GREYCOURT ROAD SOLAR PROJECT
SITE DRAWINGS

190 GREYCOURT ROAD

CHESTER, NY 10918

N

0' 200' 400' 800' 1200'

SCALE: 1" = 400'

APPLICANT

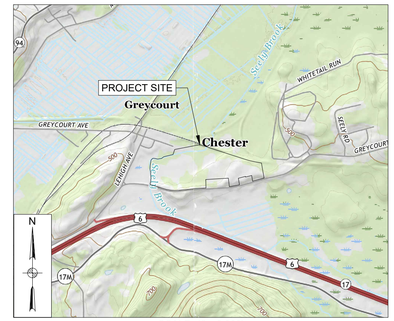
NY SOLAR 1001, LLC
SCOTT GREENBERG
501 BOYLSTON STREET
BOSTON, MA 02116

ENGINEER

MOTT MACDONALD NY, INC.
438 MAIN STREET, #300
BUFFALO, NY 14202

PRELIMINARY- NOT FOR CONSTRUCTION

Vicinity Map



SCALE: 1" = 2,000'

Site Data

PARCEL GRID #	PROPERTY OWNER	SITE ADDRESS
PID 3-1-72	GARY F. JOHNSON	190 GREYCOURT ROAD CHESTER, NY 10918
JURISDICTION	**ZONING**	**ACRES**
TOWN OF CHESTER	OFFICE PARK (OP)	22.9
CAPACITY (AC)	**CAPACITY (DC)**	
4.1 MW	5.1 MWp	

Drawing List

C-001:	COVER SHEET
C-101:	EXISTING CONDITIONS
C-201:	SITE PLAN
C-401:	GENERAL NOTES
C-402:	CIVIL DETAILS
C-403:	CIVIL DETAILS
C-404:	CIVIL DETAILS
C-405:	ROAD DETAILS

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	DOW	ISSUED FOR PERMIT	SEP	CC

MOTT MACDONALD

MOTT MACDONALD NY, INC.
438 Main Street, #300
Buffalo, NY 14202

United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

I HEREBY GRANT APPROVAL TO THIS PLAN

SIGNATURE: _____ DATE: _____

OWNER: _____

APPROVED BY THE PLANNING BOARD
TOWN OF CHESTER, ORANGE COUNTY, N.Y.

DATE: _____ MEMBER: _____

MEMBER: _____

TAX ID: 3-1-72

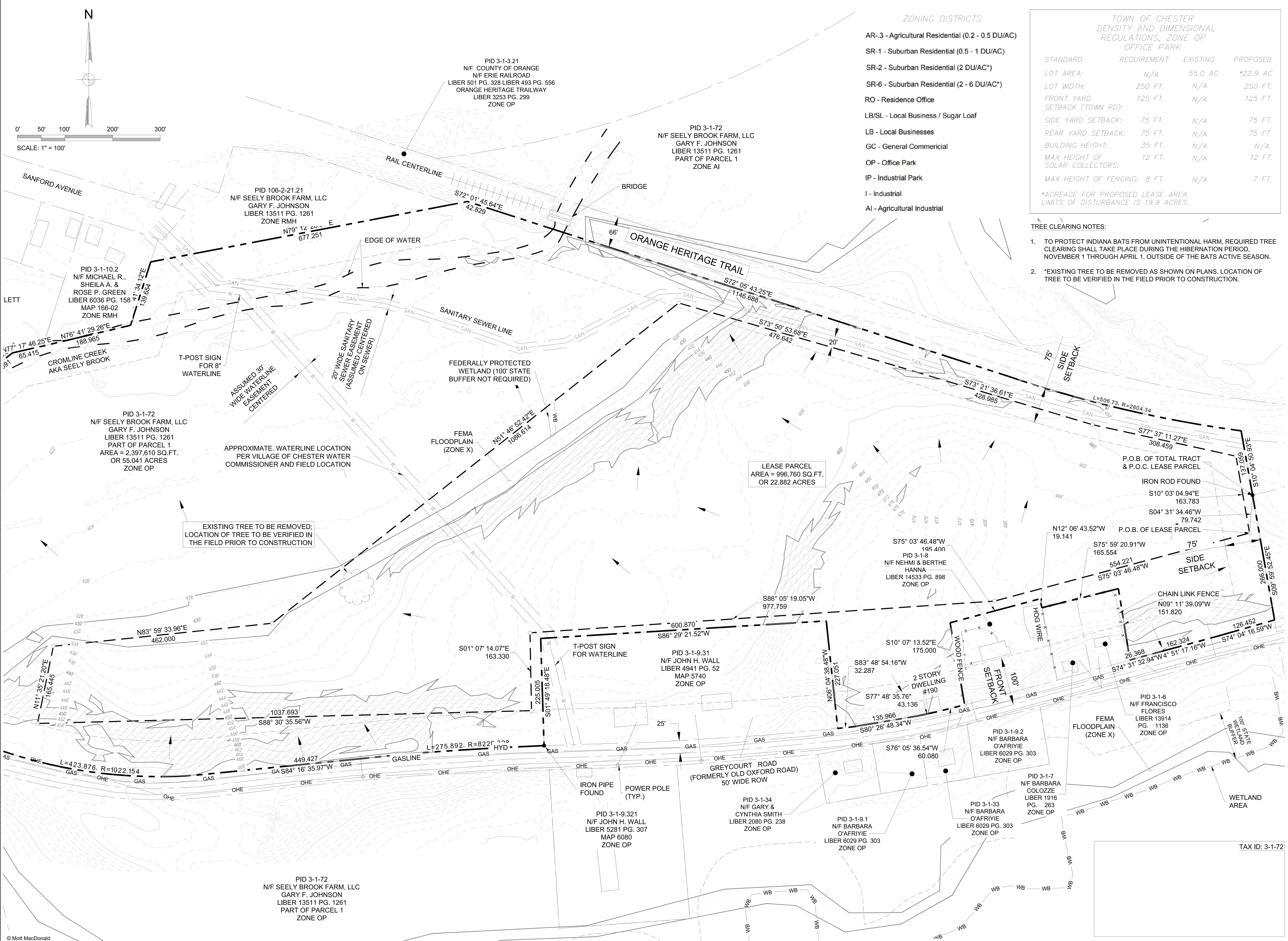
Client
NY SOLAR 1001, LLC

Title
GREYCOURT ROAD SOLAR PROJECT
COVER SHEET

STATE OF NEW YORK
CHRISTOPHER ANDREW COCKSHAW
089852
LICENSED PROFESSIONAL ENGINEER

Designed	EMJ	Check	EMJ		
Drawn	DOW	Approved	CC		
	SEP				
Scale at ANSI D		Date		Rev	
AS SHOWN		10/14/2021		B	

Drawing Number
C-001


N
SCALE: 1" = 100'
PID 3-1-3.21
N/F COUNTY OF ORANGE
N/F ERIE RAILROAD
LIBER 501 PG. 328 LIBER 493 PG. 556
ORANGE HERITAGE TRAILWAY
LIBER 3253 PG. 299
ZONE OP
PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
ZONE AI
SANFORD AVENUE
RAIL CENTERLINE
BRIDGE
PID 106-2-21.21
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
ZONE RMH
ORANGE HERITAGE TRAIL
EDGE OF WATER
SANITARY SEWER LINE
PID 3-1-10.2
N/F MICHAEL R.,
SHEILA A. &
ROSE P. GREEN
LIBER 6036 PG. 158
MAP 166-02
ZONE RMH
CROMLINE CREEK
AKA SEELY BROOK
T-POST SIGN
FOR 8"
WATERLINE
ASSUMED 30' WIDE WATERLINE EASEMENT CENTERED
20' WIDE SANITARY SEWER EASEMENT (ASSUMED CENTERED ON SEWER)
FEDERALLY PROTECTED
WETLAND (100' STATE
BUFFER NOT REQUIRED)
FEMA
FLOODPLAIN
(ZONE X)
PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
AREA = 2,397,610 SQ.FT.
OR 55.041 ACRES
ZONE OP
APPROXIMATE. WATERLINE LOCATION
PER VILLAGE OF CHESTER WATER
COMMISSIONER AND FIELD LOCATION
LEASE PARCEL
AREA = 996,760 SQ.FT.
OR 22.882 ACRES
EXISTING TREE TO BE REMOVED;
LOCATION OF TREE TO BE VERIFIED IN
THE FIELD PRIOR TO CONSTRUCTION
75' SIDE SETBACK
P.O.B. OF TOTAL TRACT
& P.O.C. LEASE PARCEL
IRON ROD FOUND
P.O.B. OF LEASE PARCEL
PID 3-1-8
N/F NEHMI & BERTHE
HANNA
LIBER 14533 PG. 898
ZONE OP
CHAIN LINK FENCE
HOG WIRE
WOOD FENCE
FRONT SETBACK
2 STORY
DWELLING
#190
T-POST SIGN
FOR WATERLINE
PID 3-1-9.31
N/F JOHN H. WALL
LIBER 4941 PG. 52
MAP 5740
ZONE OP
PID 3-1-6
N/F FRANCISCO
FLORES
LIBER 13914
PG. 1136
ZONE OP
FEMA
FLOODPLAIN
(ZONE X)
PID 3-1-9.2
N/F BARBARA
O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP
GREYCOURT ROAD
(FORMERLY OLD OXFORD ROAD)
50' WIDE ROW
GASLINE
HYD
IRON PIPE
FOUND
POWER POLE
(TYP.)
PID 3-1-9.321
N/F JOHN H. WALL
LIBER 5281 PG. 307
MAP 6080
ZONE OP
PID 3-1-34
N/F GARY &
CYNTHIA SMITH
LIBER 2080 PG. 238
ZONE OP
PID 3-1-9.1
N/F BARBARA
O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP
PID 3-1-33
N/F BARBARA
O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP
PID 3-1-7
N/F BARBARA
COLOZZE
LIBER 1916
PG. 263
ZONE OP
100' STATE WETLAND BUFFER
WETLAND
AREA
PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
ZONE OP
TAX ID: 3-1-72

ZONING DISTRICTS

- AR-.3 - Agricultural Residential (0.2 - 0.5 DU/AC)
- SR-1 - Suburban Residential (0.5 - 1 DU/AC)
- SR-2 - Suburban Residential (2 DU/AC*)
- SR-6 - Suburban Residential (2 - 6 DU/AC*)
- RO - Residence Office
- LB/SL - Local Business / Sugar Loaf
- LB - Local Businesses
- GC - General Commericial
- OP - Office Park
- IP - Industrial Park
- I - Industrial
- AI - Agricultural Industrial

TOWN OF CHESTER
DENSITY AND DIMENSIONAL
REGULATIONS, ZONE OP
OFFICE PARK

STANDARD	REQUIREMENT	EXISTING	PROPOSED
LOT AREA:	N/A	55.0 AC	*22.9 AC
LOT WIDTH:	250 FT.	N/A	250 FT.
FRONT YARD SETBACK (TOWN RD):	125 FT.	N/A	125 FT.
SIDE YARD SETBACK:	75 FT.	N/A	75 FT.
REAR YARD SETBACK:	75 FT.	N/A	75 FT.
BUILDING HEIGHT:	35 FT.	N/A	N/A
MAX HEIGHT OF SOLAR COLLECTORS:	12 FT.	N/A	12 FT.
MAX HEIGHT OF FENCING:	8 FT.	N/A	7 FT.

