BETHLEHEM 1 and 2 SOLAR PROJECT

Solar Facility Decommissioning Plan

Introduction:

SunJet Energy, LLC ("SunJet") proposes to build a solar photovoltaic (PV) solar facility ("Solar Facility") at 0 and 78 Thomson Road in Bethlehem, Connecticut Bethlehem, under Connecticut's Virtual Net Metering Program. The Solar Facility is planned to have a total nameplate capacity of approximately 1.99 megawatts (MW) alternating current (AC) and be built on an approximately 11-to-12-acre parcel of private land ("Facility Site").

This Decommissioning Plan ("Plan") provides an overview of activities that will occur during the decommissioning phase of a Solar Facility, including activities related to the restoration of land, the management of materials and waste, projected costs, and a decommissioning fund agreement overview.

The Solar Facility will have a maturity date of twenty (20) to thirty (30) years; however, the Solar Facility has an estimated useful lifetime of 30 years or more. This Plan assumes that the Solar Facility will be dismantled, and the Facility Site restored to a state like its pre-construction condition at the 30-year maturity date.

Decommissioning of the Solar Facility will include the disconnection of the Solar Facility from the electrical grid and the removal of all Solar Facility components, including:

- Photovoltaic (PV) modules, panel racking and supports.
- Inverter units, substation, transformers, and other electrical equipment.
- Access roads, wiring cables, communication tower, perimeter fence.
- Concrete foundations.

This decommissioning plan is based on current best management practices and procedures. This Plan may be subject to revision based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to stakeholders prior to decommissioning.

Decommissioning of the Solar Facility:

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. The Facility Site will be restored to a state like its preconstruction condition. All removal of equipment will be done in accordance with any applicable regulations and manufacturer recommendations. All applicable permits will be acquired.

Equipment Dismantling and Removal:

Generally, the decommissioning of the Solar Facility proceeds in the reverse order of the installation.

1. The Solar Facility shall be disconnected from the utility power grid.
2. PV modules shall be disconnected, collected, and disposed at an approved solar module recycler or reused / resold on the market if applicable.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site by an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site by an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by an approved facility.
6. Concrete foundations shall be removed and disposed off-site by an approved facility.
7. Fencing shall be removed and will be disposed off-site by an approved facility.

Environmental Effects:

Decommissioning activities, particularly the removal of project components could result in environmental effects like those of the construction phase. For example, there is the potential for disturbance (erosion/sedimentation/fuel spills) to adjacent watercourses or significant natural features. Mitigation measures like those employed during the construction phase of the Solar Facility will be implemented. These will remain in place until the site is stabilized in order to mitigate erosion and silt/sediment runoff and any impacts on the significant natural features or water bodies located adjacent to the Facility Site.

Road traffic will temporarily increase due to the movement of decommissioning crews and equipment. There may be an increase in particulate matter (dust) in adjacent areas during the decommissioning phase. Decommissioning activities may lead to temporary elevated noise levels from heavy machinery and an increase in trips to the project location. Work will be undertaken during daylight hours and conform to any applicable restrictions.

Site Restoration:

Through the decommissioning phase, the Facility Site will be restored to a state like its preconstruction condition.

All project components (discussed in Table 1) will be removed. Rehabilitated lands may be seeded with a low-growing species such as clover to help stabilize soil conditions, enhance soil structure, and increase soil fertility.

Managing Materials and Waste:

During the decommissioning phase a variety of excess materials and wastes (listed in Table 1) will be generated. Most of the materials used in a Solar Facility are reusable or recyclable and some equipment may have manufacturer take-back and recycling requirements. Any remaining materials will be removed and disposed of off-site at an appropriate facility. SunJet will establish policies and procedures to maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be disposed of, recycled, or reused.

SunJet or its assigns will be responsible for the logistics of collecting and recycling the PV modules and to minimize the potential for modules to be discarded in the municipal waste stream. Currently, some manufacturers and new companies are looking for ways to recycle and/or reuse solar modules when they have reached the end of their lifespan. Due to a recent increase in the use of solar energy technology, many panels from a variety of projects will be nearing the end of their lifespan in 15 - 25 years. It is anticipated there will be more recycling options available for solar modules at that time. SunJet proposes to determine the best way of disposing of the solar modules using best management practices at the time of decommissioning.

Table 1: Management of Excess Materials and Waste

Material / Waste	Means of Managing Excess Materials and Waste
PV panels	If there is no possibility for reuse, the panels will either be returned to the manufacturer for appropriate disposal or will be transported to a recycling facility where the glass, metal and semiconductor materials will be separated and recycled.
Metal array mounting racks and steel supports	These materials will be disposed off-site at an approved facility.

Transformers and substation components	The small amount of oil from the transformers will be removed on-site to reduce the potential for spills and will be transported to an approved facility for disposal. The substation transformer and step-up transformers in the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Inverters, fans, fixtures	The metal components of the inverters, fans and fixtures will be disposed of or recycled, where possible. Remaining components will be Disposed of in accordance with the standards of the day.
Gravel (or other granular)	It is possible that the municipality may accept uncontaminated material without processing for use on local roads, however, for the purpose of this report it is assumed that the material will be removed from the project location by truck to a location where the aggregate can be processed for salvage. It will then be reused as fill for construction. It is not expected that any such material will be contaminated.
Geotextile fabric	It is assumed that during excavation of the aggregate, a large portion of the geotextile will be "picked up" and sorted out of the aggregate at the aggregate reprocessing site. Geotextile fabric that is remaining or large pieces that can be readily removed from the excavated aggregate will be disposed of off-site at an approved disposal facility.
Concrete inverter/transformer Foundations	Concrete foundations will be broken down and transported by certified and licensed contractor to a recycling or approved disposal facility.
Cables and wiring	The electrical line that connects the substation to the point of common coupling will be disconnected and disposed of at an approved facility. Support poles, if made of untreated wood, will be chipped for reuse. Associated electronic equipment (isolation switches, fuses, metering) will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Fencing	Fencing will be removed and recycled at a metal recycling facility.
Debris	Any remaining debris on the site will be separated into recyclables/residual wastes and will be transported from the site and managed as appropriate.

Decommissioning Notification:

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Facility Site. The local municipality will be notified prior to commencement of any decommissioning activities. Six months prior to decommissioning, SunJet will update their list of stakeholders and notify appropriate municipalities of decommissioning activities. Federal, county, and local authorities will be notified as needed to discuss the potential approvals required to engage in decommissioning activities.

Approvals:

Well-planned and well-managed renewable energy facilities are not expected to pose environmental risks at the time of decommissioning. Decommissioning of a Solar Facility will follow standards of the day. SunJet will ensure that any required permits are obtained prior to decommissioning.

This Decommissioning Report will be updated as necessary in the future to ensure that changes in technology and site restoration methods are taken into consideration.

Costs of Decommissioning:

The costs below are the current estimated costs to decommission a typical 2 MWac Solar Facility, based on guidance from NYSERDA and estimates from the Massachusetts solar market, a mature solar market with experience decommissioning projects. The salvage values of valuable recyclable materials (aluminum, steel, copper, etc.) are not factored into the below costs. The scrap value will be determined on current market rates at the time of salvage. SunJet assumes that the estimated cost estimates can be prorated down to reflect an approximately up to 1.0 MWac Solar Facility.

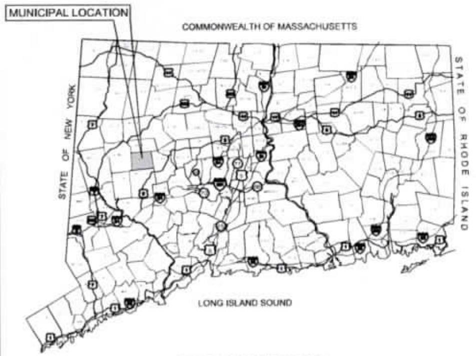
Tasks	Estimated Cost ($)
Remove Panels	$2,450
Remove Rack Wiring	$2,459
Dismantle Racks	$12,350
Remove and Load Electrical Equipment	$1,850
Break up Concrete Pads	$1,500

Remove Racks	$7,800
Remove Cable	$6,500
Remove Ground Screws and Power Poles	$13,850
Remove Fence	$4,950
Grading	$4,000
Seed Disturbed Areas	$250
Truck to Recycling Center	$2,250
Current Total	**$60,200**
Total After 20 Years (2.5% inflation rate)	**$98,300**

NY PVTN Decommissioning Fact Sheet.pdf

Decommissioning Fund

SunJet may create a decommissioning fund to guarantee that monies are available to perform the facility decommissioning. The funds would be held in a 3rd party escrow account, and they will remain available to any party performing the decommissioning such as a municipality or a landowner.



STATE OF CONNECTICUT

BETHLEHEM SOLAR ONE & TWO, LLC

"BETHLEHEM SOLAR ONE & TWO, LLC"

78 THOMSON ROAD
BETHLEHEM, CT

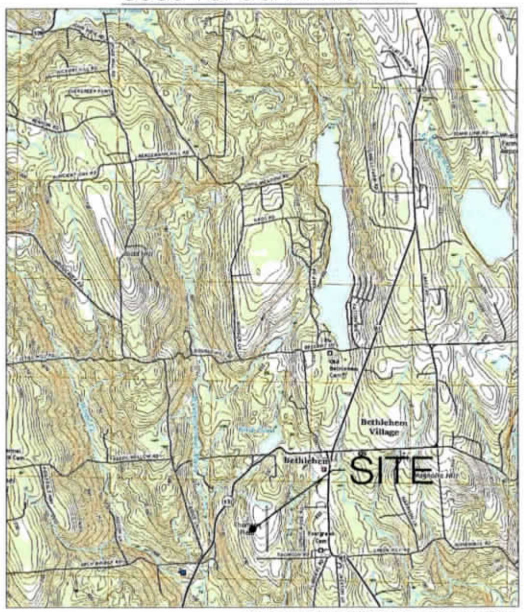
PERMIT APPLICATION DRAWINGS
SEPTEMBER 4, 2020

LIST OF DRAWINGS

SITE INFORMATION

SITE NAME:	"BETHLEHEM SOLAR ONE & TWO, LLC"
LOCATION:	78 THOMSON ROAD BETHLEHEM, CT
SITE TYPE/DESCRIPTION:	ADD (1) GROUND MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT.
PROPERTY OWNER:	LEONARD & TESSIE ASSARD 78 THOMSON ROAD BETHLEHEM, CT 06751
APPLICANT:	BETHLEHEM SOLAR ONE & TWO, LLC 28 POCOTOPAUG DRIVE EAST HAMPTON, CT 06424
ENGINEER CONTACT:	BRADLEY J. PARSONS, P.E. (860) 663-1697 x208
LATITUDE:	41° 37' 56" N
LONGITUDE:	73° 13' 5" W
ELEVATION:	750-830'± AMSL
MAP-LOT:	10-6/038
ZONE:	N/A
EXISTING LAND USE:	720 FARM TILLABLE C
PROPOSED LAND USE:	ENERGY PRODUCTION
TOTAL SITE ACREAGE:	77.37± AC.
TOTAL DISTURBED AREA:	11.84± AC.
APPROX. VOLUME OF CUT:	3,500± CY
APPROX. VOLUME OF FILL:	800 ± CY
APPROX. NET VOLUME:	2,700 ± CY OF CUT
PROP. GRAVEL ACCESS ROAD:	320± LINEAR FEET
PROP. SILT FENCE:	1,545± LINEAR FEET
TREE CLEARING AREA:	2,765± SQUARE FEET
EFFECTIVE IMPERVIOUS AREA:	4,350± SQUARE FEET

USGS TOPOGRAPHIC MAP



SCALE : 1-IN = 2000-FT SOURCE: NRCS GEOSPATIAL GATEWAY

BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSARD
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR ONE & TWO, LLC
SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT
APT FILING NUMBER: CT562110
DRAWN BY: DRA
DATE: 09/04/2020 CHECKED BY: KAM

SHEET TITLE:
TITLE SHEET & INDEX

SHEET NUMBER:
T-1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, TOWN OF BETHLEHEM STANDARDS, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURER, TOWN OF BETHLEHEM, OR CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
3. THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL TOWN OF BETHLEHEM CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
4. REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
6. SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
7. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
8. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
9. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
11. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DO NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
12. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR BETHLEHEM.
13. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.
14. ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.
15. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

1. THE SURVEY WAS PROVIDED BY SMITH & COMPANY SURVEYORS AND ENGINEERS, INC. DATED OCTOBER, 2019.
2. THERE ARE WETLANDS AND WATERWAYS LOCATED ON THE SITE AS INDICATED ON THE PLANS. BOUNDARIES WERE FLAGGED AND LOCATED VIA GPS BY APT IN JUNE 2020 FOR THE WETLAND OFFSITE TO THE WEST. OTHER BOUNDARIES WERE ESTIMATED BY AERIAL AND SOIL MAP INTERPRETATION.
3. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
4. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR BVWS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
5. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.
6. ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF BETHLEHEM AND STATE OF CONNECTICUT.
7. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPERS ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPERS ENVIRONMENTAL CONSULTANT.

UTILITY NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF BETHLEHEM TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
2. REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
3. UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTORS INFORMATION AND SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
5. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
6. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
7. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF BETHLEHEM.
9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
10. RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
11. THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
12. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
13. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
14. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROP. SANITARY PIPING.
15. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER AND TOWN OF BETHLEHEM.
16. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "DIG SAFE" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
17. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
18. ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
19. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
20. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF BETHLEHEM, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

GENERAL LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
BUILDING SETBACK		
SOLAR SETBACK		
EASEMENT		
TREE LINE		
WETLAND		
WETLAND BUFFER		
VERNAL POOL		
VERNAL POOL BUFFER		
WATERCOURSE		
WATERCOURSE BUFFER		
MAJOR CONTOUR		
MINOR CONTOUR		
UNDERGROUND ELECTRIC		E E
OVERHEAD ELECTRIC	OH OH	OH OH
GAS LINE		
WATER LINE	W W	W W
WATER QUALITY SWALE		
FENCE		X X X
LIMIT OF DISTURBANCE		LOD
SILT FENCE		SF SF

BETHLEHEM SOLAR
ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS
TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: [illegible]
WWW.ALLPOINTSTECH.COM FAX: [illegible]

CSC PERMIT SET

NO	DATE	REVISION
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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSARD
ADDRESS: 75 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR
ONE & TWO, LLC

SITE ADDRESS: 75 THOMSON ROAD BETHLEHEM, CT
APT FILING NUMBER: CT562110
DRAWN BY: DRA
DATE: [illegible]
CHECKED BY: KAM

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
GN-1

ENVIRONMENTAL NOTES - RESOURCE PROTECTION MEASURES

ENVIRONMENTAL RESOURCES PROTECTION PLAN

WETLAND AND BIRD PROTECTION PROGRAM

THE PROJECT IS LOCATED PROXIMATE TO WETLAND RESOURCE AREAS AND RARE SPECIES HABITAT. AS A RESULT, THE FOLLOWING PROTECTIVE MEASURES SHALL BE FOLLOWED TO HELP AVOID DEGRADATION OF NEARBY WETLAND/WATERCOURSES AND LISTED SPECIES.

BOBOLINK (DOLICHONYX ORYZIVORUS), SAVANNAH SPARROW (PASSERCULUS SANDWICHENSIS) AND BROWN THRASHER (TOXOSTOMA RUFUM), ALL STATE-LISTED SPECIAL CONCERN SPECIES AFFORDED PROTECTION UNDER THE CONNECTICUT ENDANGERED SPECIES ACT, ARE KNOWN TO OCCUR WITHIN THE VICINITY OF THE PROJECT. THE BIRD PROTECTION MEASURES INCLUDED HEREIN SATISFY REQUIREMENTS FROM THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION ("DEEP") WILDLIFE DIVISION IN ACCORDANCE WITH THEIR NATURAL DIVERSITY DATA BASE ("NDDB") DETERMINATION LETTER (NO. [illegible]) DATED JUNE 15, 2020. THIS DETERMINATION IS VALID UNTIL JUNE 15, 2022 PROVIDED THE SCOPE OF THE PROJECT HAS NOT CHANGED AND WORK HAS BEGUN ON THE PROJECT PRIOR TO THE EXPIRATION DATE.

