

RHODE ISLAND AIRPORT CORPORATION

NORTH CENTRAL STATE AIRPORT

PHOTOVOLTAIC ARRAY

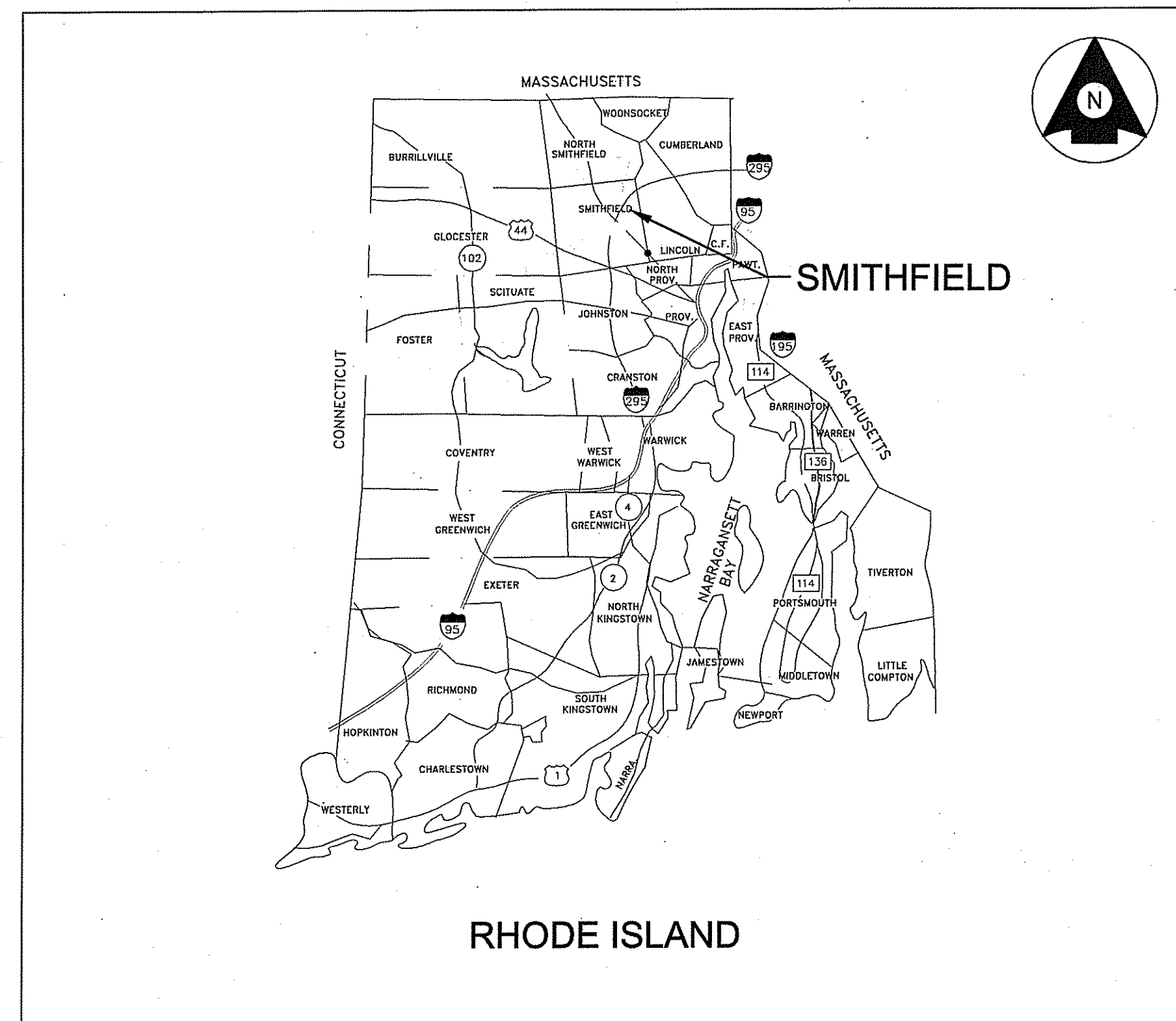
JULY 24, 2017

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED AUG 30 2017 FILE # 17-006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

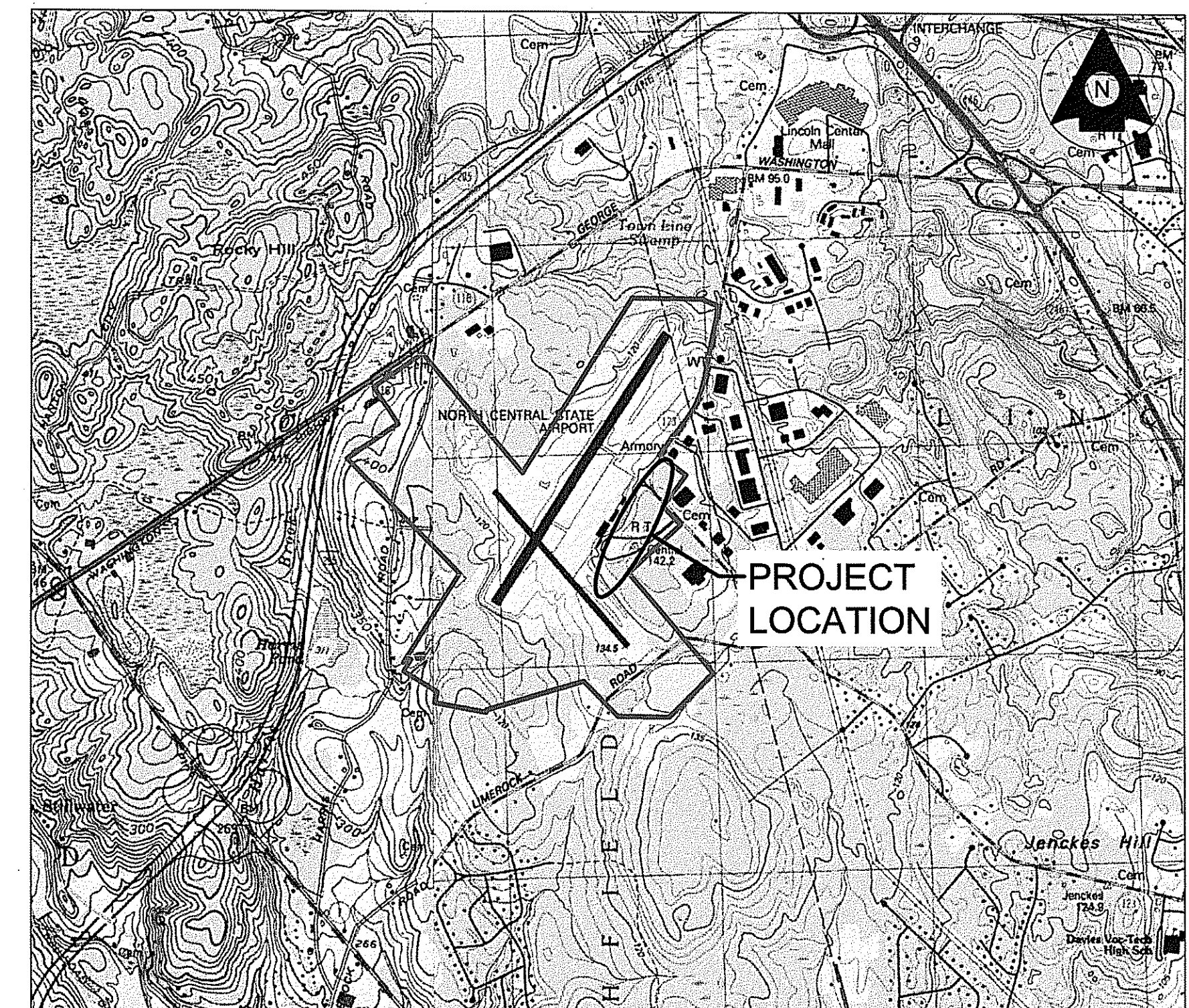
Christopher D. Wenczek

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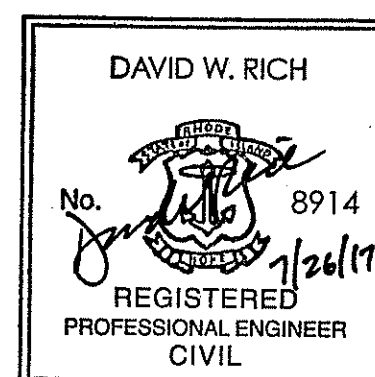
LOCATION MAP



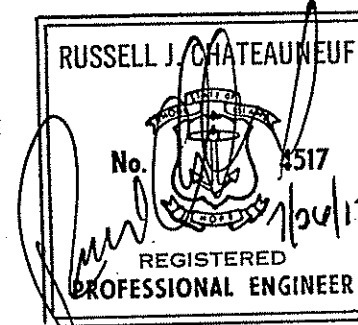
SITE MAP



David W. Rich
 APPROVED 7/26/17
 DATE



Horsley Witten Group
 Sustainable Environmental Solutions



Russell J. Chateaufort
 APPROVED 7/26/17
 DATE



JUL 28 2017

LEGEND	
	AIRPORT PROPERTY LINE
	RUNWAY PROTECTION ZONE
	RUNWAY SAFETY AREA (RSA)
	RUNWAY OBJECT FREE AREA (ROFA)
	PROPOSED FENCE
	PROPOSED SOLAR MODULES
	CONTRACTOR ACCESS ROUTE
	EXISTING WETLANDS
	100-YEAR FLOOD ZONE



GENERAL NOTES:

1. RUNWAY 15-33 WILL BE OPEN FOR THE PROJECT DURATION. ALL WORK FOR THIS PROJECT IS OUTSIDE OF THE RUNWAY 15-33 RUNWAY OBJECT FREE AREA (ROFA).
2. CONSTRUCTION VEHICLES SHALL BE PARKED WITHIN OR ADJACENT TO THE ACTIVE WORK AREAS. IN ADDITION, ALL CONTRACTOR'S VEHICLES SHALL HAVE FLASHING AMBER BEACONS AND THE COMPANY IDENTIFICATION PLAINLY VISIBLE ON BOTH SIDES OF THE VEHICLE. PARKING OF PERSONAL VEHICLES WITHIN THE SECURED AREA OF THE AIRPORT WILL NOT BE PERMITTED.
3. LOCATIONS OF UNDERGROUND UTILITIES, WHERE SHOWN, WERE OBTAINED FROM RECORD PLANS. CONTRACTOR SHALL VERIFY THE ACTUAL LOCATIONS OF ALL UTILITIES IN THE FIELD PRIOR TO COMMENCING WITH EXCAVATION.
4. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE FREE OF PAPER, BOXES, AND OTHER DEBRIS WHICH COULD BE BLOWN ONTO THE AIRPORT OPERATIONS AREA (AOA).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THOROUGHLY CLEANING VEHICLE TIRES PRIOR TO THE VEHICLE LEAVING THE WORK AREA.
6. AT THE COMPLETION OF THE CONTRACT, ALL CONTRACTOR'S AND SUBCONTRACTOR'S FACILITIES WILL BE REMOVED PROMPTLY AND THE AREA LEFT CLEAN AND FREE OF ALL DEBRIS OR SURPLUS MATERIAL.
7. CONTRACTOR'S VEHICLES SHALL NOT BE ALLOWED ACCESS TO PORTIONS OF THE AIRPORT OTHER THAN THE WORK AND STAGING AREAS. ALL PAVED HAUL ROADS OR ACCESS ROUTES SHALL BE KEPT CLEAN AT ALL TIMES TO PREVENT THE ACCUMULATION OF DIRT AND MUD AND THE GENERATION OF DUST. THE ROADS SHALL BE KEPT CLEAN BY SWEEPING.
8. CONTRACTOR SHALL PROVIDE A DEDICATED FULL-TIME GATE GUARD WHILE ANY GATE LEADING TO/FROM AIRPORT PROPERTY IS IN USE OR GATE SHALL BE CLOSED.

100-YR FLOOD ZONE IMPACT AVOIDANCE:

1. THERE ARE THREE UNNAMED FLOWING BODIES OF WATER LOCATED WITHIN THE PROJECT VICINITY. THESE STREAMS FALL UNDER THE JURISDICTION OF THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM), FRESHWATER WETLAND REGULATIONS AS DEFINED UNDER RULE 4.00; EACH HAS AN ASSOCIATED 100-YEAR FLOODPLAIN BOUNDARY AND ELEVATION AS SHOWN ON SHEET 5.
2. THE LATEST FEMA FLOOD INSURANCE RATE MAP (MAP NUMBER 44007C0188G; EFFECTIVE DATE MARCH 2, 2009) DOES NOT INDICATE THE PRESENCE OF A 100-YEAR FLOODPLAIN IN THE VICINITY OF THE NORTH CENTRAL STATE AIRPORT.
3. A FLOODPLAIN ANALYSIS IS PROVIDED AS A SEPARATE DOCUMENT AS PART OF THE RECORD FILE.
4. THE PROPOSED DEVELOPMENT HAS MINIMAL IMPACT ON THE 100-YEAR FLOODPLAIN LINE AND ELEVATION, AS THERE WILL BE NO OR WORK WITHIN THE CALCULATED FLOODPLAIN AND ONLY MINIMAL WORK WITHIN 100 FEET OF THE 100-YEAR FLOODPLAIN.

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 Aug 20 2017 FILE # 17-0016
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Senack

DAVID W. RICH

REGISTERED PROFESSIONAL ENGINEER CIVIL

RUSSELL J. CHATELAIN

REGISTERED PROFESSIONAL ENGINEER

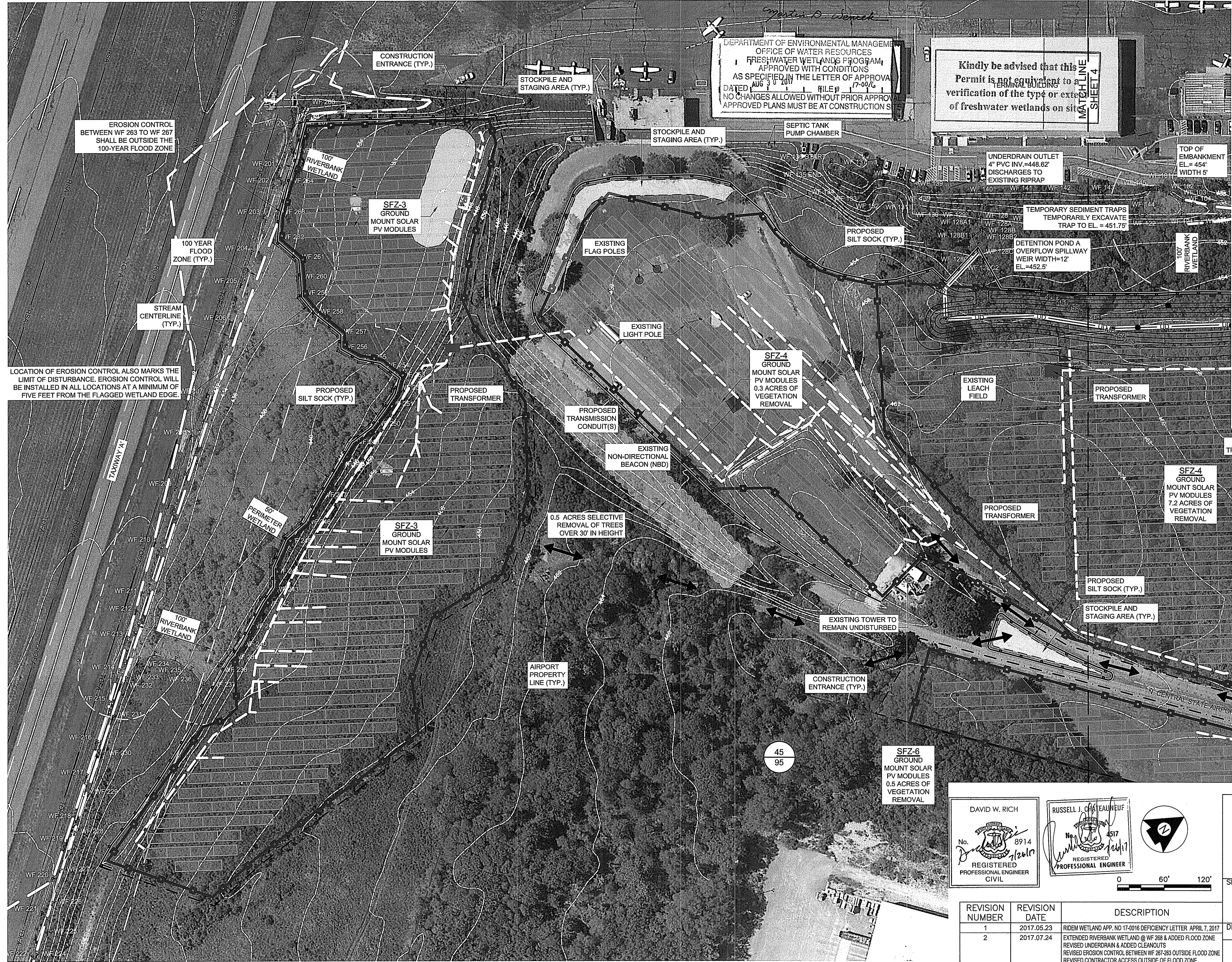
0 400' 800'

Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
SMITHFIELD, RHODE ISLAND

REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017
2	2017.07.24	ADD 100YR FLOOD ZONE AND NOTES

DESIGNED	SC	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO. 195210911							
DATE: JULY 2017							
SHEET 2							





DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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LEGEND

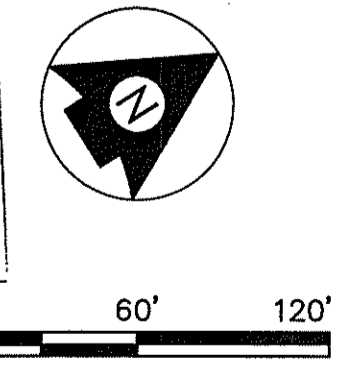
- AIRPORT PROPERTY LINE
- 450' EXISTING CONTOUR
- PROPOSED CONTOUR
- RSA RUNWAY SAFETY AREA (RSA)
- TOFA TAXIWAY OBJECT FREE AREA (TOFA)
- LIMIT OF DISTURBANCE
- EROSION CONTROL
- PROPOSED FENCE
- PROPOSED SOLAR MODULES
- VEGETATION REMOVAL AREA
- SELECTIVE VEGETATION REMOVAL AREA TREES OVER 30' IN HEIGHT
- PROPOSED CONDUIT(S)
- CONTRACTOR ACCESS ROUTE
- 100-YEAR FLOOD ZONE
- 100' RIVERBANK WETLAND
- 50' PERIMETER WETLAND BOUNDARY
- EXISTING WETLANDS
- 45 47 PLAT/LOT NUMBER
- STANDARD UTILITY POLE
- UD PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN CLEANOUT

* CALCULATED AREA OF DISTURBANCE = 11.78 AC
 (BASED ON TREE CLEARING, FENCE AND APPROXIMATE POST INSTALLATION, TRENCHING AND EQUIPMENT PAD.)

LOCATION OF EROSION CONTROL ALSO MARKS THE LIMIT OF DISTURBANCE. EROSION CONTROL WILL BE INSTALLED IN ALL LOCATIONS AT A MINIMUM OF FIVE FEET FROM THE FLAGGED WETLAND EDGE.