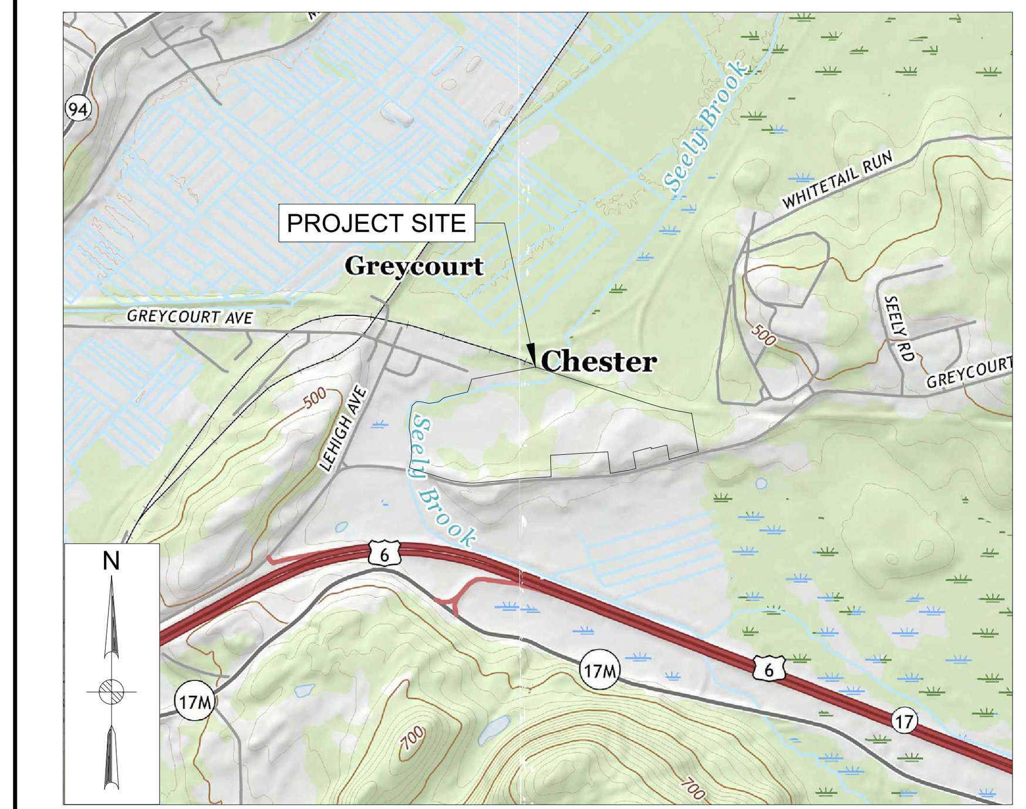
*ACREAGE FOR PROPOSED LEASE AREA.
LIMITS OF DISTURBANCE IS 19.9 ACRES.

TREE CLEARING NOTES:

1. TO PROTECT INDIANA BATS FROM UNINTENTIONAL HARM, REQUIRED TREE CLEARING SHALL TAKE PLACE DURING THE HIBERNATION PERIOD, NOVEMBER 1 THROUGH APRIL 1, OUTSIDE OF THE BATS ACTIVE SEASON.
2. *EXISTING TREE TO BE REMOVED AS SHOWN ON PLANS. LOCATION OF TREE TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.

PRELIMINARY- NOT FOR CONSTRUCTION

Vicinity Map



SCALE: 1" = 2,000'

Site Data

PARCEL GRID #	PROPERTY OWNER	SITE ADDRESS
PID 3-1-72	GARY F. JOHNSON	190 GREYCOURT ROAD CHESTER, NY 10918
JURISDICTION	ZONING	ACRES
TOWN OF CHESTER	OFFICE PARK (OP)	22.9

Legend

- PROPERTY BOUNDARY
- LEASE AREA
- PROPERTY (ADJOINER)
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- GAS — EXISTING PIPELINE
- W — EXISTING WATER LINE
- SAN — EXISTING SANITARY SEWER
- MAJOR CONTOUR (10' INTERVAL TYP.)
- MINOR CONTOUR (2' INTERVAL TYP.)
- WB — WETLAND BOUNDARY
- RAILROAD
- EXISTING TREELINE/ VEGETATION
- EDGE OF WATER LINE
- FLOW DIRECTION ARROW
- 15% OR GREATER SLOPE ZONE
- FEMA FLOODPLAIN

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	DOW	ISSUED FOR PERMIT	SEP	CC

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W www.mottmac.com

Client
NY SOLAR 1001, LLC

Title
GREYCOURT ROAD SOLAR PROJECT EXISTING CONDITIONS PLAN

STATE OF NEW YORK — CHRISTOPHER ANDREW COCKSHAW — LICENSED PROFESSIONAL ENGINEER — 089852

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D: 1" = 100'		Date: 10/14/2021	Rev: B

Drawing Number
C-101

N

0' 50' 100' 200' 300'

SCALE: 1" = 100'

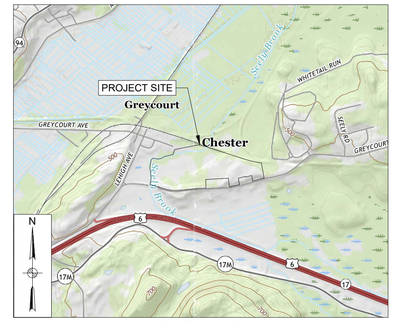
ESTIMATED MATERIAL TAKE-OFF	
	QUANTITY (CY)
CUT	576
FILL	5,108
NET (FILL)	4,532

QUANTITY NOTE:
1. VOLUMES DO NOT INCLUDE LOSS FACTOR OR COMPACTION FACTOR.

General Notes

1. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING USGS, GOOGLE EARTH, AND MICROSOFT BING. ON-SITE WETLANDS WERE DELINEATED PER THE MOTT MACDONALD WETLAND AND WATERBODY DELINEATION REPORT DATED JULY 2021.
2. SUBJECT PARCEL IS LOCATED IN ZONE "X" UNSHADED. AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ZONE AE WITH BFE AS PER FLOOD INSURANCE RATE MAP #36071C0476E EFFECTIVE DATE 08/03/2009.
3. ALL DIMENSIONS SHOWN ARE AT 90 DEGREES UNLESS OTHERWISE NOTED.
4. EXISTING CONTOURS, EASEMENT LINES, UTILITY LINES, PROPERTY LINES, BUILDING FOOTPRINTS, AND EDGE OF WATERLINE SHOWN HERE WERE DERIVED FROM THE GREYCOURT ROAD SOLAR ALTA SURVEY, PROJECT NO. 505100048-019, DATED 7-27-2021, CONDUCTED BY MOTT MACDONALD.
5. REFER TO C-401 FOR CONSTRUCTION NOTES.
6. SIGHT DISTANCES HAVE BEEN CALCULATED BASED ON THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL, CHAPTER 5, APPENDIX 5C. ASSUMED DESIGN SPEEDS ACCOUNTS FOR 5 MPH OVER POSTED SPEED LIMIT. ASSUMED VEHICLE IS COMBINATION TRUCK CROSSING ONE LANE.

Vicinity Map



SCALE: 1" = 2,000'

Site Data

PARCEL GRID #	PROPERTY OWNER	SITE ADDRESS
PID 3-1-72	GARY F. JOHNSON	190 GREYCOURT ROAD CHESTER, NY 10918
JURISDICTION	**ZONING**	**ACRES**
TOWN OF CHESTER	OFFICE PARK (OP)	22.9

Legend

- PROPERTY BOUNDARY
- LEASE AREA
- PROPERTY (ADJOINER)
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- GAS — EXISTING PIPELINE
- W — EXISTING WATER LINE
- SAN — EXISTING SANITARY SEWER
- EX. MAJOR CONTOUR (10' INTERVAL TYP.)
- EX. MINOR CONTOUR (2' INTERVAL TYP.)
- PROPOSED MAJOR CONTOURS (2 & 10' INV.)
- PROPOSED UNDERGROUND ELECTRIC
- X — PROPOSED PV PLANT FENCE
- LoD — PROPOSED LOD
- SF — PROPOSED SILT FENCE
- WB — WETLAND BOUNDARY
- RAILROAD
- EDGE OF WATER LINE
- FEMA FLOODPLAIN

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	D0W	ISSUED FOR PERMIT	SEP	CC

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Client
NY SOLAR 1001, LLC

Title
GREYCOURT ROAD SOLAR PROJECT
SITE PLAN

Designed	EMJ	Check	EMJ		
Drawn	DOW	Approved	CC		
	SEP				
Scale at ANSI D		Date		Rev	
1" = 100'		10/14/2021		B	

Drawing Number
C-201

STATE OF NEW YORK
CHRISTOPHER ANDREW COCKSHAW
089852
LICENSED PROFESSIONAL ENGINEER

PID 3-1-3.21
N/F COUNTY OF ORANGE
N/F ERIE RAILROAD
LIBER 501 PG. 328 LIBER 493 PG. 556
ORANGE HERITAGE TRAILWAY
LIBER 3253 PG. 299
ZONE OP

PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
ZONE AI

RAIL CENTERLINE

BRIDGE

SANFORD AVENUE

PID 106-2-21.21
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
ZONE RMH

66' ORANGE HERITAGE TRAIL

EDGE OF WATER

PID 3-1-10.2
N/F MICHAEL R., SHEILA A. & ROSE P. GREEN
LIBER 6036 PG. 158
MAP 166-02
ZONE RMH

LETT

CROMLINE CREEK
AKA SEELY BROOK

T-POST SIGN FOR 8" WATERLINE

ASSUMED 30' WIDE WATERLINE EASEMENT CENTERED

20' WIDE SANITARY SEWER EASEMENT (ASSUMED CENTERED ON SEWER)

SANITARY SEWER LINE

PROPOSED GRADING NOT TO EXCEED 15% SLOPES (TYP.)

20'

FEDERALLY PROTECTED WETLAND (100' STATE BUFFER NOT REQUIRED)

PROPOSED EQUIPMENT PAD WITH PV INVERTER, XFMR, AND GROUNDING XFMR

FEMA FLOODPLAIN (ZONE X)

PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
AREA = 2,397,610 SQ.FT.
OR 55.041 ACRES
ZONE OP

APPROXIMATE. WATERLINE LOCATION PER VILLAGE OF CHESTER WATER COMMISSIONER AND FIELD LOCATION

PROPOSED EQUIPMENT PAD WITH PV INVERTER AND XFMR

249' (3) 400 KCMIL AL

LEASE PARCEL
AREA = 996,760 SQ.FT.
OR 22.882 ACRES

P.O.B. OF TOTAL TRACT & P.O.C. LEASE PARCEL

IRON ROD FOUND

P.O.B. OF LEASE PARCEL

ROCK FILTER OULET (TYP.) REFER TO SHEET C-403

DEPTH OF WATER LINE TO BE VERIFIED BEFORE ROAD CONSTRUCTION BEGINS

R50'-0" (TYP)

PV ARRAY (TYP)

PID 3-1-8
N/F NEHMI & BERTHE HANNA
LIBER 14533 PG. 898
ZONE OP

CHAIN LINK FENCE

CUSTOMER RISER POLE

CUSTOMER POLE WITH CUSTOMER RECLOSER

CUSTOMER POLE WITH CUSTOMER METER

CUSTOMER POLE WITH GENERATOR DISCONNECT SWITCH (89L)

UTILITY POLE WITH UTILITY METER

UTILITY POLE WITH UTILITY RECLOSER

UTILITY POLE WITH LINE DISCONNECT

PROPOSED POI

PID 3-1-9.31
N/F JOHN H. WALL
LIBER 4941 PG. 52
MAP 5740
ZONE OP

765' INTERSECTION SIGHT DISTANCE

25'

2 STORY DWELLING #190

WOOD FENCE

HOG WIRE

PROPOSED 16' WIDE PERVIOUS MAINTENANCE DRIVE, REFER SHEET C-405.

GREYCOURT ROAD (FORMERLY OLD OXFORD ROAD) 50' WIDE ROW

IRON PIPE FOUND

POWER POLE (TYP.)

24' WIDE ACCESS GATE

CONCRETE WASHOUT 15'X30', REFER TO DETAIL ON SHEET C-403.