IT IS OF THE UTMOST IMPORTANCE THAT THE CONTRACTOR COMPLIES WITH THE REQUIREMENT FOR IMPLEMENTATION OF THESE PROTECTIVE MEASURES AND THE EDUCATION OF ITS EMPLOYEES AND SUBCONTRACTORS PERFORMING WORK ON THE PROJECT SITE. THE WETLAND PROTECTION MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES UNTIL PERMANENT STABILIZATION OF SITE SOILS HAS OCCURRED.

THE SAVANNAH SPARROW IS MOST SENSITIVE TO DISTURBANCE BETWEEN APRIL 1 - AUGUST 30. THE BOBOLINK IS MOST SENSITIVE TO DISTURBANCE BETWEEN MAY 1 - AUGUST 30. WORK IN SUITABLE HABITAT SHOULD BE AVOIDED DURING THIS TIMEFRAME. BROWN THRASHER NESTS IN SHRUBS, THICKETS, AND BRUSH; NO IMPACT TO THESE HABITATS IS ASSOCIATED WITH THIS PROJECT AND NO PROTECTION MEASURES ARE REQUIRED.

TO AVOID IMPACTING THE BREEDING SEASON OF THESE BIRDS, IT IS RECOMMENDED THAT WORK BE PERFORMED OUTSIDE OF THIS BIRDS BREEDING SEASON (MAY 1 THROUGH AUGUST 30).

ALL-POINTS TECHNOLOGY CORPORATION, P.C. ("APT") WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT THESE PROTECTION MEASURES ARE IMPLEMENTED PROPERLY. APT WILL PROVIDE AN EDUCATION SESSION FOR THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO REVIEW THE SENSITIVITY OF THE RARE SPECIES AND WETLAND RESOURCES THAT OCCUR ON THIS PROPERTY MAY. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR BIOLOGIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) [illegible] OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THIS PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS: EDUCATION OF ALL CONTRACTORS AND SUB-CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; PROTECTIVE MEASURES; PERIODIC INSPECTION OF THE CONSTRUCTION PROJECT; AND, REPORTING.

1. CONTRACTOR EDUCATION

a. PRIOR TO WORK ON SITE, THE CONTRACTOR SHALL ATTEND AN EDUCATIONAL SESSION AT THE PRE-CONSTRUCTION MEETING WITH APT. THIS ORIENTATION AND EDUCATIONAL SESSION WILL CONSIST OF AN INTRODUCTORY MEETING WITH APT PROVIDING INFORMATION REGARDING THE STATE-LISTED SPECIES, AND THE NEED TO FOLLOW PROTECTIVE MEASURES AS DESCRIBED IN THIS PROTECTION PLAN. THE IMPORTANCE OF PROTECTING NEARBY WETLAND RESOURCES WILL ALSO BE STRESSED AS PART OF THIS EDUCATIONAL SESSION. WORKERS WILL BE PROVIDED INFORMATION REGARDING THE IDENTIFICATION OF OTHER TURTLES, SNAKES AND COMMON HERPETOFAUNA SPECIES THAT COULD BE ENCOUNTERED.

b. THE EDUCATION SESSION WILL ALSO FOCUS ON MEANS TO DISCRIMINATE BETWEEN THE SPECIES OF CONCERN AND OTHER NATIVE SPECIES TO AVOID UNNECESSARY "FALSE ALARMS". ENCOUNTERS WITH ANY WILDLIFE SPECIES WILL BE DOCUMENTED.

c. THE CONTRACTOR WILL BE PROVIDED WITH CELL PHONE AND EMAIL CONTACTS FOR APT PERSONNEL TO IMMEDIATELY REPORT ANY ENCOUNTERS WITH WILDLIFE. EDUCATIONAL POSTER MATERIALS WILL BE PROVIDED BY APT AND DISPLAYED ON THE JOB SITE TO MAINTAIN WORKER AWARENESS OF THE ENVIRONMENTALLY SENSITIVE NATURE OF THE PROJECT.

d. IF ANY STATE-LISTED SPECIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL WORK, AVOID DISTURBANCE OF THE ANIMAL AND CONTACT APT.

2. ISOLATION MEASURES & SEDIMENTATION AND EROSION CONTROLS

a. PLASTIC NETTING USED IN A VARIETY OF EROSION CONTROL PRODUCTS (I.E., EROSION CONTROL BLANKETS, FIBER ROLLS (WATTLES), REINFORCED SILT FENCE) HAS BEEN FOUND TO ENTANGLE WILDLIFE, INCLUDING REPTILES, AMPHIBIANS, BIRDS AND SMALL MAMMALS, BUT PARTICULARLY SNAKES. NO PERMANENT EROSION CONTROL PRODUCTS OR REINFORCED SILT FENCE WILL BE USED ON THE PROJECT. TEMPORARY EROSION CONTROL PRODUCTS WILL USE EITHER EROSION CONTROL BLANKETS AND FIBER ROLLS COMPOSED OF PROCESSED FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX (NETLESS) OR NETTING COMPOSED OF PLANAR WOVEN NATURAL BIODEGRADABLE FIBER TO AVOID/MINIMIZE WILDLIFE ENTANGLEMENT.

b. INSTALLATION OF SEDIMENTATION AND EROSION CONTROLS, REQUIRED FOR EROSION CONTROL COMPLIANCE AND CREATION OF A BARRIER TO POSSIBLE MIGRATING/DISPERSING TURTLES, SHALL BE PERFORMED BY THE CONTRACTOR FOLLOWING CLEARING ACTIVITIES AND PRIOR TO ANY EARTHWORK. THE ENVIRONMENTAL MONITOR WILL INSPECT THE WORK ZONE AREA PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION TO ENSURE THE AREA IS FREE OF ANY WILDLIFE AND DOCUMENT BARRIERS HAVE BEEN SATISFACTORILY INSTALLED. THE INTENT OF THE BARRIER IS TO SEGREGATE THE MAJORITY OF THE WORK ZONE AND ISOLATE IT FROM FORAGING/MIGRATING/DISPERSING TURTLES, SNAKES AND OTHER HERPETOFAUNA. OFTENTIMES COMPLETE ISOLATION OF A WORK ZONE IS NOT FEASIBLE DUE TO ACCESSIBILITY NEEDS AND LOCATIONS OF STAGING/MATERIAL STORAGE AREAS, ETC. ALTHOUGH THE BARRIERS MAY NOT COMPLETELY ISOLATE THE WORK ZONE, THEY WILL BE POSITIONED TO DEFLECT MIGRATING/DISPERSAL ROUTES AWAY FROM THE WORK ZONE TO MINIMIZE POTENTIAL ENCOUNTERS WITH WILDLIFE.

c. THE CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS FOR TEARS OR BREECHES AND ACCUMULATION LEVELS OF SEDIMENT, PARTICULARLY FOLLOWING STORM EVENTS THAT GENERATE A DISCHARGE. APT WILL PROVIDE PERIODIC INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES ONLY AS IT PERTAINS TO THEIR FUNCTION AS ISOLATION MEASURES FOR THE PROTECTION OF RARE SPECIES AND WILDLIFE. THIRD PARTY MONITORING OF SEDIMENTATION AND EROSION CONTROLS WILL BE PERFORMED BY OTHER PARTIES, AS NECESSARY, UNDER APPLICABLE LOCAL, STATE AND/OR FEDERAL REGULATIONS.

d. THE EXTENT OF THE SEDIMENTATION AND EROSION CONTROLS WILL BE AS SHOWN ON THE SITE PLANS. THE CONTRACTOR SHALL HAVE ADDITIONAL SEDIMENTATION AND EROSION CONTROLS STOCKPILED ON SITE SHOULD FIELD OR CONSTRUCTION CONDITIONS WARRANT EXTENDING THE CONTROLS AS DIRECTED BY APT OR OTHER REGULATORY AGENCIES.

e. NO EQUIPMENT, VEHICLES OR CONSTRUCTION MATERIALS SHALL BE STORED OUTSIDE OF THE SEDIMENTATION AND EROSION CONTROLS WITHIN 100 FEET OF WETLANDS OR WATERCOURSES.

f. ALL SEDIMENTATION AND EROSION CONTROLS SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS SO THAT WILDLIFE MOVEMENT IS NOT RESTRICTED.

3. PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION

a. CERTAIN PRECAUTIONS ARE NECESSARY TO STORE PETROLEUM MATERIALS, REFUEL AND CONTAIN AND PROPERLY CLEAN UP ANY INADVERTENT FUEL OR PETROLEUM (I.E., OIL, HYDRAULIC FLUID, ETC.) SPILL TO AVOID POSSIBLE IMPACT TO NEARBY HABITATS.

b. A SPILL CONTAINMENT KIT CONSISTING OF A SUFFICIENT SUPPLY OF ABSORBENT PADS AND ABSORBENT MATERIAL WILL BE MAINTAINED BY THE CONTRACTOR AT THE CONSTRUCTION SITE THROUGHOUT THE DURATION OF THE PROJECT. IN ADDITION, A WASTE DRUM WILL BE KEPT ON SITE TO CONTAIN ANY USED ABSORBENT PADS/MATERIAL FOR PROPER AND TIMELY DISPOSAL OFF SITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

c. THE FOLLOWING PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING RESTRICTIONS AND SPILL RESPONSE PROCEDURES WILL BE ADHERED TO BY THE CONTRACTOR.

i. PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING

1. REFUELING OF VEHICLES OR MACHINERY SHALL OCCUR A MINIMUM OF 100 FEET FROM WETLANDS OR WATERCOURSES AND SHALL TAKE PLACE ON AN IMPERVIOUS PAD WITH SECONDARY CONTAINMENT DESIGNED TO CONTAIN FUELS.
2. ANY FUEL OR HAZARDOUS MATERIALS THAT MUST BE KEPT ON SITE SHALL BE STORED ON AN IMPERVIOUS SURFACE UTILIZING SECONDARY CONTAINMENT A MINIMUM OF 100 FEET FROM WETLANDS OR WATERCOURSES.

ii. INITIAL SPILL RESPONSE PROCEDURES

1. STOP OPERATIONS AND SHUT OFF EQUIPMENT.
2. REMOVE ANY SOURCES OF SPARK OR FLAME.
3. CONTAIN THE SOURCE OF THE SPILL.
4. DETERMINE THE APPROXIMATE VOLUME OF THE SPILL.
5. IDENTIFY THE LOCATION OF NATURAL FLOW PATHS TO PREVENT THE RELEASE OF THE SPILL TO SENSITIVE NEARBY WATERWAYS OR WETLANDS.
6. ENSURE THAT FELLOW WORKERS ARE NOTIFIED OF THE SPILL.

iii. SPILL CLEAN UP & CONTAINMENT

1. OBTAIN SPILL RESPONSE MATERIALS FROM THE ON-SITE SPILL RESPONSE KIT. PLACE ABSORBENT MATERIALS DIRECTLY ON THE RELEASE AREA.
2. LIMIT THE SPREAD OF THE SPILL BY PLACING ABSORBENT MATERIALS AROUND THE PERIMETER OF THE SPILL.
3. ISOLATE AND ELIMINATE THE SPILL SOURCE.
4. CONTACT THE APPROPRIATE LOCAL, STATE AND/OR FEDERAL AGENCIES, AS NECESSARY.
5. CONTACT A DISPOSAL COMPANY TO PROPERLY DISPOSE OF CONTAMINATED MATERIALS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

iv. REPORTING

1. COMPLETE AN INCIDENT REPORT.
2. SUBMIT A COMPLETED INCIDENT REPORT TO THE APPROPRIATE MUNICIPAL OFFICIAL, CONNECTICUT SITING COUNCIL, AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL OFFICIALS.

4. HERBICIDE AND PESTICIDE RESTRICTIONS

a. THE USE OF HERBICIDES AND PESTICIDES AT THE PROJECT SITE SHALL BE AVOIDED WHEN POSSIBLE. IN THE EVENT HERBICIDES AND/OR PESTICIDES ARE REQUIRED AT THE SITE, THEIR USE WILL BE USED IN ACCORDANCE WITH INTEGRATED PEST MANAGEMENT ("IPM") PRINCIPLES WITH PARTICULAR ATTENTION TO MINIMIZE APPLICATIONS WITHIN 100 FEET OF WETLAND OR WATERCOURSE RESOURCES. NO APPLICATIONS OF HERBICIDES OR PESTICIDES ARE ALLOWED WITHIN ACTUAL WETLAND OR WATERCOURSE RESOURCES.

5. BIRD PROTECTIVE MEASURES

a. RESTRICT CONSTRUCTION ACTIVITIES OUTSIDE OF THE BIRD BREEDING SEASON OF APRIL 1ST TO AUGUST 31ST.

b. DO NOT DISTURB SHRUBBY HABITAT OR HEDGE ROWS BETWEEN APRIL 1ST TO AUGUST 31ST.

c. IF CONSTRUCTION STARTS BEFORE THE BIRD BREEDING SEASON, BUT IS ANTICIPATED TO EXTEND BEYOND APRIL 1ST (INTO THE BIRD BREEDING SEASON), THE CONTRACTOR SHALL KEEP THE PROJECT AREA AND A 50-FOOT BUFFER AREA AROUND THE PROJECT AREA MOWED SHORT (3 INCHES OR LESS) TO AVOID ATTRACTING NESTING BIRDS THROUGHOUT THE APRIL 1ST TO AUGUST 31ST PERIOD.

d. APT WILL PERIODICALLY SURVEY THE PROJECT AREA FOR BREEDING BY STATE-LISTED BIRDS DURING THE CONSTRUCTION PERIOD THAT EXTENDS INTO THE BIRD BREEDING SEASON TO DOCUMENT NO NESTS ARE BEING ESTABLISHED OR DISTURBED. IF AN ACTIVE NEST IS IDENTIFIED, APT WILL CONTACT CTDEEP TO DETERMINE WHAT MEASURES SHOULD BE TAKEN (I.E., PROVIDE A NON-DISTURBANCE BUFFER AROUND THE NEST UNTIL THE JUVENILE BIRDS HAVE FLEDGED).

e. FOR MAINTENANCE OF THE PROJECT SITE, MOWING ACTIVITIES SHOULD BE AVOIDED DURING PEAK USAGE BY THESE STATE-LISTED BIRD SPECIES (APRIL 15TH TO AUGUST 15TH).

6. REPORTING

a. DAILY COMPLIANCE MONITORING REPORTS (BRIEF NARRATIVE AND APPLICABLE PHOTOS) DOCUMENTING EACH APT INSPECTION WILL BE SUBMITTED BY APT TO SUNLIGHT FOR COMPLIANCE VERIFICATION OF IMPLEMENTATION OF THE ENVIRONMENTAL RESOURCES PROTECTION PLAN. ANY OBSERVATIONS OF STATE-LISTED BIRDS, WETLAND IMPACTS, OR CORRECTIVE ACTIONS WILL BE INCLUDED IN THE REPORTS. SUNLIGHT WILL PROVIDE COPIES OF THE COMPLIANCE MONITORING REPORTS TO THE CONNECTICUT SITING COUNCIL FOR COMPLIANCE VERIFICATION.

b. ANY OBSERVATIONS OF STATE-LISTED BIRD SPECIES OR ANY OTHER RARE SPECIES WILL BE REPORTED TO CTDEEP BY APT ON THE APPROPRIATE SPECIAL ANIMAL REPORTING FORM, WITH PHOTO-DOCUMENTATION (IF POSSIBLE) AND SPECIFIC INFORMATION ON THE LOCATION AND DISPOSITION OF THE ANIMAL.