DAVID W. RICH
 No. 8914
 REGISTERED PROFESSIONAL ENGINEER CIVIL

RUSSELL J. STEAUNEUF
 No. 4517
 REGISTERED PROFESSIONAL ENGINEER



Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
 SMITHFIELD, RHODE ISLAND

SHEET TITLE

LAYOUT PLAN SHEET 1 OF 2

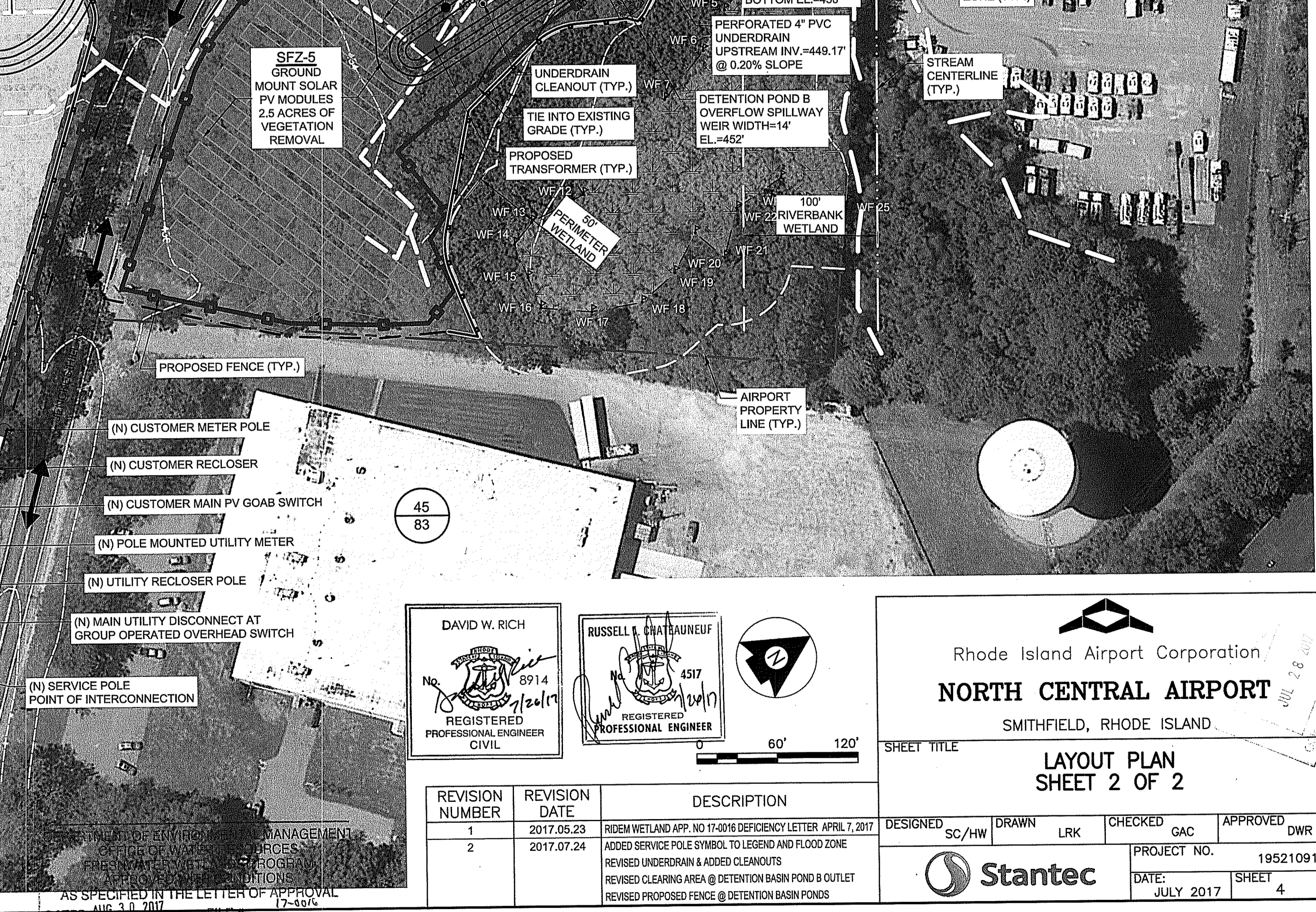
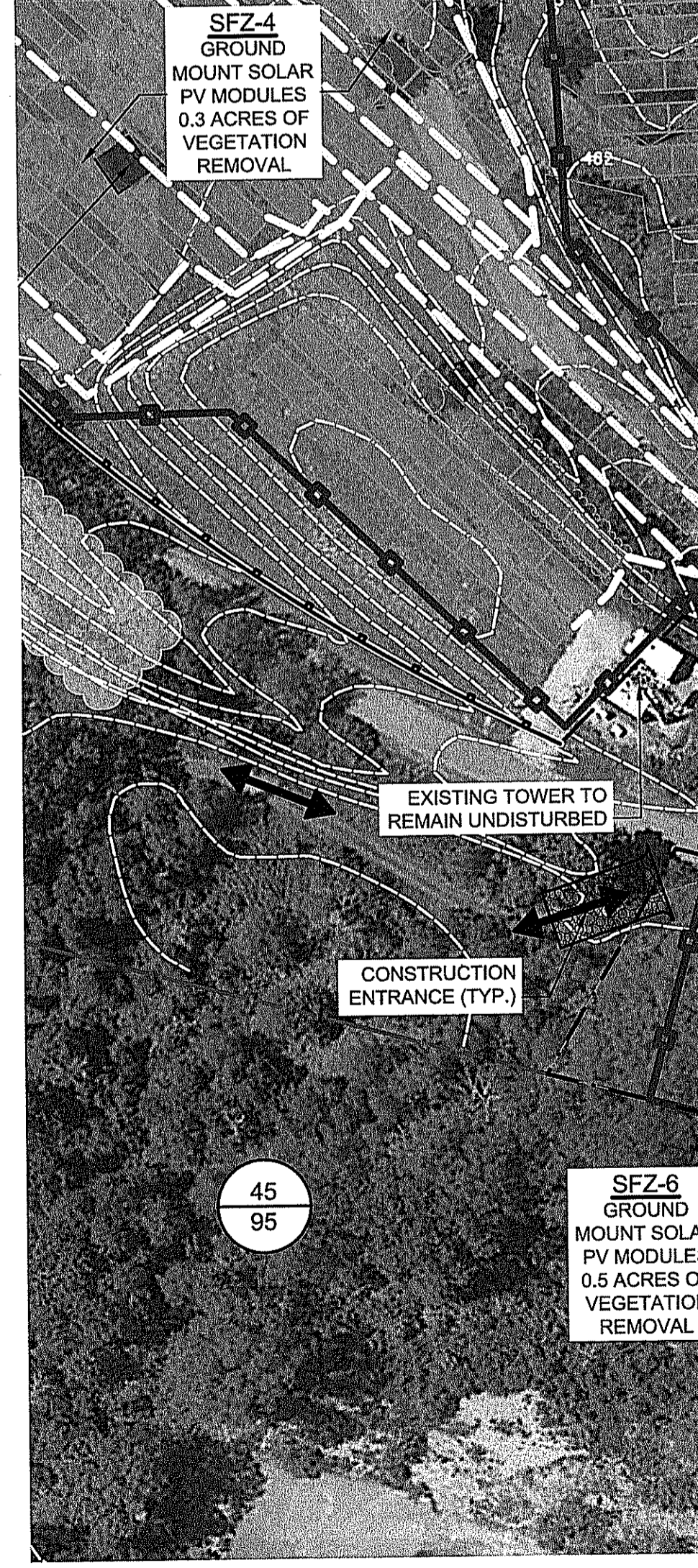
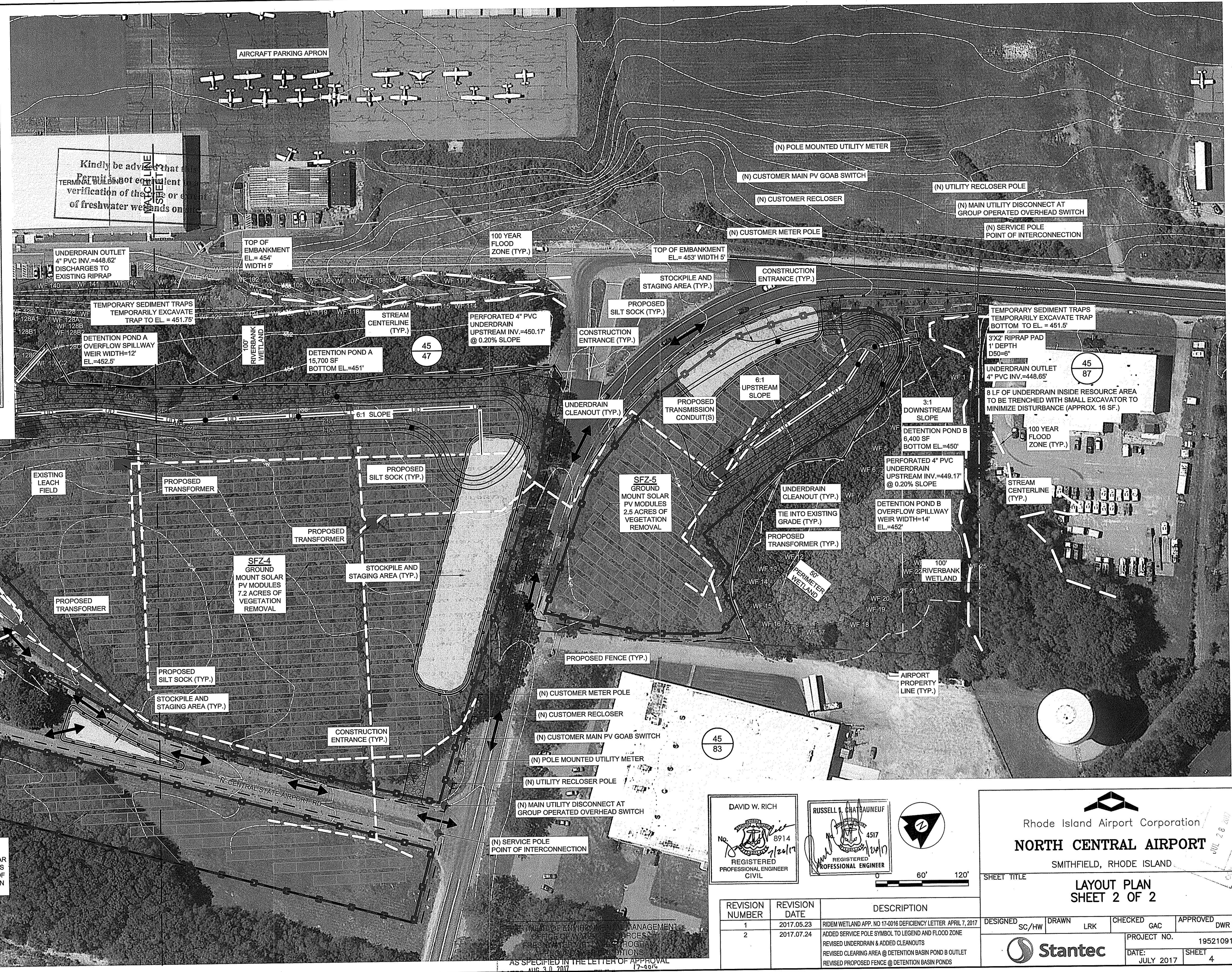
DESIGNED	SC/HW	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO. 195210911							
DATE: JULY 2017							SHEET 3

REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017
2	2017.07.24	EXTENDED RIVERBANK WETLAND @ WF 268 & ADDED FLOOD ZONE REVISED UNDERDRAIN & ADDED CLEANOUTS REVISED EROSION CONTROL BETWEEN WF 267-263 OUTSIDE FLOOD ZONE REVISED CONTRACTOR ACCESS OUTSIDE OF FLOOD ZONE REVISED PROPOSED FENCE @ DETENTION BASIN POUNDS

LEGEND

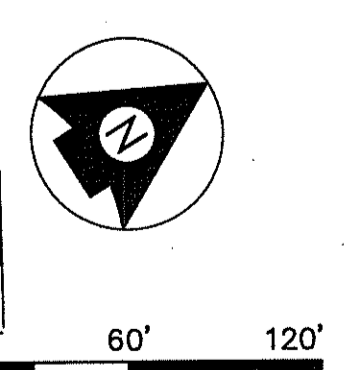
- AIRPORT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- RSA RUNWAY SAFETY AREA (RSA)
- TOFA TAXIWAY OBJECT FREE AREA (TOFA)
- LIMIT OF DISTURBANCE
- EROSION CONTROL
- PROPOSED FENCE
- PROPOSED SOLAR MODULES
- VEGETATION REMOVAL AREA
- SELECTIVE VEGETATION REMOVAL AREA TREES OVER 30' IN HEIGHT
- PROPOSED CONDUIT(S)
- CONTRACTOR ACCESS ROUTE
- 100-YEAR FLOOD ZONE
- 100' RIVERBANK WETLAND
- 50' PERIMETER WETLAND BOUNDARY
- EXISTING WETLANDS
- PLAT/LOT NUMBER
- STANDARD UTILITY POLE
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN CLEANOUT

* CALCULATED AREA OF DISTURBANCE = 11.78 AC (BASED ON TREE CLEARING, FENCE AND APPROXIMATE POST INSTALLATION, TRENCHING AND EQUIPMENT PAD.)



DAVID W. RICH
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

RUSSELL A. CHATTAUNEUF
 REGISTERED PROFESSIONAL ENGINEER



60' 120'

Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
 SMITHFIELD, RHODE ISLAND

SHEET TITLE
LAYOUT PLAN SHEET 2 OF 2

REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017
2	2017.07.24	ADDED SERVICE POLE SYMBOL TO LEGEND AND FLOOD ZONE REVISED UNDERDRAIN & ADDED CLEANOUTS REVISED CLEARING AREA @ DETENTION BASIN POND B OUTLET REVISED PROPOSED FENCE @ DETENTION BASIN PONDS

DESIGNED	SC/HW	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO.						195210911	
DATE:						JULY 2017	
SHEET						4	



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Myrtice D. Seneck

LEGEND

- AIRPORT PROPERTY LINE
- 100-YEAR FLOOD ZONE
- 100' RIVERBANK WETLAND
- 50' PERIMETER WETLAND BOUNDARY
- EXISTING WETLANDS

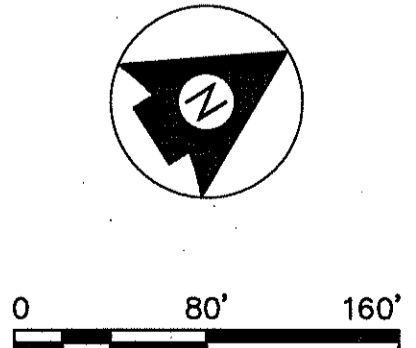
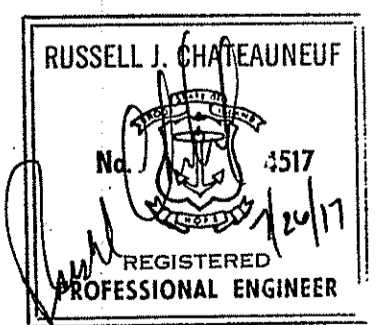


SOIL TEST PIT DATA

PERFORMED BY: G GLOVER, HORSLEY WITTEN GROUP, INC; BRIAN KUCHAR P.E.
DATE: AUGUST 5, 2016

DEPTH (TYP.)	TP-1	EL. (TYP.)	TP-2	TP-3	TP-4	TP-5
0"	Ap 10 YR 3/3 MEDIUM SAND	452'	Ap 10 YR 3/4 SANDY LOAM	Ap 10 YR 5/4 FINE SANDY LOAM	Ap 10 YR 3/2 SANDY LOAM	FILL 10 YR 5/6 LOAMY SAND
9"	Bw1 10 YR 4/6 LOAMY SAND		Bw1 10 YR 6/6 SANDY LOAM	C1 10 YR 6/2 VERY FINE SAND	Bw1 10 YR 6/3 FINE LOAMY SAND	Ab 10 YR 2/2 SANDY LOAM
14"	Bw2 10 YR 4/6 LOAMY SAND				BC 10 YR 6/3 GRAVELLY LOAMY SAND	Bw 10 YR 5/6 LOAMY SAND
22"						
56"	Cd 10 YR 4/6 VERY FINE GRAVELLY SAND	447.3'	C 10 YR 6/2 VERY FINE SAND	C2 10 YR 5/2 COARSE GRAVELLY SAND	Cd 10 YR 5/3 GRAVELLY LOAMY SAND	Cd 10 YR 6/2 GRAVELLY LOAMY SAND
	PERCHED WATER TABLE REDOX FEATURES @ 22" DEPTH		PERCHED WATER TABLE REDOX FEATURES @ 25" DEPTH	PERCHED WATER TABLE REDOX FEATURES @ 14" DEPTH	PERCHED WATER TABLE REDOX FEATURES @ 29" DEPTH	PERCHED WATER TABLE REDOX FEATURES @ 32" DEPTH

Martin D. Wenczek
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED AUG 30 2017 FILE # 17-0516
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REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017
2	2017.07.24	EXTEND RIVERBANK WETLAND FLAG 268 ADDED 100YR FLOOD ZONE

Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
SMITHFIELD, RHODE ISLAND

SHEET TITLE
WETLAND PLAN

DESIGNED HW DRAWN LRK CHECKED GAC APPROVED DWR

PROJECT NO. 195210911
DATE: JULY 2017 SHEET 5

GENERAL CONSTRUCTION NOTES

- ALL SITE PREPARATION NECESSARY TO COMPLETE THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY FENCING, BARRICADES, SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE ENGINEER AND/OR TOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
- ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD-LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACCURATELY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COST RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
- ALL TRENCHING WORK WITHIN A ROADWAY SHALL BE COORDINATED WITH THE PROPER LOCAL & STATE AGENCY. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCHWORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY. THE CONTRACTOR SHALL PLAN ACCORDINGLY.
- ALL TRENCH WORK WITHIN EXISTING PAVEMENT SHALL BE SAWCUT PER THE APPLICABLE DETAILS. TRENCHWORK BACKFILL AND COMPACTION SHALL HAVE MAX. 8-INCH LIFTS. CONTRACTOR SHALL BE REQUIRED TO REMOVE PATCH AND REPAVE AFTER ONE COMPLETE 12-MONTH CYCLE IF SETTLEMENT OCCURS DUE TO INADEQUATE COMPACTION AS DETERMINED BY THE ENGINEER WITHIN THE WARRANTY PERIOD.
- THE CONTRACTOR SHALL COORDINATE ALL CONNECTIONS AND CROSSINGS WITH THE PROPER UTILITY COMPANIES, AS REQUIRED.
- SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONDUCTED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES SHALL REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COST) OF THE CONTRACTOR.

- CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
- SOLID WASTES SHALL NOT BE STORED OR COLLECTED ON SITE. ALL SOLID WASTE DISPOSAL SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS.
- ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM INSTALLED AND BE SEEDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
- THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO AN APPROVED DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- CONCRETE TRUCKS SHALL NOT BE WASHED ONSITE. ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED AREA SHALL BE REMOVED BY HAND AT THE CONTRACTOR'S EXPENSE.
- BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED.
- IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR IS TO IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER.
- AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED, AND REMOVED FROM THE SITE.

- A CONSTRUCTION EXIT SHALL BE CONSTRUCTED AS SHOWN IN THE DETAILS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. THE CRUSHED STONE PAD WILL BE REPLACED/CLEANED AS NEEDED TO MAINTAIN ITS EFFECTIVENESS.
- THE LIMIT OF ALL CLEARING, GRADING AND DISTURBANCES SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION SHALL BE GRUBBED. THE REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERLY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK.
- ESC MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF 0.25 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE INTACT AND FUNCTIONING PROPERLY. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY NO LATER THAN 24 HOURS AFTER IDENTIFICATION.
- SOIL STOCKPILES LEFT OVERNIGHT SHALL BE SURROUNDED ON THEIR PERIMETERS WITH SILT SOCK, SILT FENCE, STRAWBALES, OR A COMBINATION OF SILT FENCE WITH STRAWBALE, AS DETERMINED NECESSARY.
- DISTURBED AREAS AND SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHOULD PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY AREAS HAVING A SLOPE GREATER THAN 4:1 SHALL BE REINFORCED WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCHBASIN RECEIVING RUNOFF FROM THE SITE. UPON THE INSTALLATION OF EACH CATCH BASIN, THE CONTRACTOR SHALL INSTALL A SILT SACK OR APPROVED EQUIVALENT. THESE ARE TO BE INSPECTED AFTER EACH SIGNIFICANT STORM EVENT AND REMOVED AND EMPTIED AS NEEDED DURING THE ENTIRE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL CONTAIN ALL SEDIMENT ONSITE. ALL EXITS FROM THE SITE WILL BE SWEEP AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. PAVED AREAS SHALL BE SWEEP AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS WHICH MAY ACCUMULATE DURING SITE WORK.
- ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL TEMPORARY PRACTICES AND DISPOSED OF IN A PRE-APPROVED LOCATION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ON SITE OR MAKE READILY AVAILABLE TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER.
- PROPER MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IF DEWATERING IS NECESSARY DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE DEWATERING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS AND/OR OTHER APPROVED DEVICES. THE DEWATERING SETUP SHALL BE APPROVED BY THE ENGINEER.
- ALL SEDIMENT COLLECTED IN THE BMP AREAS WILL BE REMOVED AND DISPOSED OF PROPERLY PRIOR TO FILTER FABRIC AND MEDIA INSTALLATION. PARTIALLY CONSTRUCTED BMP AREAS WILL HAVE A SURFACE ELEVATION AT A MINIMUM 1-FOOT ABOVE THE BOTTOM OF MEDIA ELEVATION AS SHOWN IN THE DETAILS. THIS WILL ALLOW AN OVER-DIG OF THE COLLECTED SEDIMENT FROM WITHIN THE BMP AREA PRIOR TO MEDIA/FILTER INSTALLATION.
- DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. ANY SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK SHALL BE REMOVED PRIOR TO THE OWNER'S ACCEPTANCE.