695' INTERSECTION SIGHT DISTANCE

PROPOSED NEW ENTRANCE WITH STABILIZED CONSTRUCTION ACCESS. REFER TO SHEET C-403

DEPTH OF GAS LINE TO BE VERIFIED BEFORE ROAD CONSTRUCTION BEGINS

120' (3) 4/0 AWG ACSR

PID 3-1-72
N/F SEELY BROOK FARM, LLC
GARY F. JOHNSON
LIBER 13511 PG. 1261
PART OF PARCEL 1
ZONE OP

PID 3-1-9.321
N/F JOHN H. WALL
LIBER 5281 PG. 307
MAP 6080
ZONE OP

PID 3-1-34
N/F GARY & CYNTHIA SMITH
LIBER 2080 PG. 238
ZONE OP

PID 3-1-9.1
N/F BARBARA O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP

100' STATE WETLAND BUFFER

PID 3-1-33
N/F BARBARA O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP

PID 3-1-7
N/F BARBARA COLOZZE
LIBER 1916 PG. 263
ZONE OP

PID 3-1-9.2
N/F BARBARA O'AFRIYIE
LIBER 6029 PG. 303
ZONE OP

FEMA FLOODPLAIN (ZONE X)

PID 3-1-6
N/F FRANCISCO FLORES
LIBER 13914 PG. 1136
ZONE OP

WETLAND AREA

TAX ID: 3-1-72

PRELIMINARY- NOT FOR CONSTRUCTION

GENERAL NOTES:

1. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING USGS, GOOGLE EARTH, AND MICROSOFT BING. ON-SITE WETLANDS WERE DELINEATED PER THE MOTT MACDONALD WETLAND AND WATERBODY DELINEATION REPORT DATED JULY 2021. 0.02 ACRES OF WETLAND LIE WITHIN THE PROJECT AREA.
2. BEARINGS AND NORTH SHOWN HEREON ARE REFERENCED TO NAD 83-NY EAST USING NYSNET RTN GPS.
3. TOPOGRAPHY HAS BEEN DERIVED FROM NY STATE LIDAR DATA AND VERIFIED WITH TRADITIONAL GROUND RUN SURVEY. ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD 88 REFERENCED TO GEOID 18.
4. SUBJECT PARCEL IS LOCATED IN ZONE "X" UNSHADED. AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ZONE AE WITH BFE AS PER FLOOD INSURANCE RATE MAP #36071C0476E EFFECTIVE DATE 08/03/2009.
5. PROJECT AREA, INCLUDING CONSTRUCTION STAGING AREAS, SHALL BE CLEARED AND GRUBBED AS NECESSARY, RETAINING PRE-DEVELOPMENT DRAINAGE PATTERNS TO THE GREATEST EXTENT POSSIBLE.
6. ALL DIMENSIONS SHOWN ARE AT 90 DEGRESS UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL CALL DIG SAFELY NEW YORK, CALL 811 AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
8. CONTRACTOR SHALL MAINTAIN ACCESS AND UTILITY SERVICES TO ANY REMAINING BUILDING(S) OR ADJACENT BUILDING(S) THROUGHOUT THE DEMOLITION AND CONSTRUCTION PHASES. EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED/RESTORED TO THE SATISFACTION OF THE OWNER BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.
9. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO PROVIDE SIGNS, BARRICADES, WARNING LIGHTS, GUARD RAILS, AND EMPLOY FLAGGERS AS NECESSARY WHEN CONSTRUCTION ENDANGERS EITHER VEHICULAR OR PEDESTRIAN TRAFFIC. THESE DEVICES SHALL REMAIN IN PLACE UNTIL THE TRAFFIC MAY PROCEED NORMALLY AGAIN.
10. DURING SITE DEVELOPMENT, CONSPICUOUS AND LEGIBLE SIGNAGE INDICATING THE NAME OF THE PRACTICE, SPDES PERMIT NUMBER, ETC. SHALL BE POSTED IN THE IMMEDIATE VICINITY OF THE STORMWATER MANAGEMENT PRACTICES.
11. EQUIPMENT AUDIBLE EMISSION LEVELS MEASURED AT A DISTANCE OF 1 METER FROM SOURCE:
    INVERTER: < 65 db(A)
    TRANSFORMER: < 50 db(A)
12. PESTICIDES AND HERBICIDES ARE NOT PERMITTED WITHIN THE SENSITIVE OVERLAY (SA) DISTRICT. ANY MAINTENANCE OF GROUND VEGETATION SHALL BE MECHANICAL MEANS.
13. 2.66 ACRES OF THE PROJECT SITE INCLUDE SLOPES GREATER THAN 15%.
14. THE SUBJECT PROPERTY LIES WITHIN TOWN OF CHESTER, NY ZONE OP (OFFICE PARK).
15. EXISTING CONTOURS, EASEMENT LINES, UTILITY LINES, PROPERTY LINES, BUILDING FOOTPRINTS, AND EDGE OF WATERLINE SHOWN HERE WERE DERIVED FROM THE GREYCOURT ROAD SOLAR ALTA SURVEY, PROJECT NO. 505100048-019, DATED 7-27-2021, CONDUCTED BY MOTT MACDONALD.

CONSTRUCTION SEQUENCE NOTES:

1. THE OWNER/OPERATOR SHALL FILE AN NOTICE OF INTENT (NOI) WITH THE NYSDEC 5 BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH SPDES PERMIT GP-0-20-001.
2. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE PROJECT TEAM INVOLVED IN SITE DISTURBANCE.
    * LOCATE ALL EXISTING UTILITIES WITHIN PROJECT AREA (DIG SAFELY NEW YORK-811.).
    * THE OWNER OPERATOR SHALL AUTHORIZE THE QUALIFIED PROFESSIONAL TO PERFORM WEEKLY INSPECTIONS FOR EROSION AND SEDIMENT CONTROL ONCE CONSTRUCTION BEGINS.
3. INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED IMMEDIATELY AFTER CONSTRUCTION.
    * INSTALL STABILIZED CONSTRUCTION ENTRANCE.
    * CLEAR ONLY THE AREAS NECESSARY TO INSTALL EROSION CONTROL MEASURES. GRUB ONLY AS NECESSARY TO INSTALL SILT FENCING AS DESIGNATED WITHIN THIS PLAN. ANY ADJUSTMENT TO THE EROSION CONTROL MEASURES AS SHOWN TO ACCOMMODATE EXISTING UNFORESEEN FIELD CONDITIONS, MUST BE APPROVED BY THE ENGINEER OF RECORD. SILT FENCE SHALL BE INSTALLED PARALLEL TO THE CONTOUR, UNLESS SPECIFIED OTHERWISE ON THE PLAN.
    * SILT FENCE SHOULD BE INSTALLED ON ALL DOWNSLOPE PORTIONS OF THE DISTURBED AREA. SILT FENCE SHOULD NOT BE INSTALLED ON THE
    * HIGH SIDE OF THE DISTURBANCE AREA (TREE PROTECTION FENCING IS AN ACCEPTABLE ALTERNATIVE IF DESIRED). SILT FENCE LOCATIONS MAY VARY FROM THE APPROVED PLANS PER SITE CONDITIONS.
    * COMPOST FILTER SOCK MAY BE USED ALONG LONG SLOPES AND LAID PARALLEL TO THE CONTOUR IN ACCORDANCE WITH CHAPTER 5 OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, JULY, 2016. FILTER SOCKS MAY BE SUBSTITUTED FOR SLOPE BREAKS, CHECK DAMS, AND INLET PROTECTION. THE COMPOST SOCK MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS. THEY MUST BE SIZED TO PREVENT OVERTOPPING.
    * INSTALL BARRIERS PRIOR TO CONSTRUCTION ACTIVITIES. ALL MEASURES TO BE INSTALLED CONSISTENT WITH THIS PLAN SET AND THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, JULY, 2016. PRIOR TO INSTALLING A MEASURE, EVALUATE THE SURROUNDING AREA IN THE FIELD TO CONFIRM THAT THE SPECIFIED MEASURE AND BE CONSTRUCTED/INSTALLED AS TO FUNCTION PROPERLY. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING TO MAINTAIN SUFFICIENT SEDIMENT PROTECTION.
    * ALL STOCKPILES, FUEL TANKS, AND CONCRETE WASHOUT AREAS SHOULD BE NO LESS THAN 50 FEET AWAY FROM ALL INLETS AND WATER.
    * INSTALL, STABILIZE AND LINE CLEAN SILT FENCE BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING TO PROVIDE/MAINTAIN SUFFICIENT SEDIMENT PROTECTION.
    * APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
4. CALL THE QUALIFIED PROFESSIONAL FOR AN ONSITE INSPECTION PRIOR TO CLEARING AND GRUBBING.
    * TO PROTECT INDIANA BATS FROM UNINTENTIONAL HARM, REQUIRED TREE CLEARING SHALL TAKE PLACE DURING THE HIBERNATION PERIOD, NOVEMBER 1 THROUGH APRIL 1, WHEN BATS ARE NOT EXPECTED TO BE PRESENT.
5. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
    * BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.
    * INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE INCLUDING ADDITIONAL SILT FENCE.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
    * ESTABLISH GROUND COVER ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING, PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICH-EVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
    * COMPLETE ALL SITE IMPROVEMENTS
    * PLANT/STABILIZE REMAINDER OF SITE.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL QUALIFIED PROFESSIONAL FOR AN INSPECTION.
8. PRIOR TO REMOVAL OF SILT FENCE, SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE QUALIFIED PROFESSIONAL. FILE A NOTICE OF TERMINATION (NOT).

GRADING AND DRAINAGE NOTES:

1. THIS DRAWING IS THE PRELIMINARY DESIGN AND SHOWS BASIC FEATURES ONLY. ADDITIONAL FEATURES MAY BE REQUIRED NOT SHOWN IN THIS DRAWING.
2. THE SITE SHALL BE CLEARED AND GRUBBED TO REMOVE ALL DEBRIS, TOPSOIL AND ORGANIC MATERIAL GREATER THAN 1-INCH IN DIAMETER. ALL TRASH SHALL BE REMOVED.
3. WHERE TOPSOIL STRIPPING IS REQUIRED, TOPSOIL, OR OTHER SOIL ENCOUNTERED, THAT PROMOTES VEGETATIVE GROWTH SHALL BE STOCKPILED AND USED IN AREAS THAT WILL BE SEEDED. TOPSOIL SHALL BE DEFINED AS SURFACE ROOT-ZONE SOILS WITH AN ORGANIC CONTENT OF GREATER THAN 6% BY WET COMBUSTION TEST METHODS.
4. AFTER COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ALL AREAS SHOWN TO SUPPORT STRUCTURAL FILL MATERIAL, AND/OR STRUCTURES, SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK. PROOF ROLLING SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER. IDENTIFIED WEAK OR SOFT AREAS SHALL BE RECTIFIED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS, AND ANY GUIDANCE PROVIDED BY THE GEOTECHNICAL ENGINEER.
5. FILL MATERIAL, PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, EXCEPT AS SPECIFICALLY NOTED FOR STRUCTURAL SELECT FILL FOR THE ARCH CULVERT IN THE DETAIL NOTES.
6. STRUCTURAL FILL MATERIAL CLASSIFICATIONS AND PLACEMENT REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS EXCEPT AS SPECIFICALLY MODIFIED FOR THE ARCH CULVERT AS NOTED IN THE DETAILS.
7. IN-PLACE DENSITY TESTS SHALL BE PERFORMED BY AN EXPERIENCED GEOTECHNICAL ENGINEERING TECHNICIAN TO EVALUATE THE PERFORMANCE OF THE CONTRACTOR'S COMPACTION EFFORTS. COMPACTION TESTING SHALL BE PERFORMED AT A TESTING FREQUENCY OF ONE TEST PER 10,000 SQUARE FEET, PER LIFT, AND DIRECT TESTING IN ANY AREA WHERE SOFT OR QUESTIONABLE MATERIAL MAY BE IDENTIFIED. THE TECHNICIAN SHALL ALSO BE EMPLOYED TO ASSIST THE GRADING CONTRACTOR IN MOISTURE CONTROL BY PERFORMING ON-SITE FILL MOISTURE TESTS.
8. ALL DISTURBED AREAS SHALL BE SEEDED UPON COMPLETION OF GRADING AND EARTHWORK OPERATIONS. STAKED, OVERLAPPING SOD MAY BE REQUIRED IN AREAS WHERE THE CONTRACTOR CANNOT ESTABLISH A STAND OF SEED. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING SEED UNTIL A STABLE AND ROBUST STAND OF PLANTINGS ARE ESTABLISHED.
9. THE FINISH GRADE OF ALL FILLED AREAS THAT ARE NOT GRAVELED, SHALL INCLUDE PLACEMENT OF MINIMUM 6" TOPSOIL MATERIAL.
10. FILL VOLUME INCLUDES REPLACEMENT VOLUME OF REMOVED MINIMUM 6" TOPSOIL FOR SITE PREPARATION. TOPSOIL DEPTHS SHALL BE ADJUSTED BASED ON OBSERVABLE ROOT ZONE DEPTHS AND/OR ORGANIC CARBON CONTENT WHERE ROOT ZONE MAY BE INDETERMINATE OR DISPUTED. FILL VOLUME DOES NOT INCLUDE VOLUME OF REQUIRED GRAVEL SURFACING FOR ACCESS DRIVES. ALL FILL MATERIAL TO BE APPROVED BY OWNER'S GEOTECHNICAL ENGINEER.

