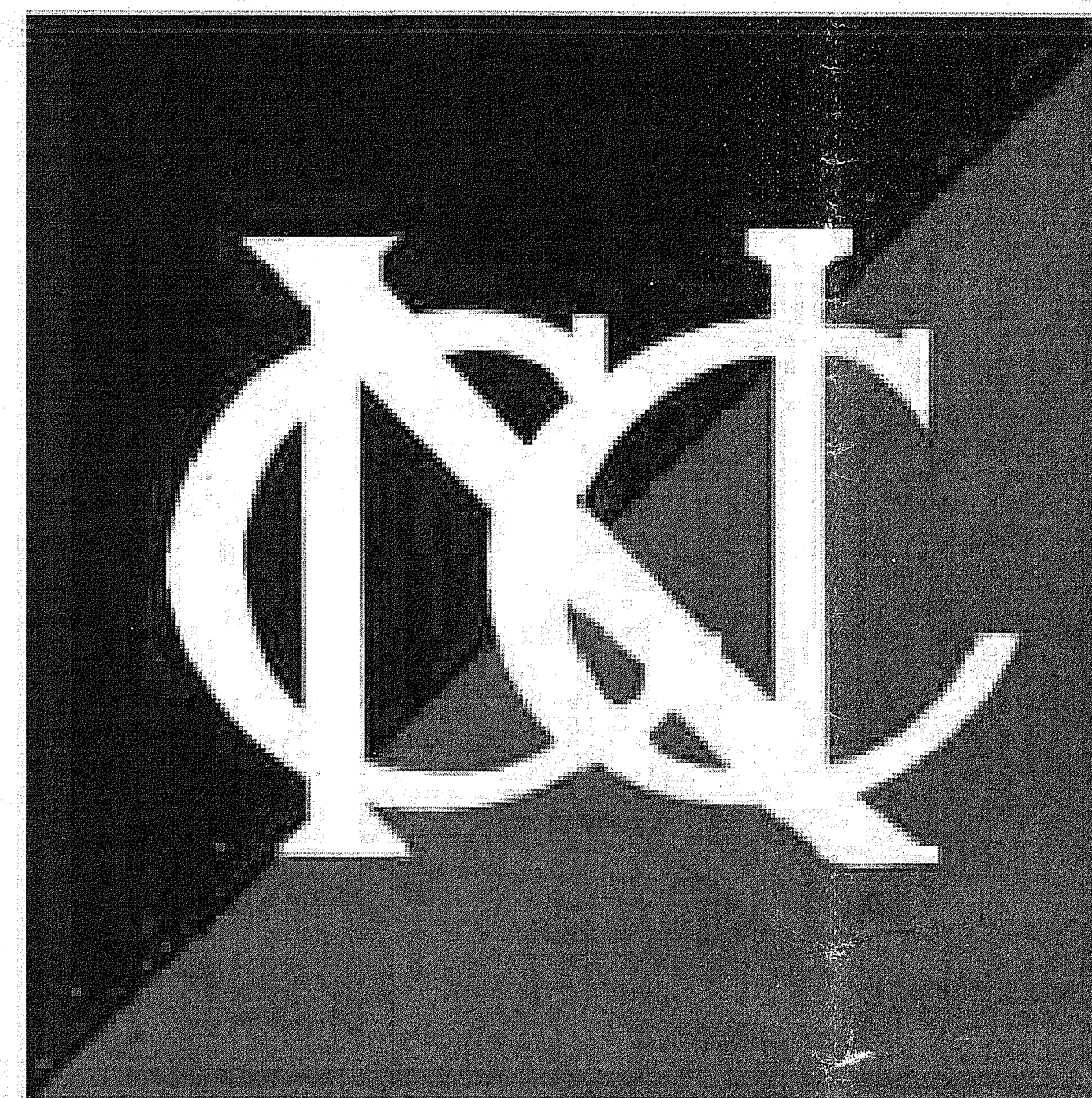


**SITE IMPROVEMENT PLANS FOR THE PROPOSED  
EXPANSION OF THE EXISTING TURF CARE CENTER**

# NEWPORT COUNTRY CLUB

**280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1**

**ZONING DISTRICT: R-160**



**APPROVALS:**

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - OWTS APPLICATION NO. 1821-1660**

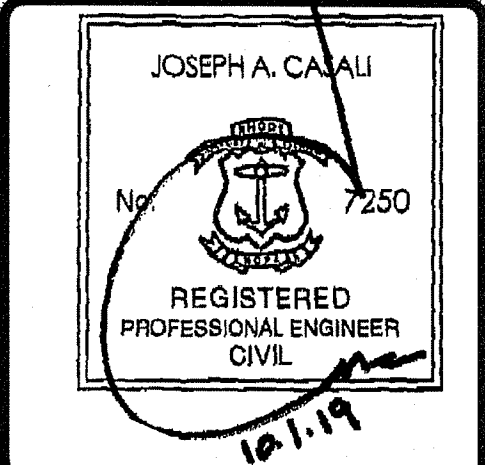
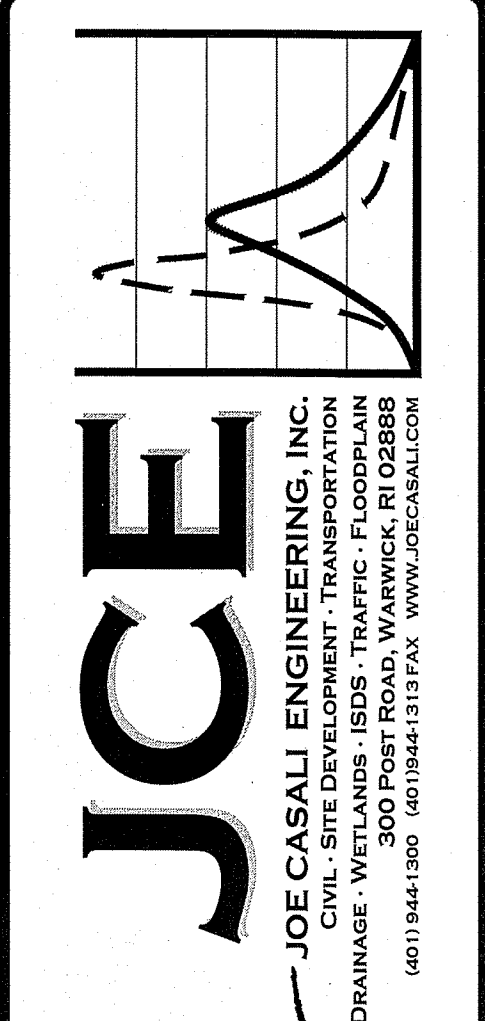
**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - INSIGNIFICANT ALTERATION PERMIT NO. 19-0032; RIPDES NO. RI101832**

**FILINGS:**

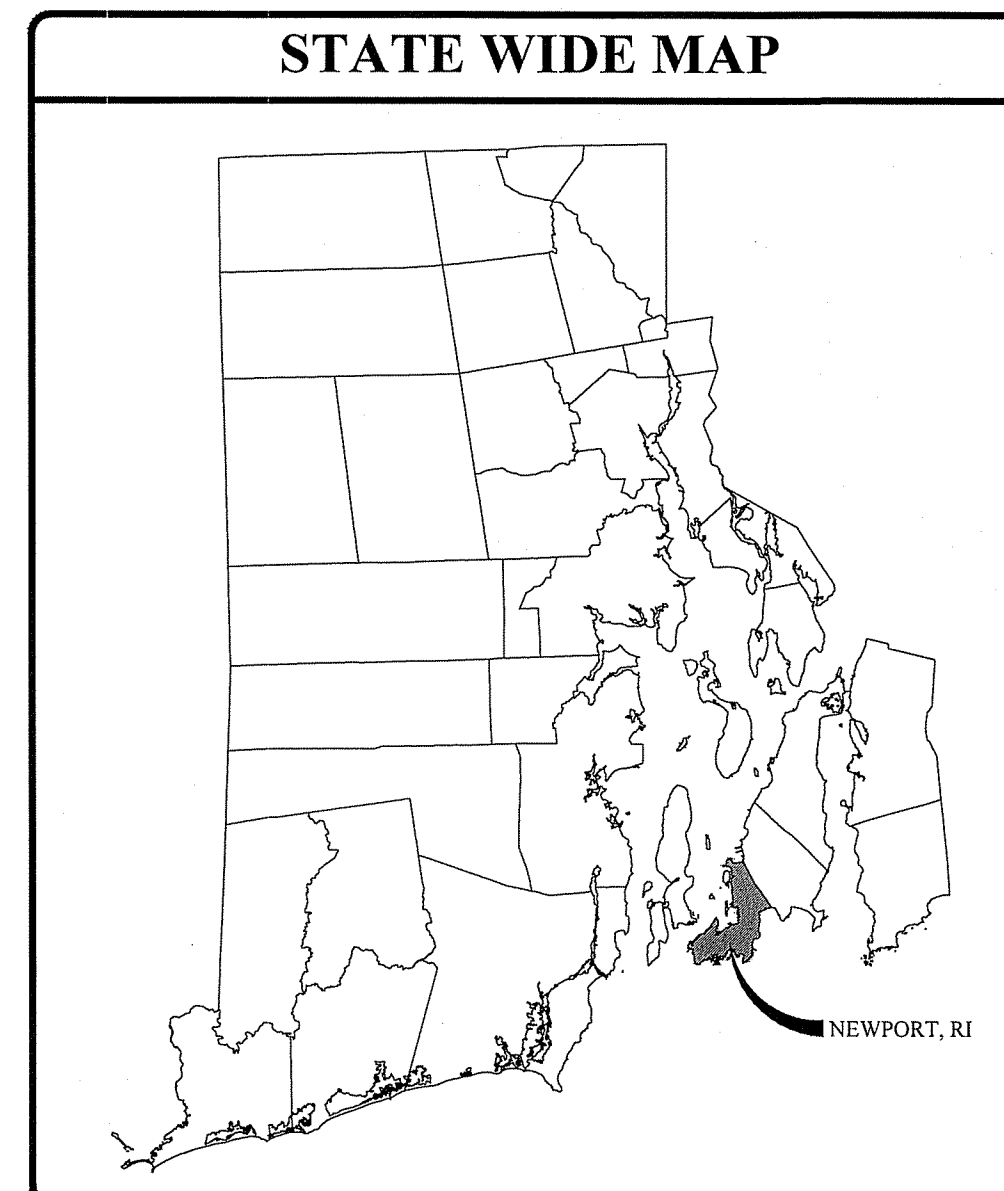
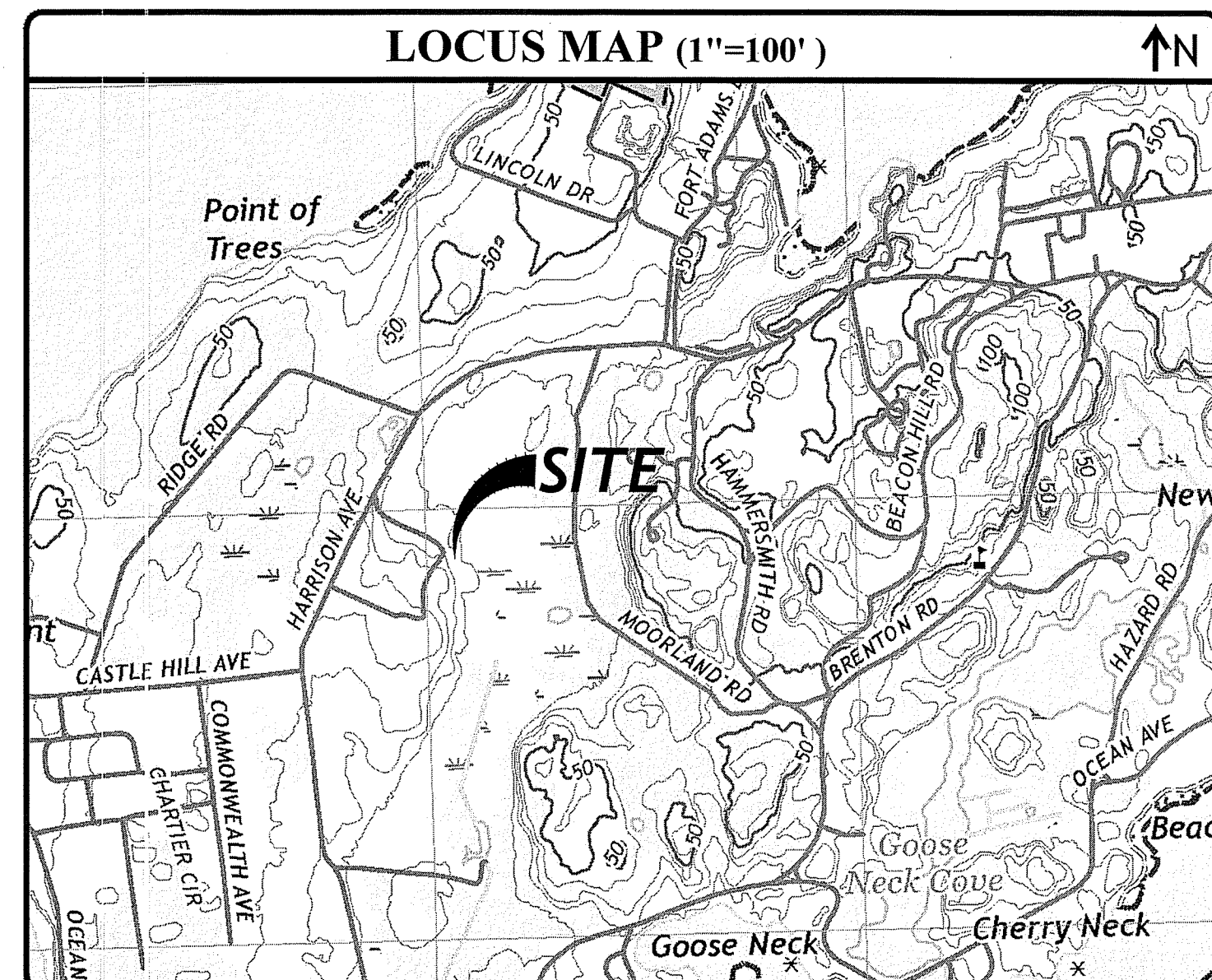
**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - PERMIT MODIFICATION**

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED DEC 23 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Nancy Freeman*

**NEWPORT COUNTRY CLUB  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1**



PROJECT TEAM			
<b>OWNER:</b>	NEWPORT COUNTRY CLUB PO BOX 426 NEWPORT, RI 02840	<b>CIVIL ENGINEER:</b>	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313 JOECASALI.COM
<b>GENERAL CONTRACTOR:</b>	CARDINAL MANAGEMENT COMPANY C/O JOSEPH NERONE PO BOX 1141 EAST GREENWICH, RI 02818 PHONE: 401-821-0110	<b>WETLAND BIOLOGIST:</b>	NATURAL RESOURCE SERVICES 180 TINKHAM LANE HARRISVILLE, RI 02830 PHONE: 401-568-7390
<b>ARCHITECT:</b>	JGA ARCHITECTURE 700 SCHOOL STREET, UNIT 2 PAWTUCKET, RI 02860 PHONE: (401) 721-0977	<b>LAND SURVEYOR:</b>	SCITUATE SURVEYS, INC. 410 TIOGUE AVENUE COVENTRY, RI 02816 PHONE: 401-438-5775



INDEX OF DRAWINGS	
SHEET NO.	PLAN
1	COVER SHEET
2	EXISTING CONDITIONS & SITE PREPARATION PLAN
3	SITE AND UTILITY PLAN
4	GRADING AND DRAINAGE PLAN
5	OWTS PLAN
6	RI STANDARD DETAILS
7	CIVIL DETAILS
8	OWTS DETAILS I
9	OWTS DETAILS II

REFERENCE PLAN:  
SHEET 1 OF 1 SURVEY PLAN, PREPARED BY SCITUATE SURVEYS, INC., DATED DECEMBER 27, 2018

OCT 16 2019

REVISIONS:		
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS
2	5/20/2019	RIDEM COMMENTS
3	10/1/2019	PERMIT REVISIONS