BETHLEHEM SOLAR
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28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

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WATERFORD, CT 06385 PHONE: (860)-663-1697
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CSC PERMIT SET

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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
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APT FILING NUMBER: CT[illegible]

DRAWN BY: [illegible]

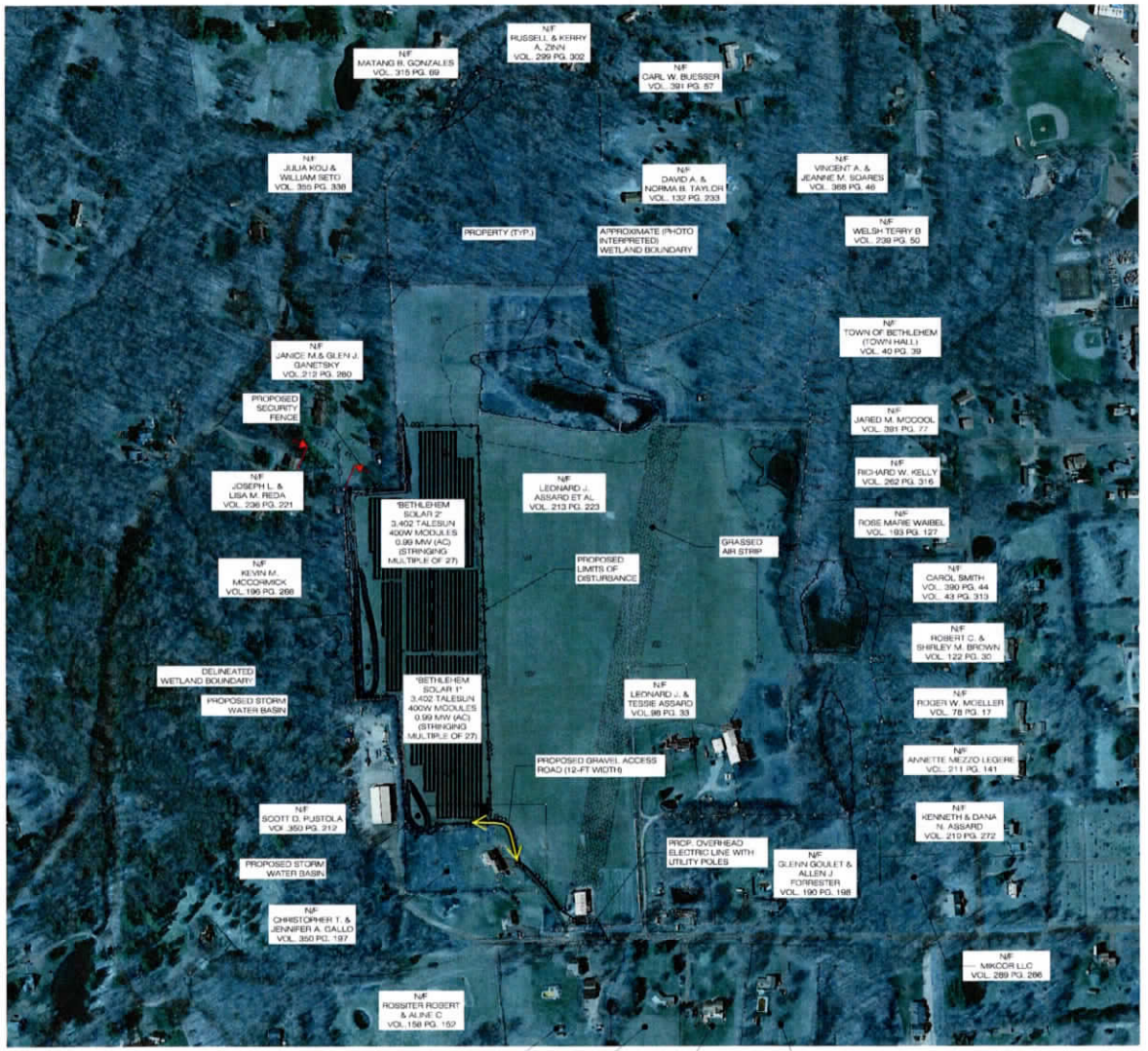
DATE: [illegible]/2020 CHECKED BY: KAM

SHEET TITLE:

ENVIRONMENTAL NOTES

SHEET NUMBER:

EN-1



DESIGN TABLE

MODULE MODEL - TALESUN 400W TRACKERS

INTER-ROW SPACING - 7'-10"

PROP. AZIMUTH - ±0 DEGREES

OVERALL SITE PLAN

(IN FEET) 1 inch = 200 ft.

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NO.	DATE	REVISION
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APT FILING NUMBER: CT562110

DRAWN BY: DRA

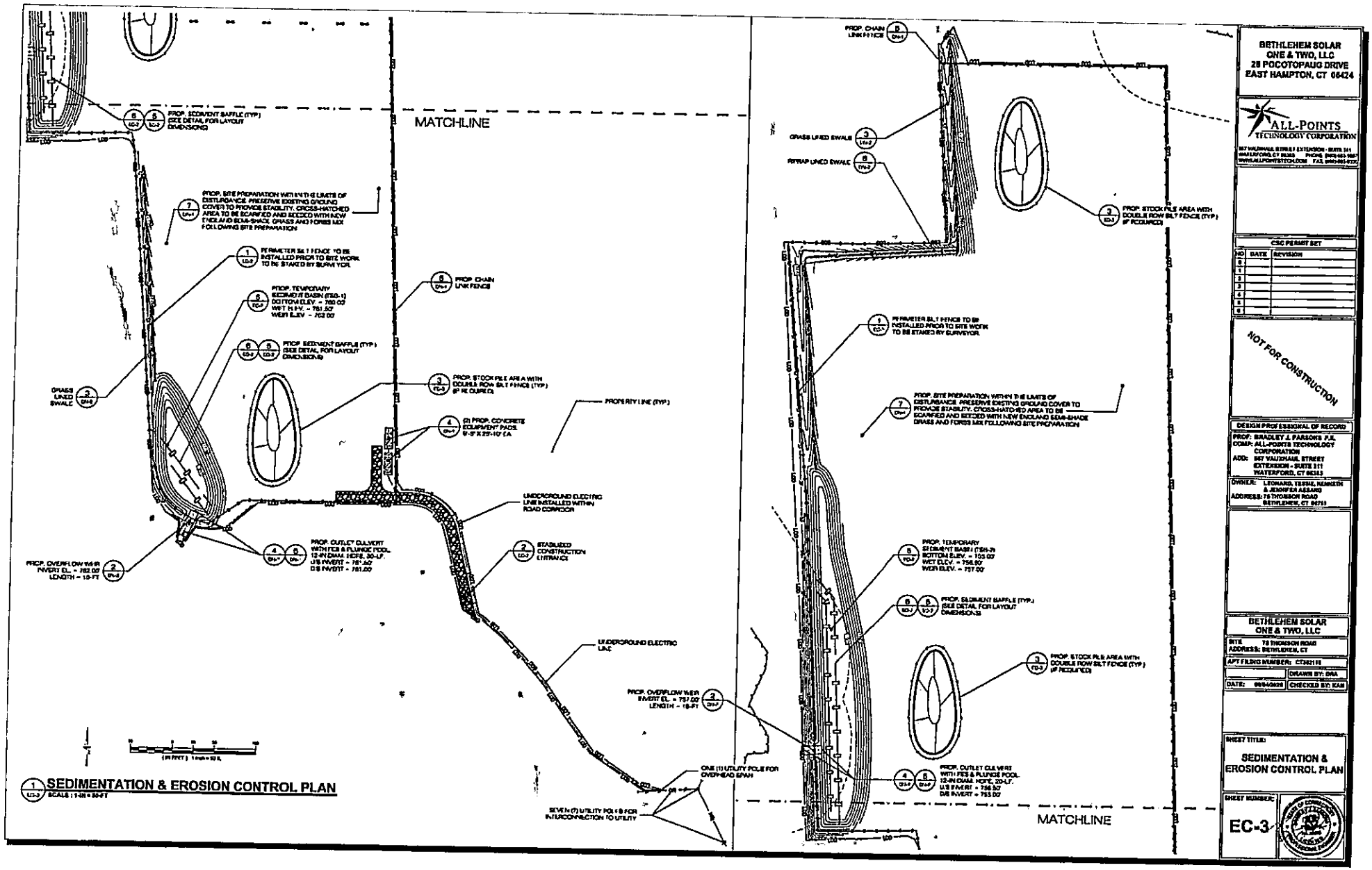
DATE: 09/04/2020 CHECKED BY: KAM

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

OP-1



1 SEDIMENTATION & EROSION CONTROL PLAN
SCALE: 1"=20'=30-FT

BETHLEHEM SOLAR
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EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION

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DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. FARRAR P.E.
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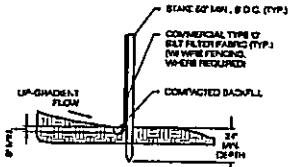
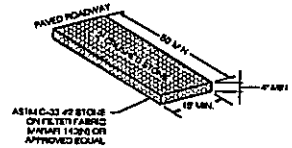
APT FILING NUMBER: CT-21118
DRAWN BY: DRA
DATE: 09/04/2020
CHECKED BY: KAH

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL PLAN

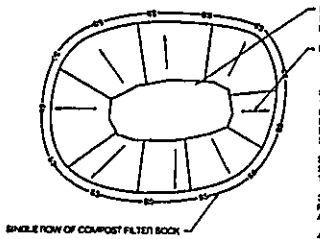
SHEET NUMBER:
EC-3



1 EC-1 **SILT FENCE DETAIL**
SCALE : N.T.S.

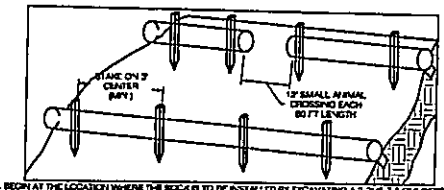


2 EC-2 **CONSTRUCTION ENTRANCE DETAIL**
SCALE : N.T.S.



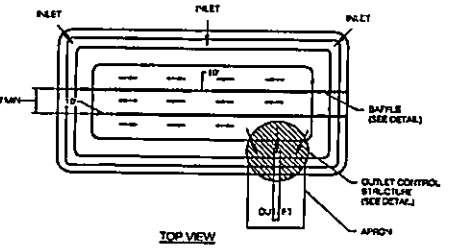
NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. BOULDER/GATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITIONS AND REUSED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 30'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

3 EC-2 **MATERIALS STOCKPILE DETAIL**
SCALE : N.T.S.

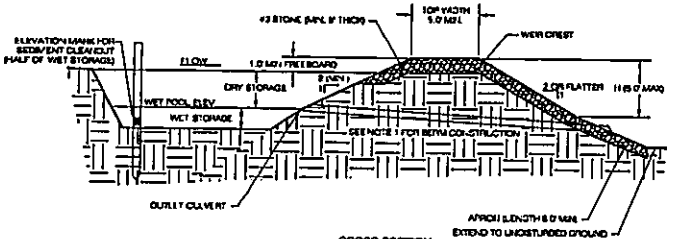


1. BEGIN AT THE LOCATION WHERE THE SOCK IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 8" (22.5 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE SOCK IN THE TRENCH SO THAT IS CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UPHILL SIDE. SOCKS SHALL BE INSTALLED IN 80 FT CONTINUOUS LENGTHS WITH ADJACENT SOCKS TIGHTLY ABUT. EVERY 80 FT THE SOCK ROW SHALL BE SPACED 12 INCHES CLEAR, END TO END, FOR AMPHIBIAN AND REPTILE TRAVEL. THE OPEN SPACES SHALL BE STAGGERED AND LENGTH OF THE NEXT DOWN GRADIENT SOCK.
3. SECURE THE SOCK WITH 1.16-2-0" (43.7-61 CM) STAKES EVERY 3-4' (0.9 - 1.3 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE SOCK. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

4 EC-2 **COMPOST FILTER SOCK SEDIMENTATION CONTROL BARRIER**
SCALE : N.T.S.



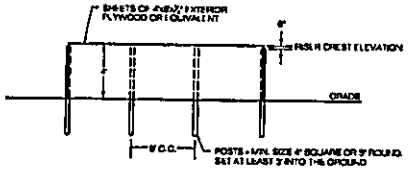
TOP VIEW



CROSS SECTION

NOTES
1. CONSTRUCT TEMPORARY SEDIMENT BASIN BERMS AND SIDEWALLS PER THE GRASS LINED BASIN DETAIL.
2. SEDIMENT BAFFLES SHALL BE INSTALLED AS SHOWN ON EC-3 TO EC-5.
3. SEE TSB SIZING TABLE FOR WET AND DRY STORAGE VOLUMES.

5 EC-1 **TEMPORARY SEDIMENT BASIN**
SCALE : N.T.S.



6 EC-3 **SEDIMENT TRAP BAFFLE**
SCALE : N.T.S.

TEMPORARY SEDIMENT BASIN SIZING TABLE

BASIN NAME	DRAINAGE AREA (AC)	REQ. DRY VOLUME (CF)	REQ. WET VOLUME (CF)	PROP. BTM. ELEV. (FT)	PROP. CULVERT ELEV. (FT)	PROP. WEIR CREST ELEV. (FT)	PROP. TOP ELEV. (FT)	DRY VOL. PROVIDED (CF)	WET VOL. PROVIDED (CF)	TOTAL VOL. PROVIDED (CF)
TSB-1	2.16	2,840	5,680	700.00	701.50	702.00	704.00	2,850	6,196	8,745
TSB-2	6.08	8,924	13,848	755.00	756.50	757.00	759.00	7,478	18,496	25,975

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SHEET TITLE:
SEDIMENTATION & EROSION CONTROL DETAILS

SHEET NUMBER:
EC-2

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF BETHLEHEM, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.

2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.

4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.

5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANNER.

6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.

7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.

8. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA. FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.

9. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXITING.

10. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.

11. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.

12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.

13. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.

14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.

15. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.

16. VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.

17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.

18. SEEDING MIXTURES SHALL BE NEW ENGLAND SEMI-SHADE GRASS AND FORBS MIX (SEE SITE DETAILS SHEET DN-1), OR APPROVED EQUAL BY OWNER.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR		
E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SEDIMENT BASIN (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SEDIMENT TRAP (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH

SEDIMENT & EROSION CONTROL NARRATIVE

1. THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY 11.84± ACRES OF EXISTING LOT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
B. CONSTRUCTION OF 6,804 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.

2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 11.84± ACRES OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THOUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT.

3. THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF STATE OF CONNECTICUT (NRCS, VERSION 19, SEP 13, 2019), CONTAINS MAP UNIT 3 (HYDROLOGIC SOIL GROUP D), 60 (HYDROLOGIC SOIL GROUP B) AND 84 & 86 (HYDROLOGIC SOIL GROUP C) SOILS. A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED.

4. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 3-4 MONTHS.

5. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.

6. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF BETHLEHEM STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.

7. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.

8. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:
A. STAGED CONSTRUCTION,
B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION,
C. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE,
D. MINIMIZE IMPERVIOUS AREAS,
E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

9. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
A. STORMWATER MANAGEMENT REPORT DATED AUGUST 2020.
B. SWPCP DATED AUGUST 2020

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN ("SWPCP") AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.

2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNERS REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON OR PERSONS RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.

3. NOTIFY CALL BEFORE YOU DIG AT 1-800-922-4455, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.

4. REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCES.

5. CLEAR ONLY AS NEEDED TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.

6. INSTALL PERIMETER EROSION CONTROL.

7. INSTALL EROSION CONTROL BELOW EQUIPMENT AREA AND INSTALL CONCRETE EQUIPMENT PADS AND CONDUITS PROTECTED BY THESE CONTROLS.

8. INSTALL TEMPORARY SEDIMENT BASINS, GRAVEL STABILIZED ACCESS ROADS, AND ASSOCIATED SWALES. UPON COMPLETION OF THE INSTALLATION AND STABILIZATION OF THE BASINS AND SWALES, UP GRADIENT WORK CAN PROCEED.