EROSION AND SEDIMENT CONTROL NOTES:

1. EROSION AND SEDIMENT CONTROL DETAILS SHALL BE IN ACCORDANCE WITH NY STATE STANDARD AND SPECIFICATIONS AS WELL AS APPENDIX M OF THE PROJECT SWPPP.
2. ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE SOIL RESTORATION REQUIREMENTS IN TABLE 5.3 OF THE DESIGN MANUAL.
3. ALL TREES OUTSIDE OF TREE REMOVAL LIMITS SHALL REMAIN IN PLACE.

SEED MIXES		
GRASS PORTION (42 POUNDS)		
PERCENT BY NO. OF SEEDS (NOT WEIGHT)	SCIENTIFIC NAME	COMMON NAME
60.8%	AGROSTIS ALBA	REDTOP
27.5%	FESTUCA RUBRA	RED FESCUE
11.7%	LOLIUM MULTIFLORUM	ANNUAL REYGRASS
LEGUME PORTION (4 POUNDS)		
100%	LOTUS CORNICULATUS	BIRDS-FOOT TREFOIL

NOTE:
SEEDING RATE OF 47 POUNDS PER ACRE WHICH IS 42 POUNDS OF GRASS SEED, 4 POUNDS OF LEGUME, AND 1 POUND OF PERENNIAL WILDFLOWERS.

SEED MIXES		
WILDFLOWER PORTION (1 POUND)		
41.9%	ACHILLEA MILLEFOLIUM	COMMON YARROW
24.1%	RUDBECKIA HIRTA	BLACK-EYED SUSAN
9.8%	CHRYSANTHEMUM LEUCANTHEM	OX-EYED DAISY
8.6%	ASTER NOVAEANGLIAE	NEW ENGLAND ASTER
6.5%	HESPERIS MATRONALIS	DAME'S ROCKET
5.8%	DAUCUS CAROTA	QUEEN ANNE'S LACE
3.3%	POLYGONUM PENSYLVANICUM	PENNSYLVANIA SMARTWEED

4 MONTH CONSTRUCTION PERIOD

ITEM NO.	DESCRIPTION	MONTH OF CONSTRUCTION			
		1	2	3	4
1	SILT FENCE INSTILLATION				
2	CLEARING AND GRUBBING				
3	UTILITY CONSTRUCTION				
4	TEMPORARY SEEDING				
5	FINAL SEEDING AND REMOVAL OF TEMPORARY STRUCTURES				
6	MAINTAIN SOIL AND EROSION CONTROL STRUCTURES				

POST CONSTRUCTION MAINTENANCE

1. GRAVEL ACCESS ROAD
   INSPECT ACCESS ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED.
2. CHAIN LINK FENCE
   CHAIN LINK FENCE SHALL BE INSPECTED ON AN ANNUAL BASIS. ANY FABRIC THAT HAS BEEN DAMAGED SHALL BE REPLACED.
3. VEGETATION
   ALL SEEDED AREAS WITHIN THE SOLAR ARRAY SHALL BE MAINTAINED BY MOWING A MAXIMUM OF TWICE PER YEAR, IN LATE SPRING AND EARLY FALL, FOR THE LIFE OF THE SOLAR ARRAYS. THE OWNER SHALL DO A YEARLY EVALUATION OF THE TREES AND REPLACE ALL TREES THAT HAVE DIED THROUGH THE LIFE OF THE SOLAR ARRAYS.

TAX ID: 3-1-72

PRELIMINARY- NOT FOR CONSTRUCTION

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	D0W	ISSUED FOR PERMIT	SEP	CC

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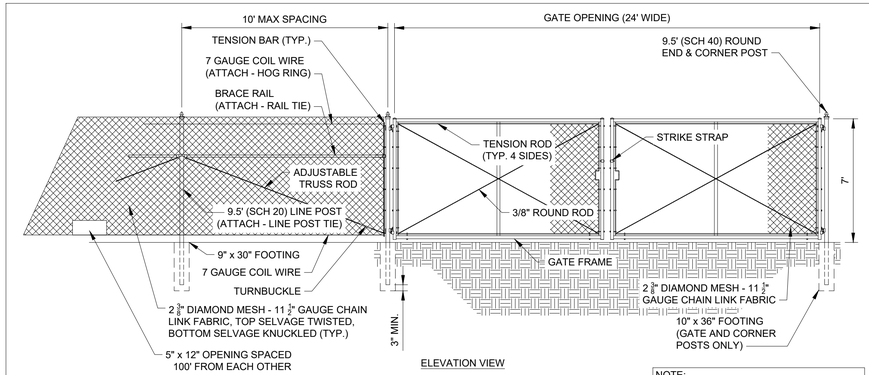
Client: NY SOLAR 1001, LLC

Title: GREYCOURT ROAD SOLAR PROJECT
GENERAL NOTES

STATE OF NEW YORK · CHRISTOPHER ANDREW COCKSHAW · 089852 · LICENSED PROFESSIONAL ENGINEER

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D	N/A	Date	10/14/2021
Rev	B		

Drawing Number: C-401

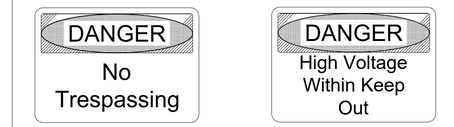


ELEVATION VIEW

POST SCHEDULE:		(SCH 40)
TERMINAL	-	2-3/8" OD
GATE	-	4" OD
POST SCHEDULE:		(SCH 20)
LINE	-	1-7/8" OD
BRACE RAIL	-	1-5/8" OD

10 - ACCESS GATE & FENCE DETAIL
Not to Scale

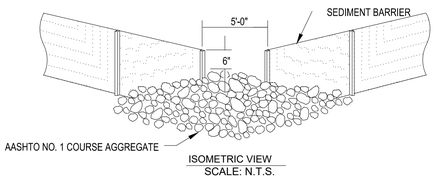
NOTE:
ALL FENCING MATERIALS TO BE BLACK PVC COATED GALVANIZED STEEL.



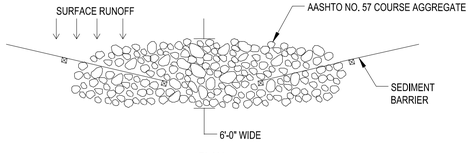
NOTES

1. SIGNS SHALL CONFORM TO THE 2013 OSHA AND ANSI REQUIREMENTS.
2. SIGNS SHALL BE 20" WIDE BY 14" HIGH.
3. SIGNS SHALL HAVE A MOUNTING HEIGHT OF BETWEEN 45 TO 66 INCHES, SECURELY ATTACHED TO THE SECURITY FENCE, ADJACENT TO THE ADDRESS SIGN NEAR THE SITE ENTRANCE.
4. SIGN PANELS SHALL BE 10 GAUGE ALUMINUM WITH HIGH VISIBILITY REFLECTIVE SHEETING.

2 - WARNING SIGN DETAILS
Not to Scale



ISOMETRIC VIEW
SCALE: N.T.S.

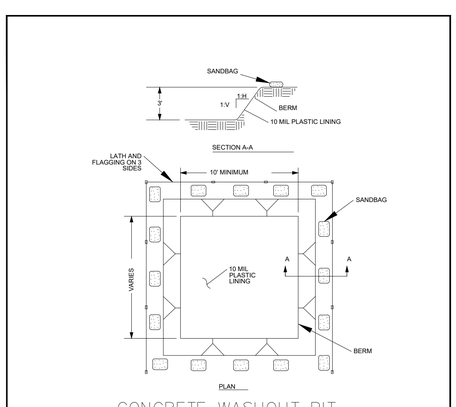


PLAN
SCALE: N.T.S.

NOTES:

1. ROCK FILTER OUTLETS SHALL BE PLACED ALONG SEDIMENT BARRIERS AS SHOWN ON THE PLAN. THE ROCK FILTER OUTLET IS NOT INTENDED TO BE PLACED IN STREAMS, RIVERS, CREEKS OR DITCHES WHICH NORMALLY HAVE FLOWING WATER.
2. ONCE THE DISTURBED AREA IS STABILIZED, THE ROCK FILTER OUTLET SHALL BE REMOVED AND ANY DISTURBED AREAS CAUSED BY REMOVAL SHALL BE RETURNED TO ORIGINAL CONDITION AND REVEGETATED.
3. THE ROCK UTILIZED IN THE ROCK FILTER OUTLET SHALL BE CLEANED OR REPLACED WHEN THE ACCUMULATION OF SEDIMENT IS SUCH THAT THE ROCK FILTER OUTLET CAN NOT EFFECTIVELY FILTER DISCHARGE WATER.
4. INSTALL AASHTO NO. 1 COURSE AGGREGATE AT THE OUTLET SIDE OF THE SEDIMENT BARRIER AS SHOWN IN THE DETAIL. AFTER INSTALLING AASHTO NO. 1 COURSE AGGREGATE, INSTALL AASHTO NO. 57 COURSE AGGREGATE AT THE INLET SIDE OF THE SEDIMENT BARRIER TO CREATE AN ADEQUATE FILTER STONE FACE FOR THE OUTLET STRUCTURE.

4 - ROCK FILTER OUTLET
N.T.S.



CONCRETE WASHOUT PIT
N.T.S.

