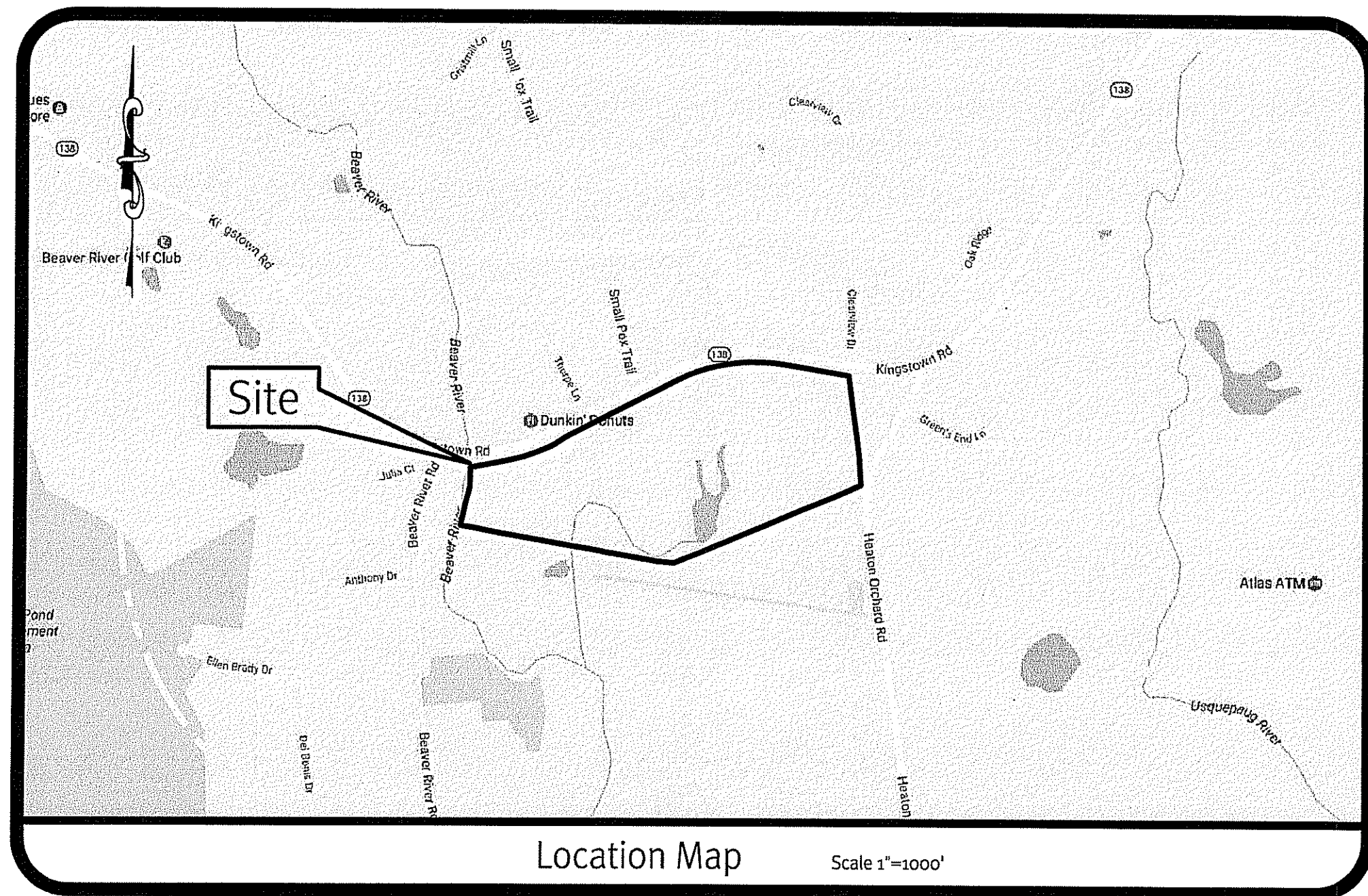


RIDEM Preliminary Determination

WED Kingstown Solar II

421 Kingstown Road
 Richmond, Rhode Island
 Assessor's Plat 6E Lot 35



Sheet Index

1. Cover Sheet
 2. 1/2 Mile Aerial & USGS
 3. Existing Conditions Plan
 4. Grading Plan
 5. Soil Erosion Control Plan
 6. Detail Sheet
- (1 of 1) Boundary Survey Plan
 (1 of 1) One-Line Diagram

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JUN 16 2017 FILE # 17-001A
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Jonathan D. Senechal

MAY 24 2017

SESC / O&M
 The Soil Erosion and Sediment Control Plan (SESC) and Operations and Maintenance Plan (O&M) are required documents with this plan set and must be maintained by the contractor and owner onsite.

DiPrete Engineering
 Two Stafford Court Cranston, RI 02920
 tel 401-949-1000 fax 401-664-6006 www.diprete-eng.com
 Boston • Providence • Newport

KEVIN C. MORIN
 No. 0051
 REGISTERED PROFESSIONAL ENGINEER CIVIL

WIND ENERGY Development LLC
 www.WindEnergyDevelopmentLLC.com

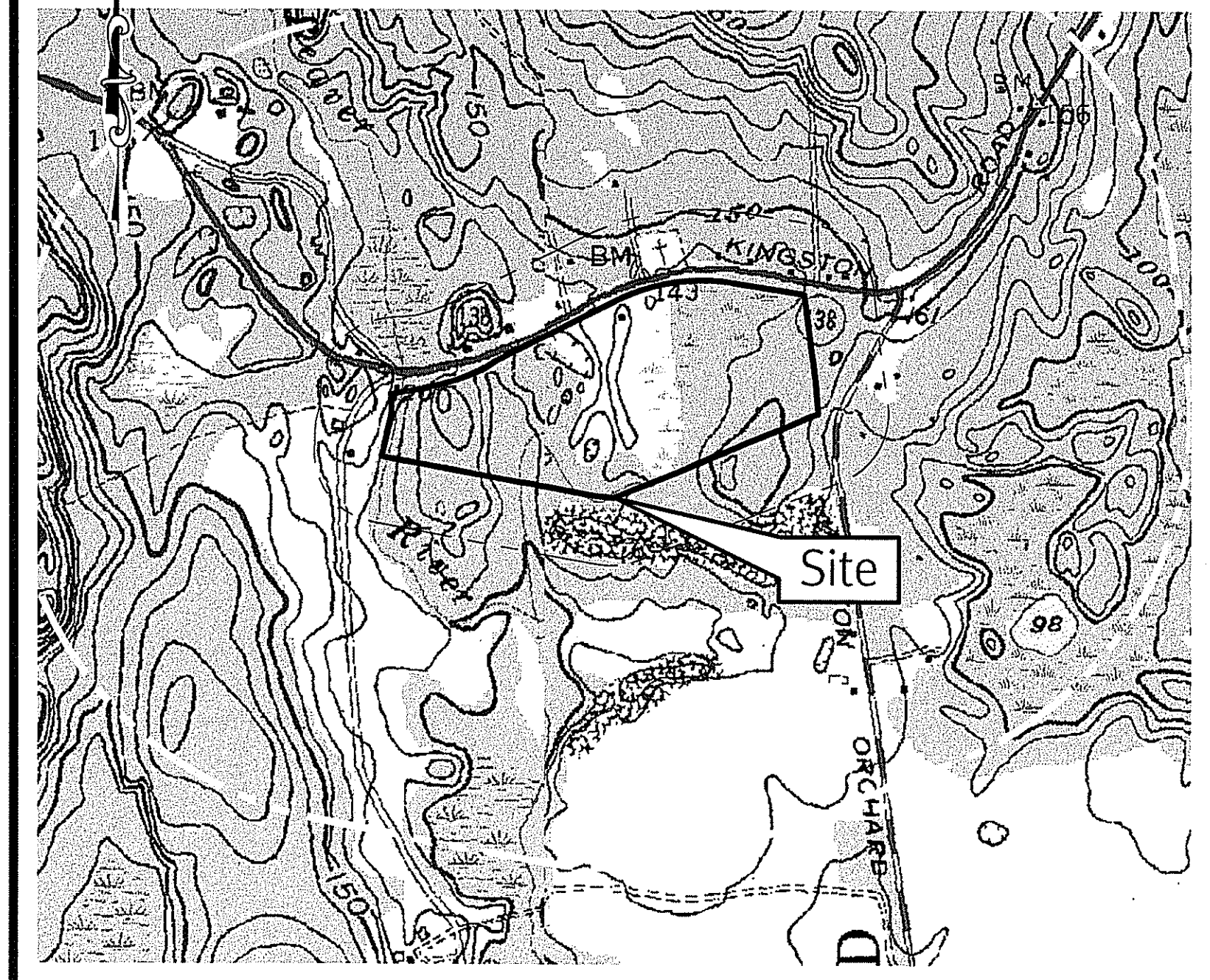
This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	Design By: J.A.C.
1	02-24-2017	PERMITS RESPONSE TO COMMENTS	J.A.C.
2	02-24-2017	RIDEM PRELIMINARY DETERMINATION	J.A.C.
3	02-24-2017	DEVELOPMENT PLAN SUBMISSION	J.A.C.
4	02-24-2017		J.A.C.

Cover Sheet
WED Kingstown Solar II
 Richmond, Rhode Island
 Assessor's Plat 6E, Lot 35
 Applicant: **WED Kingstown Solar II, LLC**
 421 Kingstown Road
 North Kingstown, Rhode Island 02882
 tel (401) 295-4998
 Owner: **John & Cindy Duncan**
 421 Kingstown Road
 North Kingstown, Rhode Island 02892
 tel (401) 295-4998
 Copyright 2017 by DiPrete Engineering Associates, Inc.

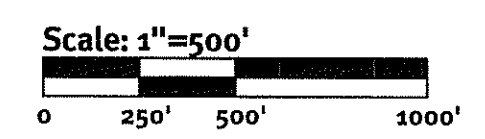
Z:\diprete\projects\0601-016-kingstown-solar\autocad-drawings\0601-016-dim-wedp-ric-01.dwg PlotDate: 5/23/2017

Z:\main\projects\0601-016 kingstown road solar\autocad drawings\0601-016-dsm-wetp-etc.dwg Plotted: 5/23/2017



USGS Map Scale: 1"=1000'

Photo obtained from the RI-GIS.



Boundary Data:

PROPERTY LINE	—————
1/2 MILE RADIUS	—————
500' RADIUS	- - - - -

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAY 16 2017 FILE # 17-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Matthew D. Wensek

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

MAY 2 2017

DiPrete Engineering
 Two Stafford Court Cranston, RI 02920
 tel. 401-943-1000 fax. 401-664-6066 www.diprete-eng.com

Boston • Providence • Newport

KEVIN C. MORIN
 No. 7051
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

WIND ENERGY Development, LLC
 www.WindEnergyDevelopmentLLC.com

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	By:
1	02-24-2017	RI-DM Form Submission	JAC
2	03-23-2017	RI-DM Form Submission	JAC
3	03-23-2017	RI-DM Form Submission	JAC

Drawn By: J.A.C. Design By: J.A.C.

1/2 Mile Aerial and USGS Map WED Kingstown Solar II
 Richmond, Rhode Island
 Assessors: Plat GE, Lot 35
 Applicant: **WED Kingstown Solar II, LLC**
 3760 Quaker Lane, North Kingstown, Rhode Island 02882
 tel. (401) 935-4998

Owner: **John & Cindy Duncan**
 419 Kingstown Road, West Kingstown, Rhode Island 02893
 tel. (401) 935-4998

DE Job No. 0601-016 Copyright 2017 by DiPrete Engineering, Associates, Inc.

General Notes:

- THE SITE IS LOCATED IN THE TOWN OF RICHMOND, RHODE ISLAND, ASSESSOR'S PLAT 6E LOT 35.
- THE SITE IS APPROXIMATELY 70.05± ACRES AND IS ZONED LI.
- THE OWNER OF AP 6E LOT 35 IS: JOHN & CINDY DUNCAN
419 KINGSTOWN ROAD
WEST KINGSTOWN, RI 02892
- THE SITE IS LOCATED IN FEMA FLOOD ZONES A AND X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44009C0160H AND 44009C0180H, MAP REVISED OCTOBER 19TH, 2010. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)

FEMA ZONE A - THIS SITE IS LOCATED IN FEMA FLOOD ZONE A. ZONE A ARE AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED.

ZONE X (UNSHADED) - THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS WHERE THERE IS MINIMAL FLOODING.
- THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE SURVEY MAY DISCLOSE.
- THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS A CLASS I SURVEY AS PERFORMED BY NATIONAL SURVEYORS-DEVELOPERS, INC. THE PLAN ITSELF CONFORMS ONLY TO A CLASS III STANDARD AS ADOPTED BY RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.
- SOIL MAPPING OBTAINED FROM SOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
- THE SITE IS WITHIN A:

NATURAL HERITAGE AREA ID#198 (RIEM)
- SOIL EVALUATIONS, WERE COMPLETED BY DIPRETE ENGINEERING ON 3/13/2017.
- TOPOGRAPHY OBTAINED FROM LIDAR. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD83.
- EXISTING CONDITIONS WITHIN PROPERTY WERE DETERMINED FROM AERIAL MAPPING AND SITE WALK PERFORMED ON 3/13/17.
- WETLANDS WERE DELINEATED BY MASON & ASSOCIATES, INC. PERFORMED ON 12/23/16.

Dimensional Regulations:

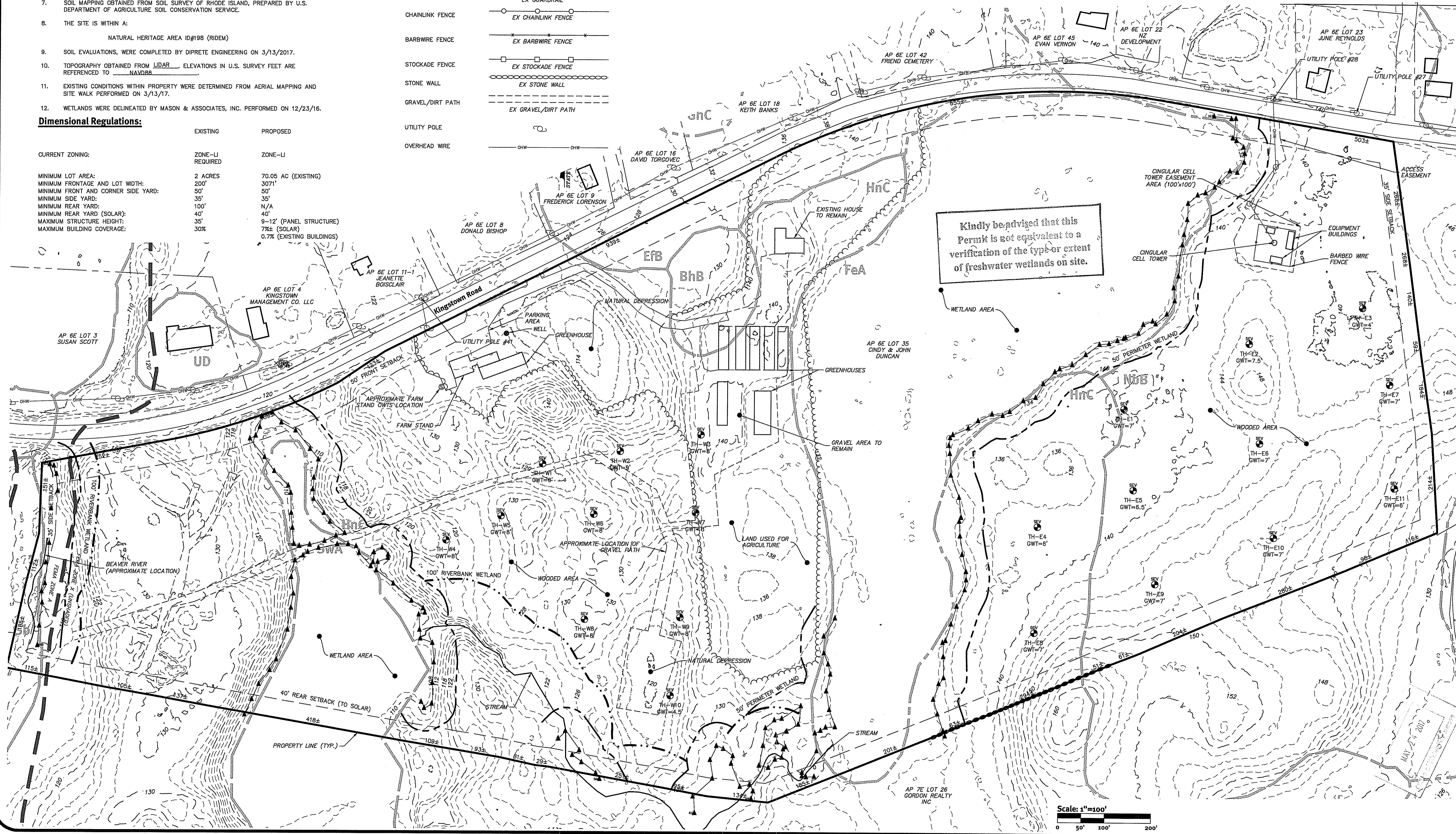
CURRENT ZONING:	EXISTING	PROPOSED
MINIMUM LOT AREA:	2 ACRES	70.05 AC (EXISTING)
MINIMUM FRONTAGE AND LOT WIDTH:	200'	3071'
MINIMUM FRONT AND CORNER SIDE YARD:	50'	50'
MINIMUM SIDE YARD:	35'	35'
MINIMUM REAR YARD:	100'	N/A
MINIMUM REAR YARD (SOLAR):	40'	40'
MAXIMUM STRUCTURE HEIGHT:	35'	9'-12' (PANEL STRUCTURE)
MAXIMUM BUILDING COVERAGE:	30%	7%± (SOLAR) 0.7% (EXISTING BUILDINGS)

Existing Data:

- SOIL BOUNDARY LINE: HkC, CaD
- EDGE OF PAVEMENT: EX EDGE OF PAVEMENT
- ASPHALT PAVEMENT
- CONCRETE
- BUILDING
- TREELINE: EX TREELINE
- TREES
- GUARDRAIL: EX GUARDRAIL
- CHAINLINK FENCE: EX CHAINLINK FENCE
- BARBWIRE FENCE: EX BARBWIRE FENCE
- STOCKADE FENCE: EX STOCKADE FENCE
- STONE WALL: EX STONE WALL
- GRAVEL/DIRT PATH: EX GRAVEL/DIRT PATH
- UTILITY POLE
- OVERHEAD WIRE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 16 2017 FILE # 17-001A
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wencel



Scale: 1"=100'
0 50' 100' 200'

KEVIN C. MORIN
REGISTERED PROFESSIONAL ENGINEER
CIVIL

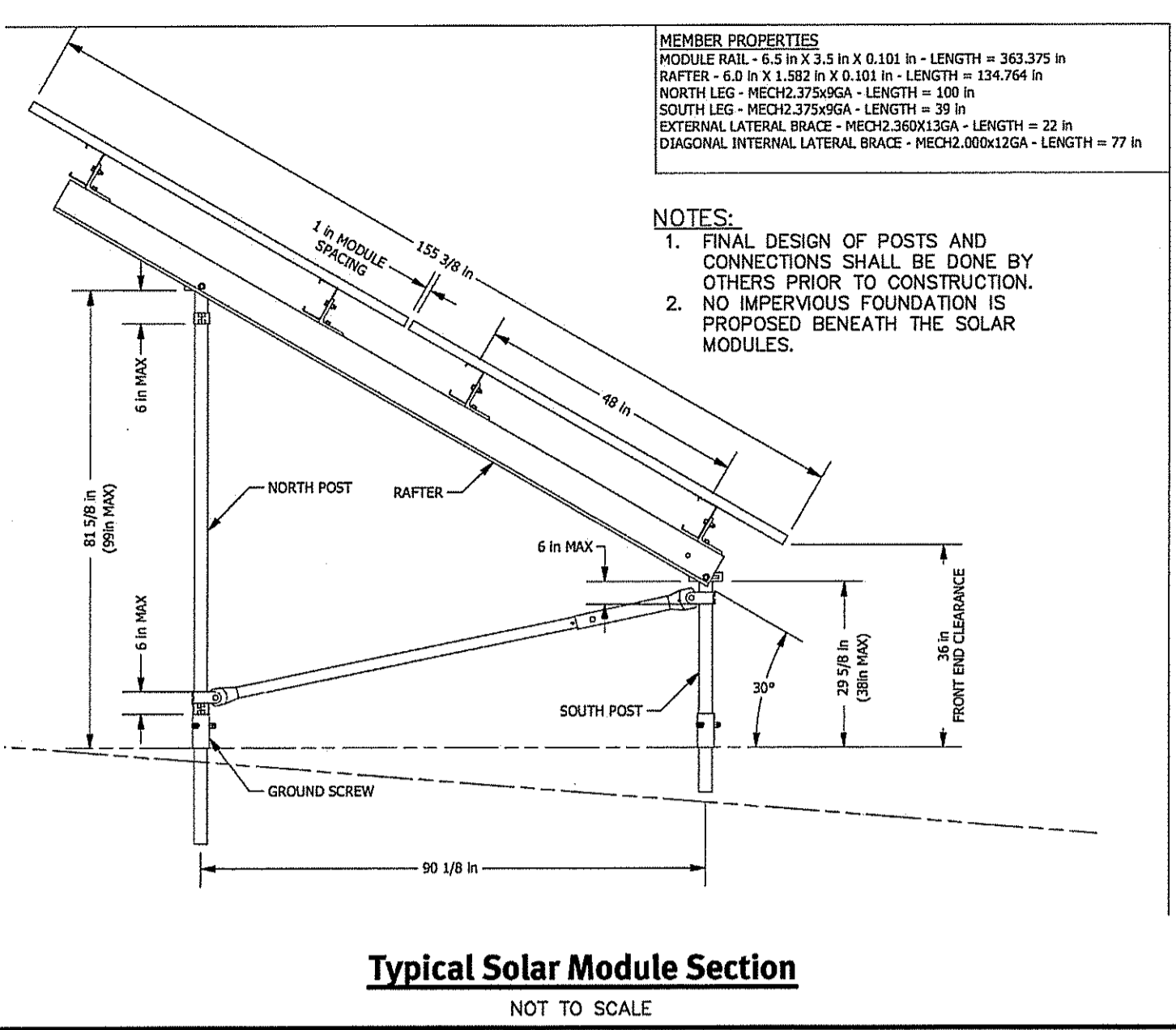
WIND ENERGY Development LLC
www.WindEnergyDevelopmentLLC.com

This regulatory submission set shall not be used for construction purposes unless stamped, issued for Construction and signed by a Diprete Engineering representative.