GENERAL STORMWATER AND EROSION CONTROL CONSTRUCTION SEQUENCE

- THE ENGINEER AND CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING.
- THE PROPOSED SITES SHALL BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION.
- INSTALL CONSTRUCTION ENTRANCES AT AREAS WHERE CONSTRUCTION WILL BEGIN (SEE EROSION AND SEDIMENT CONTROL PLAN).
- INSTALL SILT SOCK, INLET PROTECTION, AND CONSTRUCTION FENCING AROUND PROPOSED LIMIT OF WORK TO PREVENT ANY FURTHER DISTURBANCE AFTER CONSTRUCTION HAS STARTED.
- CLEAR AND GRUB A PORTION OF THE TOTAL LIMIT OF CLEARING TO INSTALL TEMPORARY SEDIMENT TRAP. SEE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR INITIAL LIMIT OF CLEARING.
- TEMPORARY SEDIMENT TRAPS ARE TO BE LOCATED WITHIN THE FOOTPRINT OF THE PROPOSED PERMANENT STORMWATER FACILITIES. CONSTRUCT TEMPORARY SEDIMENT TRAP PER GRADING PLAN AND SOIL EROSION AND SEDIMENT CONTROL PLAN. EXCAVATE TO A BOTTOM DEPTH SPECIFIED ON THE PLANS AND THE SOIL EROSION AND SEDIMENT CONTROL REPORT. ROUGH GRADE BERM AND INSTALL OVERFLOW SPILLWAY TO ELEVATION SPECIFIED ON THE PLANS AND DETAILS. EXCAVATORS OR BACKHOES SHALL WORK FROM THE SIDES TO EXCAVATE FACILITIES TO THEIR APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHALL HAVE ARMS WITH ADEQUATE REACH SO THEY DO NOT COMPACT THE SOIL WITHIN THE FOOTPRINT OF THE DETENTION POND AREA.
- CLEAR AND GRUB THE REMAINDER OF THE SITE WITHIN LIMITS OF DISTURBANCE.
- PERFORM FINISH SITE GRADING IN ACCORDANCE WITH THE GRADING PLAN.
- INSTALL PHOTOVOLTAIC PANEL ARRAYS AND ASSOCIATED ELECTRICAL EQUIPMENT OUTSIDE THE AREA OF THE SEDIMENT TRAP.
- ALL FINISH GRADING AND STABILIZATION FOR THE CONTRIBUTING DRAINAGE AREA MUST BE COMPLETE PRIOR TO BEGINNING THE FINAL CONSTRUCTION PHASE OF THE STORMWATER FACILITIES.
- COMPLETE CONSTRUCTION OF PERMANENT DETENTION PONDS. SEE GRADING PLAN FOR FINAL DETENTION POND BOTTOM ELEVATION AND SIDE SLOPE SPECIFICATIONS.
- INSTALL THE PHOTOVOLTAIC PANEL ARRAYS AND ASSOCIATED ELECTRICAL EQUIPMENT WITHIN THE AREA OF THE DETENTION BASIN.
- STABILIZE ALL REMAINING DISTURBED AREAS AND SIDE SLOPES WITH SEEDING, HYDROSEEDING, AND/OR EROSION CONTROL BLANKETS AS SPECIFIED IN THE CONSTRUCTION PLANS.
- THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY SEDIMENT THAT WASHES INTO THE STORMWATER FACILITIES DURING THE CONSTRUCTION AND PLANTING PHASES.
- CONDUCT FINAL CONSTRUCTION INSPECTION WITH ENGINEER.
- REMOVE REMAINING EROSION AND SEDIMENT CONTROLS ONLY AFTER SURROUNDING DISTURBED AREAS HAVE BEEN PROPERLY STABILIZED.

- NOTES:
 (1) SEE GENERAL CONSTRUCTION NOTES FOR OVERALL CONSTRUCTION SEQUENCE.
 (2) SEE GENERAL NOTES/SPECIFICATIONS/CONSTRUCTION DETAILS FOR DETAILED CONSTRUCTION REQUIREMENTS.

GENERAL GRADING AND DRAINAGE NOTES

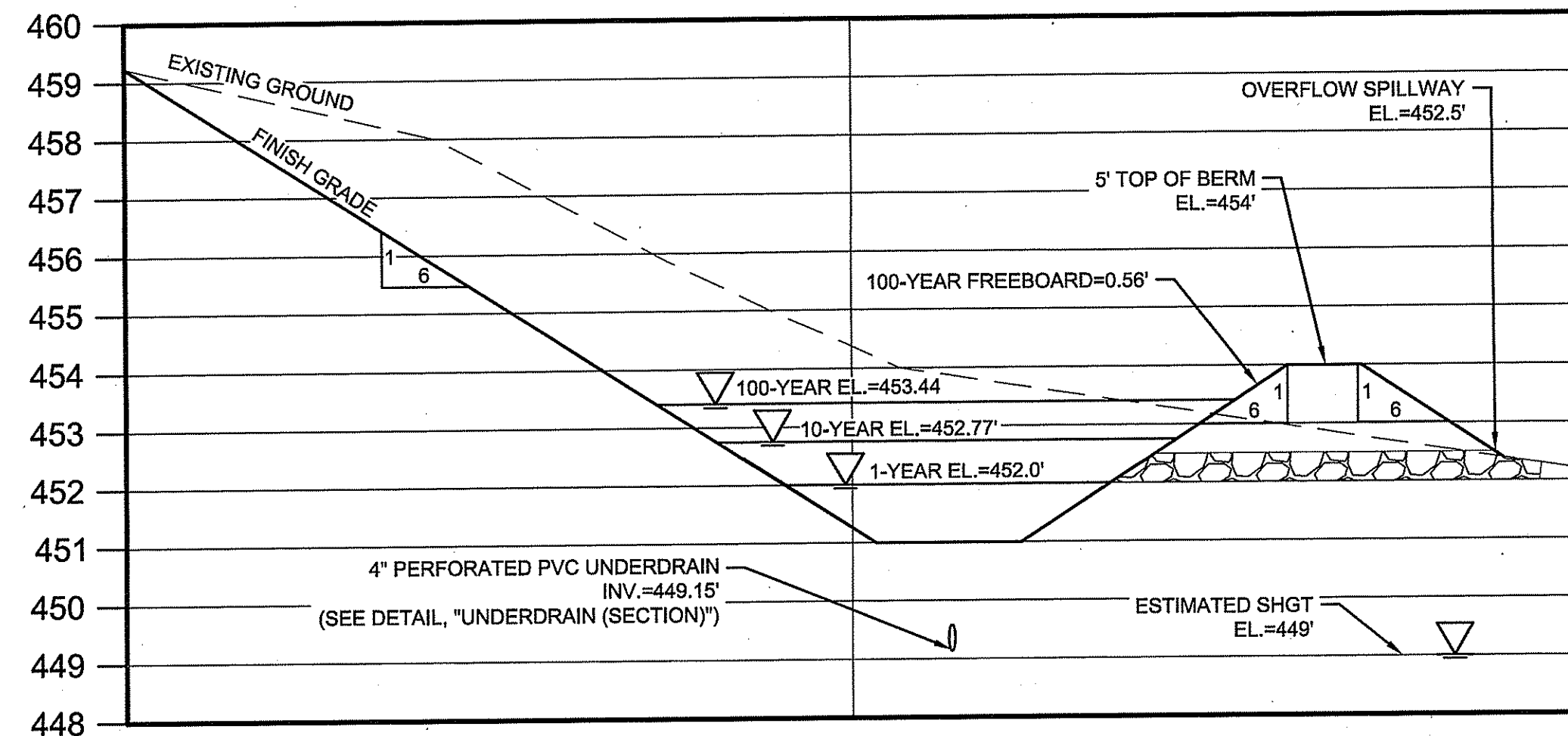
- ALL CUT AND FILL SLOPES SHALL BE 6:1 OR FLATTER UNLESS OTHERWISE NOTED.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 2 FOOT.
- PROPOSED ELEVATIONS ARE SHOWN TO FINISH GRADE UNLESS NOTED OTHERWISE.
- DRAINAGE PIPING SHALL BE PVC PIPE AND CONFORM TO AASHTO M294 CORRUGATED POLYETHYLENE PIPE. PIPE SHALL BE INSTALLED AT THE LOCATIONS INDICATED ON THE PLAN. MINIMUM CLEARANCE BETWEEN PROPOSED DRAINAGE PIPING AND OTHER UTILITIES/STRUCTURES SHALL BE 18" VERTICALLY AND 4-FT HORIZONTALLY.
- BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED SIX INCHES IN THICKNESS AND COMPACTED TO A DENSITY OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY ASHTO METHOD T-99. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

EROSION & SEDIMENT CONTROL NOTES

- THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS SHOWN ON THE DESIGN PLANS, AND AS DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES ARE TO BEGIN. THESE MEASURES SHALL BE CHECKED, MAINTAINED/REPLACED AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. SUCH MEASURES SHALL REPRESENT THE LIMIT OF WORK. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGH THE CONSTRUCTION PERIOD.
- A MINIMUM SURPLUS OF 100 FEET OF PERIMETER EROSION CONTROL BARRIER (SILT FENCE, STRAWBALE, &/OR SILT SOCK) SHALL BE STOCKPILED ONSITE AT ALL TIMES.
- THE CONTRACTOR SHALL PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE OWNER AND AS SHOWN OPLANS AND DETAILS.

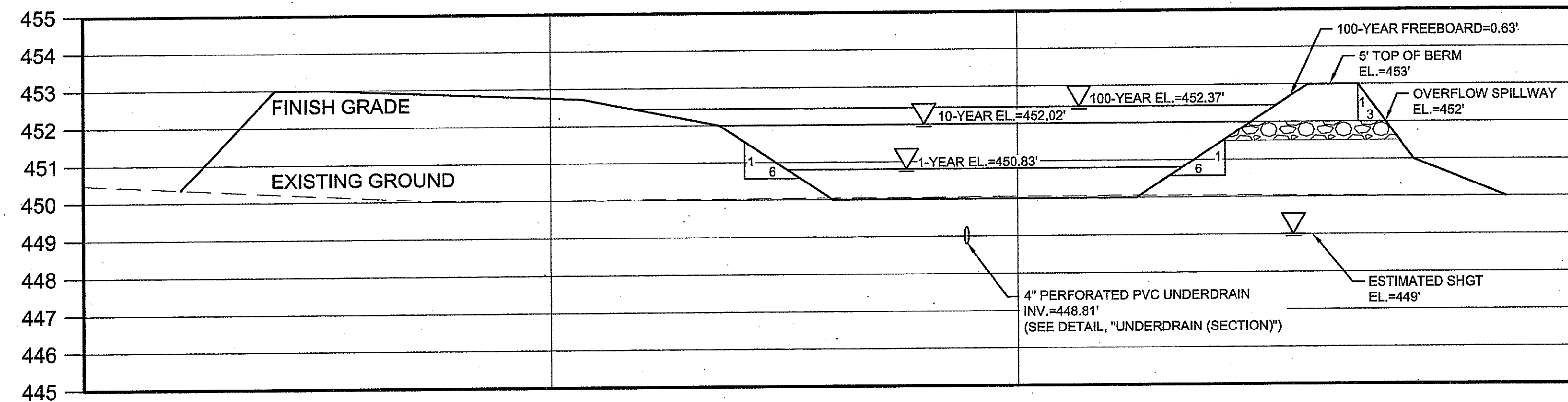
STORMWATER FACILITY OPERATION & MAINTENANCE:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES UNTIL SUCH TIME THAT THE ROADWAYS AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER AND THE ENGINEER.



DETENTION POND A PROFILE VIEW

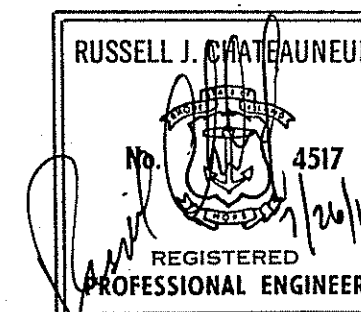
VERTICAL SCALE 1"=2.5'
 HORIZONTAL SCALE 1"=10'



DETENTION POND B PROFILE VIEW

VERTICAL SCALE 1"=2.5'
 HORIZONTAL SCALE 1"=10'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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 DATED AUG 30 2017 FILE # 17-0016
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



Matthew D. Wencsek

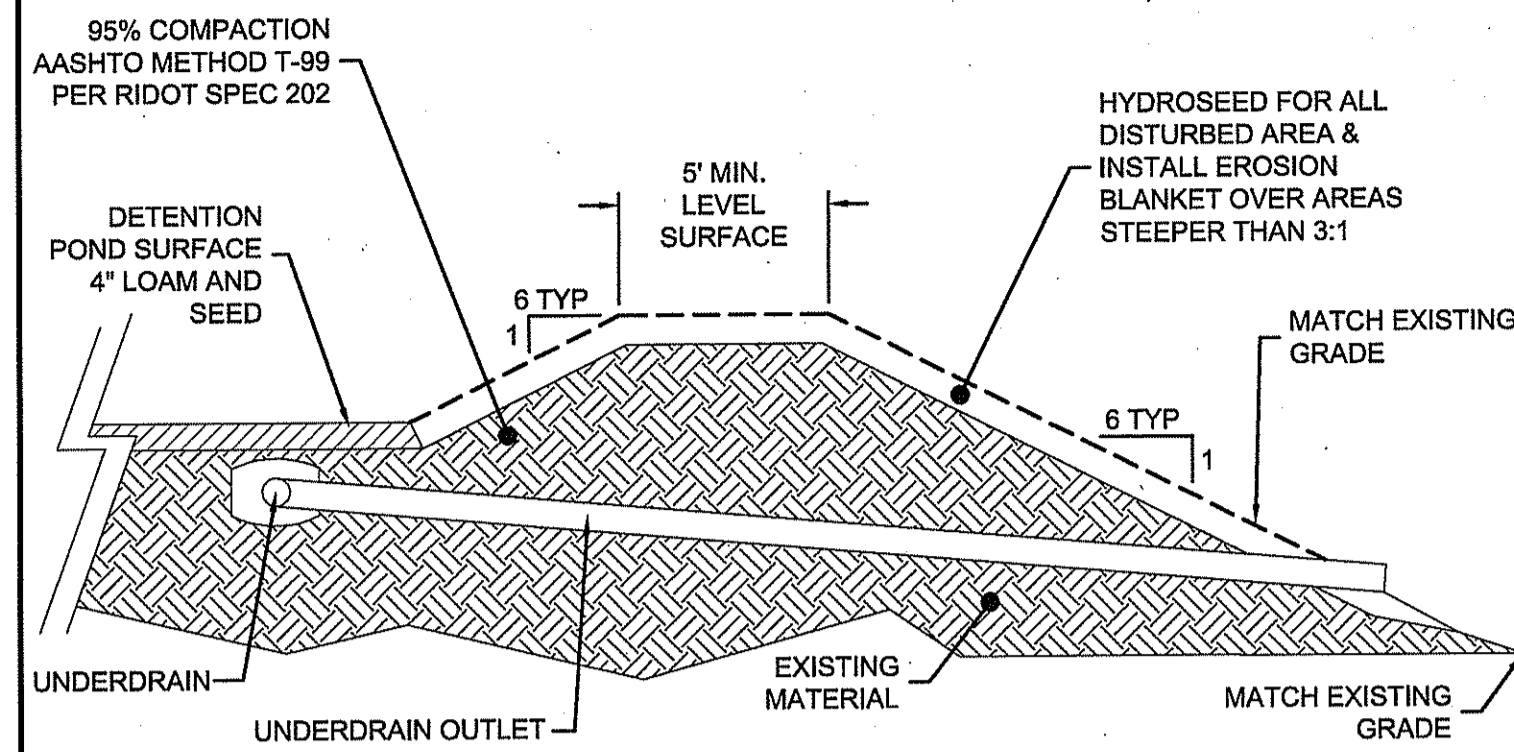
REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO. 17-0016 DEFICIENCY LETTER APRIL 7, 2017
2	2017.07.24	REVISED DETENTION POND PROFILES

Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
 SMITHFIELD, RHODE ISLAND

SHEET TITLE
EROSION CONTROL DETAILS
 SHEET 1 OF 2

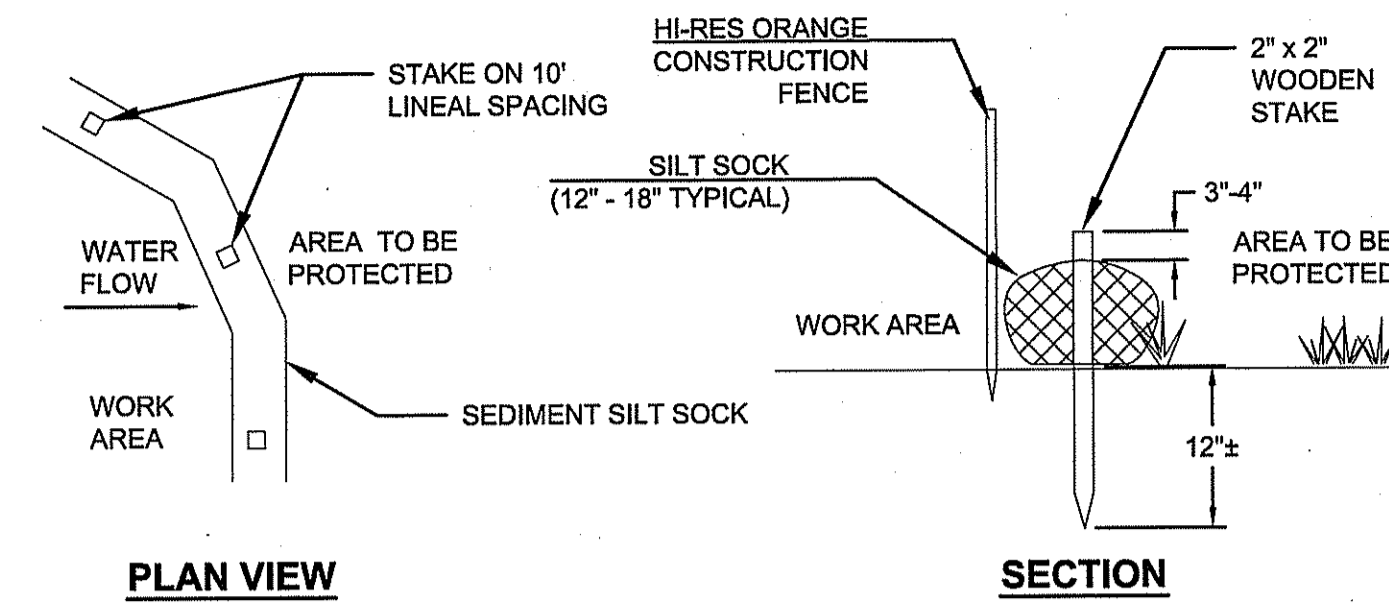
DESIGNED	FW	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO. 195210911						DATE: JULY 2017 SHEET 6	

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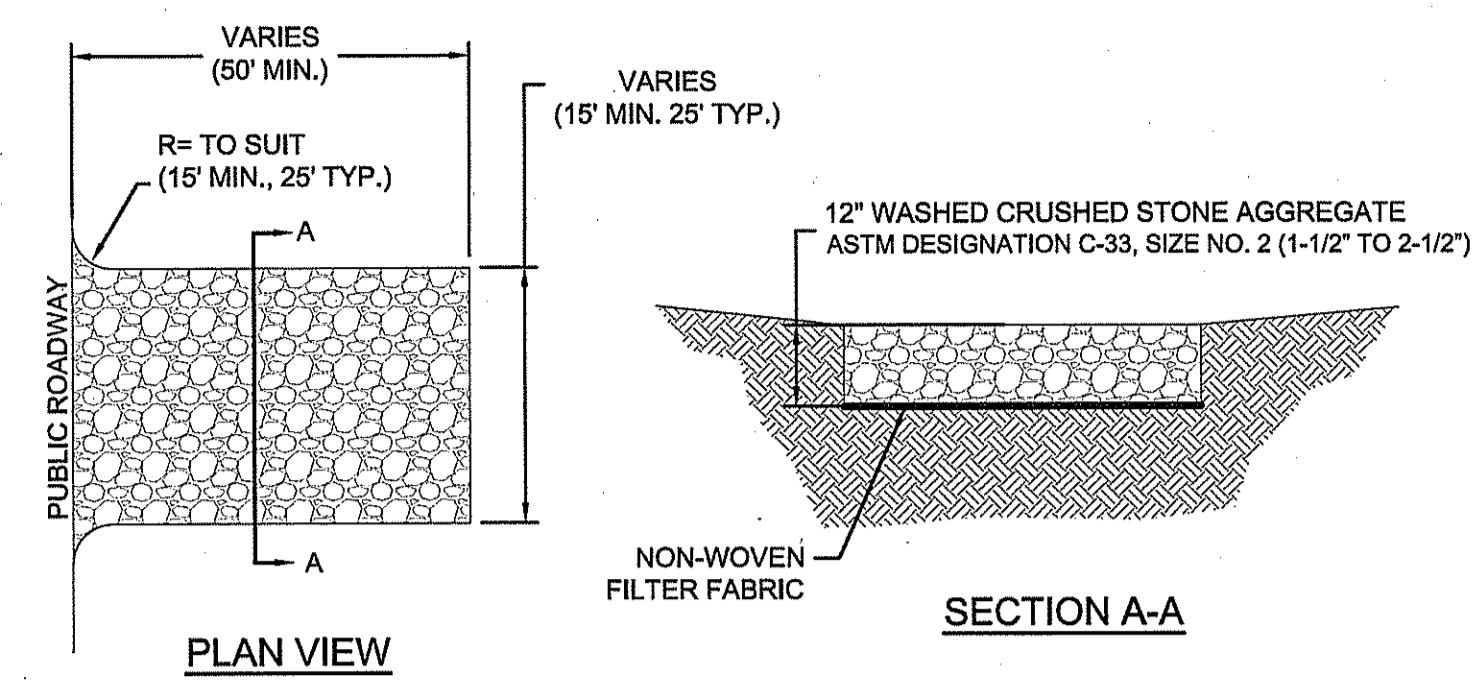
DETENTION POND BERM DETAIL
NOT TO SCALE

NOTES FOR GUIDANCE ON MATERIAL, PLACEMENT, COMPACTION, AND STRUCTURE, SEE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL APPENDIX F, PAGE F-2, "EARTH FILL".