9. UPON COMPLETION OF THE INSTALLATION OF EACH OF THE TEMPORARY SEDIMENT BASINS: THE AREA ABOVE THE BASIN CAN HAVE THE REMAINING ARRAY AREA CLEARING AND GRUBBING COMPLETED AS REQUIRED. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.

10. TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

11. INSTALL REMAINING ELECTRICAL CONDUIT.

12. INSTALL RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS.

13. INSTALL GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.

14. AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK, INCLUDING ANY REQUIRED LANDSCAPE SCREENING, AND STABILIZE ALL DISTURBED AREAS.

15. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.

16. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND TOWN OF BETHLEHEM AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.

BETHLEHEM SOLAR
ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: [illegible]
WWW.ALLPOINTSTECH.COM FAX: [illegible]

CSC PERMIT SET		
NO	DATE	REVISION
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2		
3		
4		
5		
6		

NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSARO
ADDRESS: 75 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR
ONE & TWO, LLC

SITE ADDRESS: 75 THOMSON ROAD BETHLEHEM, CT

APT FILING NUMBER: CT[illegible]

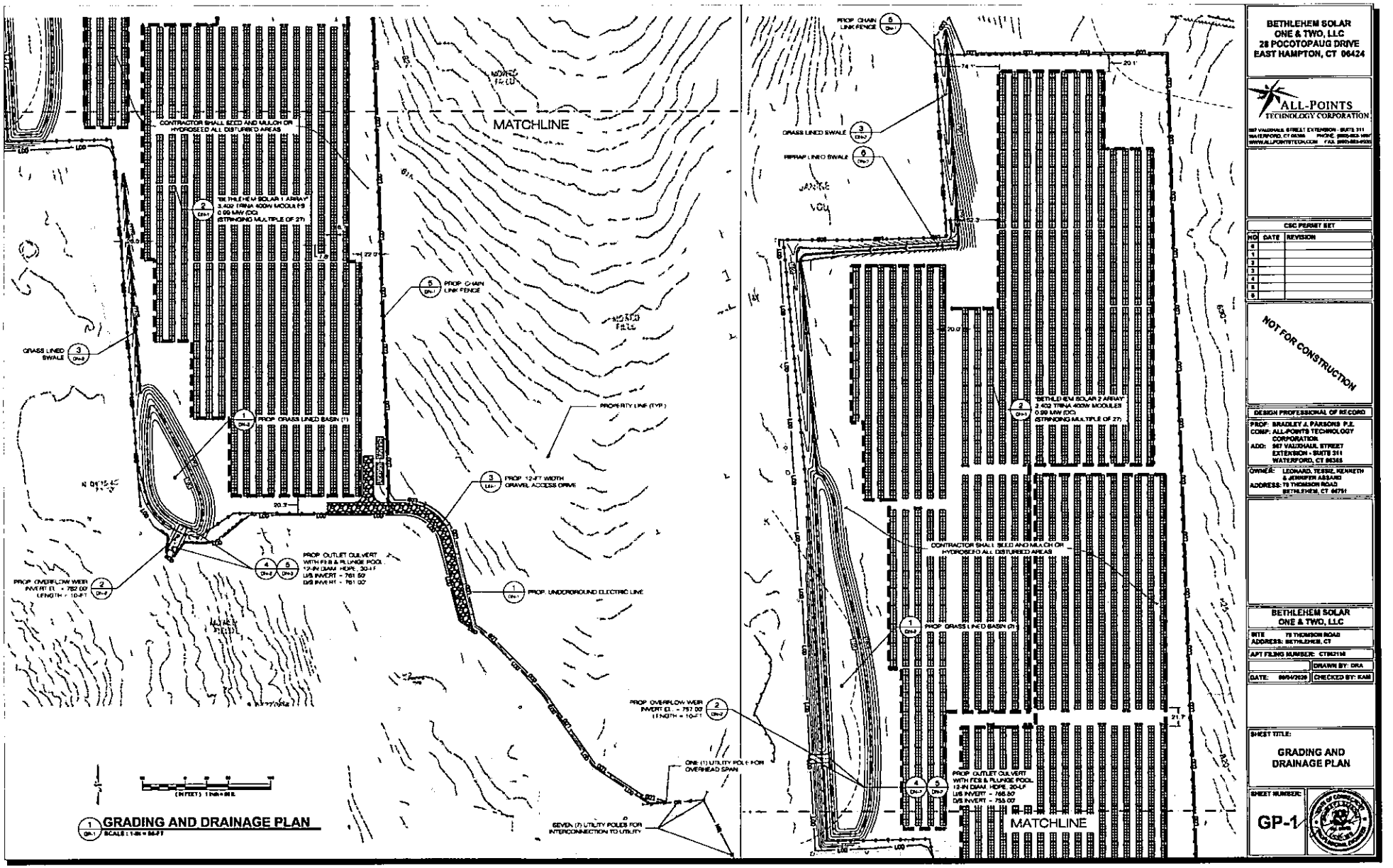
DRAWN BY: DRA

DATE: [illegible]

CHECKED BY: KAB

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL NOTES

SHEET NUMBER:
EC-1



1 GRADING AND DRAINAGE PLAN
SCALE: 1 IN = 80 FT

BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION

CSC PERMIT SET

NO	DATE	REVISION
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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TERRE, KENNETH & JENNIFER ARSANG
ADDRESS: 79 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR ONE & TWO, LLC
SITE ADDRESS: 79 THOMSON ROAD BETHLEHEM, CT
APT FILING NUMBER: CT062114
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DATE: 09/04/2020
CHECKED BY: KAM

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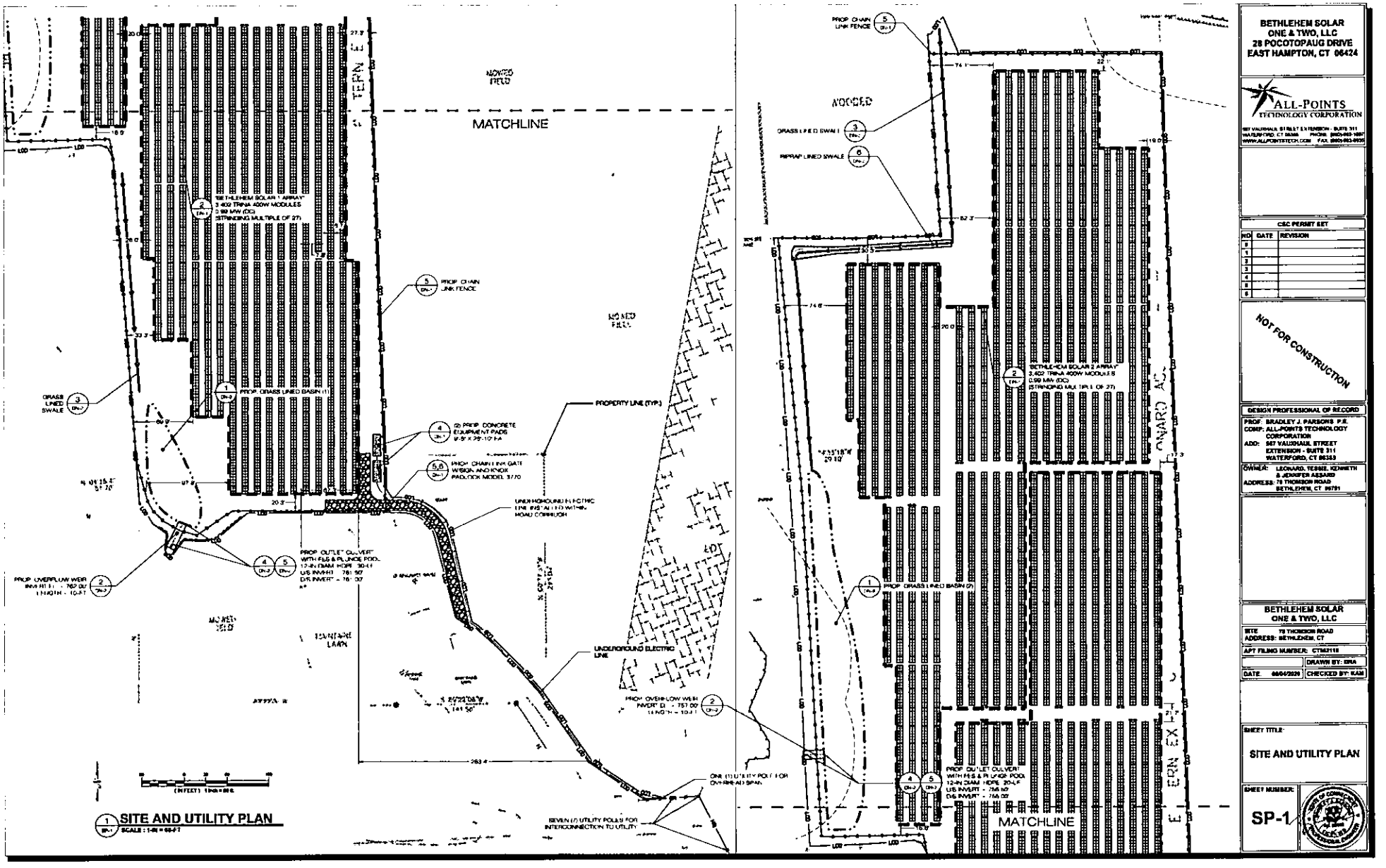
GRADING AND DRAINAGE PLAN

SHEET NUMBER:
GP-1



BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION

CSC PERMIT SET		
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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSAAD
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR ONE & TWO, LLC

SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT
APT FILING NUMBER: CT1437118
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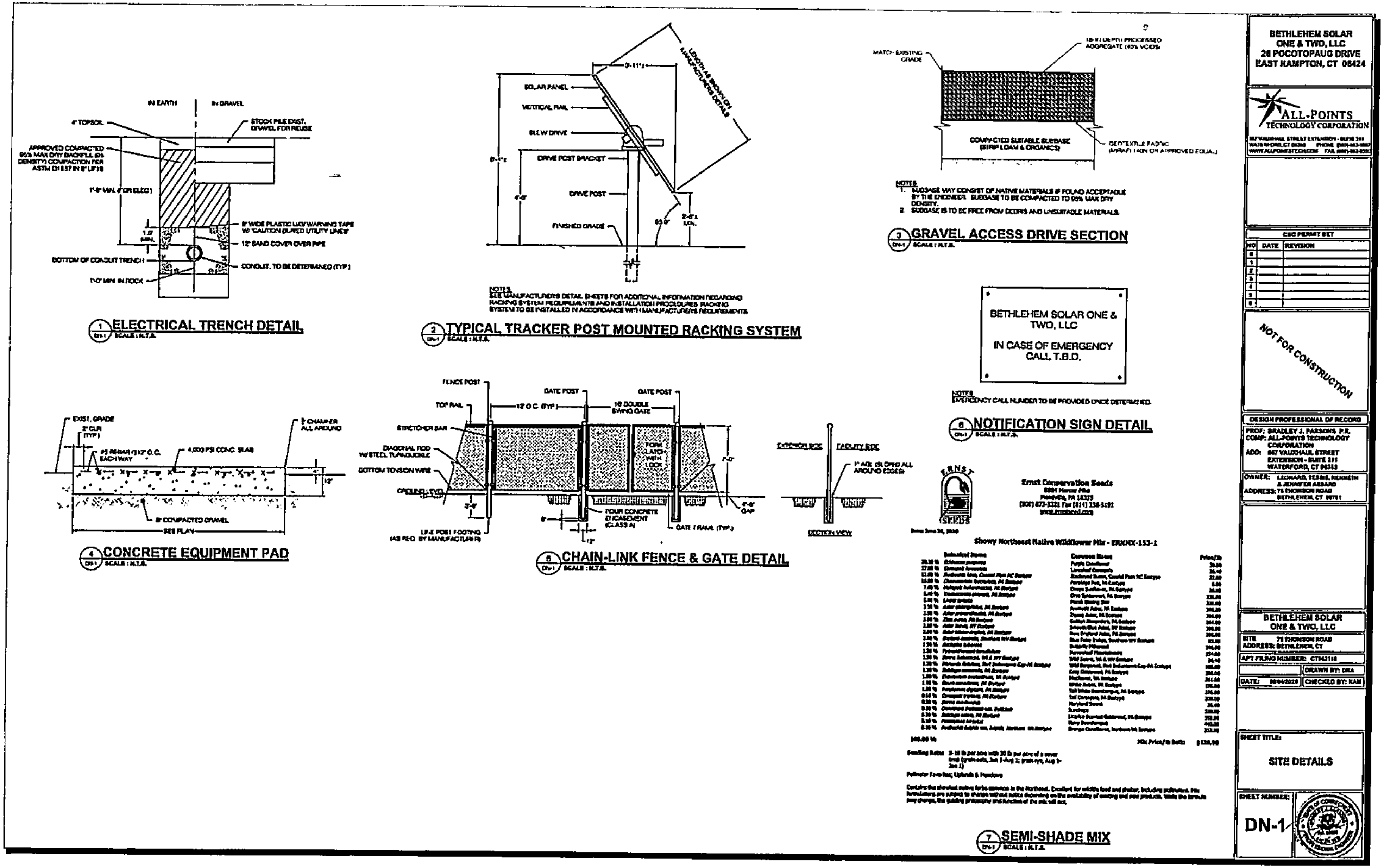
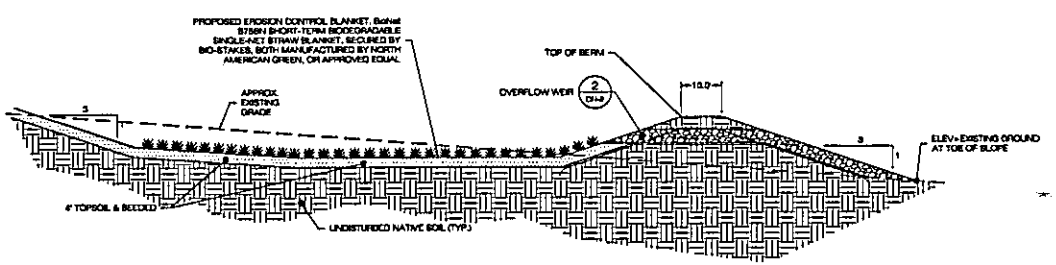
DATE: 06/04/2020
CHECKED BY: KAM