No.	Date	Description	By:
1	5/30/2017	RIEM Success to Complete	JAC
2	03/26/2017	RIEM Preliminary Determination	JAC
3	03/26/2017	RIEM Final Determination	JAC
4	03/26/2017	RIEM Final Determination	JAC

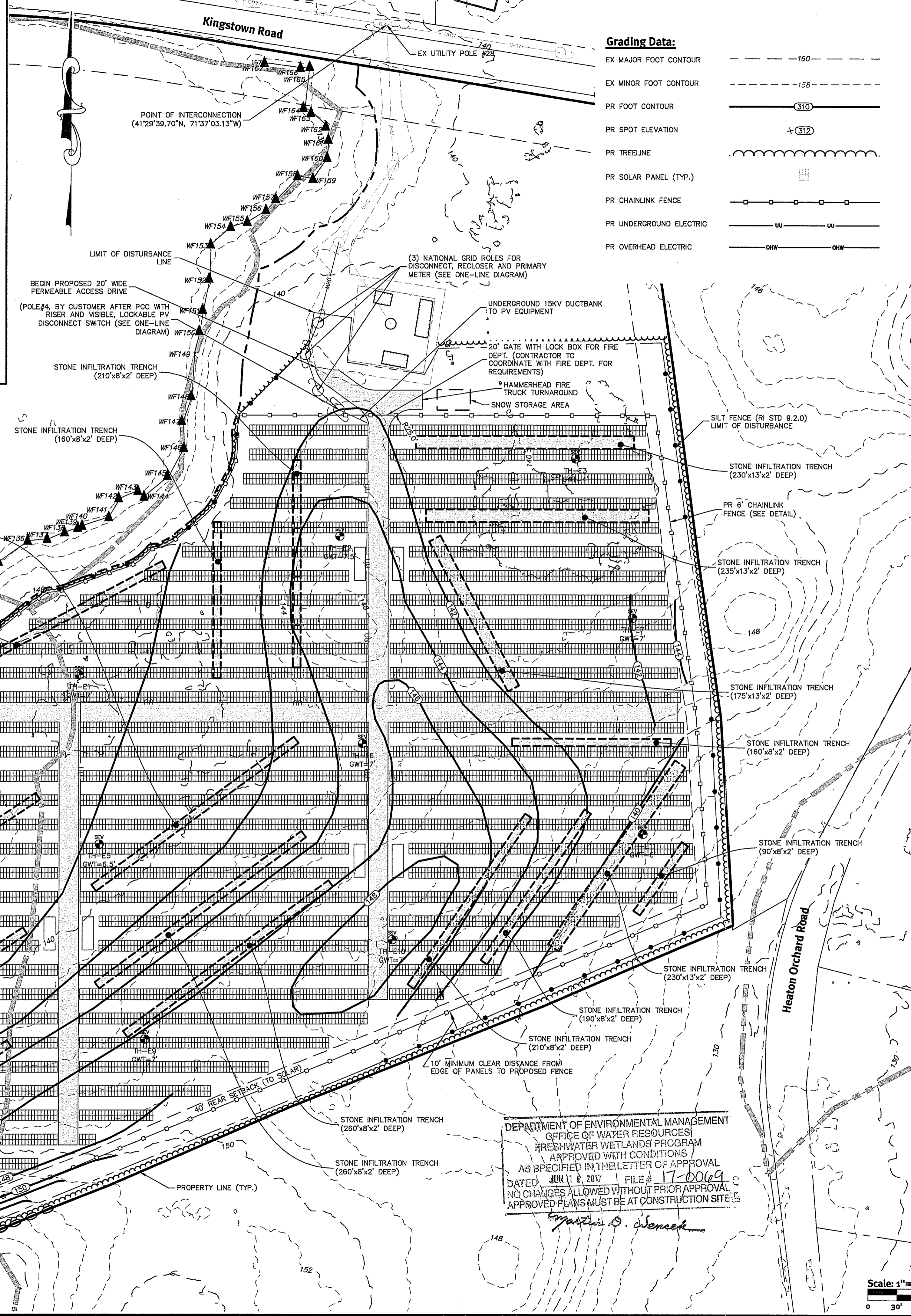
Drawn By: JAC Design By: JAC

Existing Conditions Plan
WED Kingstown Solar II
Richmond, Rhode Island
Assessors Plat 6E Lot 35
Applicant: **WED Kingstown Solar II, LLC**
3766 Quaker Lane, North Kingstown
West Kingstown, Rhode Island 02892
tel: (401) 295-9998



AP 6E LOT 35
 CINDY & JOHN
 DUNCAN

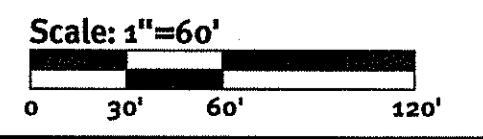
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JUN 18 2017 FILE # 17-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin O. Senecal

- General Notes:**
- THE SITE IS LOCATED IN THE TOWN OF RICHMOND, RHODE ISLAND, ASSESSOR'S PLAT 6E LOT 35.
 - THE SITE IS APPROXIMATELY 70.05± ACRES AND IS ZONED LI.
 - THE OWNER OF AP 6E LOT 35 IS: JOHN & CINDY DUNCAN
419 KINGSTOWN ROAD
WEST KINGSTON, RI 02892
 - THIS SITE IS LOCATED IN FEMA FLOOD ZONE A. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44090C0160H AND 44090C0180H, MAP REVISED OCTOBER 19TH, 2010. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)
FEMA ZONE A - THIS SITE IS LOCATED IN FEMA FLOOD ZONE A. ZONE A ARE AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED.
 - THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE SURVEY MAY DISCLOSE.
 - THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS A CLASS I SURVEY AS PERFORMED BY NATIONAL SURVEYORS-DEVELOPERS, INC. THE PLAN ITSELF CONFORMS ONLY TO A CLASS III STANDARD AS ADOPTED BY RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.
 - SOIL MAPPING OBTAINED FROM SOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
 - THE SITE IS NOT WITHIN A:
GROUNDWATER PROTECTION AREA (RIDEM)
NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (CRMC)
SALT PONDS SPECIAL AREA MANAGEMENT PLAN (CRMC)
GROUNDWATER PROTECTION OVERLAY DISTRICT (TOWN)
 - THE SITE IS WITHIN A:
NATURAL HERITAGE AREA ID#198 (RIDEM)
 - THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
 - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
 - EROSION CONTROL MEASURES
 - SHORT TERM MAINTENANCE
 - ESTABLISHMENT OF VEGETATIVE COVER
 - CONSTRUCTION POLLUTION PREVENTION
 - SEQUENCE OF CONSTRUCTION
 - OPERATIONS AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS THE FOLLOWING:
 - LONG TERM MAINTENANCE
 - LONG TERM POLLUTION PREVENTION
 - THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT:
HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
 - DETAILED SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INCORPORATED AT THE PRELIMINARY DESIGN STAGE AND WILL CONFORM TO RIDOT BEST MANAGEMENT PRACTICES.
 - THE SITE IS SERVICED BY PRIVATE WELL AND PRIVATE OWTs, WHICH IS TO REMAIN.
 - THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE.
 - SOIL EVALUATIONS WERE COMPLETED BY DIPRETE ENGINEERING ON MARCH 13TH, 2017.
 - THERE ARE NO HISTORIC CEMETERIES LOCATED ON SITE.
 - TRENCH DEPTHS NOTED ARE FOR AREAS OF MINIMAL FILL WHERE BOTTOM TRENCH IS LOCATED IN NATIVE SOIL. DEPTH SHALL BE INCREASED WHERE APPLICABLE TO ALLOW FOR BOTTOM TRENCHES IN NATIVE SOIL.



Diprete Engineering
 Two Stafford Court Cranston, RI 02920
 tel: 401-943-1000 fax: 401-464-6006 www.diprete-eng.com

Boston · Providence · Newport

KEVIN C. MORIN
 No. 7051
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

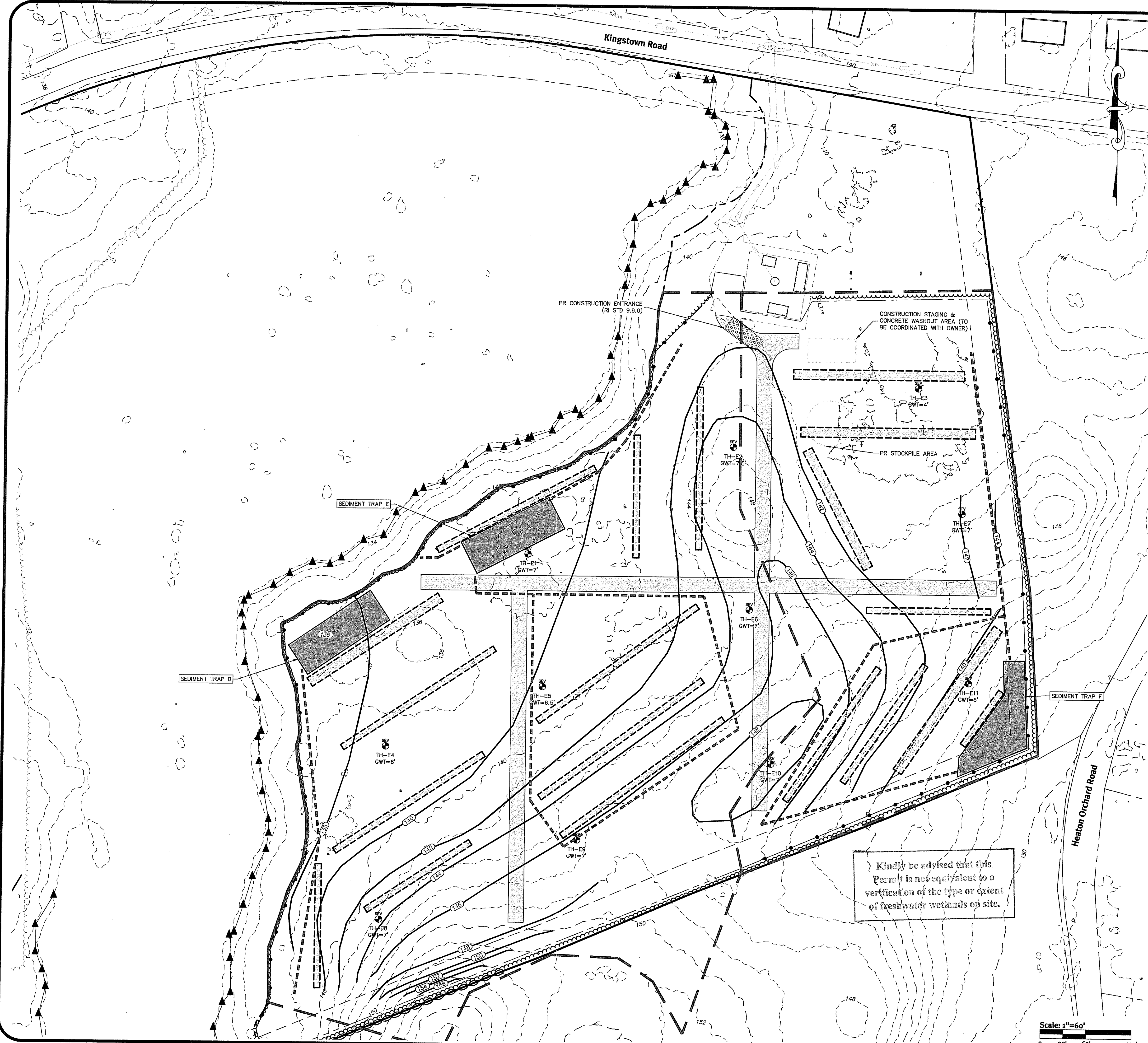
WIND ENERGY Development LLC
 www.WindEnergyDevelopmentLLC.com

This regulatory submission set shall not be used for construction unless stamped/issued for Construction and signed by a Diprete Engineering representative.

No.	Date	Description	By:
1	03/23/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
2	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
3	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
4	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
5	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
6	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
7	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
8	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
9	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
10	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
11	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
12	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
13	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
14	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
15	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
16	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
17	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
18	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
19	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC
20	03/24/2017	RI/MA/REGISTRATION TO COMMENCE	JAC

Drawn By: J.A.C. Design By: J.A.C.

Grading Plan
WED Kingstown Solar II
 Richmond, Rhode Island
 Assessor's Plat 6E, Lot 35
 Owner:
WED Kingstown Solar II, LLC John & Cindy Duncan
 3760 Quaker Lane, North Kingstown, West Kingston, Rhode Island 02892
 Rhode Island 02892
 tel: (401) 955-4998
 DE Job No: 0604-016 Copyright 2017 by Diprete Engineering Associates, Inc.



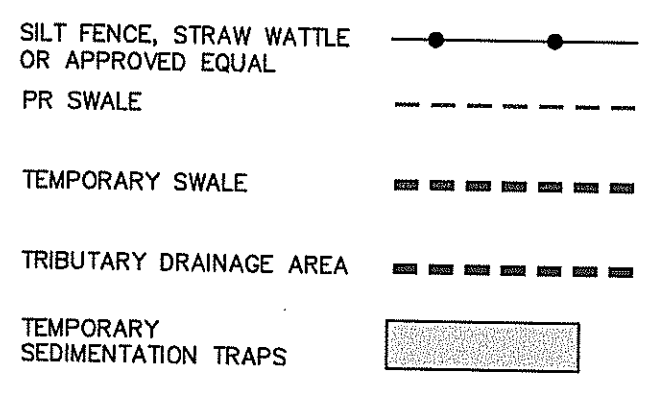
SESC Notes:

1. ALL EXISTING UTILITIES SHOWN ARE FROM MSIBL INFORMATION, DRAWINGS FROM OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED PLANS OF RECORD AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS SHALL BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO EXCAVATION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE SITE CONTRACTOR'S RESPONSIBILITY.
2. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON KINGSTOWN ROAD.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS TO INCLUDE BUT NOT LIMITED TO GRAVEL, TREES, STUMPS AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK SHALL BE RESTORED TO MATCH THE DESIGN PLANS.

General Notes:

1. THE SITE IS PROPOSED TO BE BUILT IN ONE PHASE, EACH CATCHMENT AREA IS UNDER 5 ACRES.
2. CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
3. ALL EROSION CONTROL, TEMPORARY SWALES, TEMPORARY SEDIMENTATION TRAPS, ETC. SHALL BE AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN LATEST EDITION.
4. TEMPORARY SWALES SHALL BE USED TO CONTROL RUNOFF DURING CONSTRUCTION. EROSION CONTROL MATS SHALL BE INSTALLED IF NECESSARY TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES SHALL BE REMOVED.
5. ONCE THE SEDIMENTATION TRAP IS NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENTATION TRAP SHALL REMOVED AND AREA TO BE BROUGHT TO FINAL DESIGN GRADES.
6. SEE SECTION 1.2 OF THE SESC FOR SEQUENCE OF CONSTRUCTION ACTIVITY.
7. SEE SECTION 2.2 OF THE SESC FOR PROJECT PHASING.
8. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER.
9. FOR CONSTRUCTION PHASING SEE SECTION 2.2 OF SOIL EROSION AND SEDIMENT CONTROL PLAN.
10. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.), RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: [HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP](http://www.dot.ri.gov/business/contractorsandconsultants.php).

Legend:



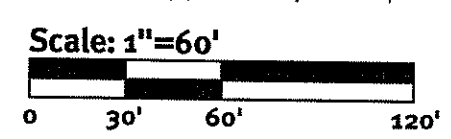
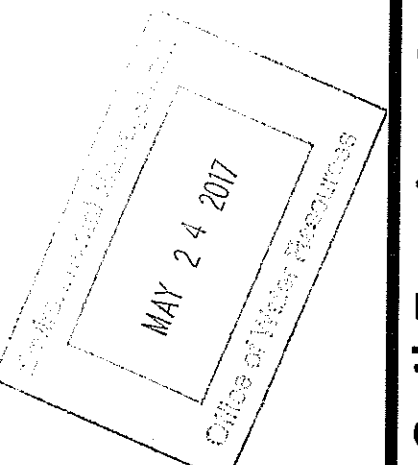
Construction Phasing:

- 1- FLAG/SURVEY LIMIT OF DISTURBANCE. EACH TRIBUTARY DRAINAGE AREA SHALL DISTURB A MAXIMUM OF 5 ACRES. INSTALL PERIMETER EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT TRAP).
- 2- CLEAR AND GRUB SITE, INSTALL TEMPORARY SWALES AND SEDIMENTATION TRAPS.
- 3- RE-GRADE SITE AND LOAM & SEED ALL DISTURBED AREAS. STABILIZE ALL AREAS.
- 4- CONSTRUCT STONE INFILTRATION TRENCHES AND BERMS.
- 5- REMOVE TEMPORARY SWALES AND SEDIMENTATION TRAPS AFTER TRIBUTARY AREAS ARE FULLY STABILIZED.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands of site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 13 JUN 18 2017 FILE # 17-00109
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Matthew D. Wenczek



DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel. 401-943-1000 fax. 401-943-6006 www.diprete-eng.com
BOSTON • PROVIDENCE • NEWPORT

KEVIN C. MORIN
REGISTERED PROFESSIONAL ENGINEER
CIVIL

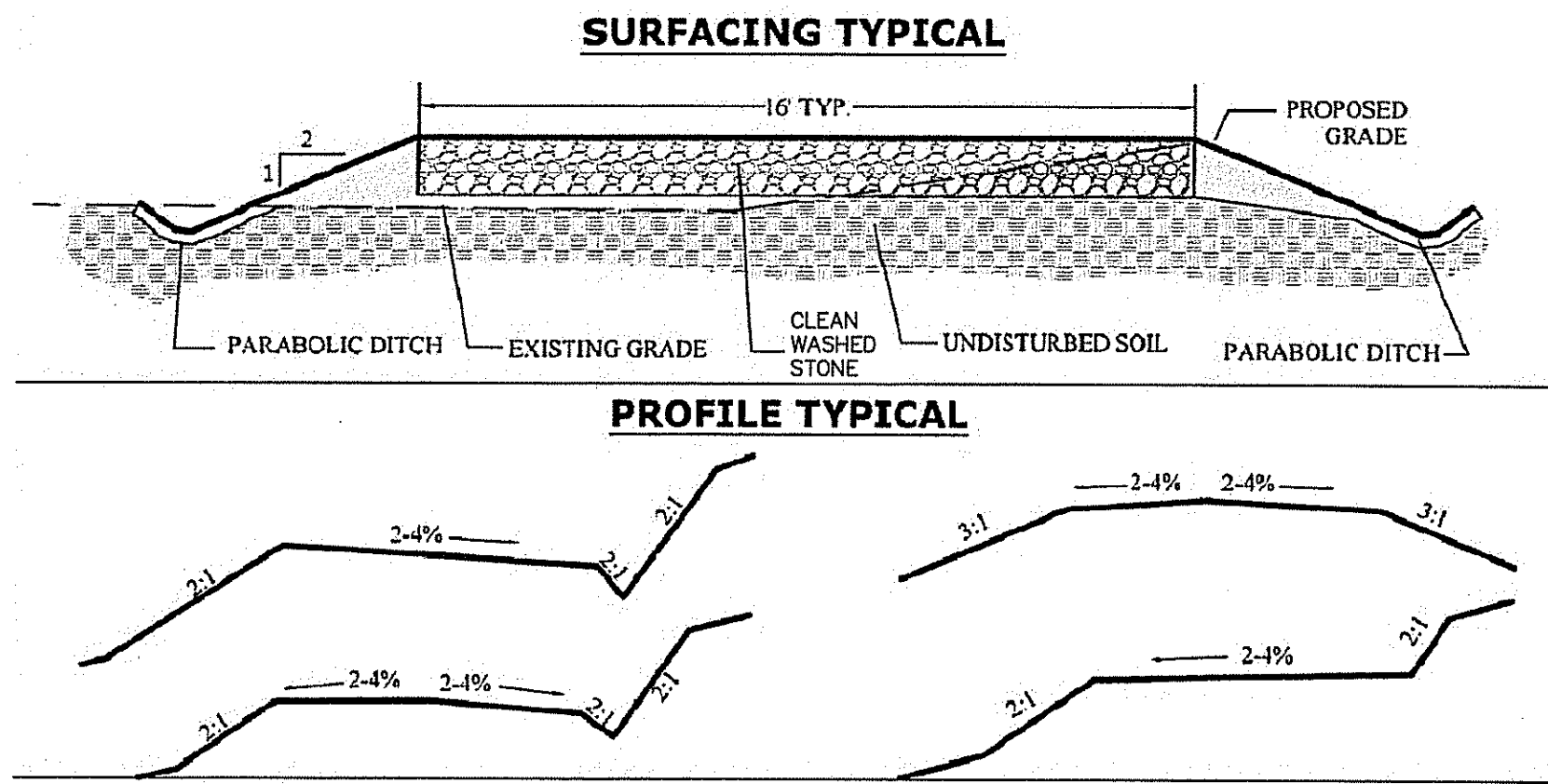
WINDY ENERGY Development LLC
www.WindyEnergyDevelopmentLLC.com

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	Design By: J.A.C.
1	03-23-2017	RIOT Response to Comments	J.A.C.
2	05-25-2017	RIOT Preliminary Administration	J.A.C.
3	05-25-2017	RIOT Final Administration	J.A.C.
4	05-25-2017	RIOT Final Permit Submission	J.A.C.
5			

Drawn By: J.A.C.

Soil Erosion Control Plan
WED Kingstown Solar II
Richmond, Rhode Island
Assessors' Plat 04E, Lot 35
Owner:
WED Kingstown Solar II, LLC
John Durcan
3760 Quaker Lane, North Kingstown
West Kingstown, Rhode Island 02892
tel. (401) 295-4998
DE job No. 0561-016 Copyright 2017 by DiPrete Engineering, Associates, Inc.



SURFACING SPECIFICATIONS

Conditions:	Road Thickness	Stone Size	Fines
Base Layer with Geotextile Fabric (not excessively wet)	6" Min.	3-3 1/2	0-6%
Base Layer with Geotextile Fabric (wet conditions)	6" Min.	3-3 1/2	0-6%

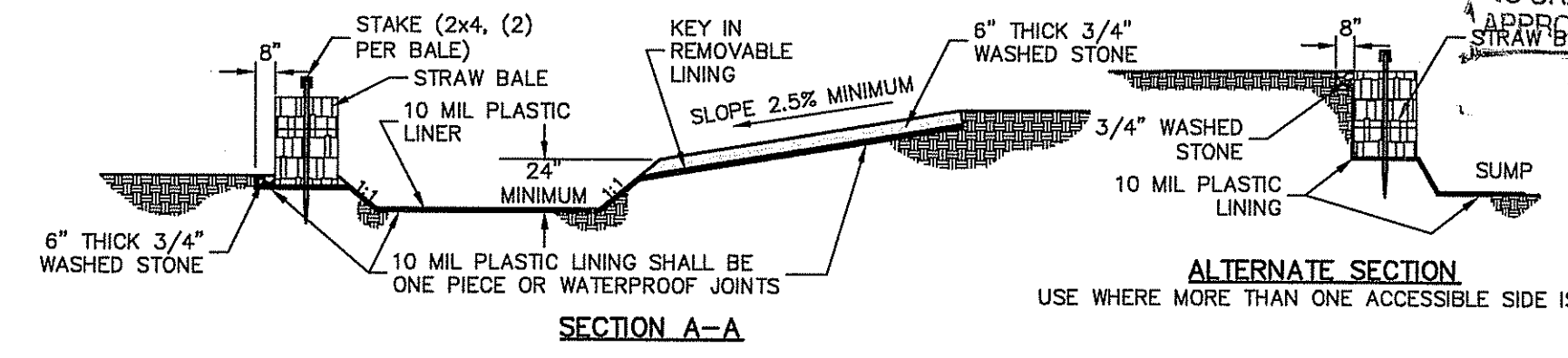
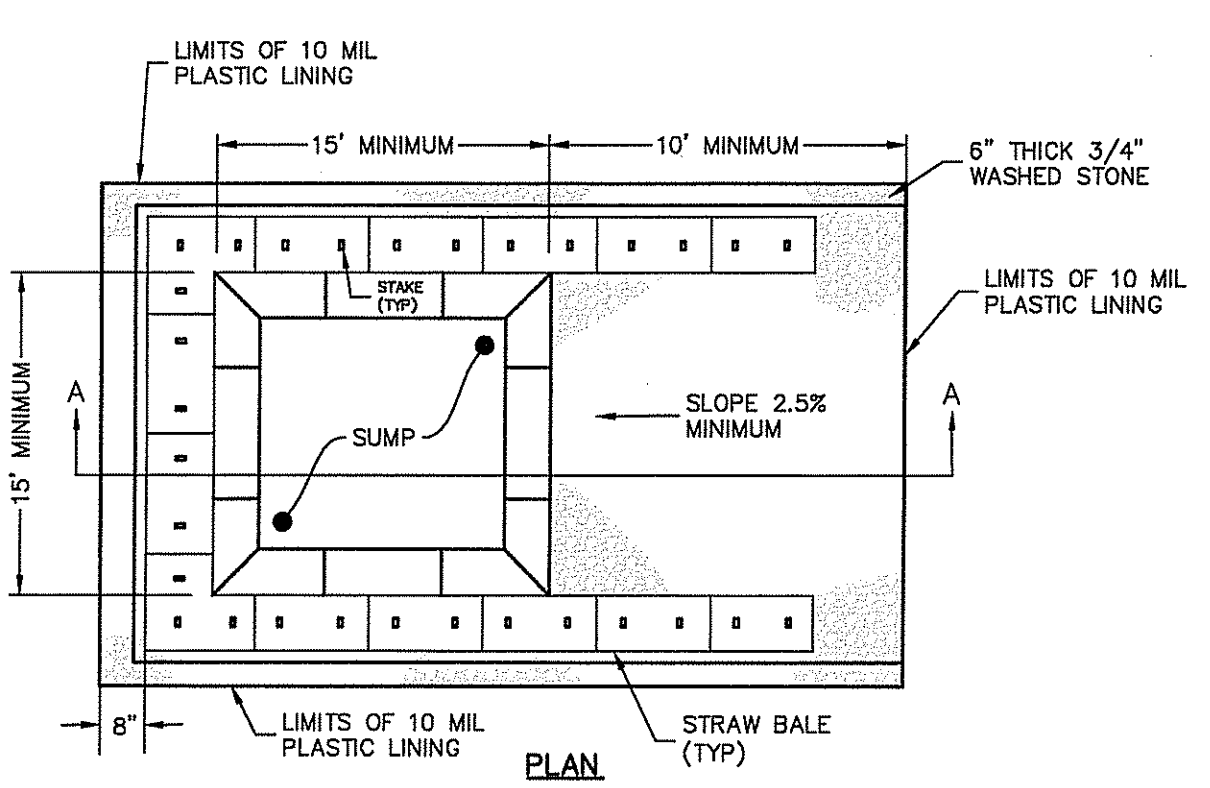
CONSTRUCTION NOTES:
 A. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION.
 B. FIXED EROSION CONTROLS AND SITE STABILIZATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPROVED BMPs, OR PURSUANT TO PROJECT SPECIFIC PERMITS.
 C. TREES, STUMPS, ROOTS, BRUSH AND WEEDS SHALL BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAY.
 D. ON WEAK BEARING SOIL, SUCH AS LOOSE ALLUVIAL, OR WETLAND SOILS, SURFACE TREATMENTS SHOULD BE UNDERSOIL WITH WOODEN GIROTTIES.
 E. AT MINIMUM, ROADSIDE DITCHES SHALL BE 1-FT BELOW ROAD SURFACE.
 F. DISCHARGE PITS, FOR DITCHES SHALL NOT BE NEAR WETLANDS OR STREAMS, AND OR BE LOCATED AT THE DIRECTION OF THE EPSCS.