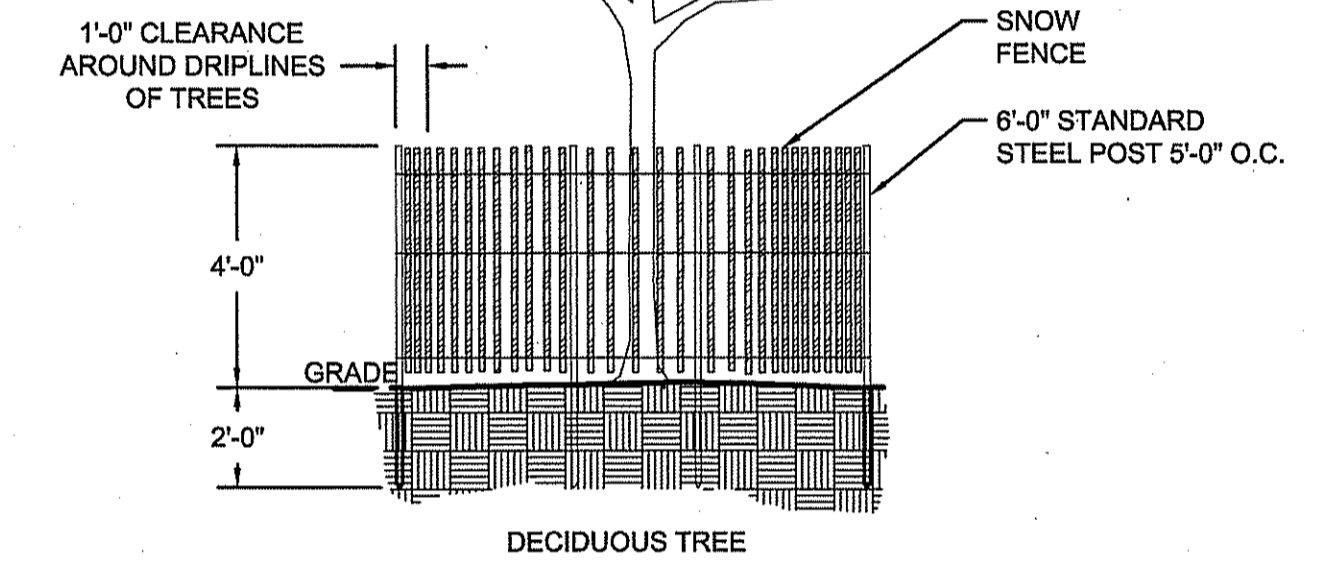
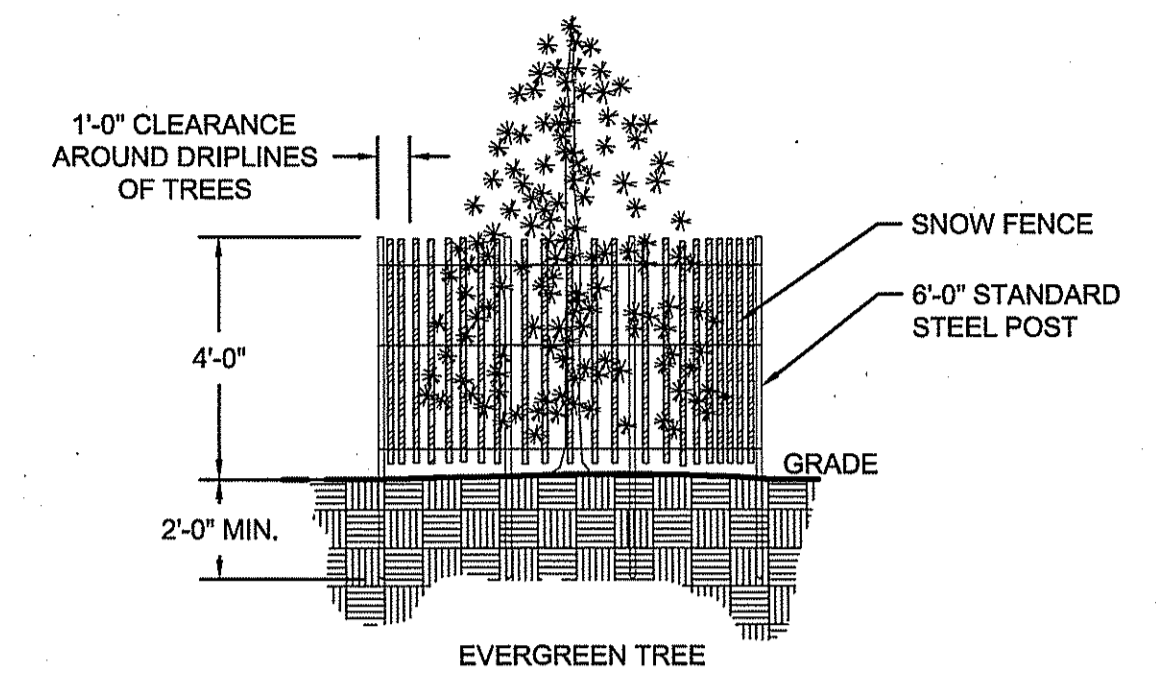
SEDIMENT SILT SOCK DETAIL
NOT TO SCALE

NOTES:
1. SILT SOCK MANUFACTURER TO BE SILT SOXX OR ENGINEER APPROVED EQUAL.
2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
3. SEDIMENT SILT SOCK TO BE FILLED WITH LEAF COMPOST AND/OR WOODY MULCH PER MANUFACTURER'S REQUIREMENTS.
4. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.
5. WHEN SILT SOCK CROSSES A PAVED SURFACE, DO NOT INCLUDE STAKE OR HI-RES ORANGE CONSTRUCTION FENCE DURING INSTALLATION.



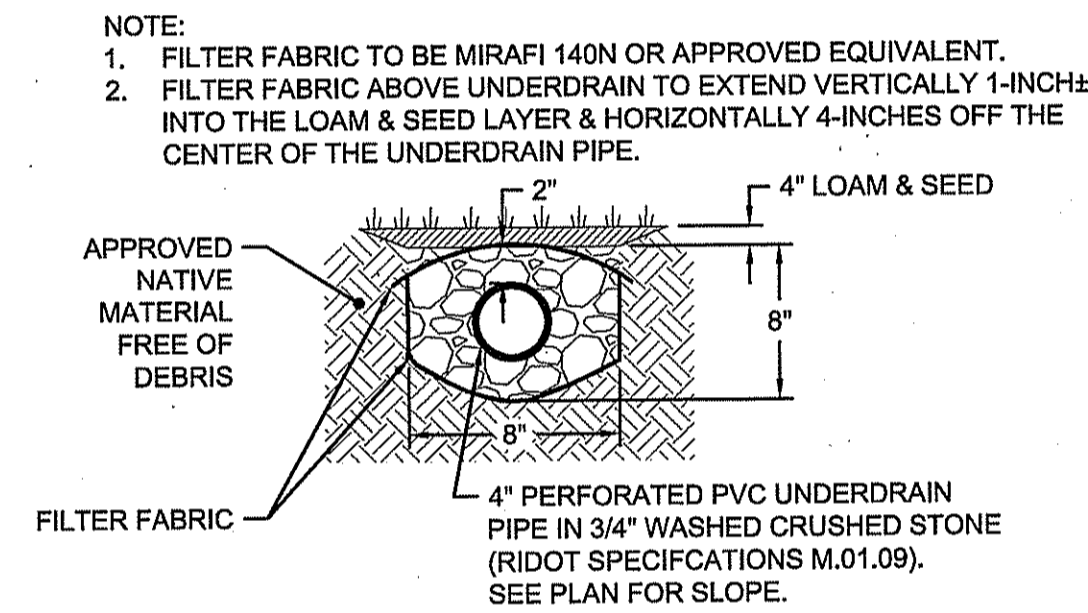
STONE CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

NOTE:
1. STONE CONSTRUCTION ENTRANCE(S) TO REMAIN UNTIL INSTALLATION OF PAVEMENT SUB-BASE IS TO BEGIN.
2. SEE SITE PLAN FOR LOCATION.



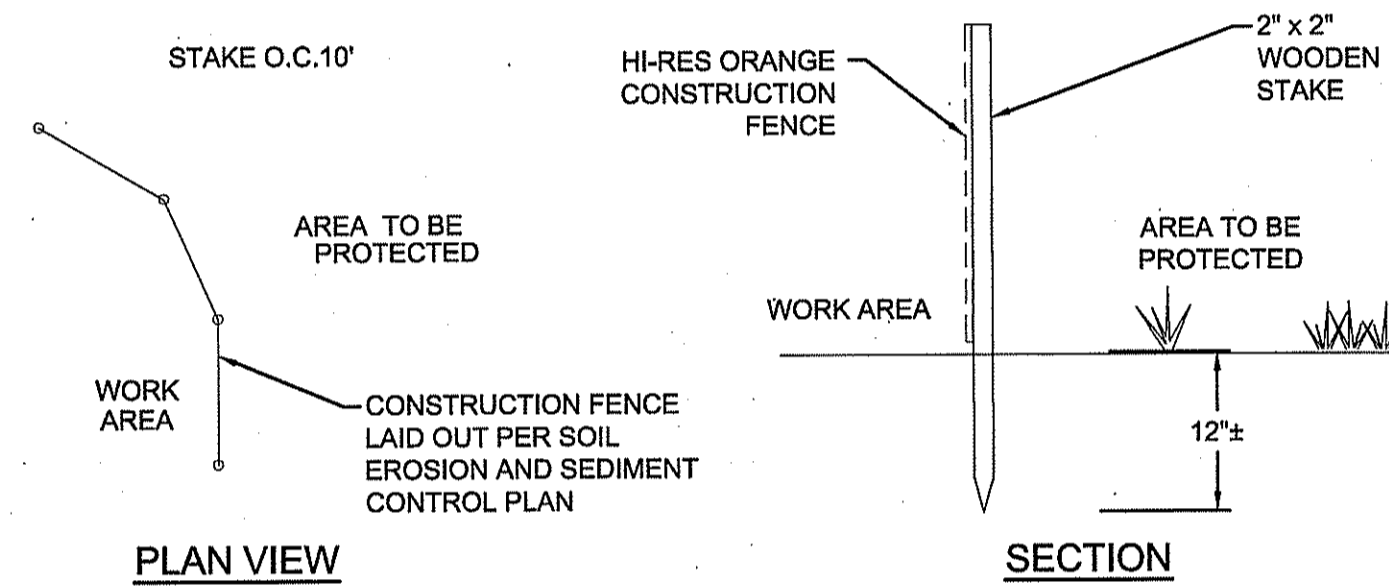
TREE PROTECTION DETAIL
NOT TO SCALE

NOTES:
1. FENCING SHALL BE ORANGE RESINET SM60 BARRIER FENCE "SNOW FENCE" OR APPROVED EQUIVALENT.
2. POST SHALL BE HOT ROLLED RAIL STEEL AND FORMED INTO A "T". DIMENSIONS OF "T" POST SECTION, APPROXIMATELY 1 7/16" X 1 5/16" X 1/8" X 6' (SIX FEET) LONG. THE POST SHALL BE PAINTED GREEN OR GALVANIZED.
3. THE FENCING SHALL REMAIN IN PLACE UNTIL ALL EXCAVATION HAS BEEN COMPLETED AND THE SURFACE HAS BEEN RE-ESTABLISHED.



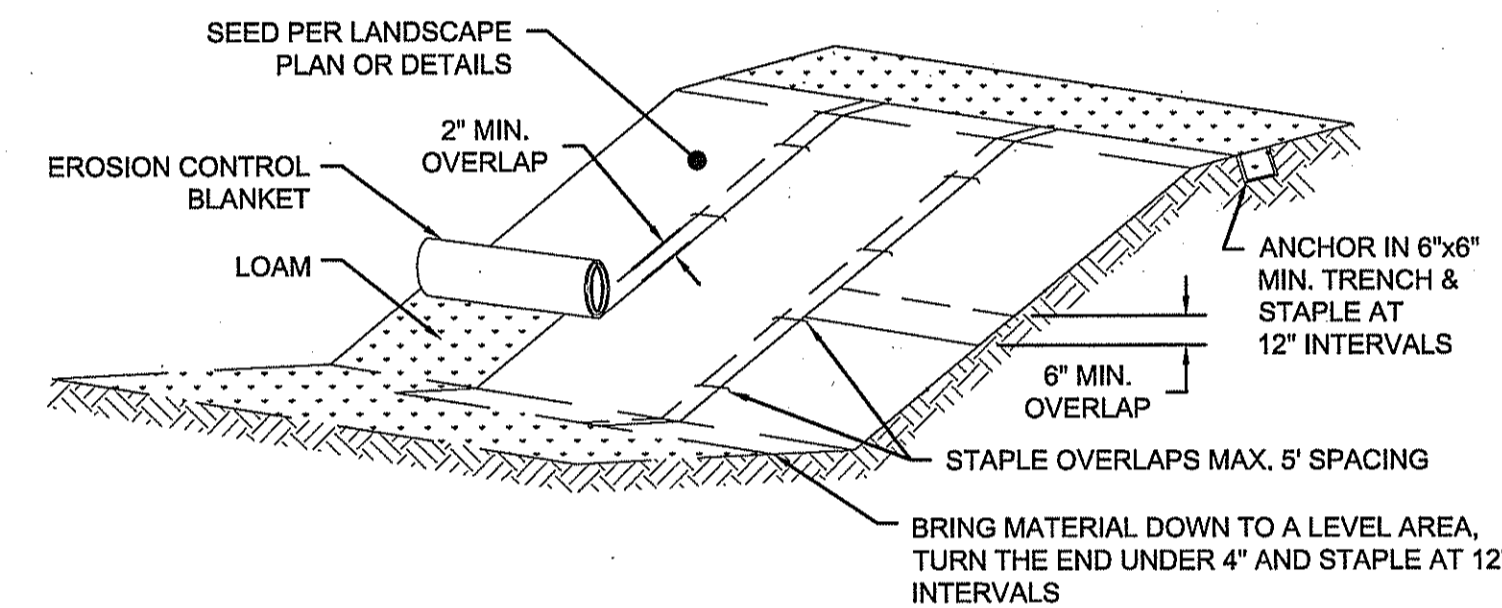
UNDERDRAIN (SECTION)
NOT TO SCALE

NOTE:
1. FILTER FABRIC TO BE MIRAFI 140N OR APPROVED EQUIVALENT.
2. FILTER FABRIC ABOVE UNDERDRAIN TO EXTEND VERTICALLY 1-INCH INTO THE LOAM & SEED LAYER & HORIZONTALLY 4-INCHES OFF THE CENTER OF THE UNDERDRAIN PIPE.



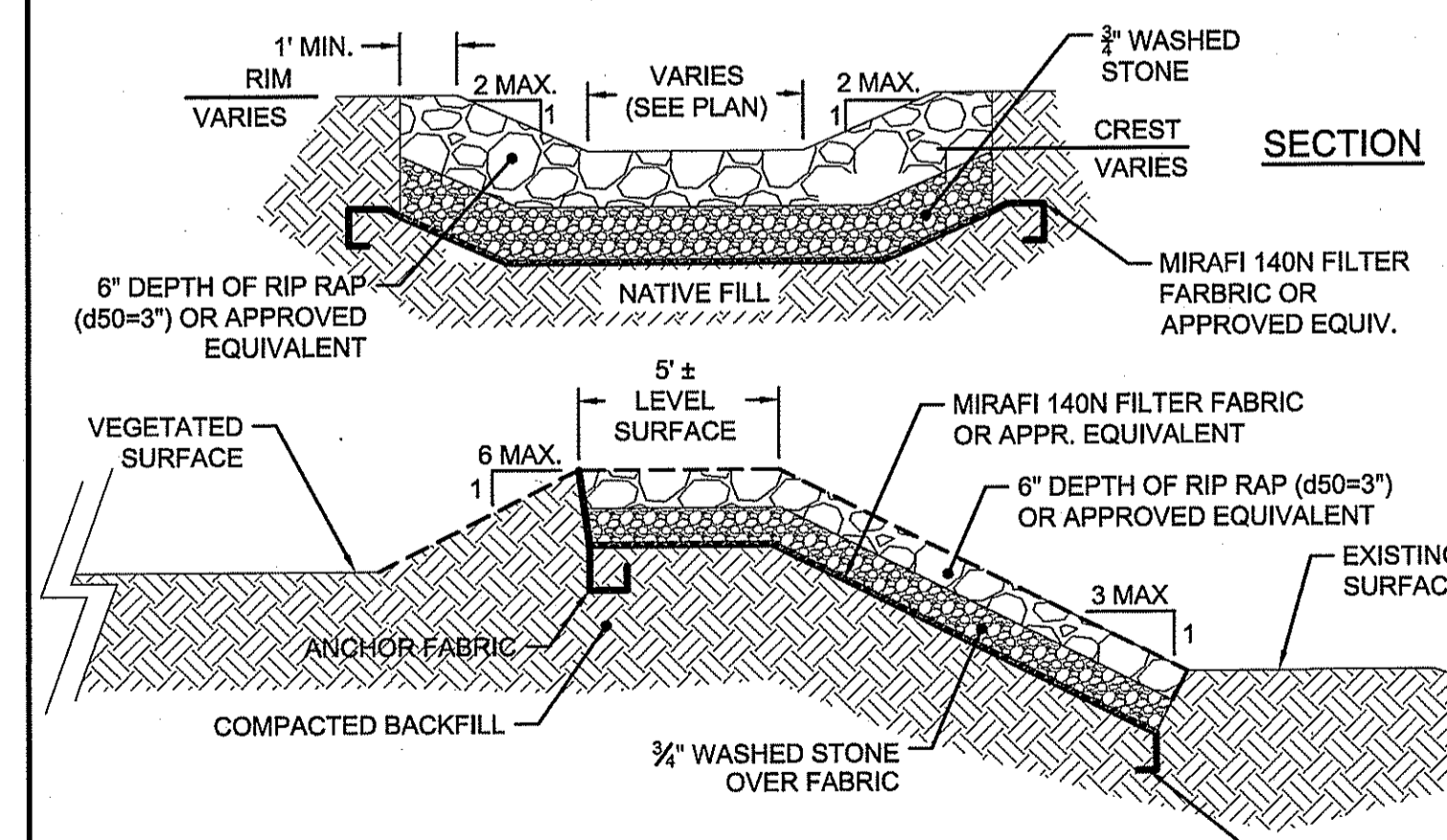
CONSTRUCTION FENCE
NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.

