Owner:
Sebago Solar, LLC
143 Highland Shores Road
Casco, Maine 04015
207-615-6850

Surveyor:
Plisga & Day Land Surveyors
72 Main Street
Bangor, Maine 04401
207-947-0019

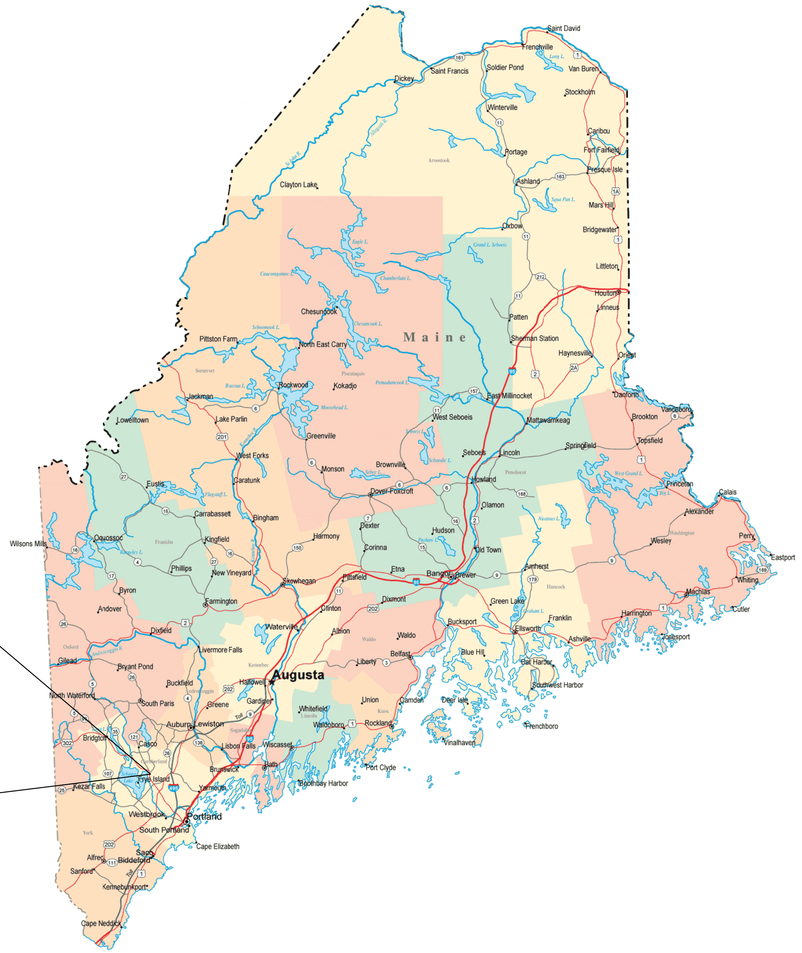
Engineer of Record:
Kirk Ball, PE
Acheron Engineering Services
147 Main Street
Newport, Maine 04953
207-368-5700

Code Enforcement: Windham
Christopher Hanson
8 School Road
Windham, Maine 04062
207-894-5960 Ext. 1

Code Enforcement: Raymond
Alex Sirois
401 Webbs Mill Road
Raymond, Maine 04071
207-655-4742 Ext. 161

Sebago Solar, LLC.
Casco, Maine
Pipe Line Road - Raymond & Windham, Maine

Site Location Map
NTS



ACHERON ENGINEERING SERVICES
Engineering, Environmental & Geologic Consultants

www.AcheronEngineering.com

147 Main St.
Newport, ME. 04953
(207)-368-5700

24466 Powell Rd.
Brooksville, Fl. 34602
(352)-796-6236

Acheron International, Inc.

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

GENERAL NOTES:

1. ACHERON ENGINEERING HAS USED A REASONABLE STANDARD OF CARE TO TRY TO LOCATE UNDERGROUND FACILITIES IN THE VICINITY OF THIS PROJECT. LOCATIONS OF UNDERGROUND FACILITIES DEPICTED ON THESE DRAWINGS ARE APPROXIMATE. EXCAVATORS MUST COMPLY WITH ALL REQUIREMENTS OF TITLE 23 SECTION 3360, PROTECTION OF UNDERGROUND FACILITIES, BEFORE COMMENCING OPERATIONS.

2. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES; STORAGE PRACTICES TO MINIMIZE EXPOSURE OF MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP AND IMPLEMENT, AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING MEASURES.

3. ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-482-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION VISIT THE MEDEP WEBSITE AT: WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

4. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA' IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE AND CONSEQUENT FLOODING AND DESTABILIZATION. NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPS) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY M.R.S.A. §465-C (1).

5. DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIAL TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE. NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISIONS OF RULES RELATED TO SOLID, UNIVERSAL AND HAZARDOUS WASTES, INCLUDING BUT NOT LIMITED TO, THE MAINE SOLID WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE RULES; MAINE OIL CONVEYANCE AND STORAGE RULES AND MAINE PESTICIDE REQUIREMENTS.

6. AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE; DISCHARGES FROM FIREFIGHTING ACTIVITY, FIRE HYDRANT FLUSHING, VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED), DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS, ROUTINE EXTERNAL BUILDING WASHDOWN (NOT INCLUDING PAINT REMOVAL, NO DETERGENTS), PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED, NO DETERGENTS), UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE, UNCONTAMINATED GROUNDWATER OR SPRING WATER, FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED, UNCONTAMINATED EXCAVATION DEWATERING, POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING AND LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES: THE MAINE DEP'S APPROVAL DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE MENTIONED IN GENERAL NOTE 7 SPECIFICALLY. THE MAINE DEP'S APPROVAL DOES NOT AUTHORIZE DISCHARGE OF THE FOLLOWING; WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OIL, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR RELEASE.

EROSION CONTROL NOTES:

1. DURING CONSTRUCTION USE PRECAUTION TO AVOID ANY EROSION AND TO PREVENT SILTING OF OCEANS, RIVERS, STREAMS, LAKES, RESERVOIRS, IMPOUNDMENTS, AND DRAINAGE DITCHES AND SWALES.

2. CONSTRUCTION SEQUENCE
   - INSTALL TEMPORARY EROSION CONTROL MEASURES.
   - DE-STUMP AND REMOVE BOULDERS.
   - SEED ANY DISTURBED AREAS.
   - CONSTRUCT STORMWATER MANAGEMENT FACILITIES.
   - INSTALL SOLAR PANELS, SUBSTATION AND EQUIPMENT.
   - INSTALL COLLECTOR LINES, REGRADE AND REVEGITATE ROADS.
   - FINAL GRADING AND RESEEDING OF DISTURBED AREAS.
   - REMOVE EROSION CONTROL DEVICES PENDING SUFFICIENT GROWTH IN SEEDED AREAS.

3. ALL CONSTRUCTION ACTIVITIES SHOULD FOLLOW GUIDANCE AS PRESENTED IN "MAINE EROSION AND SEDIMENT CONTROL PRACTICES, FIELD GUIDE FOR CONTRACTORS" PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN 2014.

4. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY BE NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR EROSION AND SEDIMENTATION CONTROL AND MAINTENANCE.

5. LOCATE AND MARK ALL PROJECT BOUNDARIES PRIOR TO CONSTRUCTION.

6. LIMIT THE AMOUNT OF SOIL DISTURBANCE TO NO MORE THAN 2 ACRES AT ONE TIME OR NO LARGER AREA THAN CAN BE MULCHED IN ONE DAY.

7. MARK ALL SOIL DISTURBANCE LIMITS AND INSTALL SEDIMENT BARRIERS PRIOR TO DISTURBING SOILS.

8. MULCH EXPOSED SOIL AS SOON AS POSSIBLE, AND REVEGETATE AS SOON AS FINAL GRADE IS ATTAINED.

9. INSPECT AND REPAIR EROSION CONTROL AND SEDIMENT TRAPPING MEASURES WEEKLY AND AFTER EVERY STORM EVENT.

10. REMOVE TEMPORARY EROSION CONTROLS WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT, GRAVEL BASE OR RIP-RAP.

11. STABILIZE DITCHES WITHIN 24 HOURS OF FINAL GRADE.

12. ALL FILL MATERIAL MUST BE FREE OF FROZEN SOIL, ROCKS OVER 6-INCHES, SOD, BRUSH, STUMPS, TREE ROOTS, WOOD OR OTHER PERISHABLE MATERIALS.

13. INSTALL SEDIMENT BARRIERS DOWN SLOPE OF SOIL STOCK PILES.

14. DO NOT SITE SOIL STOCK PILE IN AREAS OF CONCENTRATED STORMWATER FLOW OR AREAS OF POTENTIAL FLOODING.

15. THE DURATION OF EXPOSURE OF UNCOMPLETED CUT SLOPES, EMBANKMENTS, TRENCH EXCAVATIONS, AND SITE GRADED AREAS SHALL BE MINIMIZED. INITIATE SEEDING AND OTHER EROSION CONTROL MEASURES ON EACH SEGMENT AS SOON AS REASONABLY POSSIBLE.

16. SHOULD IT BECOME NECESSARY TO SUSPEND CONSTRUCTION FOR MORE THAN 7 DAYS, SHAPE AND STABILIZE ALL EXCAVATED AND GRADED AREAS. PROVIDE AND MAINTAIN TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS BERMS, DIKES, SLOPE DRAINS, SILT STOPS, AND SEDIMENTATION BASINS, UNTIL PERMANENT DRAINAGE FACILITIES OR EROSION CONTROL FEATURES HAVE BEEN COMPLETED AND ARE OPERATIVE. IF DISTURBED AREAS ARE WITHIN 75 FEET OF A WETLAND OR WATERBODY, STABILIZE DISTURBANCE WITHIN 48 HOURS OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.

17. FINE MATERIAL PLACED OR EXPOSED DURING THE WORK SHALL BE HANDLED AND TREATED AS TO MINIMIZE THE POSSIBILITY OF IT REACHING ANY SURFACE WATERS. USE DIVERSION CHANNELS, DIKES, SEDIMENT TRAPS, OR ANY OTHER EFFECTIVE AND APPROVED CONTROL MEASURES.

18. PROVIDE SILT STOPS WHEREVER EROSION CONTROL MEASURES MAY NOT BE TOTALLY CAPABLE OF CONTROLLING EROSION, SUCH AS IN DRAINAGE CHANNELS AND WHERE STEEP SLOPES MAY EXIST.

19. BEFORE WATER IS ALLOWED TO FLOW IN ANY DITCH, SWALE, OR CHANNEL, INSTALL THE PERMANENT EROSION CONTROL MEASURES IN THE WATERWAY SO THAT THE WATERWAY WILL BE SAFE AGAINST EROSION.

20. TAKE SPECIAL PRECAUTIONS IN THE USE OF CONSTRUCTION EQUIPMENT TO MINIMIZE EROSION. DO NOT LEAVE WHEEL TRACKS WHERE EROSION MIGHT BEGIN.

21. MULCHING SHALL FOLLOW THE SEEDING OPERATION BY NOT MORE THAN 24 HOURS.

22. SHOULD ANY PROTECTIVE MEASURES EMPLOYED INDICATE ANY DEFICIENCIES OR EROSION TAKING PLACE, IMMEDIATELY PROVIDE ADDITIONAL MATERIALS OR EMPLOY DIFFERENT TECHNIQUES TO CORRECT THE SITUATION AND TO PREVENT SUBSEQUENT EROSION.

23. DISTURBANCE WITHIN 30 FEET OF ANY PROTECTED NATURAL RESOURCE WILL REQUIRE DOUBLING THE PERIMETER EROSION CONTROLS AND DISTURBED AREAS MUST BE STABILIZED WITHIN 7 DAYS.

24. CONTINUE EROSION CONTROL MEASURES UNTIL THE PERMANENT MEASURES HAVE BEEN SUFFICIENTLY ESTABLISHED AND ARE CAPABLE OF CONTROLLING EROSION ON THEIR OWN.

25. REMOVE ALL TEMPORARY CONTROL MEASURES WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

26. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN THE BEST MANAGEMENT PRACTICES OF MAINE AS PREPARED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

27. AREAS CONTAINING EXPOSED SOILS MUST BE STABILIZED WITHIN 7 DAYS OF CESSATION OF AN ACTIVITY.

28. BEGIN PERMANENT STABILIZATION WITHIN 7 DAYS OF OBTAINING FINAL GRADE.

29. WINTERIZATION SCHEDULE
   - ALL STONE LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH.
   - ALL STONE COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH.
   - ALL DISTURBED SLOPES HAVING A SLOPE LESS THAN 15% TO BE SEEDED AND MULCHED BY SEPTEMBER 15TH.
   - ALL VEGETATED SLOPE GREATER THAN 15% TO BE SEED AND MULCHED BY SEPTEMBER 1ST.
   - ALL VEGETATED DITCHES AND CHANNELS TO BE SEEDED AND MULCHED BY SEPTEMBER 1ST.

30. SITE WINTERIZATION
   - IF THE SEPTEMBER 1ST DEADLINE CANNOT BE MET FOR VEGETATED SLOPES, THEN BY OCTOBER 1ST THE SLOPE SHALL BE SEEDED WITH WINTER RYE AT THE RATE OF 3 POUNDS PER 1000 SQUARE FEET AND COVERED WITH EROSION CONTROL MATS OR ANCHORED MULCH. IF RYE FAILS TO GROW 3 INCHES BY NOVEMBER 1ST THE SLOPE SHALL BE COVERED WITH AN EROSION CONTROL MIX OR COVERED WITH STONE RIPRAP.
   - IF THE SEPTEMBER 1ST DEADLINE CANNOT BE MET FOR GRASSED LINED DITCHES, THEN A SOD OR STONE LINING SHALL BE INSTALLED.
   - IF THE SEPTEMBER 15TH DEADLINE CANNOT BE MET FOR DISTURBED AREAS WITH A SLOPE LESS THAN 15%, THEN BY NOVEMBER 15TH MULCH AREAS AT A RATE OF 150 POUNDS PER 1000 SQUARE FEET SUCH THAT NO SOIL IS VISIBLE THROUGH MULCH.

31. WINTER CONSTRUCTION
   - WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED BETWEEN NOVEMBER 1ST AND APRIL 15TH.
   - IF AN AREA IS NOT STABILIZED IN ACCORDANCE WITH THE ABOVE SCHEDULE OR PERMANENTLY STABILIZED THAN ADDITIONAL STABILIZATION MEASURES MUST BE EMPLOYED.
   - PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT, GRAVEL BASE OR RIPRAP.
   - APPLY HAY MULCH AT 150 POUNDS PER 1000 SQUARE FEET SUCH THAT NO SOIL IS VISIBLE THROUGH MULCH.
   - USE MULCH AND NETTING OR AN EROSION CONTROL BLANKET OR MIX ON ALL SLOPES GRATER THAT 8 PERCENT.
   - INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3 PERCENT.
   - WINTER EXCAVATION AND EARTH WORK SHALL NOT EXPOSE MORE THAN 1 ACRE OF THE SITE WITHOUT STABILIZATION AT ANY ONE TIME.
   - IN AN AREA WITHIN 75 FEET OF A NATURAL PROTECTED RESOURCE, DOUBLE ROW SEDIMENT BARRIERS SHALL BE INSTALLED.
   - TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKING DAY IN AREAS WITHIN 75 FEET OF A NATURAL PROTECTED RESOURCE.
   - AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE SHALL BE MULCHED THE SAME DAY.
   - NO MULCH SHALL BE SPREAD OVER SNOW. SNOW SHALL BE REMOVED WITHIN ONE QUARTER INCH PRIOR TO MULCHING.
   - LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE BEING APPLIED.
   - INSPECT WEEKLY AND AFTER EACH STORM TO CHECK FOR EROSION AND REPAIR IMMEDIATELY.
   - IN SPRING, REMOVE ANY EXCESS MULCH, SEED AND MONITOR FOR EROSION AND PLANT GROWTH.

32. EXCAVATION DE-WATERING: EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN OR DIRTBAG GEOTEXTILE SEDIMENT FILTER. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE MAINE DEP. NOTE: DEWATERING CONTROLS ARE DISCUSSED IN THE "MAINE EROSION AND SEDIMENT CONTROL BMPS, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION."

33. A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL OR WHERE THE EXCAVATION MY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. PRIOR TO ANY DEWATERING ACTIVITIES SUBMIT A DEWATERING PLAN TO OWNER AND ENGINEER FOR APPROVAL.