DESIGNED BY:	WMLJR
DRAWN BY:	SDSEP
CHECKED BY:	JAC
DATE:	FEB. 2019
PROJECT NO:	18-26

PRELIMINARY, NOT FOR CONSTRUCTION

**COVER SHEET**

**SHEET 1 OF 9**

Q:\18-26-Joe Nerone\CAD\NCC (Site Plan) R5.dwg Oct. 15, 2019 3:42pm

**GENERAL NOTES:**

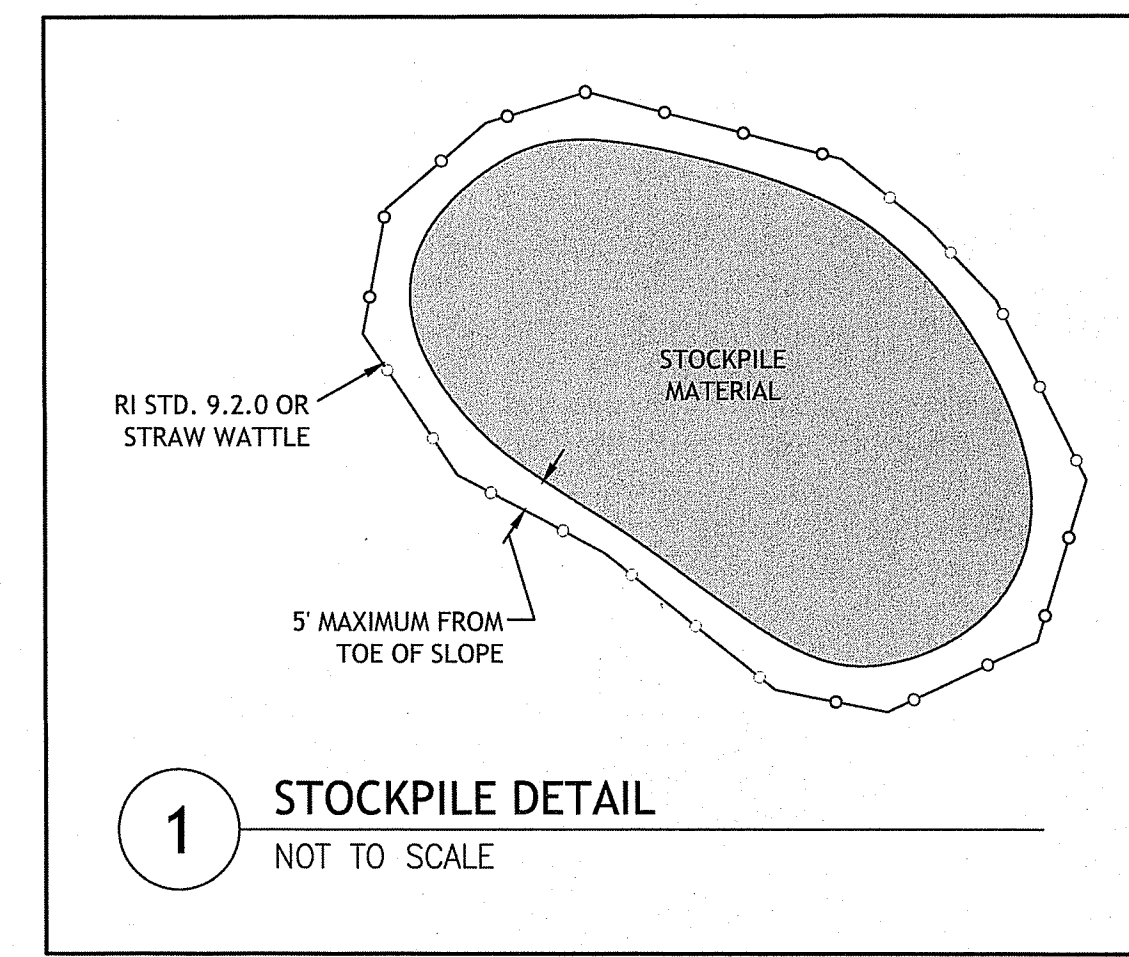
- CLASS III TOPOGRAPHIC SURVEY COMPLETED BY SCITUATE SURVEYS, INC., 410 TIOGUE AVENUE, COVENTRY, RI 02816 IN SEPTEMBER 2018.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THIS SITE LIES PARTIALLY IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD), AS SHOWN ON THE FIRM MAPS FOR NEWPORT COUNTY, COMMUNITY PANEL NO. 44005C0178J, EFFECTIVE SEPTEMBER 4, 2013. A SMALL PORTION OF THE SITE LIES WITHIN THE 0.2% ANNUAL CHANCE FLOOD ZONE. THE REMAINING PORTION OF THE SITE LIES WITHIN ZONE AE (BASE FLOOD ELEVATIONS DETERMINED) AND HAS AN ASSOCIATED BASE FLOOD ELEVATION OF 15.
- SOILS EXISTING WITHIN THE PROJECT AREA CONSISTS OF CANTON AND CHARLTON FINE SANDY LOAMS, VERY ROCKY, 3-15 PERCENT SLOPES (Cec), WHICH CLASSIFY AS HYDROLOGIC SOIL GROUP "B"; AND NEWPORT SILT LOAM, 3-8 PERCENT SLOPES (Neb), WHICH CLASSIFY AS HYDROLOGIC SOIL GROUP "C".
- WETLANDS WERE DELINEATED IN SEPTEMBER 2018 BY NATIONAL RESOURCES SERVICES, INC., P.O. BOX 311 HARRISVILLE, RI 02830.
- THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE AQUIDNECK ISLAND-FRONTAL ATLANTIC OCEAN WATERSHED. THERE ARE NO EXTRAORDINARY OR UNUSUAL FEATURES ON THE SUBJECT SITE.
- THERE ARE NO KNOWN EASEMENTS WITHIN THE SUBJECT PARCEL.
- TELEPHONE, ELECTRIC AND WATER SERVICES ARE AVAILABLE FROM WITHIN HARRISON AVENUE.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

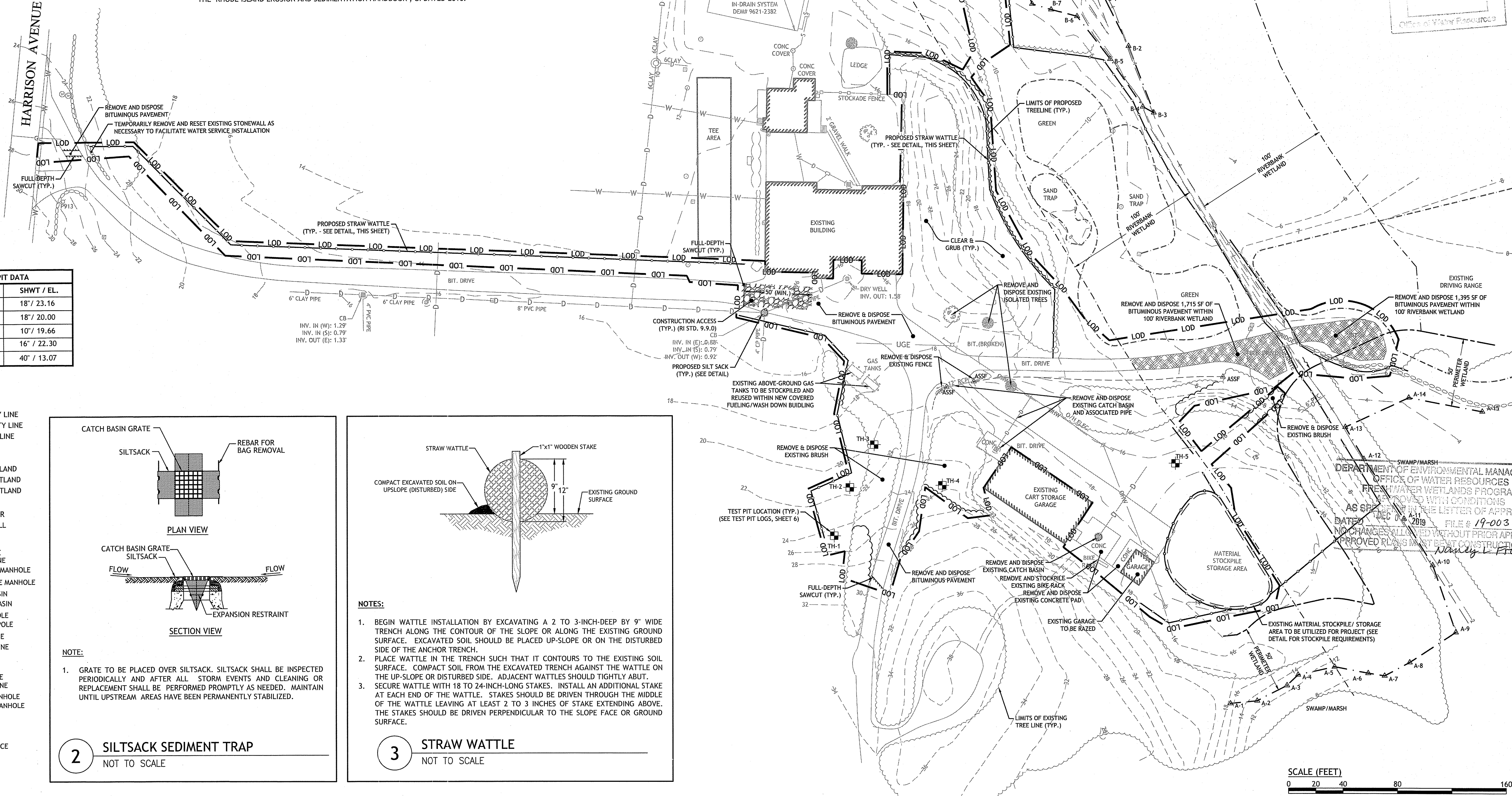
- THE STRAW WATTLE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE IN THE AREA OF THE STORMWATER MITIGATION AREAS ONCE THE SUBGRADE IS EXPOSED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDING AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
- ALL STRAW WATTLES, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE STRAW WATTLES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE STRAW WATTLE BECOMES FILLED WITH SEDIMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", UPDATED 2016.

**SEDIMENTATION CONTROL PROGRAM:**

- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE STORMWATER MANAGEMENT AREAS. THESE AREAS CANNOT BE USED AS SEDIMENT CONTROL DEVICES.
  - ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED, SHALL RECEIVE SUITABLE SLOPE PROTECTION.
  - ALL UPSLOPED AREAS ARE TO BE STABILIZED PRIOR TO CONNECTING TO THE STORMWATER FACILITIES.
  - DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF DURING STORMS AND PERIODS OF RAINFALL.
  - SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
  - REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE 1989, AS A GUIDE (UPDATED 2016).
- ORDER OF PROCEDURE:**
- SEDIMENT CONTROL DEVICES SHALL SET IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION.
  - ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED DURING THE CONSTRUCTION.
  - IF WORK PROGRESS IS INTERRUPTED AT ANY TIME, REFERENCE EROSION & SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
  - SPECIFIED PLANTINGS ARE TO TAKE PLACE IN EARLY SPRING (APRIL 1 THRU MAY 30) OR EARLY FALL (SEPTEMBER 1 THRU 30) AND ARE TO BE MAINTAINED FOR A PERIOD OF ONE GROWING SEASON AND SHALL BE REPLACED IF NECESSARY.

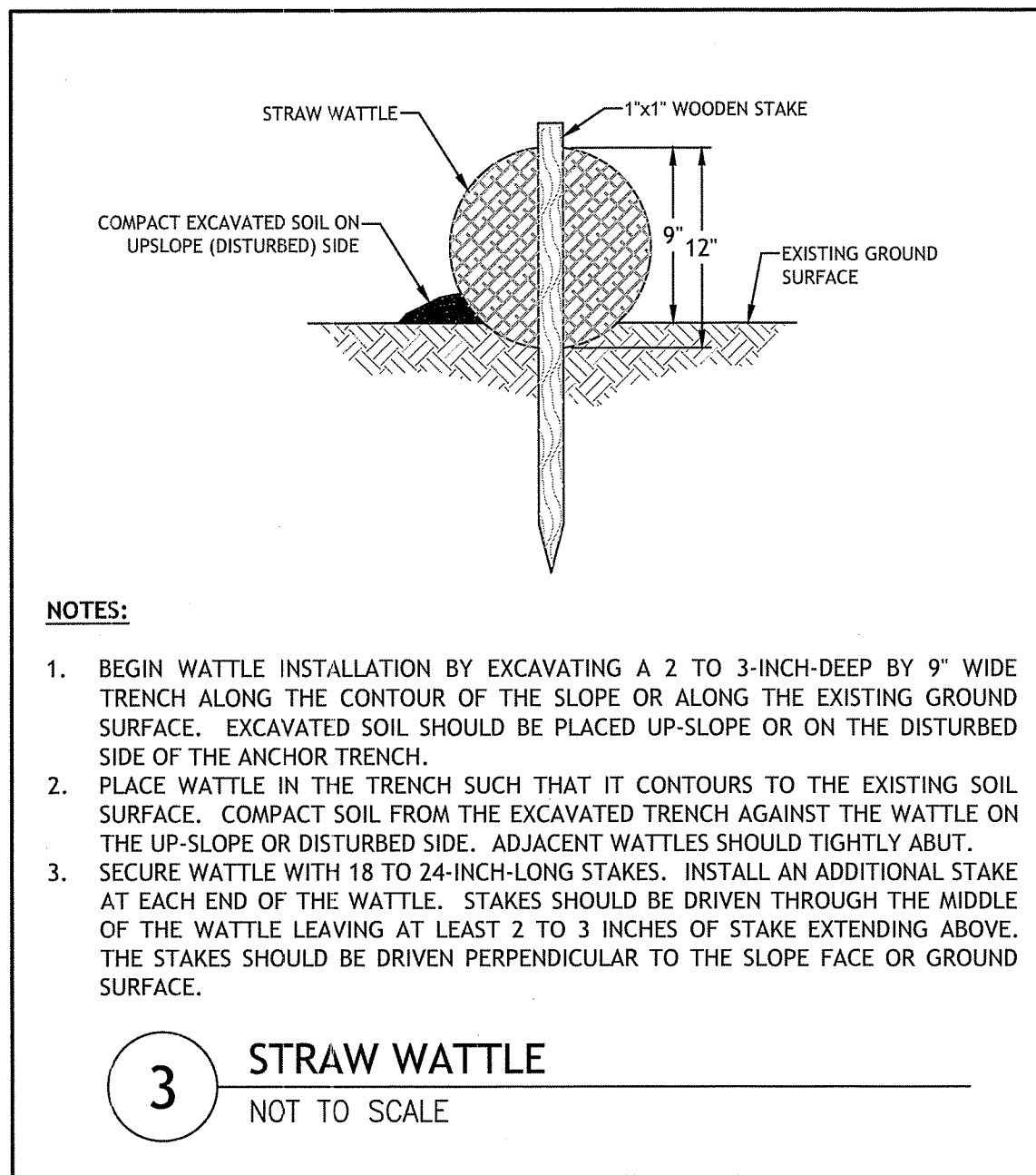
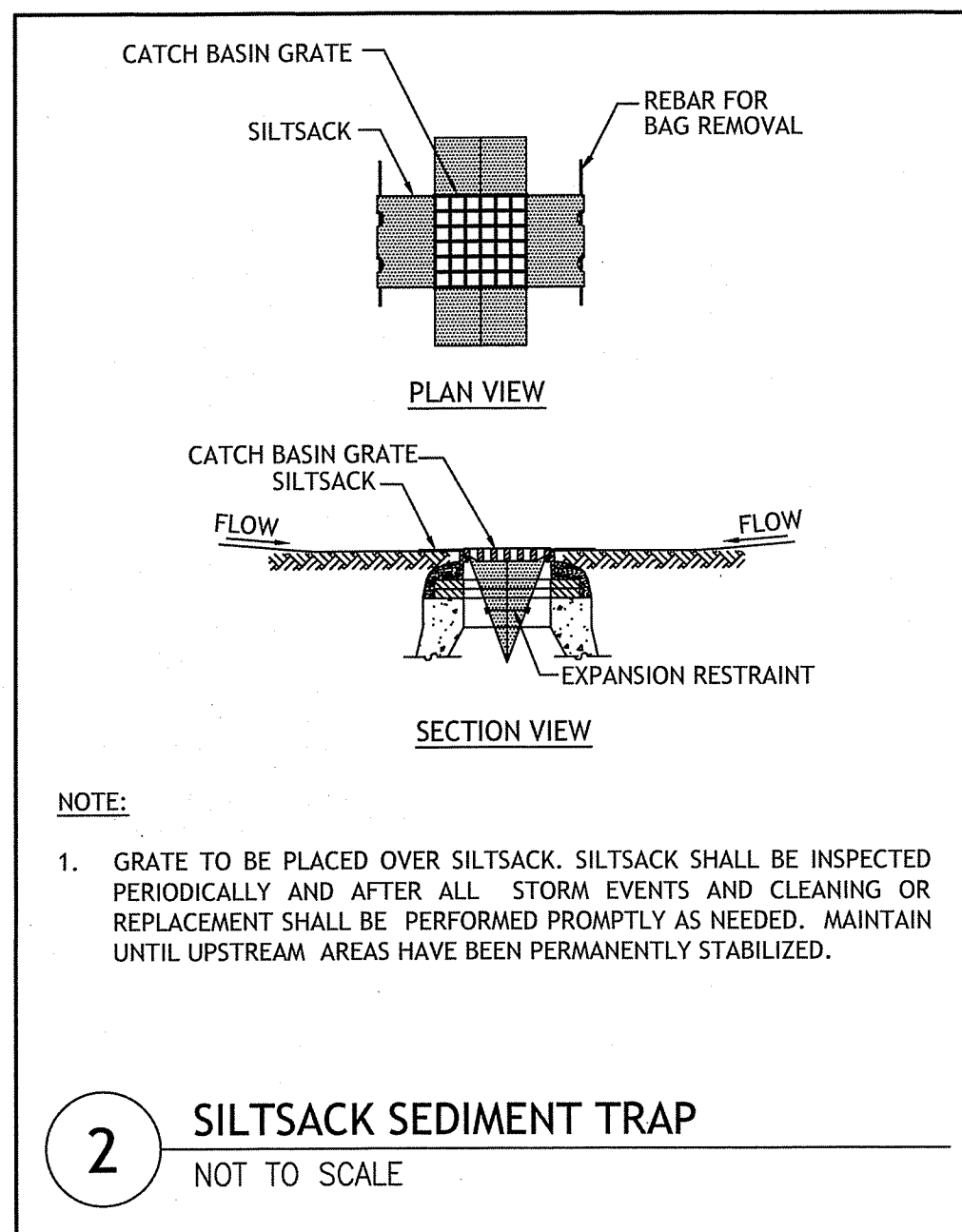