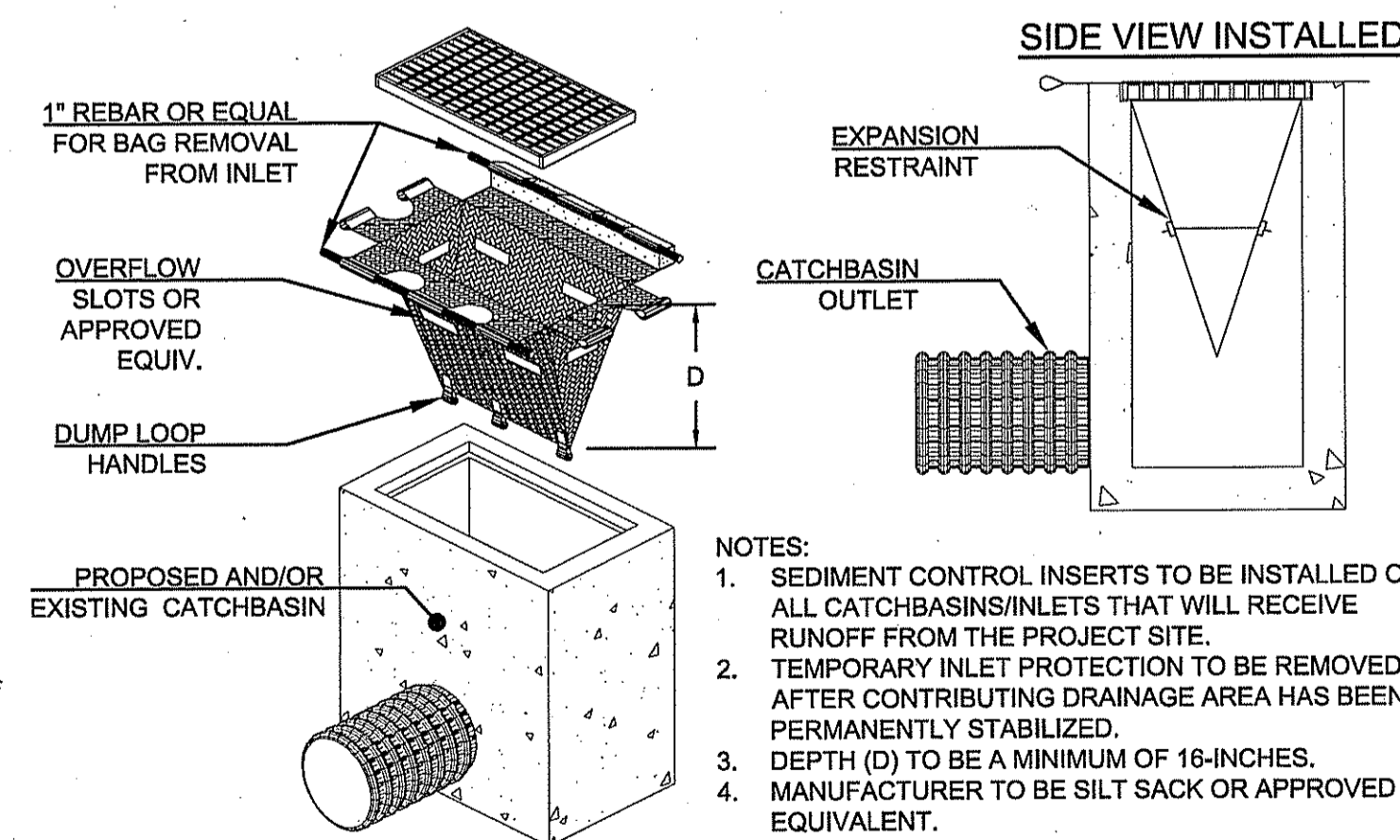


EROSION CONTROL BLANKET DETAIL
NOT TO SCALE

NOTES:
1. EROSION CONTROL BLANKET TO BE NORTH AMERICAN GREEN BIONET S150BN OR APPROVED EQUIVALENT.
2. SLOPE SURFACE SHALL BE SMOOTH BEFORE PLACEMENT FOR PROPER SOIL CONTACT.
3. STAPLING PATTERN AS PER MANUFACTURER'S RECOMMENDATIONS.
4. DO NOT STRETCH BLANKETS/MATTINGS TIGHT. ALLOW THE ROLLS TO MOLD TO ANY IRREGULARITIES.
5. FOR SLOPES LESS THAN 3H:1V, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS.
6. LIME, FERTILIZE AND SEED BEFORE INSTALLATION. PLANTING OF SHRUBS, TREES, ETC. SHOULD OCCUR AFTER INSTALLATION.

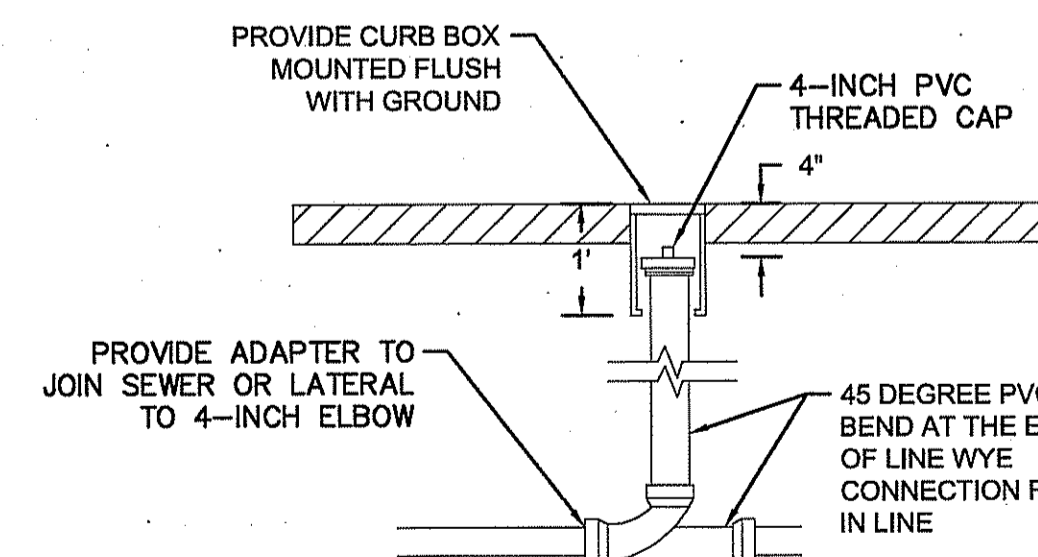


DETENTION POND OVERFLOW SPILLWAY
NOT TO SCALE



TEMPORARY CATCHBASIN INSERT WITH INLET PROTECTION
NOT TO SCALE

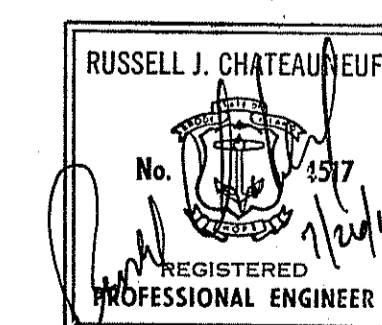
NOTES:
1. SEDIMENT CONTROL INSERTS TO BE INSTALLED OVER ALL CATCHBASINS/INLETS THAT WILL RECEIVE RUNOFF FROM THE PROJECT SITE.
2. TEMPORARY INLET PROTECTION TO BE REMOVED AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
3. DEPTH (D) TO BE A MINIMUM OF 16-INCHES.
4. MANUFACTURER TO BE SILT SACK OR APPROVED EQUIVALENT.



TYPICAL CLEANOUT DETAIL
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 3 6 2017 FILE # 17-0016
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wensek

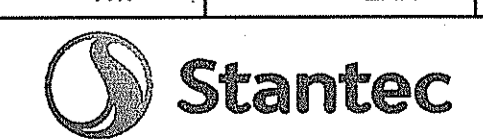


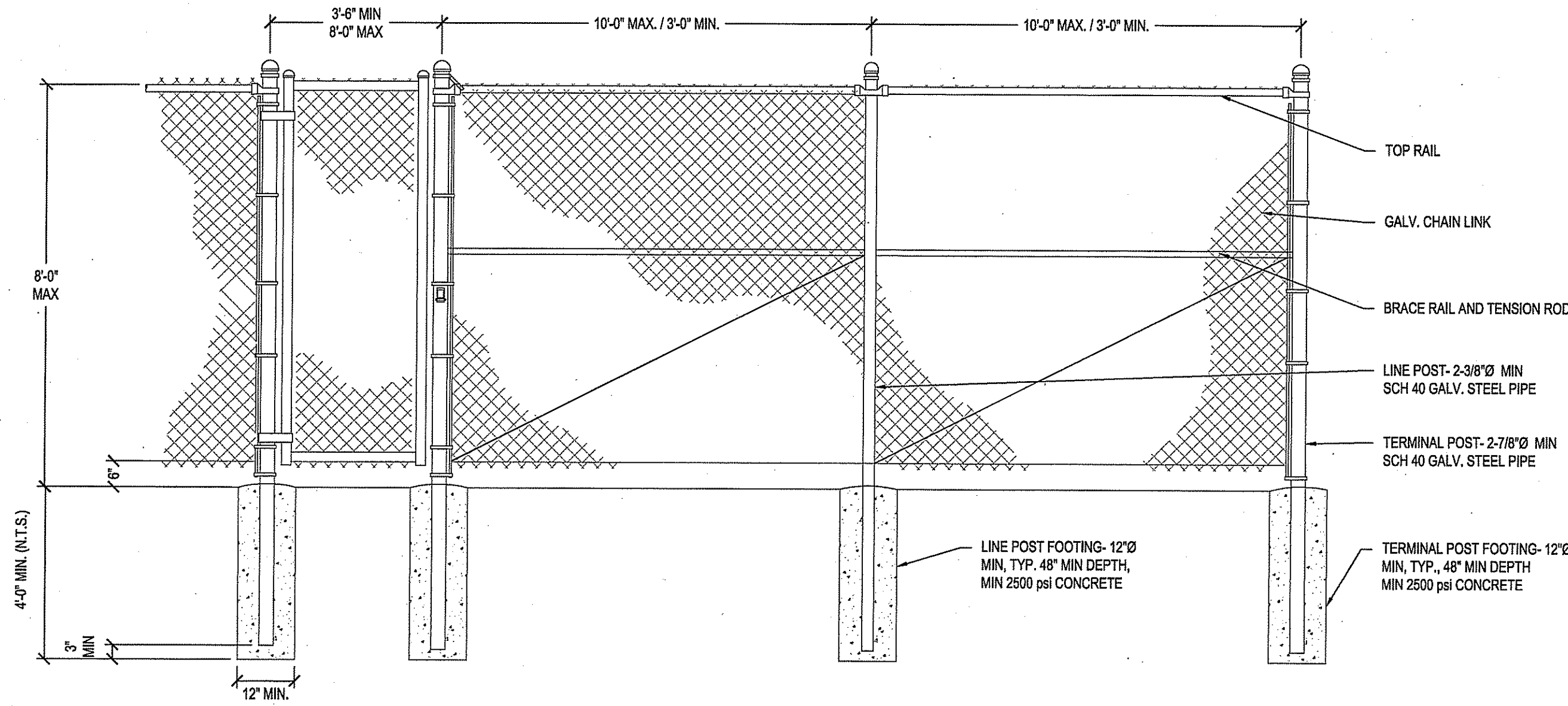
Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
SMITHFIELD, RHODE ISLAND

SHEET TITLE
EROSION CONTROL DETAILS
SHEET 2 OF 2

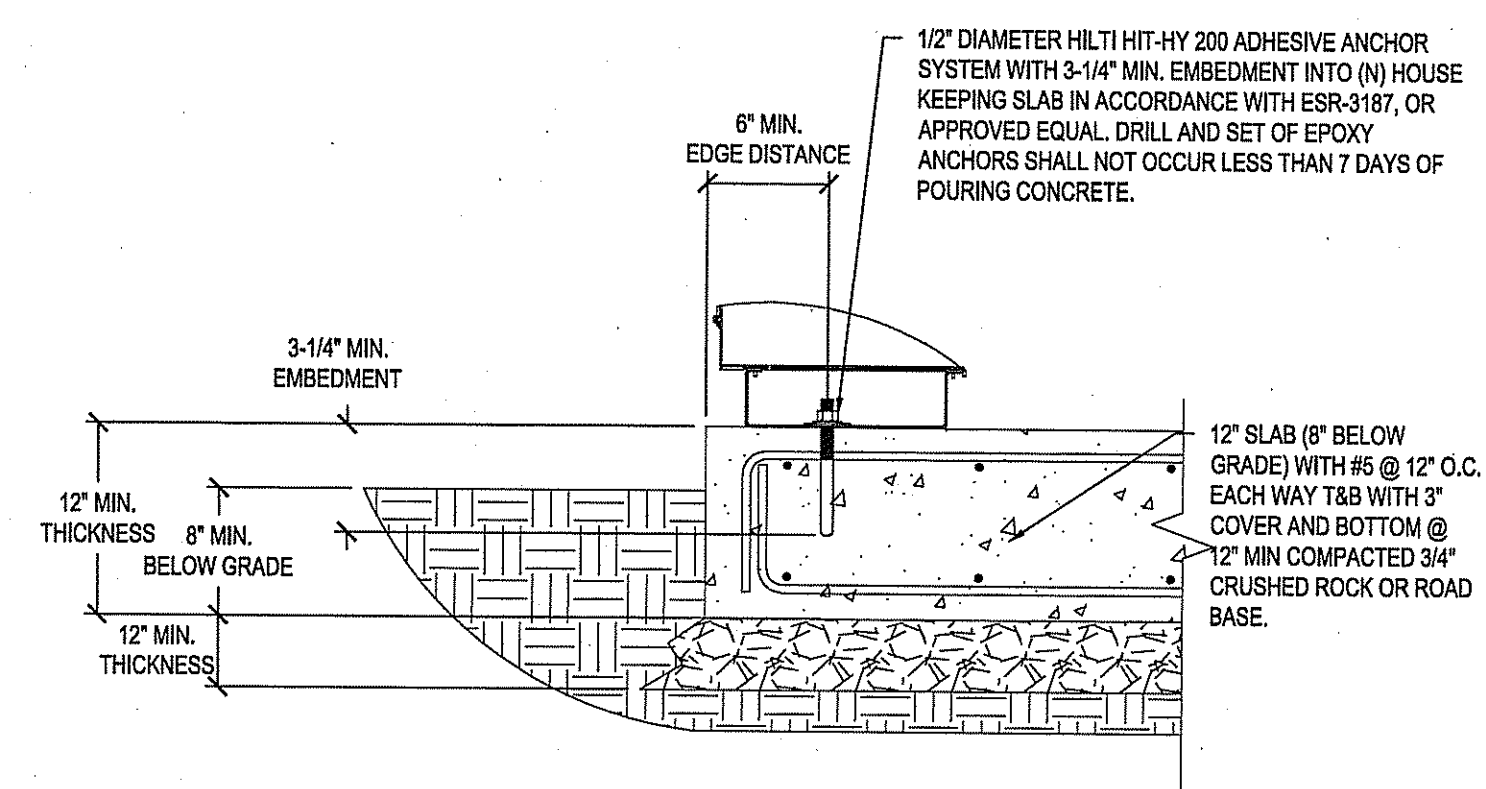
REVISION NUMBER	REVISION DATE	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017	HW	LRK	GAC	DWR
2	2017.07.24	TYPICAL CLEANOUT DETAIL ADDED				