34. FUGITIVE SEDIMENT AND DUST: ACTION MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE PER WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

35. IN LIEU OF SILT FENCE, EROSION CONTROL MIX CAN BE USED IF THE FOLLOWING CONDITIONS ARE MET.
   - FOLLOW GUIDELINE IN THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE, 2014.
   - THE EROSION CONTROL MIX BERM SHOULD BE MINIMUM OF 12" HIGH AND A MINIMUM OF 2' WIDE. ON STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERMS COMPOSED OF EROSION CONTROL MIX CAN BE SHAPED WHEN NECESSARY.
   - THE EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO ROCKS LARGER THAN 4" OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR PROCESSES WOOD PRODUCTS).

36. SEEDING:
   - COMPLETE SEEDING WITHIN 7 DAYS OF FINAL GRADING.
   - BROADCAST SEED OVER ENTIRE DITCH AND SURFACE AND RAKE INTO SOIL.
   - APPLY HAY MULCH TO ALL SEEDED AREAS.
   - SUMMER SEEDING DATES ARE FROM APRIL 1 TO SEPTEMBER 15.
   - PERMANENT SEEDING SHOULD BE DONE 45 DAYS BEFORE A KILLING FROST.
   - NORTHEAST SOLAR POLLINATOR 3' MIX, BY ERNST SEEDS OR APPROVED EQUAL
   - SEEDING RATE:
     SEED AT 40 LB/ACRE WITH 30 LBS/ACRE OF A COVER CROP.
     FOR A COVER CROP USE EITHER GRAIN OATS (1 JAN TO 31 JUL) OR GRAIN RYE (1 AUG TO 31DEC).
   - MIX COMPOSITION:
     94.9% FESTUCA OVINA, (SHEEP FESCUE)
     2.5% ASCLEPIAS TUBEROSA (BUTTERFLY MILKWEED)
     2.0% CHAMAECRISTA FASCICULATA, PA ECOTYPE (PARTRIDGE PEA, PA ECOTYPE)
     0.3% OENOTHERA FRUTICOSA VAR. FRUTICOSA (SUNDROPS)
     0.3% TRADESCANTIA VIRGINIANA, SOUTHEASTERN PA/NORTHERN VA BLEND (VIRGINIA SPIDERWORT, SOUTHEASTERN PA/NORTHERN VA BLEND)

37. MULCHING:
   - APPLY TEMPORARY MULCH ON DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE OR PRIOR TO ANY STORM.
   - DO NOT APPLY EROSION CONTROL MIX OR HAY MULCH IN CONCENTRATED WATER FLOWS.
   - DO NOT USE EROSION CONTROL MIX OR HAY MULCH FOR SLOPES STEEP THAN 2:1.
   - USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDED AREAS.
   - APPLY AT A RATE OF TWO SQUARE BALES (70-90 POUNDS) PER 1,000 SQUARE FEET.

INDEX

STATE OF MAINE
KIRK J. BALL
11681
LICENSED
PROFESSIONAL ENGINEER
9/2021

No.	Revision Description	Drwn	Chk'd	Date
-	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
Aprvd By: KJB
Date: 10-19-21

ACHERON ENGINEERING SERVICES
Engineering, Environmental & Geologic Consultants
www.AcheronEngineering.com
24466 Powell Rd.
Brooksville, Fl. 34602
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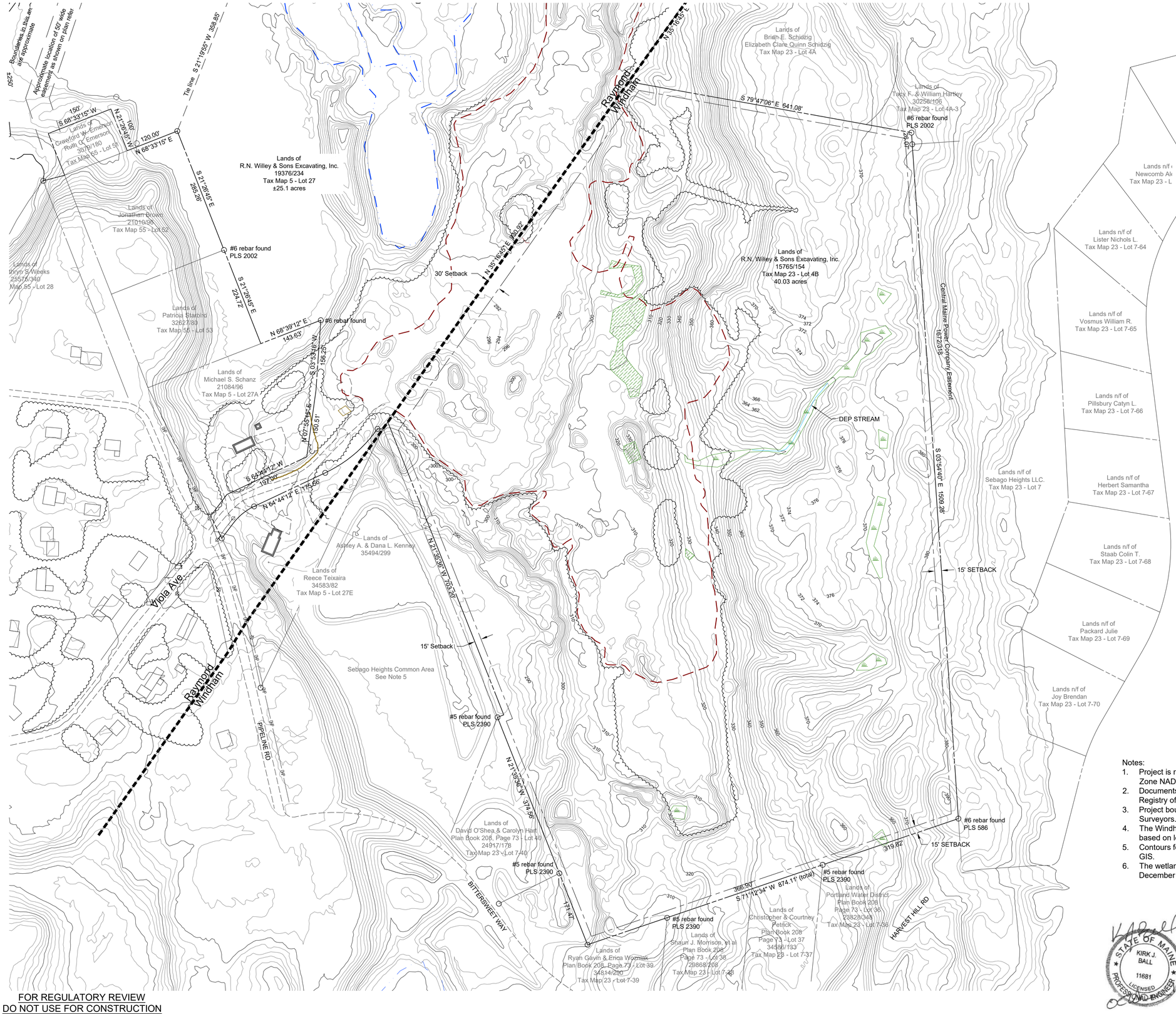
General Notes & Index

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number:
80930

Drawing No:
i

Sheet 1 of 8



Notes:

1. Project is referenced horizontally to the Maine State Coordinate System, West Zone NAD83(2011).
2. Documents referenced on this plan are recorded in the Cumberland County Registry of Deeds unless otherwise noted.
3. Project boundary survey and abutters completed by Plisga & Day Land Surveyors.
4. The Windham\Raymond town line was determined by Plisga and Day and based on local evidence.
5. Contours for the project area were obtained from the State of Maine Office of GIS.
6. The wetland delineations were conducted by Albert Frick Associates, Inc. on December 16, 2020.

STATE OF MAINE KIRK J. BALL 11681 LICENSED PROFESSIONAL ENGINEER

9, 2021

0 100 200 300

Scale: 1" : 100'

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

No.	Revision Description	Drwn	Chk'd	Date
-	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chk'd By: KJB
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Site Plan
Existing Conditions

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number: 80930

Drawing No: C-1

Sheet 2 of 8

Conditions of Approval:

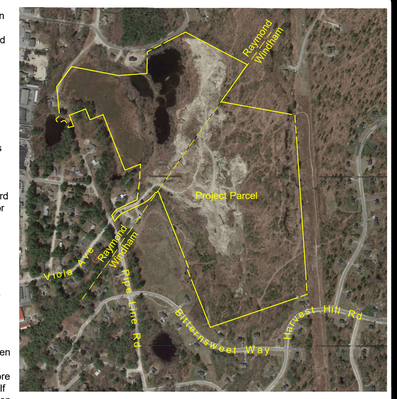
1. Approval is dependent upon, and limited to, the proposals and plans contained in the application dated October 5, 2020, as amended _____, and supporting documents and oral representations submitted and affirmed by the applicant, and conditions, if any, imposed by the Planning Board, and any variation from such plans, proposals and supporting documents and representations are subject to review and approval by the Planning Board or the Town Planner in accordance with Section 814.G. of the Land Use Ordinance.
2. Abandonment or Decommissioning

a) Removal Requirements: At such time that the ground-mounted solar energy system described in this approval has reached the end of its useful life or has been abandoned consistent with the Abandonment description within this condition of approval, it shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

i. Physical removal of all solar energy systems, structures, equipment, security barriers and transmission lines from the site.
ii. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
iii. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Site Plan Review Authority may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

b) Abandonment: Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the large-scale ground mounted solar energy system shall be considered abandoned when it fails to operate for more than one year without the written consent of the Site Plan Review Authority. If the owner or operator of the solar energy system fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the town retains the right, after the receipt of an appropriate court order, to enter and remove an abandoned, hazardous, or decommissioned large-scale ground-mounted solar energy system. As a condition of Site Plan approval, the applicant and landowner shall agree to allow entry to remove an abandoned or decommissioned installation.

c) Surety: The applicant will provide financial assurance for the decommissioning costs in the form of a performance bond, surety bond, 'evergreen' letter of credit, or other means acceptable to the Town, for the total cost of decommissioning. The applicant will have the financial assurance mechanism in place prior to construction and will re-evaluate the decommissioning cost and financial assurance at the end of years, five, ten, and fifteen. Every five years after the start of construction, updated proof of acceptable financial assurance must be submitted to the Town for review.



Site Location Map
NTS

N
North

LEGEND

- Town Line
- Property Line
- Setback
- 720 - Major Existing Contours
- Minor Existing Contours
- Existing Roadway
- Existing Utility Pole
- OHP - Existing Overhead Power
- Existing Tree Line
- Stream
- Forested Wetland
- Non-Jurisdictional Wetland
- Proposed Tree Line
- Proposed 6' Chain Link Fence
- Proposed 6' Chain Link Fence w/ Faux Hedge Slats
- 320 - Proposed Contours
- Proposed Solar Panels
- Proposed Utility Pole
- LP - Proposed Light Pole
- Proposed Project Drive
- Proposed Pavement
- Silt Fence
- Rock Wall

Planning Board Approval

This is to certify that after reviewing the Solar Field shown by this plan and considering each of the criteria set forth in Town of Windham Ordinances, as amended, and considering each of the criteria set forth in the Solar Energy Systems Ordinance of the Town of Windham, the undersigned having made findings of fact establishing that the proposed Solar Field meets all of the criteria set forth therin, and therefore the Solar Field is approved.

Dated: _____

The Town of Windham Planning Board

Notes:

1. Project is referenced horizontally to the Maine State Coordinate System, West Zone NAD83(2011).
2. Documents referenced on this plan are recorded in the Cumberland County Registry of Deeds unless otherwise noted.
3. Project boundary survey and abutters completed by Plisga & Day Land Surveyors.
4. The Windham \ Raymond town line was determined by Plisga and Day and based on local evidence.
5. Contours for the project area were obtained from the State of Maine Office of GIS.
6. The wetland delineations were conducted by Albert Frick Associates, Inc. on December 16, 2020.
7. Solar Panel layout provided by RBI Solar, Cincinnati, OH.
8. All Transformers and Inverters shall maintain a minimum separation of 30 feet from the property line.
9. Portions of project area is an active gravel pit Maine DEP ID# 397. Those portions are to be closed per Title 38§490.
10. Forested wetland disturbance equals 2,408 SF. Non-Jurisdictional wetland disturbance equals 12,501 SF.
11. All disturbed areas to be seeded with native pollinator friendly seed mix.
12. Project Area Information:
    Lease Area: 40.03 Acres
    Project Area: 19.96 Acres
    Impervious Area: 0.34 Acres (14,944 Sf)
13. Land Use Zone: Residential Limited (RL)
14. Nearest fire hydrant: Corner of Viola and Rt. 302 approximately 1,800 feet from project gate.
15. All Utilities shall be installed below grade from New Pole #3.
16. For Solar Array racking system see plans provided by RBI Solar & TerraSmart.

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

Stormwater Treatment Table			
Description	Proposed Impervious (SF)	Amount of Area Treated (SF)	
		BMP	Impervious
Equipment Pad 1 Foot Print (40' x 45')	1,800	Dripline Filters	1,800
Equipment Pad 2 Foot Print (40' x 45')	1,800	Dripline Filters	1,800
Access Road	11,344	Road Side Meadow Buffer	8,840
Totals	14,944		12,440

Percent of Linear Portion of Project Treated: 77.9%
Percent of Remaining Impervious Treated: 100%
Percent of Developed Area Treated: 83.2%

STATE OF MAINE
KIRK J. BALL
11681
LICENSED
PROFESSIONAL ENGINEER
10/9/2021

0 100 200 300
Scale: 1" : 100'

No.	Revision Description	Drwn	Chk'd	Date
-	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
Aprvd By: KJB
Date: 10-19-21

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Acheron International Inc.
147 Main St.
Newport, ME. 04953
(207)-368-5700

Proposed Conditions Site Plan & Erosion / Sedimentation Control Plan

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number: 80930

Drawing No: C-2

Sheet 3 of 8

Boundaries on this are approximate

Approximate location of 50' wide easement as shown on plan refer

Tie line S 21°19'55" W 356.85'

Lands of Crawford A. Emerson Ruth O. Emerson 3078/180 Tax Map 55 - Lot 51

S 68°33'15" W 150'

N 21°26'45" W 100'

N 68°33'15" E 120.00'

S 21°26'45" E 285.26'

Lands of Jonathan Brown 21016/08 Tax Map 55 - Lot 52

#6 rebar found PLS 2002

S 21°26'45" E 224.72'

Lands of Kryn S Weeks 25515/340 Map 55 - Lot 28

Lands of Patricia Stanbird 32627/80 Tax Map 55 - Lot 53

N 68°39'12" E 143.63'

#6 rebar found

S 05°53'16" W 156.25'

Lands of Michael S. Schanz 21084/96 Tax Map 5 - Lot 27A

N 07°55'35" E 150.51'

S 64°44'12" W 197.00'

N 64°44'12" E 175.56'

Lands of Ashley A. & Dana L. Kenney 35494/299

Lands of Reece Teixaira 34583/82 Tax Map 5 - Lot 27E

Viola Ave

Raymond Windham

PIPELINE RD

N 71°35'36" W 703.20'

Lands of R.N. Willey & Sons Excavating, Inc. 19376/234 Tax Map 5 - Lot 27 ±25.1 acres

Sebago Heights Common Area See Note 5

15' Setback

#5 rebar found PLS 2390

N 21°35'36" W 374.56'

Lands of David O'Shea & Carolyn Hart Plan Book 208, Page 73 - Lot 40 24917/176 Tax Map 23 - Lot 7-40

#5 rebar found PLS 2390

BITTERSWEET WAY

Lands of Ryan Gavin & Erica Wozniak Plan Book 208, Page 73 - Lot 39 34814/290 Tax Map 23 - Lot 7-39

#5 rebar found PLS 2390

Lands of Shaun J. Morrison, et al Plan Book 208 Page 73 - Lot 38 29868/208 Tax Map 23 - Lot 7-38

Lands of Christopher & Courtney Petrick Plan Book 208 Page 73 - Lot 37 34898/133 Tax Map 23 - Lot 7-37

#5 rebar found PLS 2390

S 71°12'34" W 874.11' (total)

366.90'

319.82'

Lands of Portland Water District Plan Book 208 Page 73 - Lot 36 23828/348 Tax Map 23 - Lot 7-36