MATERIAL SPECIFICATIONS

Sieve Designation	Percentage by Mass (Weight) Passing Square Mesh Sieves
90mm (3.5 inch)	100
75 mm (3 inch)	90-100
50 mm (2 inch)	75-100
25 mm (1 inch)	50-80
12.5mm (1/2 inch)	30-60
4.75 mm (No. 4)	15-40
75µm (No. 200)	0-6

DENSE GRADED CRUSHED STONE FOR SUBBASE:
 A. Dense graded crushed stone for subbase shall consist of clean, hard, uniformly graded, crushed stone. It shall be sufficiently free from dirt, deleterious material, and pieces that are structurally weak and shall meet the following requirements:
 B. Source of material shall be obtained from areas stripped and cleaned of soil and debris before blasting.
 C. Material coarser than the 4.75 mm (No. 4) sieve shall not be more than 30 percent, by mass (weight), of this and/or elongated pieces.

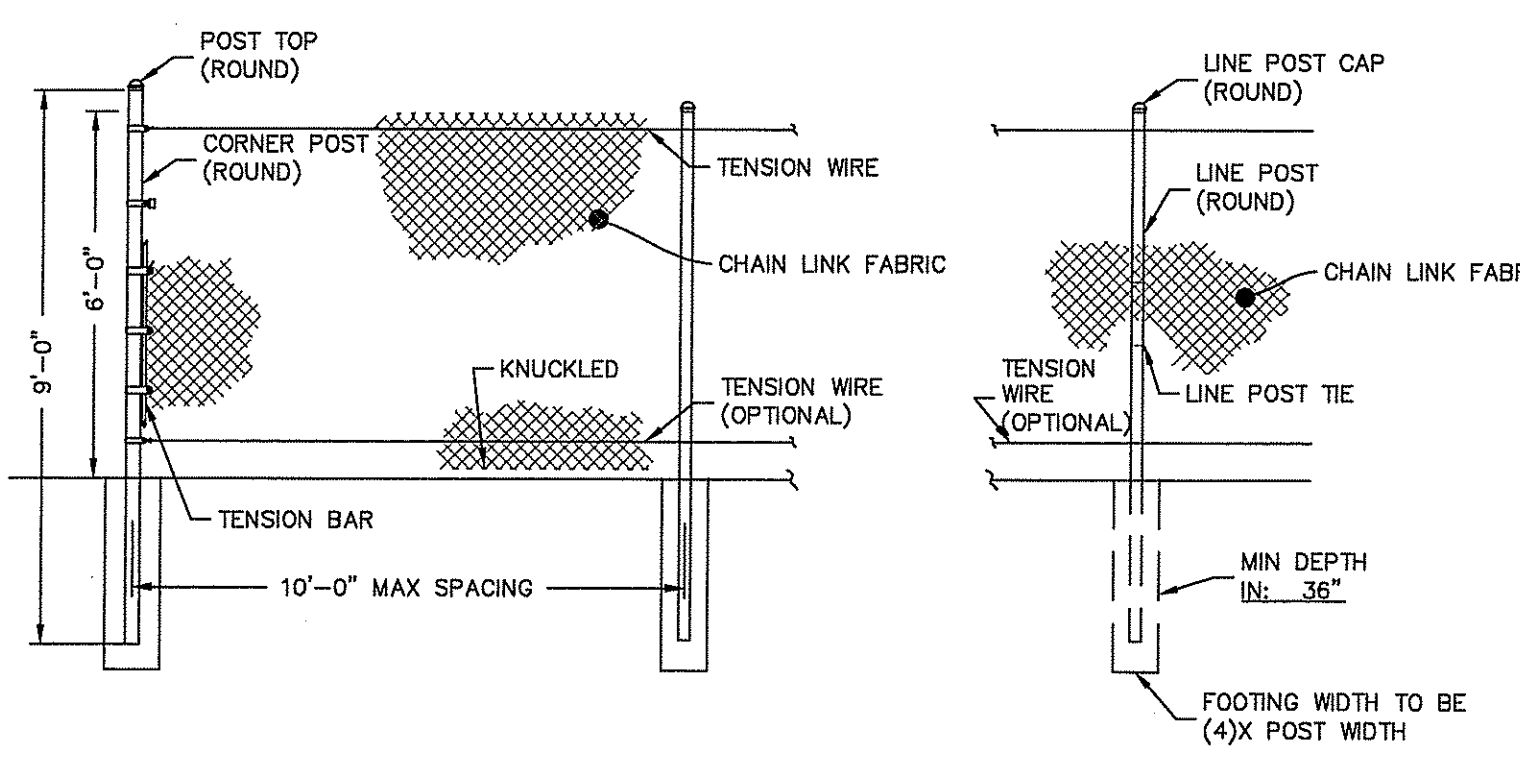
PERMEABLE ACCESS DETAIL
NTS



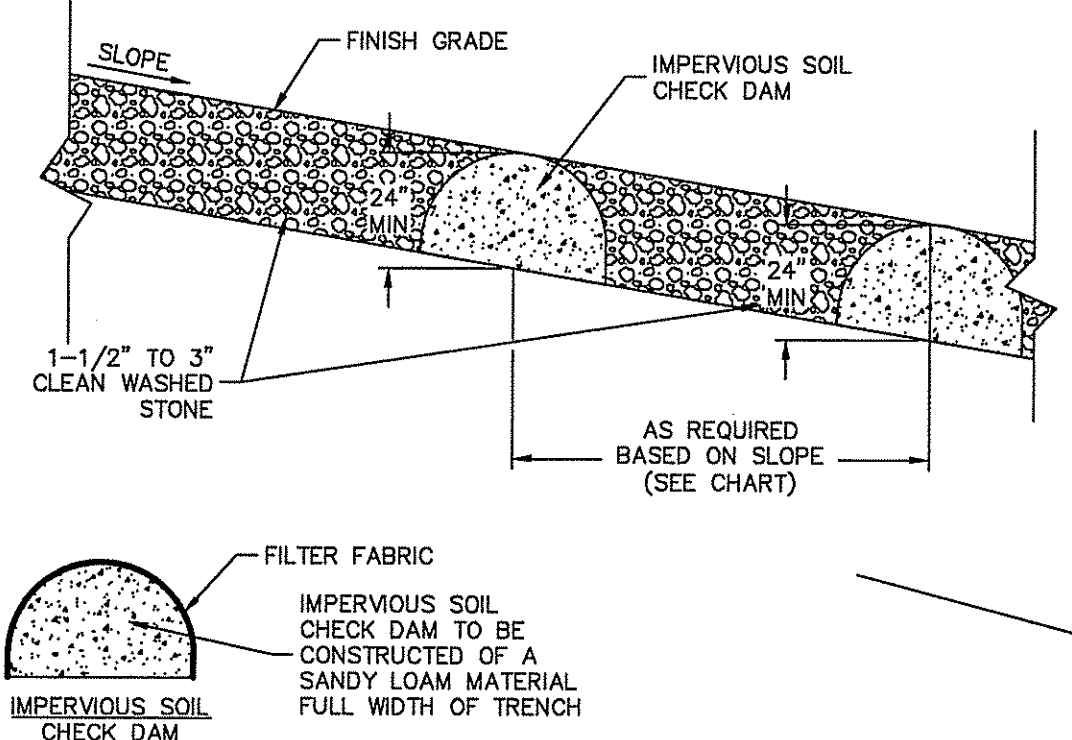
WASHOUT SIGN
ALL CONCRETE TRUCKS SHALL WASHOUT HERE

Concrete Washout Area
(NOT TO SCALE)

- NOTES:**
- PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
 - WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
 - FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12".
 - FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
 - SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
 - CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERWAYS.
 - MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.



FENCE DETAIL
NOT TO SCALE

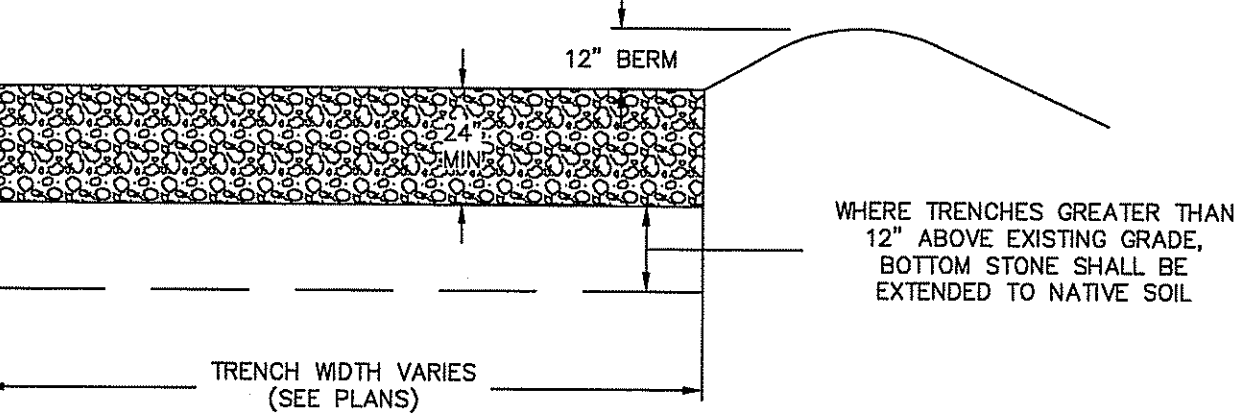


IMPERVIOUS SOIL DAM/STONE TRENCH
CROSS SECTION
NOT TO SCALE

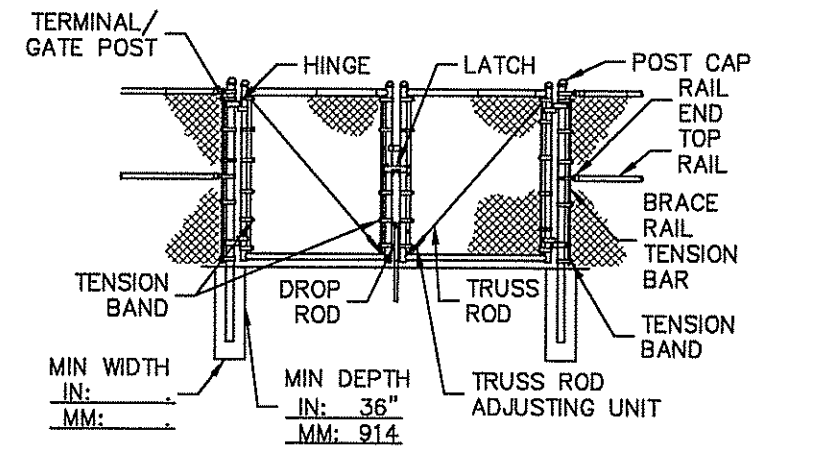
DAM LOCATION CHART

SLOPE	DISTANCE BETWEEN DAMS
1%	100'
2%	50'
3%	33.3'
4%	25'
5%	20'

- NOTES:**
- THE 12" BERM IS TO BE CONSTRUCTED AT THE END OF EACH STONE TRENCH TO MAINTAIN THE ABOVE POND STORAGE AREA.

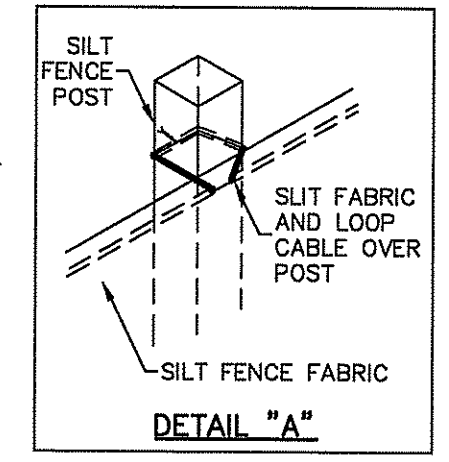


DOUBLE SWING GATE 20' OPENING
NOT TO SCALE

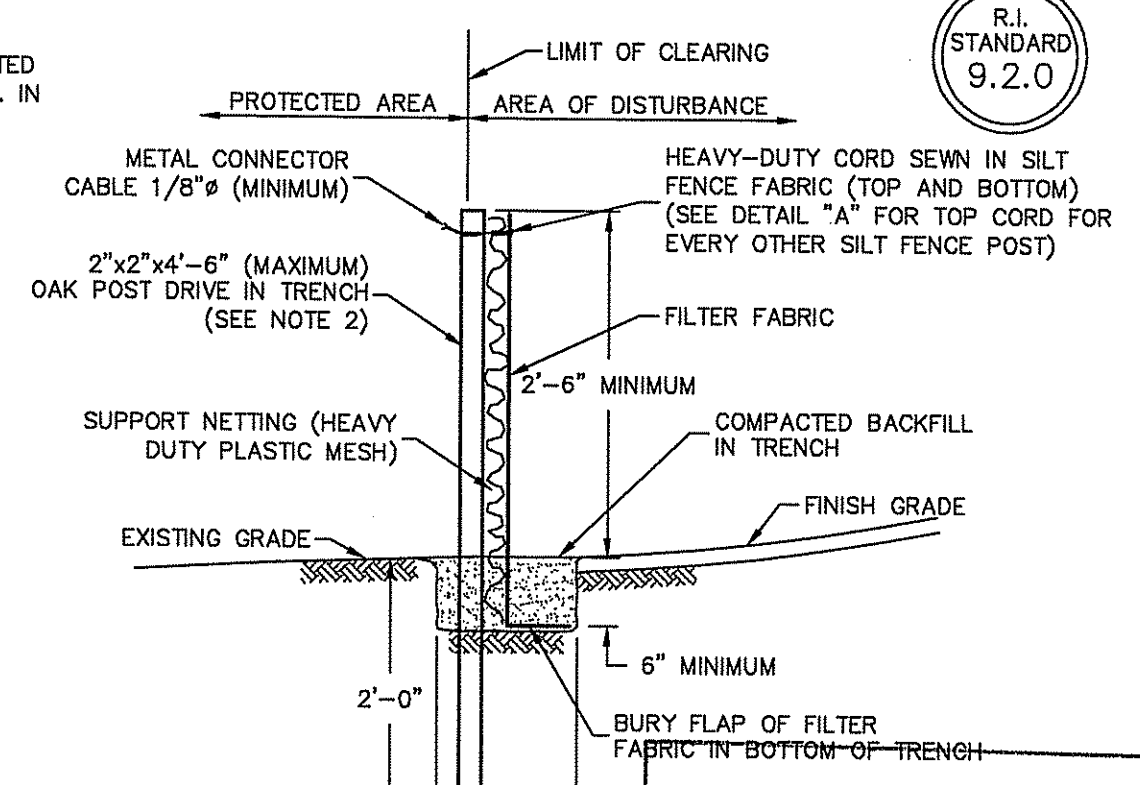


- NOTE:**
- METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
 - SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
 - FOOTING WIDTH TO BE (4)X POST WIDTH.

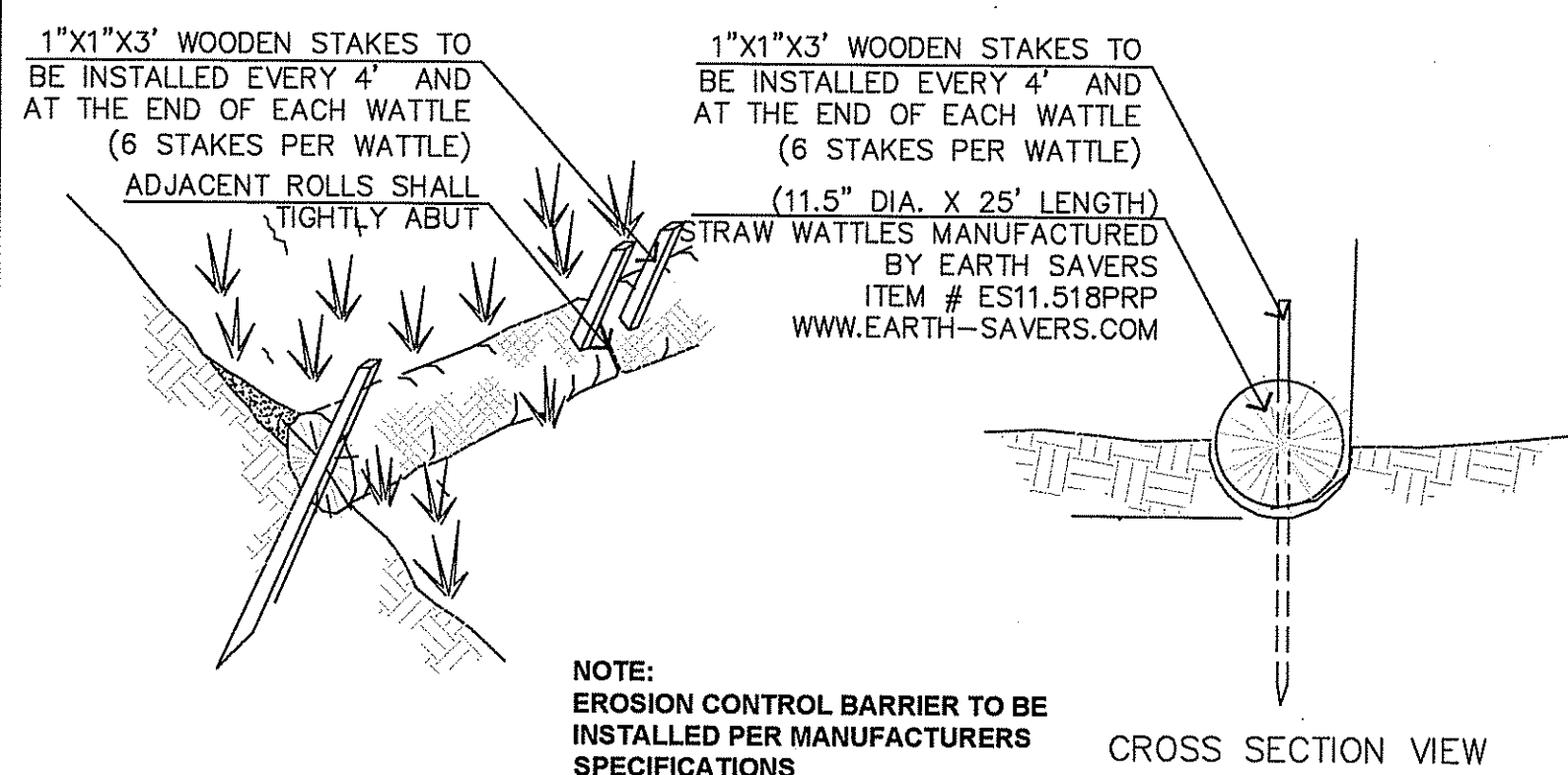
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 - 2"x2"x4"-6" (MAXIMUM) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAXIMUM) O.C. IN WETLAND AREAS AND 4'-0" (MAXIMUM) O.C. IN WETLAND RAVIDE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 - 1"x1"x4"-6" (MINIMUM) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 - SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



Silt Fence Detail
NOT TO SCALE

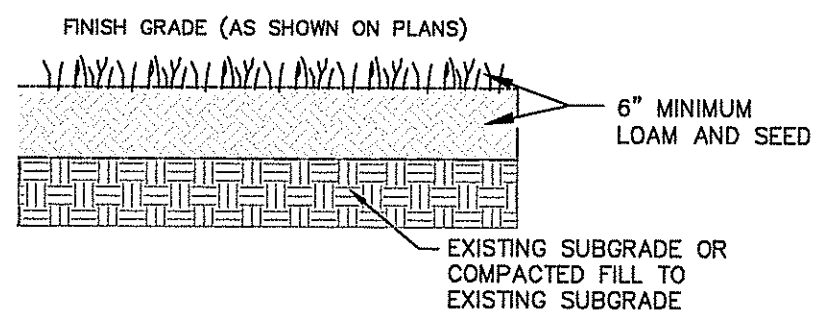


Kindly be advised that this Permit is not equivalent to a verification of the type or extent of Freshwater Wetlands on site.



- NOTE:** EROSION CONTROL BARRIER TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS

GROUND COVER DETAIL
NOT TO SCALE



- NOTE:**
- THIS SECTION APPLIES TO ALL DISTURBED AREAS WITHIN THE PROJECT SITE WITH EXCEPTION OF THE INFILTRATION TRENCH AREAS.
 - SELECTED GRASS SEE SHALL BE LOW GROWTH/SHADE TOLERANT.

**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL**

DATED JUN 16 2017 FILE # 17-0064
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

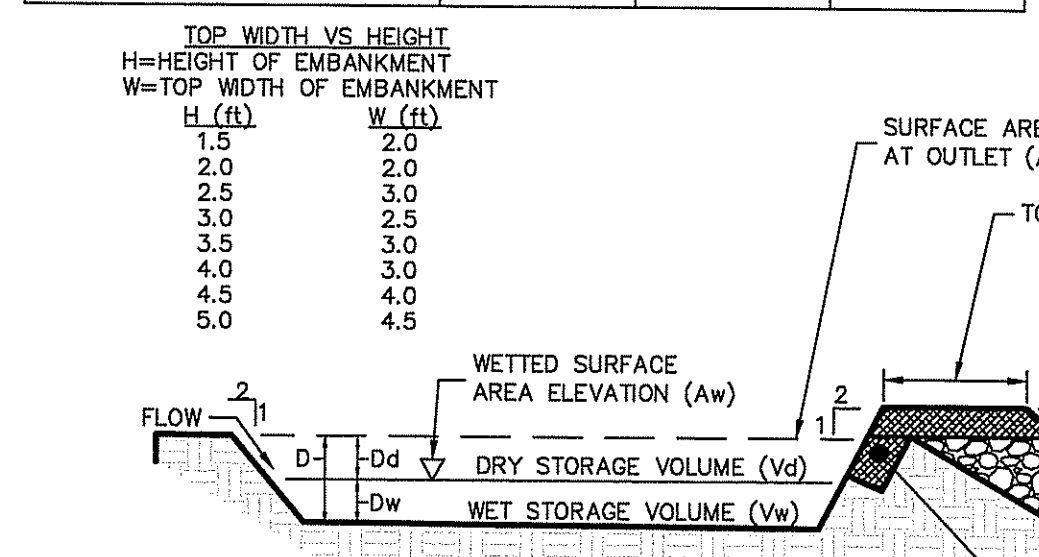
Christopher D. Wencel

ALTERNATE SECTION
USE WHERE MORE THAN ONE ACCESSIBLE SIDE IS NEEDED

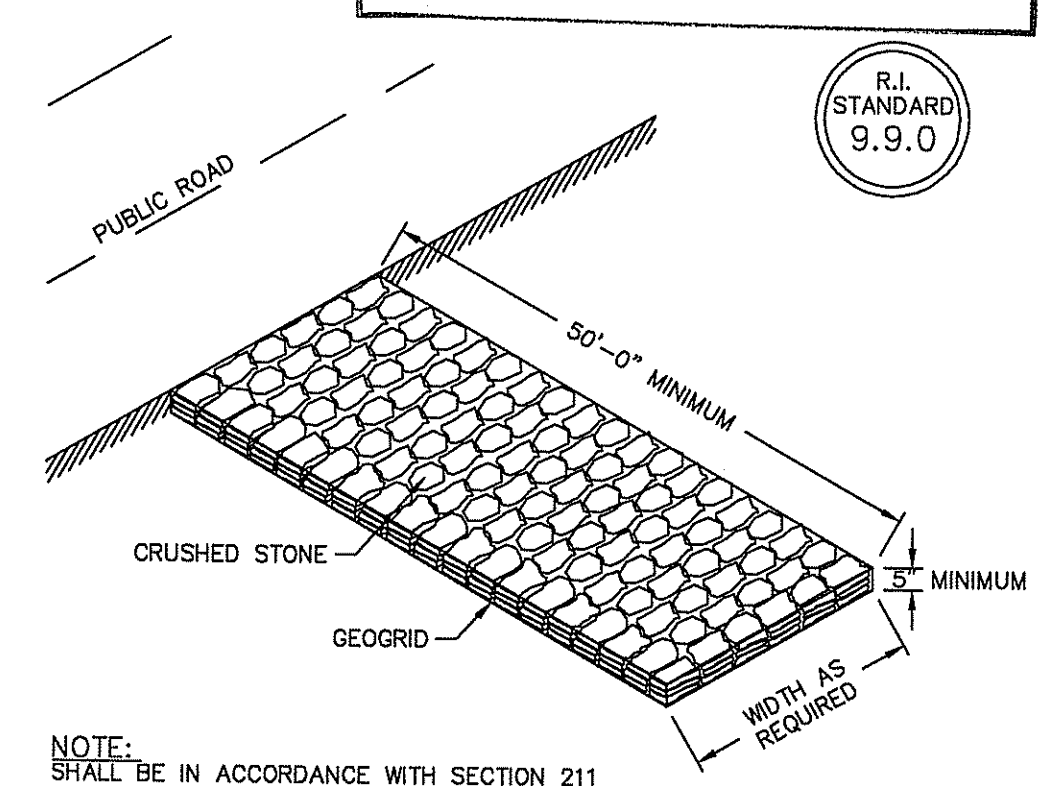
GENERAL NOTES:

- THE TEMPORARY SEDIMENT TRAP SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES.
- THE TEMPORARY SEDIMENT TRAP SHALL HAVE AN INITIAL STORAGE COLUMN OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
- THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
- THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
- TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
- MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET.
- SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.
- MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
- FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE 1, COLUMN V FILTER STONE.