PROJECT NO. 195210911
DATE: JULY 2017 SHEET 7

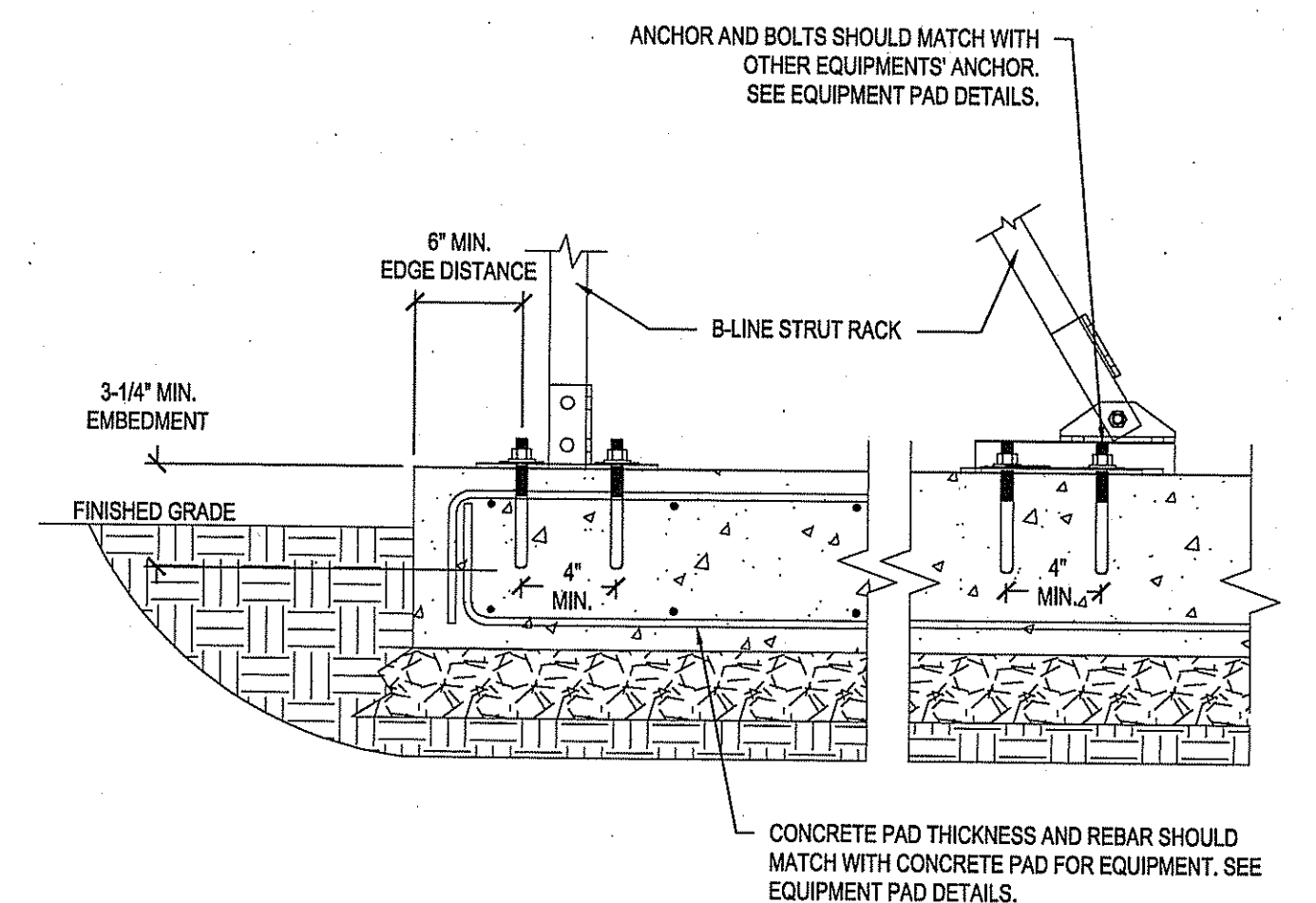




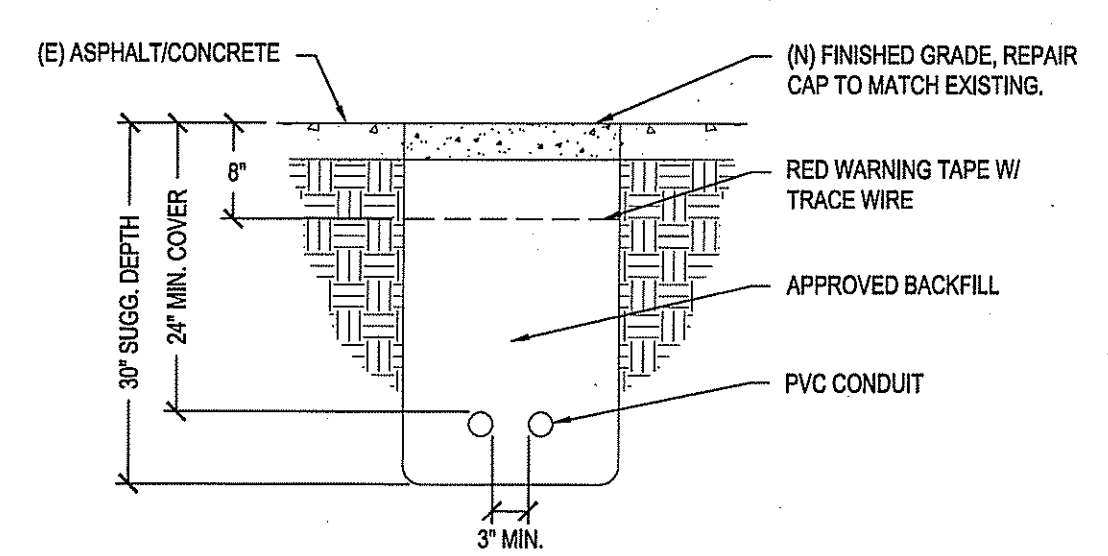
A FENCE DETAIL
NTS



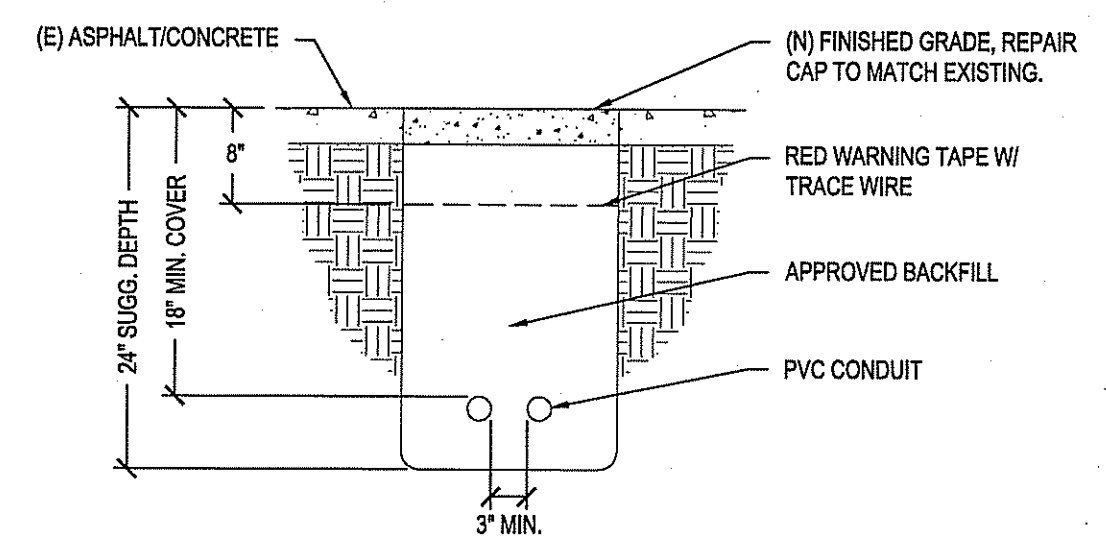
B CONCRETE PAD ANCHOR
NTS



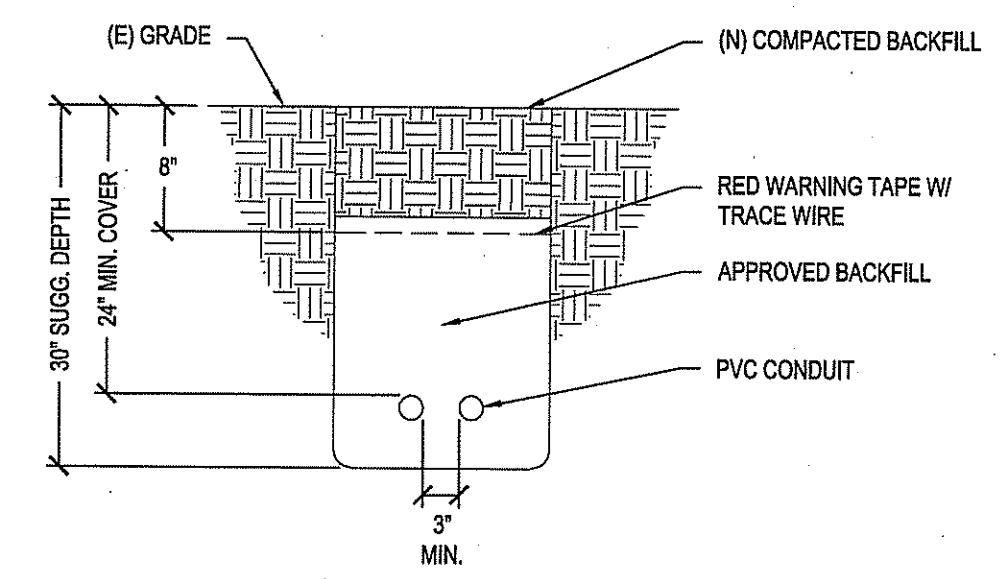
C CONCRETE PAD STRUT ANCHOR
NTS



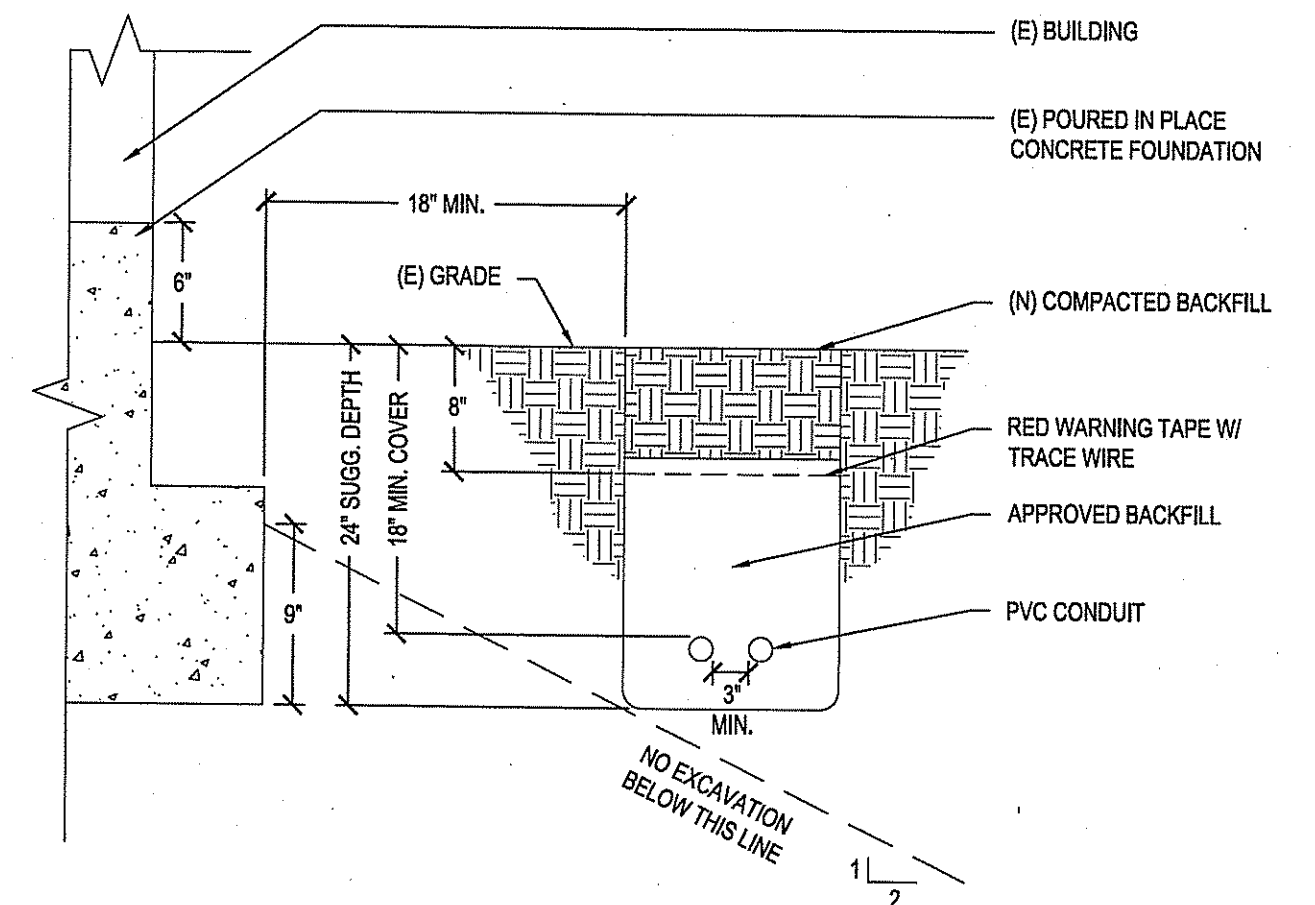
D TRENCH THROUGH PAVEMENT TRAFFIC DETAIL
NTS



E TRENCH THROUGH PAVEMENT NON-TRAFFIC DETAIL
NTS



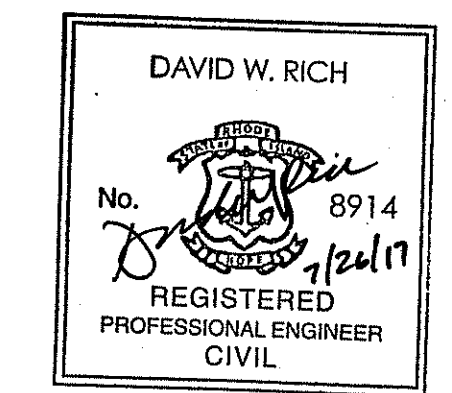
F TRENCH THROUGH SOIL TRAFFIC DETAIL
NTS



G TRENCH THROUGH SOIL NON-TRAFFIC DETAIL
NTS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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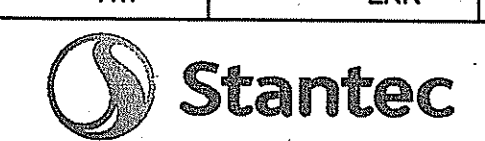
Justin D. Weneck

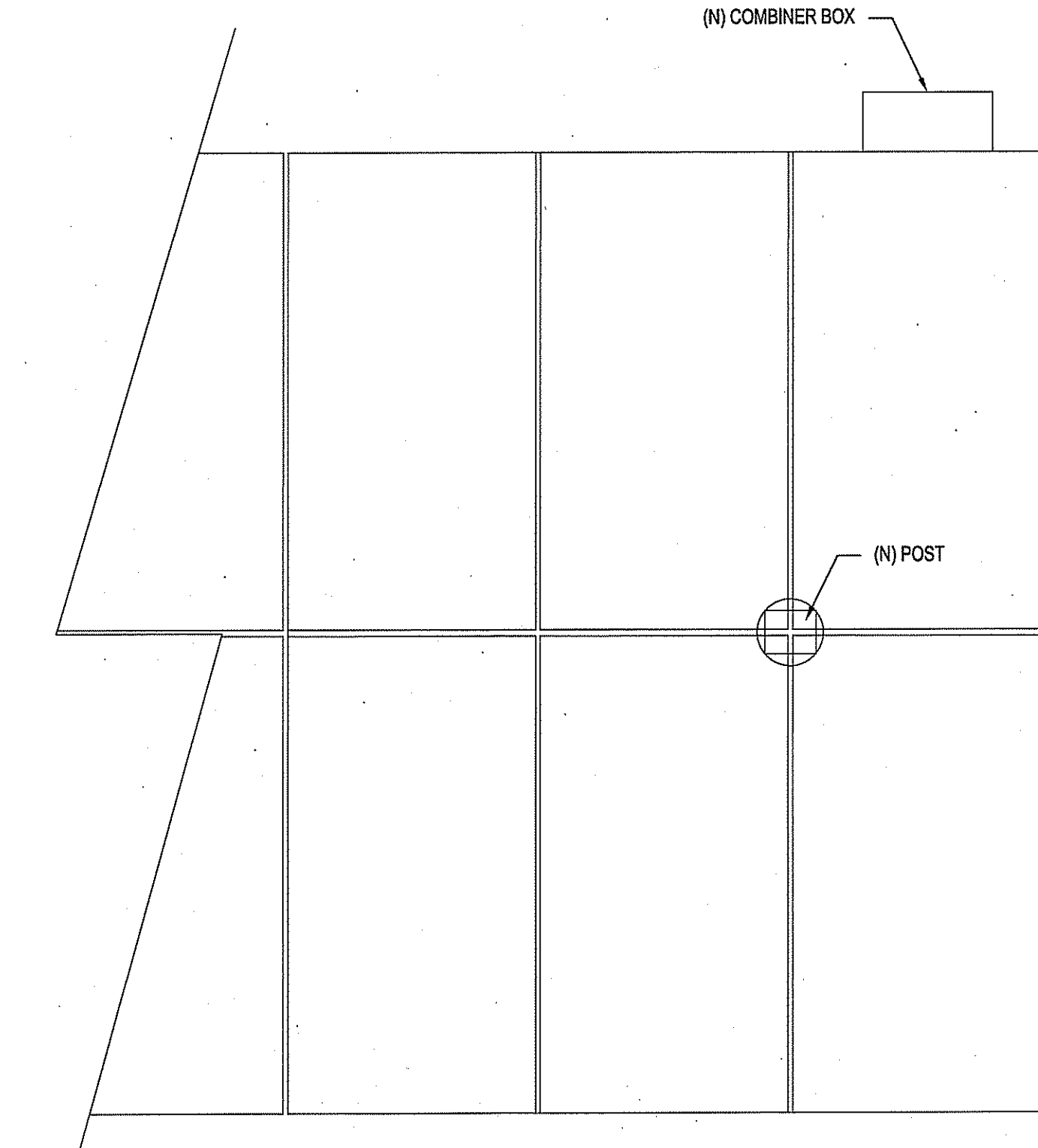


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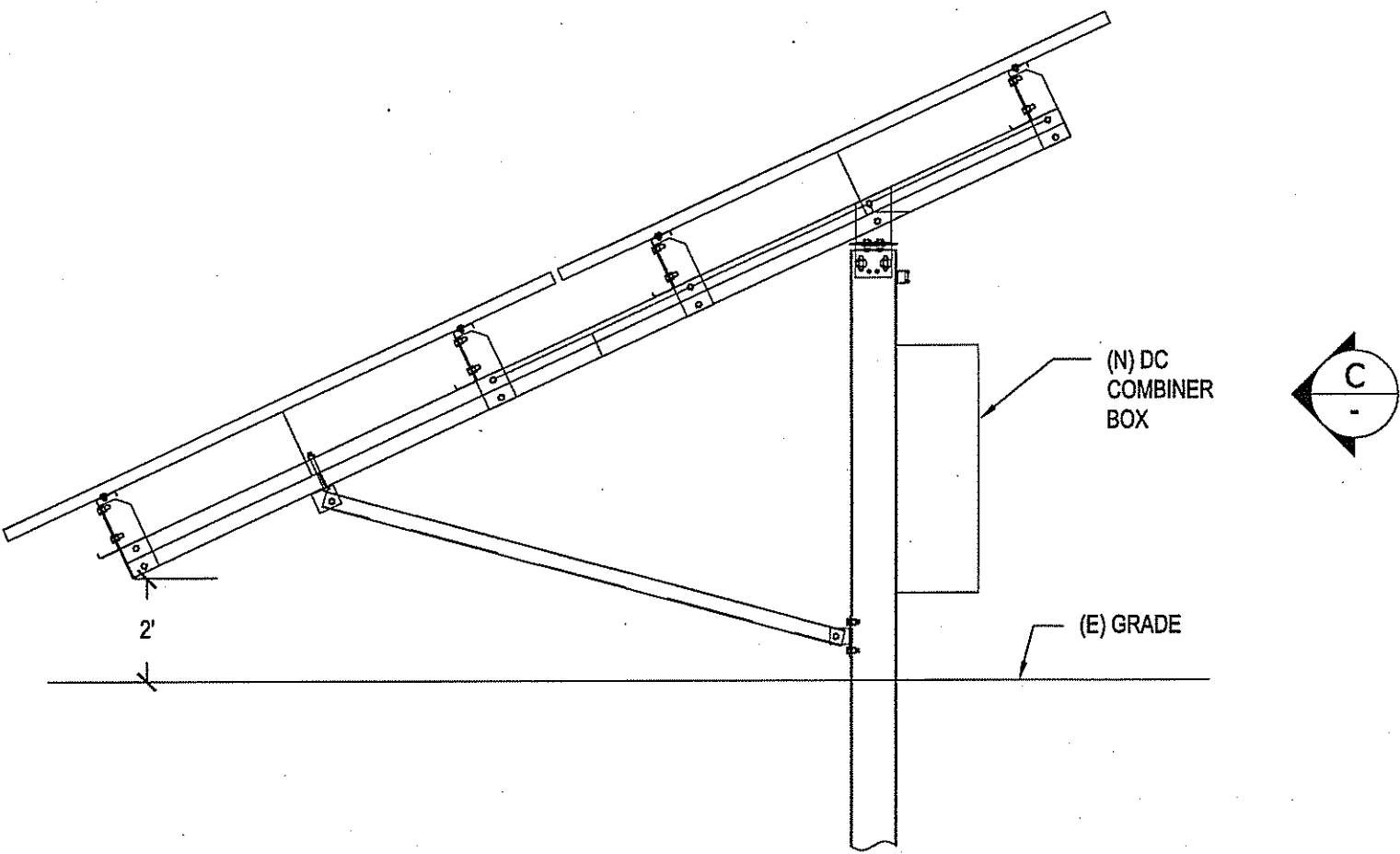
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1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017

DESIGNED	HW	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO.							195210911
DATE:							JULY 2017
SHEET							8

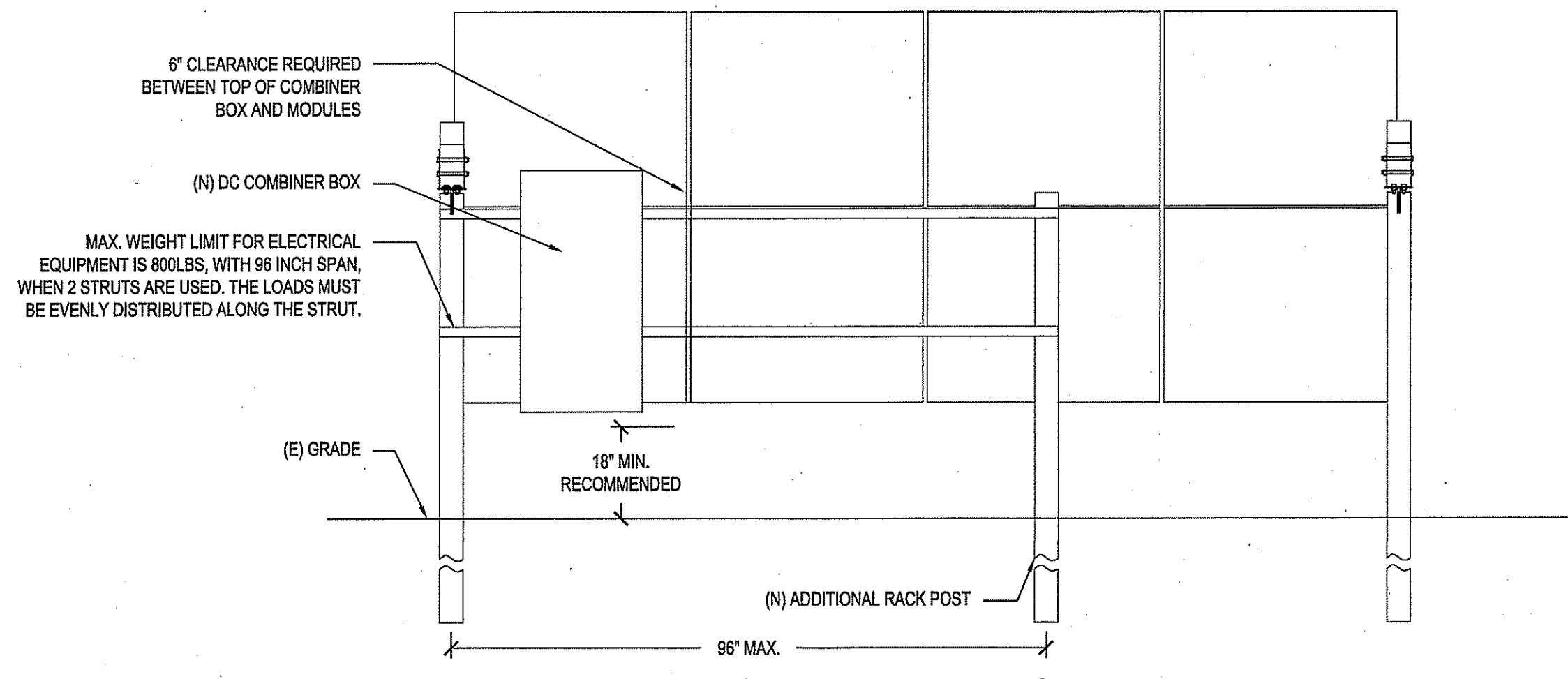




A RBI EQUIPMENT RACK (TOP ELEVATION) NTS



B RBI EQUIPMENT RACK (SIDE ELEVATION) NTS



C RBI EQUIPMENT RACK (REAR ELEVATION) NTS

- GENERAL CONSTRUCTION/SAFETY:**
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE CONSTRUCTION CODE AND THE PROJECT SPECIFICATIONS.
 - LOCATION OF UNDERGROUND UTILITIES SHALL BE VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - DIMENSIONS SHOWN ON PLAN SHALL BE VERIFIED IN FIELD.
 - LAYOUT IS SUBJECT TO CHANGE PER REQUEST AND/OR EXISTING CONDITIONS IN THE FIELD.
 - ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
 - CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. ANY UNEXPECTED CONDITIONS OR DISCREPANCIES WITH THE DESIGN DOCUMENTS SHALL BE REPORTED TO THE ENGINEER PRIOR TO INSTALLATION OR ERECTION OF MATERIALS.
 - THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
 - NO PERSONNEL SHALL STEP OR STAND ON PHOTOVOLTAIC (PV) MODULES (SOLAR PANELS) AT ANY TIME. RACK STRUCTURE AND PV MODULES ARE NOT DESIGNED FOR LIVE LOADS AND MAY VOID WARRANTY.