HARVEST HILL RD

#6 rebar found PLS 586

15' SETBACK

Lands of Sebago Heights LLC. Tax Map 23 - Lot 7

Lands of Brian E. Schidzig Elizabeth Clare Quinn Schidzig Tax Map 23 - Lot 4A

N 35°16'45" E

Raymond Windham

S 79°47'06" E 641.08'

#6 rebar found PLS 2002

Lands of Tracy F. & William Hartley 30256/106 Tax Map 23 - Lot 4A-3

Lands of R.N. Willey & Sons Excavating, Inc. 15765/154 Tax Map 23 - Lot 4B 40.03 acres

30' Setback

N 35°16'45" E 289.97'

Central Maine Power Company Easement 1672/315

S 05°54'40" E 1509.28'

DEP STREAM

75' STREAM SETBACK

15' SETBACK

Lands n/f of Newcomb Al Tax Map 23 - L

Lands n/f of Lister Nichols L. Tax Map 23 - Lot 7-64

Lands n/f of Vosmus William R. Tax Map 23 - Lot 7-65

Lands n/f of Pillsbury Catyn L. Tax Map 23 - Lot 7-66

Lands n/f of Herbert Samantha Tax Map 23 - Lot 7-67

Lands n/f of Staab Colin T. Tax Map 23 - Lot 7-68

Lands n/f of Packard Julie Tax Map 23 - Lot 7-69

Lands n/f of Joy Brendan Tax Map 23 - Lot 7-70

SCF 312' @ 0.0064ft/ft
SCF 77' @ 0.0259ft/ft
SCF 136' @ 0.0147ft/ft
SCF 20' @ 0.10ft/ft
SCF 14' @ 0.143ft/ft
SCF 20' @ 0.2ft/ft
SCF 18' @ 0.111ft/ft
SCF 26' @ 0.076ft/ft
SCF 10' @ 0.20ft/ft
SCF 218' @ 0.009ft/ft
SCF 163' @ 0.0122ft/ft
SCF 59' @ 0.067ft/ft
SCF 56' @ 0.178ft/ft
SCF 137' @ 0.014ft/ft
SCF 27' @ 0.6666ft/ft
SCF 44' @ 0.0454ft/ft
SCF 9' @ 0.222ft/ft
SCF 26' @ 0.0769ft/ft
SCF 225' @ 0.0088ft/ft
SCF 66' @ 0.0294ft/ft
SCF 28' @ 0.029ft/ft
SCF 40' @ 0.029ft/ft
SF 5' @ 0.4ft/ft
SF 8' @ 0.5ft/ft
SF 28' @ 0.071ft/ft
SF 5' @ 0.2ft/ft
SF 34' @ 0.235ft/ft
SCF 21' @ 0.19ft/ft
SCF 30' @ 0.133ft/ft
SCF 38' @ 0.105ft/ft
SCF 32' @ 0.062ft/ft
SCF 27' @ 0.074ft/ft
SCF 39' @ 0.05ft/ft
SCF 64' @ 0.094ft/ft
SCF 52' @ 0.038ft/ft
SCF23' @ 0.086ft/ft
SCF 21' @ 0.19ft/ft
SF 64' @ 0.031ft/ft
SF46' @ 0.087ft/ft
SF15' @ 0.133ft/ft
SCF 20' @ 0.10ft/ft
SCF 12' @ 0.166ft/ft
SF 63' @ 0.2380ft/ft
SCF 20' @ 0.100ft/ft
SCF 29' @ 0.0689ft/ft
SCF 87' @ 0.0229ft/ft
SCF 31' @ 0.1290ft/ft
SCF 60' @ 0.06666ft/ft
SCF 37' @ 0.1081ft/ft
SCF 45' @ 0.0444ft/ft
SCF 74' @ 0.0270ft/ft
SCF 11' @ 0.0714ft/ft
SF 19' @ 0.1052ft/ft
SCF 20' @ 0.2ft/ft
SCF 12' @ 0.333ft/ft
SCF 19' @ 0.1052ft/ft
SCF 12' @ 0.333ft/ft
SCF 20' @ 0.15ft/ft
SF 30' @ 0.333ft/ft
SCF 18' @ 0.5555ft/ft
SCF 77' @ 0.0779ft/ft
SCF 29' @ 0.2068ft/ft
SCF 44' @ 0.04545ft/ft
SCF 26' @ 0.153ft/ft
SCF 33' @ 0.0606ft/ft
SF 9' @ 0.1111ft/ft
SF 7' @ 0.857ft/ft
SF 5' @ 0.400ft/ft
SF 104' @ 0.0192ft/ft
SCF 20' @ 0.200ft/ft
SCF 37' @ 0.0540ft/ft
SCF 20' @ 0.500ft/ft
SCF 207' @ 0.0096ft/ft

1L 1S 2L 2S 3L 3S 4L 4S 5S

Grid North

LEGEND

- Property Line
- 720 - Major Existing Contours
- Minor Existing Contours
- Existing Roadway
- Setback
- OHP - Existing Overhead Power
- Active Gravel Pit Boundary
- Forested Wetland
- Non-Jurisdictional Wetland
- Stormwater Flow Path
- Stormwater Subcatchment Boundary
- 1S - Subcatchment
- 1L - Point of Analysis
- SCF - Shallow Concentrated Flow
- SF - Sheet Flow

Pre-Development Stormwater Run Off Table

Point of Analysis	Sub Catchment	Area (Acres)	Peak Run Off 2 Yr - Storm	Peak Run Off 10 Yr - Storm	Peak Run Off 25 Yr - Storm
1L	1S	27.8	0.94 cfs	8.04 cfs	17.61 cfs
2L	2S	3.54	0.00 cfs	0.05 cfs	0.35 cfs
	3S	4.50	0.00 cfs	0.06 cfs	0.45 cfs
3L	4S	2.78	0.00 cfs	0.02 cfs	0.13 cfs
4L	5S	1.39	0.00 cfs	0.01 cfs	0.05 cfs
Total		40.01	0.94 cfs	8.18 cfs	18.59 cfs

Pre-Development Stormwater Management Subcatchment Model Summary Table

	Subcatchment(s)				
	1S	2S	3S	4S	5S
Point of Analysis	1L	2L		3L	4L
Run Off Area (sf)	1,211,129	154,281	196,166	121,020	60,551
Flow Length (ft)	1,804	513	347	457	409
CN Value	53	38	38	36	36
Tc (min)	37.7	14.4	13.6	14.9	33.4
Peak Run Off 2 - Yr (cfs)	0.94	0.00	0.00	0.00	0.00
Peak Run Off 10 - Yr (cfs)	8.04	0.05	0.06	0.02	0.01
Peak Run Off 25 - Yr (cfs)	17.61	0.35	0.45	0.13	0.05

0 100 200 300

Scale: 1" : 100'

KIRK J. BALL 11681 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE 10/7/2021

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

No.	Revision Description	Drwn	Chk'd	Date
	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
Aprvd By: KJB
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Pre-Development Stormwater Management Plan

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number: 80930

Drawing No: C-3

Sheet 4 of 8

Boundaries in this are are approximate

Approximate location of 50' wide easement as shown on plan refer

Tie line S 21°19'55" W 356.85'

Lands of
Crawford A. Emerson
Ruth G. Emerson
3078/180
Tax Map 55 - Lot 5

S 68°33'15" W 150'

N 21°26'45" E 100'

N 68°33'15" E 120.00'

S 21°26'45" E 265.26'

Lands of
Jonathan Dowse
21016/26
Tax Map 55 - Lot 62

#6 rebar found
PLS 2002

Lands of
Lynn S Weeks
23515/340
Map 55 - Lot 28

S 21°26'45" E 224.72'

Lands of
Patricia Stabbird
32627/80
Tax Map 55 - Lot 53

N 68°39'12" E 143.63'

#6 rebar found

Lands of
R.N. Willey & Sons Excavating, Inc.
19376/234
Tax Map 5 - Lot 27
±25.1 acres

Lands of
Michael S. Schanz
21084/96
Tax Map 5 - Lot 27A

S 03°53'16" W 156.25'

N 07°55'35" E 150.51'

S 64°19'12" W 104.05'

N 04°44'12" E 175.56'

Lands of
Ashley A. & Dana L. Kenney
35494/299

Lands of
Reece Teixaira
34583/82
Tax Map 5 - Lot 27E

Viola Ave.

Raymond
Windham

N 71°35'36" W 703.20'

Sebago Heights Common Area
See Note 5

15' Setback

#5 rebar found
PLS 2390

PIPELINE RD

N 71°35'36" W 374.56'

Lands of
David O'Shea & Carolyn Hart
Plan Book 208, Page 73 - Lot 40
24917/178
Tax Map 23 - Lot 7-40

#5 rebar found
PLS 2390

BITTERSWEET WAY

171.47'

#5 rebar found
PLS 2390

Lands of
Ryan Gavin & Erica Wozniak
Plan Book 208, Page 73 - Lot 39
34814/290
Tax Map 23 - Lot 7-39

Lands of
Shaun J. Morrison, et al
Plan Book 208
Page 73 - Lot 38
29868/208
Tax Map 23 - Lot 7-38

Lands of
Christopher & Courtney Petrick
Plan Book 208
Page 73 - Lot 37
34588/133
Tax Map 23 - Lot 7-37

Lands of
Portland Water District
Plan Book 208
Page 73 - Lot 36
23828/348
Tax Map 23 - Lot 7-36

HARVEST HILL RD

S 71°12'34" W 874.11' (Total)

368.90'

319.82'

#5 rebar found
PLS 2390

#6 rebar found
PLS 586

15' SETBACK

Raymond
Windham

N 35°16'45" E 641.97'

S 79°47'06" E 641.08'

#6 rebar found
PLS 2002

Lands of
Brian E. Schidzig
Elizabeth Clare Quinn Schidzig
Tax Map 23 - Lot 4A

Lands of
Troy F. & William Hartley
30256/106
Tax Map 23 - Lot 4A-3

Lands of
R.N. Willey & Sons Excavating, Inc.
15765/154
Tax Map 23 - Lot 4B
40.03 acres

50' Setback

SCF 124' @ 0.0161ft/ft

2.5' Wide Dripline Filter
All Sides See Detail

Equipment Pad Elev. 298.5'

SCF 95' @ 0.0210ft/ft

SCF 150' @ 0.0666ft/ft

50' Roadside Meadow Buffer

SCF 308' @ 0.0066ft/ft

SCF 225' @ 0.0088ft/ft

SCF 26' @ 0.0769ft/ft

SCF 6' @ 0.333ft/ft

SF 6' @ 0.004ft/ft

SF 66' @ 0.333ft/ft

SF 13' @ 0.1538ft/ft

SCF 151' @ 0.0132ft/ft

SCF 99' @ 0.0202ft/ft

SCF 117' @ 0.0341ft/ft

SCF 14' @ 0.1428ft/ft

SCF 170' @ 0.200ft/ft

SCF 23' @ 0.0869ft/ft

SCF 8' @ 0.200ft/ft

SCF 246' @ 0.0487ft/ft

Equipment Pad
Elev. 313.5'

2.5' Wide Dripline Filter
All Sides See Detail

SF 13' @ 0.3076ft/ft

SF 35' @ 0.1142ft/ft

SCF 30' @ 0.0666ft/ft

SCF 35' @ 0.0571ft/ft

SCF 18' @ 0.5555ft/ft

SCF 208' @ 0.0096ft/ft

SHF 64' @ 0.031ft/ft

SHF46' @ 0.0871ft/ft

SHF15' @ 0.133ft/ft

SCF 21' @ 0.190ft/ft

SF 12' @ 0.1666ft/ft

SF 48' @ 0.125ft/ft

SF 20' @ 0.03389ft/ft

SCF 25' @ 0.08ft/ft

SCF 73' @ 0.0273ft/ft

SCF 71' @ 0.1971ft/ft

SCF 70' @ 0.05714ft/ft

SCF 11' @ 0.0714ft/ft

DEP STREAM

75' STREAM SETBACK

15' SETBACK

Central Maine Power Company Easement
1872/318

S 05°54'40" E 1539.28'

Lands n/f of
Sebago Heights LLC.
Tax Map 23 - Lot 7

Lands n/f of
Newcomb Al
Tax Map 23 - L

Lands n/f of
Lister Nichols L.
Tax Map 23 - Lot 7-64

Lands n/f of
Vosmus William R.
Tax Map 23 - Lot 7-65

Lands n/f of
Pillsbury Catyn L.
Tax Map 23 - Lot 7-66

Lands n/f of
Herbert Samantha
Tax Map 23 - Lot 7-67

Lands n/f of
Staab Colin T.
Tax Map 23 - Lot 7-68

Lands n/f of
Packard Julie
Tax Map 23 - Lot 7-69

Lands n/f of
Joy Brendan
Tax Map 23 - Lot 7-70

1L 2L 3L 4L
1S 2S 3S 4S

N
Grid North

LEGEND

- Property Line
- 720 - Major Existing Contours
- Minor Existing Contours
- Existing Roadway
- Setback
- OHP - Existing Overhead Power
- Forested Wetland
- Non-Jurisdictional Wetland
- 720 - Proposed Contour
- Stormwater Flow Path
- Stormwater Subcatchment Boundary
- 1S - Subcatchment
- 1L - Point of Analysis
- SCF - Shallow Concentrated Flow
- SF - Sheet Flow

Post-Development Stormwater Run Off Table

Point of Analysis	Sub Catchment	Area (Acres)	Peak Run Off 2 Yr - Storm	Peak Run Off 10 Yr - Storm	Peak Run Off 25 Yr - Storm
1L	1S	34.15	0.00 cfs	0.34 cfs	1.69 cfs
2L	2S	3.55	0.00 cfs	0.01 cfs	0.08 cfs
3L	3S	1.31	0.00 cfs	0.00 cfs	0.02 cfs
4L	4S	1.00	0.00 cfs	0.00 cfs	0.02 cfs
Total		40.01	0.00 cfs	0.35 cfs	1.81 cfs

Post-Development Stormwater Management Subcatchment Model Summary Table

	Subcatchment(s)			
	1S	2S	3S	4S
Point of Analysis	1L	2L	3L	4L
Run Off Area (sf)	1,487,503	154,800	56,943	43,799
Flow Length (ft)	1,659	345	330	339
CN Value	37	34	33	34
Tc (min)	46.4	15.7	15.0	14.1
Peak Run Off 2 - Yr (cfs)	0.00	0.00	0.00	0.00
Peak Run Off 10 - Yr (cfs)	0.34	0.01	0.00	0.00
Peak Run Off 25 - Yr (cfs)	1.69	0.08	0.02	0.02

0 100 200 300

Scale: 1" : 100'

STATE OF MAINE
KIRK J. BALL
11681
LICENSED
PROFESSIONAL ENGINEER

9/2021

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

No.	Revision Description	Drwn	Chk'd	Date
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Drwn By: BFG
Desg By: BFG / KJB
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Date: 10-19-21

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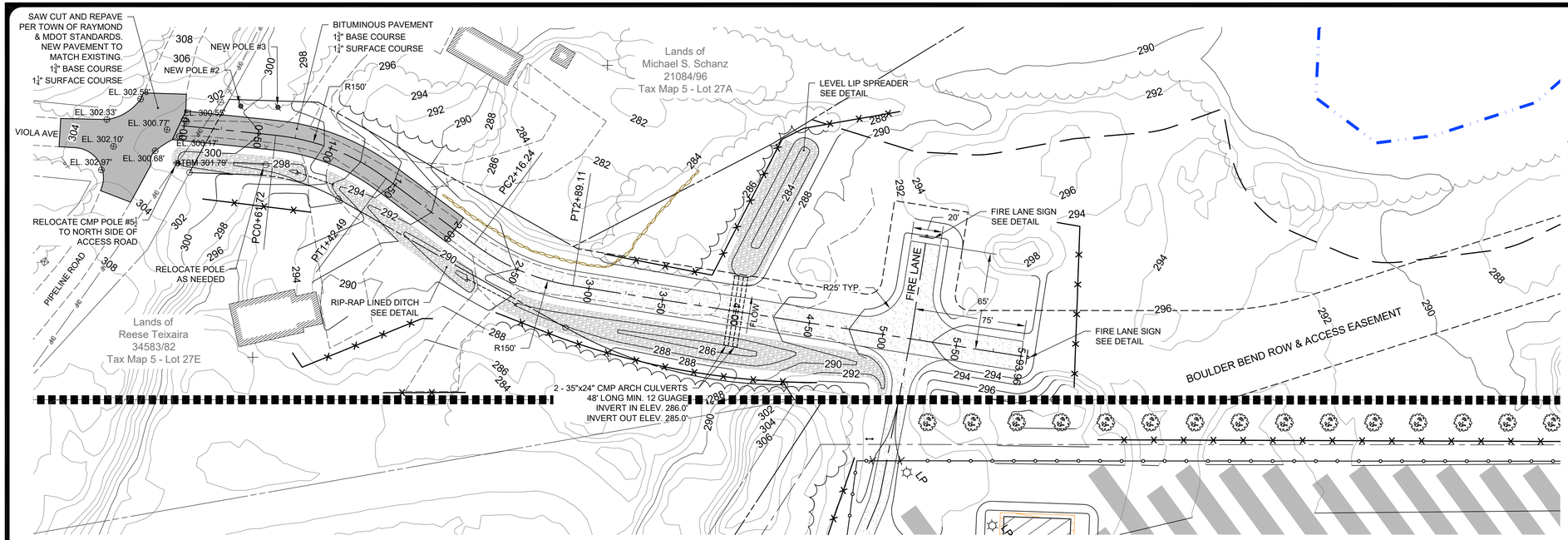
Post Development Stormwater Management Plan