SHEET TITLE:
SITE AND UTILITY PLAN

SHEET NUMBER:
SP-1

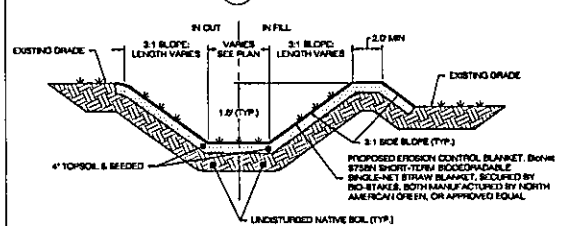


IN EARTH
IN GRAVEL
4" TOPSOIL
STOCK PILE EXIST. GRAVEL FOR REUSE
APPROVED COMPACTED 95% MAX DRY BACKFILL (95 DENSITY) COMPACTION PER ASTM D1557 IN 8" LIFTS
1'-6" MIN. (FOR ELEC.)
6" WIDE PLASTIC UG WARNING TAPE W/ "CAUTION BURIED UTILITY LINES"
12" SAND COVER OVER PIPE
BOTTOM OF CONDUIT TRENCH
CONDUIT, TO BE DETERMINED (TYP.)
1'-0" MIN IN ROCK
1 ELECTRICAL TRENCH DETAIL
SCALE: N.T.S.
SOLAR PANEL
VERTICAL RAIL
SLEW DRIVE
DRIVE POST BRACKET
DRIVE POST
FINISHED GRADE
LENGTH AS SHOWN ON MANUFACTURER'S DETAILS
NOTES:
SEE MANUFACTURER'S DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2 TYPICAL TRACKER POST MOUNTED RACKING SYSTEM
SCALE: N.T.S.
MATCH EXISTING GRADE
18" IN DEPTH PROCESSED AGGREGATE (40% VOIDS)
COMPACTED SUITABLE SUBBASE (STRIP LOAM & ORGANICS)
GEOTEXTILE FABRIC (MIRAFI 140N OR APPROVED EQUAL)
NOTES:
1. SUBBASE MAY CONSIST OF NATIVE MATERIALS IF FOUND ACCEPTABLE BY THE ENGINEER. SUBBASE TO BE COMPACTED TO 95% MAX DRY DENSITY.
2. SUBBASE IS TO BE FREE FROM DEBRIS AND UNSUITABLE MATERIALS.
3 GRAVEL ACCESS DRIVE SECTION
SCALE: N.T.S.
EXIST. GRADE
2" CLR (TYP.)
#5 REBAR @12" O.C. EACH WAY
4,000 PSI CONC. SLAB
CHAMFER ALL AROUND
8" COMPACTED GRAVEL
SEE PLAN
4 CONCRETE EQUIPMENT PAD
SCALE: N.T.S.
FENCE POST
TOP RAIL
STRETCHER BAR
DIAGONAL ROD W/STEEL TURNBUCKLE
BOTTOM TENSION WIRE
GROUND LEVEL
LINE POST FOOTING (AS REQ. BY MANUFACTURER)
GATE POST
12' O.C. (TYP.)
10' DOUBLE SWING GATE
FORK LATCH WITH LOCK
POUR CONCRETE ENCASEMENT (CLASS A)
GATE FRAME (TYP.)
7'-0"
EXTERIOR SIDE
FACILITY SIDE
1" AGL (SLOPED ALL AROUND EDGES)
SECTION VIEW
5 CHAIN-LINK FENCE & GATE DETAIL
SCALE: N.T.S.
BETHLEHEM SOLAR ONE & TWO, LLC
IN CASE OF EMERGENCY CALL T.B.D.
NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.
6 NOTIFICATION SIGN DETAIL
SCALE: N.T.S.
ERNST SEEDS
Ernst Conservation Seeds
Showy Northeast Native Wildflower Mix - ERNMX-153-1
Botanical Name
Common Name
Price/lb
7 SEMI-SHADE MIX
SCALE: N.T.S.
BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424
ALL-POINTS TECHNOLOGY CORPORATION
CSC PERMIT SET
NO DATE REVISION
NOT FOR CONSTRUCTION
DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385
OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSARD
ADDRESS: 75 THOMSON ROAD BETHLEHEM, CT 06751
BETHLEHEM SOLAR ONE & TWO, LLC
SITE 75 THOMSON ROAD
ADDRESS: BETHLEHEM, CT
DRAWN BY: DKA
CHECKED BY: KAM
SHEET TITLE:
SITE DETAILS
SHEET NUMBER:
DN-1



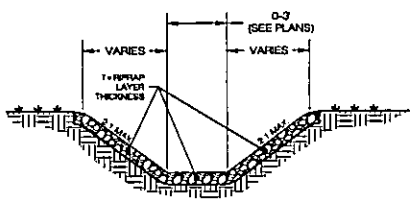
NOTES:
- SEED MIX TO BE NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR MOIST SITES ON THE BOTTOM OF THE BASIN AND NEW ENGLAND EROSION RESTORATION MIX FOR DRY SITES ON THE SIDE SLOPES.
- FOR CONVERTING TEMPORARY SEDIMENT BASIN TO INFILTRATION BASIN, REMOVE BAFFLES, CLEAN OUT SEDIMENT, RESHAPE AS REQUIRED. SEE PLANS FOR BASIN DEPTHS AND ELEVATIONS.
- INSPECT AND CLEAN PIPES.

1 GRASS LINED BASIN
DN-8 SCALE : N.T.S.



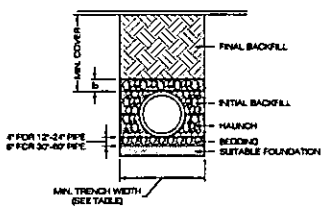
NOTES:
1. SEED MIX TO BE NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR MOIST SITES ON THE BOTTOM OF THE BASIN AND NEW ENGLAND EROSION RESTORATION MIX FOR DRY SITES ON THE SIDE SLOPES.
2. IF DEPTH VARIES FROM 1.0', SEE PLAN CALLOUTS.

3 GRASS LINED SWALE
DN-2 SCALE : N.T.S.



NOTES:
1. T=1.5 TIMES THE MAXIMUM STONE SIZE BUT NOT LESS THAN 12 INCHES.
2. THE TOTAL HEIGHT OF THE LINING IS DEPENDENT UPON THE DESIGN DEPTH OF FLOW PLUS RUNUP DUE TO CHANNEL CURVATURE, PLUS FREEBOARD.
3. IN CHANNELS WITH SIGNIFICANT BOTTOM WIDTHS LOW FLOW CHANNELS MAY BE INCORPORATED.
4. SIDE SLOPES STEEPER THAN 2:1 OR SLOPES WITH UNSUITABLE MATERIAL WILL REQUIRE ADDITIONAL ANALYSIS.
5. STONE CHECK DAMS SHALL BE INSTALLED IN ALL SWALES.

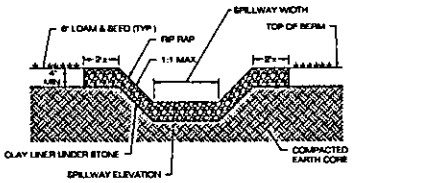
6 RIPRAP LINED SWALE
DN-8 SCALE : NTS



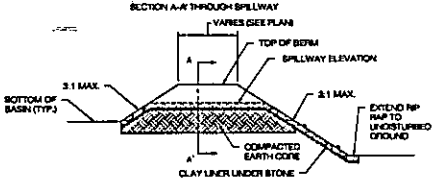
RECOMMENDED MIN. TRENCH WIDTH	
PIPE DIA.	MIN. TRENCH WIDTH
6"	22"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	58"
36"	64"
48"	80"
60"	96"

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm)ø, 6" (150mm) FOR 30"-60" (750mm-600mm)ø.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

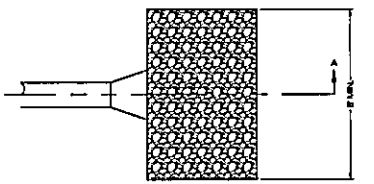
4 HDPE STORM DRAINAGE TRENCH DETAIL
DN-8 SCALE : N.T.S.

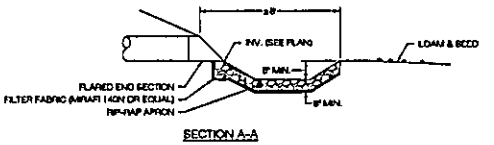


SECTION A-A THROUGH SPILLWAY



2 OVERFLOW WEIR DETAIL
DN-7 SCALE : N.T.S.





SECTION A-A

5 FLARED END SECTION/PLUNGE POOL
DN-7 SCALE : N.T.S.

BETHLEHEM SOLAR
ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION
587 VALLEY STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
0		
1		
2		
3		
4		
5		
6		

NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 587 VALLEY STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSARO
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR
ONE & TWO, LLC
SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT

APT FILING NUMBER: CT362116

DRAWN BY: DRA
DATE: 09/04/2020 CHECKED BY: RAM

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
DN-2

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4953-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 1
Location:	Bethlehem, CT
Latitude:	41-38-04.33N NAD 83
Longitude:	73-13-05.47W
Heights:	822 feet site elevation (SE)
	10 feet above ground level (AGL)
	832 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4953-OE.

Signature Control No: 449236265-450262454 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4953-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4953-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4953-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4954-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 2
Location:	Bethlehem, CT
Latitude:	41-38-03.43N NAD 83
Longitude:	73-13-04.70W
Heights:	825 feet site elevation (SE) 10 feet above ground level (AGL) 835 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4954-OE.

Signature Control No: 449236266-450262453 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4954-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4954-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4954-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4955-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 3
Location:	Bethlehem, CT
Latitude:	41-37-51.32N NAD 83
Longitude:	73-13-04.22W
Heights:	790 feet site elevation (SE)
	10 feet above ground level (AGL)
	800 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4955-OE.

Signature Control No: 449236267-450262449 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4955-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4955-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4955-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4956-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 4
Location:	Bethlehem, CT
Latitude:	41-37-51.32N NAD 83
Longitude:	73-13-06.23W
Heights:	768 feet site elevation (SE) 10 feet above ground level (AGL) 778 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4956-OE.

Signature Control No: 449236268-450262452 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4956-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4956-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4956-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4957-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 5
Location:	Bethlehem, CT
Latitude:	41-37-53.09N NAD 83
Longitude:	73-13-07.41W
Heights:	769 feet site elevation (SE)
	10 feet above ground level (AGL)
	779 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4957-OE.

Signature Control No: 449236269-450262457 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4957-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4957-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4957-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4958-OE

Issued Date: 09/08/2020

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3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 6
Location:	Bethlehem, CT
Latitude:	41-37-55.61N NAD 83
Longitude:	73-13-08.51W
Heights:	766 feet site elevation (SE)
	10 feet above ground level (AGL)
	776 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4958-OE.

Signature Control No: 449236270-450262456 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4958-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4958-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4958-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4959-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 7
Location:	Bethlehem, CT
Latitude:	41-38-00.27N NAD 83
Longitude:	73-13-09.35W
Heights:	763 feet site elevation (SE)
	10 feet above ground level (AGL)
	773 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4959-OE.

Signature Control No: 449236271-450262451 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4959-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4959-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4959-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4960-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 8
Location:	Bethlehem, CT
Latitude:	41-38-02.06N NAD 83
Longitude:	73-13-09.36W
Heights:	767 feet site elevation (SE)
	10 feet above ground level (AGL)
	777 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4960-OE.

Signature Control No: 449236272-450262458 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4960-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4960-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4960-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4961-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 9
Location:	Bethlehem, CT
Latitude:	41-38-02.08N NAD 83
Longitude:	73-13-07.92W
Heights:	780 feet site elevation (SE)
	10 feet above ground level (AGL)
	790 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4961-OE.

Signature Control No: 449236274-450262450 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4961-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4961-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4961-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4962-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
All-Points Technology Corporation - Engineering
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 10
Location:	Bethlehem, CT
Latitude:	41-38-04.32N NAD 83
Longitude:	73-13-07.10W
Heights:	805 feet site elevation (SE)
	10 feet above ground level (AGL)
	815 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
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(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4962-OE.

Signature Control No: 449236275-450262455 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4962-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4962-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4962-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2020-ANE-4963-OE

Issued Date: 09/08/2020

Bradley J. Parsons, PE, PMP
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Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel HP
Location:	Bethlehem, CT
Latitude:	41-38-02.51N NAD 83
Longitude:	73-13-04.75W
Heights:	826 feet site elevation (SE)
	10 feet above ground level (AGL)
	836 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 03/08/2022 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
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SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6531, or darin.clipper@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ANE-4963-OE.

Signature Control No: 449236276-450262459 (DNE)
Darin Clipper
Specialist

Attachment(s)
Additional Information
Case Description
Map(s)

Additional information for ASN 2020-ANE-4963-OE

The following was not evaluated as part of the FAA determination:

- Security fencing
- Security light poles
- Any utility poles used to tie into the National Grid/power company
- Anything taller than the proposed height of 10 ft. AGL to include any associated construction equipment that exceeds the AMSL height.

Case Description for ASN 2020-ANE-4963-OE

This Study is being requested in connection w/ the development of a proposed solar energy facility. Please see uploaded PDF file for site layout and point locations. Points depict perimeter/footprint of proposed facility.

Verified Map for ASN 2020-ANE-4963-OE

EXHIBIT D

Phased Sedimentation and Erosion Control
EC-1, EC-2, and EC-3

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF BETHLEHEM, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.

2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.

4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.

5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANOR.

6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.

7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN). SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.

8. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.

9. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXISTING.

10. ALL CONSTRUCTION IS TO BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.

11. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.

12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.

13. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.

14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE; MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.

15. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.

16. VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION. IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.

17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.

18. SEEDING MIXTURES SHALL BE NEW ENGLAND SEMI-SHADE GRASS AND FORBS MIX (SEE SITE DETAILS SHEET DN-1). OR APPROVED EQUAL BY OWNER.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR

E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SEDIMENT BASIN (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SEDIMENT TRAP (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

SEDIMENT & EROSION CONTROL NARRATIVE

1. THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY 11.84± ACRES OF EXISTING LOT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
B. CONSTRUCTION OF 6,804 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.

2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 11.84± ACRES OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THOUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT.

3. THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF STATE OF CONNECTICUT (NRCS, VERSION 18, SEP 13, 2019), CONTAINS MAP UNIT 3 (HYDROLOGIC SOIL GROUP D), 60 (HYDROLOGIC SOIL GROUP B), AND 84 & 86 (HYDROLOGIC SOIL GROUP C) SOILS. A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED.

4. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 3-4 MONTHS.

5. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.

6. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF BETHLEHEM STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.

7. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.

8. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:

A. STAGED CONSTRUCTION;
B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
C. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE;
D. MINIMIZE IMPERVIOUS AREAS;
E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

9. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN.

A. STORMWATER MANAGEMENT REPORT DATED AUGUST 2020.
B. SWPCP DATED AUGUST 2020

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN ("SWPCP") AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING, PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.

2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER'S REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON OR PERSONS RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.

3. NOTIFY CALL BEFORE YOU DIG AT 1-800-922-4455, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.

4. REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCES.

5. CLEAR ONLY AS NEEDED TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.

6. INSTALL PERIMETER EROSION CONTROL.

7. INSTALL EROSION CONTROL BELOW EQUIPMENT AREA AND INSTALL CONCRETE EQUIPMENT PADS AND CONDUITS PROTECTED BY THESE CONTROLS.

8. INSTALL TEMPORARY SEDIMENT BASINS, GRAVEL STABILIZED ACCESS ROADS, AND ASSOCIATED SWALES. UPON COMPLETION OF THE INSTALLATION AND STABILIZATION OF THE BASINS AND SWALES, UP GRADIENT WORK CAN PROCEED.

9. UPON COMPLETION OF THE INSTALLATION OF EACH OF THE TEMPORARY SEDIMENT BASINS, THE AREA ABOVE THE BASIN CAN HAVE THE REMAINING ARRAY AREA CLEARING AND GRUBBING COMPLETED AS REQUIRED. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.

10. TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

11. INSTALL REMAINING ELECTRICAL CONDUIT.

12. INSTALL RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS.

13. INSTALL GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.

14. AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK, INCLUDING ANY REQUIRED LANDSCAPE SCREENING, AND STABILIZE ALL DISTURBED AREAS.

15. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.

16. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND TOWN OF BETHLEHEM AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.

BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION
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WATERFORD, CT 06385 PHONE: (860) 663-1697
WWW.ALLPOINTSTECH.COM FAX: (860) 663-0935

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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 857 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TERESE, KENNETH & JENNIFER ASSAND
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR ONE & TWO, LLC

SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT

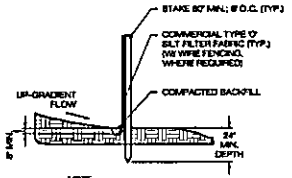
APT FILING NUMBER: CT3421110

DRAWN BY: DRA

DATE: 09/04/2020 CHECKED BY: KAM

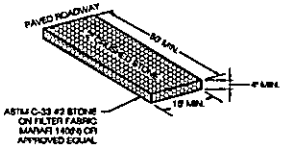
SHEET TITLE:
SEDIMENTATION & EROSION CONTROL NOTES

SHEET NUMBER:
EC-1

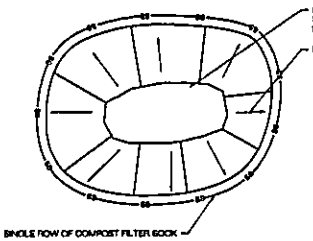


NOTE:
SILT FENCE SHALL BE LAPPED ONLY WHEN NECESSARY PER THE MANUFACTURER RECOMMENDATIONS.

