportation
CR-164 (Noeltner Road)	NY-5S	NY-161 (Mill Point Road)	Montgomery County
NY-161 (Mill Point Road)	CR-164 (Noeltner Road)	CR-143 (Youngs Corners Road)	NYS Department of Transportation
CR-143 (Youngs Corners Road)	NY-161 (Mill Point Road)	Bean Hill Road	Montgomery County
Bean Hill Road	CR-143 (Youngs Corners Road)	YMCA Road	Town of Florida
YMCA Road	Bean Hill Road	153 YMCA Road	Private

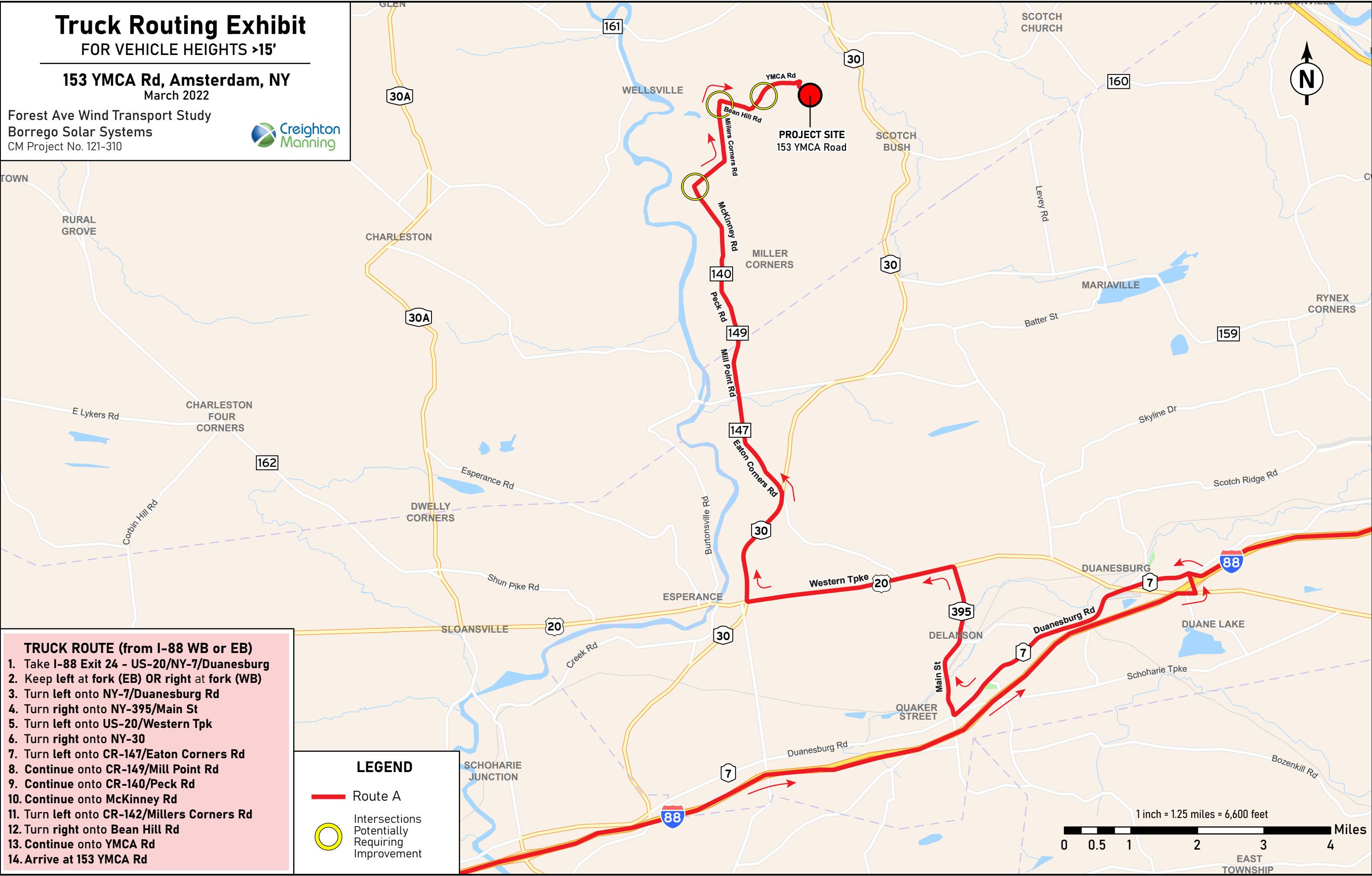
Truck Routing Exhibit

FOR VEHICLE HEIGHTS >15'

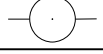
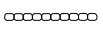
153 YMCA Rd, Amsterdam, NY

March 2022

Forest Ave Wind Transport Study
Borrego Solar Systems
CM Project No. 121-310





LEGEND		
	LTD	TREE, DECIDUOUS
	LSHD	SHRUB, DECIDUOUS
	LMB	MAILBOX
	S	SINGLE POST
	TCSP	SIGNAL POLE
	UGLM	GAS, LINE MARKER
	ULP	LIGHTING, POLE
	UP	POLE, WITH UTILITY
	UTP	TELEPHONE, PEDESTAL
	UWFH	WATER, FIRE HYDRANT
	DCP	CULVERT PIPE
	RGB	GUIDE RAIL, BOX BEAM
	UEO	ELECTRIC LINE, OVERHEAD
	UPGW	POLE, GUY WIRE
	LWS	WALL, STONE
	TCSW	SIGNAL, SPAN WIRE
	DD	DRAINAGE DITCH
	LAWA	WOODED AREA OUTLINE

LEGEND

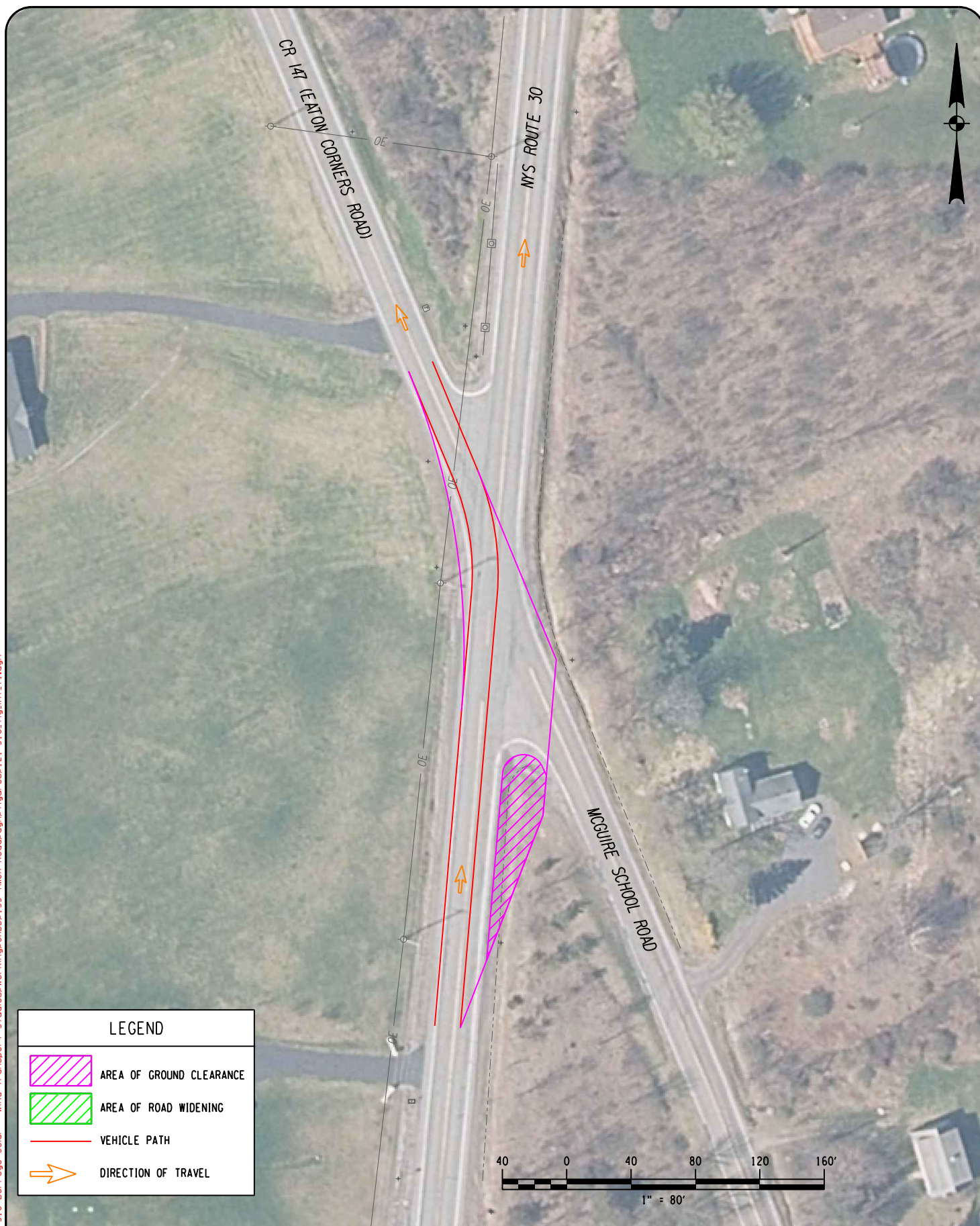
BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT: 121-310 DATE: 04/2022 FIGURE: LEG

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LEGEND

-  AREA OF GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL

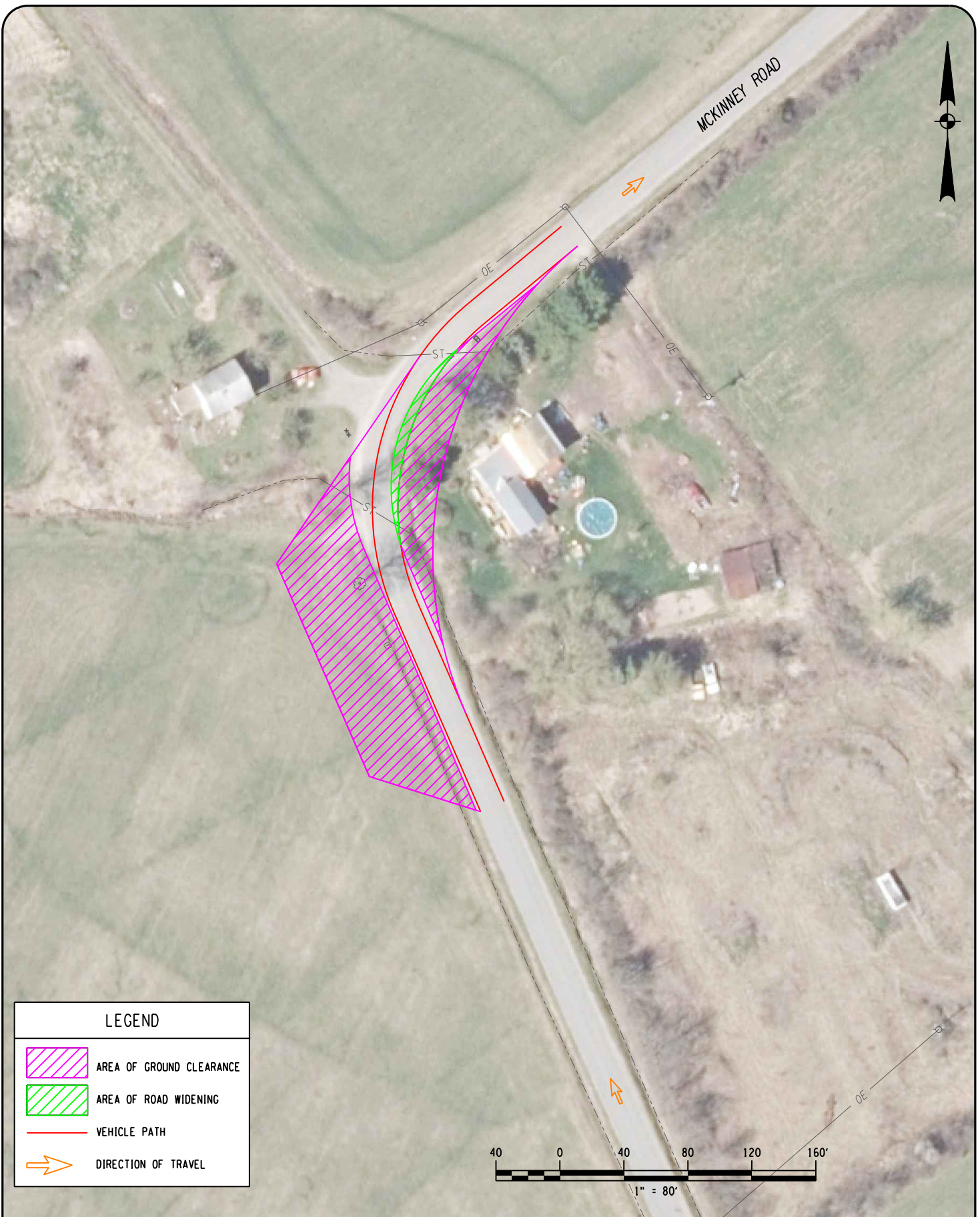
CR 147 (EATON CORNERS ROAD)
AND NYS ROUTE 50

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT: 121-310 DATE: 04/2022 FIGURE: Y1

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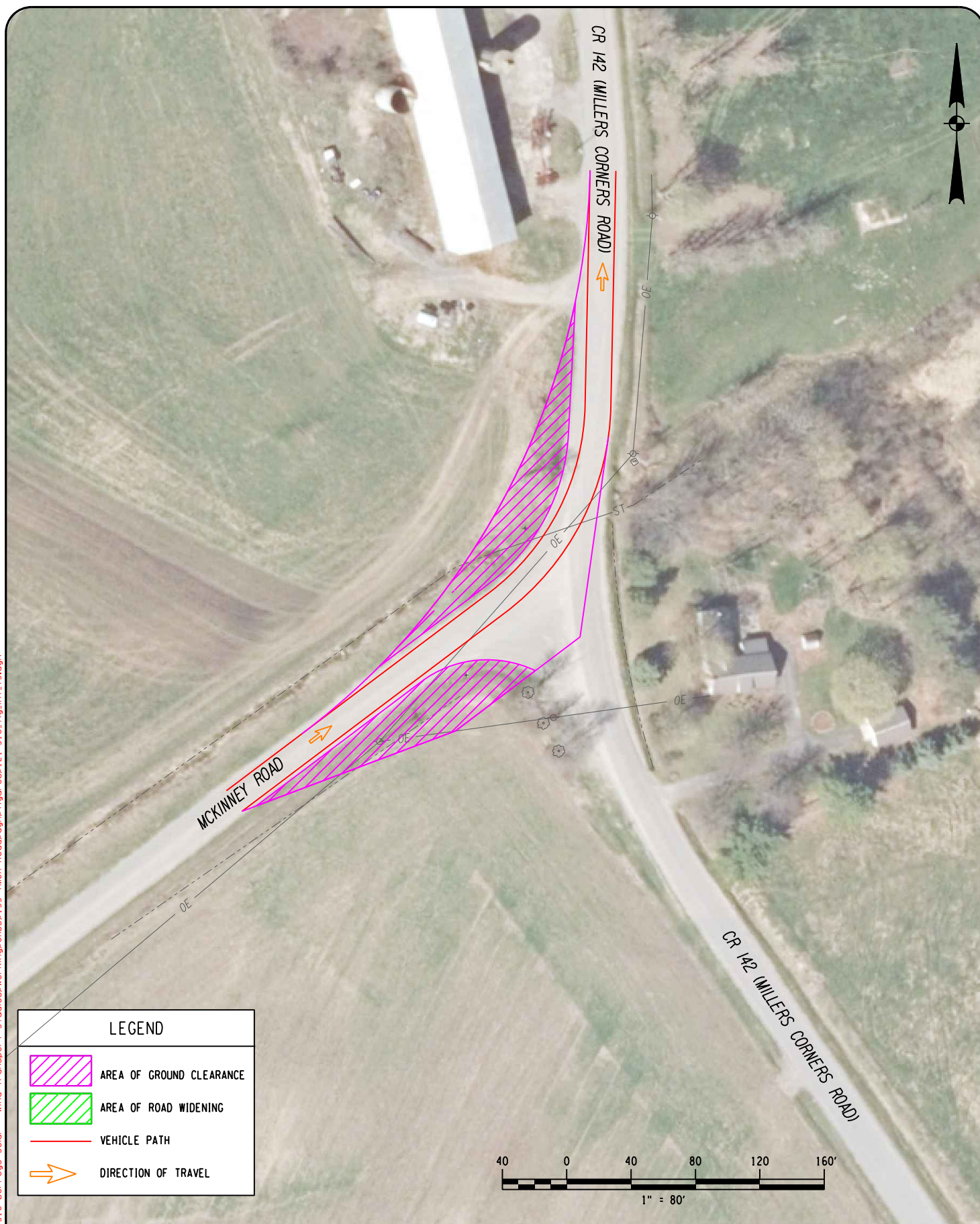
MCKINNEY ROAD

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT: 121-310 DATE: 04/2022 FIGURE: Y2