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number:
80930

Drawing No:
C-4

Sheet 5 of 8



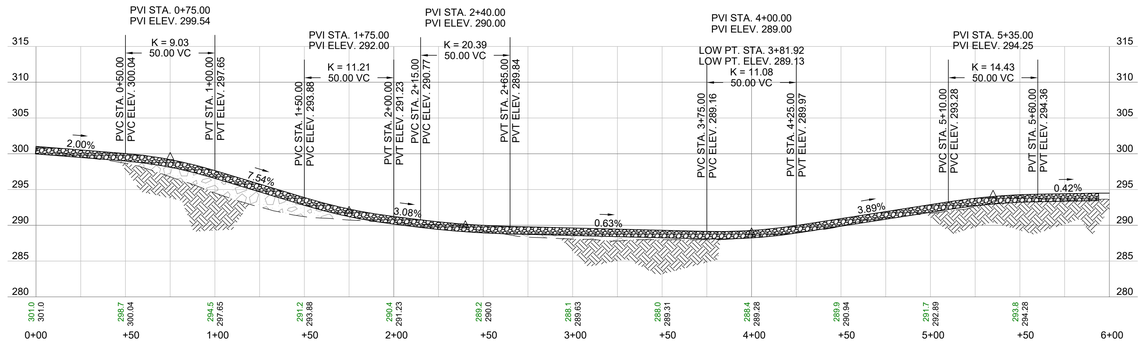
NOTE:
ADDITIONAL PROJECT AREA
0.096 ACRES (4,193 sf) ASSOCIATED WITH HAMMERHEAD
0.088 ACRES (3,829 sf) ASSOCIATED WITH LEVEL LIP SPREADER
19.77 ACRES (861,383 sf) ASSOCIATED WITH SOLAR FIELD
19.96 ACRES TOTAL PROJECT AREA

LEGEND

- Town Line
- Property Line
- Setback
- 720 - Major Existing Contours
- Minor Existing Contours
- Existing Roadway
- Existing Utility Pole
- Existing Property Pin
- OHP - Existing Overhead Power
- Stream
- Forested Wetland
- Proposed Fence
- 320 - Proposed Contours
- Proposed Solar Panels
- Proposed Utility Pole
- Proposed Gravel Project Drive
- Proposed Bituminous Pavement
- Proposed Rip-Rap
- Silt Fence
- TBM EL. 301.79' - BENCH MARK EL. 301.79' NAVD 88
- Rock Wall

BOULDER BEND ACCESS DRIVE PLAN

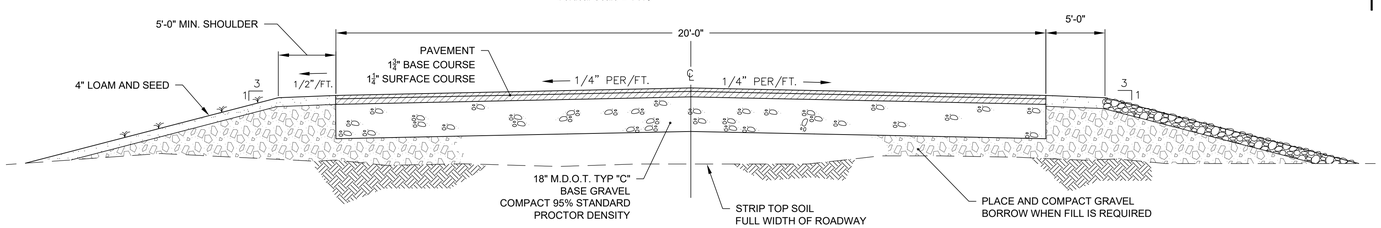
SCALE: 1" : 40'



292.2 = EXISTING GRADE ELEVATION
298.78 = FINISH GRADE ELEVATION

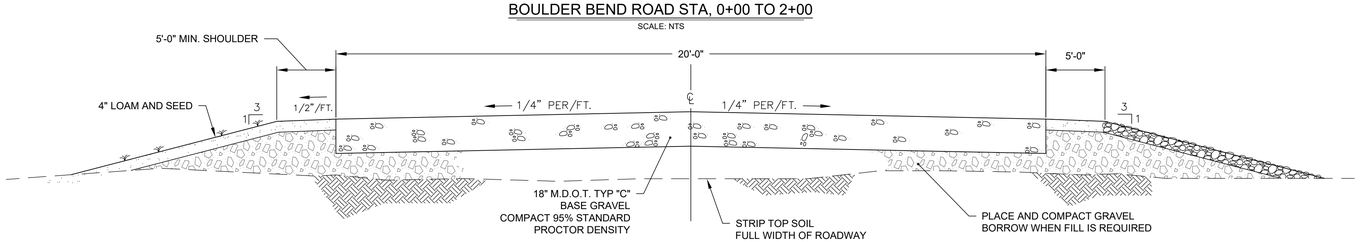
BOULDER BEND ROAD PROFILE

Horizontal Scale = 1 :40
Vertical Scale = 1 :10



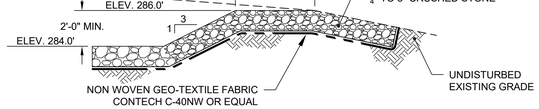
BOULDER BEND ROAD STA. 0+00 TO 2+00

SCALE: NTS



BOULDER BEND ROAD STA. 2+00 TO 5+93.96

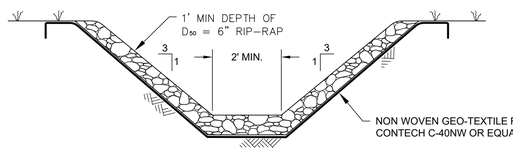
SCALE: NTS



LEVEL LIP SPREADER DETAIL

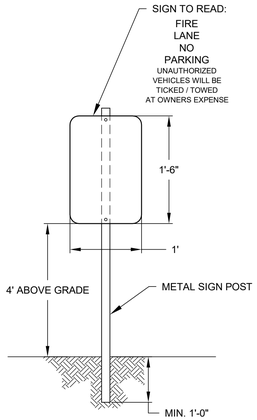
NOT TO SCALE

NOTE:
INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH LEVEL SPREADERS CONSTRUCTION, STONE BERM MATERIAL AND PLACEMENT, SETTLING BASIN FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVEL SPREADER.



RIP-RAP LINED COLLECTION DITCH DETAIL

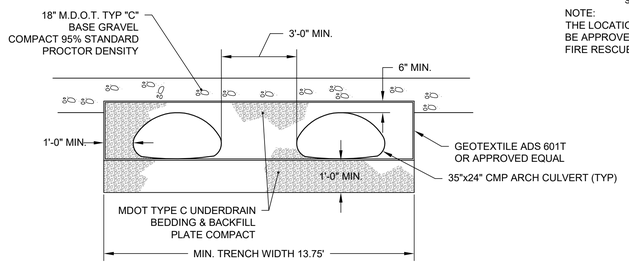
NOT TO SCALE



FIRE LANE SIGN DETAIL

SCALE: NTS

NOTE:
THE LOCATION OF THE SIGNS SHALL BE APPROVED BY THE RAYMOND FIRE RESCUE DEPARTMENT (RFRD).



ACCESS ROAD CULVERT CROSSING

SCALE: NTS

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

STATE OF MAINE
KIRK J. BALL
11681
LICENSED PROFESSIONAL ENGINEER
10/19/2021

No.	Revision Description	Drwn	Chkd	Date
-	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
Aprvd By: KJB
Date: 10-19-21

ACHERON ENGINEERING SERVICES
Engineering, Environmental & Geologic Consultants
www.AcheronEngineering.com
24466 Powell Rd.
Brooksville, Fl. 34602
(352)-796-6236
Acheron International Inc.
147 Main St.
Newport, ME. 04953
(207)-368-5700

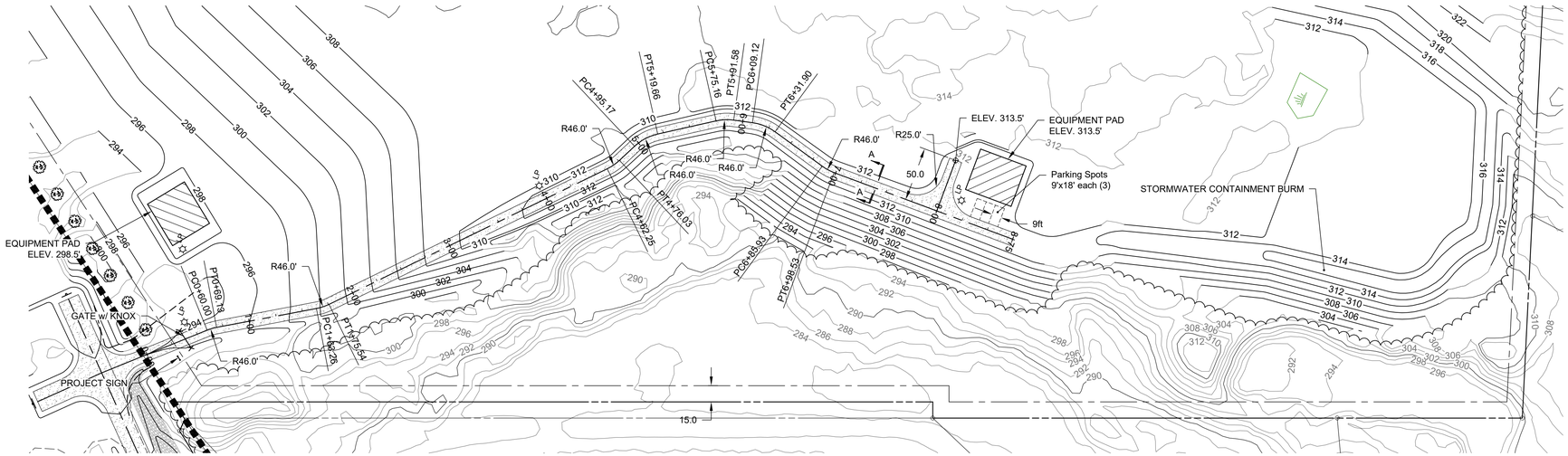
Pipe Line & Viola Ave Intersection
Access Drive Plan & Profile

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number: 80930

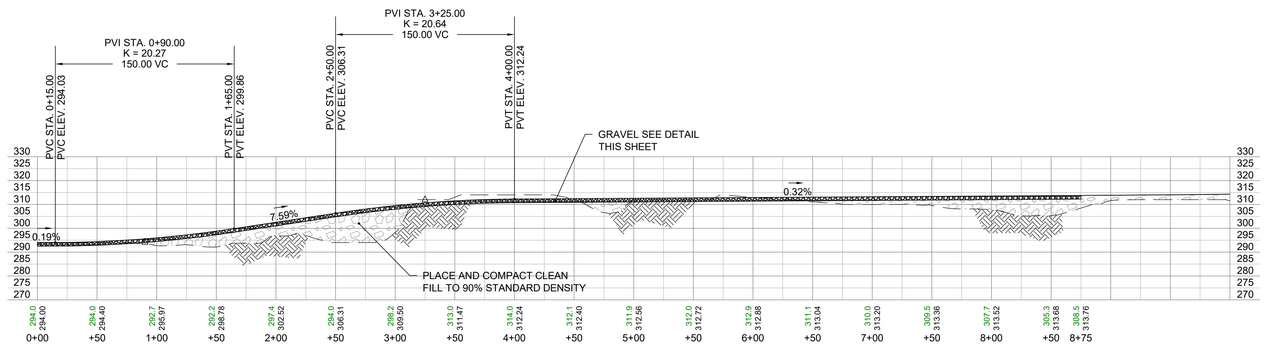
Drawing No: C-5

Sheet 6 of 8



MAINTENANCE ACCESSDRIVE PLAN

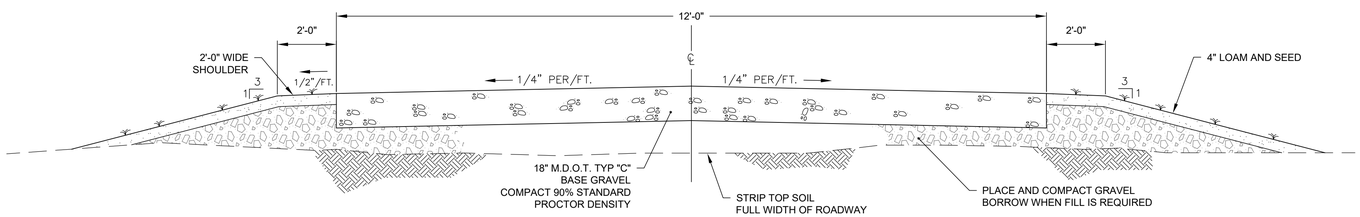
SCALE: 1" : 60'



292.2 = EXISTING GRADE ELEVATION
298.78 = FINISH GRADE ELEVATION

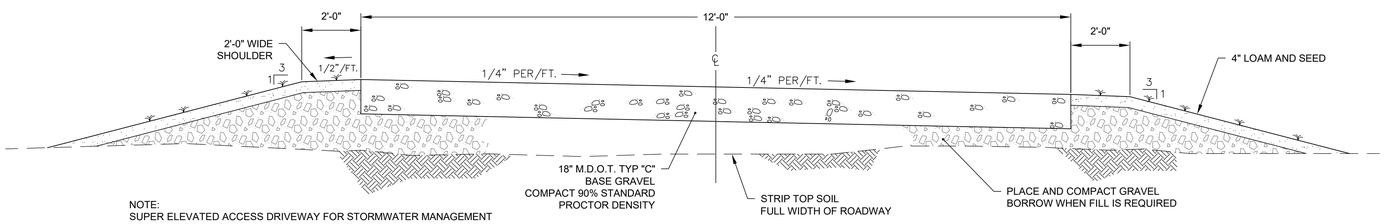
MAINTENANCE ACCESS DRIVE PROFILE

SCALE: Horz. Scale = 1:60
Vert. Scale = 1:30



TYPICAL ACCESS DRIVEWAY

SCALE: NTS



NOTE:
SUPER ELEVATED ACCESS DRIVEWAY FOR STORMWATER MANAGEMENT SHALL BE CONSTRUCTED BETWEEN STA. 1+00 TO THE END OF THE ACCESS DRIVEWAY.