TAX ID: 3-1-72

PRELIMINARY- NOT FOR CONSTRUCTION

Rev	Date	Drawn	Description	Ch'k'd	App'd
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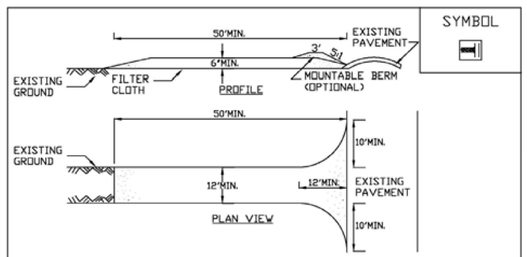
CIVIL DETAILS

STATE OF NEW YORK
CHRISTOPHER ANDREW COCKSHAW
089852
LICENSED PROFESSIONAL ENGINEER

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D		Date	Rev
N/A		10/14/2021	B

Drawing Number
C-402

Figure 2.1
Stabilized Construction Access



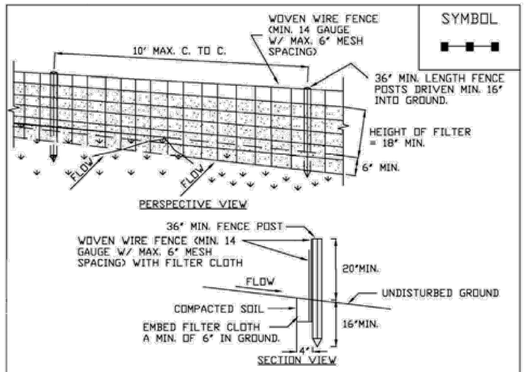
CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STABILIZED CONSTRUCTION ACCESS

Figure 5.30
Reinforced Silt Fence



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

REINFORCED SILT FENCE

Table 4.7 - Topsoil Application Depth

Site Conditions	Intended Use	Minimum Topsoil Depth
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, clay loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

Figure 4.11
Landgrading - Construction Specifications

CONSTRUCTION SPECIFICATIONS

1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
2. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
7. ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
8. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
9. FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
10. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
11. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
12. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
13. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
14. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

LANDGRADING SPECIFICATIONS

Rev	Date	Drawn	Description	Ch'k'd	App'd
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Client
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Title
GREYCOURT ROAD SOLAR PROJECT
CIVIL DETAILS

TAX ID: 3-1-72

PRELIMINARY
NOT FOR CONSTRUCTION
REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D: N/A		Date: 10/14/2021	Rev: B

Drawing Number
C-403

PRELIMINARY- NOT FOR CONSTRUCTION

STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING

Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5 -10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:

	Variety	lbs./ acre	lbs/1000 sq. ft.
Red Clover[1] OR	Acclaim, Rally, Red Head II, Renegade	8[2]	0.20
Common white clover[1]	Common	8	0.20
PLUS			
Creeping Red Fescue	Common	20	0.45
PLUS			
Smooth Bromegrass OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10

[1] add inoculant immediately prior to seeding
[2] Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

To compute Pure Live Seed multiply the "germination percent" times the "purity" and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\%\,\text{Germination} \times \%\,\text{Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\%\ \text{Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9\ \text{lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.

80% Perennial Vegetative Cover

50% Perennial Vegetative Cover

STANDARD AND SPECIFICATIONS FOR TOPSOILING

Definition & Scope

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas to provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

Conditions Where Practice Applies

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

Design Criteria

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.
2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established. Topsoil stockpiles must be stabilized. Stockpile surfaces can be stabilized by vegetation, geotextile or plastic covers. This can be aided by orientating the stockpile lengthwise into prevailing winds.
3. Refer to USDA Natural Resource Conservation Service soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

Site Preparation

1. As needed, install erosion and sediment control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.
2. Complete rough grading and final grade, allowing for depth of topsoil to be added.
3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompacted in accordance with the Soil Restoration Standard.
4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

Topsoil Materials

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.
2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.
3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.
4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.
5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
6. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.

Application and Grading

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.
2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by "tracking" with suitable equipment.
3. Apply topsoil in the amounts shown in Table 4.7 below:

STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING

Criteria

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).

IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding and can be a hazard to young wildlife species.

Definition & Scope

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists as a result of construction activities or a natural event. Critical areas may include but are not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

Conditions Where Practice Applies

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

STANDARD AND SPECIFICATIONS FOR SOIL RESTORATION

Definition & Scope

The decompaction of areas of a development site or construction project where soils have been disturbed to recover the original properties and porosity of the soil; thus providing a sustainable growth medium for vegetation, reduction of runoff and filtering of pollutants from stormwater runoff.

Conditions Where Practice Applies

Soil restoration is to be applied to areas whose heavy construction traffic is done and final stabilization is to begin. This is generally applied in the cleanup, site restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate ground cover to maintain the soil structure. Soil restoration measures should be applied over and adjacent to any runoff reduction practices to achieve design performance.

Design Criteria

1. Soil restoration areas will be designated on the plan views of areas to be disturbed.
2. Soil restoration will be completed in accordance with Table 4.6 on page 4.53.

Specification for Full Soil Restoration

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

1. Apply 3 inches of compost over subsoil. The compost shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table, except for "Particle Size" 100% will pass the 1/2" sieve. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content.**

2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, to mix and circulate air and compost into the subsoil.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.
4. Apply topsoil to a depth of 6 inches.
5. Vegetate as required by the seeding plan. Use appropriate ground cover with deep roots to maintain the soil structure.
6. Topsoil may be manufactured as a mixture or a mineral component and organic material such as compost.

Decompaction

At the end of the project an inspector should be able to push a 3/8" metal bar 12 inches into the soil just with body weight. This should not be performed within the drip line of any existing trees or over utility installations that are within 24 inches of the surface.

Maintenance

Keep the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths.

Table 4.6
AG & Markets Soil Restoration Requirements

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

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
** Per "Deep Ripping and De-compaction, DEC 2008".

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	D0W	ISSUED FOR PERMIT	SEP	CC

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Title: GREYCOURT ROAD SOLAR PROJECT
CIVIL DETAILS

TAX ID: 3-1-72

PRELIMINARY
NOT FOR CONSTRUCTION
REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D		Date	Rev
N/A		10/14/2021	B

Drawing Number: C-404

PRELIMINARY- NOT FOR CONSTRUCTION

GENERAL NOTES:

1. USE OF THIS DETAIL/CRITERION IS LIMITED TO ACCESS ROADS USED ON AN OCCASIONAL BASIS ONLY (I.E. PROVIDE ACCESS FOR MOWING, EQUIPMENT REPAIR OR MAINTENANCE, ETC.).
2. LIMITED USE PERVIOUS ACCESS ROAD IS LIMITED TO LOW IMPACT IRREGULAR MAINTENANCE ACCESS ASSOCIATED WITH RENEWABLE ENERGY PROJECTS IN NEW YORK STATE.
3. REMOVE STUMPS, ROCKS AND DEBRIS AS NECESSARY. FILL VOIDS TO MATCH EXISTING NATIVE SOILS AND COMPACTION LEVEL.
4. REMOVED TOPSOIL MAY BE SPREAD IN ADJACENT AREAS AS DIRECTED BY THE PROJECT ENGINEER. COMPACT TO THE DEGREE OF THE NATIVE INSITU SOIL. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
5. GRADE ROADWAY, WHERE NECESSARY, TO NATIVE SOIL AND DESIRED ELEVATION. MINOR GRADING FOR CROSS SLOPE CUT AND FILL MAY BE REQUIRED.
6. REMOVE REFUSE SOILS AS DIRECTED BY THE PROJECT ENGINEER. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
7. ROADWAY WIDTH TO BE DETERMINED BY CLIENT.
8. THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL BE 2% IN MOST CASES AND SHOULD NOT EXCEED 6%. THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHOULD NOT EXCEED 15%.
9. LIMITED USE PERVIOUS ACCESS ROAD IS NOT INTENDED TO BE UTILIZED FOR CONSTRUCTION WHICH MAY SUBJECT THE ACCESS TO SEDIMENT TRACKING. THIS SPECIFICATION IS TO BE DEVELOPED FOR POST-CONSTRUCTION USE. SOIL RESTORATION PRACTICES MAY BE APPLICABLE TO RESTORE CONSTRUCTION RELATED COMPACTION TO PRE-EXISTING CONDITIONS AND SHOULD BE VERIFIED BY SOIL PENETROMETER READINGS. THE PENETROMETER READINGS SHALL BE COMPARED TO THE RESPECTIVE RECORDED READINGS TAKEN PRIOR TO CONSTRUCTION, EVERY 100 LINEAR FEET ALONG THE PROPOSED ROADWAY.
10. TO ENSURE THAT SOIL IS NOT TRACKED ONTO THE LIMITED USE PERVIOUS ACCESS ROAD, IT SHALL NOT BE USED BY CONSTRUCTION VEHICLES TRANSPORTING SOIL, FILL MATERIAL, ETC. IF THE LIMITED USE PERVIOUS ACCESS IS COMPLETED DURING THE INITIAL PHASES OF CONSTRUCTION, A STANDARD NEW YORK STATE STABILIZED CONSTRUCTION ACCESS SHALL BE CONSTRUCTED AND UTILIZED TO REMOVE SEDIMENT FROM CONSTRUCTION VEHICLES AND EQUIPMENT PRIOR TO ENTERING THE LIMITED USE PERVIOUS ACCESS ROAD FROM ANY LOCATION ON, OR OFF SITE. MAINTENANCE OF THE PERVIOUS ACCESS ROAD WILL BE REQUIRED IF SEDIMENT IS OBSERVED WITHIN THE CLEAN STONE.
11. THE LIMITED USE PERVIOUS ACCESS ROAD SHALL NOT BE CONSTRUCTED OR USED UNTIL ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS HAVE ACHIEVED FINAL STABILIZATION
12. PROJECTS SHOULD AVOID INSTALLATION OF THE LIMITED USE PERVIOUS ACCESS ROAD IN POORLY DRAINED AREAS, HOWEVER IF NO ALTERNATIVE LOCATION IS AVAILABLE, THE PROJECT SHALL UTILIZE WOVEN GEOTEXTILE MATERIAL AS DETAILED IN FOLLOWING NOTES.
13. THE DRAINAGE DITCH IS OFFERED IN THE DETAIL FOR CIRCUMSTANCES WHEN CONCENTRATED FLOW COULD NOT BE AVOIDED. THE INTENTION OF THIS DESIGN IS TO MINIMIZE ALTERATIONS TO HYDROLOGY; HOWEVER WHEN DEALING WITH 5%-15% GRADES NOT PARALLEL TO THE CONTOUR, A ROADSIDE DITCH MAY BE REQUIRED. THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED WATERWAYS AND VEGETATED WATERWAYS ARE APPLICABLE FOR SIZING AND STABILIZATION. DIMENSIONS FOR THE GRASSED WATERWAY SPECIFICATION WOULD BE DESIGNED FOR PROJECT SPECIFIC HYDROLOGIC RUNOFF CALCULATIONS AND A SEPARATE DETAIL FOR THE SPECIFIC GRASSED WATERWAY WOULD BE INCLUDED IN THIS PRACTICE. RUNOFF DISCHARGES WILL BE SUBJECT TO THE OUTLET REQUIREMENTS OF THE REFERENCED STANDARD. INCREASED POST-DEVELOPMENT RUNOFF FROM THE ASSOCIATED ROADSIDE DITCH MAY REQUIRE ADDITIONAL PRACTICES TO ATTENUATE RUNOFF TO PRE-DEVELOPMENT CONDITIONS.
14. IF A ROADSIDE DITCH IS NOT UTILIZED TO CAPTURE RUNOFF FROM THE ACCESS ROAD, THE PERVIOUS ACCESS ROAD WILL HAVE A WELL-ESTABLISHED PERENNIAL VEGETATIVE COVER, WHICH SHALL CONSIST OF UNIFORM VEGETATION (I.E. BUFFER), 20 FEET WIDE AND PARALLEL TO THE DOWN GRADIENT SIDE OF THE ACCESS ROAD. POST-CONSTRUCTION OPERATION AND MAINTENANCE PRACTICES WILL MAINTAIN THIS VEGETATIVE COVER TO ENSURE FINAL STABILIZATION FOR THE LIFE OF THE ACCESS ROAD.
15. THE DESIGN PROFESSIONAL MUST ACCOUNT FOR THE LIMITED USE PERVIOUS ACCESS ROAD IN THEIR SITE ASSESSMENT/HYDROLOGY ANALYSIS. IF THE HYDROLOGY ANALYSIS SHOWS THAT THE HYDROLOGY HAS BEEN ALTERED FROM PRE- TO POST-DEVELOPMENT CONDITIONS (SEE APPENDIX A OF GP-0-15-002 FOR THE DEFINITION OF "ALTER THE HYDROLOGY..."), THE DESIGN MUST INCLUDE THE NECESSARY DETENTION/RETENTION PRACTICES TO ATTENUATE THE RATES (10 AND 100 YEAR EVENTS) TO PRE-DEVELOPMENT CONDITIONS.