OCT 16 2019  
Office of Water Resources



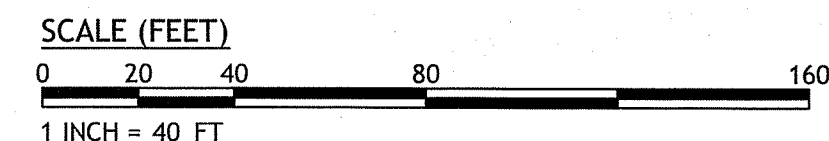
SOIL EVALUATION TEST PIT DATA		
	SURFACE EL.	SHWT / EL.
TH-1	24.66	18' / 23.16
TH-2	21.50	18' / 20.00
TH-3	20.20	10' / 19.66
TH-4	23.66	16' / 22.30
TH-5	16.41	40' / 13.07

- LEGEND**
- EXISTING PROPERTY LINE
  - ABUTTING PROPERTY LINE
  - BUILDING SETBACK LINE
  - WETLAND EDGE
  - WETLAND FLAG
  - 50' PERIMETER WETLAND
  - 100' RIVERBANK WETLAND
  - 200' RIVERBANK WETLAND
  - 100' EXISTING CONTOUR
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  - EXISTING STONE WALL
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  - PROPOSED FENCE
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  - PROPOSED SEWER MANHOLE
  - N/F - NOW OR FORMERLY
  - TREELINE
  - STRAW WATTLE
  - LOD - LIMIT OF DISTURBANCE
  - TEST HOLE



**NOTES:**

- BEGIN WATTLE INSTALLATION BY EXCAVATING A 2 TO 3-INCH-DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE OR ALONG THE EXISTING GROUND SURFACE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE OR ON THE DISTURBED SIDE OF THE ANCHOR TRENCH.
- PLACE WATTLE IN THE TRENCH SUCH THAT IT CONTOURS TO THE EXISTING SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-SLOPE OR DISTURBED SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
- SECURE WATTLE WITH 18 TO 24-INCH-LONG STAKES. INSTALL AN ADDITIONAL STAKE AT EACH END OF THE WATTLE. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2 TO 3 INCHES OF STAKE EXTENDING ABOVE. THE STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE OR GROUND SURFACE.



**JCE**  
JOE CASALI ENGINEERING, INC.  
DRAINAGE, WETLANDS, EROSION, TRAFFIC, FLOODPLAIN  
300 POPE ROAD, WARWICK, RI 02888  
(401) 944-1800 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER CIVIL  
10.1.19

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS
2	5/20/2019	RIDEM COMMENTS
3	10/1/2019	PERMIT REVISIONS

DESIGNED BY: WMLJR  
DRAWN BY: SDSEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

**EXISTING CONDITIONS & SITE PREP. PLAN**

**SHEET 2 OF 9**

**SITE NOTES:**

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
- ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS, FIRE PROTECTION PLANS, AND ELECTRICAL PLANS, FOR ACTUAL SIZE OF THE PROPOSED BUILDING AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDING.
- WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
- THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMBS, UNLESS OTHERWISE DIRECTED.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR CITY RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

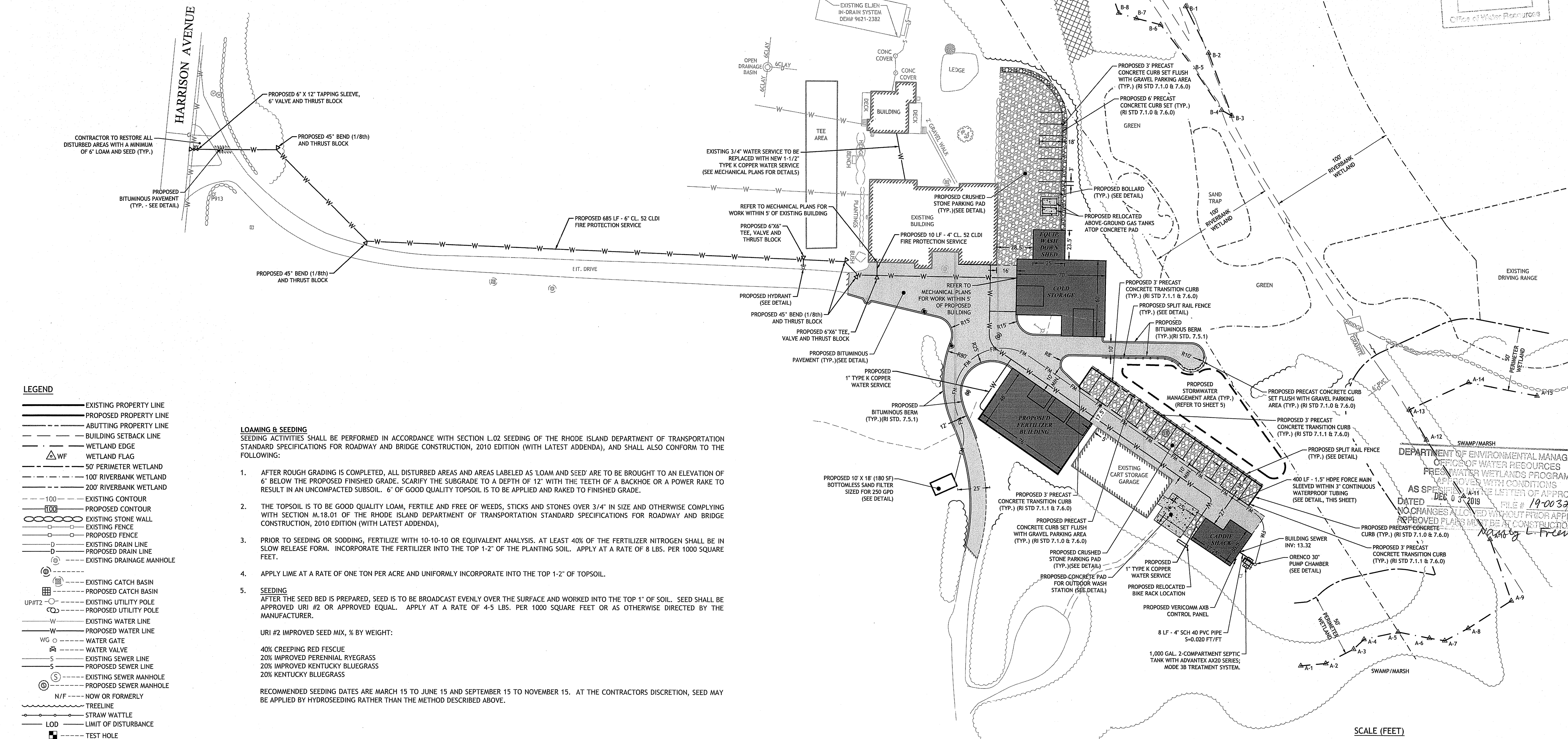
**PROPOSED BUILDINGS NOTE:**

- DIMENSIONS OF PROPOSED BUILDINGS ARE APPROXIMATE. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS.

**PERIMETER & RIVERBANK WETLAND RESTORATION NOTES:**

- EROSION CONTROLS TO BE ESTABLISHED PRIOR TO COMMENCING ANY WORK.
- ALL SLASH SHALL BE MANUALLY REMOVED FROM ALTERED RIVERBANK WETLAND.
- THE AREA SHALL BE PLANTED WITH THE FOLLOWING:
  - 20 SHADBUSH (*AMELANCHIER CANADENSIS*)
  - 20 ARROWWOOD (*VIBURNUM DENTATUM*)
  - 20 WINTERBERRY (*ILEX VERTICILLATA*)
- ALL SHRUBS SHALL BE 2-3 FEET TALL AFTER PLANTING. PLANT SPACING SHALL BE 4-5 ON-CENTER.
- AFTER PLANTING, THE AREA SHALL BE ALLOWED TO REVERT TO A WILD CONDITION.

JOSEPH A. CASALI  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 10/1/19  
 OCT 16 2019  
 Office of Water Resources



**LEGEND**

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
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**LOAMING & SEEDING**

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
- THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
- PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
- APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
- SEEDING  
 AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

- 40% CREEPING RED FESCUE
- 20% IMPROVED PERENNIAL RYEGRASS
- 20% IMPROVED KENTUCKY BLUEGRASS
- 20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

**NEWPORT COUNTRY CLUB**  
**280 HARRISON AVENUE**  
**NEWPORT, RHODE ISLAND**  
**AP 43, LOT 1**

**REVISIONS:**

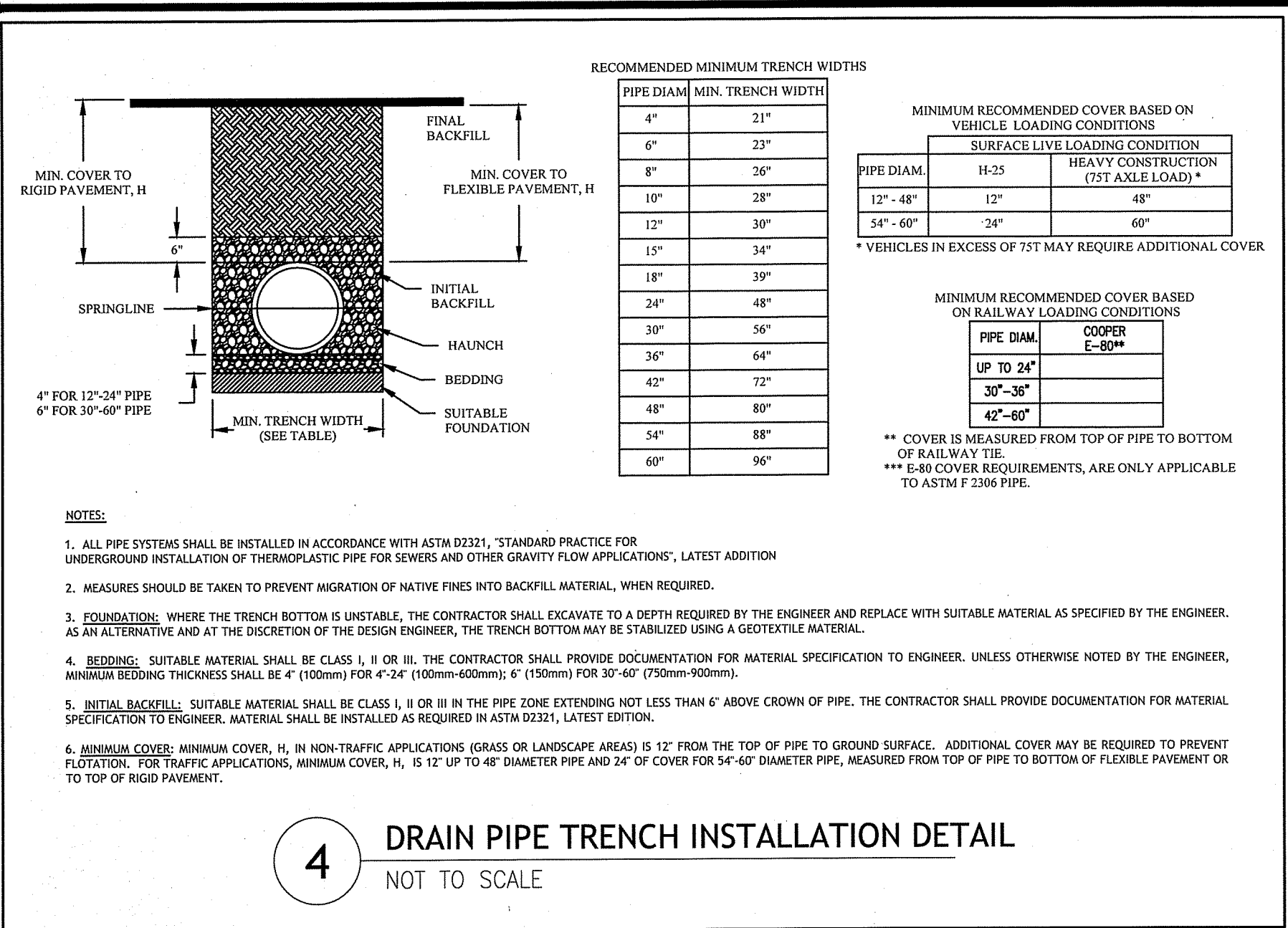
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 DATE: FEB. 2019  
 PROJECT NO: 18-26

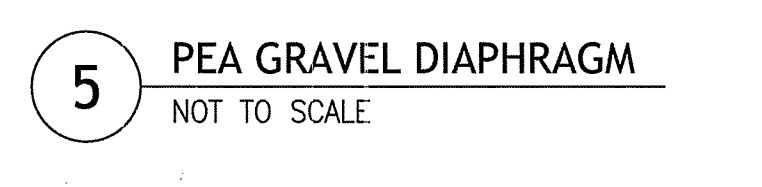
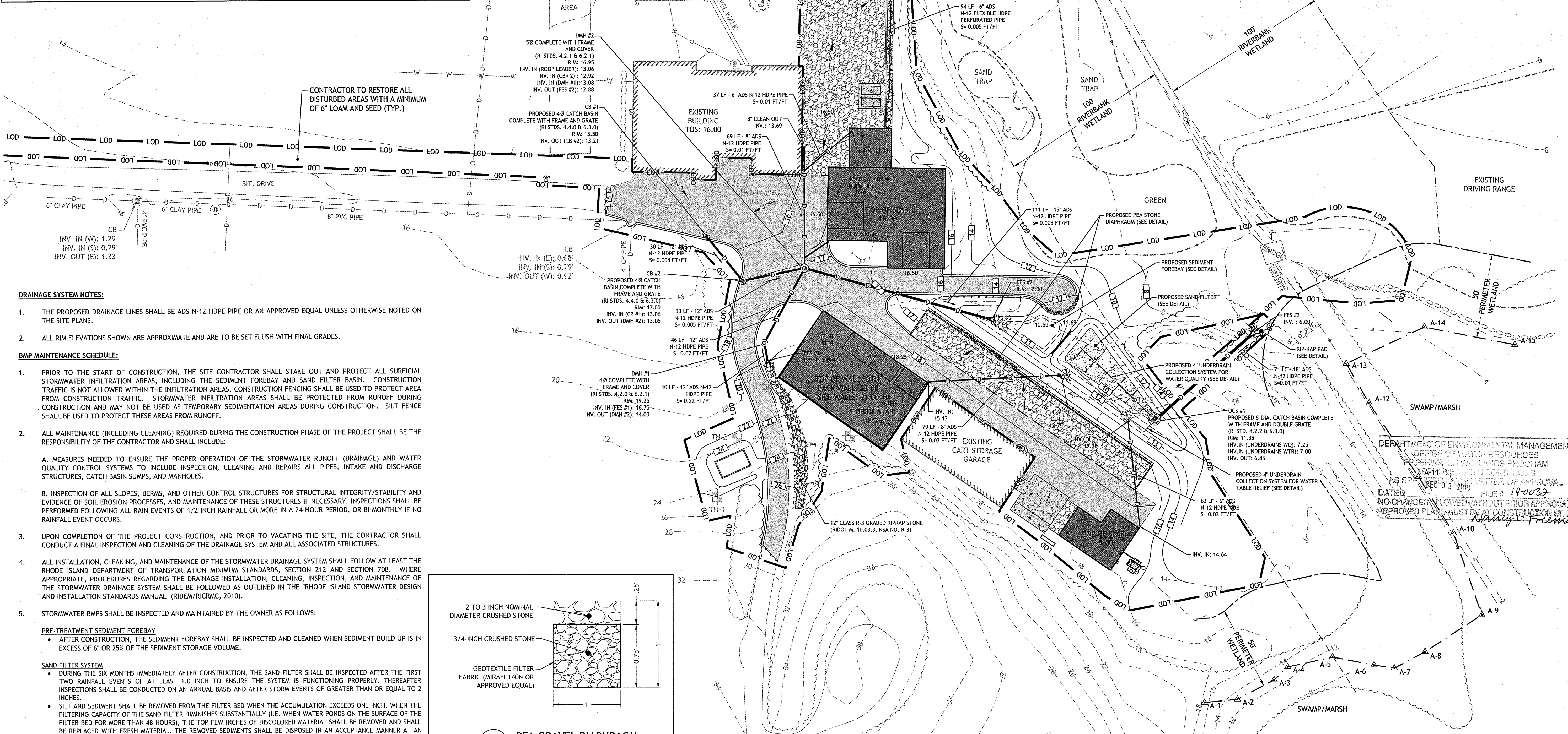
PRELIMINARY, NOT FOR CONSTRUCTION