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LEGEND

-  AREA OF GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL

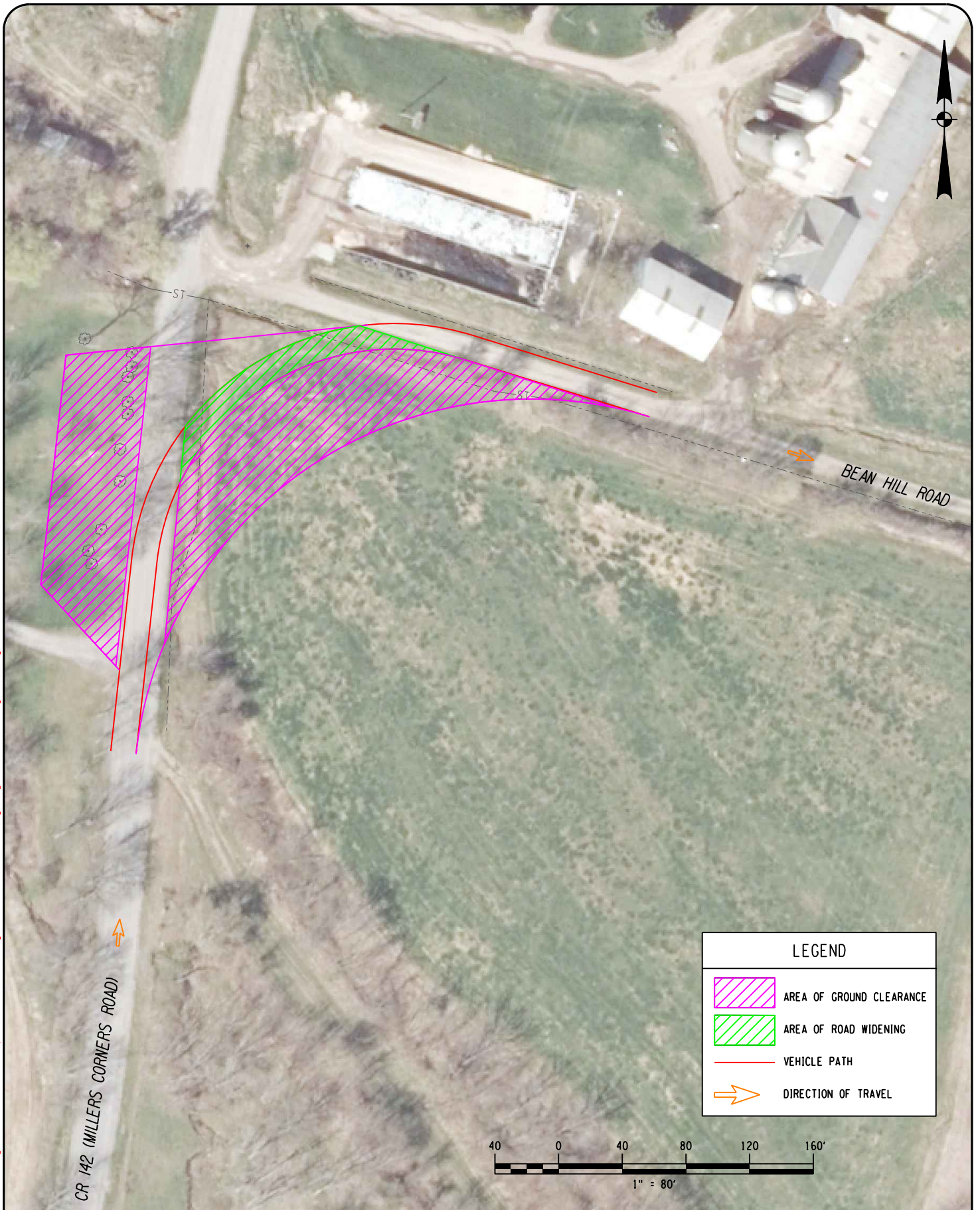
MCKINNEY ROAD AND
CR 142 (MILLERS CORNERS ROAD)

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT: 121-310 DATE: 04/2022 FIGURE: Y3

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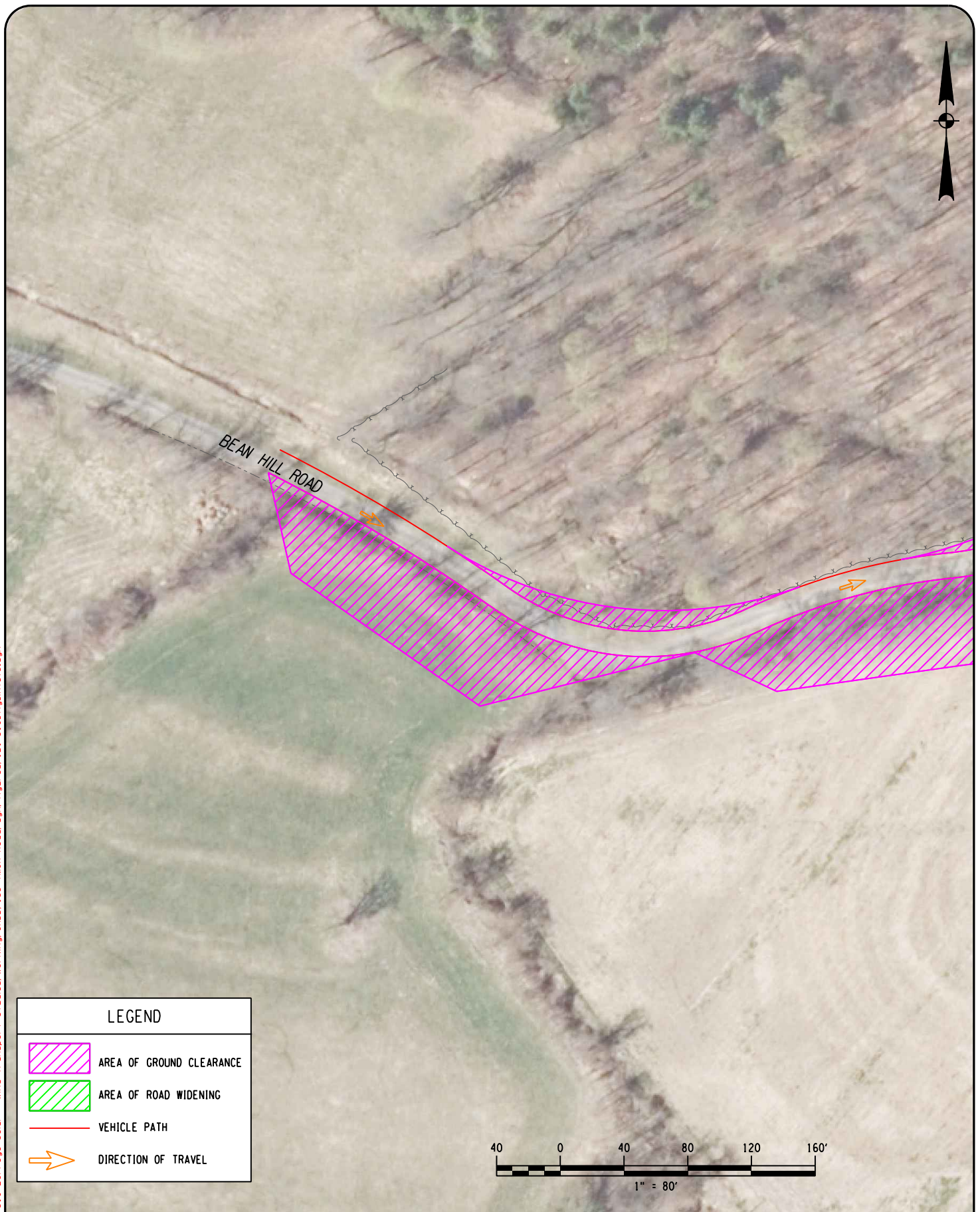
BEAN HILL ROAD AND
CR 142 (MILLERS CORNER SROAD)

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT:	121-310	DATE:	04/2022	FIGURE:	Y4
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LEGEND

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-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL



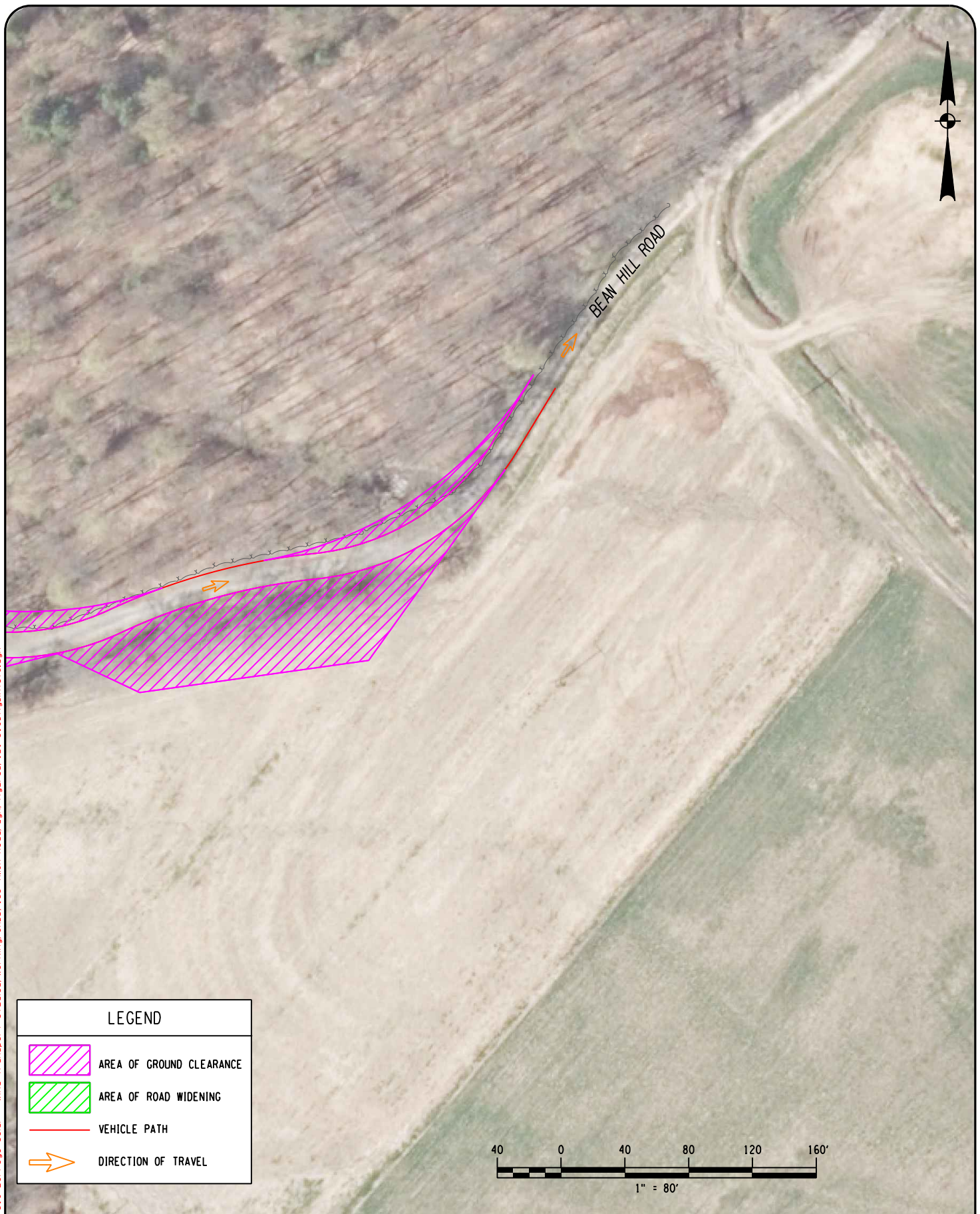
BEAN HILL ROAD

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



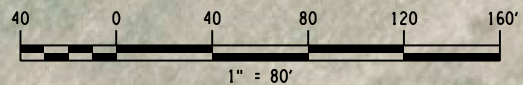
PROJECT: 121-310 DATE: 04/2022 FIGURE: Y5

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LEGEND

-  AREA OF GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL



BEAN HILL ROAD

BORREGO - WIND TURBINE ROUTING STUDY
153 YMCA RD, AMSTERDAM, NY



PROJECT: 121-310 DATE: 04/2022 FIGURE: Y6

APPENDIX 5: ACOE WETLAND PERMIT

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DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

Upstate New York Section

April 11, 2023

SUBJECT: Permit Application Number NAN-2021-01328-TEC
by Florida Wind 1, LLC
Town of Florida, Montgomery County, New York

Lydia Lake
Florida Wind 1, LLC
22 Century Hill Drive
Latham, New York 12110

Dear Ms. Lake:

On October 27, 2021, the New York District of the U.S. Army Corps of Engineers received a request for Department of the Army reauthorization for the discharge of fill material into waters of the United States to facilitate the installation of an access road to a proposed wind turbine. The site is located in the Mohawk River watershed, at 153 YMCA Road, in the Town of Florida, Montgomery County, New York.

The original submittal, and subsequent submittals received on June 1, 2021, February 16, 2023, and March 31, 2023, including the drawings entitled "Layout and Materials Plan", Drawing C-3.0, "Grading and Drainage Plan", Drawings C-5.1, C-5.2, and C.5.3, and "Access Road Profiles", Drawing C-7.0, all prepared by Borrego, dated July 22, 2021, and last revised December 18, 2022, indicate that the total permanent impacts to waters of the United States would involve the discharge of fill material into a maximum of 0.215 acres of scrub-shrub (PSS) wetlands to facilitate the construction of an access road to a proposed single wind turbine and associated infrastructure. In addition, approximately 0.014 acres of scrub-shrub (PSS) wetland will be temporarily impacted. To mitigate for the impacts to waters of the United States associated with the project, the applicant proposes to purchase 0.645 wetland mitigation credits from The Ducks Unlimited In-Lieu Fee Mitigation Program, Middle Hudson Service Area – HUC (02020006).

Based on the information submitted to this office, and accomplishment of notification in accordance with the applicable federal requirements, our review of the project indicates that an individual permit is not required. It appears that the activities within the jurisdiction of this office could be accomplished under Department of the Army Nationwide General Permit Number 14. The nationwide permits are prescribed as a Reissuance of Nationwide Permits in the Federal Register dated December 27, 2021 (86 FR 73522). The work may be performed without further authorization from this office provided the activity complies with the permit conditions listed in Section B, No. 14, Section C, any applicable New York District regional conditions, the special conditions below, and any applicable regional conditions added by the State of New

PLEASE USE THE ABOVE 18-CHARACTER FILE NUMBER ON ALL CORRESPONDENCE WITH THIS OFFICE

York, and provided the project is carried out in accordance with the above-referenced drawings. The 2021 Nationwide Permits, including their final regional conditions, water quality certifications, and coastal zone concurrence statements are available at:

<http://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/>

Please review and familiarize yourself with all relevant terms and conditions of the nationwide permit prior to proceeding with your project and subsequently ensure you adhere to all conditions through the duration of the project. If you do not have internet access and require a specific paper copy of the referenced materials, please contact the phone number below to request they be mailed to you. Please be sure to have your permit application number readily available when you call.

Special Conditions

(A) The permittee shall accomplish compensatory mitigation through the purchase of 0.645 wetland mitigation credits from The Ducks Unlimited In-Lieu Fee Mitigation Program, Middle Hudson Service Area – HUC (02020006), and provide confirmation of the purchase to this office within 30 days of the issuance of this authorization.

(B) The permittee shall undertake the authorized filling activities in a manner aimed at reducing impacts upon the general environment. In addition, the permittee shall not stockpile fill or other materials in a manner conducive to erosion, or in areas likely to cause high turbidity runoff during storm events. All exposed soils shall be re-vegetated in a timely manner to further reduce potential effects. The permittee shall also fence off all wetlands and other sensitive ecological areas during construction periods to prevent equipment and personnel from entering these areas.

(C) The permittee shall ensure that all synthetic erosion control features (e.g., silt fencing, netting, mats), which are intended for temporary use during construction, are completely removed and properly disposed of after their initial purpose has been served. Only natural fiber materials, which will degrade after time, may be used as permanent measures, or if used temporarily, may be abandoned in place.

(D) The permittee shall ensure that all temporary impacts are restored to preexisting elevations and conditions, including seeding and/or planting as necessary within 30 days of completing the work.

This determination covers only the work described in the submitted material. Any major changes in the project may require additional authorizations from the New York District.

Care should be taken so that construction materials, including debris, do not enter any waterway to become drift or pollution hazards. You are to contact the

appropriate state and local government officials to ensure that the subject work is performed in compliance with their requirements.

This verification is valid until March 14, 2026, unless the nationwide permit is modified, reissued, or revoked. This verification will remain valid until March 14, 2026, if the activity complies with the terms of any subsequent modifications of the nationwide permit authorization. If the nationwide permits are suspended, revoked, or modified in such a way that the activity would no longer comply with the terms and conditions of a nationwide permit, and the proposed activity has commenced, or is under contract to commence, the permittee shall have 12 months from the date of such action to complete the activity.

Within 30 days of the completion of the activity authorized by this permit and any mitigation required by this permit, you are to sign and submit the attached compliance certification form to this office.

In order for us to better serve you, please complete our Customer Service Survey located at:

<http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>

If any questions should arise concerning this matter, and/or if you require a specific paper copy of the above referenced nationwide general permit program, please contact Brad Sherwood, at (518) 487-0382 or Brad.Sherwood@usace.army.mil.

Sincerely,



Amy L. Gitchell
Chief, Upstate New York Section

Enclosures

cf: Connelly, P. – NYSDEC Region 4, Schenectady
Town of Florida
Smith, M. - GEI

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APPENDIX 6:
DRAFT CONSTRUCTION
STORMWATER POLLUTION
PREVENTION PLAN (SWPPP)

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Stormwater Pollution Prevention Plan

153 YMCA Road Florida Wind Energy Project

Borrego Solar

22 July 2021

 **The Power of Commitment**

GHD Consultants, Inc.