SEDIMENT TRAP DIMENSIONS	TRAP D	TRAP E	TRAP F
TRIBUTARY DRAINAGE AREA	5.00 ac	5.00 ac	5.00 ac
WET STORAGE DEPTH (Dw)	2.00 ft	2.00 ft	2.00 ft
DRY STORAGE DEPTH (Dd)	2.00 ft	2.00 ft	2.00 ft
TOTAL DEPTH (D)	4.00 ft	4.00 ft	4.00 ft
BOTTOM OF TRAP AREA (Ab)	3,449 sq.ft	4,041 sq.ft	5,458 sq.ft
WETTED SURFACE AREA (Aw)	4,665 sq.ft	5,321 sq.ft	6,240 sq.ft
SURFACE AREA AT OUTLET (Ad)	6,009 sq.ft	6,729 sq.ft	7,054 sq.ft



Temporary Sediment Trap Detail
NOT TO SCALE



- NOTE:** SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

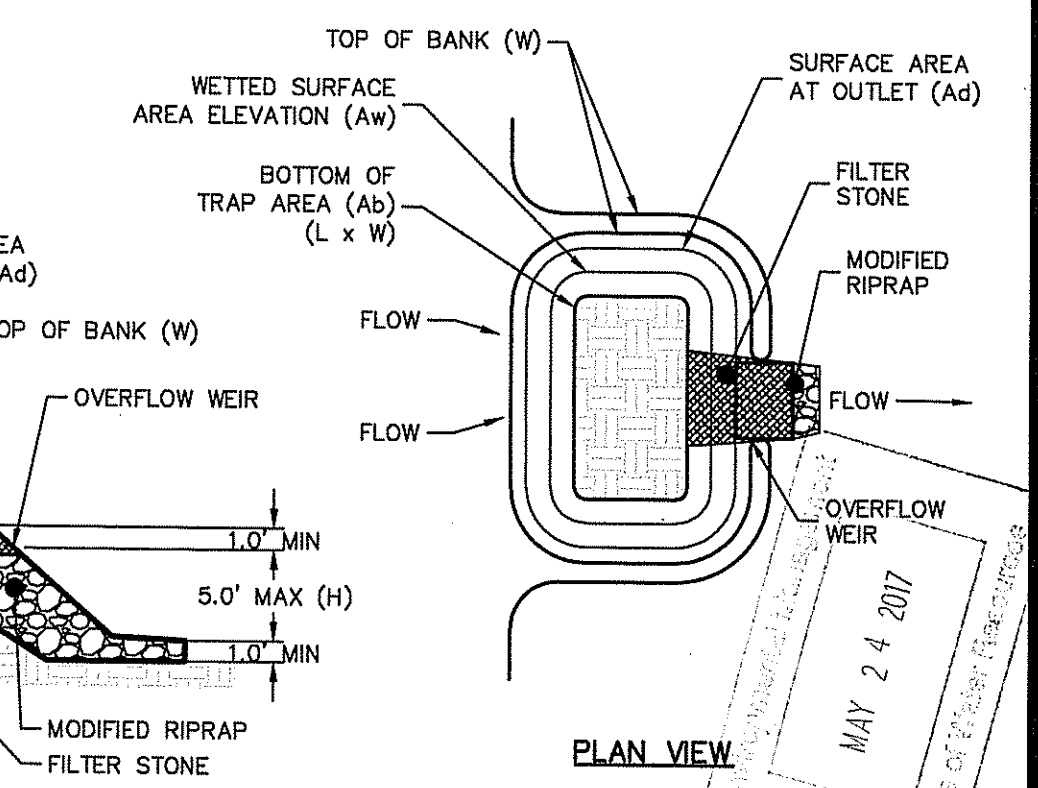
Construction Access
NOT TO SCALE

INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS:

- INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
- CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
- CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
- WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, Dewater THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
- DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA.
- THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

INSTALLATION NOTES:

- CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
- REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
- EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
- USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES, SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION.



Diprete Engineering
Two Stafford Court, Cranston, RI 02920
tel: 401-943-1000 fax: 401-641-6006 www.diprete-eng.com

KEVIN C. MORIN
REGISTERED PROFESSIONAL ENGINEER CIVIL

WIND ENERGY Development LLC
www.WindEnergyDevelopmentLLC.com

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, SAFETY PRECAUTIONS AND REQUIREMENTS, AND OSHA COMPLIANCE IN THE IMPLEMENTATION OF THIS PLAN AND DESIGN.

DESIGN BY: J.A.C.

No.	Date	Description	By	Chk.
1	05/24/2017	ISSUE FOR PERMIT	J.A.C.	J.A.C.
2	06/02/2017	ISSUE FOR CONSTRUCTION	J.A.C.	J.A.C.
3	05/24/2017	ISSUE FOR PERMIT	J.A.C.	J.A.C.
4	05/24/2017	ISSUE FOR PERMIT	J.A.C.	J.A.C.

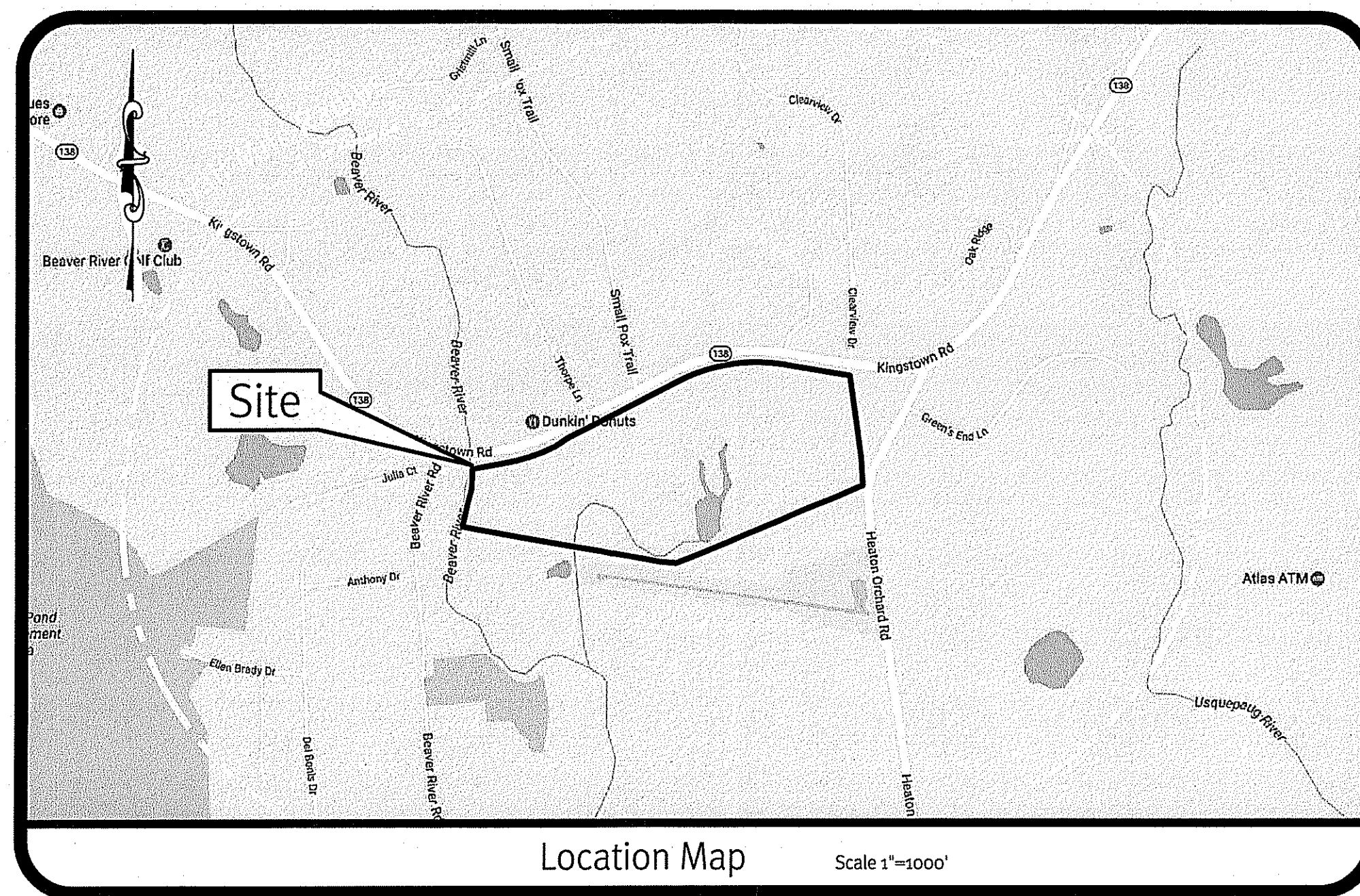
Detail Sheet
WED Kingstown Solar II
Richmond, Rhode Island
Assessors Plat 6E, Lot 35
Owner: **John & Cindy Duncan**
3766 Quaker Lane, North Kingstown
West Kingstown, Rhode Island 02892
Tel: (401) 293-9295

RIDEM Permit Modification

WED Kingstown Solar II

421 Kingstown Road
Richmond, Rhode Island

Assessor's Plat 6E Lot 35



Sheet Index

1. Cover Sheet
 2. 1/2 Mile Aerial & USGS
 3. Existing Conditions Plan
 4. Grading Plan
 5. Pond Details
 6. Soil Erosion Control Plan
 7. Detail Sheet
- (1 of 1) Boundary Survey Plan
(1 of 1) One-Line Diagram

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 30 2018 FILE # 17-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Jonathan D. Wemel

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

JUL 23 2018
Office of Water Resources

SESC / O&M
The Soil Erosion and Sediment Control Plan (SESC) and Operations and Maintenance Plan (O&M) are required documents with this plan set and must be maintained by the contractor and owner onsite.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel: 401-943-1000 fax: 401-464-6006 www.diprete-eng.com

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER
CIVIL

GREEN
development, LLC

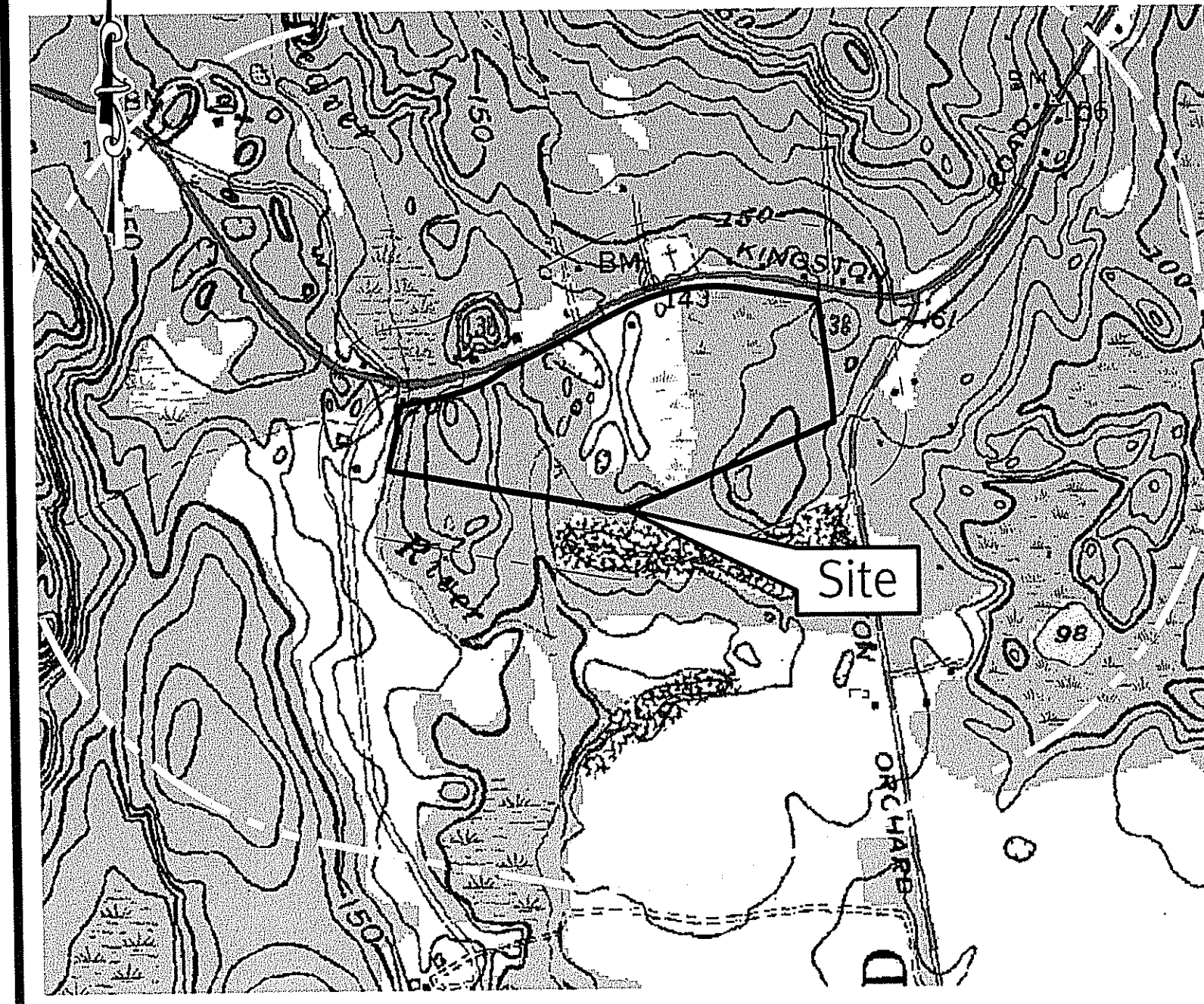
This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	By:
1	05-23-2018	SESC Permit Application	J.A.C.
2	06-29-2017	RIDEM Preliminary Determination	J.A.C.
3	02-23-2017	Development Plan Submission	J.A.C.
4			
5			

Drawn By: J.A.C. Design By: J.A.C.

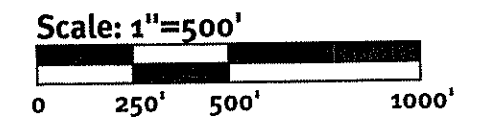
Cover Sheet
WED Kingstown Solar II
Richmond, Rhode Island
Assessor's Plat 6E, Lot 35
Applicant: **WED Kingstown Solar II, LLC** John & Cindy Duncan
3700 Quaker Lane, North Kingstown, Rhode Island 02892
tel: (401) 295-6998

DE 100-100-0001-0001 Copyright 2018 by DiPrete Engineering Associates, Inc.



USGS Map Scale: 1"=1000'

Photo obtained from Nearmap on June 27, 2018



Boundary Data:

- PROPERTY LINE
- 1/2 MILE RADIUS
- 500' RADIUS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 PROJECT NO. 17-0061
 AS SHOWN ON THE PLAN APPROVAL
 DATED OCT 30 2018 17:0061
 NO CHANGES TO BE MADE FOR APPROVAL
 APPROVED PLANNING DEPARTMENT CONSTRUCTION SITE
Christopher D. Senack

1/2 Mile Aerial and USGS Map
WED Kingstown Solar II
 Richmond, Rhode Island
 Accessions PB14 GE, L01 35
 Applicant: **WED Kingstown Solar II, LLC**
 3760 Quaker Lane, North Kingstown
 Rhode Island 02882
 tel: (401) 295-0958
 Owner: **John & Cindy Duncan**
 419 Kingstown Road
 West Kingstown, Rhode Island 02892
 DE Job No: 0201-01E Copyright 2018 by DiPrete Engineering Associates, Inc.

The contractor is responsible for all of the methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.
 This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	By
1	7/18/2018	RDAM Permit Modification	JAC
2	8/22/2017	RDAM Response to Comments	JAC
3	08/30/2017	RDAM Permit Modification	JAC
4	03/24/2017	Revised Permit Submission	JAC

KEVIN DEMERS

 REGISTERED PROFESSIONAL ENGINEER
 CIVIL



DiPrete Engineering
 Two Stafford Court, Cranston, RI 02920
 tel: 401-943-1000 fax: 401-664-6006 www.diprete-eng.com
 Boston • Providence • Newport

E:\demers\projects\0501-01E.kingstown\read_solar\autocad\drawings\0501-01E-dsm-wtbl-etc.dwg Plotter: 7/18/2018

General Notes:

- THE SITE IS LOCATED IN THE TOWN OF RICHMOND, RHODE ISLAND, ASSESSOR'S PLAT 6E LOT 35.
- THE SITE IS APPROXIMATELY 70.05± ACRES AND IS ZONED LI.
- THE OWNER OF AP 6E LOT 35 IS: JOHN & CINDY DUNCAN
419 KINGSTOWN ROAD
WEST KINGSTON, RI 02892
- THE SITE IS LOCATED IN FEMA FLOOD ZONES A AND X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44009C0160H AND 44009C0180H, MAP REVISED OCTOBER 19TH, 2010. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)

FEMA ZONE A - THIS SITE IS LOCATED IN FEMA FLOOD ZONE A. ZONE A AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED.

ZONE X (UNSHADED) - THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X AREAS WHERE THERE IS MINIMAL FLOODING.
- THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE SURVEY MAY DISCLOSE.
- THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS A CLASS I SURVEY AS PERFORMED BY NATIONAL SURVEYORS-DEVELOPERS, INC. THE PLAN ITSELF CONFORMS ONLY TO A CLASS III STANDARD AS ADOPTED BY RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.
- SOIL MAPPING OBTAINED FROM SOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
- THE SITE IS WITHIN A:

NATURAL HERITAGE AREA ID#198 (RIDEM)
- SOIL EVALUATIONS, WERE COMPLETED BY DIPRETE ENGINEERING ON 3/13/2017.
- TOPOGRAPHY OBTAINED FROM LIDAR. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD83.
- EXISTING CONDITIONS WITHIN PROPERTY WERE DETERMINED FROM AERIAL MAPPING AND SITE WALK PERFORMED ON 3/13/17.
- WETLANDS WERE DELINEATED BY MASON & ASSOCIATES, INC. PERFORMED ON 12/23/16.
- THIS PLAN REFLECTS PRE-CONSTRUCTION CONDITIONS ONLY.

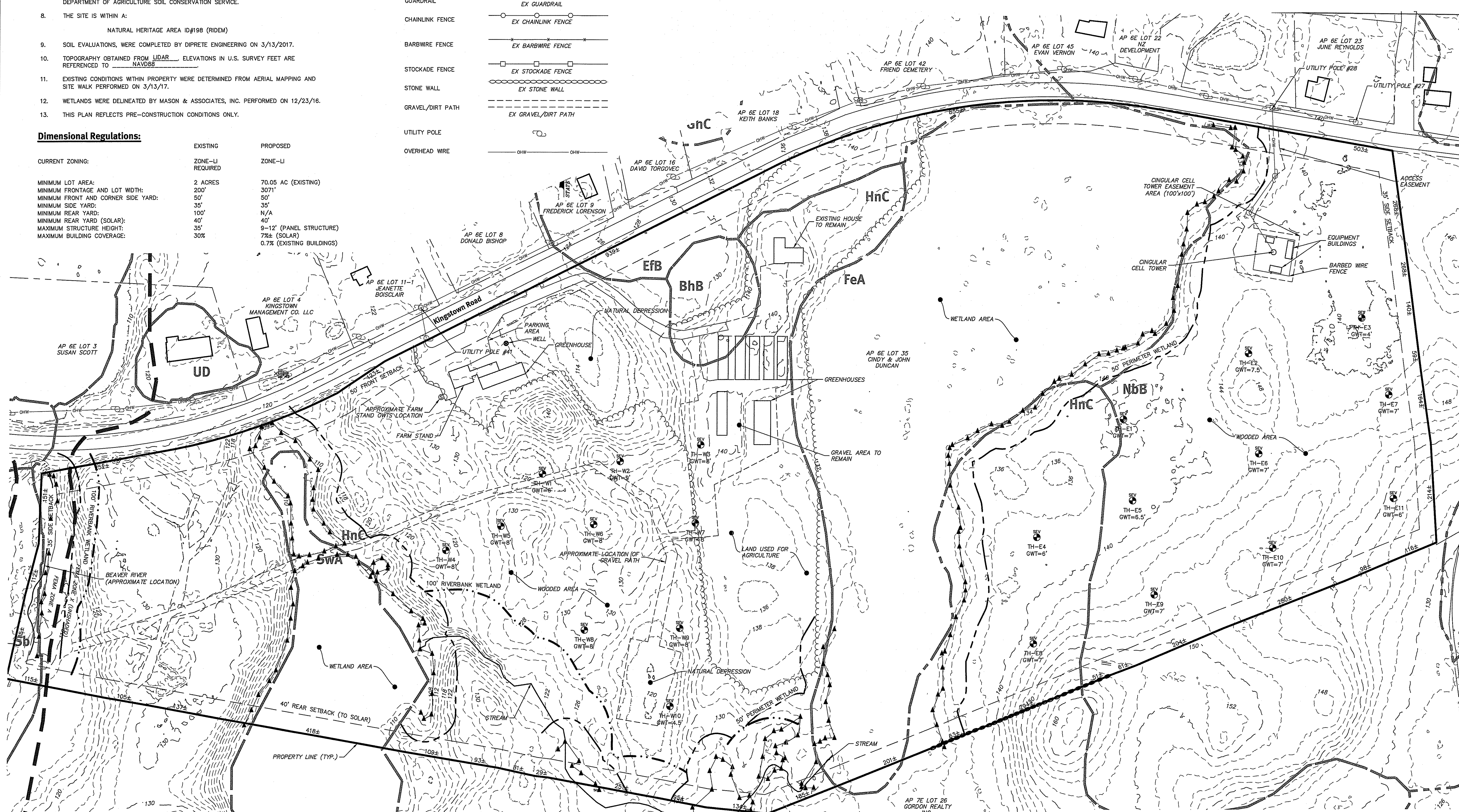
Dimensional Regulations:

CURRENT ZONING:	EXISTING ZONE-LI REQUIRED	PROPOSED ZONE-LI
MINIMUM LOT AREA:	2 ACRES	70.05 AC (EXISTING)
MINIMUM FRONTAGE AND LOT WIDTH:	200'	3071'
MINIMUM FRONT AND CORNER SIDE YARD:	50'	50'
MINIMUM SIDE YARD:	35'	35'
MINIMUM REAR YARD:	100'	N/A
MINIMUM REAR YARD (SOLAR):	40'	9'-12' (PANEL STRUCTURE)
MAXIMUM STRUCTURE HEIGHT:	35'	72± (SOLAR)
MAXIMUM BUILDING COVERAGE:	30%	0.7% (EXISTING BUILDINGS)