1 EC-3 SILT FENCE DETAIL
SCALE : N.T.S.

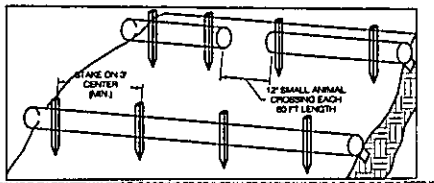


2 EC-7 CONSTRUCTION ENTRANCE DETAIL
SCALE : N.T.S.



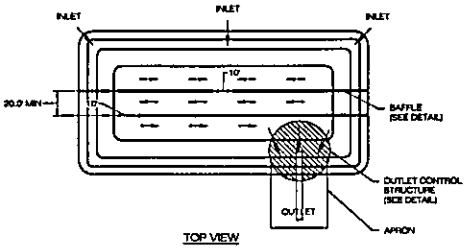
NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

3 EC-4 MATERIALS STOCKPILE DETAIL
SCALE : N.T.S.

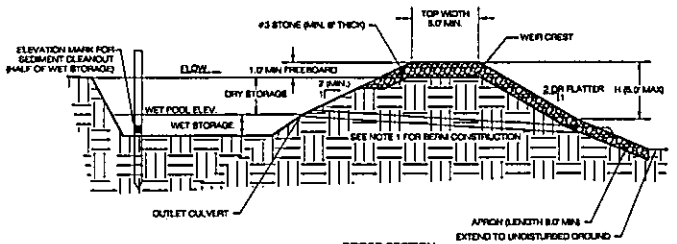


1. BEGIN AT THE LOCATION WHERE THE SOCK IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.6 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE SOCK IN THE TRENCH SO THAT IT CONFORMS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UP-HILL SIDE. SOCKS SHALL BE INSTALLED IN 80 FT CONTINUOUS LENGTHS WITH ADJACENT SOCKS TIGHTLY ABUT. EVERY 80 FT THE SOCK ROW SHALL BE SPACED 12 INCHES CLEAR, END TO END, FOR AMPHIBIAN AND REPTILE TRAVEL. THE OPEN SPACES SHALL BE STAGGERED MID LENGTH OF THE NEXT DOWN GRADIENT SOCK.
3. SECURE THE SOCK WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 - 1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK LEAVING AT LEAST 2-3" (5-7.6 CM) OF STAKE EXTENDING ABOVE THE SOCK. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

4 EC-8 COMPOST FILTER SOCK SEDIMENTATION CONTROL BARRIER
SCALE : N.T.S.



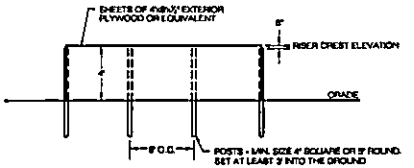
TOP VIEW



CROSS SECTION

NOTES:
1. CONSTRUCT TEMPORARY SEDIMENT BASIN BERMS AND SIDEWALLS PER THE GRASS LINED BASIN DETAIL.
2. SEDIMENT BAFFLES SHALL BE INSTALLED AS SHOWN ON EC-3 TO EC-6.
3. SEE TSB SIZING TABLE FOR WET AND DRY STORAGE VOLUMES.

5 EC-7 TEMPORARY SEDIMENT BASIN
SCALE : N.T.S.



6 EC-3 SEDIMENT TRAP BAFFLE
SCALE : N.T.S.

TEMPORARY SEDIMENT BASIN SIZING TABLE

BASIN NAME	DRAINAGE AREA (AC)	REQ. DRY VOLUME (CF)	REQ. WET VOLUME (CF)	PROP. BTM. ELEV. (FT)	PROP. CULVERT ELEV. (FT)	PROP. WEIR CREST ELEV. (FT)	PROP. TOP ELEV. (FT)	DRY VOL. PROVIDED (CF)	WET VOL. PROVIDED (CF)	TOTAL VOL. PROVIDED (CF)
TSB-1	2.16	2,540	5,050	780.00	781.80	782.00	784.00	2,550	6,195	8,745
TSB-2	6.66	6,924	13,948	785.00	786.50	787.00	789.00	7,479	18,496	25,975

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DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 367 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TERRIE, KENNETH & JENNIFER ASSAND
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BETHLEHEM SOLAR ONE & TWO, LLC

SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT

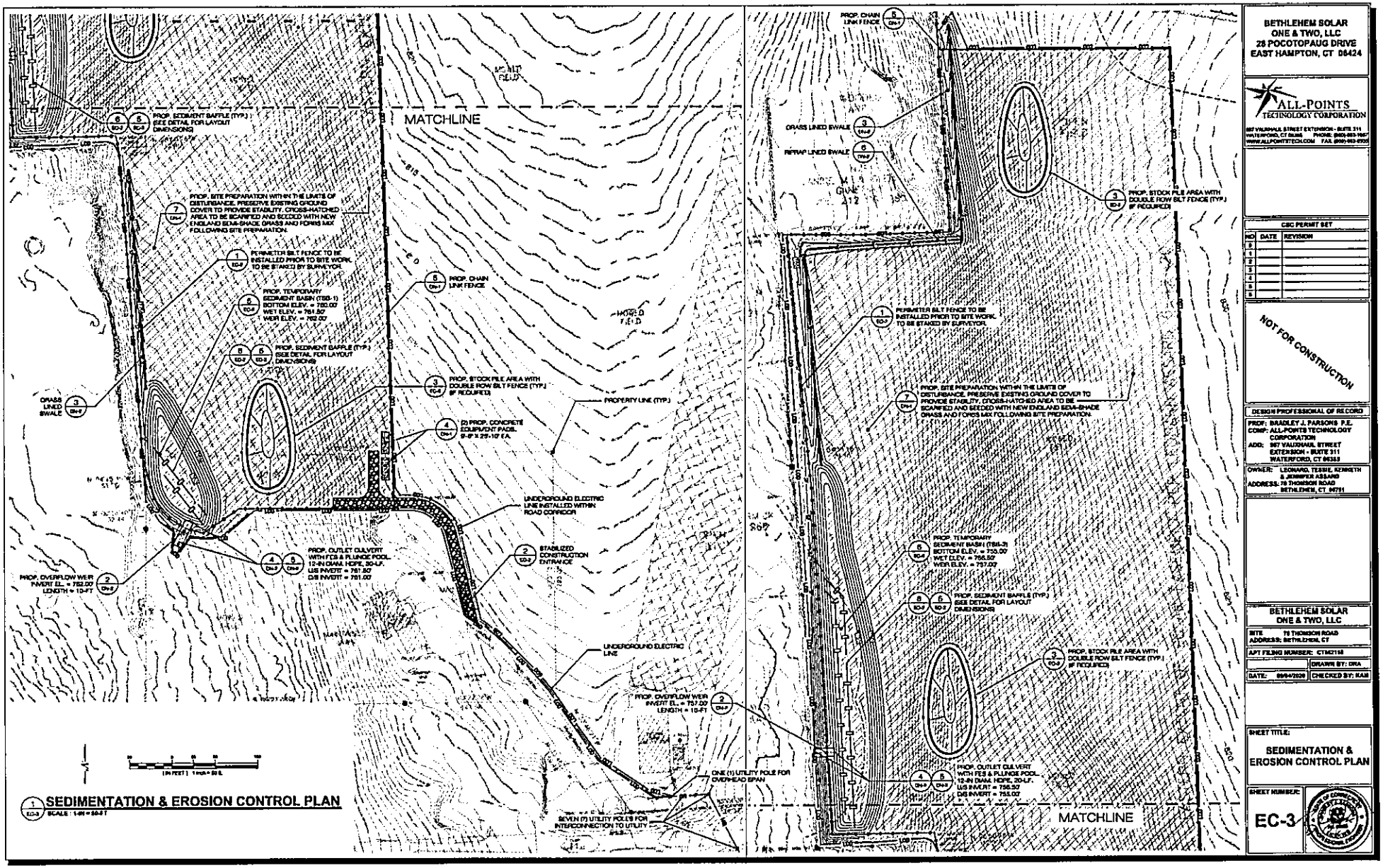
APT FILING NUMBER: CT1421116

DRAWN BY: BMA

DATE: 9/04/2020 CHECKED BY: RAM

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL DETAILS

SHEET NUMBER:
EC-2



1 EC-3 **SEDIMENTATION & EROSION CONTROL PLAN**
SCALE: 1-IN = 50-FT

BETHLEHEM SOLAR
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NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD
PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 857 VALVOAIL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ASSAND
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR
ONE & TWO, LLC

SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT

APT FILING NUMBER: CT1427116

DRAWN BY: DRA
CHECKED BY: KAH
DATE: 09/04/2020

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-3

EXHIBIT E

DEEP NDDB Determination Letter

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employ

June 15, 2020

Dean Gustafson
All-Points Technology Corporation, PC
567 Vauxhall Street Ext, Suite 311
Waterford, CT 06385
dgustafson@allpointstech.com

NDDB DETERMINATION NUMBER: 202006358

Project: Installation of commercial scale solar electric generating facility consisting of photovoltaic modules; BETHLEHEM SOLAR, 78 THOMSON RD., BETHLEHEM, CT

Expiration: June 15, 2022

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding this project. According to our records, the following State-listed species (RCSA Sec. 26-306) are documented in the project area.

- **Savannah sparrow (*Passerculus sandwichensis*) State Special Concern**

Site surveys in your application indicated observations of:

- **Bobolink (*Dolichonyx oryzivorus*) State Special Concern**
- **Brown thrasher (*Toxostoma rufum*) State Special Concern**

Species specific protection measures are listed below.

Savannah sparrow (*Passerculus sandwichensis*) State Special Concern
Bobolink (*Dolichonyx oryzivorus*) State Special Concern
In Connecticut, grasslands are among the most threatened and rare habitats. There are seven species of breeding grassland birds and that require grasslands as their primary habitat that are state listed in Connecticut. Most of Connecticut's grasslands would revert to forest without active management. Increasing development pressures on Connecticut's most important grassland habitats, exacerbates this loss of habitat through natural succession. The Savannah sparrow is most sensitive to disturbance between April 1- August 30. The Bobolink is most sensitive to disturbance between May 1- August 30. Traffic and construction in suitable habitat should be avoided during this timeframe.

The continuing decline of suitable grassland habitats is a major threat to our state listed grassland bird species. The decline is exacerbated by the intense development pressure on grassland habitat due to its accessibility. Many grassland species require expansive tracts of grassland mosaics that may include mowed areas, meadows of tall grasses and wildflowers that function best if kept in 30 acre parcels. Work closely with a biologist to plan your development to have the least impact on state listed grassland bird species.

Brown thrasher (*Toxostoma rufum*) State Special Concern
This bird nests in shrubs, thickets, and brush. It is often found in hedgerows adjacent to open fields. Their breeding season is approximately from April through August and it is during this period that the species is most susceptible to disturbances in its feeding or nesting habitat.

Construction protection measures:

- Do not disturb shrubby habitat or hedge rows between April 1- August 31.
- Land disturbance activities including digging, ground clearing, heavy machinery driving staging, or trampling that will occur more than 100 feet into or cut across in a way that fragments large parcels of **grassland habitat** should be done when grassland birds are not breeding **(outside of April 1- August 31)**. If work must begin during this time period, keep the area and a 50 foot buffer of the area mowed short to avoid attracting nesting birds.

Site Design Protection Measures:

This facility will be built in a field that supports multiple state listed bird species. If planned properly, you can minimize the impacts of habitat loss from your development.

- **Create a site management plan to promote native vegetation growth in the area under the solar panels.** Restoring native vegetation that will attract pollinators and avoid the need for constant mowing will benefit state listed species at this site.

Site management protection measures:

Create a mowing plan for the property that will benefit the state listed birds.

Early successional habitat is important for these species and maintenance by mowing is essential. Unfortunately, mowing is major source of human induced nest failure.

- **Avoid mowing or vehicular traffic during peak use by these species (April 15-August 15)**
- Use these additional techniques to minimize impact, especially if you need to mow during peak use times:
  - Mower Speed – Mowing in low gear or at slow speeds will allow animals to react and move out of the field.
  - Unmowed Edge - Leave an unmowed field edge until after September 15th. Other sensitive wildlife are usually along field edges adjacent to forest and closest to nearby streams.
  - Mow on multiyear rotation (every 2- 3 years) in fields not used for high quality hay production, combine with chemical control of woody plants.
  - In intensively managed agricultural fields where mowing occurs during the bird-nesting season, strips and edges should be left unmowed to provide areas of food and cover.
  - For grasslands >10acres, limit total mowing to 50% each year. If mowing during active season, limit to 25% of area. If mowing during inactive season limit to 50% of area.
  - Mowing style: Avoid flail mower heads with guide bars that ride along the ground. Sickle bar mowers will have the least impact if mowing every 1-5 years.
  - Mowing height: If mowing during active season, retention of mowing stubble to 7-12 inches will reduce mortality, reduce blade wear, and will leave important cover for animals.
  - Directionality - If mowing during the active season is necessary, start mowing from the center of the field and use a back-and-forth approach, or large circular pattern, to avoid concentrating fleeing animals where they may be killed or stranded. In addition, leave an unmowed 30 ft strip around the perimeter of the field and mow this area last. Additionally,
    - If field is near stream: start mowing the side furthest from stream and work towards stream.

- If field is bordered by woodland: start mowing side furthest from woodland and work towards woodland.
- If field is bordered by road, start mowing next to the road and work your way across field.

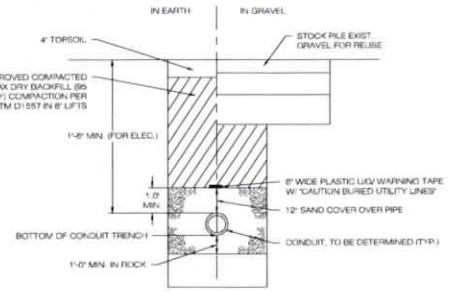
This is determination is valid for two years.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

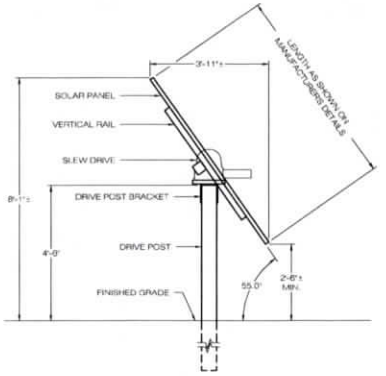
Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

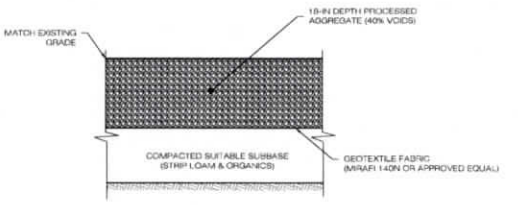


1 DN-1 **ELECTRICAL TRENCH DETAIL**
SCALE : N.T.S.



NOTES:
SEE MANUFACTURERS DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

2 DN-1 **TYPICAL TRACKER POST MOUNTED RACKING SYSTEM**
SCALE : N.T.S.



NOTES:
1. SUBBASE MAY CONSIST OF NATIVE MATERIALS IF FOUND ACCEPTABLE BY THE ENGINEER. SUBBASE TO BE COMPACTED TO 95% MAX DRY DENSITY.
2. SUBBASE IS TO BE FREE FROM DEBRIS AND UNSUITABLE MATERIALS.

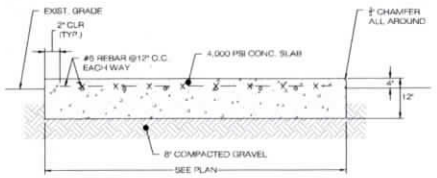
3 DN-1 **GRAVEL ACCESS DRIVE SECTION**
SCALE : N.T.S.