ACCESS DRIVEWAY SECTION A-A

SCALE: NTS

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

LEGEND

- Town Line
- Property Line
- Setback
- 720 - Major Existing Contours
- Minor Existing Contours
- Existing Roadway
- Existing Utility Pole
- OHP - Existing Overhead Power
- Stream
- Forested Wetland
- Proposed Fence
- 320 - Proposed Contours
- Proposed Solar Panels
- Proposed Utility Pole
- Proposed Project Drive

No.	Revision Description	Drwn	Chk'd	Date
-	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
Aprvd By: KJB
Date: 10-19-21

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147 Main St.
Newport, ME. 04953
(207)-368-5700

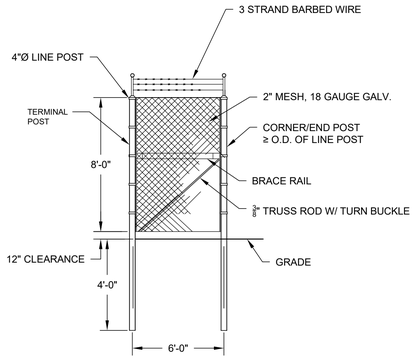
Maintenance Access Drive Plan & Profile

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number: 80930

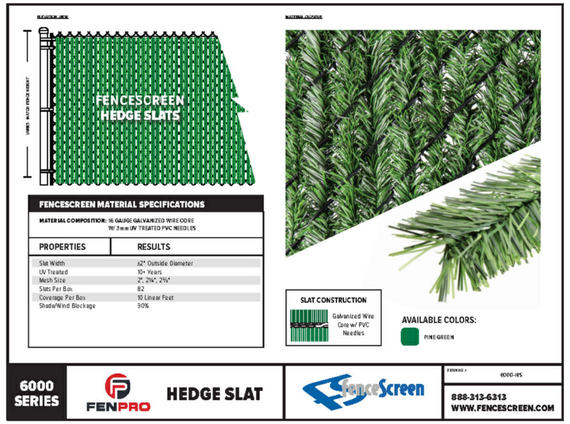
Drawing No: C-6

Sheet 7 of 8



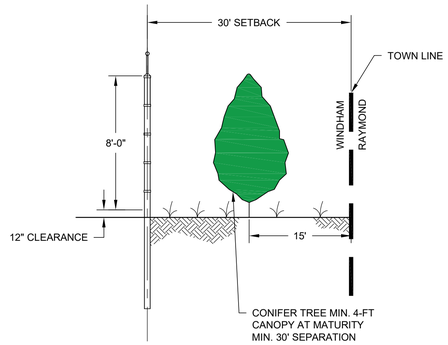
TYPICAL FENCE DETAIL

SCALE: NTS



FENCE HEDGE SLAT DETAIL

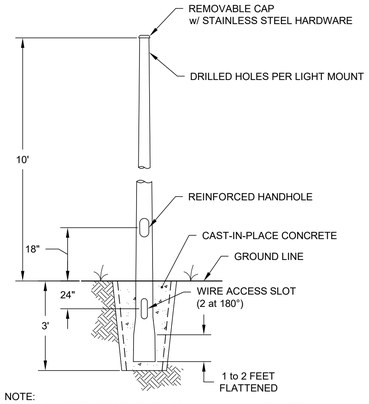
SCALE: NTS



NOTE:
FOR GROUND COVER SEE SEEDING IN GENERAL NOTES.

LANDSCAPED BUFFER DETAIL

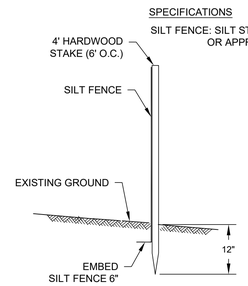
SCALE: NTS



NOTE:
ROUND TAPERED DIRECT BURIAL 6063 ALUMINUM LIGHT POLE, 10 FEET ABOVE GRADE, 5 INCH DIAMETER, 0.125 INCH WALL THICKNESS OR APPROVED EQUAL.
HUBBELL OUTDOOR LIGHTING GEOPACK SERIES SIZE 1 LED LIGHT TRP1, TYPE III, ZERO UPLIGHT (UO) DARK SKY, NEIGHBOR FRIENDLY OR APPROVED EQUAL.

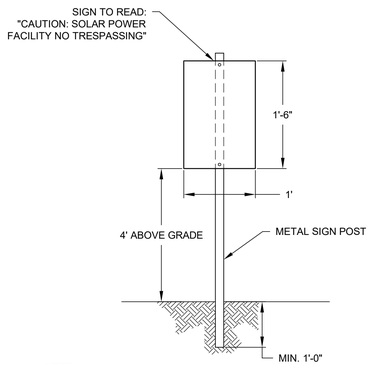
OUTDOOR LIGHT POLE DETAIL

SCALE: NTS



SILT FENCE DETAIL

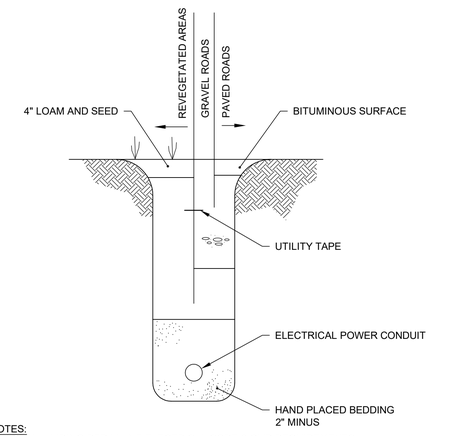
NOT TO SCALE



NOTE:
SIGNS SHOULD BE PLACED AT A MAXIMUM OF 100' SPACING ALONG PROJECT BOUNDARY.

NO TRESPASSING SIGN DETAIL

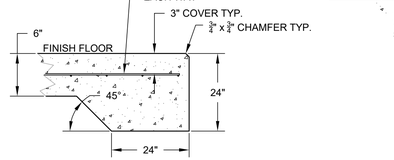
SCALE: NTS



NOTES:
1. INSTALL WIRING PER MAINE ELECTRICAL CODE & CMP REQUIREMENTS.
2. CONTRACTOR TO INSTALL CABLES PER CODE AND UTILITY SPECIFICATIONS. MATERIAL TO BE SUPPLIED BY OWNER. COORDINATE INSTALLATION WITH LOCAL UTILITIES.

ELECTRIC TRENCH DETAIL

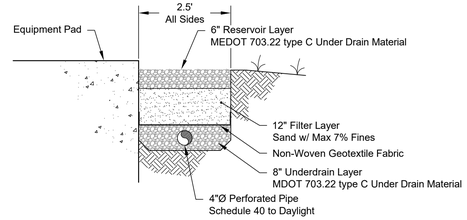
NOT TO SCALE



NOTES:
EQUIPMENT PAD SUB-BASE SHALL BE 6" OF ¾" CRUSHED STONE ON 1'-0" OF MDOT TYPE A GRAVEL THAT IS COMPACTED 95% STANDARD PROCTOR DENSITY.
EQUIPMENT PAD 1 FINISH FLOOR ELEVATION: 298.5'
EQUIPMENT PAD 2 FINISH FLOOR ELEVATION: 313.5'

EQUIPMENT PAD DETAIL

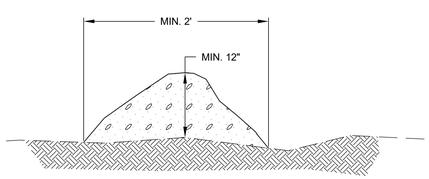
SCALE: NTS



DRIPLINE FILTER DETAIL

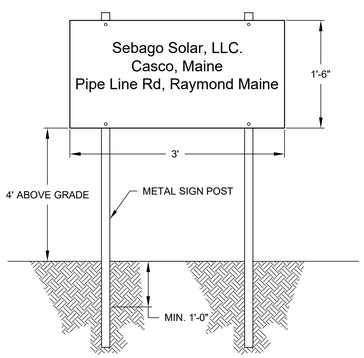
SCALE: NTS

NOTE:
IN LIEU OF SILT FENCE EROSION CONTROL MIX CAN BE USED IF CONDITIONS BELOW ARE MET: FOLLOW MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES 2016.
EROSION CONTROL MIX BERM:
THE ECM BERM SHOULD BE A MINIMUM OF 12" HIGH AND A MINIMUM OF TWO FEET WIDE. ON LONGER OR STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERMS COMPOSED OF ECM CAN BE RESHAPED WHEN NECESSARY.
EROSION CONTROL MIX:
THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).



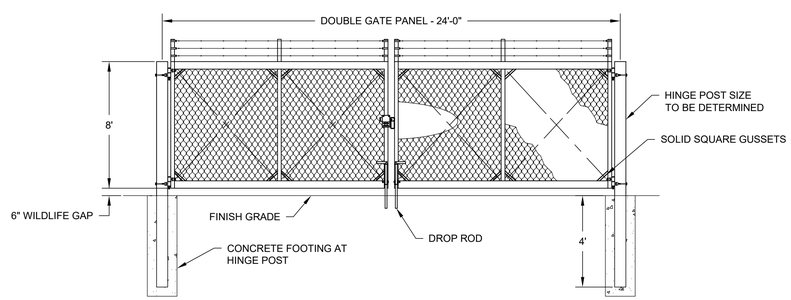
EROSION CONTROL MIX BERM DETAIL

SCALE: NTS



PROJECT SIGN DETAIL

SCALE: NTS



FENCE GATE DETAIL

SCALE: NTS

FOR REGULATORY REVIEW
DO NOT USE FOR CONSTRUCTION

STATE OF MAINE
KIRK J. BALL
11681
LICENSED
PROFESSIONAL ENGINEER
10/7/2021

No.	Revision Description	Drwn	Chk'd	Date
	-	-	-	-

Drwn By: BFG
Desg By: BFG / KJB
Chkd By: KJB
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Date: 10-19-21

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Acheron International, Inc.
147 Main St.
Newport, ME. 04953
(207)-368-5700

Details

Sebago Solar, LLC
Cumberland County
77 Pipeline Road - Windham, Maine

Job Number:
80930

Drawing No:
D-1

Sheet 8 of 8

Notes:

(1) Documents referenced on this plan are recorded in the Cumberland County Registry of Deeds unless otherwise noted.

(2) Project is referenced horizontally to the Maine State Coordinate System, West Zone NAD83(2011).

(3) The Windham\Raymond town line was determined based on local evidence.

(4) Reference is made to the Subdivision Plan, Pipeline Road and Patricia Avenue, Raymond, Maine for R.N. Wiley & Sons Excavating, Ins. dated February 7, 2017 recorded in Plan Book 217, Page 81.

(5) Reference is made to the First Amended Subdivision Plan of Sebago Heights, Pipeline Road, Windham, Maine dated July 6, 2007 recorded in Plan Book 208, Page 73.

SCALE: 1"= 100'

100' 0 100' 200' 300' 400'

North

Lands of
Tabathe J. Brown
15099/269
Tax Map 53 - Lot 40

Patricia Ave.

#5 rebar found
PLS 1271

174.89'

S 62°53'33" W

S 62°54'31" E 190.86'

S 62°43'33" W
191.80'

Lands of
RN Willey & sons Exc. Inc.
19376/234
Tax Map 5 - Lot 27D

N 40°08'33" W 215.47'

L=127.18'
R=200.20'
Chord S 44°42'34" E
125.06'

S 79°32'49" W 223.59'

#5 rebar found
PLS 1271

N 62°15'28" W 596.54'

Lands of
Nancy Valente
Sally Dodge
23285/163
Tax Map 5 - Lot 21B

Lands of
Tracy J. Sullivan
Michael R. Grenier
27846/134
Tax Map 53 - Lot 40

1646/182
2009/292
2831/199

Lands of
Kristle VanHise
33446/10
Tax Map 5 - Lot 27B

#5 rebar found
PLS 1271

S 01°08'53" W 185.85'

Lands of
Chester D
Southerland Jr.
Lorraine Southerland
19376/234
Tax Map 5 - Lot 27C

N 79°11'44" W ±407.1'

#5 rebar found
PLS 1271

S 85°56'50" W 243.93'

Lands of
William C. Hartley
Cindy D. Hartley
Tax Map 23 - Lot 4A-1
24342/78

±214'

Boundaries in this area are approximate

Approximate location of 50' wide pipeline easement as shown on plan referenced in Note 4

Tie line S 21°19'55" W 358.85'

N 35°16'45" E 388.31'

Lands of
Brian E. Schidzig
Elizabeth Clare Quinn Schidzig
Tax Map 23 - Lot 4A

Lands of
Philip D. Morse
Louise C. Morse
3952/326
Tax Map 55 - Lot 50

±250'

#6 rebar found

Lands of
Tacy F. & William Hartley
30256/106
Tax Map 23 - Lot 4A-3

S 79°47'06" E 641.08'

150'

S 68°33'15" W

Lands of
Crawford W. Emerson
Ruth C. Emerson
3079/180
Tax Map 55 - Lot 51

N 21°26'45" W 100'

120.00'

N 68°33'15" E

#6 rebar found
PLS 2002

26.07'

Lands of
R.N. Willey & Sons Excavating, Inc.
19376/234
Tax Map 5 - Lot 27
±25.1 acres

Raymond
Windham

S 21°26'45" E
285.26'

Lands of
Jonathan Brown
21010/96
Tax Map 55 - Lot 52

#6 rebar found
PLS 2002

N 35°16'45" E 930.92'

Central Maine Power Company Easement
1672/318

Lands of
Kathryn S Weeks
25575/340
Tax Map 55 - Lot 28

S 21°26'45" E
224.72'

Lands of
Patricia Starbird
32627/80
Tax Map 55 - Lot 53

#6 rebar found

N 68°39'12" E
143.63'

S 03°53'16" W
156.25'

S 03°54'40" E 1509.28'

19.18'

S 87°52'31" E
11.94'

Lands of
Michael S. Schanz
21084/96
Tax Map 5 - Lot 27A

N 07°55'15" E
150.51'

Lands of
R.N. Willey & Sons Excavating, Inc.
15765/154
Tax Map 23 - Lot 4B
40.03 acres

S 64°44'12" W
197.00'

N 37°02'57" E
59.95'

L=154.14'
R=297.47'
Chord N 49°53'32" E
152.42'

N 64°44'12" E 175.56'

4 - #6 rebar found
PLS 1271

L=60.42'
R=125.01'
Chord N 51°00'34" E
59.83'

N 26°08'40" W
55.99'

N 37°09'50" E
42.44'

Lands of
Andrew M.
Coppersmith
34583/82
Tax Map 5 - Lot 27E

Lands of
Ashley A. & Dana L. Kenney
35494/299

N 21°35'36" W 703.20'

Viola Ave.

Sebago Heights Common Area
See Note 5

Pipeline Road

#5 rebar found
PLS 2390

N 68°24'24" E
15.00'

374.56'

N 21°35'36" W

Lands of
David O'Shea & Carolyn Hart
Plan Book 208, Page 73 - Lot 40
24917/178
Tax Map 23 - Lot 7-40

#6 rebar found
PLS 586

319.82'

#5 rebar found
PLS 2390

#5 rebar found
PLS 2390

366.90'

S 71°12'34" W 874.11' (total)

Lands of
Portland Water District
Plan Book 208
Page 73 - Lot 36
23828/348
Tax Map 23 - Lot 7-36

171.47'

Lands of
Shaun J. Morrison, et al
Plan Book 208
Page 73 - Lot 38
29868/208
Tax Map 23 - Lot 7-38

Lands of
Christopher & Courtney
Petrick
Plan Book 208
Page 73 - Lot 37
34586/133
Tax Map 23 - Lot 7-37

Lands of
Ryan Gavin & Erica Wozniak
Plan Book 208, Page 73 - Lot 39
34814/290
Tax Map 23 - Lot 7-39

Symbols Legend

- Iron rod set
- Iron pipe found
- Iron rod/bolt found
- Granite/concrete monument
- Wood post
- Utility pole
- Guy/anchor
- Overhead wires
- Edge pavement/gravel
- Property line

PLISGA & DAY
LAND SURVEYORS
72 MAIN STREET
BANGOR, MAINE
DATE: April 28, 2021
PROJ. NO. 20011
Email: info@WeMapIt.com
Phone: (207) 947-0019
Toll-Free: 1-800-734-0019
DRAWING FILE: 20011.dwg
www.WeMapIt.com

Survey Standard:

This plan was prepared from information obtained by a survey conforming substantially to the requirements of Technical Standards contained in Chapter 90, Part 2, of the Rules of the Board of Licensure for Professional Land Surveyors, effective April 1, 2001. Monuments not set.