Existing Data:

Symbol	Description
--- HkC ---	SOIL BOUNDARY LINE
--- CaD ---	EDGE OF PAVEMENT
EX EDGE OF PAVEMENT	ASPHALT PAVEMENT
CONCRETE	CONCRETE
BUILDING	BUILDING
TREELINE	EX TREELINE
TREES	TREES
GUARDRAIL	EX GUARDRAIL
CHAINLINK FENCE	EX CHAINLINK FENCE
BARBWIRE FENCE	EX BARBWIRE FENCE
STOCKADE FENCE	EX STOCKADE FENCE
STONE WALL	EX STONE WALL
GRAVEL/DIRT PATH	EX GRAVEL/DIRT PATH
UTILITY POLE	UTILITY POLE
OVERHEAD WIRE	OVERHEAD WIRE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 3 2018 FILE # 17-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Jonathan D. Demers



Diprete Engineering
Two Stafford Court, Cranston, RI 02920
Tel: 401-943-1000 Fax: 401-464-6006 www.diprete-eng.com

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER CIVIL

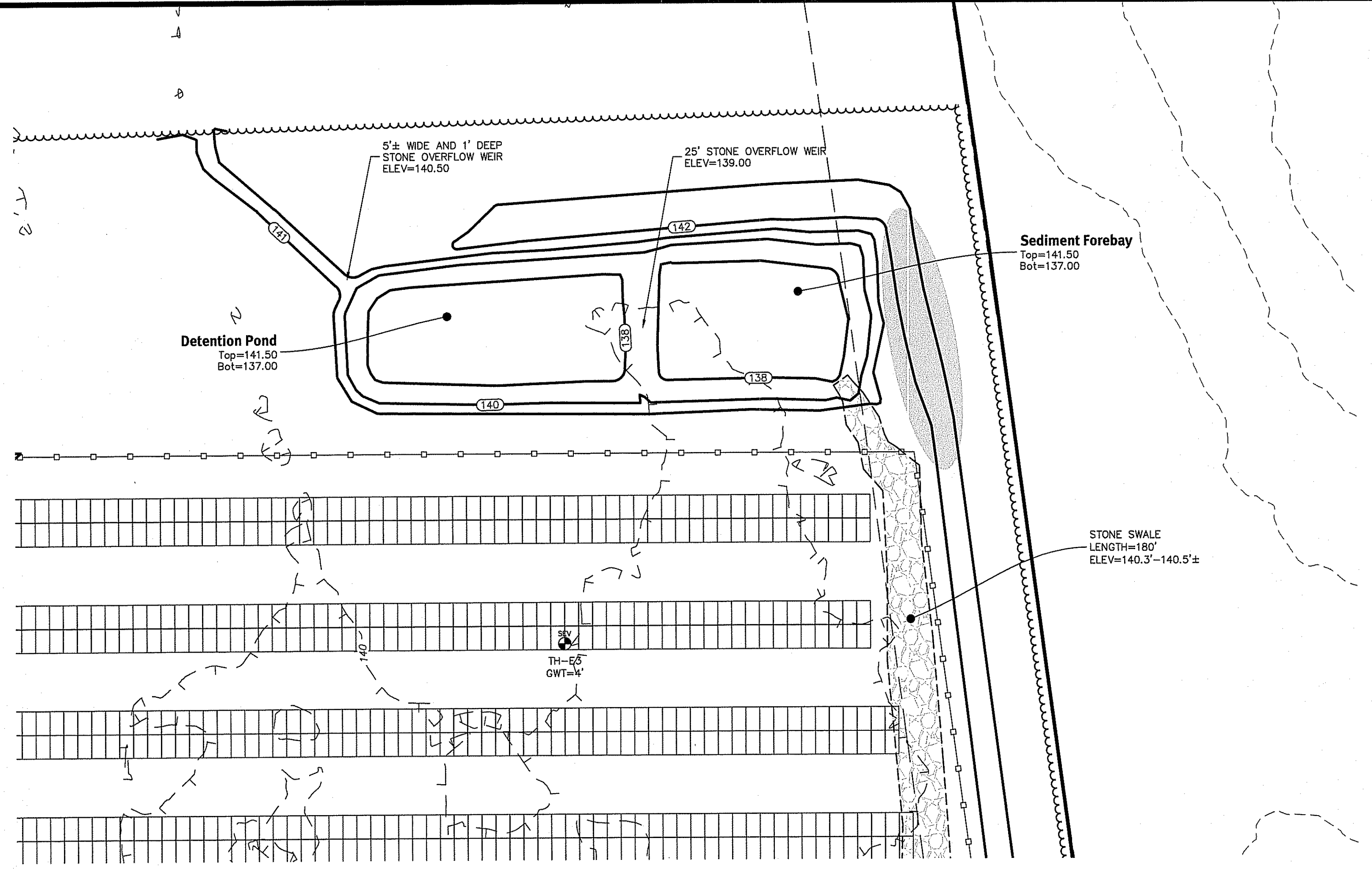
GREEN development, LLC

This regulatory submission set shall not be used for construction purposes unless stamped/issued for construction and signed by a Diprete Engineering representative.

No.	Date	Description	By:
1	2-09-2018	PERMITS MODIFICATION	JAC
2	4-24-2017	RI/EM BIDDING IN COMMENTS	JAC
3	09-29-2017	RI/EM PERMITS MODIFICATION	JAC
4	09-29-2017	RI/EM PERMITS MODIFICATION	JAC
5	09-29-2017	REVISION PLAN SUBMISSION	JAC

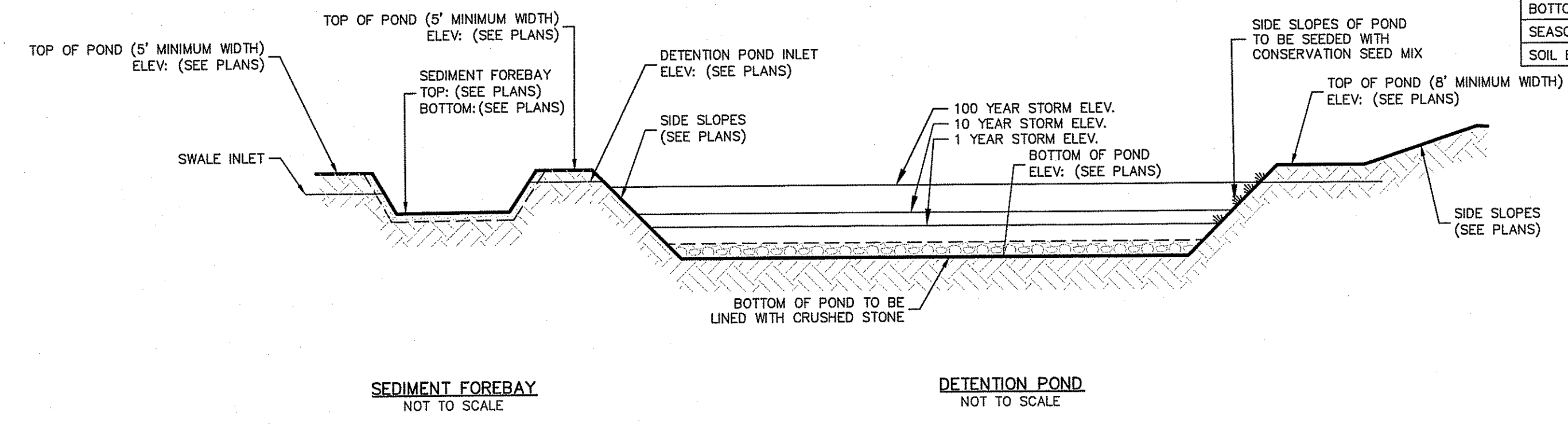
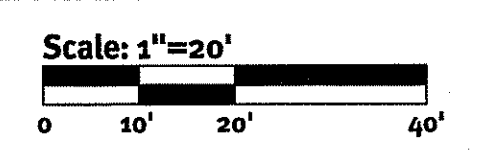
Design By: J.A.C.
Drawn By: J.A.C.

Existing Conditions Plan
WED Kingstown Solar II
Richmond, Rhode Island
Assessors Plat 6E, Lot 35
Owner: **John & Cindy Duncan**
WED Kingstown Solar II, LLC
419 Kingstown Road
West Kingston, Rhode Island 02892
Tel: (401) 295-1998
DE Job No. 0601-016 Copyright 2018 by Diprete Engineering, Associates, Inc.



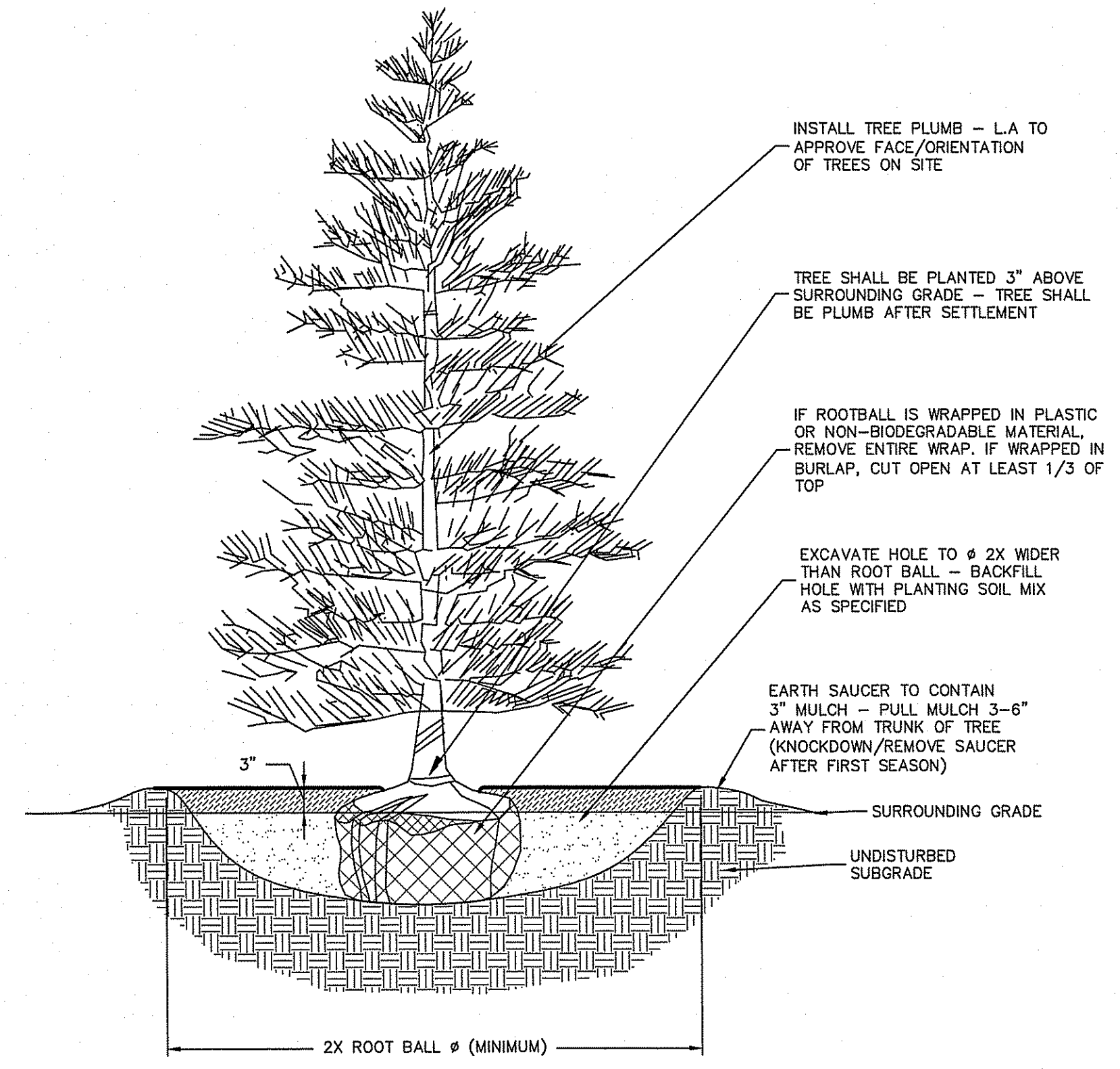
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 30 2018 FILE # 17-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Christopher D. Wewick

Pond System



DESCRIPTION	SEDIMENT FOREBAY	DETENTION POND
TOP OF POND ELEVATION	141.50	141.50
100 YEAR STORM ELEVATION	140.99	140.99
10 YEAR STORM ELEVATION	140.61	140.63
1 YEAR STORM ELEVATION	139.03	138.68
BOTTOM OF POND ELEVATION	137.00	137.00
SEASONAL HIGH GWT ELEVATION	136.00	136.00
SOIL EVALUATION	TH-E3	TH-E3

Pond System
NOT TO SCALE



Evergreen Tree Planting
NOT TO SCALE

Diprete Engineering
 Two Stafford Court, Cranston, RI 02920
 Tel: 401-943-1000 Fax: 401-464-6006 www.diprete-eng.com
 BOSTON • PROVIDENCE • NEWPORT

KEVIN DEMERS

 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

GREEN development, LLC

This regulatory submission set shall not be used for construction purposes without the approval of the design professional and sealed by a Diprete Engineering representative.

No.	Date	Description	By:
1	10/30/2018	100% Final Modification	J.A.C.
2	10/30/2018	100% Response to Comments	J.A.C.
3	10/30/2018	100% Final Submission	J.A.C.
4	10/30/2018	Development Plan Submission	J.A.C.

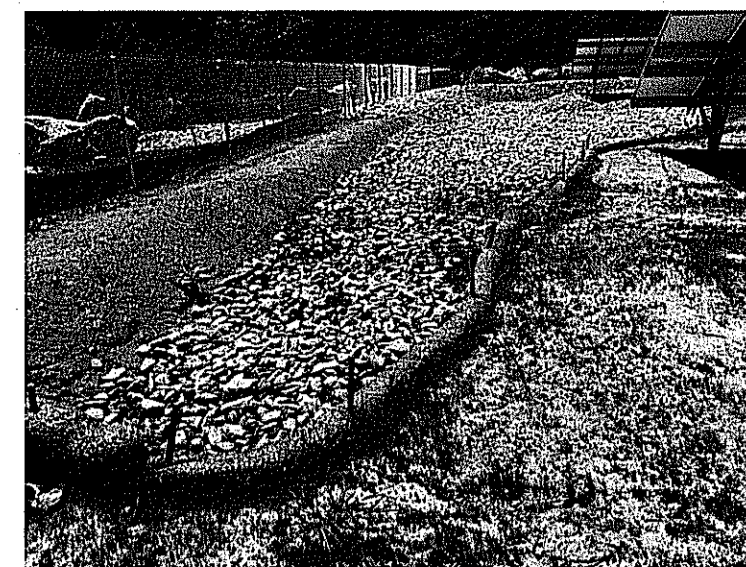
Design By: J.A.C.

Pond Details
WED Kingstown Solar II
 Richmond, Rhode Island
 Assessors Plat 6E, Lot 35
 Applicant: **WED Kingstown Solar II, LLC**
 2760 Quaker Lane, North Kingstown, Rhode Island 02892
 Tel: (401) 295-6998
 Owner: **John & Cindy Duncan**
 119 Kingsdown Road, West Kingston, Rhode Island 02892
 Tel: (401) 295-6998

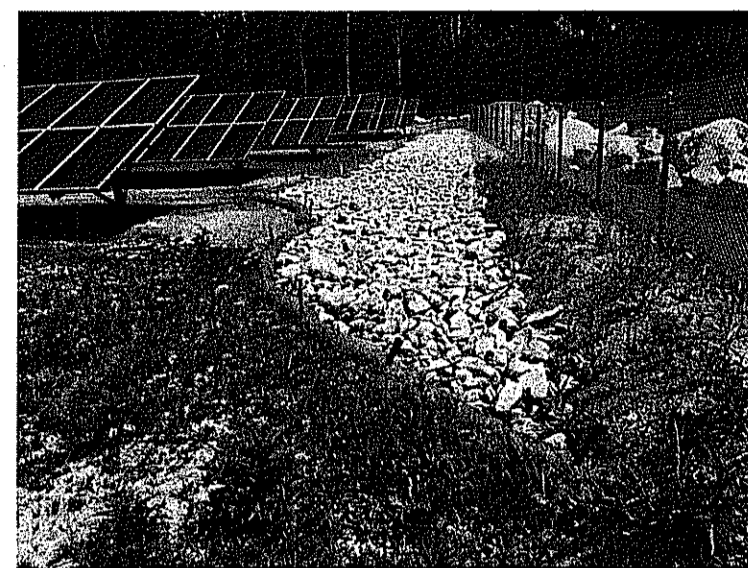
z:\Main\projects\0601-016.kingstown solar\avocad drawing\0601-016-desn-wlp-retc.dwg, Plotdate: 7/19/2018



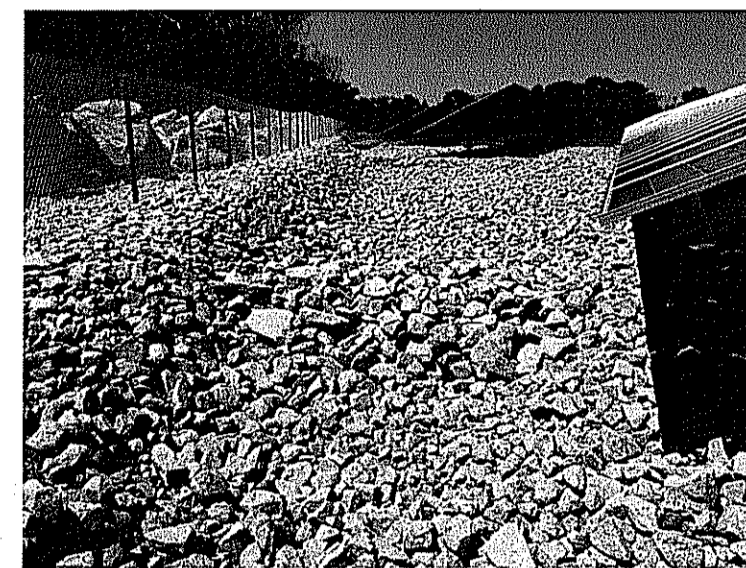
1



4



2



5

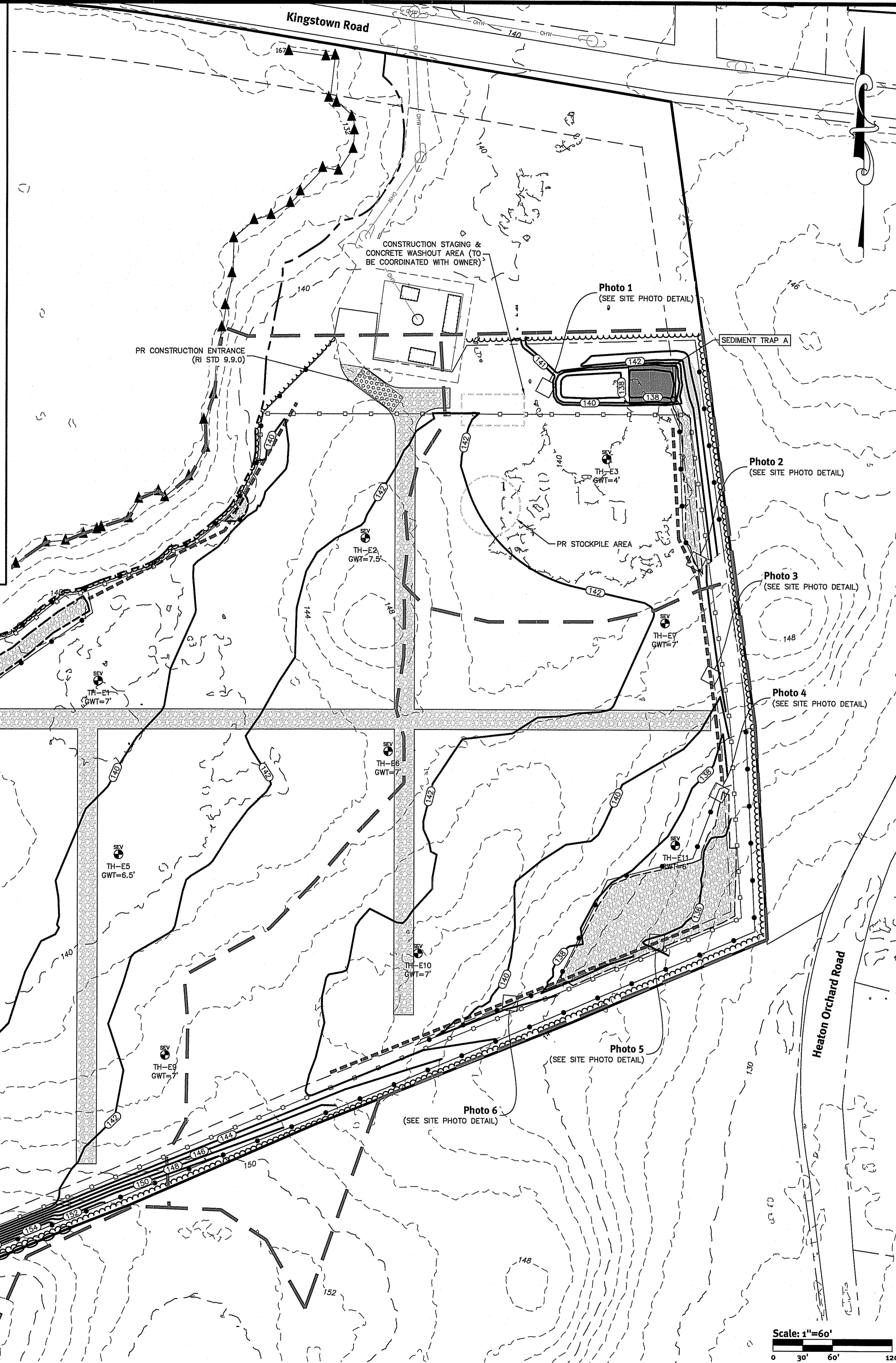


3



6

Site Photo Detail



SESC Notes:

1. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED PLANS OF RECORD AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS SHALL BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO EXCAVATION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE SITE CONTRACTORS RESPONSIBILITY.
2. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON KINGSTOWN ROAD.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS TO INCLUDE BUT NOT LIMITED TO GRAVEL, TREES, STUMPS AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK SHALL BE RESTORED TO MATCH THE DESIGN PLANS.

General Notes:

1. THE SITE IS PROPOSED TO BE BUILT IN ONE PHASE, EACH CATCHMENT AREA IS UNDER 5 ACRES.
2. CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
3. ALL EROSION CONTROL, TEMPORARY SWALES, TEMPORARY SEDIMENTATION TRAPS, ETC. SHALL BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL LATEST EDITION AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN (SESC).
4. TEMPORARY SWALES SHALL BE USED TO CONTROL RUNOFF DURING CONSTRUCTION. EROSION CONTROL MATS SHALL BE INSTALLED IF NECESSARY TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES SHALL BE REMOVED.
5. ONCE THE SEDIMENTATION TRAP IS NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENTATION TRAP SHALL BE REMOVED AND AREA TO BE BROUGHT TO FINAL DESIGN GRADES.
6. SEE SECTION 1.2 OF THE SESC FOR SEQUENCE OF CONSTRUCTION ACTIVITY.
7. SEE SECTION 2.2 OF THE SESC FOR PROJECT PHASING.
8. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER.
9. FOR CONSTRUCTION PHASING SEE SECTION 2.2 OF SOIL EROSION AND SEDIMENT CONTROL PLAN.
10. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: [HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP](http://www.dot.ri.gov/business/contractorsandconsultants.php).