**SITE AND UTILITY PLAN**

**SHEET 3 OF 9**



**4 DRAIN PIPE TRENCH INSTALLATION DETAIL**  
NOT TO SCALE



OCT 16 2019  
City of Newport Planning Dept.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
AS SPECIFIED WITH CONDITIONS  
FILE # 19-0032  
DATED DEC 03 2019  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
Holly L. Freeman

**JCE**  
JOE CASALI ENGINEERING, INC.  
DRAINAGE, WETLANDS, ISDS, TRAFFIC, FLOODPLAIN  
300 POST ROAD, WARWICK, RI 02888  
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
12.1.19

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

**REVISIONS:**

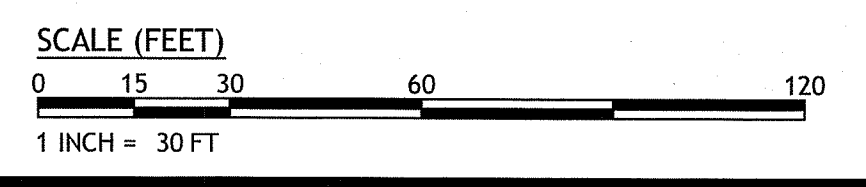
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS
2	5/20/2019	RIDEM COMMENTS
3	10/1/2019	PERMIT REVISIONS

DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

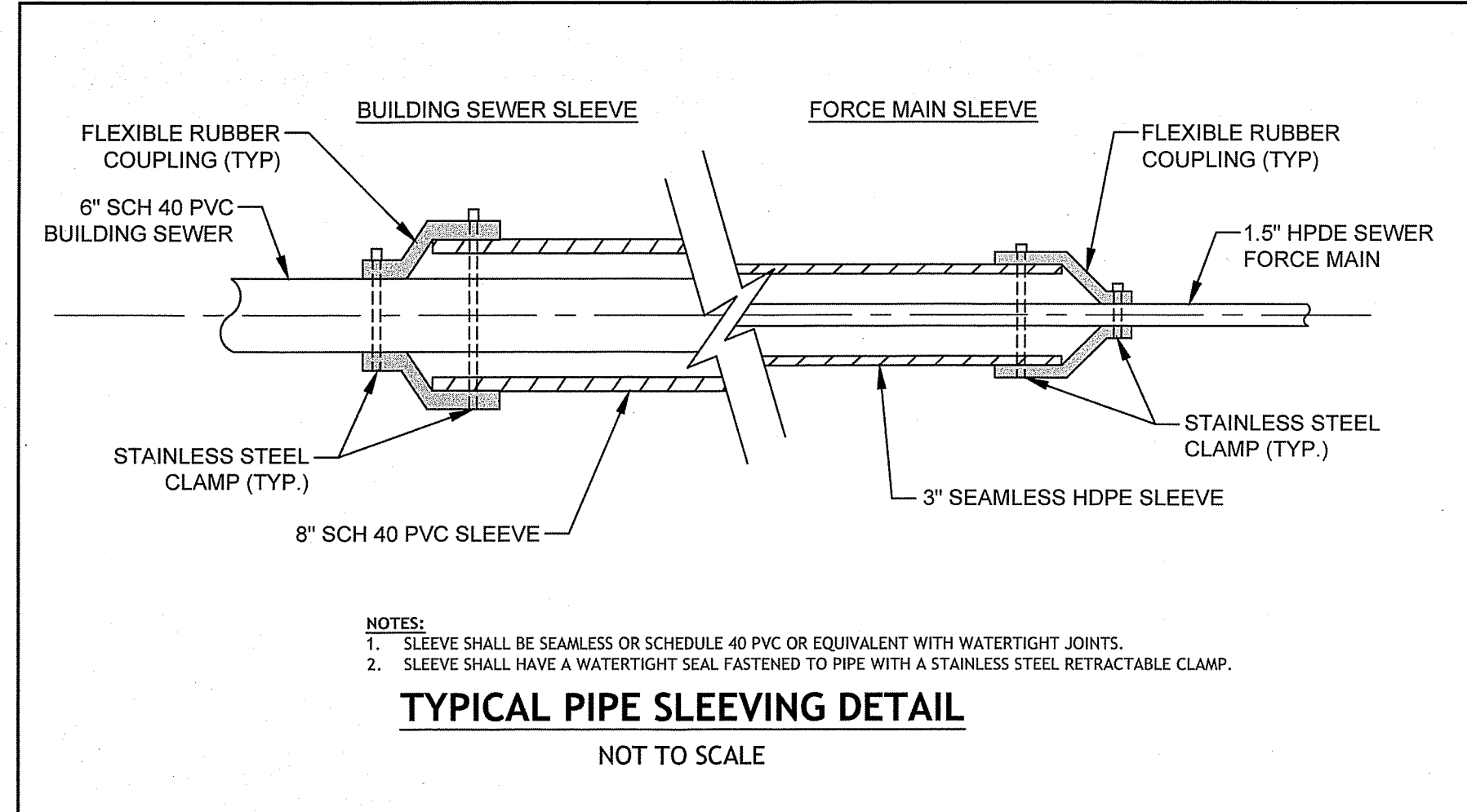
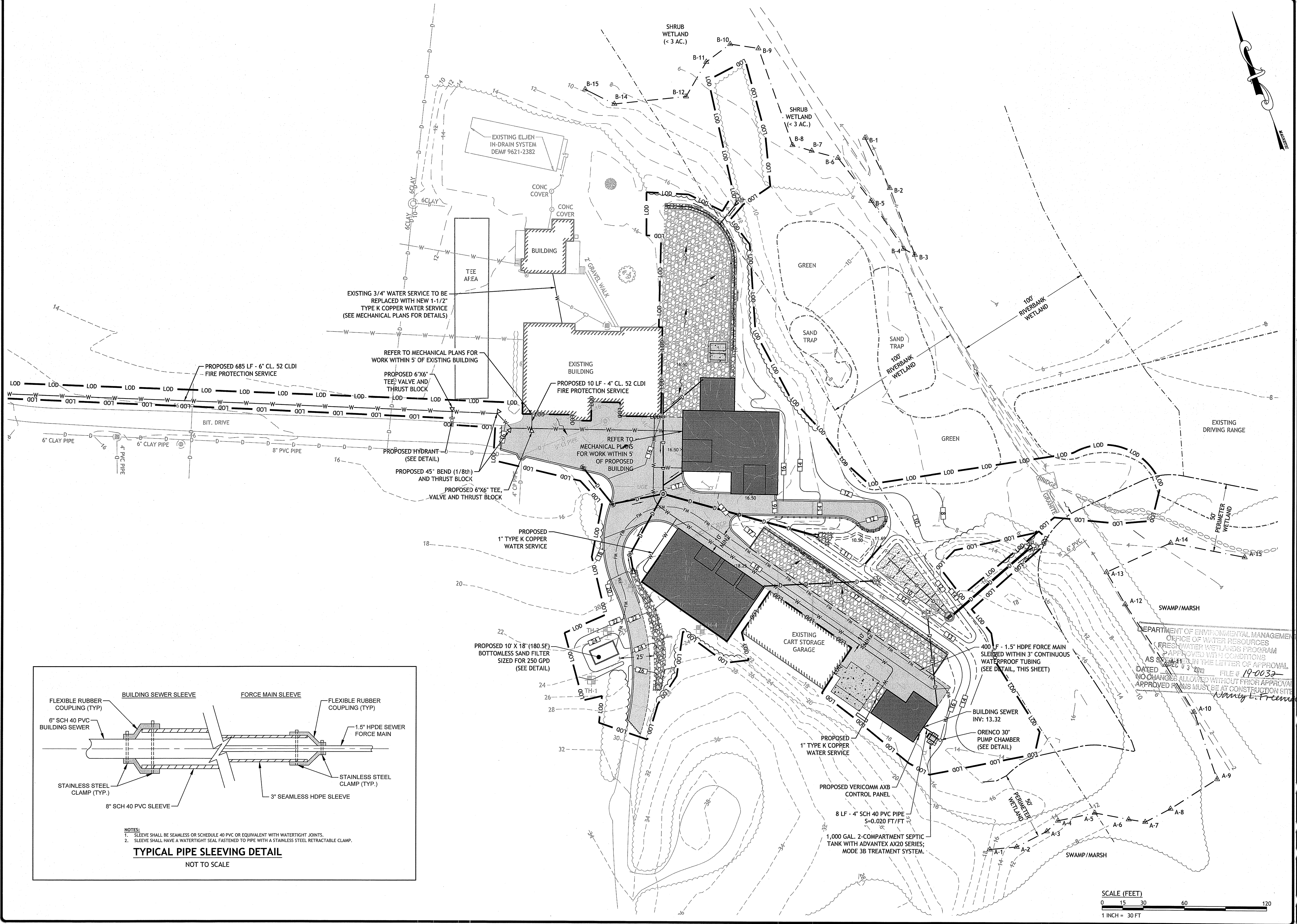
PRELIMINARY, NOT FOR CONSTRUCTION

**GRADING & DRAINAGE PLAN**

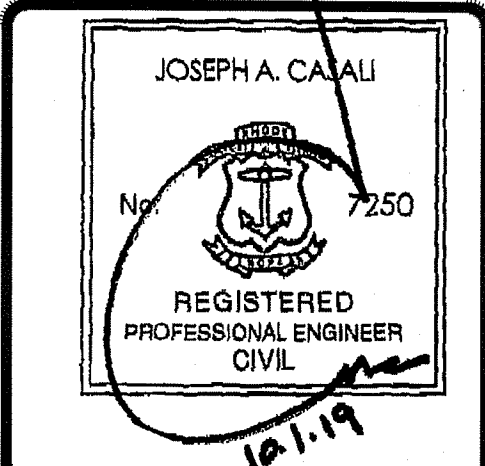
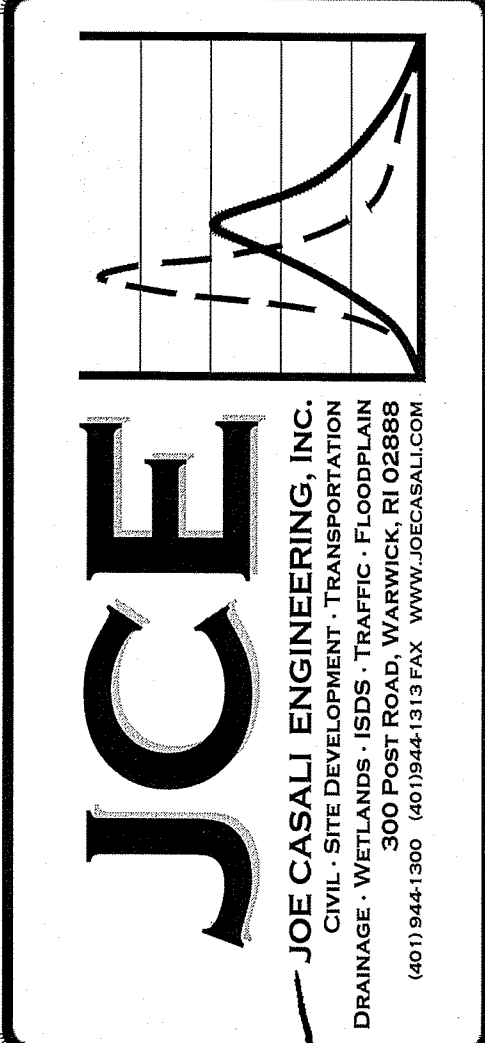
**SHEET 4 OF 9**



Q:\18-26 Joe Heron\ACAD\INCC (Site Plan) R5.dwg Oct. 15, 2019 3:19pm



**NOTES:**  
 1. SLEEVE SHALL BE SEAMLESS OR SCHEDULE 40 PVC OR EQUIVALENT WITH WATERTIGHT JOINTS.  
 2. SLEEVE SHALL HAVE A WATERTIGHT SEAL FASTENED TO PIPE WITH A STAINLESS STEEL RETRACTABLE CLAMP.  
**TYPICAL PIPE SLEEVING DETAIL**  
 NOT TO SCALE



**NEWPORT COUNTRY CLUB**  
**280 HARRISON AVENUE**  
**NEWPORT, RHODE ISLAND**  
**AP 43, LOT 1**

REVISIONS:

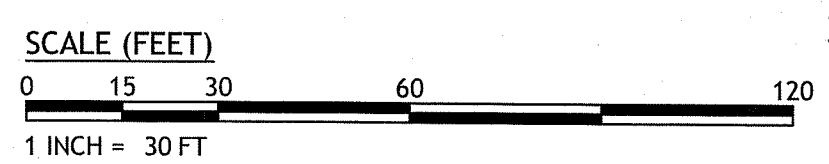
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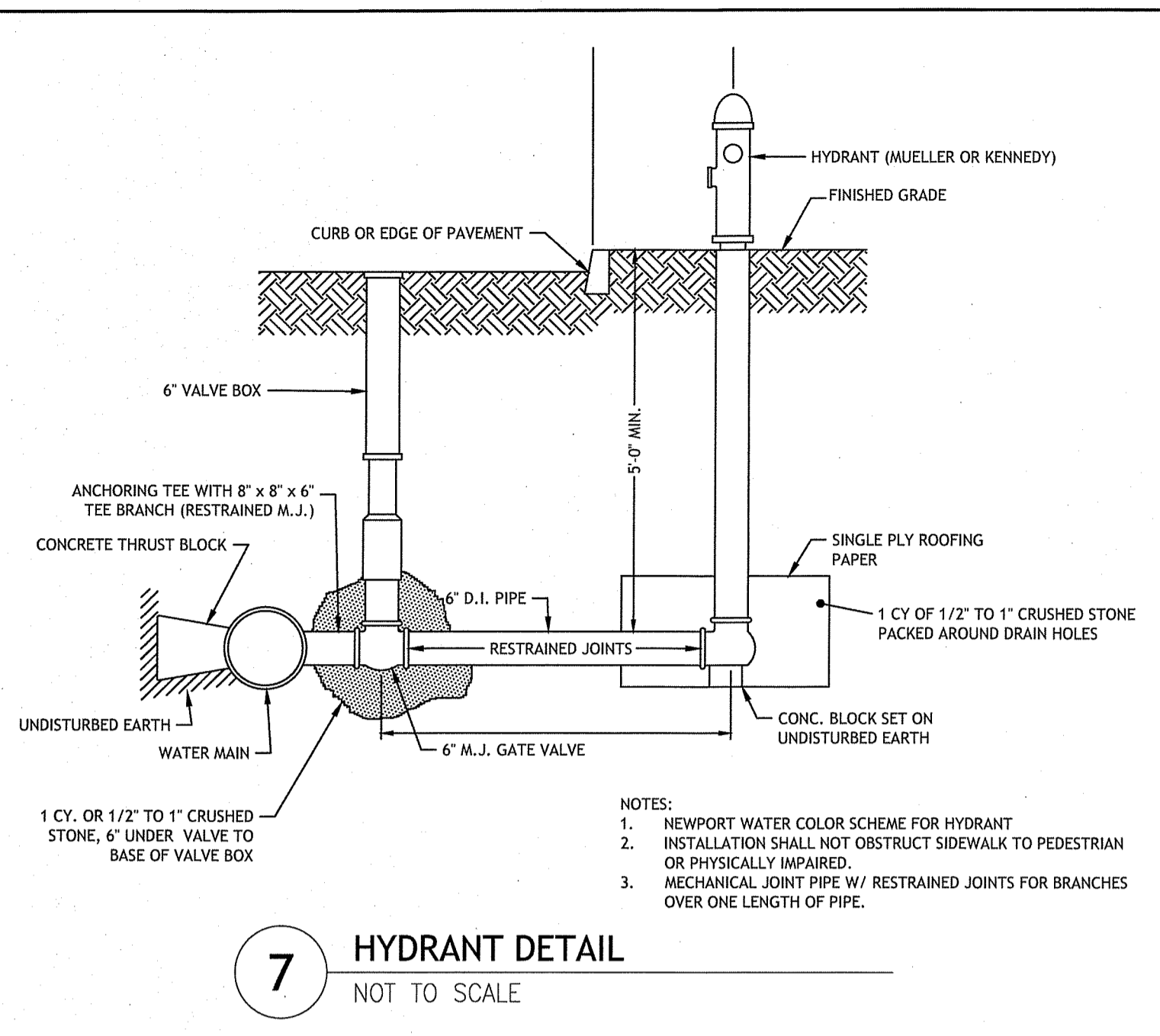
**OWTS PLAN**