GEOGRID MATERIAL NOTES:

1. THE GEOGRID, OR COMPARABLE PRODUCT, IS INTENDED FOR USE FOR ALL CONDITIONS, IN ORDER TO ASSIST IN MATERIAL SEPARATION FROM NATIVE SOILS AND PRESERVE ACCESS LOADS.
2. GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYSDOT ITEM 703-02, SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED.
3. GEOGRID SHALL BE MIRAFI BXG110 OR APPROVED EQUAL. GEOGRID SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
4. IF MORE THAN ONE ROLL WIDTH IS REQUIRED, ROLLS SHOULD OVERLAP A MINIMUM OF SIX INCHES.
5. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER TYING AND CONNECTIONS.
6. LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE MEETING NYSDOT ITEM 703-02 SPECIFICATIONS.

BASIS OF DESIGN: TENCATE MIRAFI BXG110 GEOGRIDS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA;800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

GEOWEB MATERIAL NOTES:

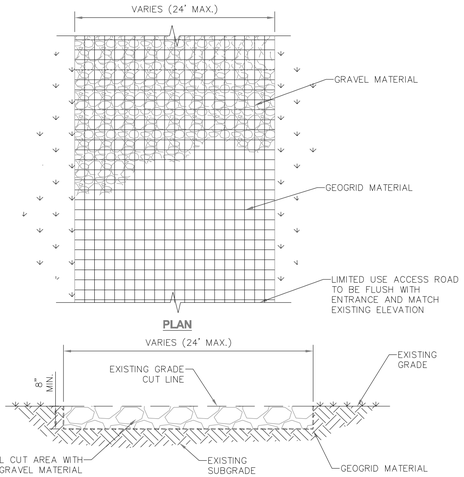
1. THE GEOWEB, OR COMPARABLE PRODUCT, IS SUGGESTED FOR USE ON ROAD PROFILES EXCEEDING 10%. THE GEOWEB PRODUCT IS INTENDED TO LIMIT SHIFTING STONE MATERIAL DURING USE.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. WHERE REQUIRED, A NATIVE SOIL WEDGE SHALL BE PLACED TO ACCOMMODATE ROAD CROSS SLOPE OF 2% NATIVE SOIL SHALL BE COMPACTED TO MATCH EXISTING SOIL CONDITIONS.
4. GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYSDOT ITEM 703-02, SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED
5. GEOWEB SYSTEM SHALL BE PRESTO GEOSYSTEM GEOWEB OR APPROVED EQUAL. GEOWEB SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
6. LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE, SIZE 3A, MEETING NYSDOT ITEM 703-02 SPECIFICATIONS.
7. THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FLUSH WHEN CONNECTING. ALIGN THE I-SLOTS FOR INTERLEAF AND END TO END CONNECTIONS. THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAD AND END TO END CONNECTIONS. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER INSTALLATION, TYING AND CONNECTIONS.

BASIS OF DESIGN: PRESTO GEOSYSTEMS GEOWEB; 670 NORTH PERKINS STREET, APPLETON, WI; 800-548-3424 OR 920-738-1222; INFO@PRESTOGEO.COM; WWW.PRESTOGEO.COM

WOVEN GEOTEXTILE MATERIAL NOTES:

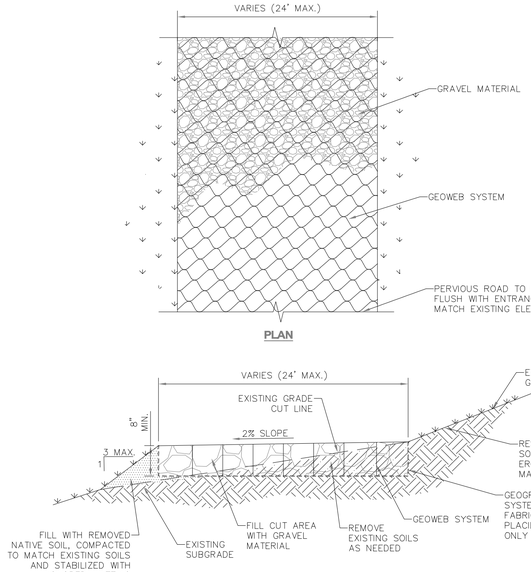
1. SPECIFIED GEOTEXTILE WILL ONLY BE UTILIZED IN PLACID SOILS. PLACID SOILS CONSIST OF POORLY DRAINED SOILS COMPOSED OF FINELY TEXTURED PARTICLES AND ARE PRONE TO RUTTING. PLACID SOILS ARE TYPICALLY PRESENT IN LOW-LYING AREAS WITH HYDROLOGIC SOILS GROUP (HSG) OF C OR D, OR AS SPCIFIED FROM AN ENVIRONMENTAL SCIENTIST, SOIL SCIENTIST, OR GEOTECHNICAL DATA.
2. THE CONCERN FOR POTENTIAL REDUCTION OF NATIVE INFILTRATION RATES DUE TO THE GEOTEXTILE MATERIAL WOULD NOT BE A SIGNIFICANT CONCERN IN POORLY DRAINED SOILS WHERE SEGREGATION OF PERVIOUS STONE AND NATIVE MATERIALS IS CRUCIAL FOR LONG TERM OPERATION AND MAINTENANCE.

BASIS OF DESIGN: TENCATE MIRAFI RSI-SERIES WOVEN GEOSYNTHETICS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA;800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM



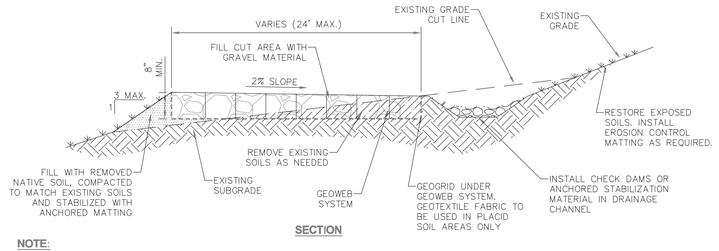
1 LIMITED USE PERVIOUS ACCESS ROAD - 0% TO 10% SLOPES

SCALE: N.T.S.



3 LIMITED USE PERVIOUS ACCESS ROAD - 10% AND GREATER SLOPES

SCALE: N.T.S.

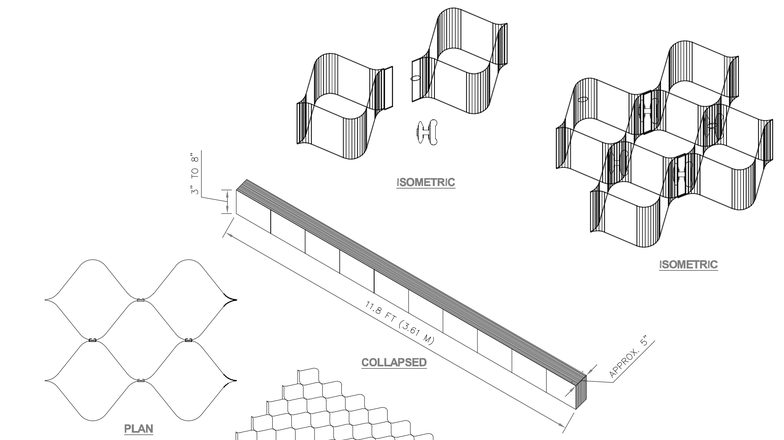


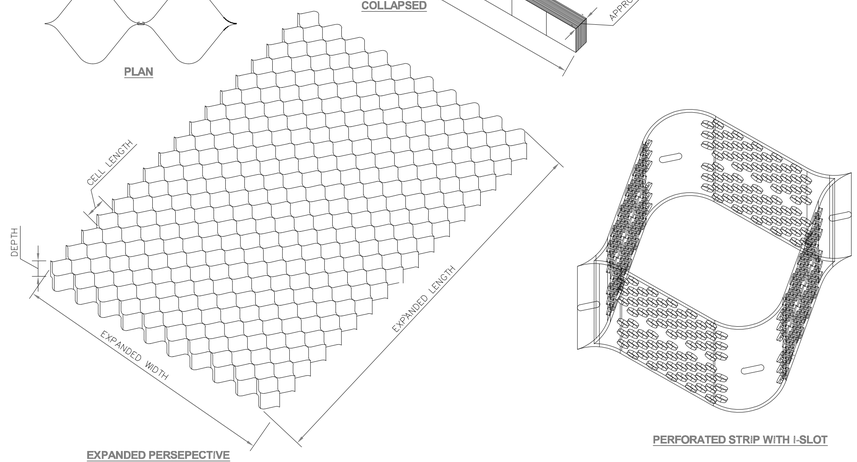
NOTE:

1. THE ROADSIDE DITCH SHALL BE DESIGNED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED AND VEGETATED WATERWAYS. ADDITIONAL DETAILS WILL BE PROVIDED SPECIFIC TO THE SITE DESIGN.

2 LIMITED USE PERVIOUS ACCESS ROAD - 10% AND GREATER SLOPES WITH DITCH

SCALE: N.T.S.





4 GEOWEB SYSTEM

SCALE: N.T.S.

TAX ID: 3-1-72

PRELIMINARY- NOT FOR CONSTRUCTION

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	10/29/21	DOW	ISSUED FOR PERMIT	SEP	CC
A	10/14/21	D0W	ISSUED FOR PERMIT	SEP	CC

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Client: NY SOLAR 1001, LLC

Title: GREYCOURT ROAD SOLAR PROJECT
ROAD DETAILS

PRELIMINARY
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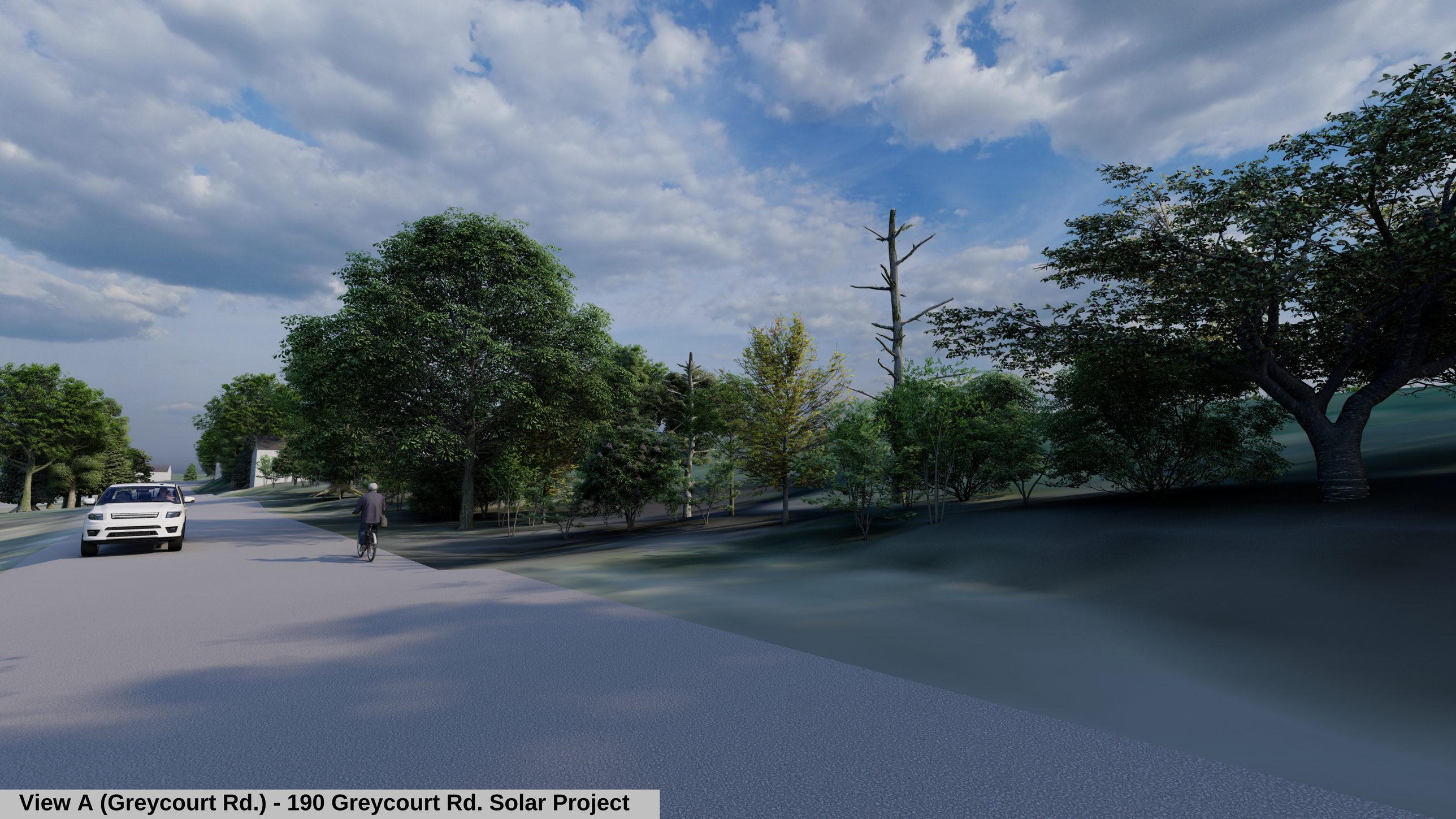
REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION

Designed	EMJ	Check	EMJ
Drawn	DOW	Approved	CC
	SEP		
Scale at ANSI D: N/A		Date: 10/14/2021	Rev: B

Drawing Number: C-405

Aerial View - 190 Greycourt Rd. Solar Project



View A (Greycourt Rd.) - 190 Greycourt Rd. Solar Project

View B (Heritage Trail) - 190 Greycourt Rd. Solar Project

View C (Sanford Ave.) - 190 Greycourt Rd. Solar Project

MOTT MACDONALD

Visual Assessment for Greycourt Road Solar Project

November 2021

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Visual Assessment for Greycourt Road Solar Project

November 2021

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
0	11/5/2021	M. Thornton	D. Peters	J. Uceda	Draft Visual Analysis
1	11/9/2021	M. Thornton	D. Peters	J. Uceda	Final Visual Analysis

Document reference:

Information class: Standard

Contents

Figures

1 Visual and Aesthetic Resources Assessment

This report provides an assessment of the visual and aesthetic resources adjacent to the proposed Greycourt Rd Solar Project in the Town of Chester, Orange County New York. The proposed project will consist of a 4.1MW panel array with seven utility poles and a pervious gravel access road all contained within a 19.9 acre limit of disturbance area. The project will be surrounded by a chain-link fence. This project will result in the removal of one tree.

The New York State Department of Environmental Conservation (NYSDEC) issued a Program Policy on July 31, 2000 entitled “Assessing and Mitigating Visual Impacts.” This policy provides the framework for evaluating visual and aesthetic impacts created from proposed facilities. The NYSDEC uses this policy to protect those resources whose scenic character has been recognized through national or state designations. The following summarized those resources that are covered under this policy:

1) *A property on or eligible for inclusion in the National or State Register of Historic Places [16 U.S.C. §470a et seq., Parks, Recreation and Historic Preservation Law Section 14.07].*
2) *State Parks [Parks, Recreation and Historic Preservation Law Section 3.09].*
3) *Urban Cultural Parks [Parks, Recreation and Historic Preservation Law Section 35.15].*
4) *The State Forest Preserve [NYS Constitution Article XIV].*
5) *National Wildlife Refuges [16 U.S.C. 668dd], and State Game Refuges [ECL 11 2105].*
6) *National Natural Landmarks [36 CFR Part 62].*
7) *The National Park System [16 U.S.C. 1c].*
8) *Rivers designated as National or State Wild, Scenic or Recreational [16 U.S.C. Chapter 28,ECL 15 2701 et seq.]*.
9) *A site, area, lake, reservoir or highway designated or eligible for designation as scenic [ECL Article 49].*
10) *Scenic Areas of Statewide Significance [Article 42 of Executive Law].*
11) *A state or federally designated interstate or inter county foot trail, or one proposed for designation [16 U.S.C. Chapter 27 or equivalent].*
12) *Adirondack Park Scenic Vistas.*
13) *State Nature and Historic Preserve Areas.*
14) *Palisades Park.*
15) *Bond Act Properties purchased under Exceptional Scenic Beauty category*.

The Greycourt Solar Project Area (Project) will be evaluated utilizing the above framework in the following report. This project is adjacent to the Orange Heritage Trail, a 10-foot trail on the right-of-way of the former Erie Railroad. The trail, when complete, will extend from the City of Middletown to the Village of Harriman and wind through bird/wildlife sanctuary, historic landmarks, streams meadows and communities. Although this trail has not been designated as a protected property, it is important that the trail not be adversely affected by the Project.

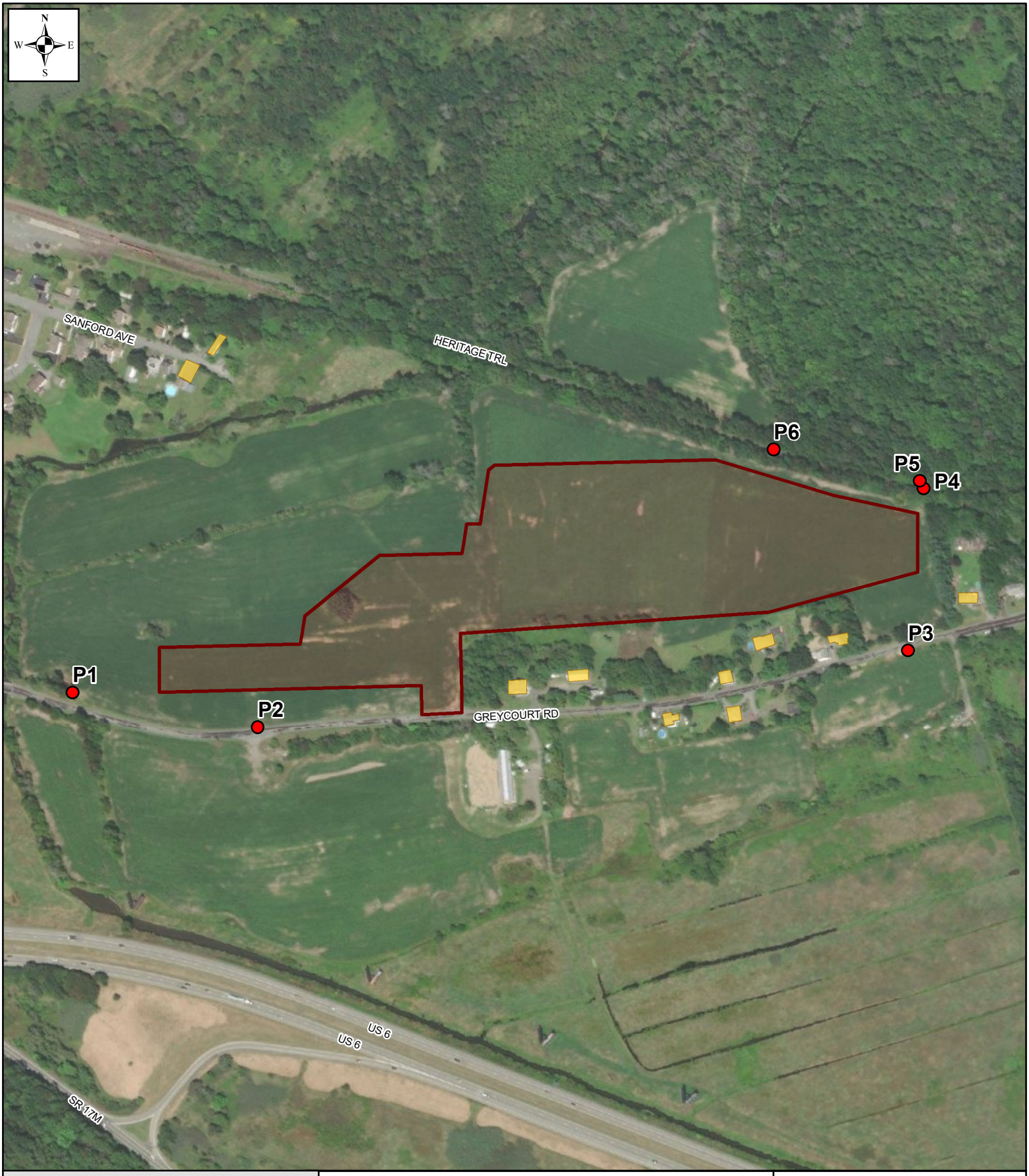
In addition, projects must also take into account neighboring residences and areas of sensitivity like cemeteries. Therefore, this project has three areas of visual analysis, the Orange County Heritage Trail, the nearby residences, and the historic cemetery.

2 Project Locations

The visual analysis for this project was conducted by choosing several viewpoints from around the Project and using the Solocator App to stamp photographs with the coordinates, compass direction, altitude, date and time taken. The photographs chosen for this report are the best representatives of a collection of photos taken that show areas of screening and areas of open views that are similar to a specific area of the project.

For this Project, six photos best demonstrate the view of the project area and screening of the project of the project area from outside locations, (labeled P1 through P6). These photos are displayed on Figure 1. In addition, the closest private residences are also marked in yellow to demonstrate their locations and the vegetation screening around those homes. The Heritage Trail is also labeled and is located along the eastern side of the project area adjacent to a transmission line.

Project simulations of two locations are provided to demonstrate scale and appearance (Appendix A). These examples demonstrate the view from the Orange Heritage Trail and from the least screened area near the residences.



LEGEND

- Photo Location
- Residential Structure
- Limits of Disturbance

LIGHTSTAR RENEWABLES, LLC

190 GREYCOURT ROAD - SOLAR PROJECT

PHOTO ASSESSMENT MAP

ORANGE COUNTY, NEW YORK

FT
0 200 400

LIGHTSTAR RENEWABLES

DRAWN BY:	EAP 11/02/2021	**APPROVED BY:**	MLT 11/02/2021	**SCALE:**	1 INCH = 400 FT
CHECKED BY:	MLT 11/02/2021	**REV. DATE:**	11/2021	**REV.:**	0

DWG NO: Fig. 2.1 PAGE 1 OF 1

Figure 2.1: Project map with photograph points.

2.1 Site Locations

Picture 1 (Point P1 on Figure 2.1) is located directly west of the southwestern corner of the project and at the east edge of a small historic family cemetery plot. This plot is located 200 feet west of the fenced boundary of the project. The cemetery plot remains covered in tree and vegetation, however the photograph is taken outside of those trees and adjacent to the roadway demonstrating the view from the street (Figure 2.2). This area and the southwest border of the project have a clear view of the project area. The large tree located in the center of the photograph is the only tree slated for removal in this project and is in the northern boundary of the project area. Although this area is easily viewed from the road to the south, this area has no homes and no outlook locations and therefore the viewshed change is of minimal impact to the area.

Figure 2.2: Photograph at location P1 taken from Southwest of Project Area near Greycourt Road adjacent to vegetated cemetery plot

Picture 2 (Point P2 on Figure 2.1) is located at the southwestern corner of the project lease area. It demonstrates the same conditions as P1for this area. The western side of portion of this project provides the most open viewshed of the solar array as there is no vegetation for screening nor is there any topography that would limit the view of the project (Figure 2.3).

Potential concern about glare onto the road (or nearby homes) adjacent to this portion of the project would be similar to the same impacts from the sun at rising and setting as these are tracked arrays and follow the angle of the sun. These panels are also manufactured with an anti-reflective film and designed to absorb the sun and not reflect it. Other project evaluations have indicated that the glares from similar panels is no greater than glare from a window or a body of water and typically occur while panels are located in their stowed (pre-tracking- very early and very late) position. In addition, this glare at stowed angles puts the glare very high in the sky and well above 2 story homes.

Figure 2.3: Photograph of location P2 taken from Greycourt Road taken at southwest corner of Project area to the Northeast.

Picture 3 (Point P3 on Figure 2.1) is taken from the southeast corner of the Project. This is east of where the majority of the residences near the project are located. At this location there is some topographic relief which blocks the view of the project area ground level, however the top of the closest solar arrays would be just visible (Figure 2.4). At this location, not many of the solar arrays would be visible as the ground continues to slope down to the north making it difficult to see much of the project from this location. Therefore, even without any vegetative screening very little of the project could be seen from this area (Appendix A, View A).