Legend:

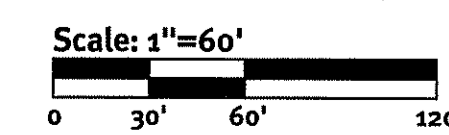
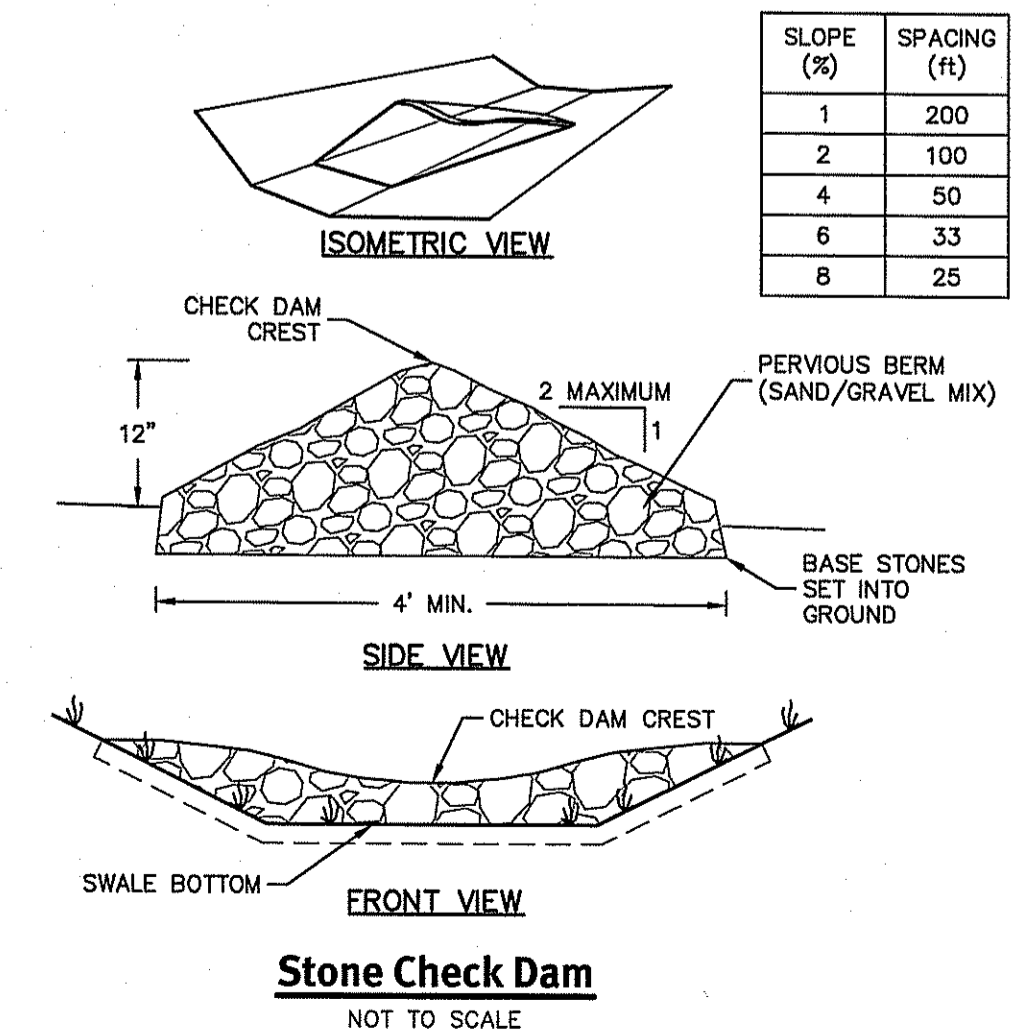
- SILT FENCE, STRAW WATTLE OR APPROVED EQUAL
- TEMPORARY SWALE W/ CHECK DAMS
- TRIBUTARY DRAINAGE AREA
- TEMPORARY SEDIMENTATION TRAPS

Construction Phasing:

- 1- FLAG/SURVEY LIMIT OF DISTURBANCE. EACH TRIBUTARY DRAINAGE AREA SHALL DISTURB A MAXIMUM OF 5 ACRES. INSTALL PERIMETER EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT TRAP).
- 2- CLEAR AND GRUB SITE, INSTALL TEMPORARY SWALES AND SEDIMENTATION TRAPS.
- 3- RE-GRADE SITE AND LOAM & SEED ALL DISTURBED AREAS. STABILIZE ALL AREAS.
- 4- CONSTRUCT STONE INFILTRATION TRENCHES AND BERMS.
- 5- REMOVE TEMPORARY SWALES AND SEDIMENTATION TRAPS AFTER TRIBUTARY AREAS ARE FULLY STABILIZED.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 30 2018 FILE # 17-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Compton D. Savelle



DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel: 401-993-1000 fax: 401-464-6066 www.diprete-eng.com

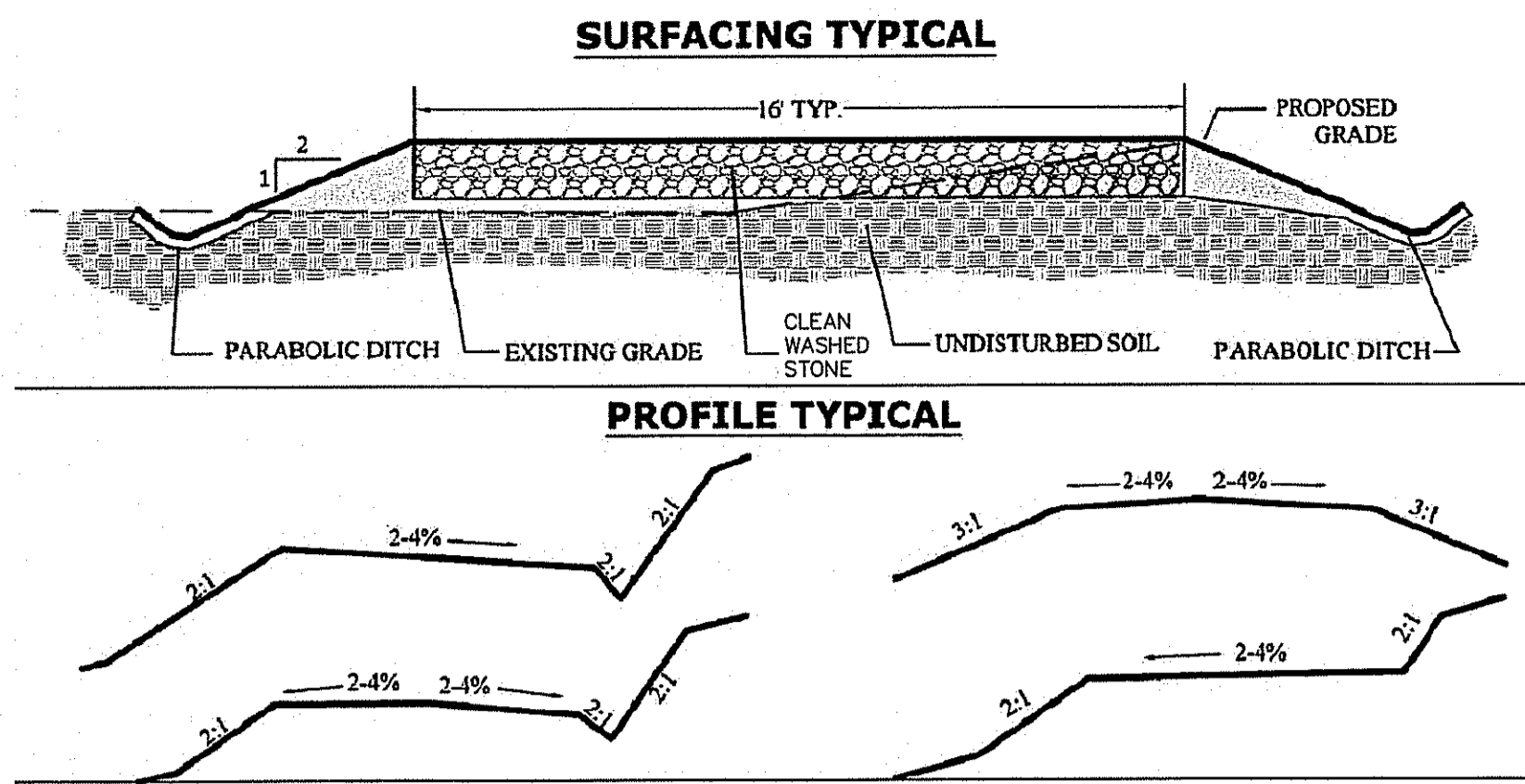
KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER CIVIL

GREEN development, LLC

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	By	Design By: J.A.C.
1	08/27/2018	Final Design	J.A.C.	J.A.C.
2	09/20/2017	Final Preliminary Determination	J.A.C.	J.A.C.
3	03/29/2017	Final Preliminary Determination	J.A.C.	J.A.C.
4	02/27/2017	Final Preliminary Determination	J.A.C.	J.A.C.

Soil Erosion Control Plan
WED Kingstown Solar II
Richmond, Rhode Island
Assessors Plat 6E, Lot 35
Owner: **John & Cindy Duncan**
Applicant: **WED Kingstown Solar II, LLC**
3760 Quaker Lane, North Kingstown
RI 02881
Tel: (401) 292-6298



SURFACING SPECIFICATIONS

Conditions:	Road Thickness	Stone Size	Fines
Base Layer with Geotextile Fabric (not excessively wet)	6" Min.	3-3 1/2"	0-6%
Base Layer with Geotextile Fabric (wet conditions)	6" Min.	3-3 1/2"	0-6%

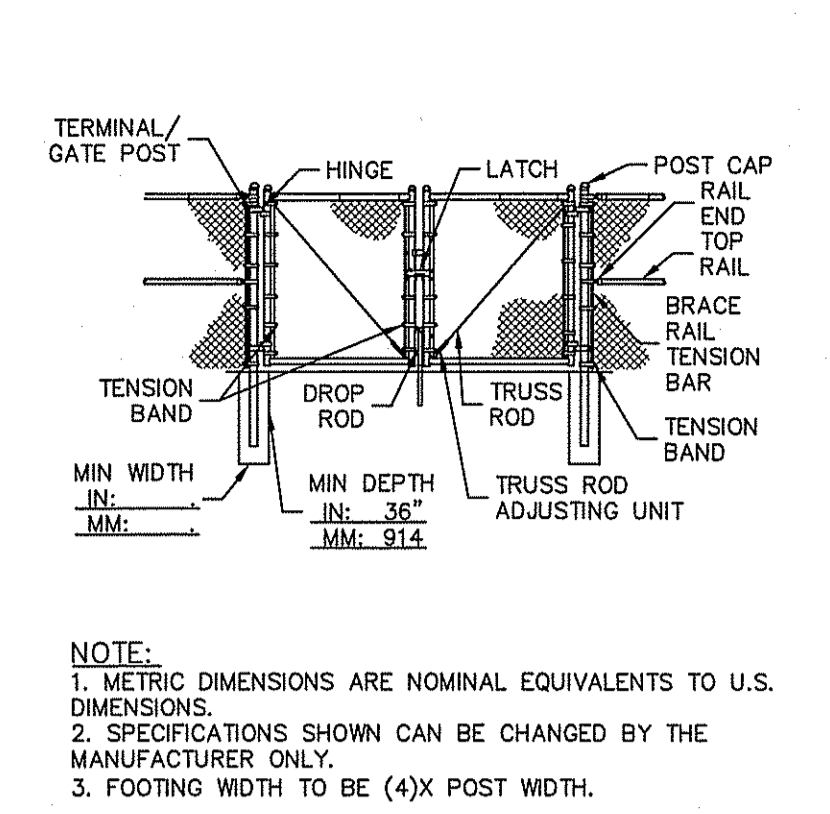
CONSTRUCTION NOTES:

- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION.
- FIXED EROSION CONTROLS AND SITE STABILIZATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPROVED BMP'S, OR PURSUANT TO PROJECT SPECIFIC PERMITS.
- TREES, STUMPS, ROOTS, BRUSH AND WEEDS SHALL BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAY.
- ON WEAK BEARING SOIL SUCH AS LOCAL ALLUVIAL, OR WETLAND SOILS, SURFACE TREATMENTS SHOULD BE UNDERPAVED WITH WOVEN GEOTEXTILES.
- AT MINIMUM, ROADSIDE DITCHES SHALL BE 1-FT BELOW ROAD SURFACE.
- DISCHARGE PITS FOR DITCHES SHALL NOT BE NEAR WETLANDS OR STREAMS, AND OR BE LOCATED AT THE DIRECTION OF THE EPSCS.

MATERIAL SPECIFICATIONS

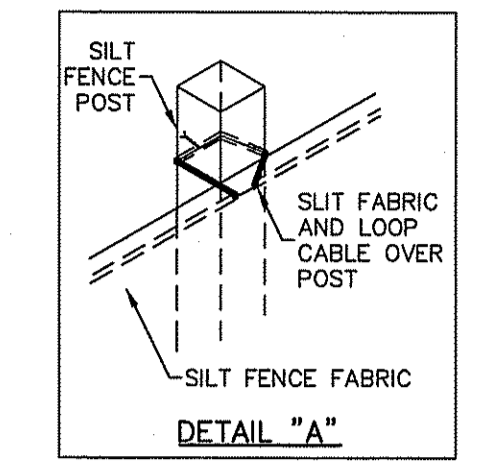
Stone Designation	Percentage by Mass (Weight) Passing Square Mesh Sieves	DIKED GRADED CRUSHED STONE FOR SUBBASE:
90mm (3.5 inch)	100	A. Dike graded crushed stone for subbase shall consist of clean, hard, uniformly graded, crushed stone. It shall be sufficiently free from dirt, deleterious material, and pieces that are structurally weak and shall meet the following requirements:
75mm (3 inch)	90-100	B. Source of material shall be that obtained from areas assigned and cleared of soil and debris before blasting.
50mm (2 inch)	75-100	C. Material coarser than the 4.75 mm (No. 4) sieve shall not be more than 30 percent, by mass (weight), of the total dry weight.
25mm (1 inch)	50-80	
12.5mm (1/2 inch)	30-60	
4.75mm (No. 4)	15-40	
75um (No. 200)	0-6	

PERMEABLE ACCESS DETAIL
NTS

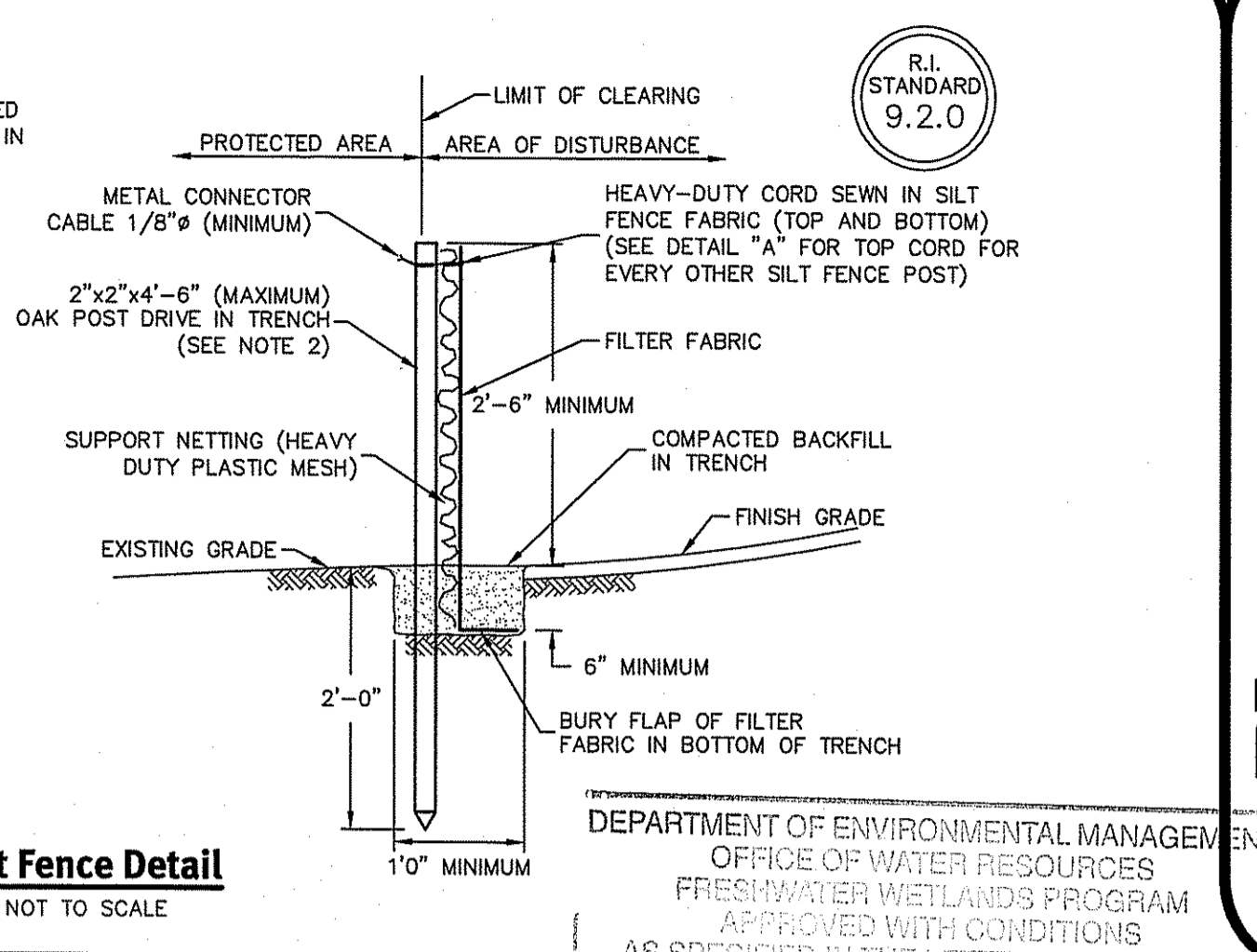


DOUBLE SWING GATE 20' OPENING
NOT TO SCALE

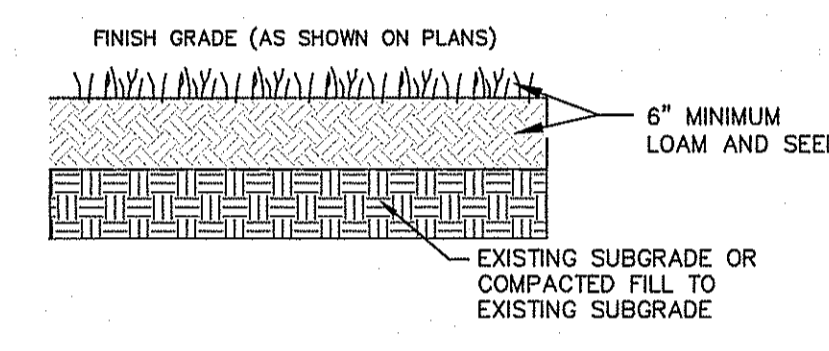
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 - 2"x2"x4"-6" (MAXIMUM) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAXIMUM) O.C. IN WETLAND AREAS AND 4'-0" (MAXIMUM) O.C. IN WETLAND RAINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 - 1"x1"x4"-6" (MINIMUM) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 - SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



Silt Fence Detail
NOT TO SCALE

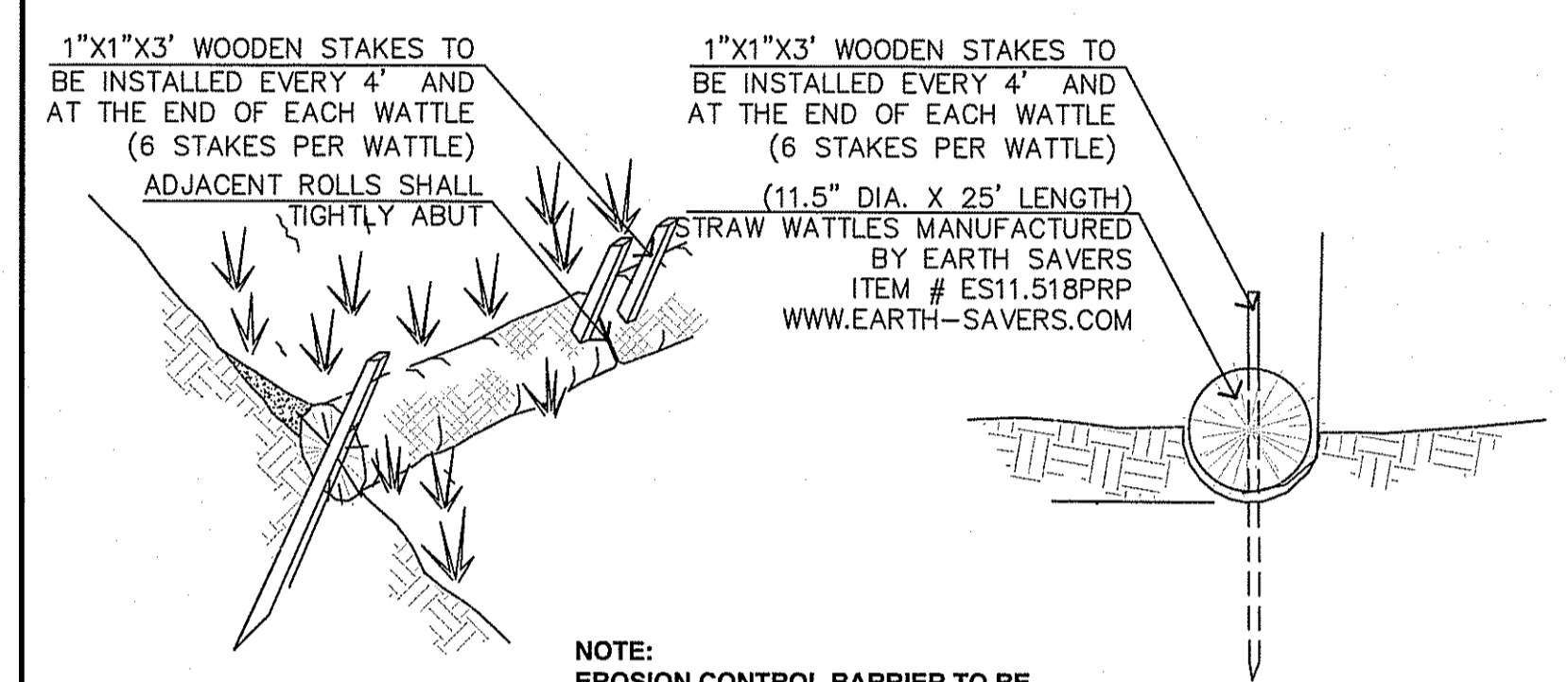


Silt Fence Detail
NOT TO SCALE



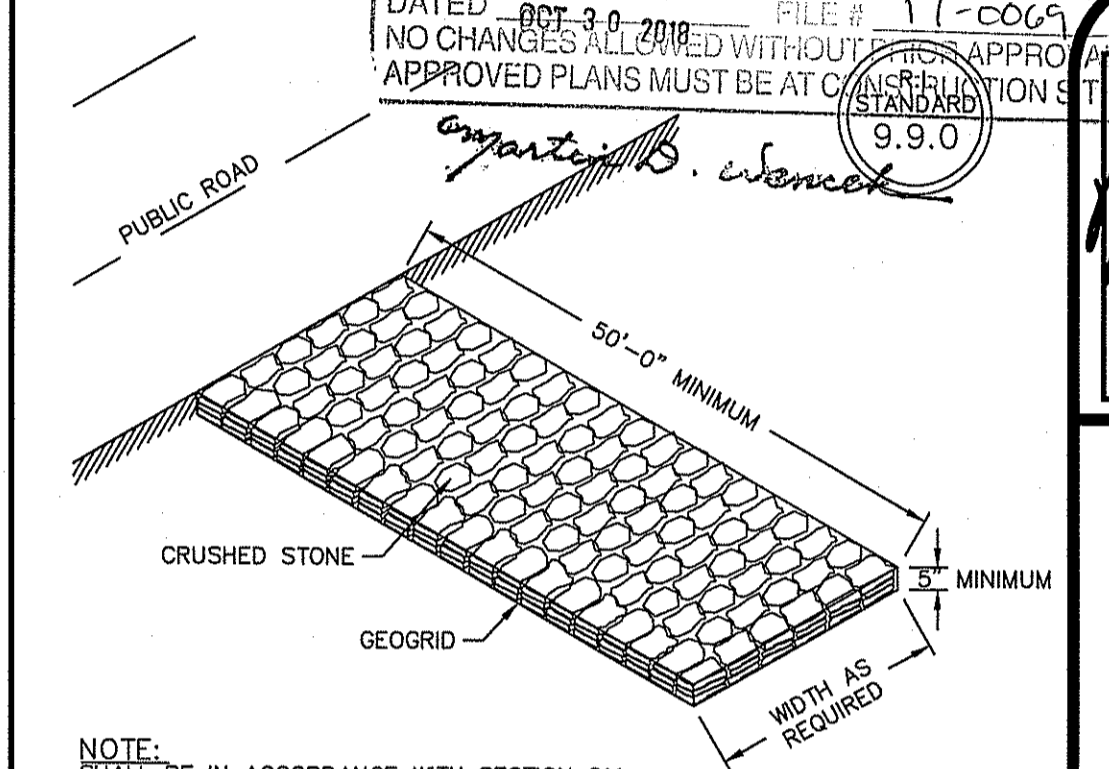
- NOTE:**
- THIS SECTION APPLIES TO ALL DISTURBED AREAS WITHIN THE PROJECT SITE WITH EXCEPTION OF THE INFILTRATION TRENCH AREAS.
 - SELECTED GRASS SEE SHALL BE LOW GROWTH/SHADE TOLERANT.