**SHEET 5 OF 9**

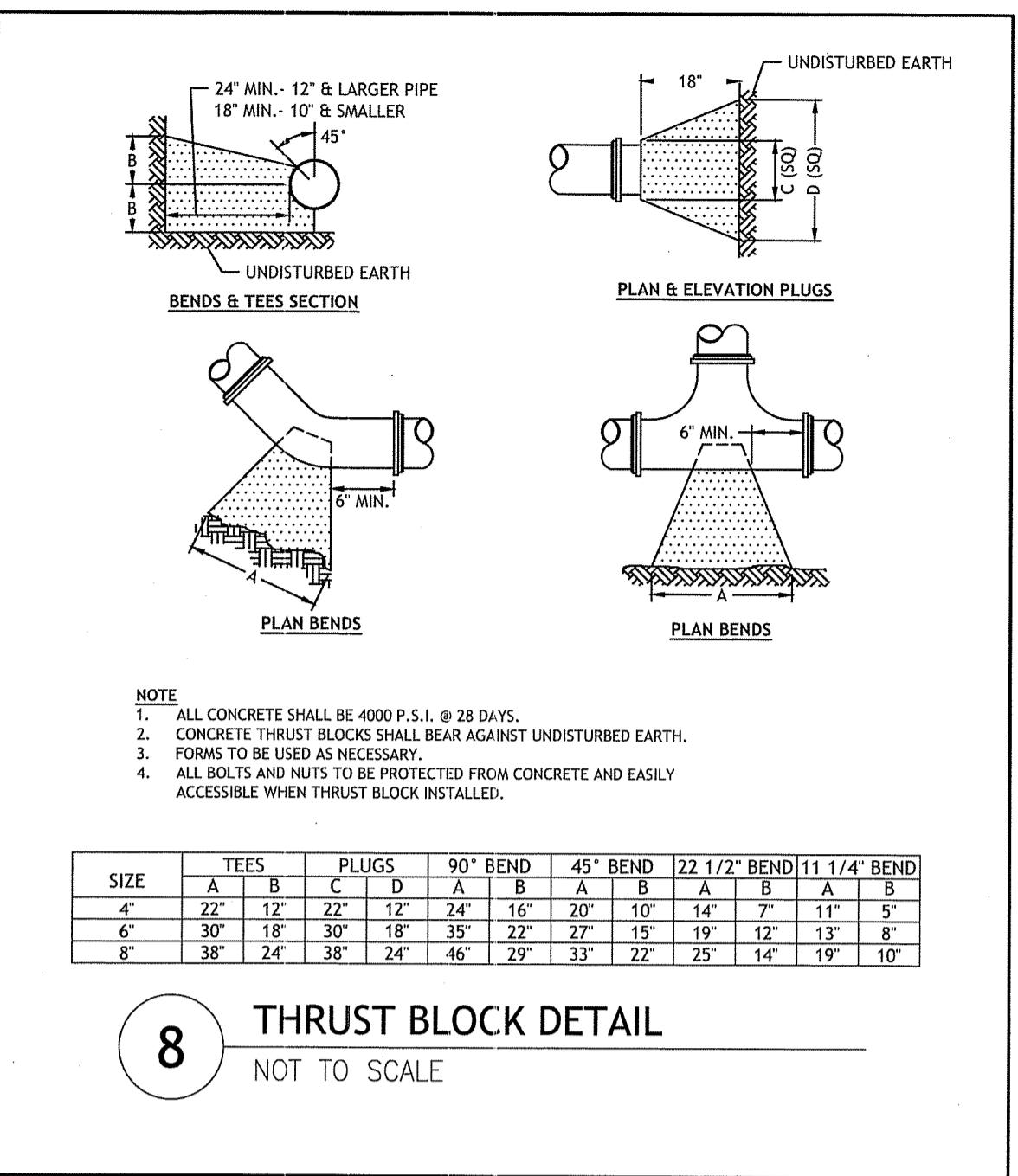


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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 FRESH WATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
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 DATED 02/03/2019 FILE # 19-0032  
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*Nancy E. Freeman*