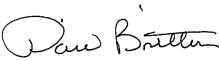
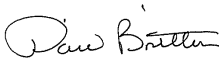
285 Delaware Avenue, Suite 500

Buffalo, NY 14202, USA

T 716-856-2142 | F 716-856-2160 | ghd.com

Printed date	7/21/2021 6:04:00 PM
Last saved date	21 July 2021 6:04 PM
File name	11227525-RPT-1 SWPPP.docx
Author	Camie Jarrell
Project manager	Camie Jarrell
Client name	Borrego Solar
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Stormwater Pollution Prevention Plan

Preparer's Certification

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



Signature

July 21, 2021

Date

David M. Britton, P.E.
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GHD Consulting Services Inc.

SWPPP comments -BDG

1. the SWPPP indicates the project is considered a linear project and does not require runoff reduction Volume, water quality volume, channel protection volume or volume control per DEC requirements if peak discharges are substantially the same. While runoff patterns will be significantly similar to existing condition's we are unsure if NYSDEC will waive these typical requirements. Has any dialogue with them been initiated?
2. The access road is the main area of impervious area graded and has the proposed gravel access road in it modeled with a CN of 91. WS3 has a significant portion of it as Bath channerly silt loam, a hydrologic C soil where some infiltration or stormwater management is conceivable if NYSDEC requires RRv and stormwater management beyond erosion and sediment controls. It was modeled a D soils though.
3. Is stabilization fabric proposed beneath all rip-rap? This could impact CN along road. Rip-rap in flow areas and upstream and downstream of culverts should be a mix of medium and light rip-rap and 24-30" deep..
4. Modeling herein for the gravel road represents CN=91 which depending on the gravel could be correct. Often crusher run gravel roads are modeled at higher curve numbers.
5. The culverts are not modeled to understand the surcharge height and if the road is overtopped during a significant storm event.
6. a porous road section sometimes utilized for utility projects would better mitigate runoff increases and better mimic natural/existing drainage patterns and should be considered. this could replace a gravel section used for construction post installation perhaps.
7. Modeling does not include any volumetric practices that might attenuate runoff. check dams are proposed. While no real volume exists along the steeper portions of the road they will dissipate some energy and mitigate erosive velocities.

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Appendix D	County Soil Reports
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1. Purpose and Objectives

GHD Consulting Services, Inc. (GHD) has prepared this Stormwater Pollution Prevention Plan (SWPPP) on behalf of Borrego Solar for the Florida Wind Energy Project, a single 4.3 MW wind turbine, located at 143 YMCA Road, Florida, New York.

This SWPPP has been prepared in compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001), which is included in Appendix A. The design standards and practices outlined herein are based on guidelines in the New York State Standards and Specifications for Erosion and Sediment Control (NYS Standards) and the New York State Stormwater Management Design Manual.

The objective of the SWPPP is to establish mitigation measures and to minimize the number of pollutants in the stormwater runoff from the project area in order to protect the waters of the United States from the adverse impact of stormwater runoff. The selection of Best Management Practices (BMPs) for this project follows an approach to develop a Site design that regulates stormwater discharges, reduces impacts of stormwater runoff, and provides a maximum level of treatment given the project constraints.

An owner or operator of a construction activity that is eligible for coverage under this general permit must obtain coverage prior to commencement of construction activity. A copy of the Notice of Intent (NOI) can be found in Appendix B of this SWPPP. The owner or operator shall submit electronically the NOI to the NYSDEC. Permit coverage shall begin five (5) business days following receipt of the NOI. The NYSDEC shall provide a Letter of Acknowledgment and it shall be made part of this SWPPP in Appendix C.

The following sections outline the project background and existing Site conditions, the general project requirements, a description of construction activities, the erosion and sedimentation control requirements, post-construction stormwater practices, and maintenance and inspection requirements.

2. Background

2.1 Project Background

Borrego Solar has negotiated a lease agreement with a property owner on the south side of YMCA Road, a dead-end roadway, in the Town of Florida, Montgomery County, for a single wind turbine project. All permitting of the Site is within the Florida jurisdiction. The standards and procedures for siting of wind projects is outlined in the Zoning Ordinance, Section 45.4 – Wind Turbine Facilities Law, Local Law No. 1 of 2008, as adopted by the Town of Florida, which generally involved a Site plan review process to the Town Planning Board with issuance of a Special Use Permit (upon approval). The parcel is located within Montgomery County Agricultural District 3.

All project features will be leased, operated, and maintained by Borrego Solar. The project is located on private property and is not located within a regulated jurisdictional municipal separate storm system (MS4), therefore, SPDES permitting will be under the authority of the NYSDEC.

A location map of the Florida YMCA Road Wind Energy Project is provided as Figure 1.

2.2 Existing Conditions

The property of interest, 143 YMCA Road, is a privately owned, single parcel of approximately 110 acres in size. The Site is a vacant undisturbed lot with some smaller stands of trees and areas of brush. Several wetlands were delineated on the Site and found to be jurisdictional. The lease area of the Site is limited to the east and southern portions of the project, which is also the location of the wetlands. Therefore, project impacts to wetlands have been minimized to the extent practical, but a disturbance of 0.45 acres is anticipated and a joint application for permit required.

The Site generally drains from the south to north and across YMCA Road. YMCA Road is a narrow gravel roadway that is inadequate for large vehicle traffic. There are no clear indications of existing drainage ditches or swales.

The neighboring properties include some isolated rural residences, some farmlands (active and inactive), and some vacant undisturbed parcels similar to the project parcel. There is a single family residential home at the dead-end of YMCA Road to the east.

There is no floodplain on the property.

2.3 Project Description

The project involves the construction of a single wind turbine and associated features and infrastructure. At the time of preparation of this SWPPP, the model anticipated for the project is the Vestas V150, 4.3 MW turbine, which has a tip height of 600 feet. The turbine foundation is anticipated to be a spread footer that will predominately be underground leaving an 18-foot concrete pedestal aboveground. Permanent features of the project shall include a gravel access road off YMCA Road, the widening of YMCA Road for construction traffic, a gravel pad around the turbine, a crane pad, and a small run of overhead electrical lines and poles off YMCA Road while the remaining electrical lines will be underground. Other temporary features needed during construction include construction staging area, stockpile, blade laydown area and truck route around turbine. The staging area and truck router will be constructed of gravel, but following the turbine installation, the stone will be removed and the area de-compacted and restored with topsoil and seeding. The remaining areas will remain pervious but will require decompaction and reseeding following turbine construction.

There is no substation or other interconnection features required for the project. The project shall directly connect to the local electrical system.

The project will result in a soil disturbance of 7.9 acres of which 1.70 acres of new impervious area. Erosion and sediment control information is included on the project Drawings, which shall be considered part of the SWPPP.

2.4 Involved Parties

The following are the involved parties for the project concerning stormwater pollution prevention:

Operator: Borrego Solar

Address: 55 Technology Dr, Suite 102, Lowell MA 01851

Contact Person: Greg Gibbons

Phone Number: 315-378-9567

Design Engineer: GHD Consulting Services, Inc.

Address: 285 Delaware Avenue, Suite 500, Buffalo, NY 14202

Contact Person: David M. Britton.

Phone Number: (716) 362-8815

NYSDEC Regional Office: Region 7

Address: 615 Erie Boulevard West, Syracuse NY 13204

Phone Number: (315) 426-7400

2.5 Geology

The soils in the United States are assigned to four Hydrologic Soils Groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

HSG A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

HSG B: Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well-drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

HSG C: Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

HSG D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils, which are in their natural condition in Group D, are assigned to dual classes.

There is a significant variety of soil types on the parcel. The project will mostly impact Wellsboro and Mardin soils (WmC), Bath channery silt loam (BfC) and Bath and Lackawanna soils (BhC) with slopes from 3 percent to 15 percent. WmC is hydrologic group D and moderately well drained while the others are group C and well drained. The County Soil Reports are included in Appendix D.

3. Stormwater Pollution Prevention Plan

3.1 Construction Sequence

The project shall be constructed in a single phase of approximately 3 months. The following typical construction sequence will generally be followed:

- Mobilization of construction equipment and materials to the Site.
- Installation of stabilized construction entrance to the Site and temporary erosion and sediment controls.
- Rough grading of the access road, turbine area and crane/laydown areas and stockpiling of materials as needed.
- Installation of culverts crossings, gravel access road and gravel work areas.
- Excavation and construction of turbine foundation and electrical service.
- Delivery and assembly of crane and turbine components.
- Installation of overhead electrical connection.
- Removal of temporary gravel.
- Final grading and restoration of disturbed areas.
- Removal of erosion and sediment control features upon establishment of grass cover and plantings.

3.2 Best Management Practices

As stated above, the project shall be constructed in a single phase of an approximately 3-month period. The project will not require the disturbance of greater than 5 acres at any one time. The Contractor shall request, in writing, authorization from the Regional Office of the NYSDEC for the disturbance and meet all SPDES Permit requirements. If at any time, the disturbance drops below the 5-acre threshold, the Contractor shall advise the Regional Office in writing.

The Contractor will be responsible for dust control and removal of any sediment buildup on the adjacent roadway. The Contractor will be required to protect existing and new inlets and ditches throughout construction. All erosion and sediment control measures have been designed in general compliance with the NYS Standards.

The Contractor shall be responsible for installation and maintenance of BMPs on the Site. The Contractor shall sign the certification statements made part of the SWPPP in Appendix E. In addition, any subcontractors will be required to respect and protect these BMPs against disturbance due to their operations, therefore, will be required to sign the SWPPP as well.

The BMPs, which will be incorporated in the construction phase, are detailed on the Drawings and include:

- Stabilized Construction Entrance: YMCA Road is currently a gravel roadway with insufficient width for the project. The roadway shall be improved and widened as necessary to accommodate construction vehicles and minimize sediment transportation off the Site. Also, a stabilized construction entrance shall be installed at the Site entrance from the public roadway. The entrance shall help control sediment transportation by vehicles entering and exiting the Site. The entrance shall be installed in accordance with details and be maintained should sediment buildup on the surface as needed and until the permanent gravel access road is installed.
- Silt Sock/Fence: As a measure to prevent off-Site sediment transportation to the drainage ditches and pond, silt sock or silt fence shall be installed along the slopes to prevent sediment-laden runoff from exiting the work areas, as shown on the Drawings. Sediment buildup on silt fence or silt sock shall be removed if it reaches 50% of the capacity and any damaged sections shall be replaced.
- Check Dams/Riprap: Stone check dams are intended to control potential sediment along existing drainage ditch and pond. The Contractor will be required to install stone check dams as shown on Drawings and as needed. When work is conducted adjacent to culvert pipes, such as driveway crossings, light stone riprap will be installed at the end of pipes to collect sediment-laden runoff. These measures shall be inspected regularly, and accumulated sediment removed from stones.
- Stockpile Stabilization: Spoil materials from excavation shall be stockpiled for reuse in wetland habitat plantings area or as backfill and excess spoils shall be removed from the Site. Topsoil material may be segregated from backfill and reused for stabilization. At no time shall stockpiled materials be placed in drainage pathways or waterways. The Contractor shall install perimeter protection around all stockpiles.
- Soil Stabilization: The project pervious surfaces around the turbine shall be lawn areas and will be stabilized using topsoil and seeding. Straw mulch may be used to stabilize the areas until grass growth is established. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within 14 days (7 days if greater than 5 acres disturbed) from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standards, NYS Standards.

All temporary stormwater control measures shall remain in place, and well maintained, until a qualified professional determines that final stabilization has been reached.

3.3 Pollution Prevention Controls

The Contractor and all subcontractors shall be responsible for implementation of pollution prevention controls. Pollution prevention controls shall include:

- Dust Control: Contractors shall incorporate standard practices for the control of dust from construction. Such controls shall include, but not be limited to, stabilized construction entrance, temporary stabilization of inactive areas and stockpiles, Site watering, and vehicle washing. The Contractor will be responsible for designating vehicle wash areas and providing proper facilities for such activities.
- Sanitary Facilities: Contractors shall comply with state and local sanitary 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.
- Waste Disposal and Construction Debris: All materials used on the Site will be properly stored, handled, and dispensed following applicable label directions. No solid waste materials are allowed to be exposed to or discharged from the Site with stormwater. Each Contractor and his subcontractors shall be responsible for proper containment and disposal of garbage and debris from construction activities. Contractors shall be responsible for coordinating garbage and debris removal or pickup if necessary.
- Concrete Truck Washout: If necessary, a designated truck washout area will be provided within the work area in order to ensure concrete materials are not impacted by stormwater.

- Vehicle Fueling: Temporary on-Site fuel tanks or trucks for construction vehicles shall meet all state and federal regulations and have approved spill containment. Emergency spill containment materials must also be kept on Site and accessible in case of spills.
- Spill Prevention and Control: All Contractors shall incorporate spill prevention planning, secondary containment, and spill cleanup procedures as required by OSHA and NYSDEC for all products present on the Site.
- Hazardous Materials: No hazardous materials are anticipated on the Site or as part of the project. If any hazardous or potentially hazardous waste is found at the Site. It will be properly handled in order to reduce the potential of stormwater impacts.

3.4 Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowed as indicated in the SPDES Permit:

- Discharges from firefighting activities only when firefighting activities are emergencies/unplanned.
- Waters to which other components have not been added that are used to control dust.
- Uncontaminated discharges from construction dewatering operations.

3.5 Post-Construction Stormwater Practices

At first, the project was analyzed in accordance with the New York State Stormwater Design Manual (SWDM). As required by the SWDM, Chapter 3, Stormwater Management Planning, there are six steps to developing a SWPPP.

Step 1: Site Planning

Step 2: Determine Water Quality Treatment Volume (WQv)

Step 3: Apply Runoff Reduction Techniques (RRv)

Step 4: Determine the minimum RRv required

Step 5: Apply Standard Stormwater Management Practices

Step 6: Apply Volume and Peak Rate Control Practices

The project design began with Step 1 and the following criteria was examined:

1. Preservation of Natural Resources
 - a. Preservation of Undisturbed Areas – The project is designed to limit disturbance of the property specifically the wetlands. The landowner also identified an exclusion area that no project features are permitted.
 - b. Preservation of Buffers – The project disturbance has been limited to the extent practical.
 - c. Reduction of Clearing and Grading – The project will limit clearing and grading as needed to level the necessary area for the turbine and access road.
 - d. Locating Development in Less Sensitive Areas – The project is located on a privately owned undisturbed parcel.
 - e. Open Space Design – This does not apply to the project.
 - f. Soil Restoration – All surfaces within the agricultural district shall be restored in accordance with New York State Department of Agriculture and Markets, Guidelines for Agricultural Mitigation for Wind Power Projects. All surfaces shall be decompacted and restored with topsoil and seed in accordance with Soil Restoration standard from the NYS Standards and Specifications for Erosion and Sediment Control, latest revision.
2. Reduction in Impervious Cover
 - a. Roadway Reduction – The access road will be installed to the minimum size needed for the installation and operation of a wind turbine.
 - b. Sidewalk Reduction – This does not apply to the project.

- c. Driveway Reduction – This does not apply to the project.
- d. Cul-de-sac Reduction – This does not apply to the project.
- e. Building Footprint Reduction – This does not apply to the project. A single wind turbine has a fairly small footprint.
- f. Parking Reduction – This does not apply to the project. No on-Site parking is provided.

To address Steps 2-4, wind turbine projects are generally considered as linear utility projects. The water quality volume and runoff reduction can be achieved by the use of a filter strip or naturally occurring buffer area as long as the filter strip width is equal to or greater in width than the impervious area draining to it. No additional stormwater management practices will be utilized in order to minimize disturbance to the property.

The following is an analysis of all runoff reduction techniques supports the above determination for this project.

3. Runoff Reduction Techniques

- a. Conservation of Natural Areas – The project will only impact areas as needed for project features.
- b. Sheet flow to Riparian Buffers or Filter Strips – The project will utilize filter strips to provide stormwater treatment for the new impervious areas. In order to meet requirements of a filter strip, the soil along the access road and adjacent to the turbine gravel pad will be de-compacted and allowed to revegetate. The filter strip cannot be located on steep slopes. The access road and turbine pad shall be graded in a manner that will allow sheet flow to the adjacent areas where the Site show intermittent streams.
- c. Vegetated Swale – No vegetated swale was incorporated into the project.
- d. Tree Planting/Tree Pit – Tree planting is not feasible for a wind turbine project.
- e. Disconnection of Rooftop Runoff – This does not apply to the project.
- f. Stream Daylighting – There are no streams on the Site.
- g. Rain Garden – This practice is not recommended with the C or D soils.
- h. Green Roofs – This does not apply to the project.
- i. Stormwater Planters – This does apply to the project.
- j. Rain Barrels and Cisterns – This does not apply to the project.
- k. Porous Pavement – This does not apply to the project.

Finally, Step 6, volume controls for the 1-year, 10-year and 100-year storm events are not necessary if it can be shown that there is less than a 2.5% increase of the peak flow during 1-year event and less than 5% during the 10-year and 100-year events by comparing the existing conditions to the proposed conditions in these areas. The analysis of the post-construction conditions depicts negligible increases in the runoff rate from the pre-construction conditions during the 1-year, 10-year and 100-year storm events.

No Channel Protection Volume (CPv), Overbank Flood Control (Qp), or Extreme Flood Control (Qf) are required. Although it is apparent that the project will negligibly impact stormwater runoff, this method of analysis is not in accordance with the requirements of the SWDM and thus a 60 day review may be necessary by the NYSDEC.