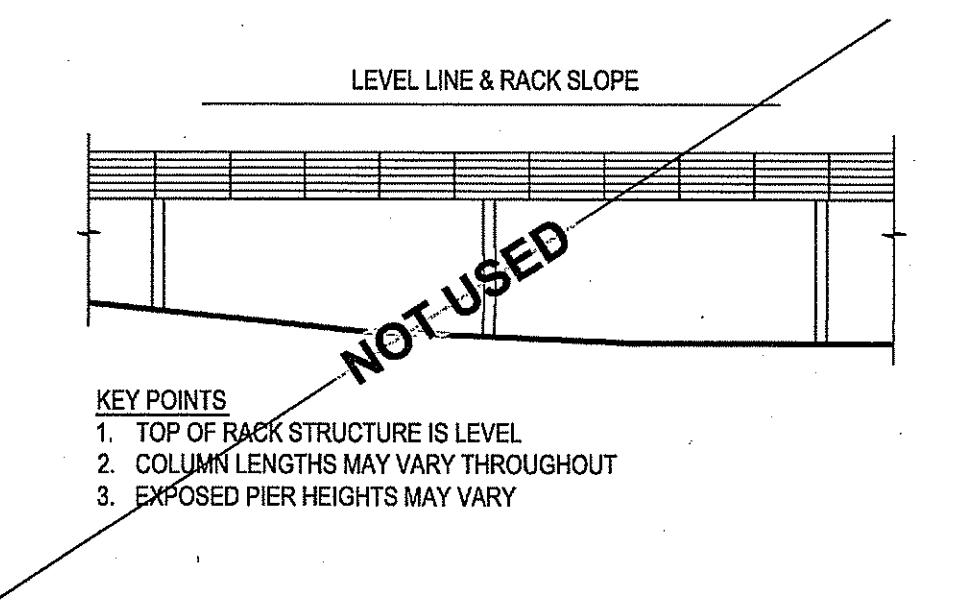
- SPECIAL FIELD INSPECTION:**
- ALL SPECIAL INSPECTORS SHALL BE RETAINED BY OWNER/CUSTOMER. THE EXTENT OF THE INSPECTION SHALL COMPLY WITH THE CONTRACT DOCUMENTS, THE BUILDING CODE REQUIREMENTS, AND LOCAL JURISDICTION. IT IS THE OWNER/CUSTOMER'S RESPONSIBILITY TO GIVE PROPER NOTIFICATION TO THE SPECIAL INSPECTOR AND PROCEED WITH THE WORK ONLY AFTER THE SPECIAL INSPECTOR'S APPROVAL.
 - FAILURE TO NOTIFY THE SPECIAL INSPECTOR MAY RESULT IN OWNER/CUSTOMER HAVING TO REMOVE WORK FOR THE PURPOSE OF INSPECTION AT THE OWNER'S/CUSTOMER'S EXPENSE.
 - PREMATURE NOTIFICATION FOR INSPECTION WILL RESULT IN AN ADDITIONAL INSPECTION WITH ALL EXPENSES AND FEES PAID BY THE OWNER/CUSTOMER.
 - SPECIAL INSPECTORS SHALL KEEP RECORDS OF ALL INSPECTIONS. RECORDS SHALL BE FURNISHED TO THE OWNER, ENGINEER OF RECORD, AND LOCAL JURISDICTION AS REQUIRED. ANY AND ALL DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR. CORRECTIONS SHALL BE MADE AND A FINAL REPORT OF INSPECTIONS SHALL BE PROVIDED NOTING COMPLETION OF INSPECTIONS AND CORRECTIONS OF DISCREPANCIES. FAILURE TO CORRECT DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD AND THE LOCAL JURISDICTION AND MAY RESULT IN REMOVAL OF COMPLETED WORK AND ADDITIONAL WORK TO CORRECT DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
 - SPECIAL INSPECTION NOT REQUIRED BY RBI SOLAR, AS REQUIRED BY OWNER/CUSTOMER AND/OR AUTHORITY HAVING JURISDICTION, MINIMUM INSPECTION SHALL INCLUDE:

IBC TABLE 1705		
STRUCTURAL STEEL/ALUMINUM FABRICATION	CONTINUOUS	PERIODIC
MATERIAL IDENTIFICATION		X
HIGH STRENGTH BOLTS - MATERIAL IDENTIFICATION OF BOLTS, NUTS AND WASHERS		X
WELD FILLER MATERIALS - IDENTIFICATION AND CONFIRMATION OF COMPLIANCE WITH DESIGN DOCUMENTS		X
STRUCTURAL STEEL/ALUMINUM ERECTION		
MATERIAL IDENTIFICATION		X
INSTALLATION OF HIGH STRENGTH BOLTS		X
WELDED CONNECTIONS		X
MEMBER SIZES AND PLACEMENT		X
GENERAL CONFORMANCE WITH DESIGN DOCUMENTS		X
CONCRETE CONSTRUCTION		
MATERIAL IDENTIFICATION		X
MIX DESIGN VERIFICATION		X
SIZE AND PLACEMENT OF REINFORCING STEEL		X
PLACEMENT OF CONCRETE USING PROPER TECHNIQUES		X
CONCRETE SAMPLES FOR SLUMP, AIR CONTENT, TEMPERATURE, STRENGTH TESTS, ETC. IN ACCORDANCE WITH ACI 318		X
PROPER MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
FOUNDATIONS		
SIZE AND LOCATION OF FOUNDATION EXCAVATIONS		X
PLACEMENT OF REINFORCING STEEL AS REQUIRED		X

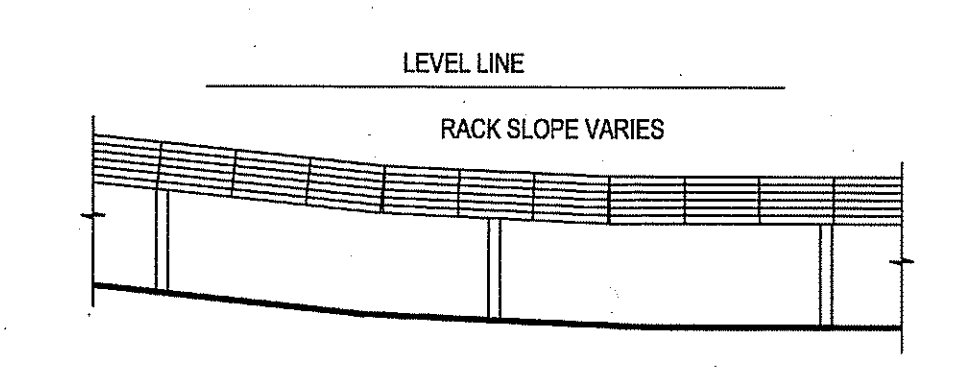
- FOUNDATION/CONCRETE NOTES:**
- CONCRETE SPECIFICATIONS:
CONCRETE STRENGTH: 2500 PSI @ 28 DAYS
MINIMUM COVER: AS NOTED OR 3" ADJACENT TO EARTH
AIR CONTENT: 4-6%
AGGREGATE SIZE: 3/4" MAXIMUM
 - CUSTOMER IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS ARE CONSISTENT WITH FINDINGS INCLUDED IN GEOTECHNICAL REPORT, IF APPLICABLE, AND/OR FIELD TESTS PERFORMED BY RBI SOLAR. VARIATIONS IN SOIL CONDITIONS SHALL BE REPORTED TO GEOTECHNICAL ENGINEER AND/OR ENGINEER OF RECORD RESPONSIBLE FOR FOUNDATION DESIGN PRIOR TO INSTALLATION OF ANY FOUNDATION MATERIALS.
 - CUSTOMER IS RESPONSIBLE FOR VERIFYING CORROSION COMPATIBILITY WITH FOUNDATIONS AND/OR DRIVEN POSTS.
 - INSTALLER/CONTRACTOR SHALL COORDINATE PLACEMENT OF FOUNDATIONS AND/OR ANCHOR BOLTS PER DESIGN DRAWINGS AND/OR MANUFACTURER'S SPECIFICATIONS.
 - RBI SOLAR, INC. DESIGNS DRIVEN-PILE AND ALTERNATIVE FOUNDATIONS BASED ON SOIL PROPERTIES OUTLINED IN CERTIFIED GEOTECHNICAL REPORTS AND/OR DATA FROM FIELD TESTING. ALL DESIGNS ASSUME UNDISTURBED SOIL CONDITIONS, AND DO NOT TAKE INTO ACCOUNT TRENCHING NEAR FOUNDATIONS. FOR CASES WHERE TRENCHING FOR ELECTRICAL WORK IS AT OR NEAR A FOUNDATION, RBI SOLAR RECOMMENDS A MINIMUM OF 3'-0" CLEAR FROM THE EDGE OF THE TRENCH TO THE EDGE OF THE FOUNDATION FOR "NORMAL GOOD SOIL CONDITIONS." IN CASES OF "POOR SOIL" CONDITIONS, RBI SOLAR RECOMMENDS A MINIMUM CLEAR DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE FOUNDATION. IF IN DOUBT OF SOIL CONDITIONS, RBI SOLAR RECOMMENDS CONSULTING A QUALIFIED GEOTECHNICAL ENGINEER TO ASSESS SOIL CONDITIONS AT THE SITE.
- NOTE: TRENCHING/EXCAVATION WITHIN 3'-0" OF ANY RACK SUPPORT POST REQUIRES REPLACING THE ORIGINAL SOIL AND COMPACTION TO 95% STANDARD PROCTOR DENSITY. FOR FURTHER CLARIFICATION ON COMPACTION REQUIREMENTS, RBI SOLAR RECOMMENDS CONSULTING A QUALIFIED GEOTECHNICAL ENGINEER.

- DRIVEN POST REFUSAL NOTES:**
- NOTE: WHEN REFUSAL IS ENCOUNTERED WHILE INSTALLING DRIVEN-POST FOUNDATIONS, FOLLOW THIS PROCEDURE:
- ATTEMPT TO DRIVE POST TO DEPTH SHOWN ON DESIGN DOCUMENTS - REFERENCE DETAIL A1/S-301.
 - IF REFUSAL IS ENCOUNTERED, EFFORTS TO DRIVE THE POST FURTHER SHOULD BE STOPPED.
 - DEPTH AND LOCATION OF ANY POST THAT DOES NOT MEET DESIGN EMBEDMENT SHALL BE RECORDED FOR ENGINEERING REVIEW AND RECORD DRAWINGS.
 - POSTS MAY BE FIELD TESTED FOR UPLIFT CAPACITY PROVIDED A MINIMUM EMBEDMENT OF 5 FT. IS ACHIEVED PRIOR TO REFUSAL. EMBEDMENT LESS THAN 5 FT. SHALL REQUIRE AN ALTERNATE FOUNDATION.
 - VERTICAL PULL TEST ON POSTS THAT DO NOT REACH DESIGN EMBEDMENT SHALL RESIST A MINIMUM UPLIFT FORCE OF 3900 LBS. IF POSTS DO NOT MEET THIS MINIMUM, AN ALTERNATE FOUNDATION IS REQUIRED.
 - LATERAL TEST ON POSTS THAT DO NOT REACH DESIGN EMBEDMENT SHALL RESIST A MINIMUM LATERAL FORCE OF 2950 LBS & THE POST SHALL REBOUND WITHIN 1/4" OF ORIGINAL LOCATION. IF POSTS DO NOT MEET THIS MINIMUM REQUIREMENT AN ALTERNATE FOUNDATION IS REQUIRED.
 - POSTS THAT PASS THE FIELD TESTS SHALL BE CUT DOWN TO APPROPRIATE HEIGHT AND HOLES FOR POST-TOP MOUNTING BRACKETS DRILLED IN THE TOP OF POST.
 - ALL CUT SURFACES SHALL BE PAINTED WITH BRUSH-ON GALVANIZING PAINT. RBI SOLAR DOES NOT RECOMMEND SPRAY GALVANIZING FOR REPAIR AND PAINTING OF CUT SURFACES.

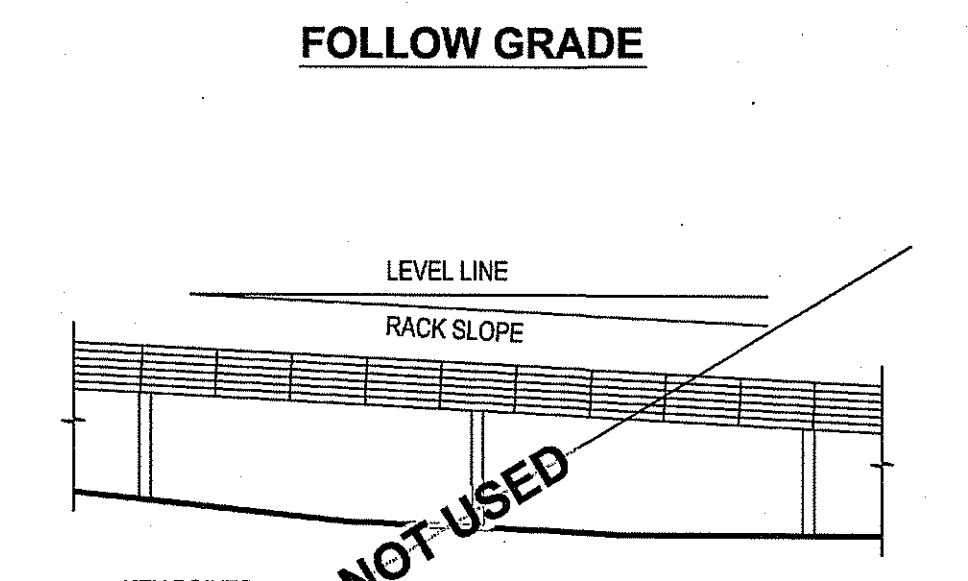
- STRUCTURAL STEEL:**
- ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST VERSION OF AISC "MANUAL OF STEEL CONSTRUCTION." LIGHT GAGE COLD-FORMED SECTIONS SHALL CONFORM TO LATEST VERSION OF AISI SPECIFICATIONS FOR COLD-FORMED STEEL STRUCTURAL MEMBERS.
 - MATERIALS:
 - A. ROLLED SHAPES: ASTM A992 OR A572 GRADE 50, F_y = 50 KSI MINIMUM
 - B. PLATES: ASTM A36
 - C. TUBULAR SHAPES: ASTM A500 GRADE B, F_y = 50 KSI MINIMUM
 - D. FIELD BOLTS (TYP. U.N.O): SAE J429 GRADE 5
 - E. SCREWS: #12 TEK-S - GALVANIZED
 - TEK SCREWS ARE TO BE INSTALLED USING A 2500 RPM MAX. NON-IMPACTING VARIABLE SPEED DRILL WITH CLUTCH OUT.
 - REFER TO THE RBI SOLAR MANUAL "GROUND MOUNT SYSTEM MODEL GM-H ASSEMBLY INSTRUCTIONS", VERSION 11, FOR STRUCTURAL CONNECTION TORQUE VALUES.
 - ALL WELDING OF STEEL SHALL BE DONE IN ACCORDANCE WITH THE LATEST VERSION OF THE AMERICAN WELD SOCIETY'S SPECIFICATIONS - AWS D1.1. ELECTRODES SHALL BE E70 SERIES UNLESS NOTED OTHERWISE.
 - GALVANIZING SPECIFICATIONS - GALVANIZING SHALL BE PER CONTRACT DOCUMENTS
 - A. HOT-DIPPED GALVANIZING SHALL BE PER ASTM A123.
 - B. PRE-GALVANIZED MATERIALS SHALL COMPLY WITH ASTM A653 - G90 MINIMUM.
 - C. ALL STRUCTURAL HARDWARE (NOT MODULE MOUNTING HARDWARE) SHALL BE GALVANIZED.



FLAT PLANE



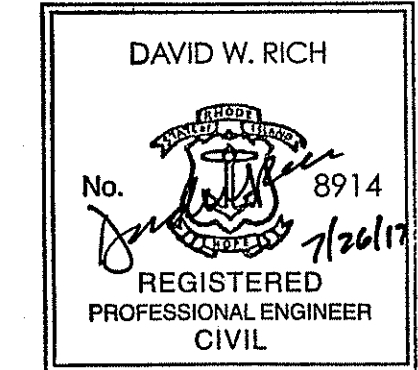
FOLLOW GRADE



FOLLOW AVERAGE GRADE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 30 2017 FILE # 17-0016
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Matthew D. Wemel



Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
SMITHFIELD, RHODE ISLAND

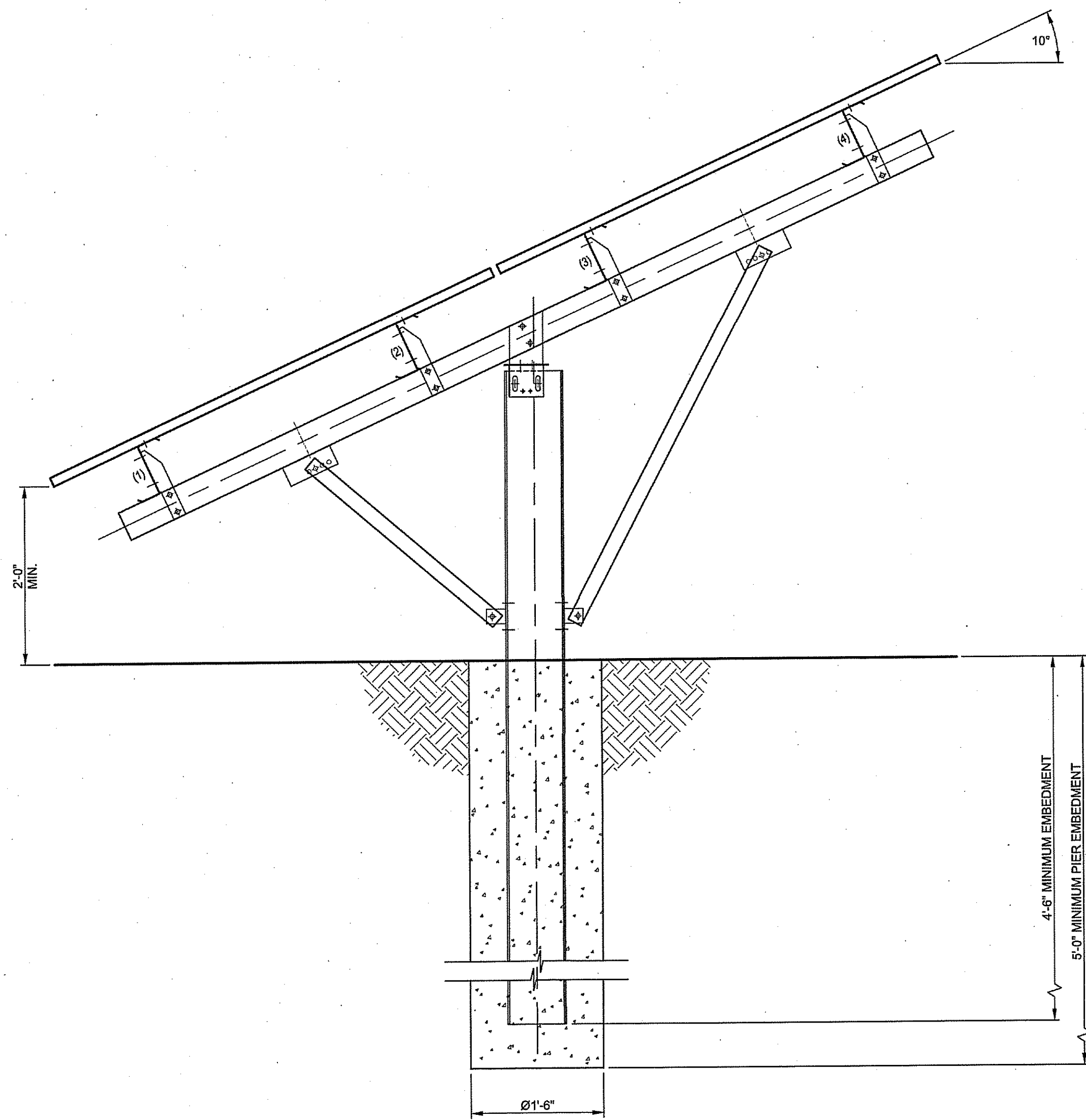
SHEET TITLE

SOLAR RACK SYSTEM AND FOUNDATION DETAILS SHEET 1 OF 2

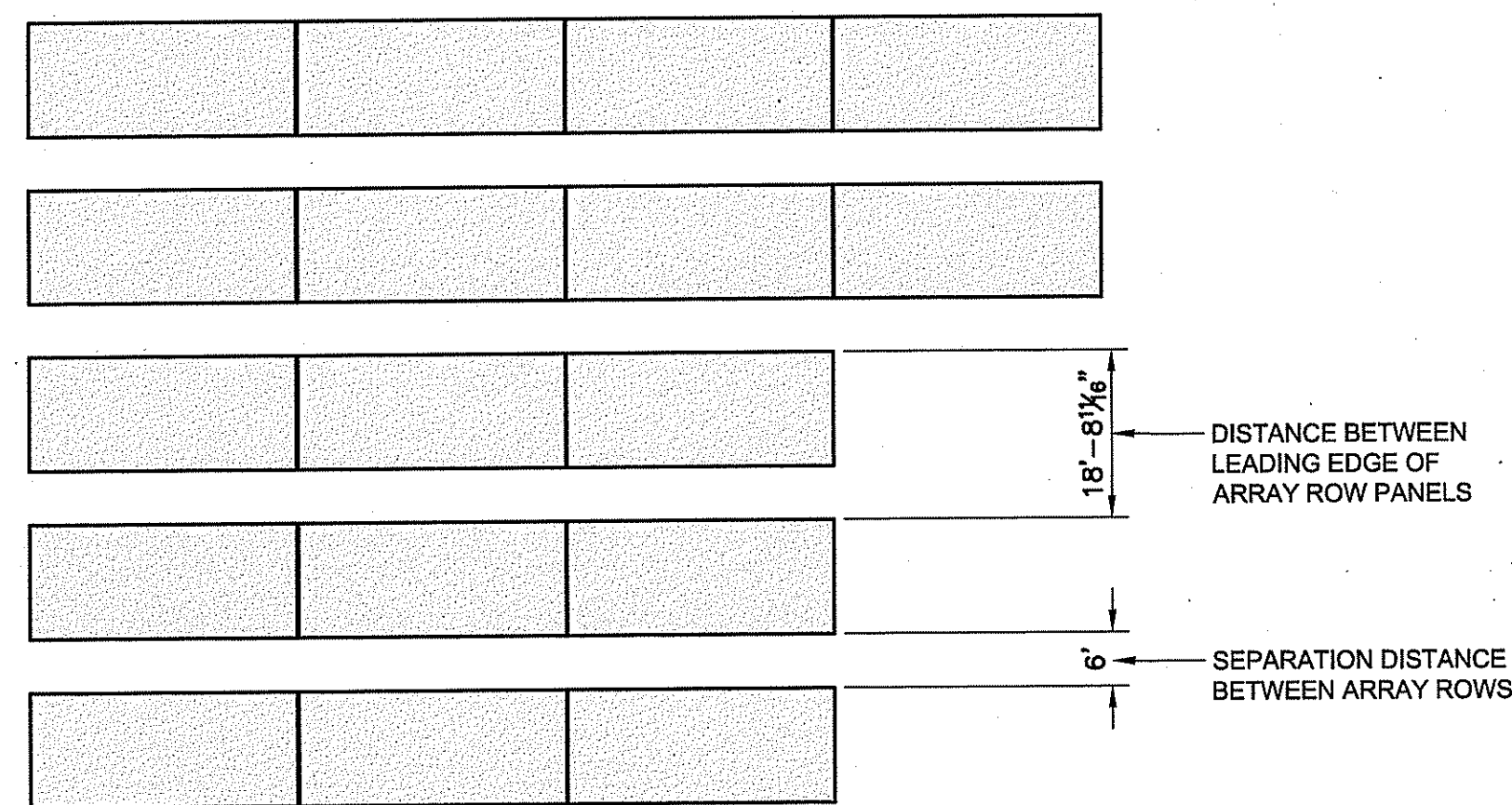
DESIGNED	SC	DRAWN	LRK	CHECKED	GAC	APPROVED	DWR
PROJECT NO.		195210911					
DATE:		JULY 2017		SHEET		9	

REVISION NUMBER	REVISION DATE	DESCRIPTION
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017

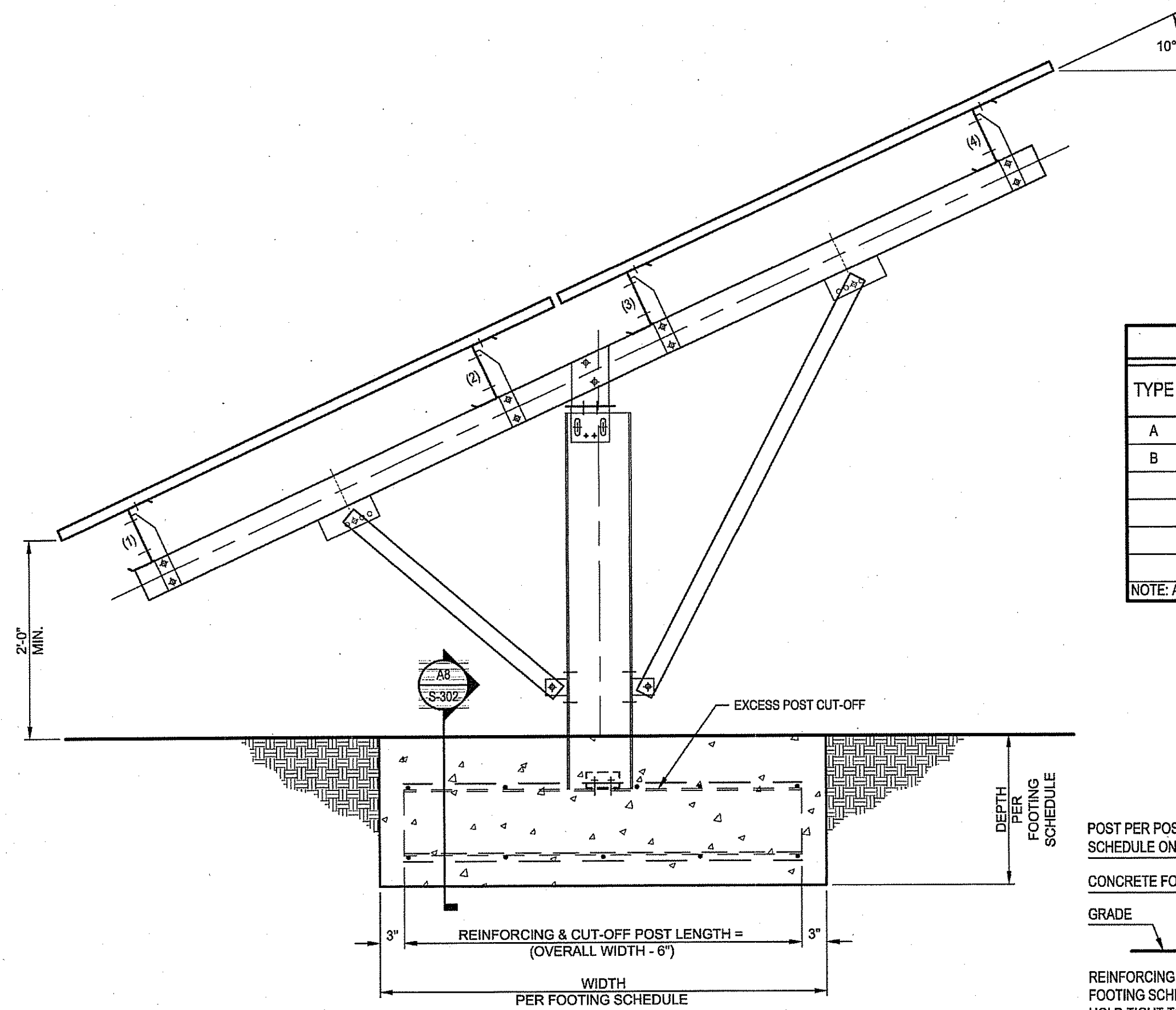




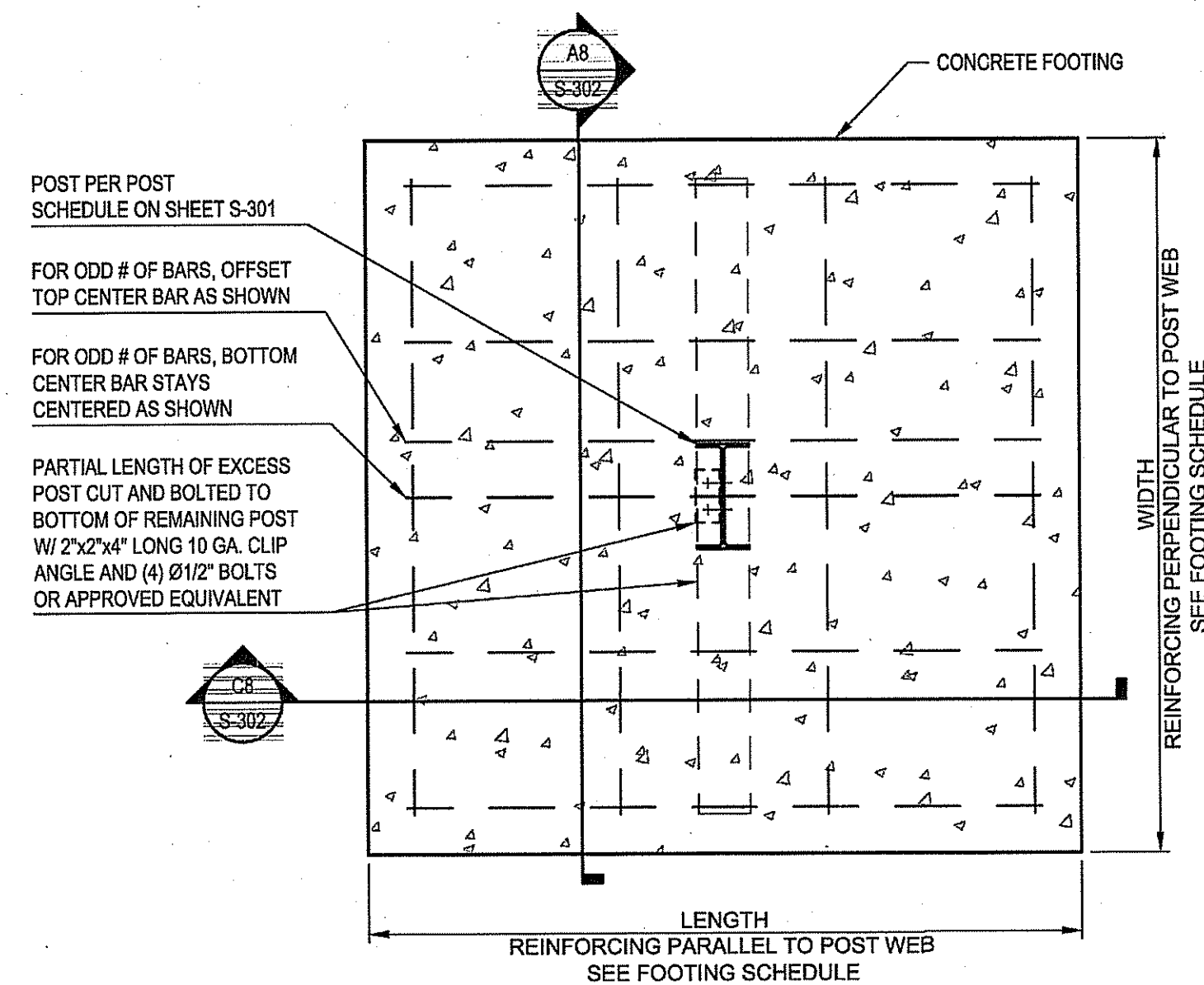
ALTERNATE CONCRETE FOUNDATION
NOT TO SCALE



ARRAY LAYOUT DETAIL
NOT TO SCALE



ALTERNATE SPREAD FOOTER DETAIL
NOT TO SCALE



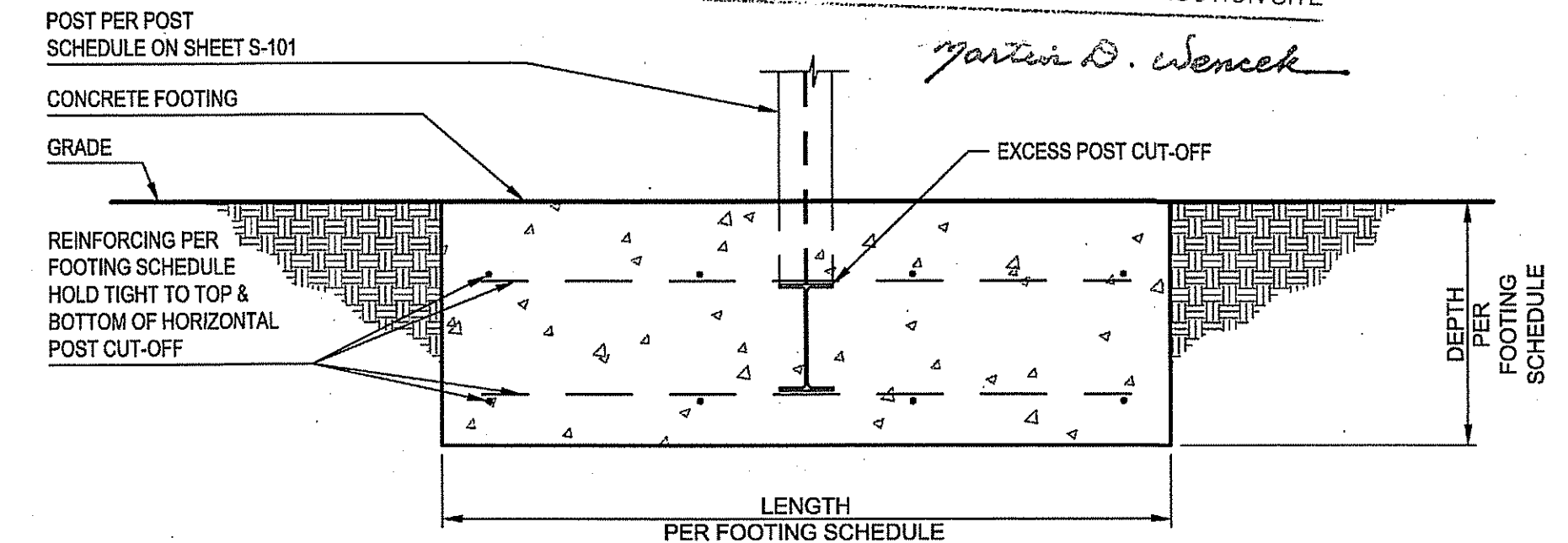
NOTE:
REINFORCING SHOWN MAY NOT REPRESENT THE ACTUAL REINFORCING REQUIRED.
SEE FOOTING SCHEDULE FOR REQUIRED REINFORCING.
PROVIDE MINIMUM 3" COVER FOR ALL REINFORCEMENT.

ALTERNATE FOUNDATION PLAN
NOT TO SCALE

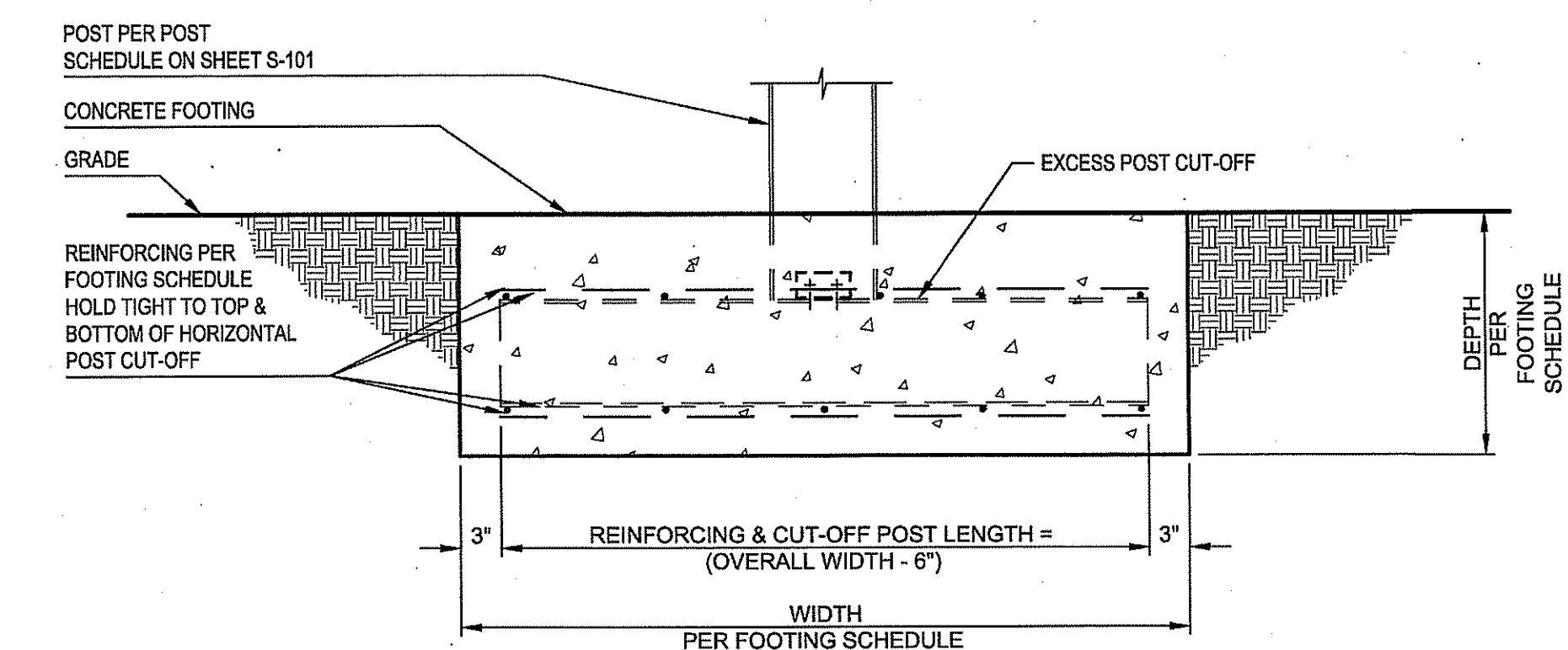
FOOTING SCHEDULE				
TYPE	LENGTH x WIDTH	DEPTH	REINFORCING PARALLEL TO POST WEB AND POST CUT-OFF	REINFORCING PERPENDICULAR TO POST WEB AND POST CUT-OFF
A	5'-9" x 5'-9" (PERIMETER)	1'-6"	(4) #4 BARS T&B OR (4) #5 BARS T&B	(5) #4 BARS T&B OR (4) #5 BARS T&B
B	4'-8" x 4'-8" (INTERIOR)	1'-6"	(4) #4 BARS T&B OR (4) #5 BARS T&B	(5) #4 BARS T&B OR (4) #5 BARS T&B

NOTE: ALL REINFORCING TO HAVE 3" MINIMUM COVER

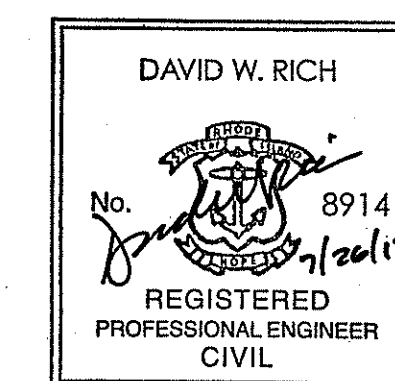
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ALTERNATE FOUNDATION SECTION
NOT TO SCALE



ALTERNATE FOUNDATION SECTION
NOT TO SCALE



Rhode Island Airport Corporation
NORTH CENTRAL AIRPORT
SMITHFIELD, RHODE ISLAND

SHEET TITLE
SOLAR RACK SYSTEM AND FOUNDATION DETAILS
SHEET 2 OF 2

REVISION NUMBER	REVISION DATE	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
1	2017.05.23	RIDEM WETLAND APP. NO 17-0016 DEFICIENCY LETTER APRIL 7, 2017	SC	LRK	GAC	DWR

PROJECT NO. 195210911
DATE: JULY 2017 SHEET 10