BETHLEHEM SOLAR ONE & TWO, LLC

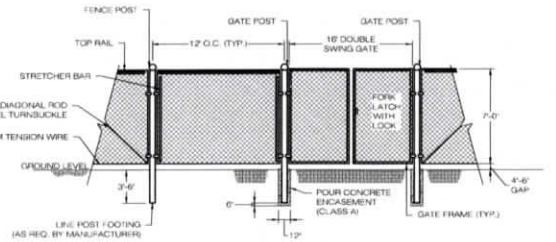
IN CASE OF EMERGENCY CALL T.B.D.

NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.

6 DN-1 **NOTIFICATION SIGN DETAIL**
SCALE : N.T.S.



4 DN-1 **CONCRETE EQUIPMENT PAD**
SCALE : N.T.S.



5 DN-1 **CHAIN-LINK FENCE & GATE DETAIL**
SCALE : N.T.S.

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: June 26, 2020

Showy Northeast Native Wildflower Mix - ERNMX-153-1

	Botanical Name	Common Name	Price/lb
20.10 %	*Echinacea purpurea*	Purple Coneflower	79.60
12.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	26.40
12.00 %	*Rudbeckia hirta, Coastal Plain NC Ecotype*	Blackeyed Susan, Coastal Plain NC Ecotype	22.00
10.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	6.80
7.00 %	*Helianthus helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	30.80
6.40 %	*Tradescantia ohiensis, PA Ecotype*	Ohio Spiderwort, PA Ecotype	231.00
5.00 %	*Liatris spicata*	Marsh Blazing Star	231.00
5.50 %	*Aster oblongifolius, PA Ecotype*	Aromatic Aster, PA Ecotype	396.00
3.50 %	*Aster prenanthoides, PA Ecotype*	Zigzag Aster, PA Ecotype	396.00
3.00 %	*Zizia aurea, PA Ecotype*	Golden Alexanders, PA Ecotype	264.00
2.00 %	*Aster laevis, NY Ecotype*	Smooth Blue Aster, NY Ecotype	396.00
2.00 %	*Aster novae-angliae, PA Ecotype*	New England Aster, PA Ecotype	396.00
2.00 %	*Baptisia australis, Southern WV Ecotype*	Blue False Indigo, Southern WV Ecotype	88.00
1.50 %	*Asclepias tuberosa*	Butterfly Milkweed	396.00
1.50 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	154.00
1.50 %	*Senna hebecarpa, VA & WV Ecotype*	Wild Senna, VA & WV Ecotype	26.40
1.20 %	*Monarda fistulosa, Fort Indiantown Gap-PA Ecotype*	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	105.60
1.10 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	396.00
1.00 %	*Eupatorium coelestinum, VA Ecotype*	Mistflower, VA Ecotype	281.60
1.00 %	*Gaura cespitosa, PA Ecotype*	White Avens, PA Ecotype	176.00
1.00 %	*Penstemon digitalis, PA Ecotype*	Tall White Beardtongue, PA Ecotype	176.00
0.60 %	*Coreopsis tripteris, PA Ecotype*	Tall Coreopsis, PA Ecotype	308.00
0.50 %	*Senna marilandica*	Maryland Senna	26.40
0.20 %	*Oenothera fruticosa var. fruticosa*	Sundrops	330.00
0.20 %	*Solidago odora, PA Ecotype*	Licorice Scented Goldenrod, PA Ecotype	352.00
0.10 %	*Penstemon hirsutus*	Hairy Beardtongue	440.00
0.10 %	*Rudbeckia fulgida var. fulgida, Northern VA Ecotype*	Orange Coneflower, Northern VA Ecotype	352.00
100.00 %		**Mix Price/lb Bulk:**	**$120.90**

Seeding Rate: 5-10 lb per acre with 20 lb per acre of a cover crop (grain oats, Jan 1-Aug 1; grain rye, Aug 1-Jan 1)

Pollinator Favorites, Uplands & Meadows

Contains the showiest native forbs common in the Northeast. Excellent for wildlife food and shelter, including pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

7 DN-1 **SEMI-SHADE MIX**
SCALE : N.T.S.

BETHLEHEM SOLAR ONE & TWO, LLC
28 POCOTOPAUG DRIVE
EAST HAMPTON, CT 06424

ALL-POINTS TECHNOLOGY CORPORATION
587 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
0		
1		
2		
3		
4		
5		
6		

NOT FOR CONSTRUCTION

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 587 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: LEONARD, TESSIE, KENNETH & JENNIFER ABSARD
ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT 06751

BETHLEHEM SOLAR ONE & TWO, LLC

SITE ADDRESS: 78 THOMSON ROAD BETHLEHEM, CT

APT FILING NUMBER: CT562110

DRAWN BY: DRA

DATE: 09/04/2020 CHECKED BY: KAM

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
DN-1

HERITAGE CONSULTANTS

August 13, 2020

Mr. Brian Gaudet
Project Manager
All-Points Technology Corporation
567 Vauxhall Street Extension, Suite 311
Waterford, Connecticut 06385

RE: Proposal for Cultural Resources (Phase IA) Survey of the Proposed Sunjet Solar Project in Bristol, Connecticut

Mr. Gaudet:

In May of 2020, All-Points Technology Corporation, P.C., contracted with Heritage Consultants, LLC (Heritage) to complete a Phase IA cultural resources assessment survey of a proposed solar center located at 78 Thomson Road in Bethlehem, Connecticut. The parcel of land on which the solar center was to be built encompassed approximately 73.2 acres of land and was to be accessed from Thompson Road, which abuts the southern boundary of the property (Figure 1). The Phase IA investigation consisted of: 1) preparation of an overview of the region's prehistory, history, and natural setting); 2) a literature search to identify and discuss previously recorded cultural resources in the region; 3) a review of readily available historic maps and aerial imagery depicting the project area to identify potential historic resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project area to determine their archaeological sensitivity.

The results of the Phase IA survey completed in May of 2020 indicated that the western portion of the project area, which encompassed 9.6 acres of land, was characterized by steep slopes and possessed a low/no sensitivity for intact archaeological deposits. It was also determined that the area of the then-proposed 4.26 m (14 ft) wide crushed stone access road had visible signs of modern disturbance and held no/low sensitivity for intact archaeological deposits. The pedestrian survey portion of the investigation revealed that there were two historic standing houses near the solar facility. The first, which was identified along the northern side of Thompson Road and to the southeast of the project area would not be directly or indirectly impacted due to existing vegetation and topography, which obscured visibility of the solar array. The second, a historic residence located across the street and on the south side of Thompson Road, was visible from the then-proposed solar facility'; it was recommended that any impacts to it, including visual impacts, should be avoided. Finally, the eastern portion of the then-proposed project area, which included 4.9 acres of land, was determined to hold moderate/high sensitivity for intact archaeological deposits due to the presence of low/no slopes, well drained soils, and no visible disturbance. It was recommended that the eastern portion of the project area be subjected to a Phase IB cultural resources survey prior to the construction of the solar facility.

Since submission of Heritage's Phase IA report in May of 2020, All-Points, working with its client, Sunjet, has reconfigured the layout of the proposed solar center (Figure 2). While the entrance point

to the facility will be at the same location, the proposed access road will follow a different path. The access road will now trend along an existing gravel driveway that leads to a modern residence to the northwest of Thompson Road. That driveway has been disturbed in the past and no longer retains any potential to produce intact cultural deposits. No additional archaeological examination of the proposed access road is recommended.

The proposed solar center itself has been shifted to the west of its original location such that all of it will now be located in the area of the open field that was previously identified as possessing a no/low archaeological potential due to the presence of steep slopes. As a result, no additional archaeological examination of the area to contain the solar array is recommended. In addition, the new location of the solar array will still not be visible from the historic house to the southeast along Thompson Road and the historic house to the immediately south of the previous location of the array and access road will now not be visible from the revised array location due to an intervening tree line along Thompson Road, the modern house at the end of the newly proposed access road, and the above-referenced slopes.

It is the professional opinion of Heritage that the revised location of the proposed Sunjet solar center at 78 Thomson Road in Bethlehem, Connecticut will have no effect on cultural resources. No additional examination of the project area is recommended. If you have any questions regarding this addendum letter, or if we can be of additional assistance with this or with any other project you may have, please do not hesitate to contact me at dgeorge@heritage-consultants.com or at (860) 299-6328. We are at your service.

Sincerely,

David R. George

David R. George, M.A., R.P.A.
Heritage Consultants, LLC

Figure 1. Original Project Plans for the Sunjet Solar Facility in Bethlehem, Connecticut.

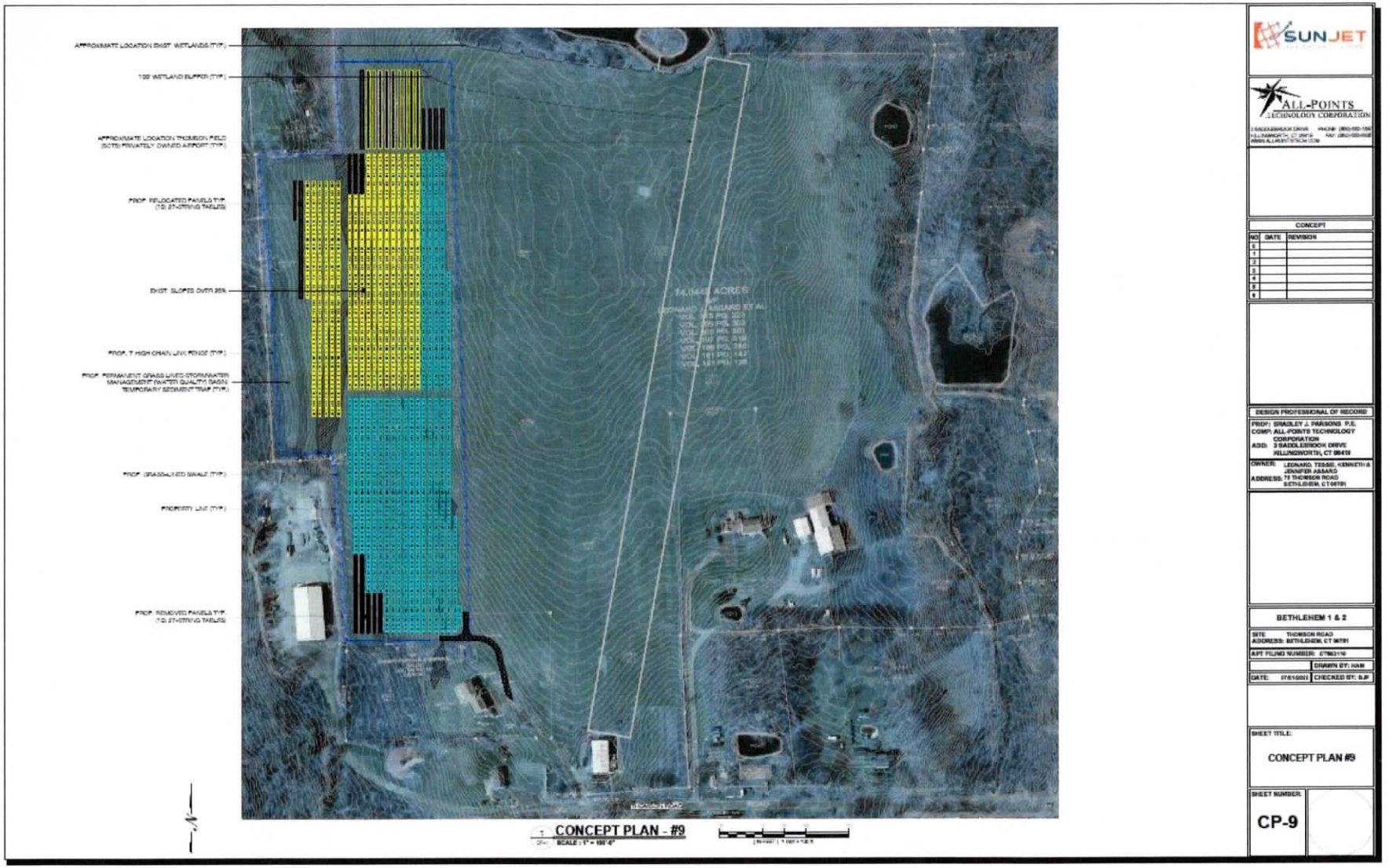


Figure 2. Revised Project Plans for the Sunjet Solar Facility in Bethlehem, Connecticut.

EXHIBIT H

Transformer Specifications
Noise Data

MGM

TRANSFORMER COMPANY

BULLETIN 30

Dry Type Substation Transformers

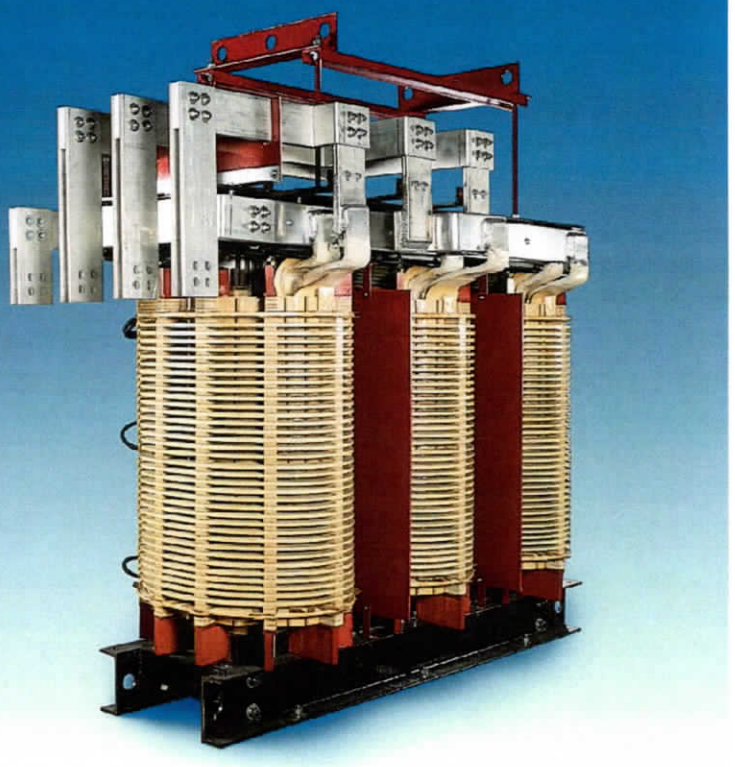
ISO 9001:2008 REGISTERED

U.S. DEPARTMENT OF ENERGY
DOE 2016 COMPLIANT

ENERGY STAR PARTNER

made in USA

Special Design



MGM Transformer Company
manufactures transformers in six major categories:

Special Design Dry Type Transformers:
- 9 kVA to 10,000 kVA
- Single Phase & Three Phase
- 600 V to 34.5 kV
- K-Factor Ratings
- Retrofit Applications

Dry Type Substation Transformers:
- 225 kVA to 10,000 kVA
- 600 V to 34.5 kV
- Indoor and Outdoor

Liquid Filled Substation Transformers:
- 500 kVA to 10,000 kVA
- 2.5 kV to 34.5 kV
- Indoor and Outdoor

Dry Type Drives Isolation Transformers:
- 6, 12, 18, 24 and 36-Pulse
- 15 kVA to 7,500 kVA
- 600 V to 25 kV
- Indoor and Outdoor

Liquid Filled Drives Isolation Transformers:
- 6, 12, 18, 24 and 36-Pulse
- 200 kVA to 7,500 kVA
- 2.5 kV to 25 kV
- Indoor and Outdoor

600V Class Transformers:
- 15 kVA to 3,750 kVA, 3-Phase
- 10 kVA to 833 kVA, 1-Phase

MGM Transformer Company has established itself as a leading manufacturer of custom dry type transformers. With an exceptionally large and experienced engineering staff, MGM has the ability to design to the varying criteria of differing industries while maintaining short lead times. Core and coil applications for regulators and UPS systems, low loss/high efficiency drives isolation transformers. Special custom size K-factor rated substation transformers for retrofit are but a few of the special transformers MGM has designed and manufactured.