The project site catchment area is divided into three watersheds. The Western portion of the site is part of a 20 Acre watershed that is tributary to Schohaire Creek. The middle portion of the site is part of an 8 Acre watershed that is also tributary to Schohaire Creek. The Eastern portion of the site is part of a 32 Acre watershed that is tributary to North Chuctanunda Creek.

A pre-construction and post-construction stormwater model was created. The results are shown in Appendix F and summarized in the tables below. The project will meet the requirements of the SWDM and SPDES permit.

Table 1 *Pre-Development*

Catchment Area	1 Yr Peak Flow (cfs)	10 Yr Peak Flow (cfs)	100 Yr Peak Flow (cfs)
Western WS	14.02	34.38	72.64
Middle WS	5.67	13.56	28.12
Eastern WS	23.41	57.17	120.66

Table 2 Post-Development

Catchment Area	1 Yr Peak Flow (cfs)	10 Yr Peak Flow (cfs)	100 Yr Peak Flow (cfs)
Western WS	14.02	34.38	72.64
Middle WS	5.79	13.87	28.86
Eastern WS	23.41	57.17	120.66

3.6 Maintenance

The Contractor is responsible for the condition of the Site during construction. This shall include the maintenance of all BMP and pollution prevention controls during construction. The Contractor and their subcontractors shall sign the certification statement as referenced in Appendix E. Maintenance guidelines for each practice shall be in accordance with NYS Standards.

Each Contractor and subcontractor shall 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, as defined in the SPDES permit. The trained contractor shall conduct daily inspection of the Site including all BMPs and erosion and sediment controls and perform any maintenance required.

The long-term maintenance of the Site, and all features, is the responsibility of Borrego as the operator of the wind turbine. It is anticipated that a Borrego representative will make periodic inspections of the Site and the project facilities. At that time, the gravel access road will be inspected for any issues, the filter strips area will be inspected and maintained in good condition, and the culverts and riprap shall be inspected and cleaned or replaced as needed.

4. Inspection

In accordance with the SPDES permit for stormwater discharges from construction activities, the owner or operator of the Site must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times. The Town, as owner/operator, shall engage a qualified inspector, as required, in the following sections. The Contractor shall engage a trained contractor as defined by the permit throughout construction. The trained contractor shall be responsible for the day-to-day implementation of the SWPPP.

The following sections contain additional information taken directly from the SPDES permit.

4.1 Owner or Operator Maintenance Inspection Requirements

The *owner or operator* shall inspect, in accordance with the requirements in the most current version of the technical standard, NYS Standards, the erosion and sediment control measures identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.

For construction sites where soil disturbance activities have been temporarily suspended (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the *owner or operator* can stop conducting the maintenance inspections. The *owner or operator* shall begin conducting the maintenance inspections as soon as soil disturbance activities resume.

For construction sites where soil disturbance activities have been shut down with partial project completion, the *owner or operator* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

4.2 Qualified Inspector Requirements

The *owner or operator* shall have a *qualified inspector* conduct Site inspections in conformance with the following requirements:

Note: The *trained contractor* identified cannot conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications in the permit. In order to perform these inspections, the *trained contractor* would have to be one of the following:

- Licensed Professional Engineer.
- Certified Professional in Erosion and Sediment Control (CPESC).
- Registered Landscape Architect.
- Someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 4 hours of Department-endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District or other Department-endorsed entity.

Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

- For construction sites where soil disturbance activities are ongoing, the qualified inspector shall conduct a site inspection at least once every 7 calendar days.
- For construction sites where soil disturbance activities are ongoing and the owner or operator has received authorization to disturb greater than 5 acres of soil at any one time, the qualified inspector shall conduct at least two site inspections every 7 calendar days. The two inspections shall be separated by a minimum of 2 full calendar days.
- 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 30 calendar days. The owner or operator shall notify the Regional Office stormwater contact, in writing, prior to reducing the frequency of inspections.
- 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 Region 9 stormwater contact person 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 Notice of Termination (NOT). The owner or operator shall then submit the completed NOT form to the NYS DEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, NY 12233-3505.

At a minimum, the qualified inspector shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction Site, and all points of discharge from the construction Site.

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:

- Date and time of inspection.
- Name and title of person(s) performing inspection.
- A description of the weather and soil conditions (e.g., dry, wet, saturated) at the time of the inspection.

- 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.
- 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.
- Identification of all erosion and sediment control practices that need repair or maintenance.
- Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.
- Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection.
- 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.
- Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).
- 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 on Site within 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 7 calendar days of that inspection.

Within 1 business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. The Contractor or subcontractor shall begin implementing the corrective actions within 1 business day of this notification and shall complete the corrective actions in a reasonable timeframe.

All inspection reports shall be signed by the qualified inspector. Pursuant to the permit, the inspection reports shall be maintained on Site with the SWPPP.

The NYSDEC shall have the authority to inspect the Site and required documentation at any time during normal business hours.

5. Project Certification and Closeout

Borrego, as the Site operator, and the Contractor shall sign the SWPPP certifications in Appendix E.

Borrego shall submit the NOI to the NYSDEC in order to obtain permit coverage. This will be in the form of a NYSDEC Acknowledgment Letter and made part of the SWPPP in Appendix C. Timelines for submittal of NOI are provided in the SPDES permit.

Upon establishment of final cover, a final inspection shall be conducted by the qualified inspector who will sign off on the final stabilization and post-construction stormwater management practices of the Site on the NOT, which is included in Appendix G. Then, Borrego shall sign and submit the NOT to the NYSDEC for closure of the SPDES permit.

6. Recordkeeping

During Construction: The Contractor shall maintain for the duration of construction and in a secure location on Site, copies of the signed SWPPP, the NOI, the SPDES General Permit, and NYSDEC Acknowledgment Letter. Copies of inspection reports shall be made a part of the SWPPP. These reports shall be kept on Site during construction and be made available to the NYSDEC during inspection. During normal working hours, the documents shall be available for viewing.

Record Retention: The *owner or operator* shall retain a copy of the NOI, MS4 SWPPP Acceptance Form, NYSDEC Acknowledgment Letter, SWPPP, and any inspection reports that were prepared in conjunction with this permit for a period of at least 5 years from the date that the Site achieves final stabilization. This period may be extended by the NYSDEC, in its sole discretion, at any time upon written notification.

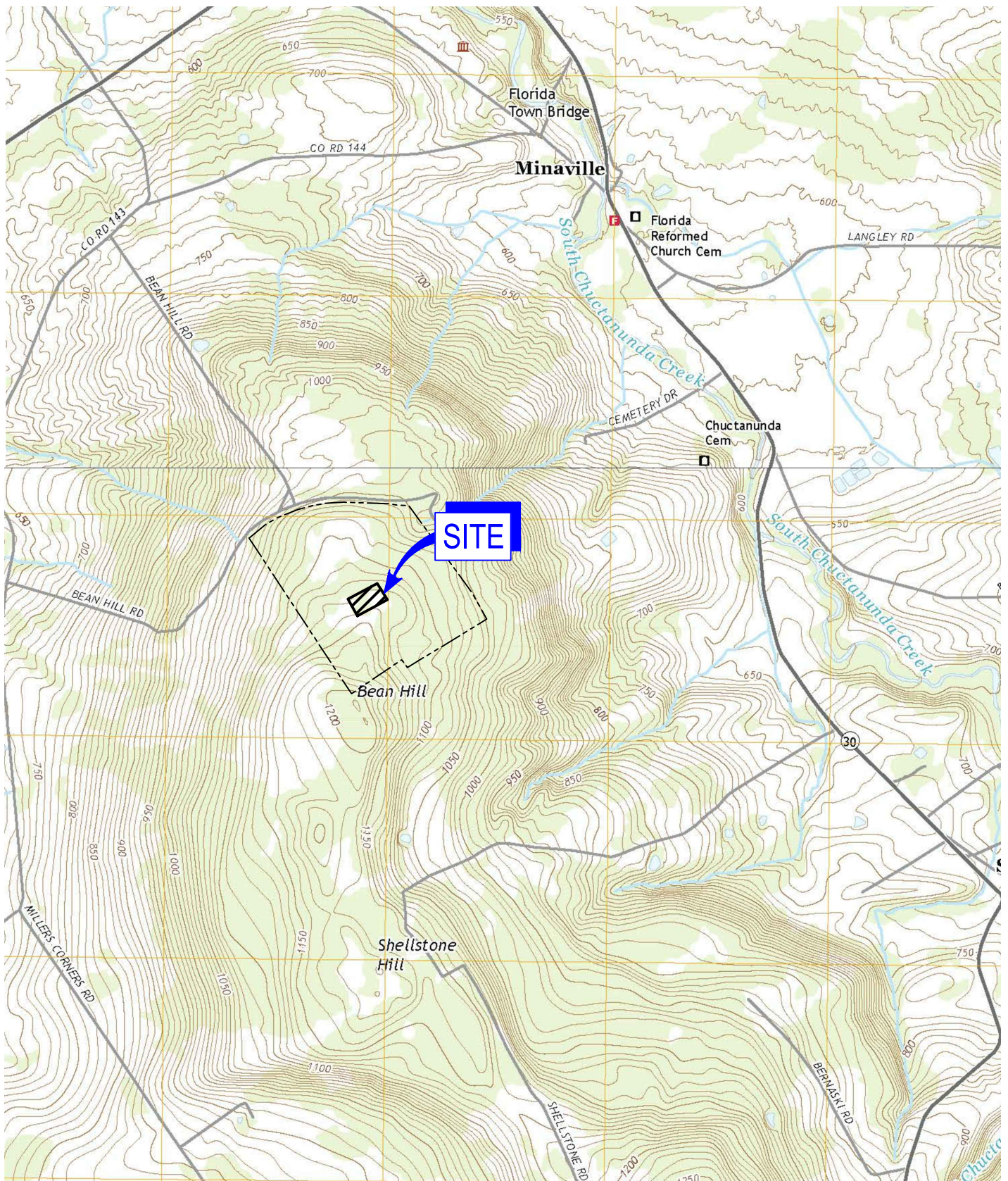
Addresses: With the exception of the NOI and NOT, all written correspondence requested by the NYSDEC, including individual permit applications, shall be sent to the address of the Region 4 Office, Bureau of Water Permits.

7. References

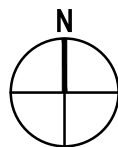
- New York State Standards and Specifications for Erosion and Sediment Control (November 2016).
- New York State Stormwater Management Design Manual (January 2015).

Figure 1

Location Map



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, DUANESBURG AND AMSTERDAM, NY AND 2019



BORREGO SOLAR
153 YMCA RD

SITE LOCATION MAP

Project No. 11227527
Report No. 003
Date JULY 2021

FIGURE 1

Appendix A

**SPDES General Permit for Stormwater
Discharges from Construction Activities
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

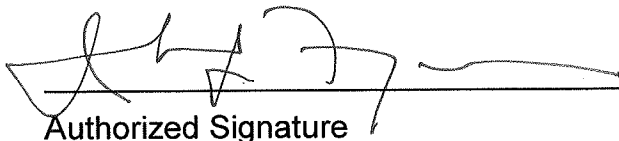
Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

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

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single family home <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.
The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
The following construction activities that involve soil disturbances of one (1) or more acres of land: • Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover • Cross-country ski trails and walking/hiking trails • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development; • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path. • Slope stabilization projects • Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

**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

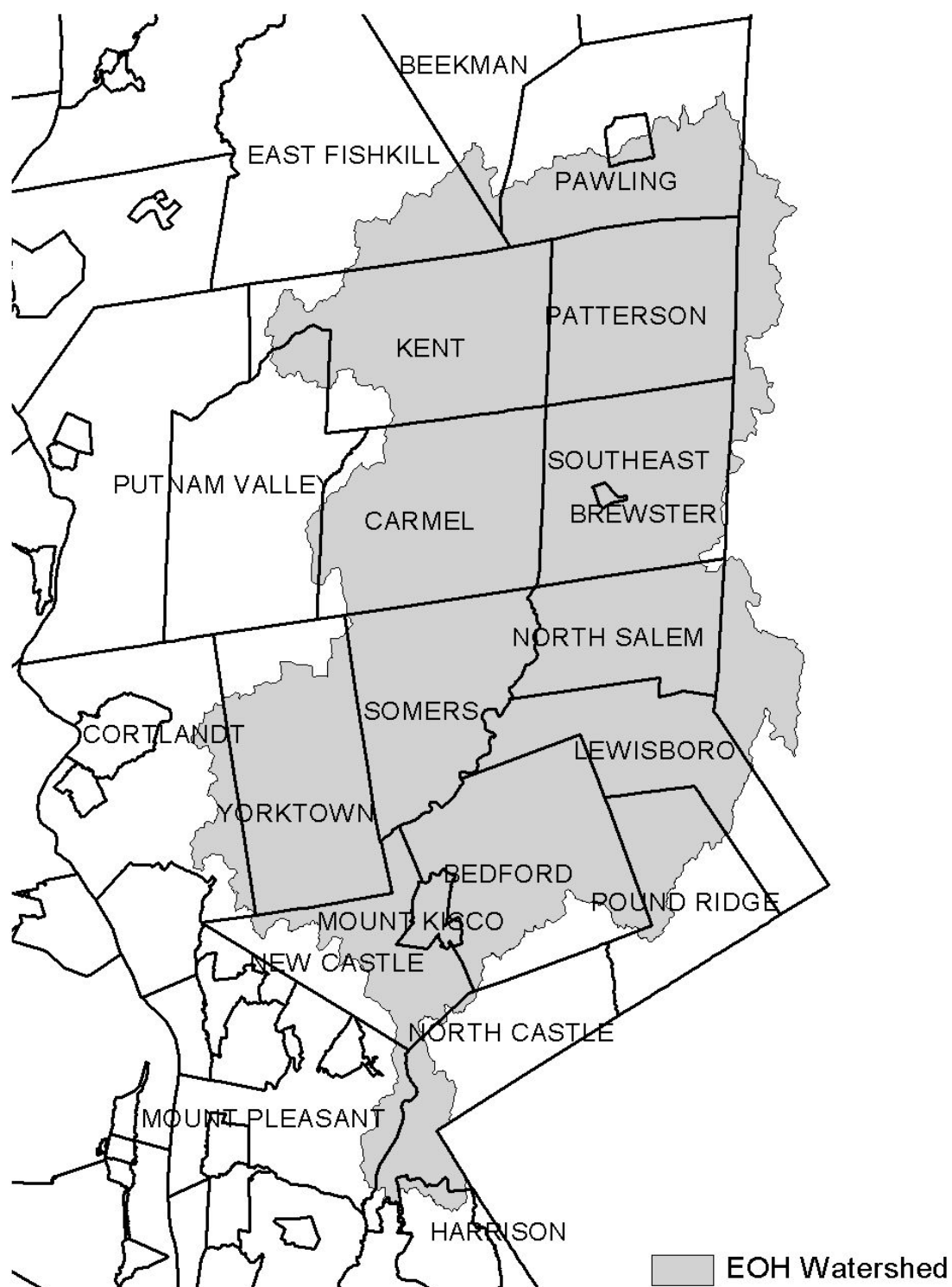
Figure 1 - New York City Watershed East of the Hudson

Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

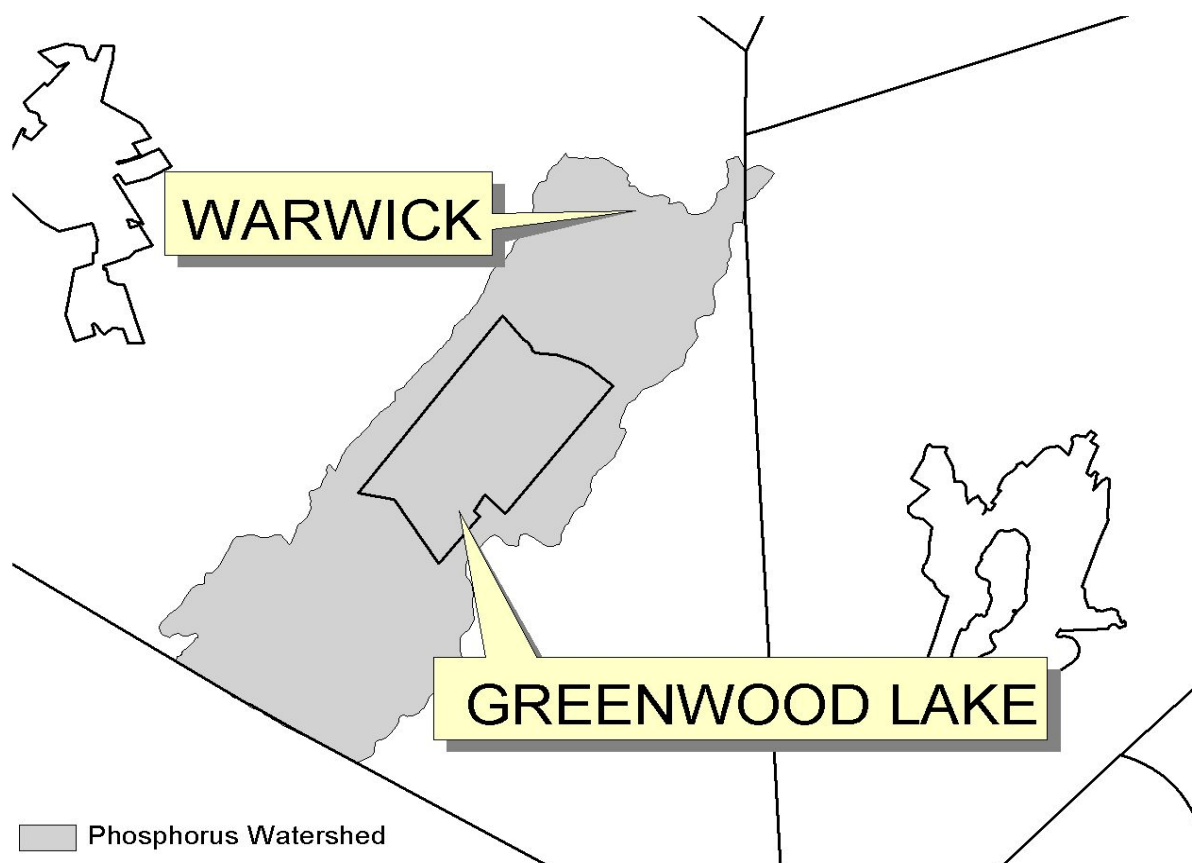


Figure 4 - Oscawana Lake Watershed

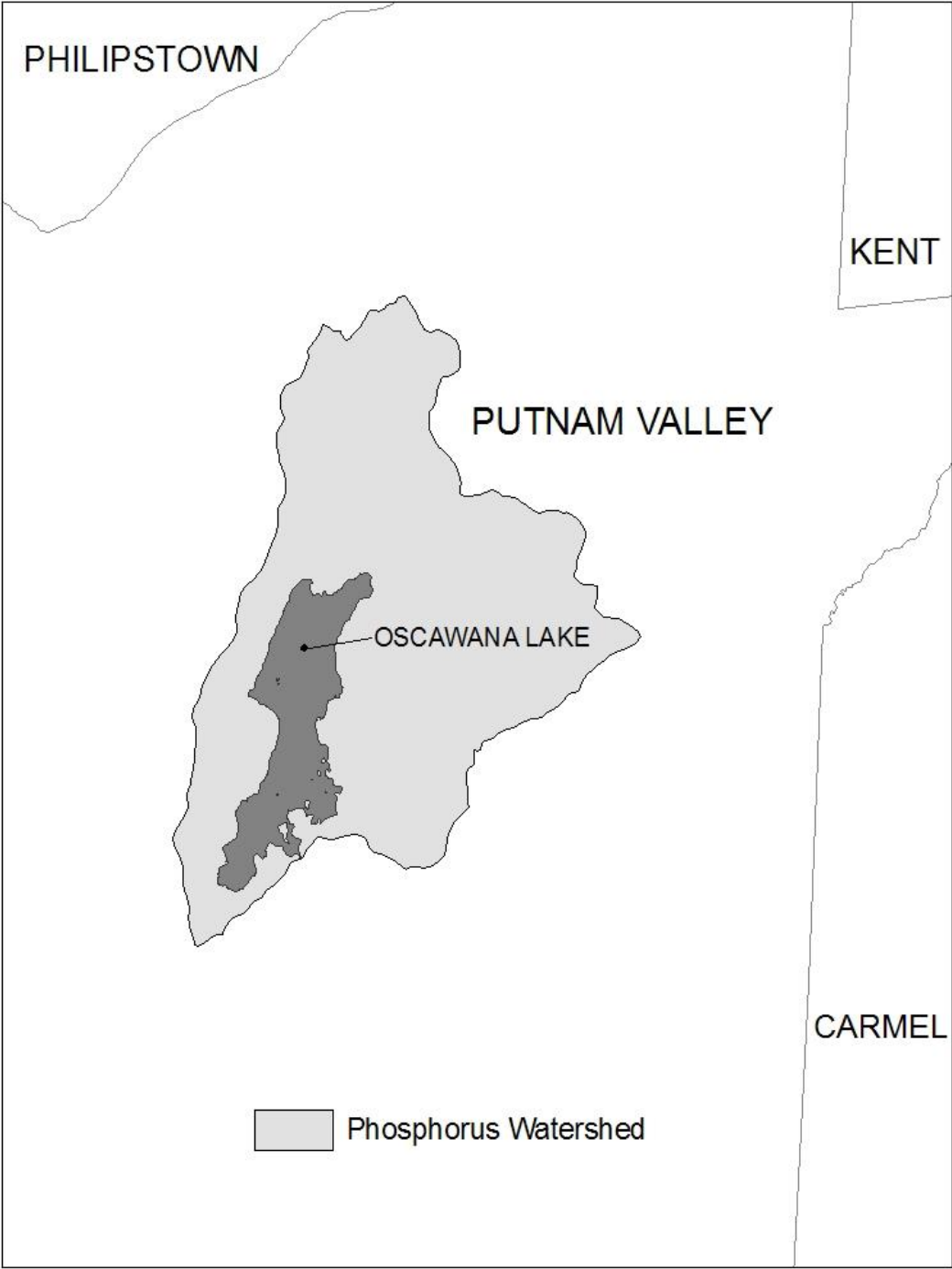
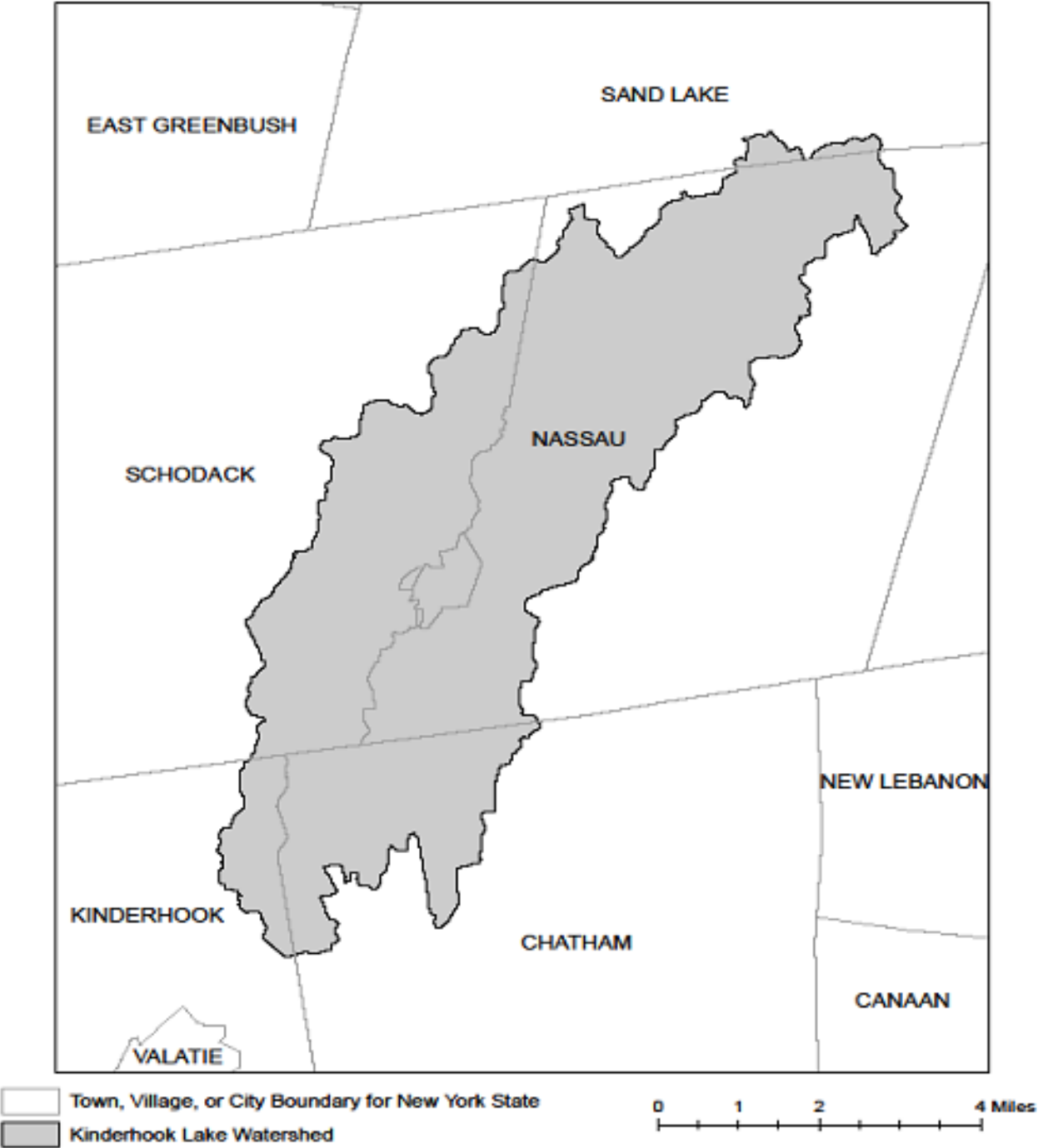


Figure 5 - Kinderhook Lake Watershed



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
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APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

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

Appendix B

Notice of Intent

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.30

(Submission #: HPA-D26N-8R0MB, version 1)

Details

Originally Started By Camie Jarrell

Submission ID HPA-D26N-8R0MB

Submission Reason New

Status Draft

Form Input

Owner/Operator Information

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

Borrego Solar

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Gibbons

Owner/Operator Contact Person First Name

Greg

Owner/Operator Mailing Address

NONE PROVIDED

City

NONE PROVIDED

State

NONE PROVIDED

Zip

NONE PROVIDED

Phone

NONE PROVIDED

Email

NONE PROVIDED

Federal Tax ID

NONE PROVIDED

Project Location**Project/Site Name**

153 YMCA Road Wind Project

Street Address (Not P.O. Box)

153 YMCA Road

Side of Street

NONE PROVIDED

City/Town/Village (THAT ISSUES BUILDING PERMIT)

NONE PROVIDED

State

NONE PROVIDED

Zip

NONE PROVIDED

DEC Region

NONE PROVIDED

County

NONE PROVIDED

Name of Nearest Cross Street

NONE PROVIDED

Distance to Nearest Cross Street (Feet)

NONE PROVIDED

Project In Relation to Cross Street

NONE PROVIDED

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

42.872481,-74.22510799999999

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

NONE PROVIDED

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

NONE PROVIDED

Post-Development Future Land Use

NONE PROVIDED

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)

NONE PROVIDED

Total Area to be Disturbed (acres)

NONE PROVIDED

Existing Impervious Area to be Disturbed (acres)

NONE PROVIDED

Future Impervious Area Within Disturbed Area (acres)

NONE PROVIDED

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

NONE PROVIDED

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

A (%)

NONE PROVIDED

B (%)

NONE PROVIDED

C (%)

NONE PROVIDED

D (%)

NONE PROVIDED

7. Is this a phased project?

NONE PROVIDED

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

Start Date

NONE PROVIDED

End Date

NONE PROVIDED

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

NONE PROVIDED

9a. Type of waterbody identified in question 9?

NONE PROVIDED

Other Waterbody Type Off Site Description

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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?

NONE PROVIDED

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

NONE PROVIDED

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?

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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)?

NONE PROVIDED

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)?

NONE PROVIDED

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?

NONE PROVIDED

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

NONE PROVIDED

SWPPP Preparer

NONE PROVIDED

Contact Name (Last, Space, First)

NONE PROVIDED

Mailing Address

NONE PROVIDED

City

NONE PROVIDED

State

NONE PROVIDED

Zip

NONE PROVIDED

Phone

NONE PROVIDED

Email

NONE PROVIDED

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

NONE PROVIDED

Comment

NONE PROVIDED

Erosion & Sediment Control Criteria

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

NONE PROVIDED

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

Temporary Structural

NONE PROVIDED

Biotechnical

NONE PROVIDED

Vegetative Measures

NONE PROVIDED

Permanent Structural

NONE PROVIDED

Other

NONE PROVIDED

Post-Construction Criteria

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

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

NONE PROVIDED

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).

NONE PROVIDED

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

NONE PROVIDED

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)

NONE PROVIDED

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

NONE PROVIDED

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)

NONE PROVIDED

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

NONE PROVIDED

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)

NONE PROVIDED

CPv Provided (acre-feet)

NONE PROVIDED

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

NONE PROVIDED

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)

NONE PROVIDED

Post-Development (CFS)

NONE PROVIDED

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)

NONE PROVIDED

Post-Development (CFS)

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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

NONE PROVIDED

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.

NONE PROVIDED

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)

NONE PROVIDED

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 PROVIDED

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?
NONE PROVIDED

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?
NONE PROVIDED

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

NONE PROVIDED

Comment

NONE PROVIDED

Appendix C

NYSDEC Acknowledgement Letter (to be added upon receipt)

Appendix D

County Soil Reports



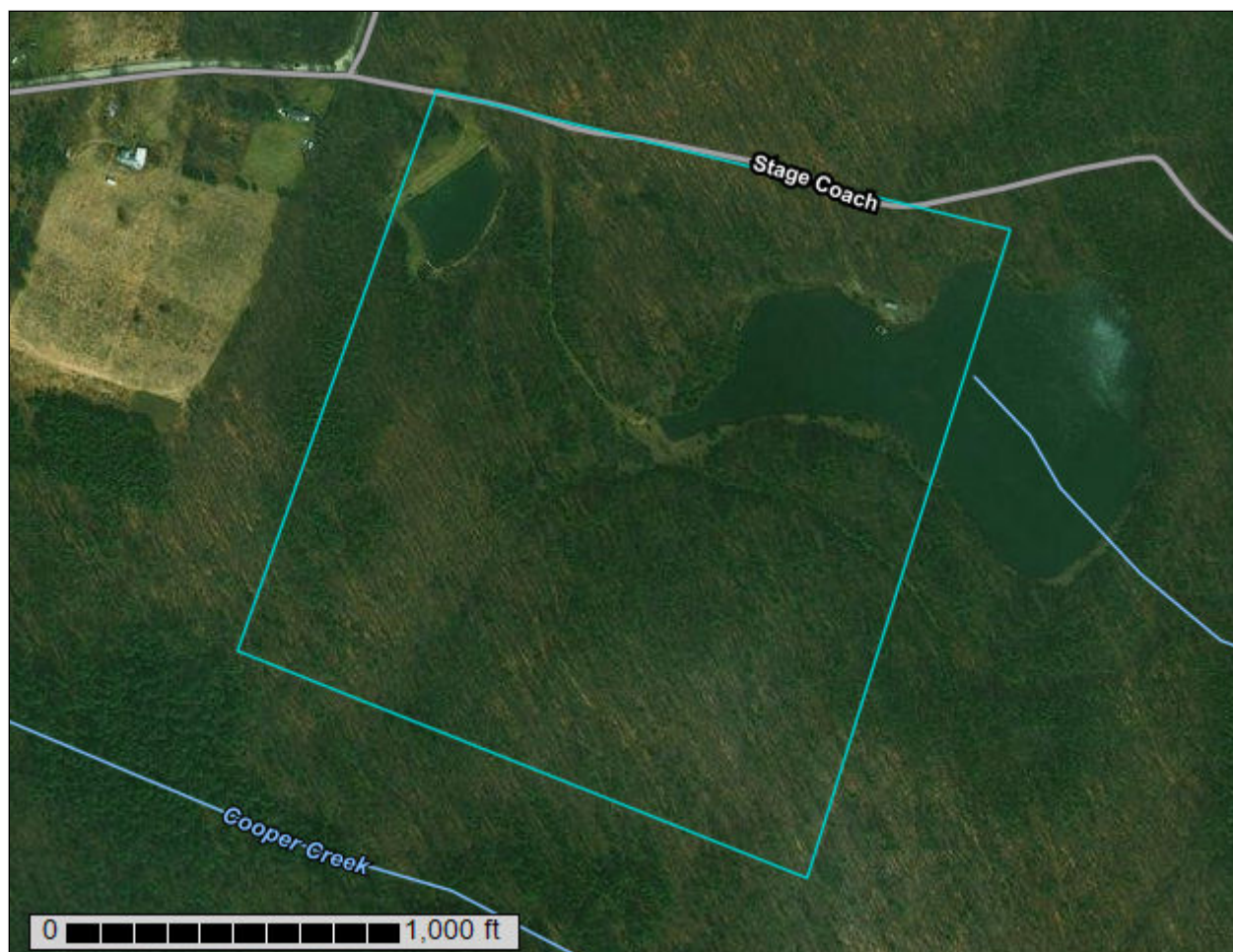
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Otsego County, New York



Preface

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

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

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

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

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

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

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

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

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

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

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

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

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

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

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

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

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report Soil Map



MAP 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: Otsego County, New York
Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: Feb 5, 2014—Sep 15, 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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BfC	Bath channery silt loam, 8 to 15 percent slopes	10.9	13.7%
BfD	Bath channery silt loam, 15 to 25 percent slopes	10.3	13.0%
BhC	Bath and Lackawanna soils, 8 to 15 percent slopes, extremely stony	16.5	20.7%
LoB	Lordstown-Arnot complex, 1 to 8 percent slopes, rocky	1.3	1.7%
LpC	Lordstown-Chadakoin complex, 8 to 15 percent slopes	2.1	2.7%
MeB	Mardin channery silt loam, 3 to 8 percent slopes	13.5	17.0%
MeC	Mardin channery silt loam, 8 to 15 percent slopes	1.5	1.9%
Sa	Sapristis and Aquents, inundated	5.7	7.2%
W	Water	1.2	1.5%
WmC	Wellsboro and Mardin soils, 3 to 15 percent slopes, extremely stony	16.4	20.7%
Totals for Area of Interest		79.4	100.0%

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

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

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

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

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

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

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

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

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

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

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

Otsego County, New York

BfC—Bath channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2v314

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Bath and similar soils: 90 percent