Adam N. Robinson, Maine Licensed
Professional Land Surveyor No. 2361

STATE OF MAINE
ADAM N. ROBINSON
NO. 2361
PROFESSIONAL LAND SURVEYOR

Survey Plan

property of

R. N. Willey & Sons Excavating, Inc.

Cumberland County Registry of Deeds
Volume 19376, Page 234
Volume 15765, Page 154

Pipeline Road - Windham, Maine

Lands n/f of
Hartley William C.
Tax Map 23 - Lot 4-A01

Lands n/f of
Schidzig Brian E.
Tax Map 23 - Lot 4-A

Lands n/f of
Hartley William C.
Tax Map 23 - Lot 4-A03

Lands n/f of
Newcomb Alec S.
Tax Map 23 - Lot 7-63

Lands n/f of
Lister Nichols L.
Tax Map 23 - Lot 7-64

Lands n/f of
Vosmus William R.
Tax Map 23 - Lot 7-65

Lands n/f of
Pillsbury Catyn L.
Tax Map 23 - Lot 7-66

Lands n/f of
Herbert Samantha
Tax Map 23 - Lot 7-67

Lands n/f of
Staab Colin T.
Tax Map 23 - Lot 7-68

Lands n/f of
Packard Julie
Tax Map 23 - Lot 7-69

Lands n/f of
Joy Brendan
Tax Map 23 - Lot 7-70

Lands n/f of
Vanhise Kristle
Tax Map 5 - Lot 27

Lands n/f of
Schanz Michael S.
Tax Map 5 - Lot 27A

Lands n/f of
Willey R N & Sons
Tax Map 23 - Lot 4B

Lands n/f of
Sebago Heights LLC.
Tax Map 23 - Lot 7

Lands n/f of
Coppersmith Andrew
Tax Map 5 - Lot 27E

Lands n/f of
Sebago Heights LLC.
Tax Map 23 - Lot 7

Lands n/f of
O'Shea David
Tax Map 23 - Lot 7-40

Lands n/f of
Davis Derek L.
Tax Map 23 - Lot 7-36

Lands n/f of
Gavin Ryan C.
Tax Map 23 - Lot 7-39

Lands n/f of
Morrison Shaun J.
Tax Map 23 - Lot 7-38

Lands n/f of
Petrick Christopher J.
Tax Map 23 - Lot 7-37

644.51'
1,506.74'
686.76'
374.57'
167.82'
199.08'
167.15'
319.30'

942 Sq. Feet
0.0216 Acres

2539 Sq. Feet
0.0583 Acres

195834 Sq. Feet
4.4957 Acres

APPROX. EDGE
OF GRAVEL PIT

LIMITS OF
PROPOSED
PROJECT AREA

PIPELINE RD

BITTERSWEET WAY

HARVEST HILL RD

MAP COMPILED FROM:

*TOWN OF WINDHAM TAX MAP
*CONCEPTUAL DESIGN PLAN BY ACHERON ENGINEERING SERVICES
*AERIAL PHOTOGRAPH FROM THE MAINE OFFICE OF GIS
*2' TOPOGRAPHIC CONTOURS FROM THE MAINE OFFICE OF GIS
*ON SITE LOCATIONS UTILIZING TRIMBLE GEO7X HANDHELD UNIT

LEGEND

WETLAND AREA

POTENTIAL VERNAL POOL (APPROX.)

DEP STREAM

75' STEAM SETBACK

EDGE OF EXISTING GRAVE PIT (APPROX)

GRAPHIC SCALE

100 0 50 100 200

(IN FEET)
1 inch = 100 ft.

DATE:	REVISIONS:

WETLAND DELINEATION PLAN

PREPARED FOR
NEXT PHASE ENERGY
77 PIPELINE ROAD
(MAP 23, LOT 4B)
WINDHAM, MAINE

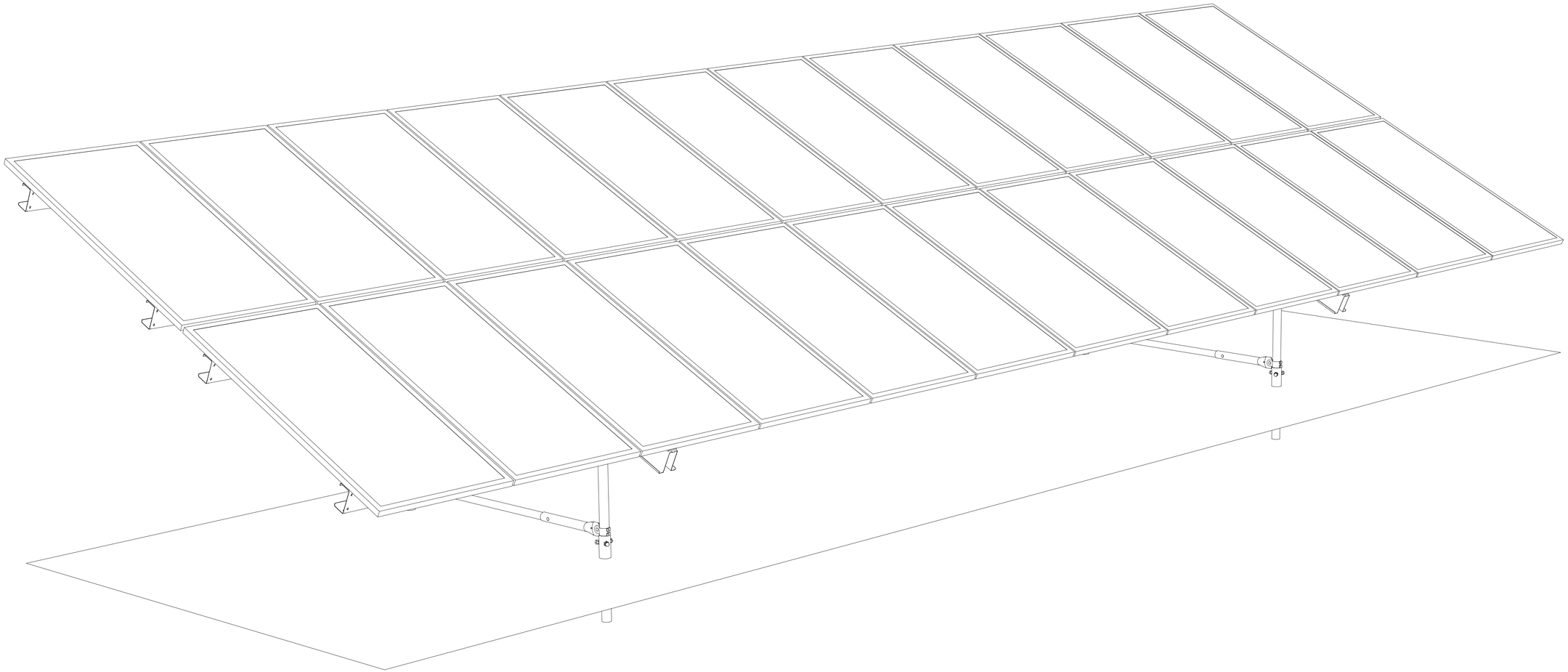
Albert Frick Associates, Inc.
Environmental Consultants
Gorham, Maine

Drawn By: B.J.
Checked By: C.C.
Date: 12/10/2020
Scale: 1" = 100'

TERRAGLIDE RACKING ENGINEERING PLANS

TERRASMART - SEBAGO SOLAR, LLC

2X12 - TERRAGLIDE PORTRAIT - 30° RACK



ZEYN B. UZMAN
CT PE# PEN.0023151

NOTES:
1. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009

DESIGN CRITERIA
ASCE = 7-10
WIND SPEED = 121 MPH
WIND LOAD BUILDING CATEGORY = I
WIND LOAD EXPOSURE CATEGORY = C
GROUND SNOW LOAD, Pg = 30 PSF
FLAT ROOF SNOW LOAD, Pf = 18.144 PSF
SEISMIC SITE CLASS = D
SEISMIC Ss = 0.17
SEISMIC S1 = 0.061

GROUND SCREW
KRINNER G SERIES GROUND SCREW
SOUTH SCREW - 76mm X 2100mm
NORTH SCREW - 76mm X 2100mm
MODULE DIMENSIONS
NORTH/ SOUTH EDGE - 79.69 (2024mm)
EAST/ WEST EDGE - 40.31 (1024mm)
NORTH/ SOUTH BOLT SPACING - 56.06 (1424mm)
EAST/ WEST BOLT SPACING - 38.74 (984mm)
THICKNESS - 1.57 (40mm)

PROJECT SPECIFICATIONS:
TILT ANGLE - 25˚
RACK SIZE - 2X12
MODULE ORIENTATION - PORTRAIT

TERRASMART, LLC
14590 GLOBAL PARKWAY
FORT MYERS, FL 33913
P 239.362.0211 | F 239.676.1900
WWW.TERRASMART.COM

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ENG. APPROVED BY	PROJ. ENG. APPROVED BY		
MF -	XX -		
MFG. APPROVED BY	PROJECT NAME		SHEET SIZE
SS -	SEBAGO SOLAR		D

PROJECT NUMBER	CLIENT	MODULE	REV	SHEET NUMBER
19-XXXX	Sebago Solar, LLC	TBD	0	1 OF 6

I. PERMITTING, CONSTRUCTION, AND ERECTION NOTES

1. FRAME AND FOUNDATION CONFORMS TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE BASED UPON DESIGN CRITERIA AS OUTLINED ON THE COVER SHEET. TERRASMART MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE DESIGN CRITERIA AS IT WAS SUPPLIED BY CLIENT. PLEASE REFER TO STRUCTURAL CALCULATIONS FOR FRAME AND FOUNDATION DESIGN.
2. THE STRUCTURAL INTEGRITY OF THE TERRAGLIDE RACK DEPENDS ON INTERACTION OF VARIOUS CONNECTED COMPONENTS. PROVIDE ADEQUATE BRACING, SHORING, AND OTHER TEMPORARY SUPPORTS AS REQUIRED TO SAFELY COMPLETE THE WORK.
3. FOUNDATION INSTALLATION SUB-CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IF ANY UNFORESEEN CONFLICTS ARISE, SUCH AS EXISTING UNDULATION THAT COULD POTENTIALLY CAUSE RACKING INSTALLATION ISSUES.
4. STRUCTURAL STEEL SHALL BE ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
6. CROSS BRACING TO BE FIT ON SITE, PER INSTALLATION MANUAL.
7. COLD GALVANIZING COMPOUND SHALL BE USED PER MANUFACTURER'S DIRECTIONS AND IN ACCORDANCE WITH ASTM-A780 IN AREAS WHERE GALVANIZATION WAS REMOVED DURING TRANSPORTATION, OR ERECTION/INSTALLATION.
8. BOLTS TO BE TIGHTENED PER THE PROCEDURES DESCRIBED IN THE INSTALLATION MANUAL.
9. THIS STRUCTURAL DRAWING DOES NOT INCLUDE INFORMATION REGARDING ELECTRICAL CONNECTIONS, INCLUDING GROUNDING. REFER TO INSTALLATION MANUAL AND ELECTRICAL PLANS PREPARED BY OTHERS.
10. SHADING ANALYSIS WAS NOT PERFORMED BY TERRASMART AND WAS NOT CONSIDERED IN THE LAYOUT OF THE FOUNDATION. TERRASMART RECOMMENDS CONSULTING A SOLAR SHADING EXPERT PRIOR TO INSTALLATION TO AVOID POWER REDUCTION DUE TO SHADOWS.
11. SNOW BANKING ANALYSIS WAS NOT PERFORMED BY TERRASMART AND WAS NOT CONSIDERED IN THE STRUCTURAL DESIGN. THE FRONT EDGE CLEARANCE WAS SUPPLIED BY CLIENT AND IT IS ASSUMED THAT THE SYSTEM OWNER WILL REMOVE SNOW AS NEEDED TO MAINTAIN AN UNOBSTRUCTED FRONT EDGE. ADVERSE EFFECTS OF SNOW BANKING, INCLUDING SHADING OR OTHER STRUCTURAL CONSIDERATIONS ARE BEYOND TERRASMART'S SCOPE.
12. MINIMUM AND TYPICAL FRONT EDGE CLEARANCE SHOWN ON SIDE ELEVATION. MAXIMUM FRONT EDGE CLEARANCE DETERMINED PER FIELD CONDITIONS.
13. SOUTHERN EDGES OF MODULES SHALL BE ALIGNED WITHIN 2" HORIZONTALLY OF THE SOUTHERN EDGE OF MODULES OF THE ADJACENT RACK.
14. EASTERN AND WESTERN EDGES OF MODULES SHALL BE ALIGNED WITHIN 2" VERTICALLY AND HORIZONTALLY OF THE SOUTHERN EDGE OF MODULES OF THE ADJACENT RACK.
15. TILT ANGLE TOLERANCE: ± 2° FROM ANGLE SHOWN ON SIDE ELEVATION.
16. RACK SPACING TOLERANCE: 6" TYPICAL, 4" MINIMUM, AS MEASURED BETWEEN THE CLOSEST MODULES EDGE BETWEEN ADJACENT RACKS. REFER TO CIVIL ENGINEERING PLANS FOR MORE INFORMATION AND FURTHER DETAIL.
17. AZIMUTH TOLERANCE: ± 2° FROM APPROVED CIVIL ENGINEERING PLANS.
18. TERRAGLIDE RACKING IS DESIGNED TO ACCOMMODATE A MAXIMUM EAST/WEST SLOPE OF 22%, A MAXIMUM NORTH FACING SLOPE OF 30%, AND A MAXIMUM SOUTH FACING SLOPE OF 18%. THESE SLOPES WERE PROVIDED BY THE CLIENT.
19. PANEL SPACING TOLERANCE: +/-1/4" FROM SPACING DIMENSION AS SHOWN ON SIDE ELEVATION AND REAR ELEVATION.
20. FOR MODULE MOUNTING HARDWARE, TERRASMART PROVIDES STAINLESS STEEL HEX BOLT WITH INTEGRATED STAR WASHER AND SERRATED FLANGE NUT. THE CLIENT IS RESPONSIBLE TO CONFIRM THAT TERRASMART'S MODULE MOUNTING HARDWARE IS COMPATIBLE WITH THE MODULE THAT THE CLIENT WILL PROVIDE.