GROUND COVER DETAIL
NOT TO SCALE



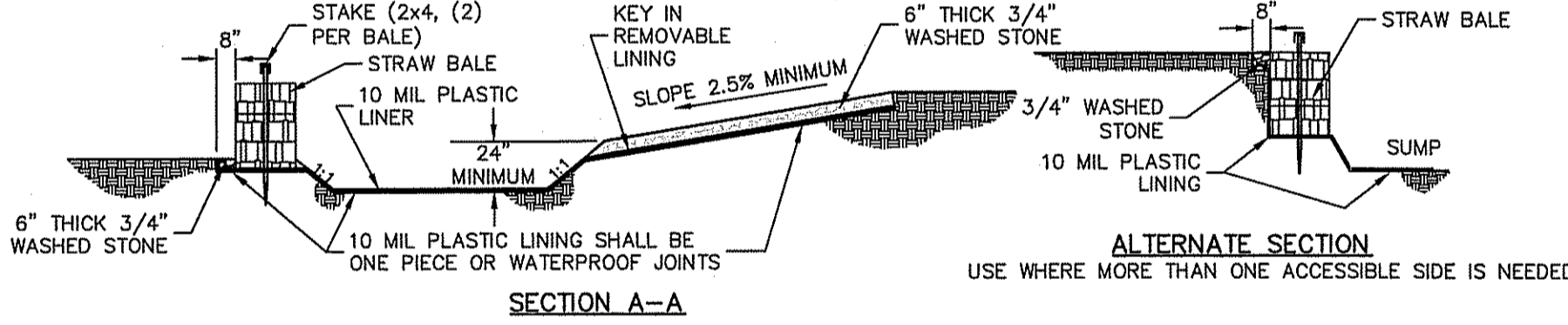
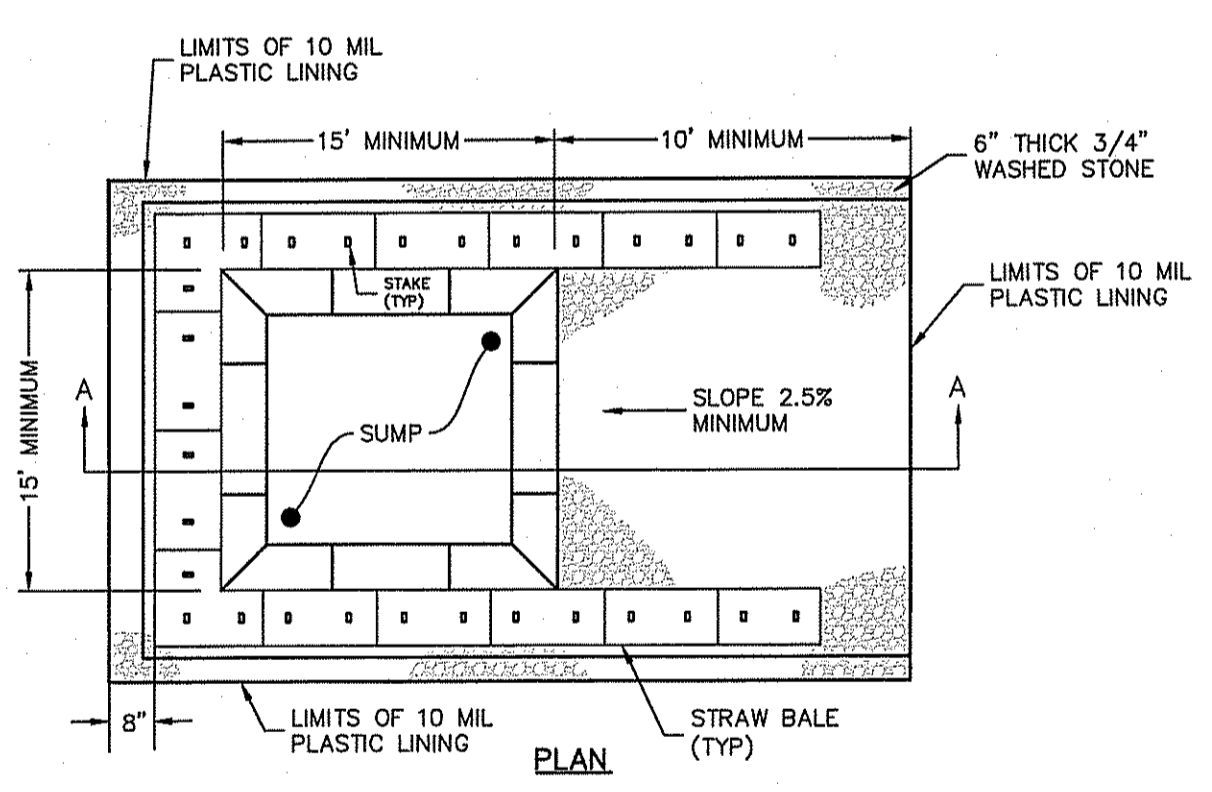
- NOTE:**
- EROSION CONTROL BARRIER TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS

STRAW WATTLE SEDIMENT BARRIER
NOT TO SCALE



- NOTE:**
- SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

Construction Access
NOT TO SCALE



- NOTE:**
- PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
 - WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
 - FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
 - FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
 - SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
 - CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERS.
 - MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.

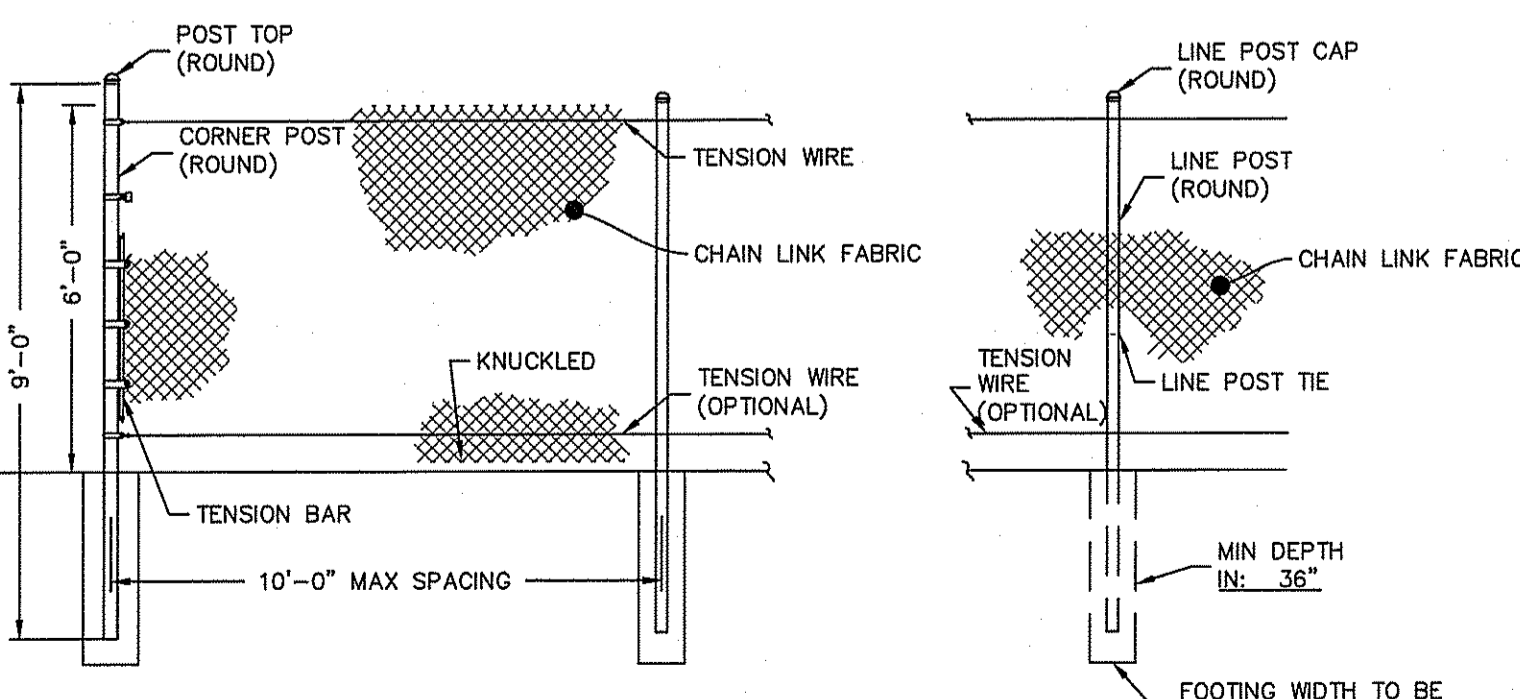
Concrete Washout Area
(NOT TO SCALE)

- GENERAL NOTES:**
- THE TEMPORARY SEDIMENT TRAP SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
 - THE TEMPORARY SEDIMENT TRAP SHALL HAVE AN INITIAL STORAGE COLUMN OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.
 - ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
 - THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
 - THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A SUITABLE CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
 - TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
 - MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET.
 - SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.
 - MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
 - FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE 1, COLUMN V FILTER STONE.

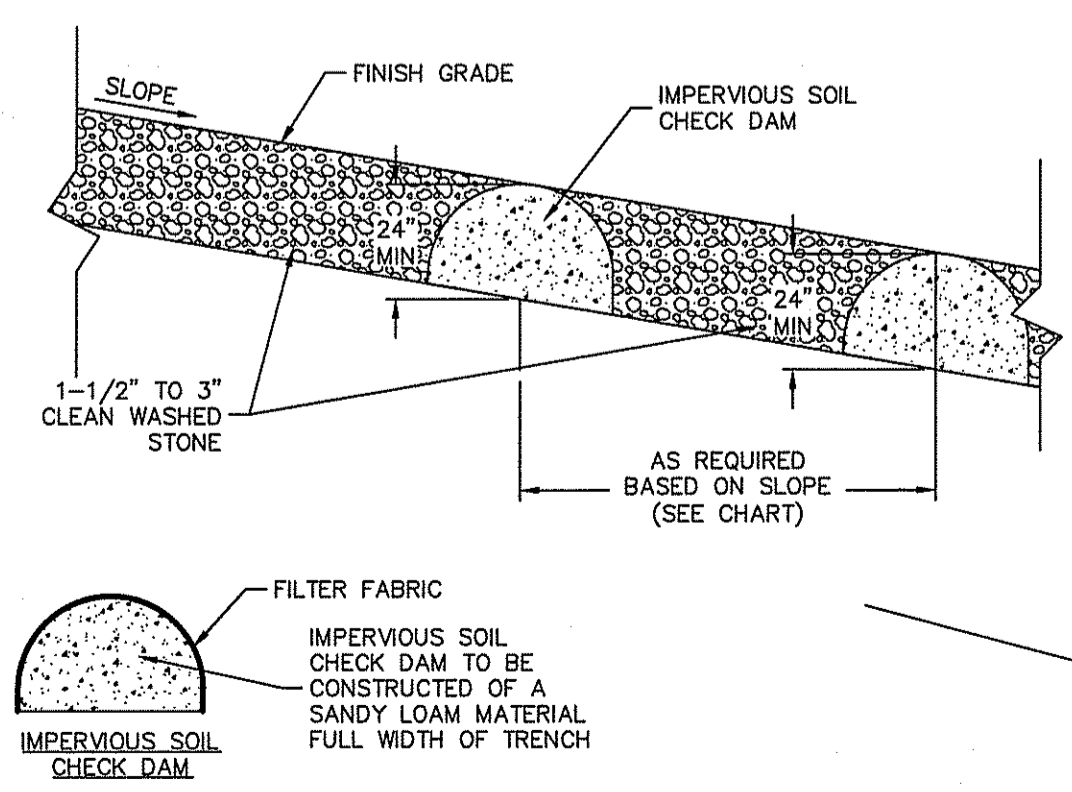
SEDIMENT TRAP DIMENSIONS

TRAP A	TRAP B
TRIBUTARY DRAINAGE AREA	1.93 ac
WET STORAGE DEPTH (Dw)	2.00 ft
DRY STORAGE DEPTH (Dd)	2.00 ft
TOTAL DEPTH (D)	4.00 ft
BOTTOM OF TRAP AREA (Ab)	1,180 sq.ft
WETTED SURFACE AREA (Aw)	1,960 sq.ft
SURFACE AREA AT OUTLET (Ao)	2,600 sq.ft

- INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS:**
- INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
 - CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
 - CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
 - WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
 - DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA.
 - THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
- INSTALLATION NOTES:**
- CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
 - REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
 - EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
 - USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
 - STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES, SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION.



FENCE DETAIL
NOT TO SCALE

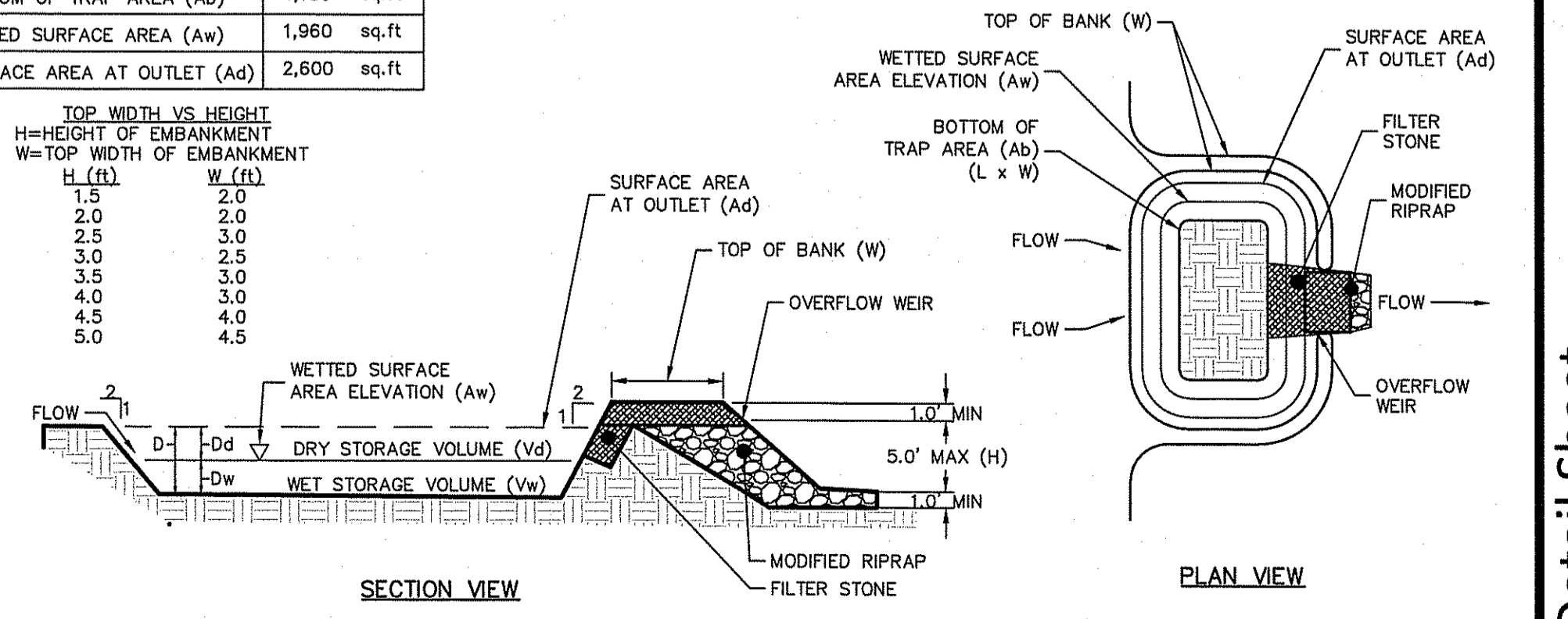
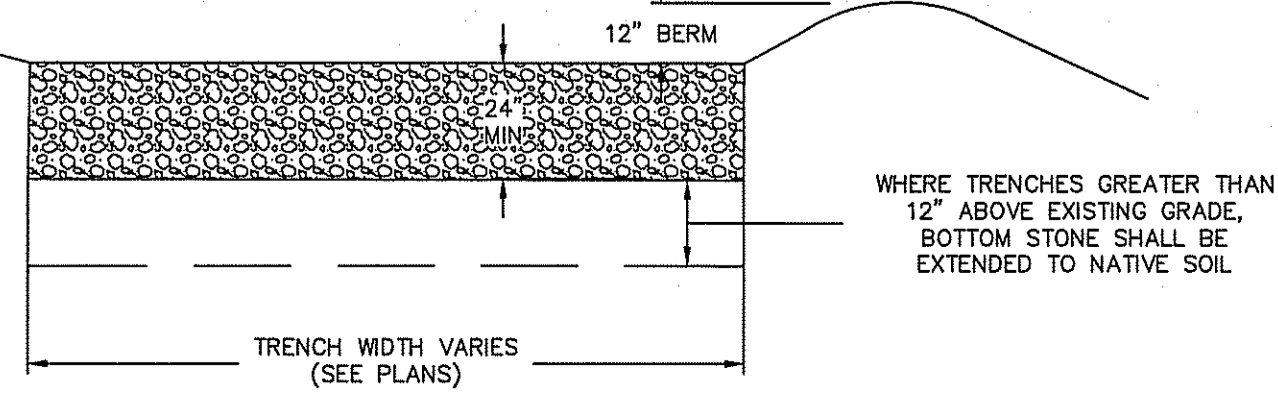


IMPERVIOUS SOIL DAM/STONE TRENCH CROSS SECTION
NOT TO SCALE

DAM LOCATION CHART

SLOPE	DISTANCE BETWEEN DAMS
1%	100'
2%	50'
3%	33.3'
4%	25'
5%	20'

- NOTE:**
- THE 12" BERM IS TO BE CONSTRUCTED AT THE END OF EACH STONE TRENCH TO MAINTAIN THE ABOVE POND STORAGE AREA.



Temporary Sediment Trap Detail
NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02926
tel 401-943-1000 fax 401-464-6005 www.diprete-eng.com
Boston • Providence • Newport

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER
CIVIL

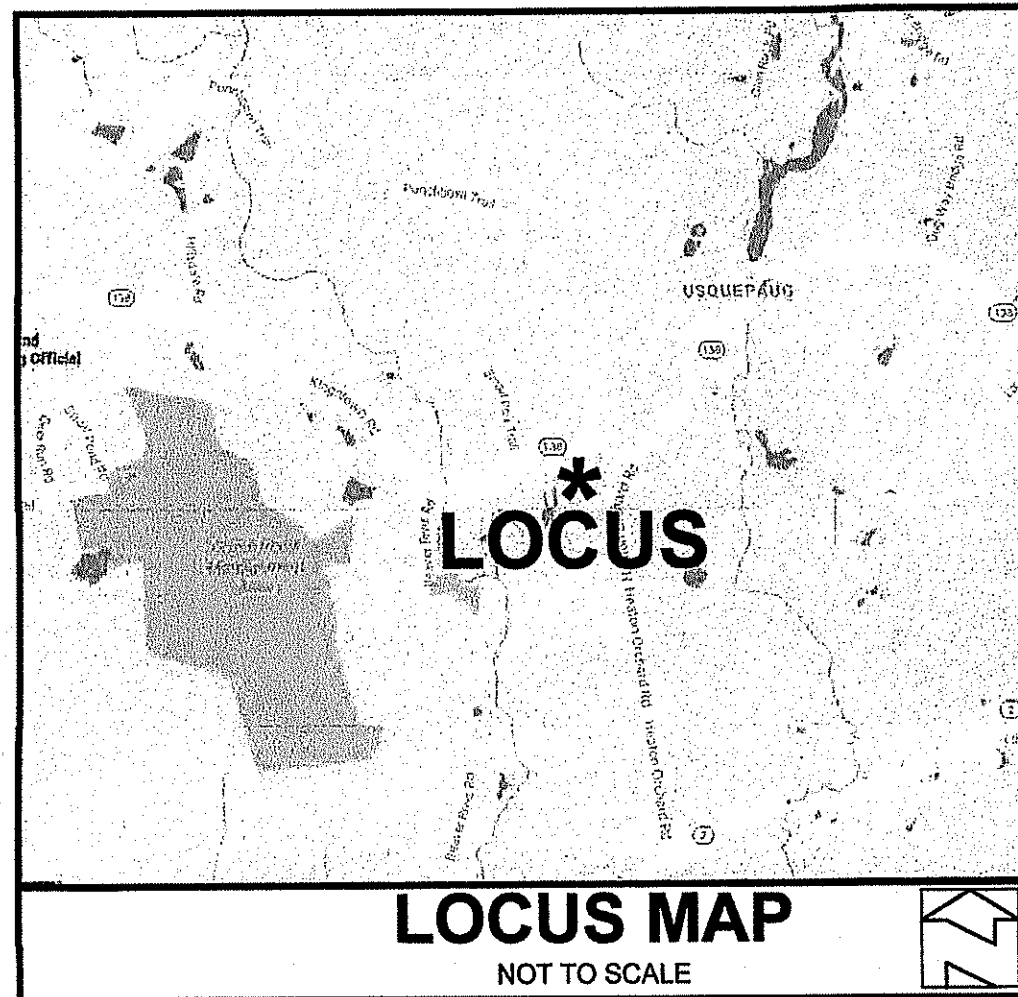
GREEN development, LLC

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

No.	Date	Description	By:
1	08/20/2018	Issue for Construction	J.A.C.
2	08/20/2018	Issue for Construction	J.A.C.
3	08/20/2018	Issue for Construction	J.A.C.
4	08/20/2018	Issue for Construction	J.A.C.

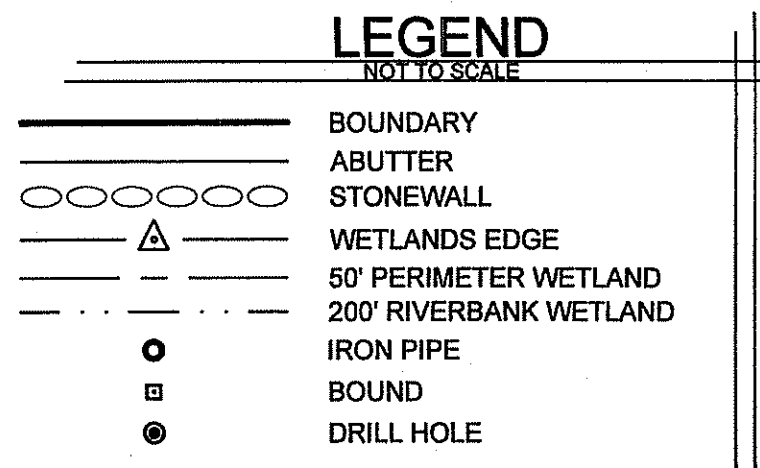
Drawn By: J.A.C. Design By: J.A.C.

Detail Sheet
WED Kingstown Solar II
Richmond, Rhode Island
Assessors Plat 6E, Lot 35
Owner: **John & Cindy Duncan**
Applicant: **WED Kingstown Solar II, LLC**
3750 Quaker Lane, North Kingstown
Rhode Island 02892
Tel 401-923-4994
DE Job No: 0601-016 Copyright 2018 by DiPrete Engineering Associates, Inc.