Minor components: 10 percent

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

Description of Bath

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: channery silt loam

Bw1 - 9 to 15 inches: channery silt loam

Bw2 - 15 to 25 inches: channery loam

E - 25 to 29 inches: channery loam

Bx - 29 to 52 inches: very channery silt loam

C - 52 to 72 inches: very channery silt loam

Properties and qualities

Slope: 8 to 15 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: 26 to 38 inches to fragipan

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 24 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: F140XY030NY - Well Drained Dense Till

Hydric soil rating: No

Minor Components

Lordstown

Percent of map unit: 5 percent

Landform: Mountains, hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountaintop, side slope, nose slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Mardin

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluvium, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

BfD—Bath channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2v316

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Bath and similar soils: 85 percent

Minor components: 15 percent

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

Description of Bath

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: channery silt loam

Bw1 - 9 to 15 inches: channery silt loam

Bw2 - 15 to 25 inches: channery loam

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E - 25 to 29 inches: channery loam
Bx - 29 to 52 inches: very channery silt loam
C - 52 to 72 inches: very channery silt loam

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 26 to 38 inches to fragipan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F140XY030NY - Well Drained Dense Till
Hydric soil rating: No

Minor Components

Lordstown

Percent of map unit: 10 percent
Landform: Mountains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountaintop, side slope, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluvium, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

BhC—Bath and Lackawanna soils, 8 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2v31r
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches

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Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Bath, extremely stony, and similar soils: 50 percent

Lackawanna, extremely stony, and similar soils: 30 percent

Minor components: 20 percent

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

Description of Bath, Extremely Stony

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: channery silt loam

Bw1 - 3 to 15 inches: channery silt loam

Bw2 - 15 to 25 inches: channery loam

E - 25 to 29 inches: channery loam

Bx - 29 to 52 inches: very channery silt loam

C - 52 to 72 inches: very channery silt loam

Properties and qualities

Slope: 8 to 15 percent

Surface area covered with cobbles, stones or boulders: 7.0 percent

Depth to restrictive feature: 26 to 38 inches to fragipan

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 24 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Ecological site: F140XY030NY - Well Drained Dense Till

Hydric soil rating: No

Description of Lackawanna, Extremely Stony

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

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Across-slope shape: Linear

Parent material: Loamy till derived mainly from reddish sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: channery silt loam

Bw1 - 3 to 17 inches: channery silt loam

Bw2 - 17 to 26 inches: channery loam

Bx - 26 to 60 inches: channery loam

C - 60 to 72 inches: very channery loam

Properties and qualities

Slope: 8 to 15 percent

Surface area covered with cobbles, stones or boulders: 7.0 percent

Depth to restrictive feature: 17 to 36 inches to fragipan

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 16 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Mardin, extremely stony

Percent of map unit: 4 percent

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Lordstown, very stony

Percent of map unit: 4 percent

Landform: Mountains, hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank, side slope, nose slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Wellsboro, extremely stony

Percent of map unit: 4 percent

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Linear

Across-slope shape: Linear

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Hydric soil rating: No

Oquaga, extremely stony

Percent of map unit: 4 percent

Landform: Mountains, hills

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Upper third of mountainflank, crest, nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear

Hydric soil rating: No

Valois, extremely stony

Percent of map unit: 4 percent

Landform: Valley sides, lateral moraines, end moraines

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

LoB—Lordstown-Arnot complex, 1 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 9w5l

Elevation: 970 to 1,750 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 105 to 145 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Lordstown and similar soils: 55 percent

Arnot and similar soils: 25 percent

Minor components: 20 percent

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

Description of Lordstown

Setting

Landform: Benches, hills, ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from sandstone and siltstone

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 26 inches: channery loam

Custom Soil Resource Report

H3 - 26 to 28 inches: channery loam

H4 - 28 to 32 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 8 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Arnot

Setting

Landform: Hills, ridges, benches

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from acid sandstone, siltstone, and shale

Typical profile

H1 - 0 to 5 inches: channery silt loam

H2 - 5 to 19 inches: very channery silt loam

H3 - 19 to 23 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 8 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: D

Ecological site: F140XY023NY - Shallow Till Uplands

Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 4 percent

Chadakoin

Percent of map unit: 3 percent

Hydric soil rating: No

Tuller

Percent of map unit: 3 percent

Hydric soil rating: No

Greene

Percent of map unit: 3 percent

Hydric soil rating: No

Bath

Percent of map unit: 3 percent

Hydric soil rating: No

Mardin

Percent of map unit: 3 percent

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Hydric soil rating: Unranked

LpC—Lordstown-Chadakoin complex, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9w5m

Elevation: 970 to 1,750 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 105 to 145 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lordstown and similar soils: 55 percent

Chadakoin and similar soils: 25 percent

Minor components: 20 percent

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

Description of Lordstown

Setting

Landform: Benches, hills, ridges

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from sandstone and siltstone

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Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 26 inches: channery loam
H3 - 26 to 28 inches: channery loam
H4 - 28 to 32 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Chadakoin

Setting

Landform: Drumlinoid ridges, hills, till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 19 inches: gravelly silt loam
H3 - 19 to 46 inches: very gravelly silt loam
H4 - 46 to 57 inches: very flaggy silt loam
H5 - 57 to 61 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F140XY027NY - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 5 percent

Hydric soil rating: No

Bath

Percent of map unit: 5 percent

Hydric soil rating: No

Mardin

Percent of map unit: 5 percent

Hydric soil rating: No

Arnot

Percent of map unit: 5 percent

Hydric soil rating: No

MeB—Mardin channery silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2srhb

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mardin and similar soils: 85 percent

Minor components: 15 percent

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

Description of Mardin

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluvium, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam

BE - 8 to 12 inches: channery silt loam

Bw1 - 12 to 16 inches: channery silt loam

Bw2 - 16 to 20 inches: channery silt loam

Bx1 - 20 to 36 inches: channery silt loam

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Bx2 - 36 to 57 inches: channery silt loam

C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: 14 to 26 inches to fragipan

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 13 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Bath

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluvium, side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Volusia

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, interfluvium, side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Lordstown

Percent of map unit: 5 percent

Landform: Mountains, hills

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Mountaintop, interfluvium, crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

MeC—Mardin channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2srhj
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Mardin and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mardin

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam
BE - 8 to 12 inches: channery silt loam
Bw1 - 12 to 16 inches: channery silt loam
Bw2 - 16 to 20 inches: channery silt loam
Bx1 - 20 to 36 inches: channery silt loam
Bx2 - 36 to 57 inches: channery silt loam
C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 14 to 26 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D

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Hydric soil rating: No

Minor Components

Bath

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Volusia

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lordstown

Percent of map unit: 2 percent
Landform: Mountains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountaintop, side slope, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sa—Saprists and Aquepts, inundated

Map Unit Setting

National map unit symbol: 9w70
Elevation: 970 to 2,430 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 105 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Saprists and similar soils: 45 percent
Aquepts and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saprists

Setting

Landform: Swamps, marshes

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Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Organic material

Typical profile

H1 - 0 to 72 inches: muck

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.20 to 19.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 5 percent

Available water capacity: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Description of Aquents

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope

Down-slope shape: Concave

Across-slope shape: Concave

Typical profile

H1 - 0 to 10 inches: mucky silt loam

H2 - 10 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)

Depth to water table: About 0 to 24 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 10 percent

Available water capacity: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components

Carlisle

Percent of map unit: 3 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

Wayland

Percent of map unit: 3 percent

Landform: Flood plains

Hydric soil rating: Yes

Canandaigua

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

Alden

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

Palms

Percent of map unit: 3 percent

Landform: Marshes, swamps

Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 9w8d

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 105 to 155 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

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

WmC—Wellsboro and Mardin soils, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2v327

Elevation: 330 to 2,460 feet

Custom Soil Resource Report

Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 50 percent
Mardin, extremely stony, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wellsboro, Extremely Stony

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till from reddish sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery silt loam
Bw - 3 to 22 inches: channery silt loam
Bx - 22 to 55 inches: channery loam
C - 55 to 72 inches: very channery loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 7.0 percent
Depth to restrictive feature: 14 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Mardin, Extremely Stony

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loamy till

Custom Soil Resource Report

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery silt loam
BE - 3 to 12 inches: channery silt loam
Bw1 - 12 to 16 inches: channery silt loam
Bw2 - 16 to 20 inches: channery silt loam
Bx1 - 20 to 36 inches: channery silt loam
Bx2 - 36 to 57 inches: channery silt loam
C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 7.0 percent
Depth to restrictive feature: 14 to 26 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Morris, extremely stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluvium, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Volusia, extremely stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluvium, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lackawanna, extremely stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluvium, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Custom Soil Resource Report

Bath, extremely stony

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

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Custom Soil Resource Report

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Appendix E

Stormwater Pollution Prevention Plan Certifications

STORMWATER POLLUTION PREVENTION PLAN
FLORIDA YMCA ROAD WIND PROJECT
BORREGO SOLAR

Owner/Operator's Certification Statement

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the 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 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."

Owner/Operator's Name

Address

Phone Number

Owner/Operator's Representative Name and Title

Representative Signature

Date

STORMWATER POLLUTION PREVENTION PLAN
FLORIDA YMCA ROAD WIND PROJECT
BORREGO SOLAR
Contractor's Certification Statement

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the 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 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."

Contractor's Name

Address

Phone Number

Contractor's Representative Name and Title

Representative Signature

Date

Appendix F

Stormwater Calculations and Modeling Results

WinTR-55 Current Data Description

--- Identification Data ---

User: Cristobald Date: 21/07/2021
 Project: BorregoSolar Units: English
 SubTitle: PostDevelopment Areal Units: Acres
 State: New York
 County: Montgomery NRCC-B
 Filename: C:\Users\CDelgado\OneDrive - GHD\Proyectos\Borrego Solar Single Wind Turbine\02. Calculations\Po

--- Sub-Area Data ---

Name	Description	Reach	Area (ac)	RCN	Tc
ws1	west - schohaire creek	Outlet	19.64	82	.139
ws2	mid - schohaire creek	Outlet	8.47	83	.175
ws3	east - n. chuctanunda	Outlet	31.5	82	0.129

Total area: 59.61 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.48	3.01	3.5	4.27	4.96	5.77	2.16

Storm Data Source: Montgomery NRCC-B County, NY (NRCS)
 Rainfall Distribution Type: Type NR_B
 Dimensionless Unit Hydrograph: delmarva

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.48	3.01	3.5	4.27	4.96	5.77	2.16

Storm Data Source: Montgomery NRCC-B County, NY (NRCS)
Rainfall Distribution Type: Type NR_B
Dimensionless Unit Hydrograph: delmarva

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period		
	10-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)

SUBAREAS			
ws1	34.38	72.64	14.02
ws2	13.87	28.86	5.79
ws3	57.17	120.66	23.41
REACHES			
OUTLET	105.14	221.50	42.97

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow 10-Yr (cfs) (hr)	Peak Flow 100-Yr (cfs) (hr)	Peak Time (hr) by Rainfall Return Period 1-Yr (cfs) (hr)
------------------------------------	-------------------------------------	--------------------------------------	---

SUBAREAS

ws1	34.38 12.14	72.64 12.14	14.02 12.16
-----	----------------	----------------	----------------

ws2	13.87 12.17	28.86 12.17	5.79 12.18
-----	----------------	----------------	---------------

ws3	57.17 12.14	120.66 12.15	23.41 12.15
-----	----------------	-----------------	----------------

REACHES

OUTLET	105.14	221.50	42.97
--------	--------	--------	-------

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
ws1	19.64	0.139	82	Outlet	west - schohaire creek
ws2	8.47	0.175	83	Outlet	mid - schohaire creek
ws3	31.50	0.129	82	Outlet	east - n. chuctanunda
Total Area:	59.61 (ac)				

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
ws1							
SHALLOW	1983	0.0600	0.050				0.139
						Time of Concentration	.139 =====
ws2							
SHALLOW	1440	0.0200	0.050				0.175
						Time of Concentration	.175 =====
ws3							
SHALLOW	1672	0.0500	0.050				0.129
						Time of Concentration	0.129 =====

Cristobald

BorregoSolar
PostDevelopment
Montgomery NRCC-B County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number

ws1	Gravel (w/ right-of-way)	D	.269	91
	Industrial	D	.311	93
	Pasture, grassland or range	(fair) D	1.987	84
	Woods - grass combination	(fair) D	17.073	82
	Total Area / Weighted Curve Number		19.64	82
			=====	==
ws2	Industrial	D	.048	93
	Pasture, grassland or range	(fair) D	4.316	84
	Woods - grass combination	(fair) D	4.106	82
	Total Area / Weighted Curve Number		8.47	83
			=====	==
ws3	Gravel (w/ right-of-way)	D	1.149	91
	Industrial	D	.314	93
	Pasture, grassland or range	(good) D	3.85	80
	Woods - grass combination	(fair) D	26.187	82
	Total Area / Weighted Curve Number		31.5	82
			=====	==

WinTR-55 Current Data Description

--- Identification Data ---

User: Cristobald Date: 21/07/2021
 Project: BorregoSolar Units: English
 SubTitle: PreDevelopment Areal Units: Acres
 State: New York
 County: Montgomery NRCC-B
 Filename: C:\Users\CDelgado\OneDrive - GHD\Proyectos\Borrego Solar Single Wind Turbine\02. Calculations\Pr

--- Sub-Area Data ---

Name	Description	Reach	Area (ac)	RCN	Tc
ws1	west - schohaire creek	Outlet	19.64	82	.139
ws2	mid - schohaire creek	Outlet	8.47	83	.182
ws3	east - n. chuctanunda	Outlet	31.5	82	.129

Total area: 59.61 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.48	3.01	3.5	4.27	4.96	5.77	2.16

Storm Data Source: Montgomery NRCC-B County, NY (NRCS)
 Rainfall Distribution Type: Type NR_B
 Dimensionless Unit Hydrograph: delmarva

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.48	3.01	3.5	4.27	4.96	5.77	2.16

Storm Data Source: Montgomery NRCC-B County, NY (NRCS)
Rainfall Distribution Type: Type NR_B
Dimensionless Unit Hydrograph: delmarva

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period		
	10-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)

SUBAREAS			
ws1	34.38	72.64	14.02
ws2	13.87	28.86	5.79
ws3	57.17	120.66	23.41
REACHES			
OUTLET	105.14	221.50	42.97

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow 10-Yr (cfs) (hr)	Peak Flow 100-Yr (cfs) (hr)	Peak Time (hr) by Rainfall Return Period 1-Yr (cfs) (hr)
------------------------------------	-------------------------------------	--------------------------------------	---

SUBAREAS

ws1	34.38 12.14	72.64 12.14	14.02 12.16
-----	----------------	----------------	----------------

ws2	13.87 12.17	28.86 12.17	5.79 12.18
-----	----------------	----------------	---------------

ws3	57.17 12.14	120.66 12.15	23.41 12.15
-----	----------------	-----------------	----------------

REACHES

OUTLET	105.14	221.50	42.97
--------	--------	--------	-------

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
ws1	19.64	0.139	82	Outlet	west - schohaire creek
ws2	8.47	0.182	83	Outlet	mid - schohaire creek
ws3	31.50	0.129	82	Outlet	east - n. chuctanunda
Total Area:	59.61 (ac)				

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Sub-Area Time of Concentration Details

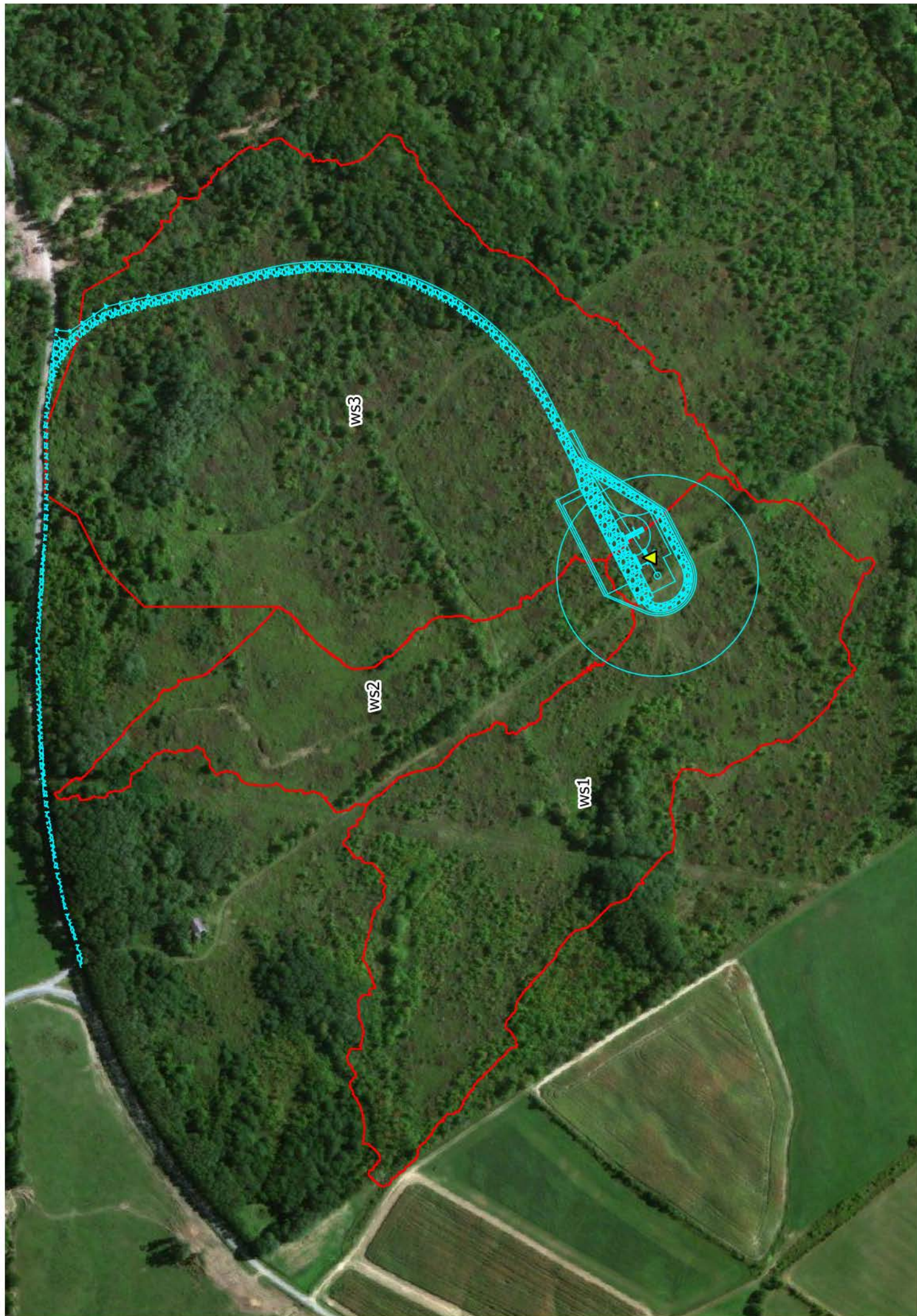
Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
ws1							
SHALLOW	1983	0.0600	0.050				0.139
					Time of Concentration		.139 =====
ws2							
SHALLOW	1496	0.0200	0.050				0.182
					Time of Concentration		.182 =====
ws3							
SHALLOW	1672	0.0500	0.050				0.129
					Time of Concentration		.129 =====