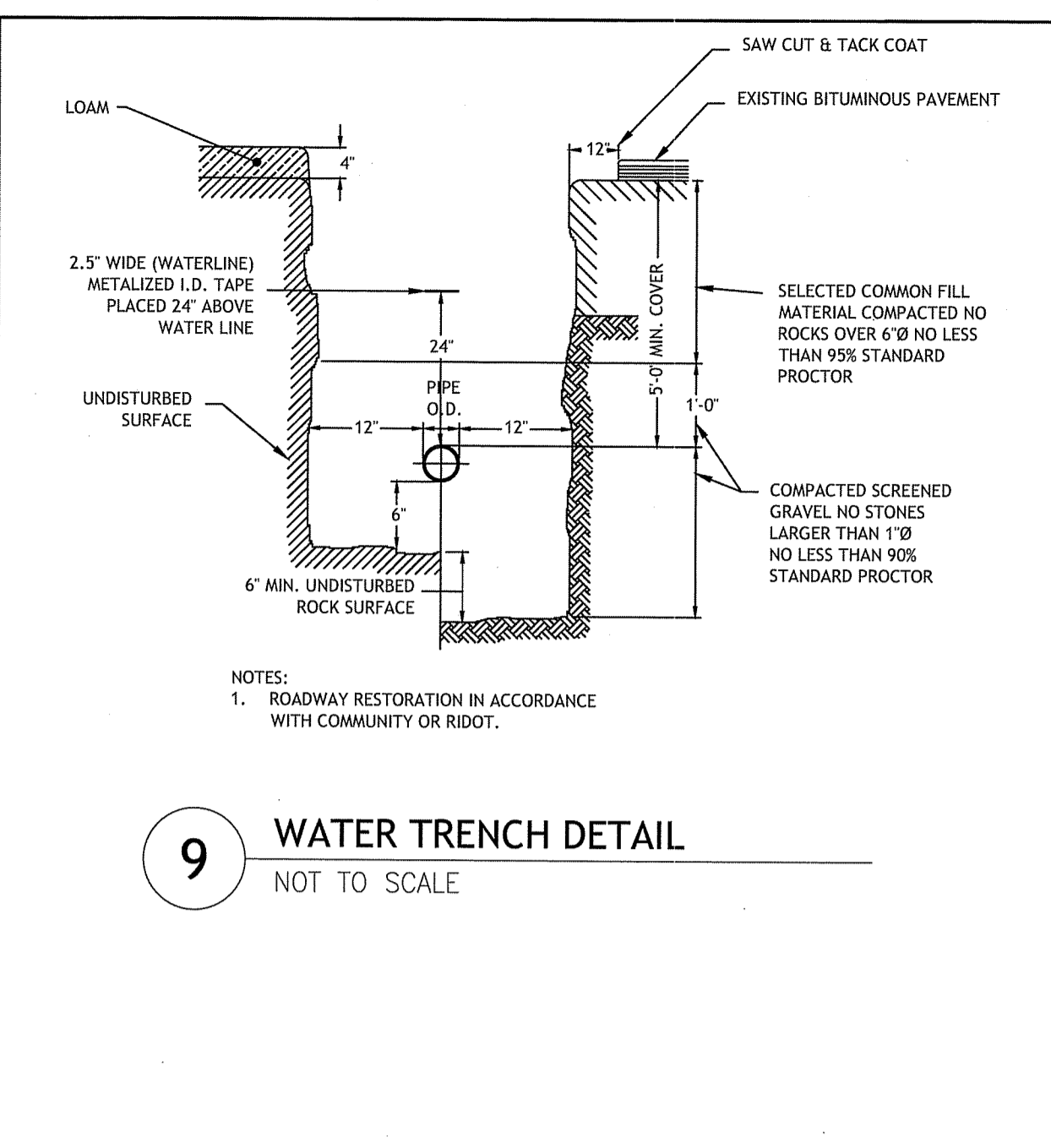




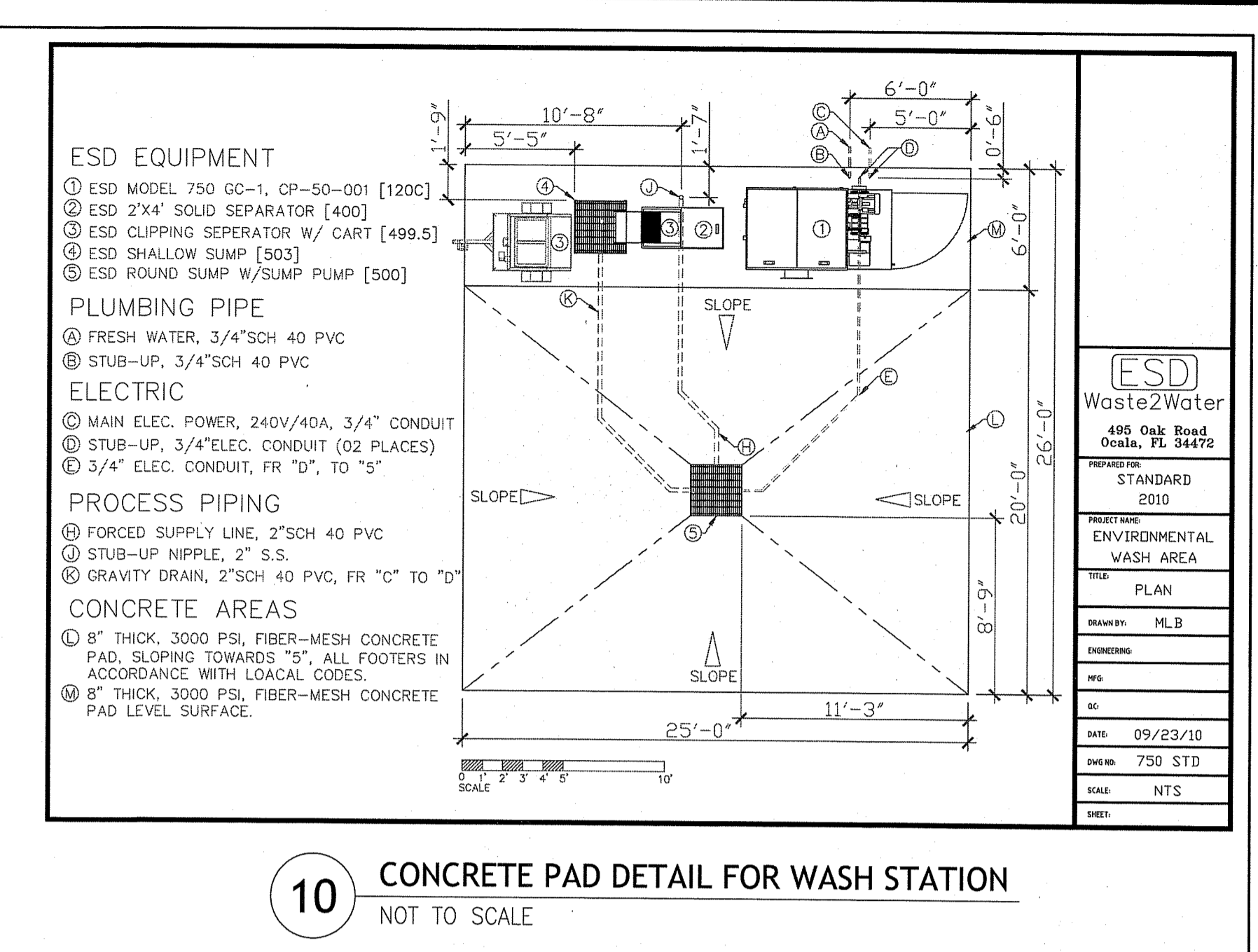
**7 HYDRANT DETAIL**  
NOT TO SCALE



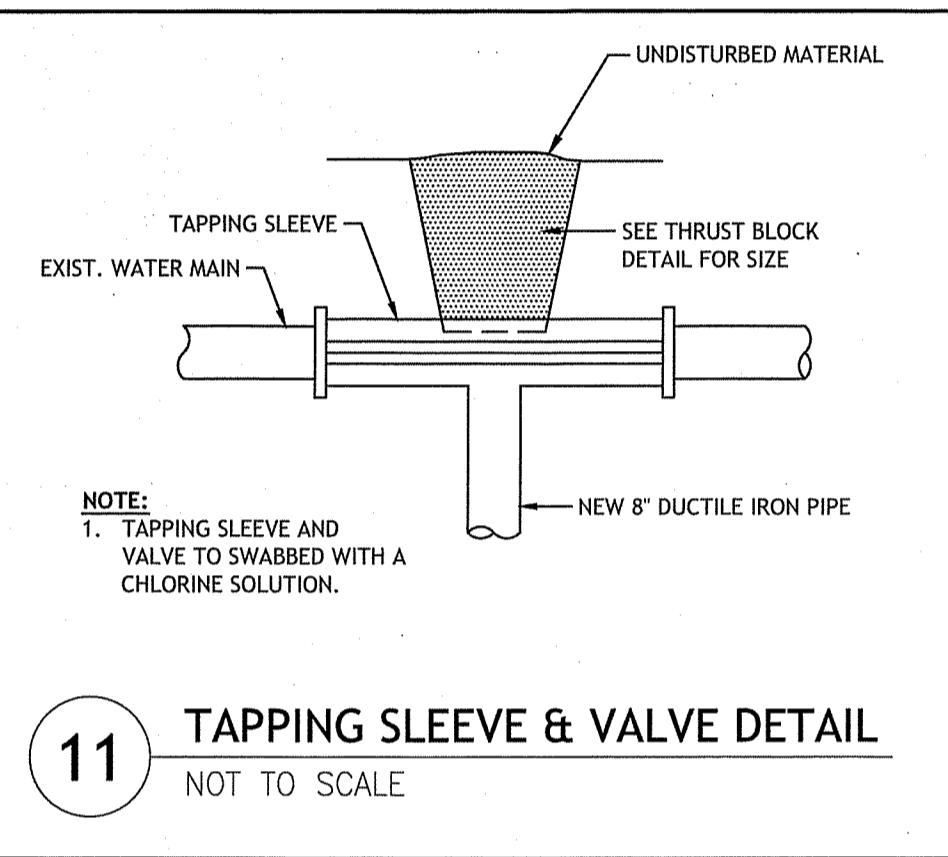
**8 THRUST BLOCK DETAIL**  
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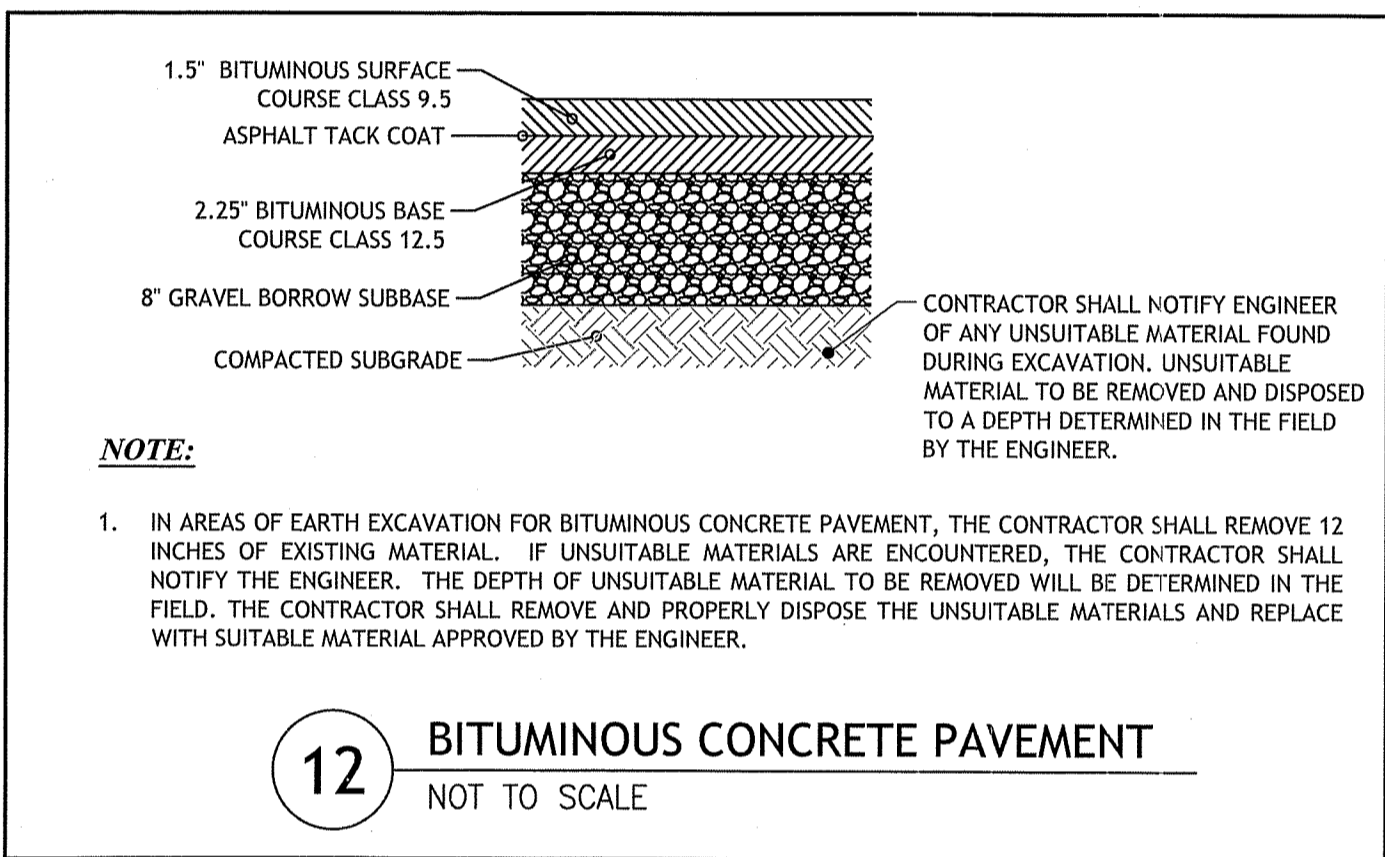
**9 WATER TRENCH DETAIL**  
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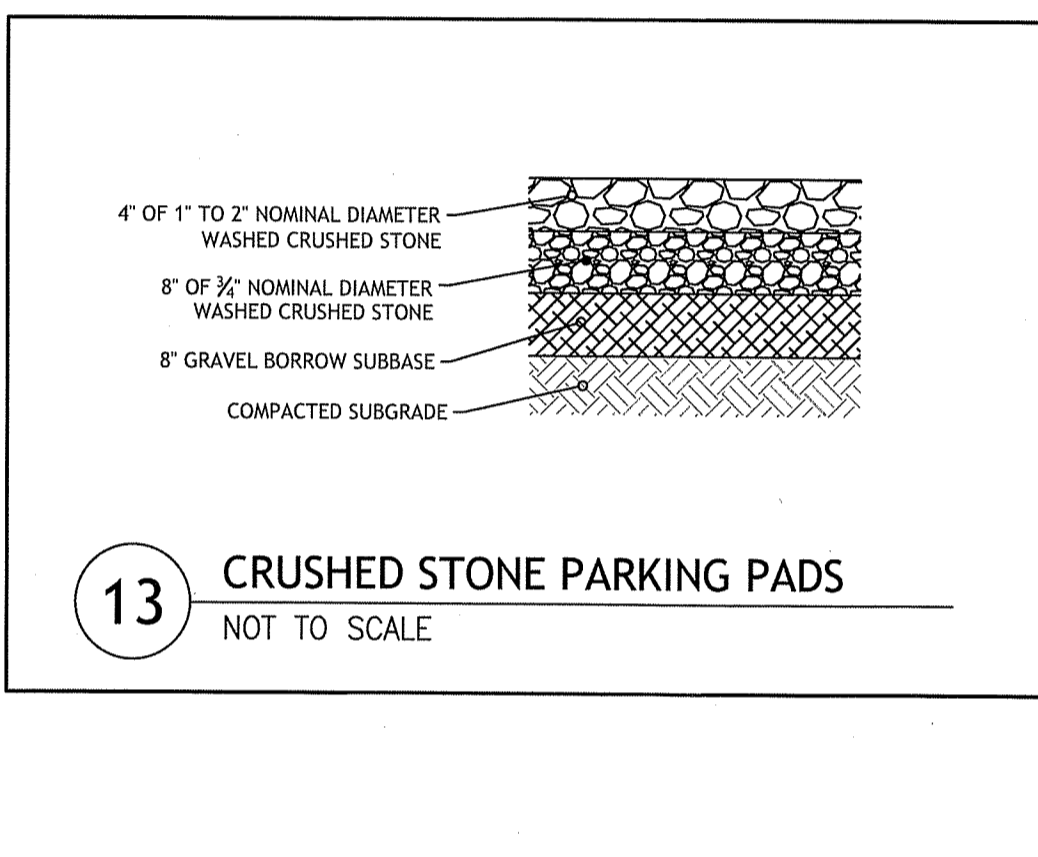
**10 CONCRETE PAD DETAIL FOR WASH STATION**  
NOT TO SCALE



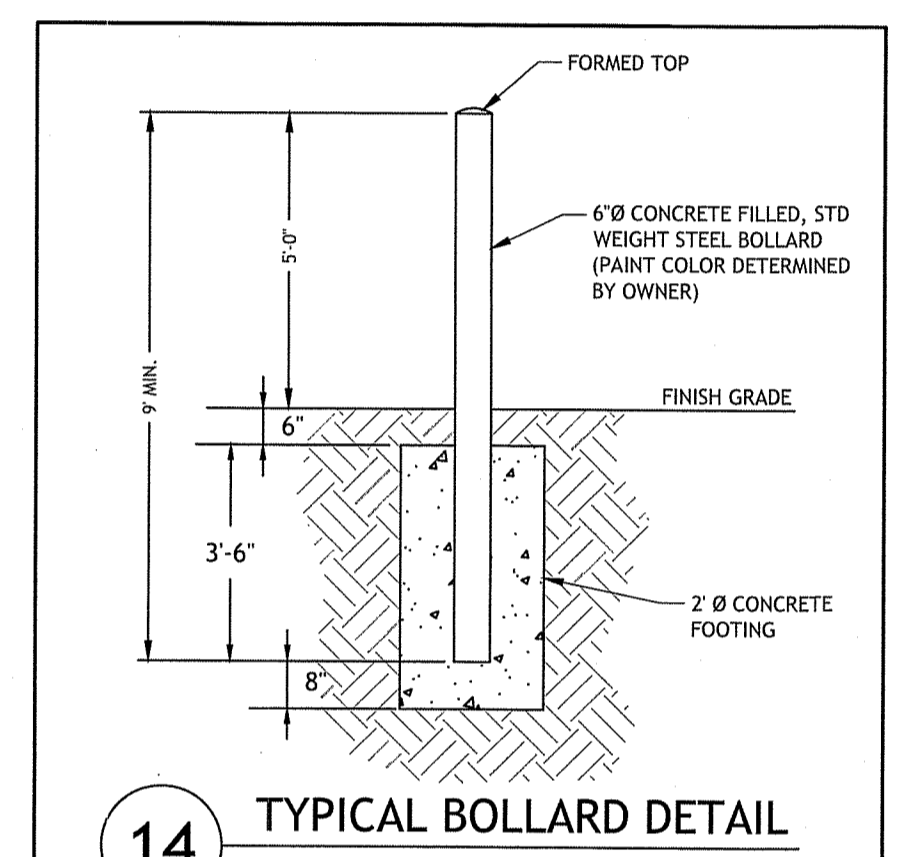
**11 TAPPING SLEEVE & VALVE DETAIL**  
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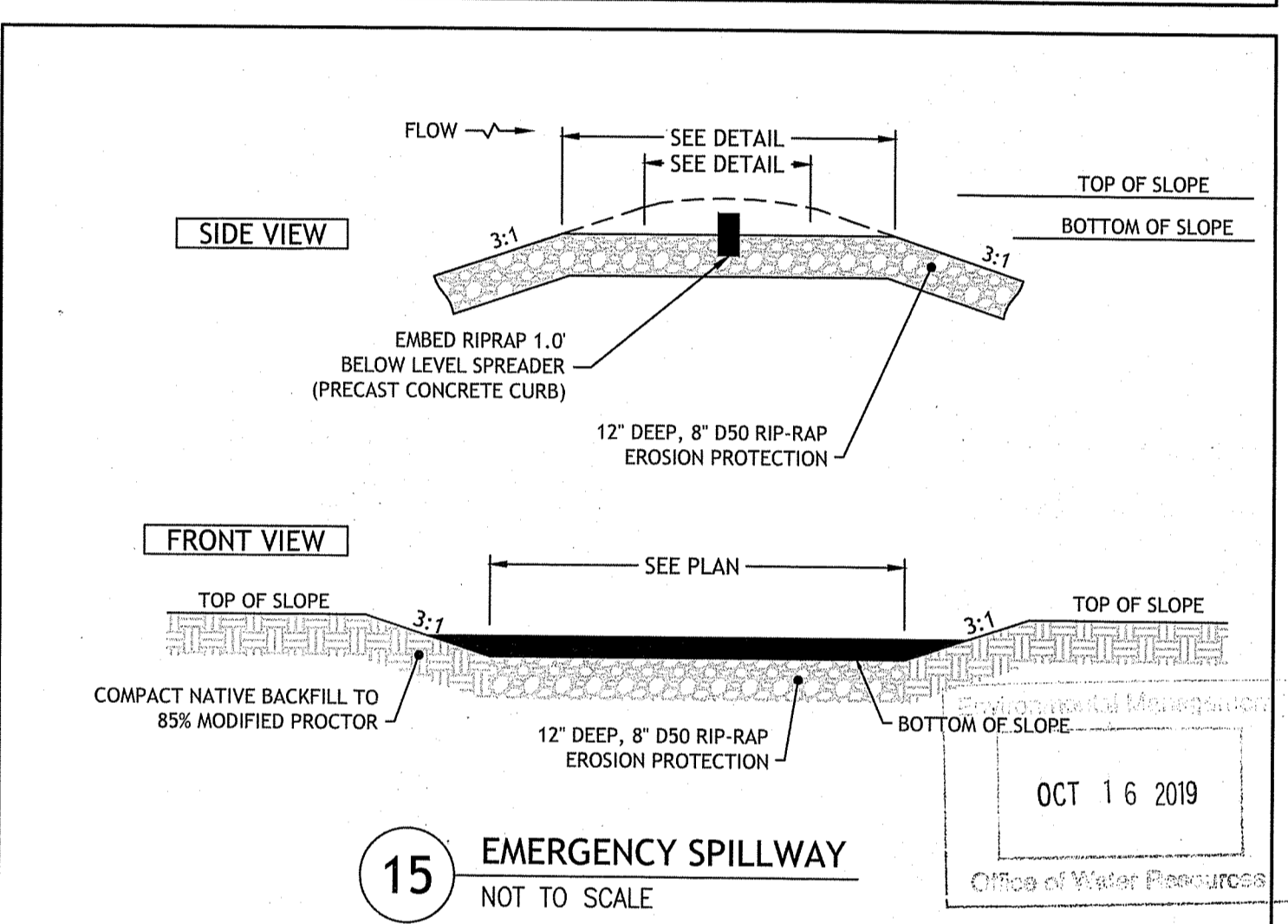
**12 BITUMINOUS CONCRETE PAVEMENT**  
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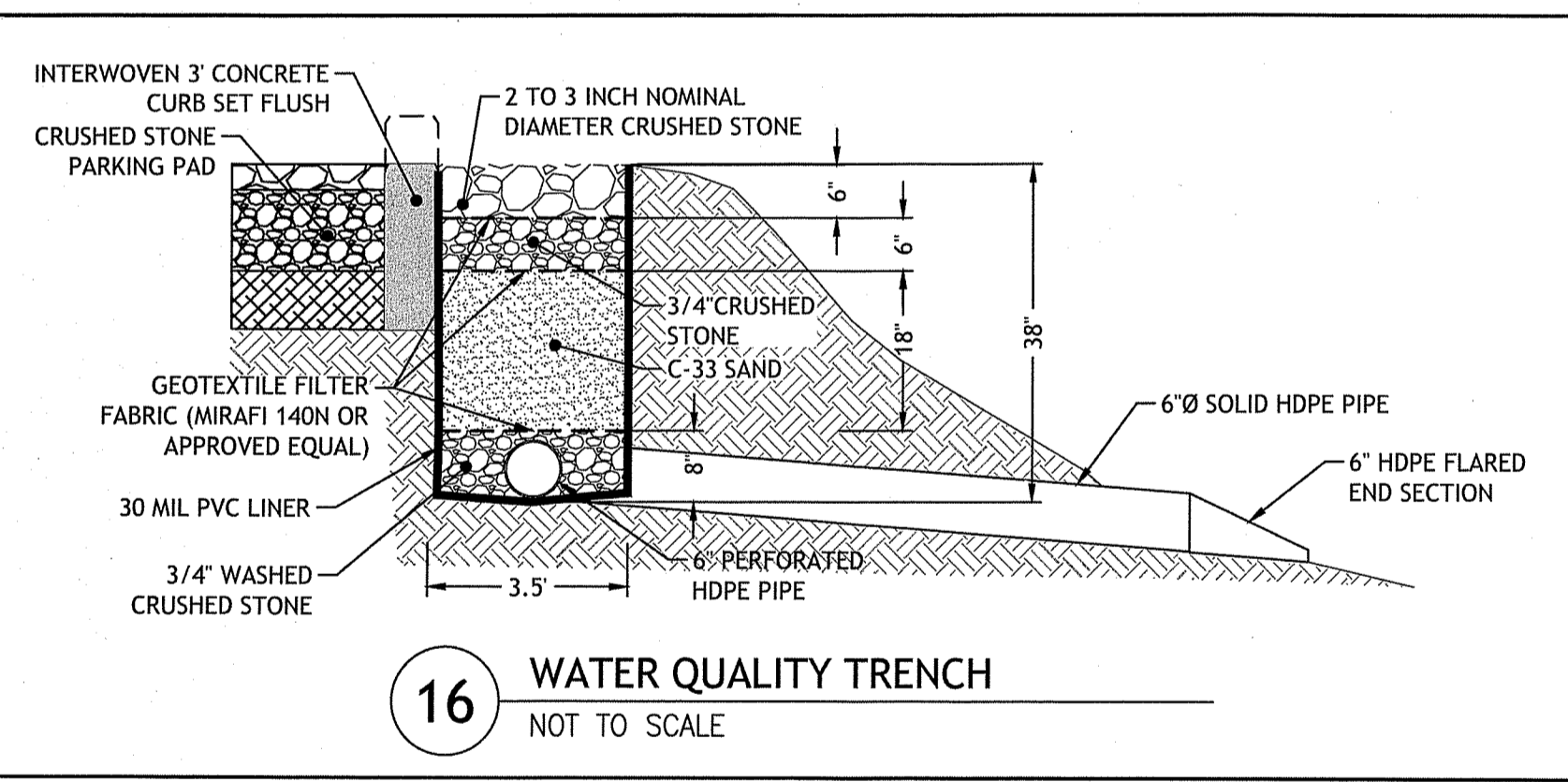
**13 CRUSHED STONE PARKING PADS**  
NOT TO SCALE