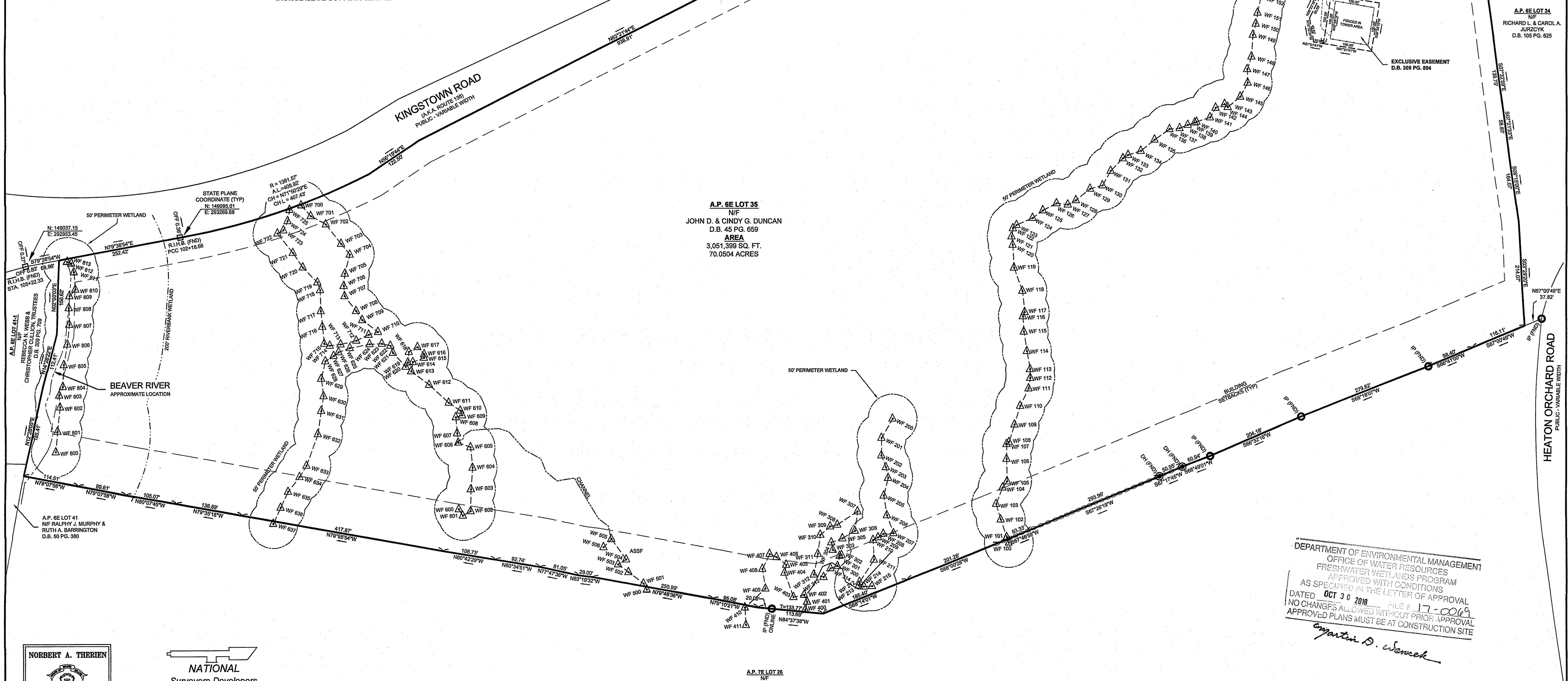


- GENERAL NOTES:**
1. THERE ARE NO KNOWN EASEMENTS OR RIGHTS OF WAY WITHIN OR ADJACENT TO THIS PARCEL EXCEPT THOSE SHOWN.
 2. THERE ARE NO KNOWN HISTORIC CEMETERIES WITHIN OR IMMEDIATELY ADJACENT TO THIS PARCEL.
 3. WETLANDS SHOWN HEREIN WERE DELINEATED BY MASON & ASSOCIATES, INC. 771 PLAINFIELD PIKE, NORTH SCITUATE, RI ON DECEMBER 21, 2016.
 4. WETLANDS FLAGGING LOCATION SUPPLIED BY WIND ENERGY DEVELOPMENT, LLC. 3760 QUAKER LANE NORTH KINGSTOWN, RI 02852
 5. HORIZONTAL DATUM BASED ON NAD-83 RHODE ISLAND STATE PLANE COORDINATE SYSTEM

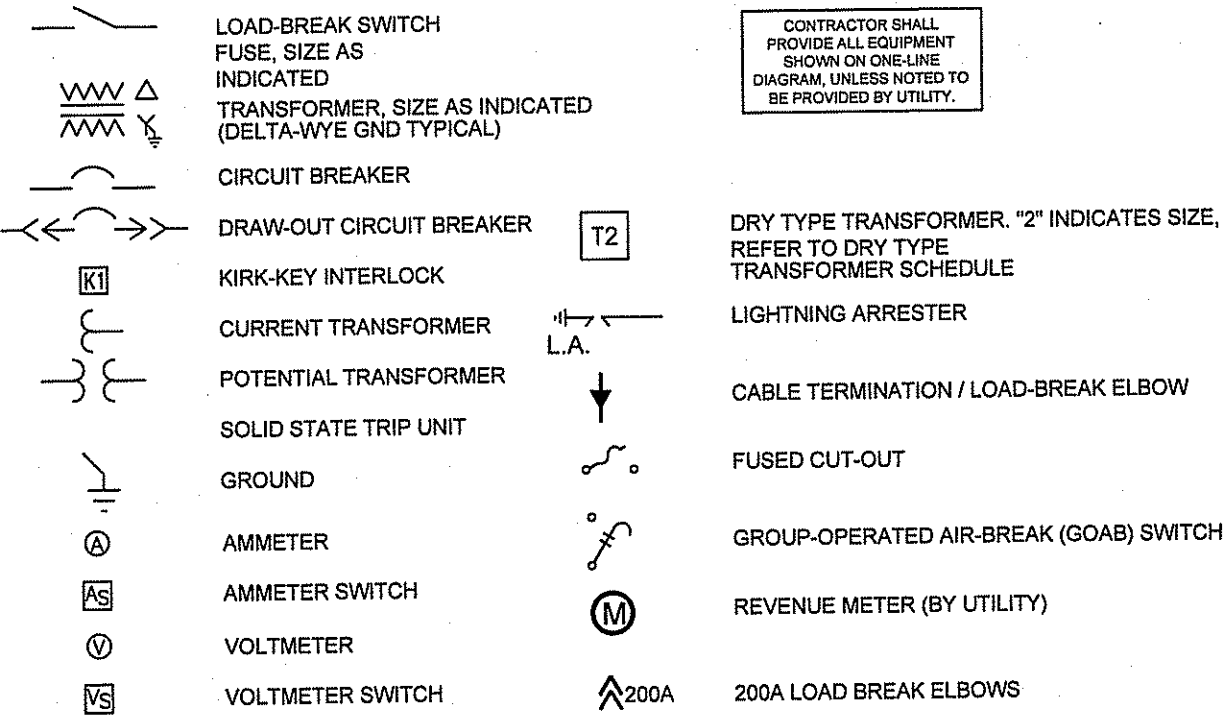
- REFERENCES:**
1. PLAN ENTITLED "ADMINISTRATIVE SUBDIVISION PREPARED FOR GORDON REALTY, INC. ASSESSOR'S PLAT 7E, LOT 26 & PLAT 8E, LOT 33 HEATON ORCHARD ROAD RICHMOND, RHODE ISLAND" RECORDED IN THE LAND EVIDENCE RECORDS OF THE TOWN OF RICHMOND AS MAP 325, SLIDE 325A.
 2. PLAN ENTITLED "PLAN OF LAND PREPARED FOR GORDON REALTY, INC., ASSESSOR'S PLAT 7E, LOT 26, HEATON ORCHARD ROAD, RICHMOND, RHODE ISLAND" RECORDED IN THE TOWN OF RICHMOND LAND EVIDENCE RECORDS AS MAP 110, SLIDE 58B.
 3. PLAN ENTITLED "PLAN OF LAND TO BE CONVEYED TO GEN-COV LM, LOCATED IN THE TOWN OF RICHMOND, RHODE ISLAND, A.P. 6E LOT 33 AS SEEN ON TAX ASSESSOR'S MAP" RECORDED IN THE LAND EVIDENCE RECORDS OF THE TOWN OF RICHMOND AS MAP 123, SLIDE 73A.
 4. RHODE ISLAND DOT PLATS 329 & 408



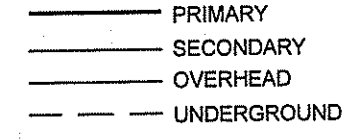
NO.	DATE	DESCRIPTION	BY



ONE LINE POWER DIAGRAM



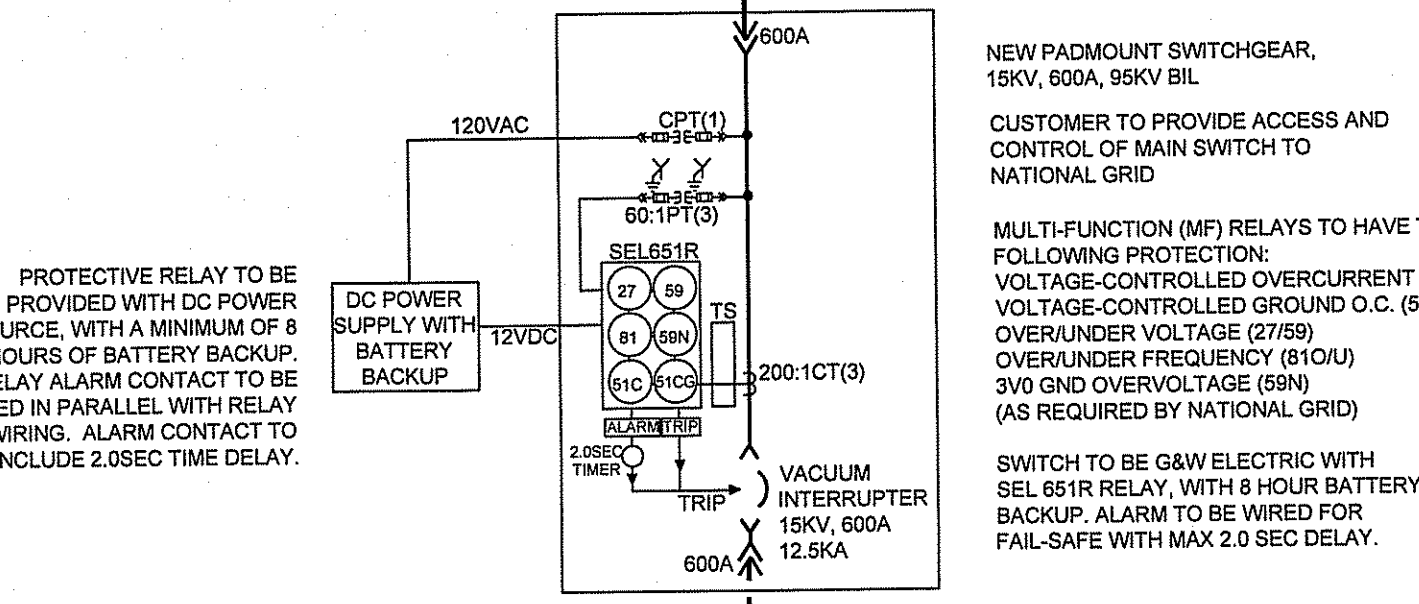
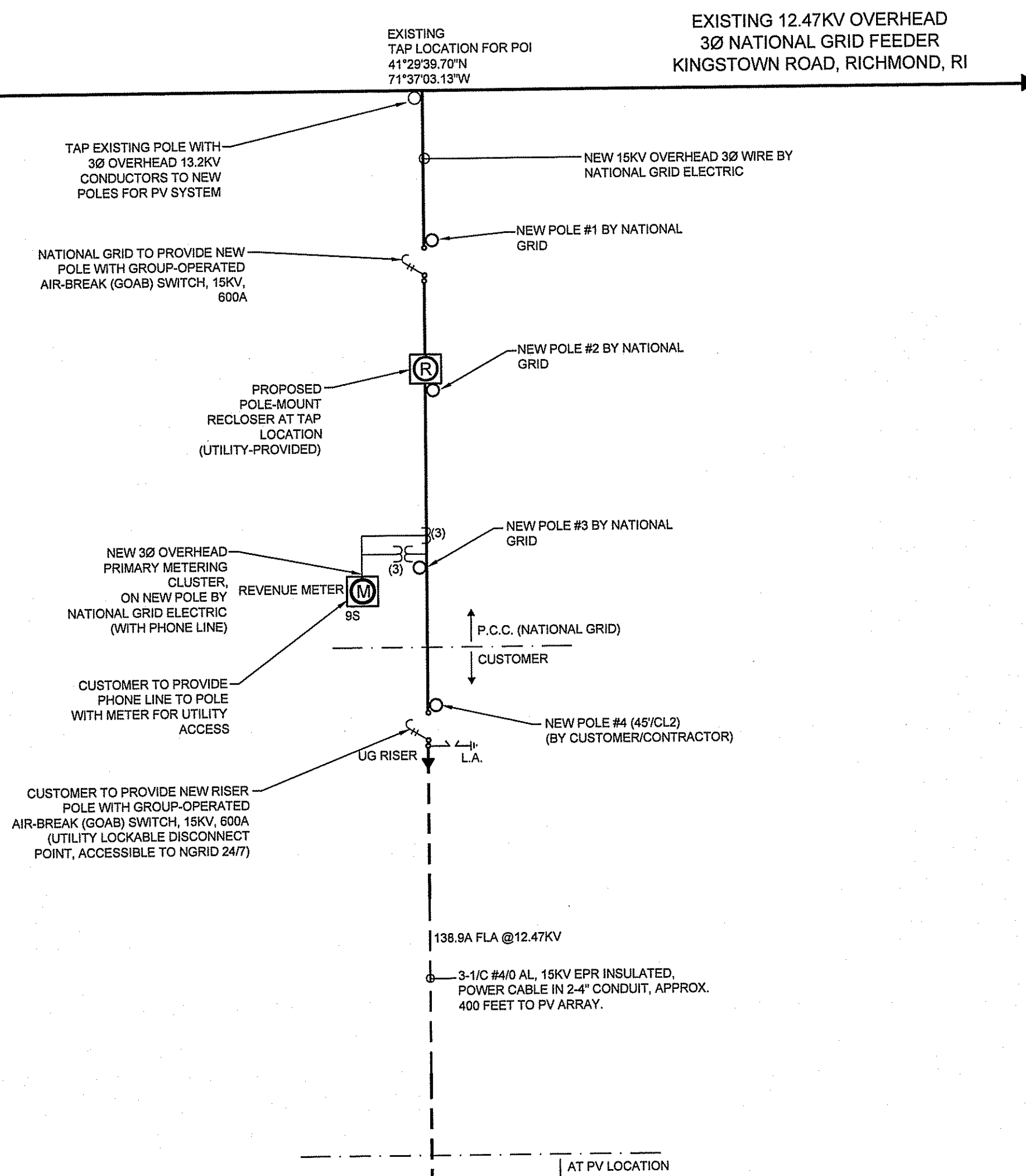
DEVICE NO.	DESCRIPTION
27T	TIME UNDER VOLTAGE RELAY
27I	INSTANTANEOUS UNDER VOLTAGE RELAY
32F	FORWARD OVER POWER RELAY
32R	REVERSE POWER RELAY
46	NEGATIVE PHASE SEQUENCE OVERCURRENT RELAY
47	REVERSE PHASE VOLTAGE RELAY
50/51	INSTANTANEOUS / TIME OVERCURRENT RELAY
51N	GROUND OVERCURRENT RELAY
59I	INSTANTANEOUS OVERVOLTAGE RELAY
59T	TIME OVERVOLTAGE RELAY
60	VOLTAGE BALANCE RELAY
81O	OVER FREQUENCY RELAY
81U	UNDER FREQUENCY RELAY



UTILITY INTERCONNECTION NOTES:

- TRANSFORMER TO BE WYE GROUND PRIMARY AND DELTA SECONDARY.
- PROVIDE POTS PHONE LINE TO EACH OF THE GRID PRIMARY METERING CLUSTER. PROVIDE 3 FEET ADDITIONAL PHONE LINE AND LIQUID-TIGHT CONDUIT WITH END NUT TO BOTTOM OF METER SOCKET ON POLE.
- PROTECTIVE RELAYS TO HAVE DC BATTERY BACKUP WITH AC POWERED BATTERY CHARGER FOR BACKUP.
- PROTECTIVE RELAY ALARM CIRCUIT TO BE WIRED OR PROGRAMMED TO TRIP SWITCH FOR REDUNDANCY PER NATIONAL GRID REQUIREMENTS. FOR SEL RECLOSURE THE HALARM WORD BIT IS USED TO TRIP ON LOSS OF DC POWER. BITFAIL IS USED FOR BATTERY FAILURE.
- TRANSFORMER FUSES TO BE COOPER BAY-O-NET STYLE, CAT#4000393C16 FOR 100A FUSES.
- PV SYSTEM WILL HAVE A 5-MINUTE HEALTHY GRID RECONNECT FEATURE PROGRAMMED INTO THE RECLOSURE. THIS WILL BE PROGRAMMED INTO THE RECLOSURE TO DEFEAT THE CLOSE BUTTON AND BLOCK CLOSE UNTIL THE 5 MINUTE TIMER HAS COMPLETED.

PV TOTAL SYSTEM SUMMARY
 12,066 PV MODULES TOTAL
 320W PV MODULES
 3,857.92 KW DC TOTAL
 3,000.0 KW AC TOTAL
 18 MODULES PER STRING (TYP.)
 112 STRINGS PER INVERTER (TYP.)
 6 X 500KW INVERTERS
 3 X 1000KVA TRANSFORMERS



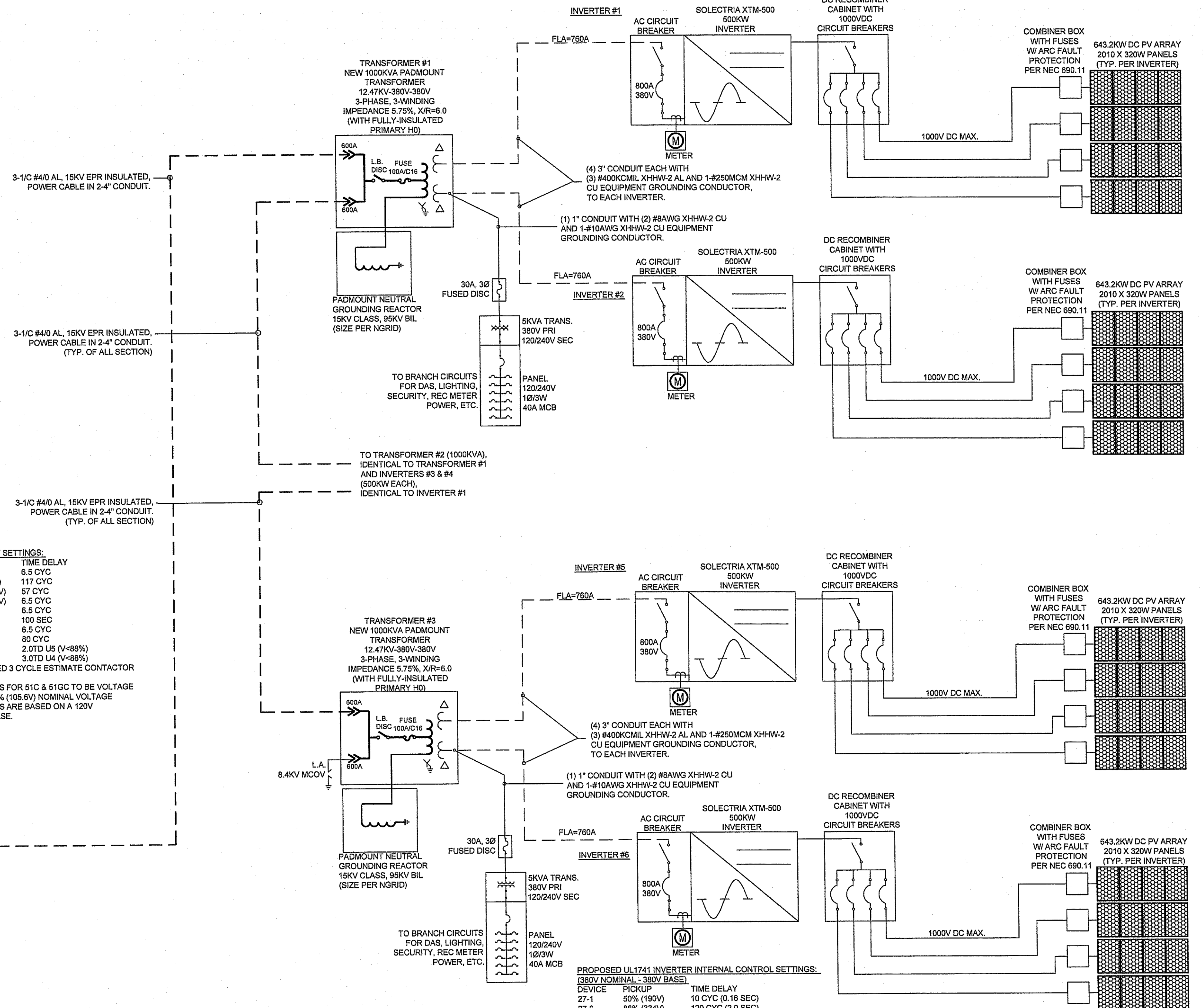
PROPOSED 651R RELAY SETTINGS:

DEVICE	PICKUP	TIME DELAY
27-1	50% (80.0V)	6.5 CYC
27-2	88% (105.6V)	117 CYC
59-1	110% (132.0V)	57 CYC
59-2	120% (144.0V)	6.5 CYC
81U-1	57.0HZ	6.5 CYC
81U-2	58.5HZ	100 SEC
81O-1	60.5HZ	6.5 CYC
59N	100V	80 CYC
51C	50A PRI	2.0TD U4 (V=88%)
51GC	30A PRI	3.0TD U4 (V=88%)

• SETTINGS INCLUDED 3 CYCLE ESTIMATE CONTACTOR OPENING TIME

• VOLTAGE SETTINGS FOR 51C & 51GC TO BE VOLTAGE CONTROLLED + 88% (105.6V) NOMINAL VOLTAGE

• VOLTAGE SETTINGS ARE BASED ON A 120V SECONDARY PT BASE.

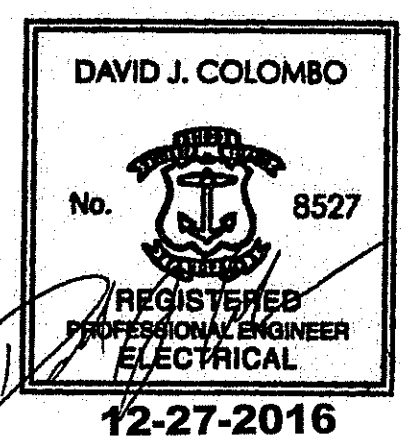


PROPOSED UL1741 INVERTER INTERNAL CONTROL SETTINGS: (380V NOMINAL - 380V BASE)

DEVICE	PICKUP	TIME DELAY
27-1	50% (190V)	10 CYC (0.16 SEC)
27-2	88% (334V)	120 CYC (2.0 SEC)
59-1	110% (418V)	80 CYC (1.0 SEC)
59-2	120% (459V)	10 CYC (0.16 SEC)
81U-1	57.0HZ	10 CYC (0.16 SEC)
81U-2	58.0HZ	1820 CYC (32.0 SEC) PER NPCC
81O-1	60.5HZ	10 CYC (0.16 SEC)

SETTINGS ARE BASED ON IEEE 1547 TABLE 1 (VOLT) AND TABLE 2 (FREQ), AND NPCC DIRECTORY 12 FOR UNDER-FREQUENCY.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 30 2016 FILE # 17-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



<p>PROJ. MANAGER: _____</p> <p>CHIEF DESIGNER: _____</p> <p>REVIEWED BY: _____ DATE _____</p>		<p>SEAL</p>	<p>SCALE:</p> <p>HORIZ.: NONE</p> <p>VERT.: _____</p> <p>DATUM:</p> <p>HORIZ.: _____</p> <p>VERT.: _____</p> <p>GRAPHIC SCALE</p>	<p>POWER ENGINEERS, LLC</p> <p>37 Fox Den Road Kingston, MA 02364-2150 (508) 612-0382 www.PowerEngineersLLC.com</p> <p>Electrical Engineering, Power, Lighting, Technical Studies and Utility Consulting</p>	<p>GREEN DEVELOPMENT, LLC</p> <p>421 KINGSTOWN ROAD - PV PROJECT</p> <p>3.0MW AC ONE-LINE DIAGRAM - ARRAY #1</p> <p>RICHMOND RHODE ISLAND</p>	<p>PROJ. No.: 144R DATE: DECEMBER 2016</p> <p>E-1</p> <p>SIZE: D REV: 0</p>													
<p>ISSUED FOR REVIEW</p> <p>12/27/2016</p>		<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>12/27/2016</td> <td>ISSUED FOR REVIEW</td> </tr> </tbody> </table>		No.	DATE	DESCRIPTION	0	12/27/2016	ISSUED FOR REVIEW	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> </tbody> </table>		No.	DATE	DESCRIPTION	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> </tbody> </table>		No.	DATE	DESCRIPTION
No.	DATE	DESCRIPTION																	
0	12/27/2016	ISSUED FOR REVIEW																	
No.	DATE	DESCRIPTION																	
No.	DATE	DESCRIPTION																	