Cristobald

BorregoSolar
PreDevelopment
Montgomery NRCC-B County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
ws1	Pasture, grassland or range	(fair)	D	2.31	84
	Woods - grass combination	(fair)	D	17.33	82
	Total Area / Weighted Curve Number			19.64	82
				=====	==
ws2	Pasture, grassland or range	(fair)	D	4.32	84
	Woods - grass combination	(fair)	D	4.15	82
	Total Area / Weighted Curve Number			8.47	83
				=====	==
ws3	Pasture, grassland or range	(fair)	D	3.85	84
	Woods - grass combination	(fair)	D	27.65	82
	Total Area / Weighted Curve Number			31.5	82
				=====	==



Appendix G

Notice of Termination

**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:

(NYS DEC Notice of Termination - January 2015)



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→ **The Power of Commitment**

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APPENDIX 7: METEOROLOGICAL DATA

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Wind and Climate Data Summary, Florida , New York

Submitted to Dave Strong and Megan Murphy
New Leaf Energy, Inc.

Prepared by Prabha Kumari and Daniel Struwig
ArcVera Renewables, 16 February 2023

There is a series of tabs in this workbook that contain wind and climate statistics and that are self-explanatory to client.

Please see the separate, shared, repair log maintained by ArcVera on behalf of New Leaf Energy, Inc. for details regarding tower issues.

Current Month Data Summary by Meteorological Tower Site*

	4554	Comment
Mean Wind Speed (m/s)	5.99	measurements nearest top of tower
Mean Wind Direction (°)	273	measurements nearest top of tower
Mean Wind Shear Exponent	0.29	top and bottom levels
Weibull A	6.75	measurements nearest top of tower
Weibull k	2.11	measurements nearest top of tower
Maximum Wind Speed (m/s)	17.5	10-minute maximum, all data
Max gust (m/s)	26	1s or 2s gust, all data
TI ₁₅	0.154	TI at a 15 m/s wind speed, near top of tower
Mean air density (kg/m ³)	1.25	Based on temperature/pressure nearest top of tower

Overall/Composite Data Summary by Meteorological Tower Site

	4554	Comment
Data Period Start	11/10/2021	Tower installation date
Data Period End	01/31/2023	Latest data in this report
Months of Data	14.7	top and bottom levels
Mean Wind Speed (m/s)	5.74	measurements nearest top of tower
Mean Wind Direction (°)	260	measurements nearest top of tower
Mean Wind Shear Exponent	0.30	top and bottom levels
Weibull A	6.52	measurements nearest top of tower
Weibull k	1.88	measurements nearest top of tower
Maximum Wind Speed (m/s)	26.2	10-minute maximum, all data
Max gust (m/s)	36	1s or 2s gust, all data
TI ₁₅	0.150	TI at a 15 m/s wind speed, near top of tower
Mean air density (kg/m ³)	1.21	Based on temperature/pressure nearest top of tower

* --- indicates that no data are available for the month or period

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APPENDIX 8: DRAFT EMERGENCY RESPONSE PLAN

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Emergency Response Plan (DRAFT)

153 YMCA Road, Florida,
NY

Applicant:
Florida Wind 1, LLC

For Activities At:
153 YMCA Road
Florida, NY 12010

Prepared by:



New Leaf Energy
22 Century Hill Drive
Latham, NY 12110

Dated: July 2023



DISCLAIMER STATEMENT

The information contained in this Emergency Response Plan ("ERP") is being made available by New Leaf Energy, Inc. ("NLE") and Florida Wind 1, LLC (Referred to as "Florida Wind") to local first responders and to the general public to educate and provide a preliminary plan for the Florida Wind Turbine Project ("Project") of the procedures to follow in the event of an emergency.

The contents of the ERP are preliminary and provided in good faith, but nothing herein should be taken as constituting professional advice. By the dissemination of the information contained herein, NLE and Florida Wind intend to ensure the transmission of important information to site personnel and visitors regarding emergency procedures.

In no event shall NLE, Florida Wind or their affiliates, be liable for any damages of any kind arising out of or in any way connected with the use of this ERP.



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1.0 Introduction

Florida Wind recognizes that site personnel have the right and need to know the procedures to follow in the event of an emergency. With this ERP, Florida Wind is attempting to transmit information to site personnel regarding emergency action.

This Emergency Response Plan ("ERP") is developed to support the safety of persons at the Florida Wind facility in the event of a major emergency which could occur at the Facility where work is performed. The ERP discusses events which include:

1. Communication media
2. Field Injury
3. Fire
4. Earthquake
5. Adverse Weather
6. Hazardous Material Spill
7. Crime / Violent Behavior / Civil Disturbance

The ERP is established to give additional awareness to the following:

- Identify alarm and emergency evacuation procedures.
- Identify procedures to be followed by site personnel who remain to operate critical operations before they evacuate.
- Identify rescue and medical duties for all site personnel following emergency evacuation.
- Identify persons who can be contacted for further information or explanation of duties under this plan.
- Establish training guidelines for site personnel regarding this plan to support safe practices in the event of an emergency.

Plan Maintenance

The responsibility for maintaining this Plan has been assigned to the facility Plant Operator. Herein the term "Manager" or "Management" shall mean any Manager or Supervisor, unless otherwise specified.

Site Personnel Training

New site personnel will be oriented to the ERP via a copy and review of this document in combination with their orientation to other Florida Wind safety policies.

Beyond new hire orientation, the Plant Operator, or the employee's direct supervisor, shall provide training to support their job function.



A copy of this Emergency Response Plan (“ERP”) is provided to each site person and is to be available at all times for all site personnel to review.

Local First Responder Training and Access

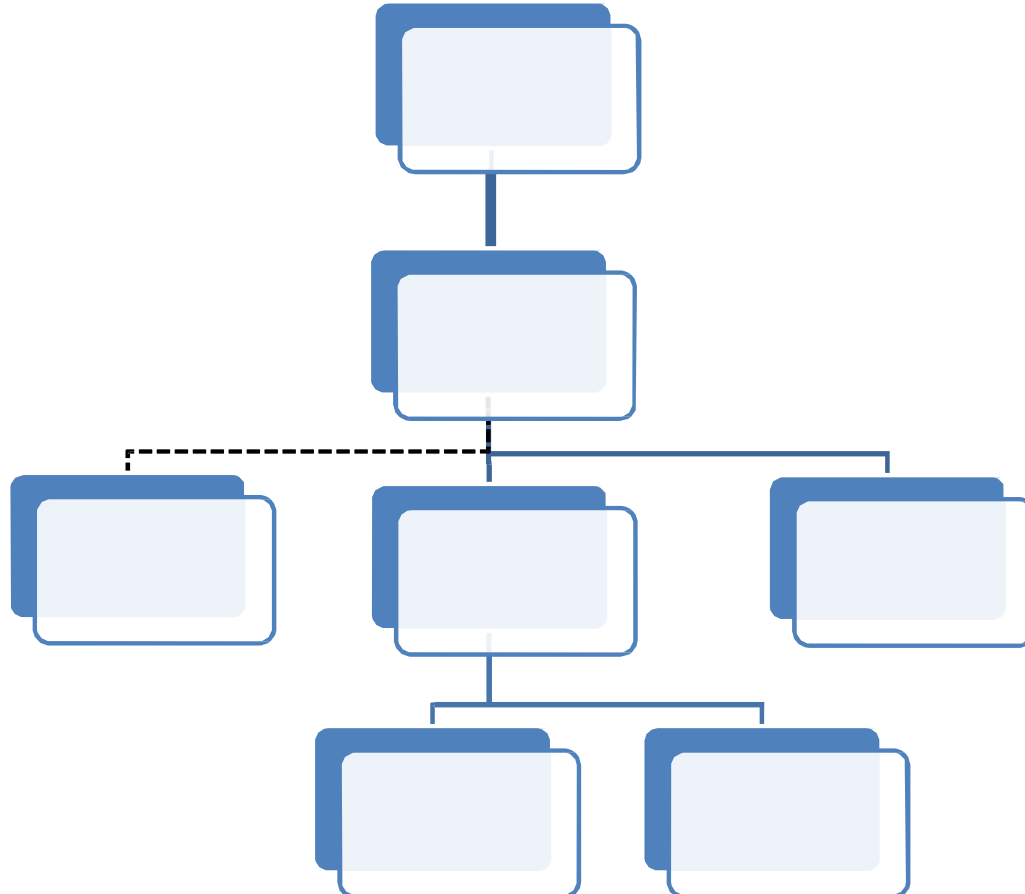
Local first responders will be provided with a copy of the final ERP.

Annual training will be held for local first responders. The specifics of the annual training will be decided by the Plant Operators and local first responders. Only personnel who have been certified in High Tower Rescue procedures (or equivalent) may perform rescues at levels above the ground or base level in wind turbines.

Fire responders are not expected to access a turbine location to fight a fire since current best practice is to let the fire burn out at a turbine. Emergency responders will not have direct access to turbines through access roads due to security and landowner preference reasons. However, anytime that the Facility operators and maintenance personnel are at a turbine site, the access road gates remain unlocked, so medical personnel will be able to access turbines when personnel are at these locations.

2.0 Emergency Management Organization

Emergency Management Hierarchy **to be determined.**





Key Personnel Contacts

Florida Wind Corporate	TBD	TBD
	TBD	TBD
Plant Operators	TBD	TBD
	TBD	TBD
Turbine supplier O&M Supervisor	TBD	TBD
Turbine supplier Health and Safety	TBD	TBD

Personnel Responsibilities

All Site Personnel	
Respond and assist (when safety is not jeopardized) to emergency situations	
Plant Operator - Updates emergency plans and policies - Ensures site personnel have access to policies and procedures - Interfaces with local utility companies - Interfaces with emergency response service entities - Interfaces with general public - Responsible for BOP equipment isolation - When possible notifies all site personnel of emergency situations - Reports to Florida Wind Corporate	Turbine Supplier Health and Safety Oversees incident reporting
Turbine Supplier O&M Supervisor - Reports emergency situations to Plant Operator and Turbine Supplier H&S - In absence of Plant Operator reports to Florida Wind Corporate - Ensures timely incident reporting to Turbine Supplier H&S and Plant Operator	Customer Subcontractors - Notifies Plant Operator of any emergency situations - Completes incidents reports
Turbine Supplier Technicians - Report emergency situations to Turbine Supplier Supervisor - Complete incident reports	Turbine Supplier Subcontractors - Report emergency situations to Turbine Supplier Supervisor - Complete incident reports



3.0 Emergency Contact List

Medical Assistance

Local facilities that will be used to assist or treat medical injuries include:

CLOSEST EMERGENCY HOSPITAL:

St. Mary's Memorial Health Center

4988 NY-30, Amsterdam, NY 12010 Phone: 518-841-3770

LOCAL PROFESSIONAL EMERGENCY RESPONSE:

911

Notification of Landowners

Plant operator will notify Project component host land owners of incidents occurring on their property via telephone. This reporting will be at the discretion of the Plant Operator.

Notification of Utilities

The Plant operator will notify any relevant utilities that may be impacted by incidents that occur at the Project by telephone.

Notification of Environmental Agencies

Plant Operator will notify local or regional environmental agencies of incidents which may have resulted in violation of applicable environmental regulations (for example, release of chemicals or lubricants to the environment).

New York State Department of Environmental Conservation

Spill Hotline (24-hour, toll-free hotline for reporting oil or chemical spills)

1-800-457-7362



4.0 Emergency Response Procedures

4.1 Communication Media

All field site personnel shall carry or have access to communication media and is identified by their site personnel name/ number. Subcontractors often carry their own communications media and are identified by name.

Communications media is used for communication between the site personnel in the field and the office personnel for the purposes of:

- Field status reports
- Power outage coordination
- Emergency conditions
- Other daily work performance

It is absolutely necessary that everyone has communication media at all times during working hours.

4.2 Field Injury Procedure

A. FIRST PERSON AT THE ACCIDENT SCENE

Upon arriving at the scene of the injury related Accident, the first person shall survey the scene (Is it safe?). The first person at the scene will have to determine whether to call 911 or to transport the injured person to the hospital. If the responder is unsure call 911.

B. CALL 911

The responding individual will...

1. Dial 911 immediately.
2. Identify yourself as a Florida Wind employee.
3. Relay information to the 911 operator.
4. If the Victim has been hanging in a harness the 911 caller must notify 911 and the emergency response crew that the victim could be suffering from orthostatic shock (suspension trauma). DO NOT allow any personnel to lay an unconscious person who has been hanging in a harness on their back. IT COULD KILL THE PERSON. If the injured person is to be emergency descended from the tower someone must be on the ground to catch them to prevent them from coming to rest on their back.

If a life flight is required, a 100x100 area is required to land the helicopter. The on scene leader of the fire department will pick the suitable area.



The caller will have to make considerations for the weather conditions at the time of the emergency. If the roads are icy it may not be possible for the ambulance and/or fire truck to access the area. The caller will have to coordinate through the 911 operator if they will meet EMS somewhere on the wind farm.

C. ALSO NOTIFY THE FOLLOWING PERSONS

After the call to 911, the designated 911 call person shall notify all of the following personnel (if possible):

- Plant Operator
- Site Supervisor

4.2.1 Medical Emergencies

Medical cases generally fall under the following categories:

Minor Medical Case – Medical cases requiring minimal care and presenting no disability potential. Frequently do not require professional medical care.

Medical Case – Medical cases that are not life threatening and not likely to result in permanent or serious disability. Require professional medical care.

Emergency Medical Case – Those medical cases that, if not properly attended to, could result in death or serious injury. Permanent disability is possible. Require professional medical care.

A. PROCEDURE

1. Do not move victim unless safety dictates or an emergency descent is required.
2. If the injury appears to be life threatening, be prepared to give the 911 operator as much information as possible.
3. If the injury is not life threatening or likely to result in permanent disability, first aid care may be provided by trained employee, or the injured person will be transported to the ER.

B. LOCATION OF FIRST AID SUPPLIES

Each vehicle shall be equipped with an individual first aid kit.

Field: Ground floor of WTG and in the nacelle

AEDs: Automated External Defibrillators (AEDs) are located in strategic locations onsite. Their storage locations are marked on the site map.



4.3 Fire

1. Field personnel will call 911 in the event of a fire. After the 911 call notify the Plant Operator and Turbine Supplier Supervisor.
2. Know the location of fire extinguishers, fire exits and alarm systems in your area and know how to use them. Extinguishing a fire should not be done unless it can be done in a safe manner.
3. If a minor fire appears to be controllable, trained personnel may attempt to extinguish the fire using fire extinguishers or other appropriate sources, only after "911" has been called.
4. A complete evacuation of the area will be performed in any fire emergency. All site personnel should proceed to the nearest exit or safe location.
5. Seek out any handicapped personnel in the area and provide assistance when exiting.
6. Managers or site personnel will assist in the evacuation and will meet the Fire Department to direct them to the proper location.
7. Once the Fire Department has arrived, the responding incident commander will take charge of all rescue operation and suppression activities.
8. Personnel should meet at:

Location TBD

9. Keep clear of fire lanes, hydrants and walkways for emergency crews and vehicles. Personnel should remain at this location until accounted for by Management. Do not leave the premises until accounted for and given permission to do so. Valuable time could be wasted searching for personnel who have not followed correct procedures.
10. Only the Plant Operator can declare the state of emergency over and give permission to re-enter.

4.4 Earthquake

A. DURING AN EARTHQUAKE

1. Move to an open area away from turbine towers, power lines and poles.
2. Get low to the ground and balance yourself. The ground may move violently for several minutes.
3. If there is not open area, seek available shelter (such as your vehicle) to avoid falling objects. Stay in your vehicle if electrical wires fall on it. Wait for professional help – wires may still be live, and you could be electrocuted if you stepped outside.