II. SITE PREPARATION

1. PRIOR TO COMMENCING WORK AND FOR THE DURATION OF THE PROJECT, GENERAL CONTRACTOR SHALL ENSURE THE SITE IS PREPARED AND MAINTAINED AS FOLLOWS (TO AVOID CHANGE ORDERS):
   A. ALL REQUIRED PERMITS SHALL BE OBTAINED AND CURRENT.
   B. LOCATE ALL UNDERGROUND UTILITIES AND ENSURE THAT THE PROPOSED INSTALLATION DOES NOT CONFLICT WITH ANY EXISTING INFRASTRUCTURE. MARKINGS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT.
   C. ALL REQUIRED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND OPERATIONAL.
   D. GRASS SHALL BE MOWED WITH BLADES NO HIGHER THAN 3" TALL.
   E. ALL VEGETATION, INCLUDING TREES AND SHRUBS SHALL BE CLEARED AND ROOT SYSTEMS GRUBBED. ALL ORGANIC MATTER SHALL BE STRIPPED AND REMOVED FROM THE BUILDING ENVELOPE BEFORE EARTH WORK OCCURS, IF ANY.
   F. LOOSE SURFACE IMPEDIMENTS, INCLUDING ROCKS, COBBLES, BOULDERS, CONSTRUCTION DEBRIS, AND OTHER OBSTRUCTIONS SHALL BE REMOVED.
   G. SITE SHALL BE SAFE FOR OPERATING MACHINERY AND FOR PERSONNEL ON FOOT. SITE CONDITIONS SHALL NOT BE AN ENCUMBRANCE TO THE PERFORMANCE OF WORK.
   H. GROUND WATER, INCLUDING WATER TABLE AND PERCHED WATER, SHALL NOT ENCROACH BETWEEN THE GROUND SURFACE AND THE EMBEDMENT DEPTH OF THE GROUND SCREW. DEWATERING IS REQUIRED IF GROUND WATER IS ENCOUNTERED DURING PILOT HOLE DRILLING AND/OR GROUND SCREW INSTALLATION.
   I. SITE SHALL BE GRADED TO PROVIDE CONTROLLED POSITIVE DRAINAGE AWAY FROM FOUNDATIONS. STANDING WATER AND/OR WATER WITH SUFFICIENT VELOCITY TO ERODE SOIL IS NOT ALLOWED WITHIN 20 FEET OF THE FOUNDATION.
   J. NO FINISHED GRADE SOIL SHALL BE DISTURBED WITHIN 24" OF THE PROPOSED OR INSTALLED LOCATION OF A GROUND SCREW. SEE ADDITIONAL REQUIREMENTS FOR TRENCHES AND OTHER EXCAVATIONS IN SECTION II.3.
2. ALL EARTHWORK SHALL BE NOTED ON THE PLANS AND PROPERLY AS-BUILTED. CUT AREAS SHALL BE PROOF ROLLED AFTER REMOVAL OF SOIL. FILL AREAS SHALL BE STRIPPED OF ALL VEGETATION AND PROOF ROLLED PRIOR TO PLACING FILL MATERIAL.
3. TRENCHES AND OTHER EXCAVATIONS MAY BE CUT EITHER BEFORE OR AFTER GROUND SCREW INSTALLATION PROVIDED THEY MEET THE REQUIREMENTS OF II.1, II.5. IF THEY ARE CUT AFTER GROUND SCREW INSTALLATION, THE HORIZONTAL DISTANCE BETWEEN THE GROUND SCREW AND THE EDGE OF THE EXCAVATION MUST BE GREATER THAN OR EQUAL TO THE VERTICAL DEPTH OF THE EXCAVATION (1:1 RATIO), PLUS 24". 2. IF THEY ARE CUT BEFORE GROUND SCREW INSTALLATION, THE HORIZONTAL DISTANCE BETWEEN EXCAVATION AND PROPOSED GROUND SCREW LOCATION SHOULD BE 24" OR GREATER.
4. IMPORTED GRANULAR FILL MATERIAL SHALL BE USED FOR EARTHWORK UNLESS ON-SITE SOILS MEET THE FOLLOWING REQUIREMENTS:
   A. FREE OF PARTICLES LARGER THAN 2" IN DIAMETER, ORGANIC MATTER, AND OTHER DELETERIOUS MATERIALS; AND
   B. CAN BE PROPERLY MOISTURE CONDITIONED.
5. GRANULAR ON-SITE SOILS OR IMPORTED GRANULAR MATERIAL MAY BE USED AS FILL AS LONG AS THEY MEET THE FOLLOWING REQUIREMENTS:
   A. WELL GRADED BETWEEN COARSE AND FINE SIZES;
   B. CONTAINING NO CLAY BALLS, ROOTS, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS;
   C. MAXIMUM PARTICLE SIZE OF 2", WITH LESS THAN 12% PASSING THE U.S. NO. 200 SIEVE; AND
   D. IMPORTED FILL MATERIALS SHALL BE SAMPLED AND TESTED BY A GEOTECHNICAL ENGINEER OR OTHER QUALIFIED SOIL TESTING AGENCY PRIOR TO BEING TRANSPORTED TO THE SITE.
6. FILL SOILS SHALL BE COMPACTED AT MOISTURE CONTENTS THAT ARE NEAR OPTIMUM. THE OPTIMUM MOISTURE CONTENT VARIES WITH THE SOIL GRADATION AND SHALL BE EVALUATED DURING CONSTRUCTION. FILL MATERIAL THAT IS NOT NEAR OPTIMUM MOISTURE CONTENT SHALL BE MOISTURE CONDITIONED. FILL MATERIAL SHALL BE PLACED IN UNIFORM, HORIZONTAL LIFTS, AND BE COMPACTED WITH APPROPRIATE EQUIPMENT TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY PER ASTM D1557. THE MAXIMUM LIFT THICKNESS WILL VARY DEPENDING ON THE MATERIAL AND COMPACTION EQUIPMENT USED, BUT SHALL NOT BE GREATER THAN 12" AND SHOULD BE CONSISTENT THROUGHOUT THE DEPTH OF THE COMPACTED SOIL.
7. TERRASMART REQUIRES THAT FILL COMPACTION BE TESTED BY A GEOTECHNICAL ENGINEER OR OTHER QUALIFIED SOIL TESTING AGENCY DURING THE PLACEMENT AND COMPACTION OF FILL TO VALIDATE THE WORK.
8. ROCK DRILLING SHALL BE PERFORMED IF REQUIRED BY PRESENCE OF UNDERGROUND ROCK. PILOT HOLE DIAMETER SHALL BE DETERMINED BY ONSITE TESTING AND APPROVED BY TERRASMART.

III. FOUNDATION NOTES

1. GROUND SCREW FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS BY A CERTIFIED INSTALLER TRAINED ON THIS TECHNOLOGY.
2. GROUND SCREW FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED, NATURAL SOIL, UNLESS OTHERWISE NOTED AND PROPERLY PREPARED AS DESCRIBED IN SECTION II. SITE PREPARATION.
3. FOUNDATION INSTALLATION SUB-CONTRACTOR SHALL DETERMINE DIAMETER AND DEPTH OF PRE-DRILLED PILOT HOLE AS REQUIRED BY SITE CONDITIONS.
4. SHOULD UNFORESEEN LOOSE SOIL CONDITIONS BE ENCOUNTERED ONSITE, CONCRETE OR OTHER ADDITIVES MAY BE USED TO STABILIZE THE SOIL AT CLIENTS EXPENSE. SHOULD UNDERGROUND WATER BE ENCOUNTERED, THE CLIENT SHALL REMEDIATE THE ISSUE.
5. THE USE OF WATER AS LUBRICANT IS ALLOWED.
6. TOLERANCES IN THE POSTION OF EACH SCREW ARE ± 2" LATERALLY (NORTH-SOUTH AND EAST-WEST) AND ± 3" VERTICALLY (UP-DOWN) WITH A TYPICAL 76.7" EMBEDMENT, AS MEASURED FROM GRADE.
7. MINIMUM REQUIRED TORQUE FOR GROUND SCREW INSTALLATION: 2000 N-m.
8. AT THIS TIME NO GROUND SCREW TESTING DATA IS AVAILABLE. GROUND SCREW FOUNDATIONS HAVE BEEN DESIGNED BASED ON EXTENSIVE TESTING IN MEDIUM/ DENSE SOILS.
9. GROUND SCREW FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE PROJECT GEOTECHNICAL REPORT PROVIDED BY THE CLIENT (CLA ENGINEERS, INC., REPORT NUMBER 17-6202, DATED 04/04/2019).

v-1.8

ZEYN B. UZMAN
CT PE# PEN.0023151

GROUND SCREW
KRINNER G SERIES GROUND SCREW
SOUTH SCREW - 76mm X 2100mm
NORTH SCREW - 76mm X 2100mm
MODULE DIMENSIONS
NORTH/ SOUTH EDGE - 79.69 (2024mm)
EAST/ WEST EDGE - 40.31 (1024mm)
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EAST/ WEST BOLT SPACING - 38.74 (984mm)
THICKNESS - 1.57 (40mm)

PROJECT SPECIFICATIONS:
TILT ANGLE - 25°
RACK SIZE - 2X12
MODULE ORIENTATION - PORTRAIT

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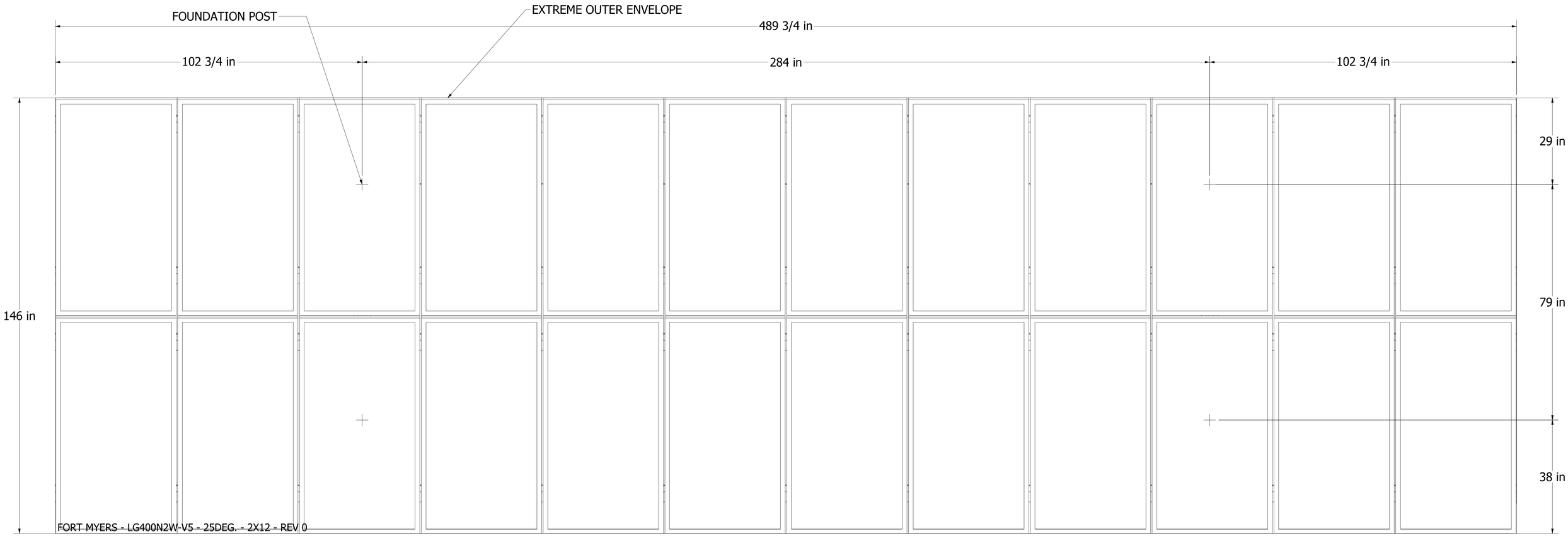
MF -	XX -		
MFG. APPROVED BY	PROJECT NAME		SHEET SIZE
SS -	SEBAGO SOLAR		D

PROJECT NUMBER	CLIENT	MODULE	REV	SHEET NUMBER
19-XXXX	Sebago Solar	TBD	0	2 OF 6



FLATTENED LAYOUT
SCALE 1/16

ZEYN B. UZMAN
CT PE# PEN.0023151

GROUND SCREW
KRINNER G SERIES GROUND SCREW
SOUTH SCREW - 76mm X 2100mm
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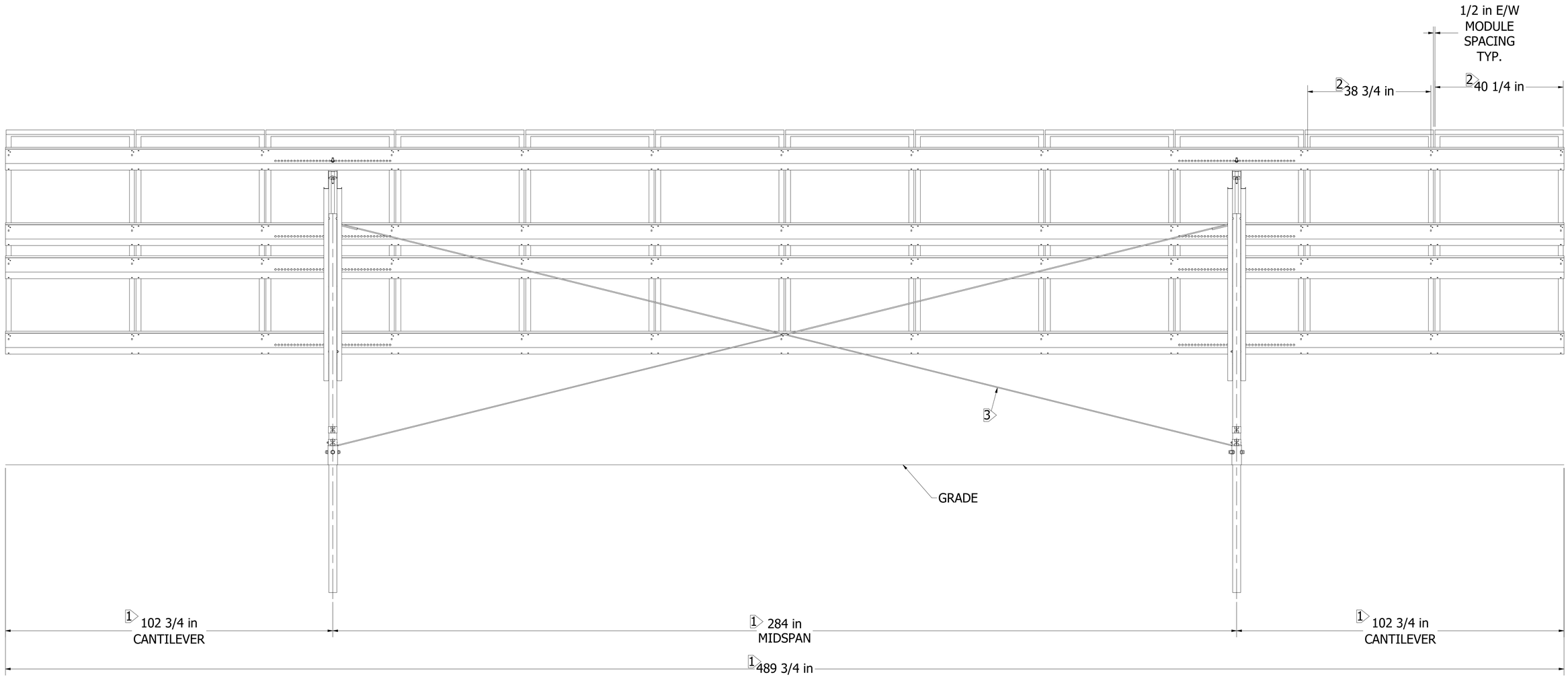
SS -	SEBAGO SOLAR		D
PROJECT NUMBER	CLIENT	MODULE	REV / SHEET NUMBER
19-XXXX	Sebago Solar	TBD	0 / 3 OF 6



REAR ELEVATION VIEW
SCALE 1/16

ZEYN B. UZMAN
CT PE# PEN.0023151

NOTES:
1. TYPICAL INSTALLATION DIMENSIONS MAY BE ADJUSTED TO SUIT FIELD CONDITIONS WITHIN THE TOLERANCES PROVIDED.
2. PURLIN SPACING IS DEPENDENT ON MODULE SPECIFICATIONS, REFER TO PROJECT NOTES FOR MODULE SPECIFICATIONS.
3. SEISMIC CROSS BRACING TO BE FIELD FIT.

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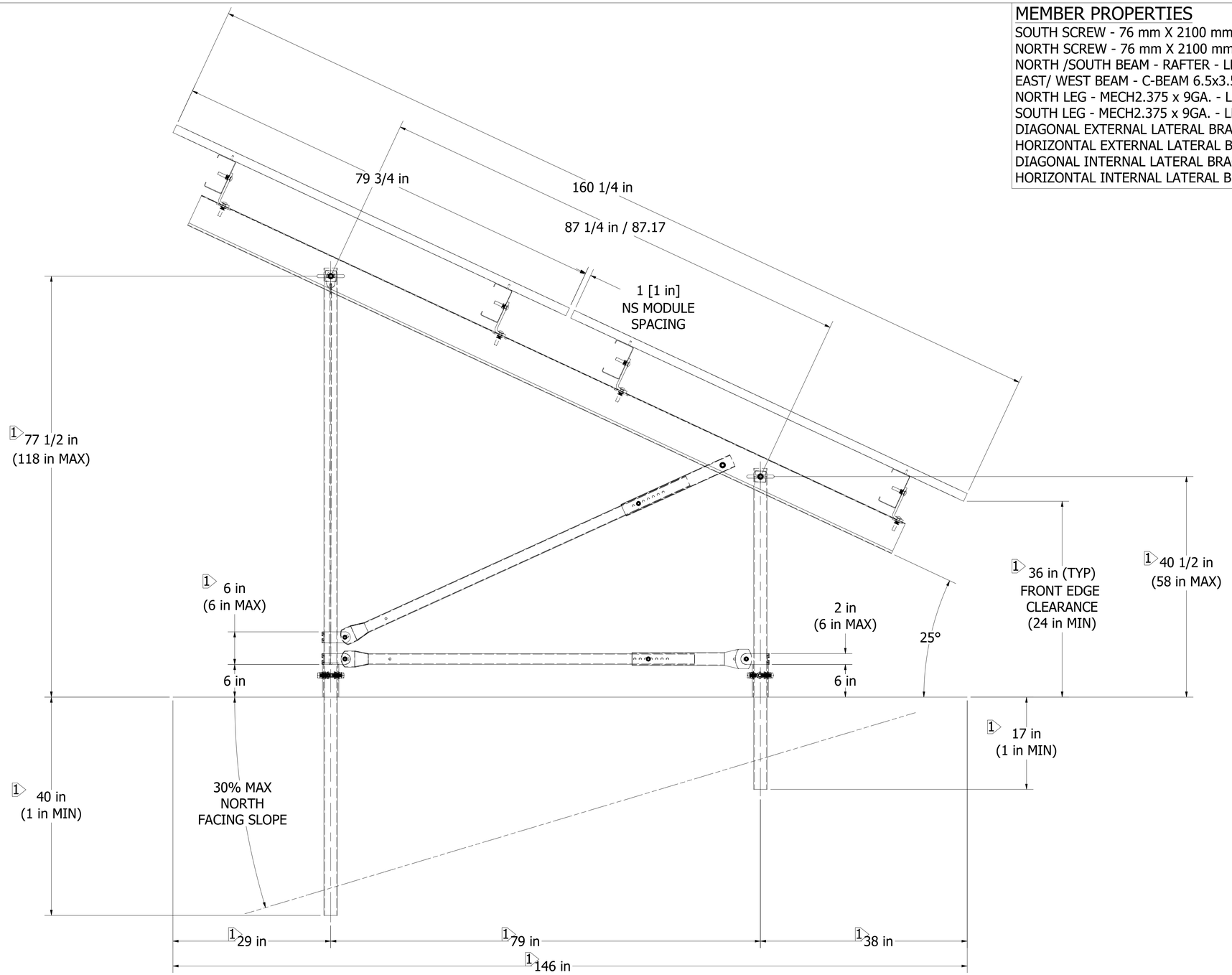
ENG. APPROVED BY: MF -	PROJ. ENG. APPROVED BY: XX -		
MFG. APPROVED BY: SS -	PROJECT NAME: SEBAGO SOLAR		SHEET SIZE: D
PROJECT NUMBER: 19-XXXX	CLIENT: Sebago Solar	MODULE: TBD	REV: 0 / SHEET NUMBER: 4 OF 6