MGM employs three winding styles for Special Design Dry Type transformers, based on kVA, voltage and BIL requirements. The ability to select a specific winding style assures the highest degree of mechanical strength under short circuit stress conditions and suitability for different voltage classes.

Most transformer companies offer standard engineered products only, and ask the users to make it fit their applications. MGM can engineer the product both electrically and mechanically to fit virtually any application.

Dry Type Transformers

PRODUCT RANGE

Three Phase

Voltage Class	KVA
600 V thru 1.2 kV	9 thru 2,000
2.4 kV thru 5 kV	15 thru 10,000
8.7 kV thru 15 kV	45 thru 10,000
25 kV	225 thru 10,000
34.5 kV	500 thru 10,000

Single Phase

Voltage Class	KVA
600 V thru 1.2 kV	10 thru 833
2.4 kV thru 5 kV	15 thru 1,667
8.7 kV thru 15 kV	30 thru 1,667
25 kV	150 thru 1,667
34.5 kV	333 thru 1,667

Barrel wound

The rectangular barrel wound style is the most common method in the industry for 600V and 5kV applications.
MGM's standard is the superior oval barrel wound method for 600V class and 5kV class, 45kV BIL maximum.

Section wound

The section wound style is rarely used in the industry due to higher cost vs. barrel or random wound. May be used for special applications up to 125 kV BIL.

SPECIFICATIONS

- Aluminum/Copper
- 150°C / 115°C / 80°C or Special Request
- 220°C insulation
- NEMA standard/special sound levels
- ANSI standard/special BIL levels
- VPI
- UL K-factor ratings
- UL/CUL/CE/CSA listings (check with factory)
- Multi-voltage input/output
- 50/60/400 Hz
- OEM core and coil
- Multiple electrostatic shields
- Design to meet customer impedance and loss criteria
- Ultra Efficient Designs

Disk wound

Due to its superior design criteria, MGM uses this method on most 15kV class to 125kV BIL.

Substation Transformers

RANGE

225kVA-3,750kVA, 600 V

225kVA-10,000kVA, 2.4/5/15kV

500kVA-10,000kVA, 34.5kV

Dry Type Substation 1800 kVA

Primary 6.3kVΔ Secondary 400Y/231V 50Hz; 150°C Rise; Copper Wound; Digital Temperature Monitor; NEMA 3R Louvers; Low Voltage Transition Section with Flex Leads

SPECIFICATIONS

Aluminum/Copper
150°C / 115°C / 80°C
220°C insulation
Indoor/outdoor
ANSI standard/special BIL levels
VPI
UL K-factor ratings
UL/CUL/CSA listings
(check with factory)

BULL RUSH PROGRAM

Need it fast? We can deliver. Emergencies happen and we're here to respond. WE WILL WORK 24/7 TILL THE UNIT IS DONE OR YOUR MONEY BACK! Ask about our BULL RUSH program and let us know what you need.

For over two decades, MGM Transformer Company has been a reliable source for quality secondary unit substation transformers. Our standard designs cover the full range of requirements from 5kV to 34.5kV, 500kVA to 10,000kVA, in both liquid and dry type.

As an engineering oriented transformer company, we maintain a large engineering staff. Our experience in working with various switchgear manufacturers enables us to design the high voltage/low voltage switchgear interface, assuring the proper match in the field. Flex connectors can be supplied.

Non-standard substation designs are also available for special situations such as failed unit retrofitting or PCB replacement.

All manufacturing processes are done on the premises. This advantage, along with a large inventory of electrical steel and wire, assures our customers of the industry's **shortest standard lead times,** regardless of the interface requirements.

Ventilated Dry-Type Transformers

Approximate Enclosure Dimensions and Weights

Based upon 15kV class, 150°C rise. Al windings

KVA	Height Inches	Width* Inches	Depth Inches	Weight lbs
225	90	56	50	2,400
300	90	56	50	3,000
500	90	72	50	3,700
750	90	80	50	4,900
1000	90	90	50	6,000
1500	90	90	50	8,100
2000	100	100	60	9,700
2500	108	108	60	11,500
3000	108	108	60	12,800

*Add 18" to width for each ATC.

NOTES:

1. Coordination to HV/LV Switchgear may require Transition/Throats.
2. Depth and height dimension may increase for outdoor NEMA 3R enclosures.
3. Dimensions may vary with special requirements.
4. Dimensions and weights are subject to change without notice and should not be used for construction purposes.
5. Compact designs available.
6. Retrofit designs available. (with or without enclosures)
7. Special, totally enclosed enclosures available. (dimensions will vary)
8. MGM is now offering NEMA 1/3R/4 stainless steel enclosures.

Safe, Convenient and Environmentally Sound

Installations of ventilated dry-type transformers do not require a liquid confinement area, automatic fire extinguishing system or fire vault. Dry-type transformers use no insulating liquids, virtually eliminating the risk of local environment contamination and simplifying routine maintenance by eliminating the need to check, replace or clean liquid. Dry-type units are relatively lightweight and can be conveniently installed on upper floors, balconies, roof trusses or roofs. Insurance companies generally offer lower premiums for installations of dry-types than for liquid-filled transformers.

General Construction

Coils are vacuum-pressure-impregnated (VPI) with solventless polyester resin, ensuring complete impregnation of the windings and insulation. The finished VPI coils are incredibly strong, readily dissipate heat and are protected against moisture, dirt and most industrial contaminants. Ventilated dry-type winding designs vary depending on the voltage, basic impulse level (BIL) and current of the individual winding and/or application of the transformer. For all units, the insulation system will be 220°C regardless of the average winding rise.

MGM ventilated dry-type transformers are designed for indoor or outdoor applications in schools, hospitals, industrial plants, commercial buildings and any place requiring safe and dependable power. Ventilated dry-type transformers offer an economical solution and are extremely reliable when properly installed and maintained.

DRY

ENCLOSURE

The standard indoor enclosure is NEMA 1, Category C construction. Enclosures are suitable for lifting, jacking, rolling or skidding with provisions for lifting from the transformer base. High voltage and low voltage ANSI ground pads are provided.

The enclosure paint finish is neat, clean and highly resistant to corrosion. Metal surfaces are thoroughly cleaned of scale, oil, grease, rust and other foreign matter before painting. Unless specified otherwise, paint color shall be ANSI 61 (light gray). NEMA 3R and NEMA 4 outdoor enclosures are available for applications that prohibit indoor installation.

COILS

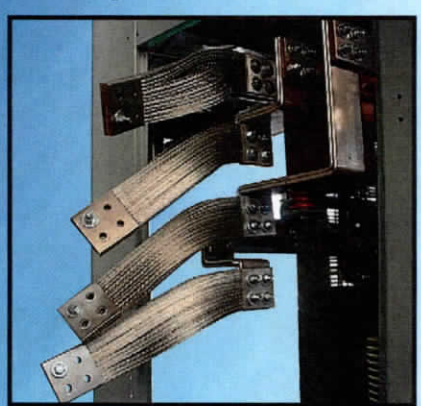
Generally, low voltage (LV) windings less than 2,400 volts are either multi-conductor barrel or sheet conductor types. Multi-conductor windings may be more economical and preferred in smaller kVA low voltage applications in which the current and axial short circuit forces are relatively small. High voltage (HV) windings 2,400 volts or greater may be single-section barrel, multi-section barrel or disk types. Ventilated dry-type coils may be either round, oval or rectangular through about 2,000 kVA. Transformers larger than 2,000 kVA generally are designed with round windings unless there are special considerations, such as limiting dimensions.

CORE

The transformer cores are constructed of non-aging, high grade, grain oriented silicon steel laminations with high magnetic permeability. Magnetic flux densities are kept well below the saturation point. Core laminations are free of burrs and stacked without gaps. Mitered STEPLAP construction cores may be provided when specified. The core clamping brackets are designed to provide even distribution of clamping forces to the core yokes and legs. The core is electrically isolated except for the factory-installed core ground strap, which provides a single path from the core to ground.

FORCED AIR COOLING

All units rated 750 kVA and higher can have added fans, increasing capacity in all current carrying parts for the fan-cooled rating and capability to add a thermometer relay to control fans. When specified, the transformer shall be provided with fans to give a forced air-cooled rating of 33% above the self-cooled rating. Control wiring (wire markers included), a thermal sensor and a fan controller will be supplied.



STANDARD FEATURES

- UL Listing, CSA, & CUL
- Vacuum Pressure Impregnated (VPI) windings
- 80°, 115°, 150°C average winding rise ratings
- 60 Hz operation
- 220°C insulation system
- Aluminum or copper windings
- ANSI ground pads
- Core ground strap
- Indoor ventilated enclosure - NEMA 1
- Paint — ANSI 61 finish
- Provisions for lifting
- Removable front and rear panels
- Vibration isolating pads
- (2) 2 1/2 % full capacity taps above and below nominal
- Conform to NEMA, ANSI, & IEE standards for Dry Type Transformers
- OSHPD Qualified

ACCESSORIES OR OPTIONS

- Fans for 133% FA kVA rating
- Future fan wiring and control
- Ground bus - full length copper
- Impact indicator - Mechanical
- Outdoor enclosure NEMA 3R
- Paint — polyurethane overcoat
- Screened ventilation openings
- Enclosure — hinged panels
- Enclosure — knockdown
- Electrostatic Shield
- Space heaters
- Temperature monitor/fan controller
- Thermostat for space heaters
- Bus to End
- Flex Leads
- Low Noise

TYPE

AUDIO SOUND LEVELS

The transformer shall be designed to meet or exceed ANSI and NEMA sound levels for dry-type transformers. As an option, transformers designed at -3dB to -10dB below ANSI and NEMA standard sound levels are available.

Vent-Dry Sound Levels: (dB)

Equivalent Two Winding Base kVA	Self-Cooled dB	Fan-Cooled dB
500	60	N/A
750	64	67
1000	64	68
1500	65	69
2000	66	71
2500	68	71
3000	68	73

Product Coordination

When specified, transformers can be close-coupled to a multitude of High Voltage and Low Voltage Switchgear.

Testing

Each transformer shall receive the following standard production tests in accordance with ANSI C57.12.90

- Resistance test
- Polarity & phase relation test
- Turns ratio test at all tap positions
- No-load loss & exciting current test
- Impedance and load-loss test
- Applied potential test
- Induced potential test

Test results, when requested, are available by transformer serial number. In addition, the following special tests can be performed on each transformer in accordance with applicable ANSI standards at an additional cost.

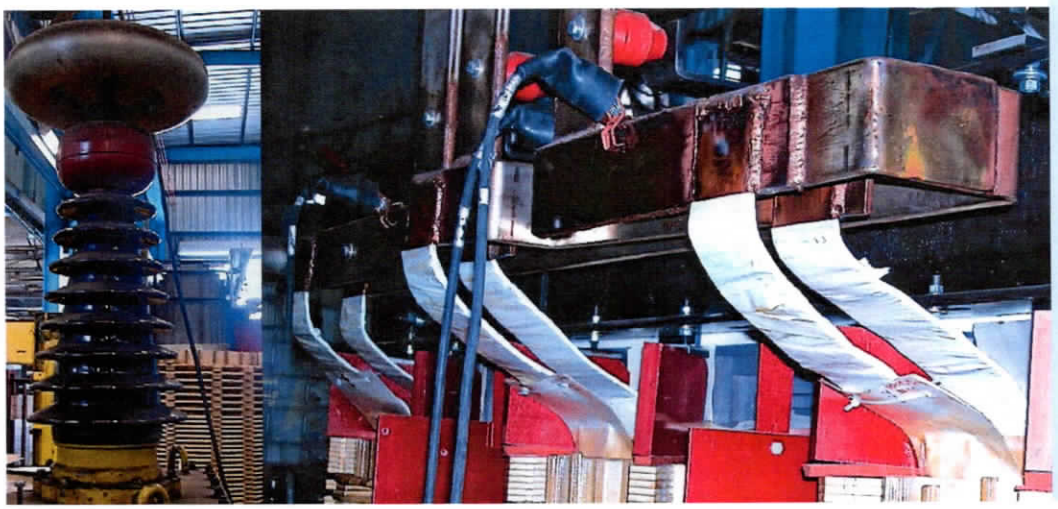
- Temperature test
- Impulse test
- Sound test
- Partial discharge test

Special Design or Application

- Low loss designs
- Rectifier transformer designs
- Special ambient designs
- High overload capacity designs
- Special/low sound level designs
- 50 Hz designs
- Series/parallel windings
- Retrofit to specific dimensions
- K-factor ratings
- Special Paint
- Auto transformers
- PCB replacement
- Grounding transformers
- Zig-zag transformers
- Scott-T transformers
- 6, 12, 18, 24 and 36-pulse transformers
- Drives isolation transformers

VENT-DRY BASIC IMPULSE RATINGS

Nominal System Voltage kV	Standard BIL kV	Option BIL kV
1.2	10	30
2.5	30	45
5.0	30	45,60
8.7	45	60,95
15.0	60	95,110
22.0	110	125



DOE 2016 Energy Efficiency

Single Phase			
kVA	BIL		
	20-45 kV	46-95 kV	>= 96 kV
	Efficiency(%)	Efficiency(%)	Efficiency(%)
15	98.10	97.86	NA
25	98.33	98.12	NA
37.5	98.49	98.30	NA
50	98.60	98.42	NA
75	98.73	98.57	98.53
100	98.82	98.67	98.63
167	98.96	98.83	98.80
250	99.07	98.95	98.91
333	99.14	99.03	98.99
500	99.22	99.12	99.09
667	99.27	99.18	99.15
833	99.31	99.23	99.20

Three Phase			
kVA	BIL		
	20-45 kV	46-95 kV	>= 96 kV
	Efficiency(%)	Efficiency(%)	Efficiency(%)
15	97.50	97.18	NA
30	97.90	97.63	NA
45	98.10	97.86	NA
75	98.33	98.13	NA
112.5	98.52	98.36	NA
150	98.65	98.51	NA
225	98.82	98.69	98.57
300	98.93	98.81	98.69
500	99.09	98.99	98.89
750	99.21	99.12	99.02
1000	99.28	99.20	99.11
1500	99.37	99.30	99.21
2000	99.43	99.36	99.28
2500	99.47	99.41	99.33

MGM Transformer Company is pleased to list a sample of our satisfied customers. For more information, please contact the factory.

Quality
you can see

Drives Industry

Rockwell Automation	Cegelec
Rockwell Reliance	Lloyd Controls
ABB	Ansaldo-Ross Hill
Toshiba	Control Techniques

Industrial & Commercial

General Electric	Motorola
Siemens	LTV Steel
Proctor & Gamble	Toyota
EATON	Hewlett-Packard
BMW	AT&T
Amazon	Logan Aluminum
eBay	Constellium
Boeing	Chrysler

Petrochemical

Amoco Oil	Shell Oil
Arco	Exxon
Chevron	Unocal
Mobil Oil	Premcor
	Aramco

Pulp & Paper

Weyerhauser	Georgia-Pacific
Eddy Paper	

Municipalities & Utilities

Southern California Edison	Pacific Bell
Commonwealth Edison	Iowa Power & Light
L.A. Department of	Wisconsin Power & Light
Water & Power	Pacific Gas & Electric
Metropolitan Water District	Edison International
Florida Power & Light	PSEG Power LLC

Architects & Contractors

ARAMCO	Fluor Daniel
Bechtel	Ralph M. Parsons Co.
Brown & Root	Black & Veatch
Jacobs	Rosendin Electric
Mustang	Cupertino Electric
Bergelectric	

Universities / Labs

UCLA	University of Michigan
UC Berkeley	University of Minnesota
UC San Diego	Lawrence Livermore Labs
Fermilab	SUNY
Argonne National Lab	

Wind-Turbine Power Generation

Palm Springs, California	Tehachapi Pass, California
Solar City	

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