B. IMMEDIATELY AFTER THE QUAKE

1. Be prepared for aftershocks. Although usually less intense than the main quake, they can cause further damage.
2. Use any communication means necessary to notify your supervisor of your status and position. If your device does not operate at first, keep trying. Know that someone will be trying to make contact with you also.
3. If you feel safe in doing so, attempt to evacuate to the following designated meeting place:

Location TBD

Back up designated meeting place: TBD

4. Remain at your designated rendezvous location until you have answered to a roll call by the Plant Operator. Do not leave the premises until accounted for and given permission to do so by the Plant Operator. Valuable time could be wasted searching for personnel that have not followed correct procedures.
5. You may be directed to return to the Florida Wind office location. This does not give you permission to go elsewhere.
6. Only the Plant Operator can declare the state of emergency over and give permission to leave the designated rendezvous location or the Florida Wind shelter area.

4.5 Adverse Weather

A serious weather “watch” indicates that conditions for bad weather exist. During a “watch” status, maintain a normal routine. The Plant Operator and all personnel should monitor available information. A “warning” is more serious. The following is a list of emergency situations, definitions of these conditions, and general emergency instructions which should be followed.

4.5.1 Severe Thunderstorms

Winds exceeding 55 miles per hour and heavy lightning and thunder. Lightning is the greatest danger during a severe thunderstorm.

Special Precautions:

1. Remain indoors.
2. Stay away from open doors or windows, metal pipes or electrical appliances.
3. Prepare for flash flooding.
4. Follow Management instructions.



General Information

During the late spring to the summer months, in certain parts of the country, thunderstorms are common. Because of this, all service technicians who work in these areas need to be aware of the possible lightning conditions that may occur on our wind turbine projects during these thunderstorms. Before, during, and after, thunderstorms all affected employees need to be aware of what to do and where to report.

Safer Locations during Thunderstorms and Locations to Avoid

No Place is absolutely safe from lightning threat; however, some places are safer than others. Large enclosed structures (substantially constructed buildings) tend to be much safer than smaller or open structures. The risk for lightning injury depends on whether the structure incorporates lightning protection, construction materials used, and the size of the structure. Avoid contact with metal or conducting surfaces outside or inside the vehicle.

Generally speaking, if an individual can see lightning and/or hear thunder he/she is already at risk. Louder or more frequent thunder indicates that lightning activity is approaching, increasing. If the time delay between seeing the flash (lightning) and hearing the bang (thunder) is less than 30 seconds, the individual should be in, or seek a safer location. Be aware that this method of ranging has severe limitations in part due to the difficulty of associating the proper thunder of the corresponding flash.

High winds, rainfall, and cloud cover often act as precursors, to actual cloud-to-ground strikes, by notifying individuals to take action. Many lightning casualties occur in the beginning, as the storm approaches, because people ignore these precursors. Also, many lightning casualties occur after the perceived threat has passed. Generally, the lightning threat diminishes with time after the last sound of thunder, but may persist for more than 30 minutes. When thunderstorms are in the area but not overhead, the lightning threat can exist even when it is sunny, not raining, or when clear sky is visible.

When available, pay attention to weather warning devices such as weather radio and/or credible lightning detection systems, however, do not let this information override good common sense, as isolated storms are common.

Lightning Safety

1. Avoid being in or near:

Wind turbine and communication towers, other high places, open fields, isolated trees, light poles, metal fences, and open water (ocean, lakes, rivers, etc.). After the storm has passed, all employees shall wait at least 30 minutes after the last lightning strike within the warning zone surrounding the Wind Turbine before approaching any equipment. If you hear a hissing or crackling sound, this may be a sign of the wind turbine holding a charge. If these sounds are present, DO NOT APPROACH the wind turbine.



2. When inside a building avoid:

Use of the telephone, washing your hands, or any contact with conductive surfaces with exposure to the outside such as metal door or window frames, electrical wiring, telephone wiring, cable TV wiring, plumbing, etc.

3. When in Vehicles during lightning:

If you get caught inside a metal vehicle you must not be touching any metallic objects referenced to the outside of the car. Door and window handles, radio dials, CB microphones, gearshifts, steering wheels, and other inside-to-outside metal objects should be left alone during close-in lightning events. If you are driving, and get caught in a lightning storm, pull off to the side of the road in a safe manner (in a low area, not on a hill), turn on the emergency blinkers, turn off the engine, put your hands in your lap, and wait out the storm.

4. Heavy Equipment:

Boom trucks, cranes, backhoes, bulldozers, loaders, graders, scrapers, mowers, etc. which employ an enclosed rollover systems canopy (ROPS) are safe in nearby electrical storms. The operator should shut down the equipment, close the doors, and sit with hands in lap, waiting out the storm. In no circumstances, during close-in lightning, should the operator attempt to step off the equipment to ground in an attempt to find another shelter. If operating a boom truck or crane, make sure to retract the boom and place in the boom rack.

5. First Aid Recommendations for Lightning Victims:

Most lightning victims can actually survive their encounter with lightning, especially with timely medical treatment. Individuals struck by lightning do not carry a charge and it is safe to touch them to render medical treatment. Follow these steps to try to save individuals struck by lightning.

First:

Call 911 to provide directions and information about the individual(s).

Response:

The first priority of emergency care is "make no more casualties". If the area where the victim is located is a high-risk area (mountain top, isolated wind turbine, open field, etc.) with a continuing thunderstorm, the rescuers may be placing themselves in significant danger.

Evacuation:

It is relatively unusual for victims who survive a lightning strike to have major fractures that would cause paralysis or major bleeding complications unless they



have suffered a fall or been thrown a distance. As a result, in an active thunderstorm, the rescuer needs to choose whether

evacuation from very high-risk areas to an area of lesser risk is warranted and should not be afraid to move the victim rapidly if necessary. Rescuers are cautioned to minimize their exposure to lightning as much as possible.

Resuscitation:

Perform CPR if trained to do so. Use an AED to restore normal heartbeat if the victim has no or abnormal pulse.

4.5.2 Flooding

Concerns to be aware of in the Field:

1. Down power lines.
2. Transformers down, exposing primary/secondary lines.
3. Cracks in dikes, exposing primary/secondary lines.
4. Control panels down, exposing secondary lines.
5. Towers over, exposing secondary lines.

4.5.3 Tornadoes

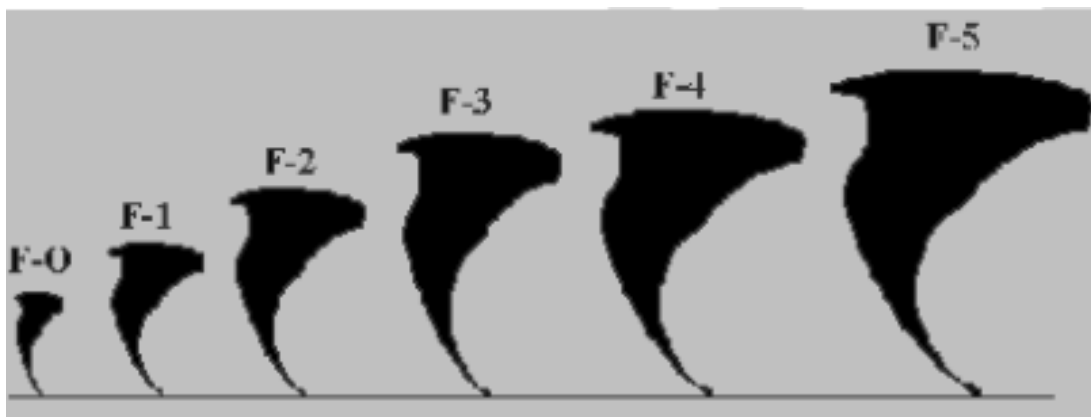
Tornado Watch

A tornado watch means that conditions are favorable for tornadoes to develop.

Tornado Warning

A tornado warning means that either official spotters have sighted a tornado or Doppler radar has reported a developing tornado. A tornado warning is typically issued for a small area (possibly a county or two) for less than an hour.

Fujita - Pearson Tornado Scale



F-0: 40-72 mph, chimney damage, tree branches broken.

F-1: 73-112 mph, mobile homes pushed off foundation or overturned.



F-2: 113-157 mph, considerable damage, mobile homes demolished, trees uprooted. F- 3: 158-205 mph, roofs, and walls torn down, trains overturned, cars thrown.

F-4: 207-260 mph, well-constructed walls leveled.

F-5: 261-318 mph, homes lifted off foundation and carried considerable distances, autos thrown as far as 100 meters.

General Information

During late spring to the summer months, in certain parts of the country, tornados are common. Because of this, all service technicians who work in these areas need to be aware of the possible tornado conditions that may occur on our wind turbine projects. Before, during, and after, tornados all affected employees need to be aware of what to do and where to report.

When a tornado is coming, you have only a short amount of time to make life-or-death decisions. Advance planning and quick response are the keys to surviving a tornado. This is why it is so important to conduct tornado drills before and during each tornado season.

When a tornado watch is issued in your area, stay tuned to a weather radio, commercial radio and or television to stay informed of changing weather conditions. Remain alert for approaching storms and remember that tornados can occur with little to no warning. Be prepared to take cover on short notice.

When a tornado warning is issued, local EMS, if trained to do so, should take as a minimum the following precautions to alert the public:

- Sound local sirens (know what is the sequence in your area).
- Activating the Emergency Alert System (SAS), to interrupt radio and television broadcasts to provide instructions and information to the public.

Tornado Safety

1. Tornado danger signs (learn and know these tornado danger signs):
 - An approaching cloud of debris can mark the location of a tornado even if a funnel is not visible.
 - Before a tornado hits, the wind may die down and the air may become very still.
 - Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.
2. Take the following protective actions when a tornado watch has been issued in your area:
 - Have a person designated to monitor a radio or television.



- Notify all affected employees of the tornado watch and assure that they are in immediate contact if an emergency arises.
 - If the weather is extreme, all employees should leave the field.
 - Take the following protective actions when a tornado warning has been issued in your area.
 - Seek sturdy shelter in a basement or other predestinated “tornado shelter” (not a mobile home, car or trailer).
 - Go at once to a windowless, interior room; storm cellar; basement; or lowest level of the building.
 - If there is no basement, go to an inner hallway or a smaller inner room without windows, such as a bathroom or closet.
 - Stay away from windows, doors, and outside walls (most deaths occur from the flying debris).
3. If outdoors:
- If possible, get inside a building.
 - If shelter is not available or there is no time to get indoors, lie in a ditch or low-lying area or crouch near a strong building. Be aware of the potential for flooding.
 - Use arms to protect head and neck.
4. If in a car:
- Never try to out drive a tornado in a car or truck. Tornadoes can change direction quickly and can lift up a car or truck and toss it through the air.
 - Get out of the car immediately and take shelter in a nearby building.
 - If there is no time to get indoors, get out of the car and lie in a ditch or low-lying area away from the vehicle. Be aware of the potential for flooding.
5. After a tornado, be aware of your surroundings. Also:
- Turn on radio or television to get the latest emergency information.
 - Use the telephone only for emergency calls.
 - Watch for downed power and telephone lines (do not use the phone unless calling 911).
 - Around the projects, watch for falling debris, exposed power lines, and chemical spills.



- Give first aid when appropriate. Don't try to move the seriously injured unless they are in immediate danger of further injury.
- Stay out of damaged buildings, return only when authorities say it is safe.
- Clean up spilled medicines, bleaches, or gasoline or other flammable liquids immediately. Leave the buildings if you smell gas or chemical fumes.

Designated meeting place: **TBD**

Back up designated meeting place: **TBD**

4.5.4 Cold Weather Safety

General

The human body can experience a loss of functionality, damage or death from the cold environment. Temperature is not the only factor resulting in cold injury. Immersion and wind speed can also contribute to the severity of cold injuries.

Immersion

Immersion can cause a significant and rapid loss of body heat. In water temperatures that are well above freezing, a person can quickly become immobilized and drown.

Immersion Survival Times

Water Temperature Degrees Fahrenheit	30	40	50	60	70
Time for 50% Deaths	15 min	20 min	50 min	2 hrs	Safe
Time for 100% Deaths	1 hr	2 hrs	4 hrs	Some Survive	Safe

In water temperatures as high as 60 degrees there is danger of people being overcome by the cold. Wind turbine sites are often located where there are lakes, rivers, creeks or ponds. These are also areas where roads may become unstable. There is some chance of crashing into the water. Heavy rain can have the same effect as immersion. In the event a person should experience immersion the first step is to remove them from the cold, the second is to get them dry. As the need arises use clothing to protect from getting wet.

Wind Chill

Just as exposure to wet and cold can rob heat faster than just temperature alone, so can strong winds enhance the effects of low temperatures. The chart below shows combinations of wind and temperature that can lead to cold injuries. In areas where these conditions exist care should be taken to cover all exposed flesh or stay out of the weather.



U.S. Customary Wind Chill Chart												
Estimated Wind Speed in MPH	Actual Thermometer Reading (F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Temperature (F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect)	LITTLE DANGER*				INCREASED DANGER*				GREAT DANGER*			
	*DANGER FROM FREEZING OF EXPOSED FLESH											

Cold Injuries

A. Hypothermia

The medical term for a drop in core body temperature is Hypothermia. As temperatures drop the human body adapts various strategies to keep the core temperature at 98.6 degree Fahrenheit. "Goose bumps" and shivering are the first signs of a drop in body temperature. The body may restrict flow of blood to the extremities making them more susceptible to freezing. As the extremities get colder there is loss of coordination. As a person gets colder they become apathetic and lose gross motor functions. At some point shivering will cease. The skin will be cold and waxy, muscles will be rigid and the heart rate slows. As the core temperature drops the pupils dilate and the person will possibly go into a coma. At a core body temperature below 86 degrees cardiac arrest is likely.

B. Local Cold Injury

Local cold injury is commonly called "frost bite". Frost bite occurs when body tissue gets cold enough to freeze. It is most likely to affect the tips of the fingers, toes, ears, nose, cheek bones and chin. While when first exposed to cold a body part will burn and sting, eventually as exposure time lengthens, there will be a loss of sensation. The skin may turn waxy grey or yellow. If the condition is allowed to continue the tissue will freeze and cause permanent tissue damage.

C. Treatment

1. General

Prevention is always preferable to treatment. Heat is lost through the body by several means, not the least of which is radiation. It is important to cover all



exposed areas of the body. Hands and head are often neglected when dressing for the cold environment. Head coverings should cover as much of the head, neck and face as possible. Gloves should be insulated as should footwear. Clothes should be loose and layered. Clothing may need to be shed and donned several times during a work day. As one works the clothes might need to be removed to keep from overheating. The clothes will need to be put on again during periods of inactivity.

2. Hypothermia

First priority in hypothermia/ cold injury treatment is to remove the patient from the cold environment. Keep the person warm and dry. Use blankets, sleeping bags, etc. to cover exposed areas. Shelter the patient from the wind. If in the field, the cab of a vehicle with the heater running will provide a warm environment. If the patient is in advanced hypothermia (confused, no shivering) handle them gently and do not let patient exert themselves. There is possibility of cardiac arrest. Seek medical attention.

3. Local Cold Injury

In the event one suspects a local cold injury, remove the person from the cold. Never try to thaw any tissue if there is a possibility of it refreezing. Carefully remove any jewelry, wet or restrictive clothing. Leave the clothing if it is frozen to the skin. Cover the skin with loose clothing or bandage to prevent friction or pressure. Never rub or massage the affected area. If the area is hard and frozen do not attempt to re-warm it by applying heat. Seek medical attention.

4.6 Hazardous Materials

Material Safety Data Sheets (MSDS's) are kept on premises on all chemicals used at the site.

These data sheets are located: **TBD**

The nacelle frame of the turbine is designed to hold all liquid uptower in the event of a single component failure. For spills, leaks and incidents when a fire is not involved, the Plant Operator should be notified.

4.7 Crime/Violent Behavior/Civil Disturbance

A. Crime or Violent Behavior

HOW TO REPORT:

You may contact any Manager, or you may call "911" yourself to access the Police Department.

B. Reporting Crimes in Progress

If you are a victim or a witness to any in-progress criminal offense, report the incident as soon as possible, providing the following information:



1. Nature of the incident. MAKE SURE that the 911 dispatcher understands that the incident is IN PROGRESS!
2. Location of the incident.
3. A description of the suspect(s) involved.
4. A description of any weapons involved.
5. A description of any property involved.

Stay on the line with the dispatcher until a police officer arrives at the scene. Keep the dispatcher informed of any changes in the situation so that updated information can be relayed to the responding units. Even if you are the victim and unable to communicate further, try to keep the line open.

C. Reporting Crimes Not In Progress

All crimes should be reported. Be prepared to provide the following information to the investigating officer:

1. When the incident occurred.
2. If a property crime, what was taken or damaged.
3. The names and/or descriptions of any suspects or witnesses.

D. Civil Disturbance Response Plan

1. Any site personnel noting a possible civil disturbance should contact a Manager immediately.
2. If necessary, all entrances and exits will be secured.
3. Should unauthorized intruders gain access onto premises, refrain from any contact with the intruders.
4. All site personnel should remain in the area, remain calm and follow instructions from Management.
5. Should intruders gain access into the building and damage property, site personnel should not interfere. The personal safety of our site personnel is more important than the protection of our property.

E. Electric Disturbance Events (OE-417)

If a crime or violent behavior affects the operation of the wind farm DOE form OE-417 may need to be submitted. Verify this via the OE-417 instructions. Projects that are NERC Compliant may have additional requirements. See specific NERC instructions for such facilities.