MEMBER PROPERTIES

SOUTH SCREW - 76 mm X 2100 mm
NORTH SCREW - 76 mm X 2100 mm
NORTH /SOUTH BEAM - RAFTER - LENGTH = 142.75 in
EAST/ WEST BEAM - C-BEAM 6.5x3.5x0.1017 - LENGTH = 489.70 in
NORTH LEG - MECH2.375 x 9GA. - LENGTH = 119.00 in
SOUTH LEG - MECH2.375 x 9GA. - LENGTH = 59.00 in
DIAGONAL EXTERNAL LATERAL BRACE - MECH2.360 x 13GA. - LENGTH = 23.00 in
HORIZONTAL EXTERNAL LATERAL BRACE - MECH2.360 x 13GA. - LENGTH = 22.00 in
DIAGONAL INTERNAL LATERAL BRACE - MECH2.000x12GA.- LENGTH = 70 in
HORIZONTAL INTERNAL LATERAL BRACE - MECH2.000x12GA.- LENGTH = 65 in



SIDE ELEVATION VIEW
SCALE 1/10

NOTES:
1. TYPICAL INSTALLATION DIMENSIONS MAY BE ADJUSTED TO SUIT FIELD CONDITIONS WITHIN THE TOLERANCES PROVIDED.
2. LEGS SHALL BE INSTALLED PLUMB, IF MECHANICALLY POSSIBLE. MAXIMUM 3° OUT OF PLUMB.
3. LATERAL BRACES ARE DESIGNED TO ALLOW FOR 7" OF TOTAL ADJUSTMENT. IF FIELD CONDITIONS REQUIRE ADDITIONAL ADJUSTMENT AND LATERAL BRACES ARE TOO LONG, THEY MAY BE CUT DOWN AND DRILLED TO FIT BY THE RACK INSTALLER. IF THEY ARE TOO SHORT, NEW LATERAL BRACES MAY BE ORDERED TO FIT AT THE PURCHASER'S EXPENSE.
4. FOR SOUTH FACING SLOPES, THE DIAGONAL AND HORIZONTAL LATERAL BRACES CAN BE SWITCHED TO PROVIDE ADDITIONAL ADJUSTABILITY.
5. ON NORTH FACING SLOPES LEGS CAN BE FULLY EXTENDED TO MEET MINIMUM FRONT EDGE REQUIREMENTS. ALL LEGS REQUIRE A MINIMUM OF 1 INCH EMBEDMENT BELOW GRADE. FULL EXTENSION OF LEGS MAY RESULT IN LATERAL BRACES NOT FITTING. IF THEY ARE TOO SHORT, NEW LATERAL BRACES MAY BE ORDERED TO FIT AT THE PURCHASER'S EXPENSE.

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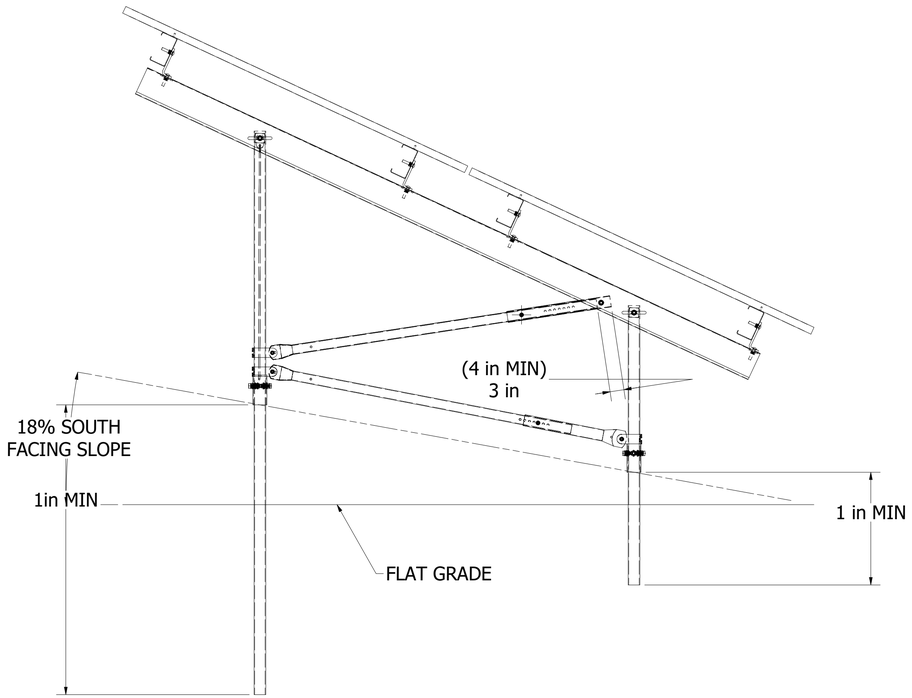
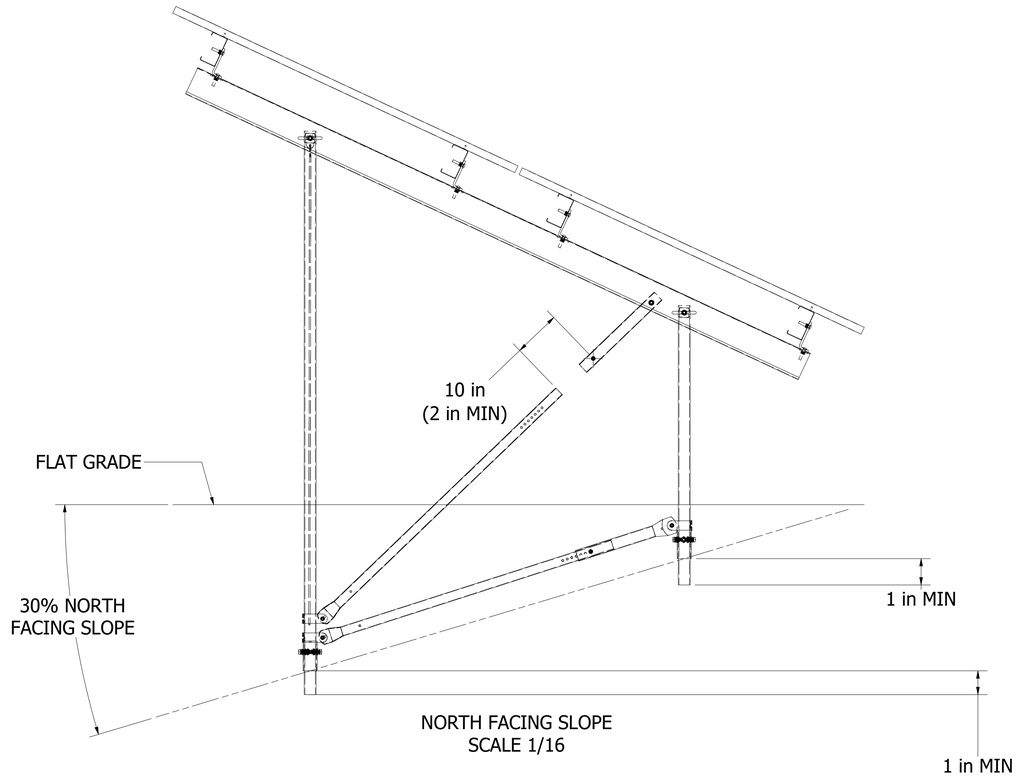
19-XXXX	Sebago Solar	TBD	0 / 5 OF 6



SOUTH FACING SLOPE
SCALE 1/16



NORTH FACING SLOPE
SCALE 1/16

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PROJECT NUMBER	CLIENT	MODULE	REV / SHEET NUMBER
19-XXXX	Sebago Solar	TBD	0 / 6 OF 6

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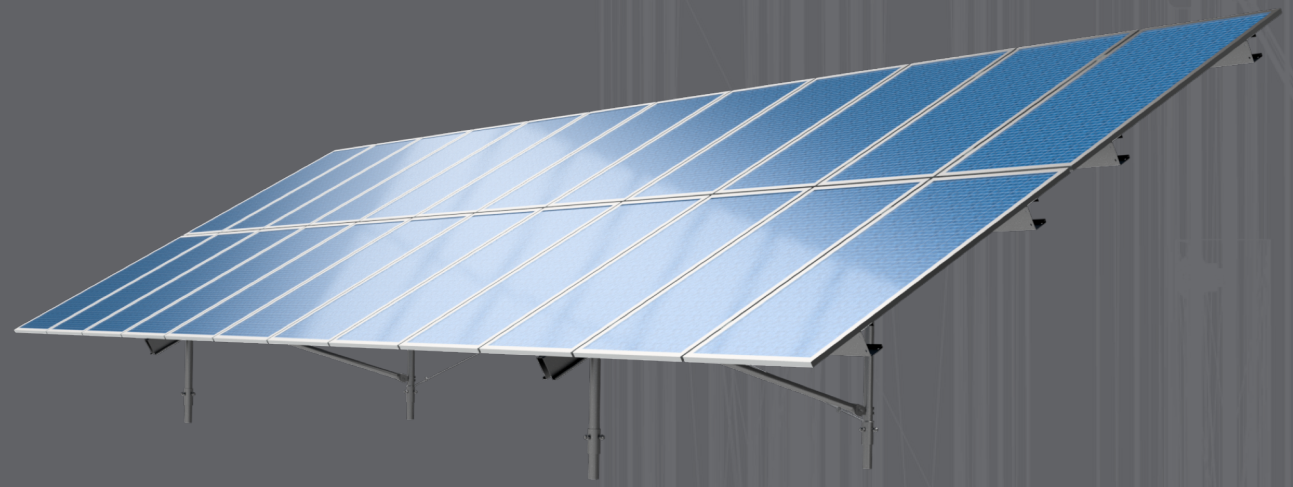

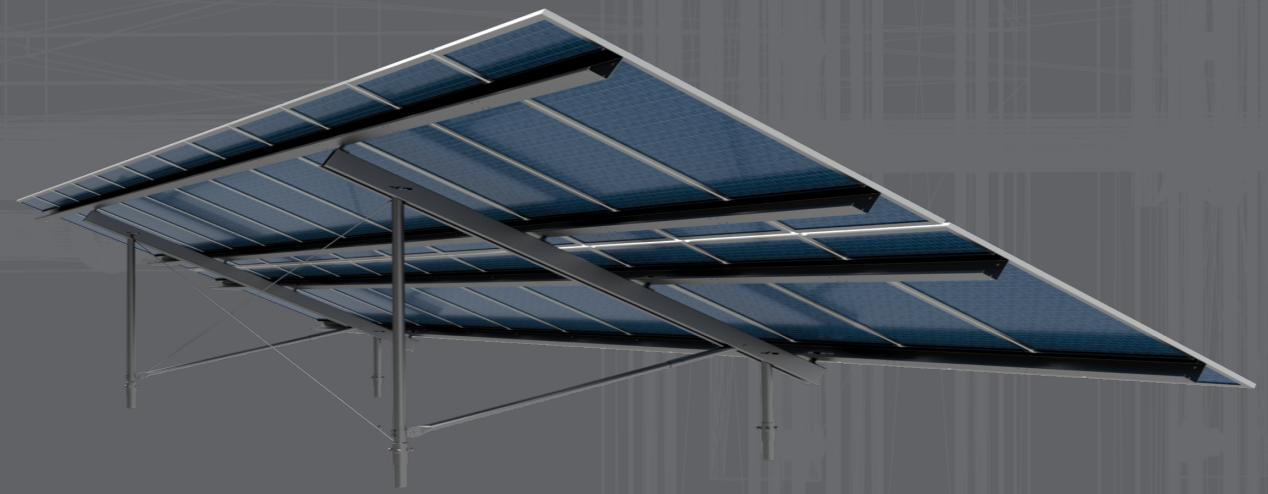

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GLIDE - TGP

Fixed-Tilt Ground Mount

OVERVIEW

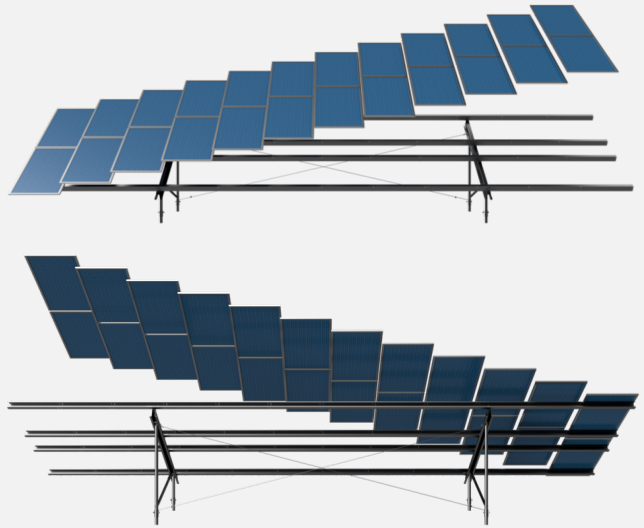
GLIDE Portrait (TGP) is TerraSmart's next generation fixed-tilt ground mount racking solution. TGP is the culmination of ten years and over 3 gigawatts of installed-capacity experience in engineering, manufacturing and construction. As a result, GLIDE is currently the most economical racking system in TerraSmart's fixed-tilt ground mount racking portfolio. Leveraging the benefits of TerraSmart's widely deployed proprietary ground screw foundation, TGP is designed to work in any soil condition.

TerraSmart's state-of-the-art surveying, rock drilling and installation equipment removes project risks and provides post-installation documentation for increased project bankability. All of these benefits improve upon TerraSmart's industry-leading construction efficiency and raise the bar by offering customers increased install efficiency, reduced labor hours and tenders significant savings in material costs.

START SMART. BUILD SMART.

SPECS

Specifications Member Material	ASTM AIOII Cold Rolled Steel, Hot Dip Galvanized to ASTM A653 (G90 min) ASTM A 500 Hollow Structural Steel, Hot Dip Galvanized to ASTM A123 (3.0 mils min)
Hardware Material	316 Stainless Steel for Module Mounting Hardware Carbon Steel Alloy, Magni Coated to ASTM F2833 for all Structural Hardware
Foundation Options	Ground Screw Portrait
Module Orientation	Portrait
Module Mounting	Bottom Mount Integrated Electrical Bonding
Tilt Angle	5 to 40 degrees
Wire Management	Incorporated in Structure – NEC Compliant
Configuration	Portrait: Up to 2 high x up to 12 wide
Slopes	East or West facing, up to 30%, north or south facing, up to 36%
Load Capacities	Project Specific; Up to 170 MPH wind speed and 100 PSF Ground Snow Load
Certifications	UL 2703, Edition 1; CPP Wind Tunnel Tested
Warranty	20 - year limited warranty



FAST
- Exponentially Less Hardware
- Integrated Electrical Bonding
- Included Wire Managment

COMPLIANT
- UL 2703, Edition 1 Listed
- NEC Compliant
- Wind Tunnel Tested

VERSATILE
- Numerous Configurations
- Adapts to Steep Slopes
- Accommodates Arduous Soils

LIGHT
- Lighter / Stiffer Components
- Less Freight Costs

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