Figure 2.4: Photograph at location P3 taken at the southeast corner of the project area to the northwest across Greycourt Road.

The Orange County Heritage Trail viewshed to the project area are shown in Figures 2.5, 2.6, and 2.7 and exemplify the vegetative screening between the asphalt pedestrian and bike trail and the Project. The vegetative screening is comprised largely of deciduous trees, low shrubs and vines, and some coniferous trees. It is approximately 10-25 feet wide and has a variety of density along the trail and a variety of size of trees, most averaging about 8-12 inches in diameter at breast height (dbh) for the hardwood trees.

Along the Heritage Trail there are also pedestrian lights and a transmission line on the same side as our project area. During the late fall and winter months there will be some visibility of the solar array from the Heritage Trail but it will be relatively unobtrusive. Our visualizations used significantly less trees than our photographs have demonstrated to exist (Appendix A, View B) and it is possible to get a sense of the size and scale of the panels.

Figure 2.5: Photograph at location P4 taken from the Orange County Heritage Trail toward the project area to the southwest.

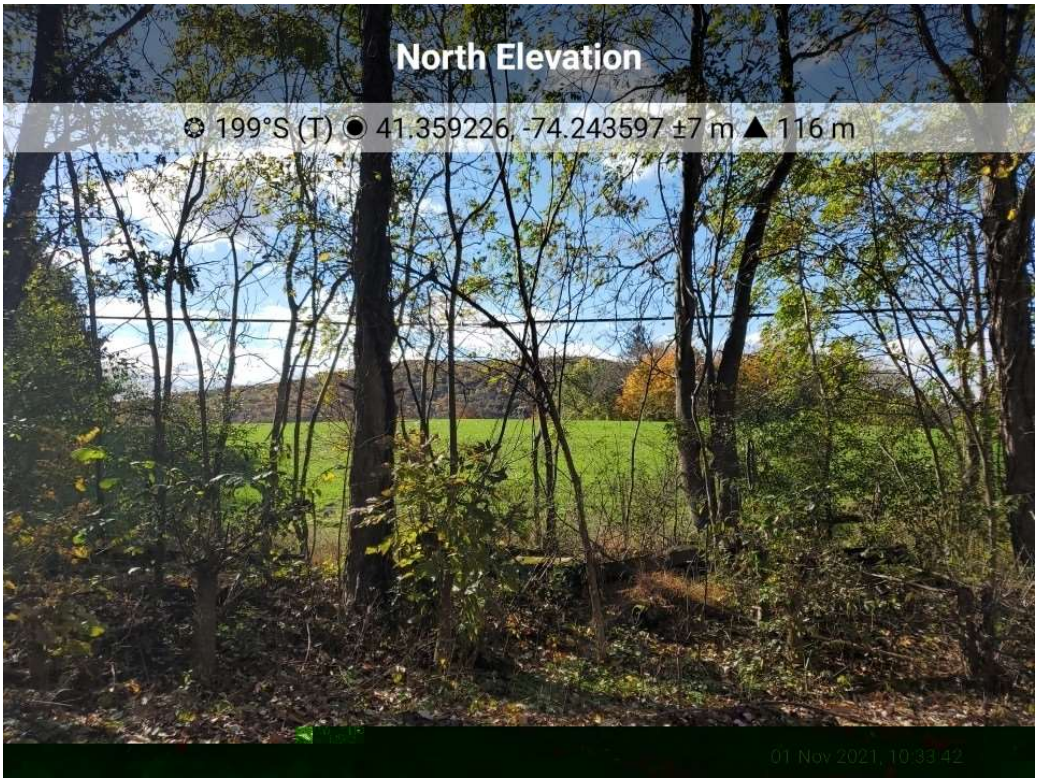


Figure 2.6: Photograph at location P5 taken from the Heritage Trail toward the project area to the south.

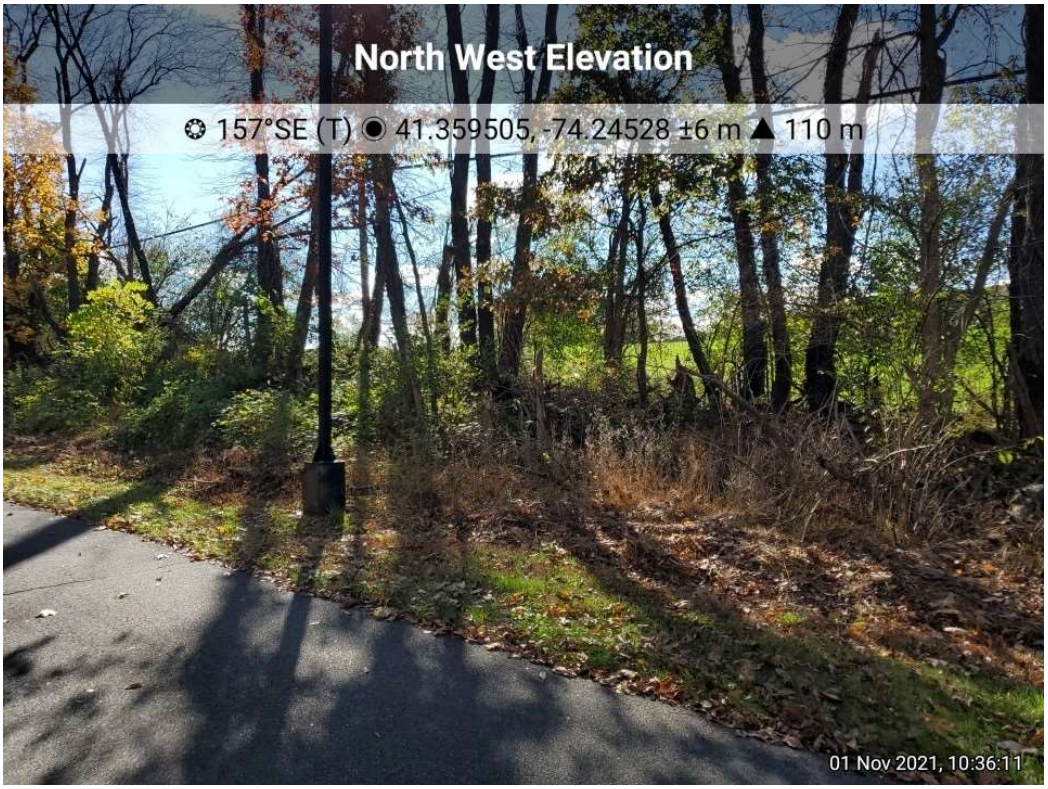


Figure 2.7: Photograph at location P6 taken from the Heritage Trail toward the project area to the southeast.

3 Conclusion

The 190 Greycourt Solar Project has three sensitive receptors for the analysis of visual resources, the Orange County Heritage Trail, residential homes, and the small historic family cemetery to the west of the project area.

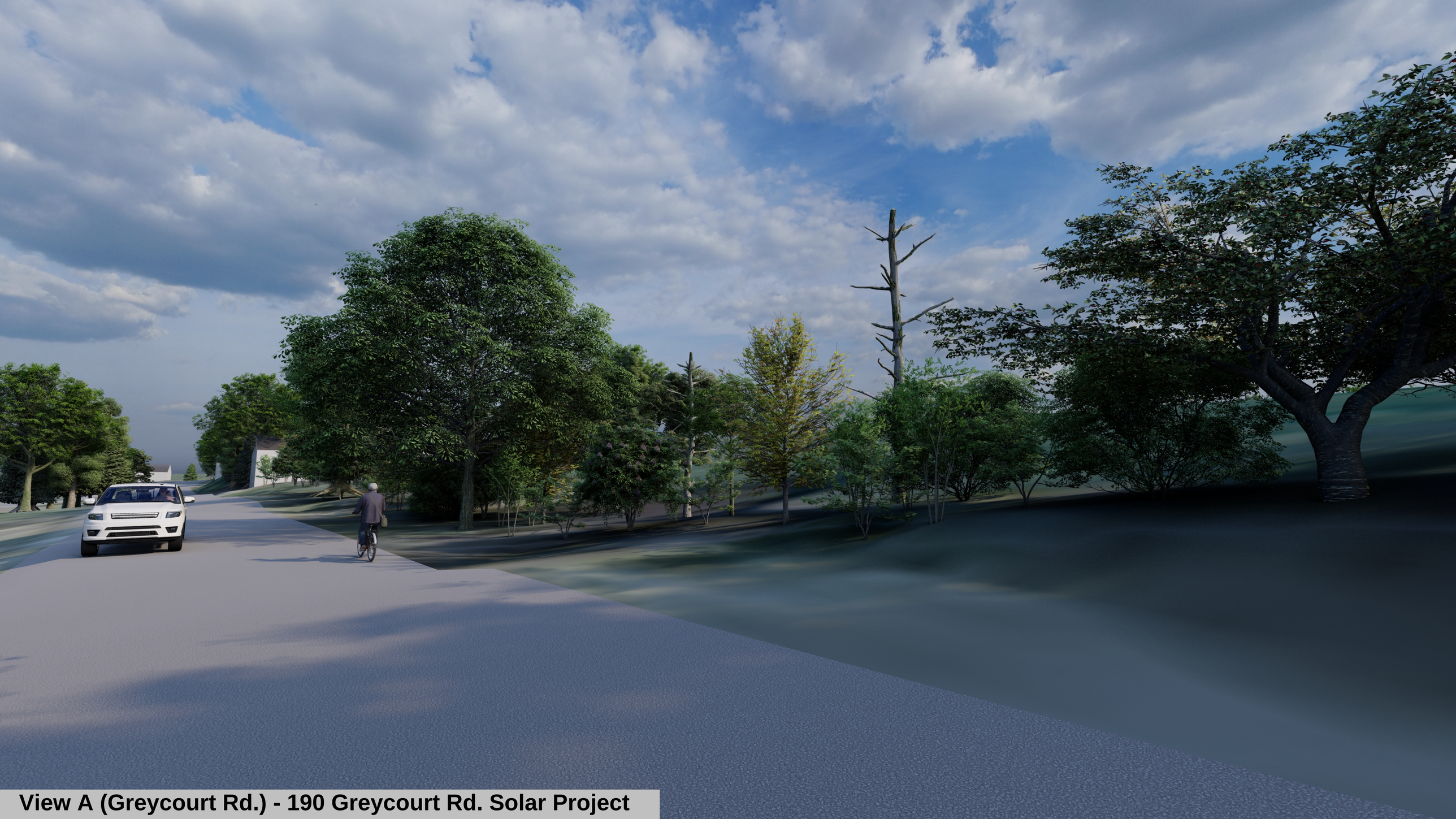
The Orange County Heritage Trail appears to be well screened by the existing vegetation that currently exists on both sides of the trail. This trail is part of the existing Rails to Trails program and it extends through numerous types of towns, neighborhoods, and regions. This project will not increase noise, traffic, danger or other concerns to bikers or walkers that could impede their use of the trail. The view will be minimally impacted and would remain consistent with many other facilities that exist within the 18 mile trail.

The historic family cemetery is completely vegetated, abandoned and will remain in the state in which it exists. There are no signs that this site is actively maintained or visited. This project would not appear to have an impact on the use of this location.

The residences have two different scenarios of impacts. The vast majority of the homes are well screened by vegetation from the project area. There may be one or two homes for which some additional vegetative of fenced screening would be desired. This can be accomplished on an individual basis or for a portion of the site if the homeowner feels this is necessary. As this project did not have access to all adjacent properties to accurately assess each property this could be discussed at a later state in the project.

A. Appendix– Visual Simulations

Aerial View - 190 Greycourt Rd. Solar Project



View A (Greycourt Rd.) - 190 Greycourt Rd. Solar Project

View B (Heritage Trail) - 190 Greycourt Rd. Solar Project

View C (Sanford Ave.) - 190 Greycourt Rd. Solar Project

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