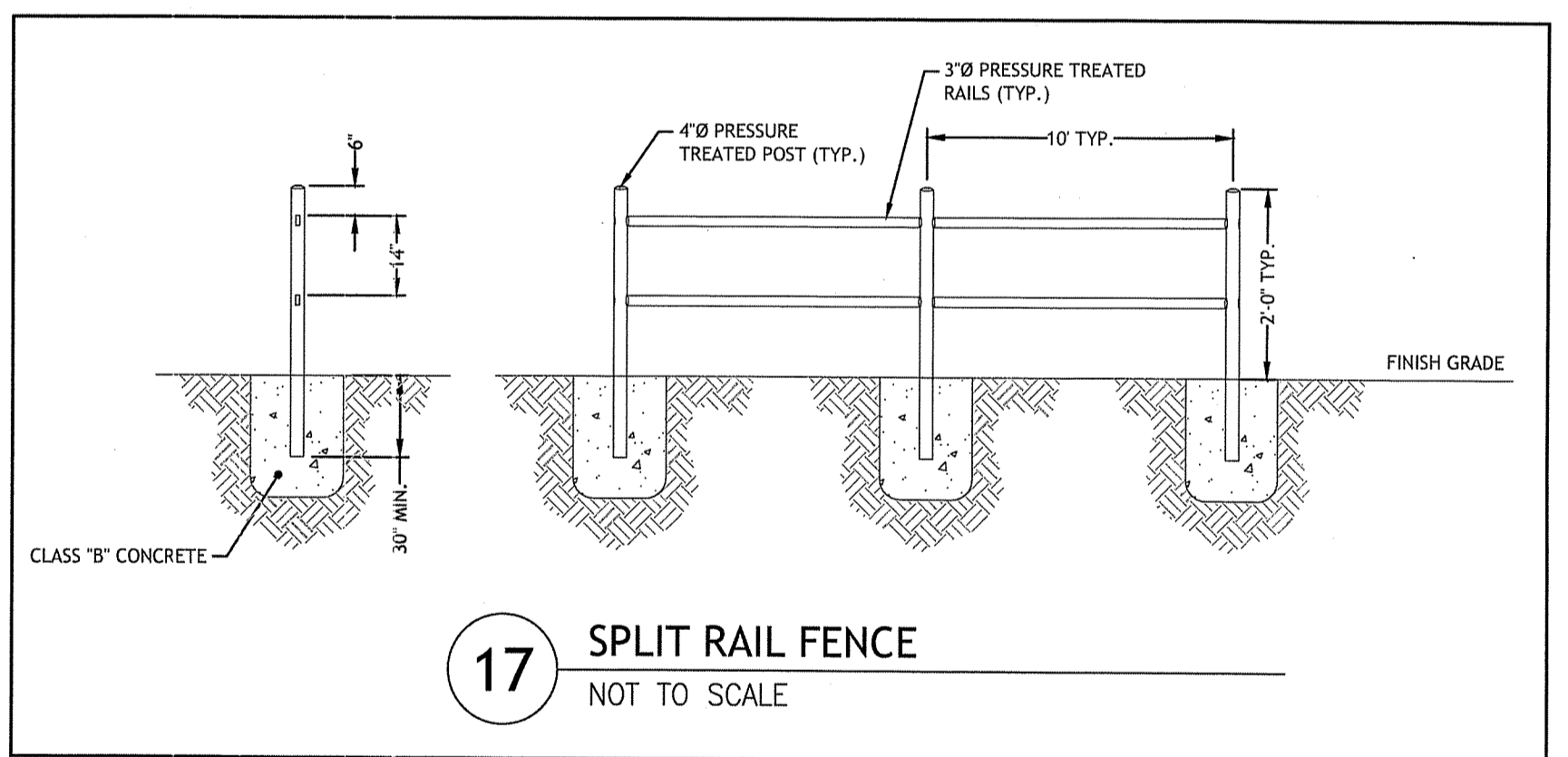
**14 TYPICAL BOLLARD DETAIL**  
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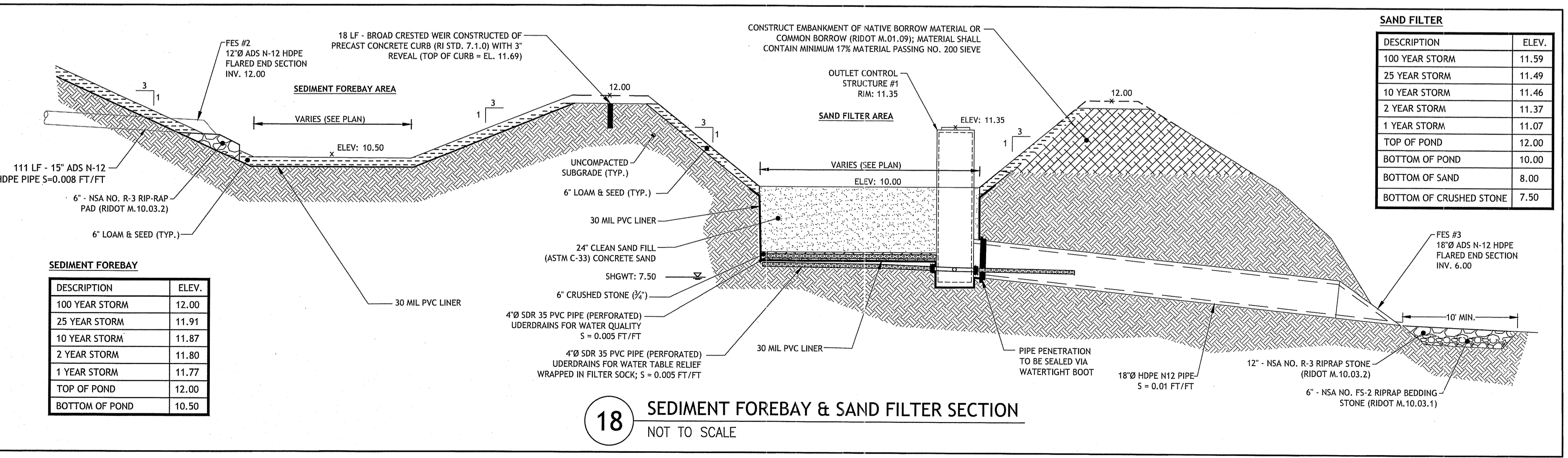
**15 EMERGENCY SPILLWAY**  
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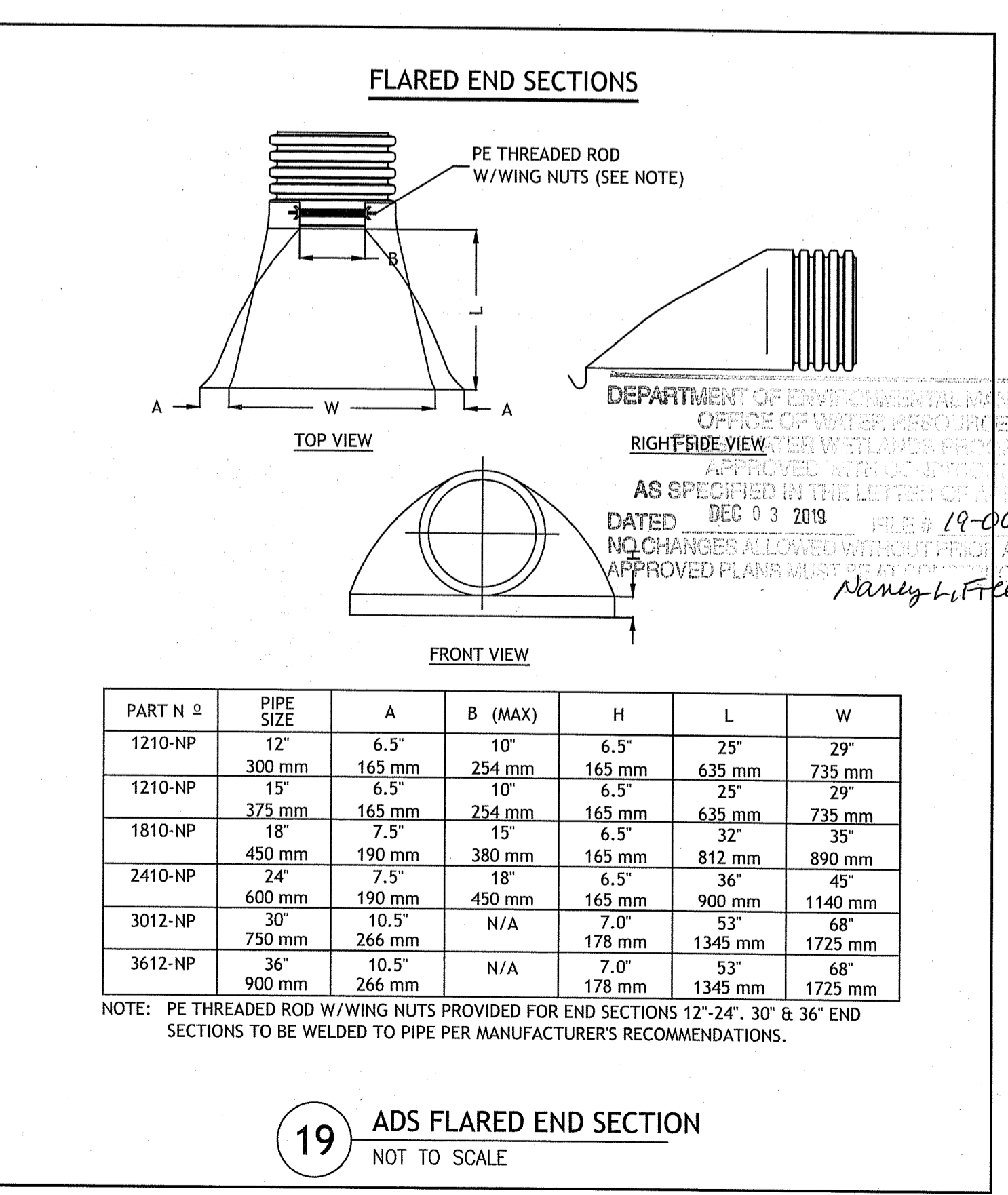
**16 WATER QUALITY TRENCH**  
NOT TO SCALE



**17 SPLIT RAIL FENCE**  
NOT TO SCALE



**18 SEDIMENT FOREBAY & SAND FILTER SECTION**  
NOT TO SCALE



**19 ADS FLARED END SECTION**  
NOT TO SCALE

**JOE CASALI ENGINEERING, INC.**  
495 Oak Road  
Greenville, RI 02888  
TEL: 401/844-1300 FAX: 401/844-1313 WWW.JOECASALI.COM

**JOSEPH A. CASALI**  
No. 7550  
REGISTERED PROFESSIONAL ENGINEER  
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**CIVIL DETAILS**

**SHEET 7 OF 9**



**GENERAL OWTS NOTES:**

THIS DESIGN IS SUBMITTED TO RIDEM TO BE REVIEWED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. CONSTRUCTION OF THIS SYSTEM WILL REQUIRE THE DESIGNER'S CERTIFICATE OF CONSTRUCTION FOR OWTS.

UNLESS OTHERWISE SPECIFIED, THE SYSTEM HAS NOT BEEN DESIGNED WITH THE PROVISIONS FOR GARBAGE GRINDERS.

THERE ARE NO KNOWN PUBLIC WELLS, EXISTING OR PROPOSED, WITHIN 500 FEET OF THE DESIGNED SYSTEM UNLESS SHOWN.

LEACHFIELD SHALL NOT BE WITHIN 25 FEET OF ANY UPGRADED SUBSURFACE DRAIN OR WITHIN 50 FEET OF ANY DOWNGRADED SUBSURFACE DRAIN, INCLUDING FOUNDATION DRAINS. THERE ARE NO KNOWN SUBSURFACE DRAINS 25 FEET UPGRADED OR 50 FEET DOWNGRADED OF THE PROPOSED LEACHFIELD.

NO DRIVING, PARKING OR PAVING WITHIN 10' OF BSF.

THIS SEWERAGE DISPOSAL SYSTEM SHALL CONFORM TO ALL THE REGULATIONS UNDER SECTIONS 42-17.1-2(1), (4) (R) AND (5) AND SECTION 23-19.5-4 AND CHAPTER 42-35 OF THE GENERAL LAWS OF RHODE ISLAND.

ALL PIPES EXCEPT IN THE LEACHING FIELD SHALL BE SOLID 4 INCH DIAMETER SDR 35 WITH WATER TIGHT JOINTS OR EQUIVALENT UNLESS OTHERWISE SPECIFIED.

ALL GRAVITY PIPES UNLESS OTHERWISE SPECIFIED SHALL HAVE A SLOPE NOT LESS THAN 1/8 INCH PER FOOT BUT NO GREATER THAN 3%.

SEPTIC TANK AND DOSING TANK SHALL BE SET ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE.

INSPECTIONS OR AS-BUILT PLANS ARE REQUIRED. DESIGNER MUST BE NOTIFIED 48 HOURS IN ADVANCE AND COMPONENTS OF SYSTEM MUST BE LEFT EXPOSED.

**BOTTOMLESS SAND FILTER NOTES:**

THE BOTTOMLESS SAND FILTER (BSF) IS INCORPORATED AS THE DISPOSAL BED IN THIS DESIGN TO MAXIMIZE THE REMOVAL OF PATHOGENIC ORGANISMS (PAGE 6 RIDEM TRC GUIDELINES).

PER RIDEM NOTICE 4/30/04, TOTAL PEA STONE DEPTH IS INCREASED TO 9" TO REDUCE WINTER FREEZE POTENTIAL.

THE BSF AREA IS TO BE LOCATED AND STAKED IN THE FIELD BY THE INSTALLER PRIOR TO CONSTRUCTION. PROTECTION AGAINST HEAVY VEHICLE TRAFFIC MUST BE ESTABLISHED IN THE BSF AREA PRIOR TO INITIATING ANY CONSTRUCTION OPERATIONS ON THE SITE. DEGRADATION OF THE PROPOSED SITE AREA WILL REQUIRE A RE-DESIGN.

SYSTEM COMPONENTS WITHIN THIS DESIGN ARE AVAILABLE FROM ORENCO SYSTEMS INC., 814 AIRWAY AVENUE, SUITE 100, WILMINGTON, OH 43091. LOCAL DEALER INFORMATION IS AVAILABLE AT 1-800-348-9843 OR WWW.ORENCO.COM.

A MINIMUM TEN (10) FEET MUST BE MAINTAINED BETWEEN THE BSF AND ADJACENT TREES AND SHRUBS.

INTERMITTENT PRESSURE DOSED EFFLUENT WILL PROVIDE A UNIFORM DISTRIBUTION OF WASTE WATER OVER THE BSF AREA, MINIMIZING LOCALIZED SATURATION. LATERAL GATE VALVES ARE DESIGNED FOR PLACEMENT OFF THE HEADER LINE SO AS TO EQUALIZE HYDRAULIC PRESSURE IN THE DISPERSAL.

THE PRESSURE LINE IS TO BE SLOPED BACK TOWARDS THE PUMP CHAMBER FROM THE BSF FIELD TO ELIMINATE FREEZING.

THE BSF SAND MEDIA MUST CONFORM TO ASTM C-33 SPECIFICATIONS. EFFECTIVE SIZE (D10) OF 0.3 mm AND A UNIFORMITY COEFFICIENT (D60/D10) OF 3.0 TO 4.0. MAXIMUM MATERIAL PASSING THE NUMBER 200 SIEVE SHALL BE 1%. THE INSTALLER SHALL PRODUCE GRADATION ANALYSIS RESULTS FOR THE MATERIAL PROVIDED FROM THE SUPPLIER.

PERIMETER STRIPPING OF THE SOIL MATERIAL BELOW THE BSF IS PROHIBITED, UNLESS FILL MATERIAL IS PRESENT.

THE WALLS OF THE BSF ENCLOSURE MUST BE LINED WITH A 30 MIL PVC LINER WITH ALL BOOTS, PATCHES, REPAIRS, AND SEAMS HAVING THE SAME PROPERTIES AS THE LINER.

ANY PENETRATION THROUGH THE PVC LINER WALL SHALL BE DONE WITH A PVC BOOT ATTACHMENT TO THE LINER WITH APPROPRIATE RESILIENT SEALER.

EXCAVATOR/BACKHOE BUCKET USED TO PLACE MEDIA SHALL BE WASHED THOROUGHLY BEFORE LOADING PROCESS.

SAND MEDIA SHALL BE PLACED IN 6 INCH LIFTS AND WETTED TO PROVIDE EVEN SETTLING. AFTER PLACEMENT OF EACH LIFT EDGES OF THE FILTER SHALL BE WALKED DOWN, CLEAN SHOES ARE REQUIRED FOR THIS PROCESS.

AFTER SAND MEDIA HAS SETTLED, 3 INCHES OF 3/8 INCH WASHED PEA STONE SHALL BE PLACED OVER SAND MEDIA. AFTER INSTALLATION OF DISTRIBUTION LATERALS ADD 6 INCHES OF WASHED PEA STONE TO COVER THE SYSTEM. NO FILTER FABRIC OF ANY KIND IS TO BE USED BETWEEN THE SAND AND OVERLYING PEA STONE LAYERS.

THE ELEVATION OF THE BSF INVERT SHALL EXTEND 5 FEET BEYOND THE WALL PERIMETER.

WHILE NOT NORMALLY EXPERIENCED, THERE HAVE BEEN REPORTED INSTANCES WHERE SAND FILTER SYSTEMS HAVE BEEN KNOWN TO EXPERIENCE PROBLEMS WITH FREEZING OF PIPES UNDER EXTREME COLD CONDITIONS. WHILE MOST SAND FILTER INSTALLATIONS OPERATE PROPERLY AND WITHOUT FREEZING PROBLEMS, THE POSSIBILITY OF FREEZING MAY EXIST UNDER CERTAIN CIRCUMSTANCES. SHOULD THE OWNER WISH TO MAXIMIZE THE AVOIDANCE OF THIS POSSIBILITY, THE OWNER MAY ELECT THE OPTION OF INSTALLING AN ELECTRIC HEAT TRACING SYSTEM ON THE PIPELINES. OWNER SHOULD CONTACT MANUFACTURER/SUPPLIERS OF SUCH EQUIPMENT FOR FURTHER INFORMATION.

SUPPORT WALLS ARE NEEDED TO PREVENT CAVING OF FILTER WALLS DURING CONSTRUCTION. THESE WALLS SHALL BE RIGID AND MADE OF PLYWOOD (OR EQUIVALENT) AND 2" x 4" SUPPORT BOARDS.

A PERMANENT TOP FRAME STRUCTURE MUST BE PROVIDED ON ANY PORTION OF THE BSF THAT IS INSTALLED ABOVE GRADE (MAX OF 24" ABOVE GRADE). THE PERIMETER OF THE BSF, BELOW THE REQUIRED PERIMETER OF TIMBERS, MAY BE BORED WITH NATIVE SOIL OR OTHER MATERIAL SUCH AS LANDSCAPE STONE OR OTHER NON-DEGRADING MATERIAL. BELOW GRADE USE OF TIMBERS IS PROHIBITED.

**ADVANTEX AX 20 TREATMENT SYSTEM NOTES:**

THE AX 20 SYSTEM IS AN ORENCO COMPONENT SYSTEM AND THIS DESIGN IS PREDICATED UPON AN INSTALLATION IN THE SERIES 38 MODE. IN MODE 38 THE FILTRATE RECIRCULATES BACK TO THE HIGH-CARBON, LOW OXYGEN ENVIRONMENT OF THE PROCESSING TANK. THIS PROCESS ALLOWS MICROBES TO REDUCE NITRATES TO NITROGEN GAS, DENITRIFYING THE EFFLUENT. THE INSTALLER OF THIS SYSTEM MUST BE LICENSED BY ORENCO, INC.

THE UNIT UTILIZED IN THIS DESIGN IS AN ORENCO AX 20, WITH COLD WEATHER CONFIGURATION.

IT IS CONDITIONAL IN THIS DESIGN THAT THE LID OF THE AX 20 UNIT BE TREATED WITH 2 INCHES OF FOAM INSULATION TO REDUCE FREEZING POTENTIAL.

A THERMOSTATICALLY CONTROLLED IN-LINE HEATER TO PRE-HEAT TREATMENT AIR IS AN OPTION WHICH IS RECOMMENDED IN THIS PLACEMENT.

THE INCORPORATION OF THE AX 20 SYSTEM WILL PROVIDE FOR A CATEGORY 1 TREATMENT SYSTEM, AN ADVANCED TREATMENT UNIT THAT IS TIME DOSED AS CLASSIFIED BY THE RIDEM.

EXTREME CARE TO BE TAKEN IN THE PLACEMENT OF THE EFFLUENT PRESSURE LINE FROM THE AX-20 PUMP CHAMBER TO THE BOTTOMLESS SAND FILTER. SOIL BASE IS TO BE COMPACTED TO PREVENT SETTLEMENT AND A MINIMUM SLOPE OF 1/8 INCH PER FOOT FROM BSF TO THE PUMP CHAMBER.

RVS LEVEL: FOR STINGER PIPE LENGTHS UP TO 24" LONG, THE LOW LIQUID LEVEL WILL BE APPROXIMATELY 5'-6" BELOW THE TOP OF THE RVS CAGE. (LOW LIQUID LEVEL IS THE LEVEL AT WHICH 100% OF THE FILTRATE RETURNS TO THE TANK.) FOR MOST RESIDENTIAL APPLICATIONS, THE RECOMMENDED SURGE VOLUME IS APPROXIMATELY 150 TO 250 GALLONS (APPROX. 50% TO 100% OF ACTUAL FLOW). THE SURGE VOLUME IS THE VOLUME BETWEEN THE LOW LIQUID LEVEL AND THE HIGH WATER ALARM FLOAT. FOR MODE 3 INSTALLATIONS, THE DUCKBILL MODEL RVS IS REQUIRED, WHICH HAS A FLEXIBLE PVC TUBE THAT VENTS THE RVS CAGE TO THE ATMOSPHERE.

FLOAT LEVELS: TYPICALLY THE BOTTOM FLOAT SHOULD BE POSITIONED AS CLOSE TO THE TOP OF THE BIOTURE CARTRIDGE AS POSSIBLE. THE TOP FLOAT IS NORMALLY SET ONE TO TWO INCHES BELOW THE INVERT OF THE TANK INLET. FOR MOST RESIDENTIAL APPLICATIONS, THE RECOMMENDED SURGE VOLUME IS APPROXIMATELY 150 TO 250 GALLONS (APPROX. 50% TO 100% OF ACTUAL FLOW). THE SURGE VOLUME IS THE VOLUME BETWEEN THE LOW LIQUID LEVEL AND THE HIGH WATER ALARM FLOAT. BE SURE TO CHECK PLANS FOR ANY SITE SPECIFIC OR TANK SPECIFIC FLOAT SETTINGS.

**OPERATIONAL AND MAINTENANCE NOTES:**

THIS SYSTEM SHALL PROVIDE FOR AN AUDIBLE ALARM FOR HIGH WATER IN THE PUMP CHAMBERS WHICH MAY BE SILENCED BY PUSHING A BUTTON ON THE CONTROL PANEL. THIS SITUATION MAY DEVELOP WITH UNUSUAL HIGH WATER USAGE AND WILL NOT INDICATE AN ONGOING PROBLEM. REPEATED ALARMS, OR ALARMS WITH NO UNUSUAL WATER USAGE SHOULD BE REPORTED TO YOUR MAINTENANCE PROVIDER.

THE PROPERTY OWNER SHALL ENTER INTO MAINTENANCE CONTRACTS FOR BOTH THE ADVANTEX AX SYSTEM AND THE BSF DISPOSAL FIELD. EACH UNIT SHOULD HAVE A MINIMUM OF 2 INSPECTIONS ANNUALLY.

THE MAINTENANCE PROVIDER SHALL AFFIX THEIR NAME AND 24-HOUR CONTACT PHONE INSIDE THE CONTROL BOX LOCATED ON THE EXTERIOR OF THE HOUSE.

THE BSF INSPECTION SHALL INCLUDE A SAMPLING OF THE BSF INFLUENT TO CHECK FOR CLARITY.

BSF LATERALS SHALL BE CLEANED ANNUALLY BY OPENING THE LATERAL, THREADED END CAP AND CLEANING THE ENTIRE LENGTH OF THE LATERAL WITH A BOTTLE BRUSH. THE ACCUMULATED CLEANED MATERIAL MAY BE DEPOSITED IN THE INLET OF THE SEPTIC TANK. EACH LATERAL IS TO BE FLUSHED AS REQUIRED.

THE TOP OF THE BSF FIELD IS TO BE KEPT CLEAN OF DEBRIS AND UNWANTED VEGETATION (WEEDS, LEAVES, BRUSH, ETC.). LANDSCAPE TIMBERS AS DESIGNED SHALL BE MAINTAINED TO PREVENT CRUSHING OF THE SYSTEM BY UNWANTED LOADS, AND SURFACE WATER INDICATION OF THE SYSTEM.

ELECTRONIC COMPONENTS OF THE ADVANTEX AND THE BSF SYSTEMS SHALL BE CHECKED ANNUALLY FOR OPERATION.

ALL FLOATS IN THE PUMP CHAMBERS SHALL BE HOSED DOWN AND CLEANED FROM BUILD-UP.

THE INLET OF THE SEPTIC TANK AND THE DOSING TANK SHALL BE INSPECTED FOR SLUDGE AND SCUM ACCUMULATION. WHEN THESE MATERIALS BUILD UP TO 33% OF THE SEPTIC TANK HEIGHT, THE TANK SHOULD BE PUMPED AND THE ACCUMULATIONS APPROPRIATELY REMOVED.

THE FILTER IN THE PUMP CHAMBERS SHALL BE CLEANED ANNUALLY.

SHOULD THE PUMP ASSEMBLY BE REMOVED, THE WALL SHALL BE CLEANED AND FILLED WITH CLEAN WATER TO PREVENT THE SCREEN FROM BEING FOULED WITH SOLIDS.

TIMER SETTINGS SHALL BE CHECKED AT EVERY ESTABLISHED MAINTENANCE AND INSPECTION VISIT AND ADJUSTED AS NEEDED BY THE SERVICE PROVIDER.

ALL TANKS AND BASINS SHALL BE VISUALLY INSPECTED FOR WATER TIGHTNESS.

PROPERTY OWNER TO REDUCE ANY SHADING IN THE AREA OF THE BOTTOMLESS SAND FILTER TO REDUCE FREEZE POTENTIAL. ANY ACTIVITY TO REDUCE SHADING MUST BE IN ACCORDANCE WITH THE RIDEM WETLANDS APPROVALS.

**TEST HOLE RESULTS**  
APPLICATION #1821-1660  
PERFORMED BY EDWARD J. AVIZINIS, D4083

DATE OF TEST 11/8/2018

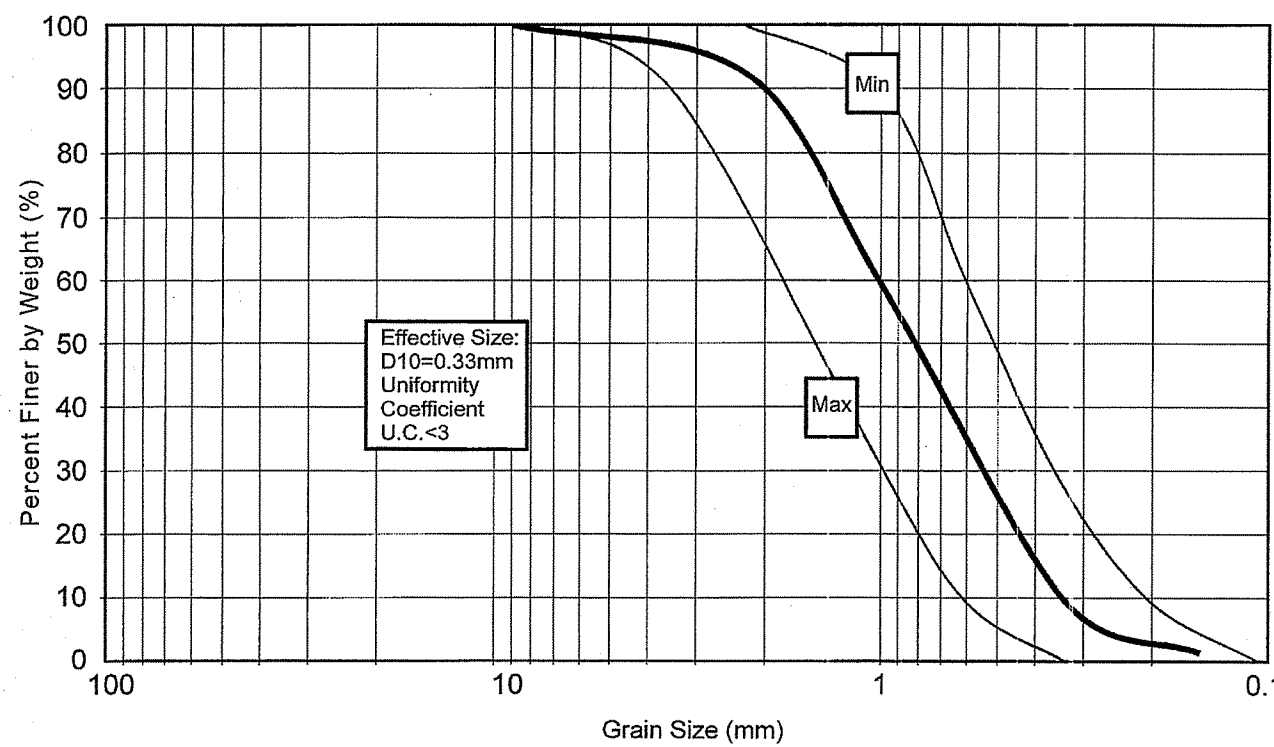
**TEST HOLE 1**  
SURFACE ELEV: 24.50  
SHGWT: 23.00 (18")  
LEDGE AT: 18.83 (68")

**TEST HOLE 2**  
SURFACE ELEV: 21.50  
SHGWT: 20.00 (18")  
LEDGE AT: 13.00 (102")

**PERCOLATION TEST**  
LOADING RATE= 1.5 GAL/SF/DAY  
PER LIMITING SOIL LAYER CATEGORY 9

**DESIGN DATA**  
50 CADDYS AT 5 GPD = 250 GAL/DAY  
250 GAL/DAY @ 1.5 GAL/SF/DAY = 166.67 SF  
CATEGORY-1 TIME DOSED SYSTEM

**SAND FILTER**  
10' X 18' = 180 SF  
180 SF x 166.67 SF : : OK



**BOTTOMLESS SAND FILTER MEDIA SPECIFICATIONS**

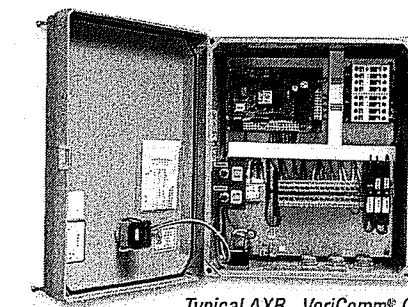
NOT TO SCALE

**VeriComm® AXB Control Panels**

**For AdvanTex® Treatment Systems**

**Applications**

VeriComm® AXB1 and AXB2 remote telemetry control panels are used with two-pump operations — recirculation and discharge (on-demand or timed) — for AdvanTex® Treatment Systems. Interlocked controls prevent the recirculation pump from running if there is a high level alarm on the discharge side. Coupled with the VeriComm Web-based Monitoring System, these affordable control panels give water/wastewater system operators and maintenance organizations the ability to monitor and control each individual system's operation remotely, with real-time efficiency, while remaining invisible to the homeowner. VeriComm AXB panels allow remote operators to change system parameters, including timer settings, from the Web interface.



**To Specify...**

To specify this panel for your installation, require the following:

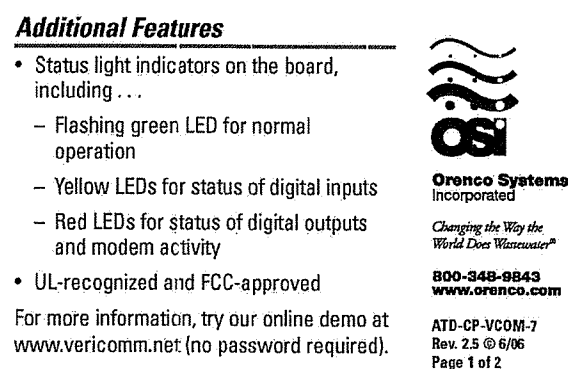
- **Basic Control Logic: Three Operating Modes**
  - A "Start-up Mode" for the initial 30 days, during which the system collects trend data to establish operating standards for future reference.
  - A "Normal Mode" that manages day-to-day functions.
  - A "Test Mode" that suspends data collection and alarm reporting during installation and service.
- **Data Collection and Utilization**
  - Data logs of system conditions and events, such as pump run times, pump cycles, and alarm conditions.
- **Troubleshooting and Diagnostic Logic**
  - Troubleshooting capabilities that can report suspected failed components, which then trigger Alarms.
- **Advanced Control Logic**
  - Advanced control logic that activates during flow malfunctions to diagnose the situation and keep the system operating normally until servicing.

**Communication and Alarm Management**

- Remote telemetry capabilities coupled with a Web-based monitoring application (see VeriComm Monitoring System, ATD-WEB-VCOM-1) for communication and alarm management. Updating of point values (including timer settings) and receipt of queued changes during each communication session with host. Communication sessions that occur monthly, at a minimum, and more frequently during alarm conditions.
- Multiple methods of communication, as follows:
  - **Call-in to VeriComm® Host**
    - Automatic notification to host of "Alarms," which signal fault conditions that need to be addressed immediately (e.g., pump failure).
    - Automatic notification to host of "Alerts," which signal less critical fault conditions and which trigger the panel's troubleshooting logic and alternative operating mode (e.g., stuck float switch).
    - Automatic notification to host of "Updates," which include alarm updates or all-clear notifications following Alarms/Alerts, as well as normally scheduled monthly panel reports.
    - Manual, forced communication from panel to host to effect an updating of point values and receipt of queued changes.
  - **Real-Time Direct Connection to Panel**
    - Manual, direct connection at the site via RS-232 serial port, to allow a local operator real-time access to detailed logged data and the ability to change point values from a laptop.
    - Manual, forced communication by local operator/homeowner at the site to initiate an auto-responder mode, allowing a remote operator real-time access to detailed logged data and the ability to change point values.
    - During real-time, manual connections, software with open architecture (and password security) is used; no proprietary software is required. VTI00 protocol allows access and control from any computer (modern Mac or PC) with a simple communication program (e.g., Windows® HyperTerminal); multilevel password protection in panel ensures that only qualified personnel can access the panel's data.

**Additional Features**

- Status light indicators on the board, including:
  - Flashing green LED for normal operation
  - Yellow LEDs for status of digital inputs
  - Red LEDs for status of digital outputs and modem activity
- UL-recognized and FCC-approved



For more information, try our online demo at [www.vericomm.net](http://www.vericomm.net) (no password required).

**VeriComm® AXB Control Panels**

**Technical Data Sheet**

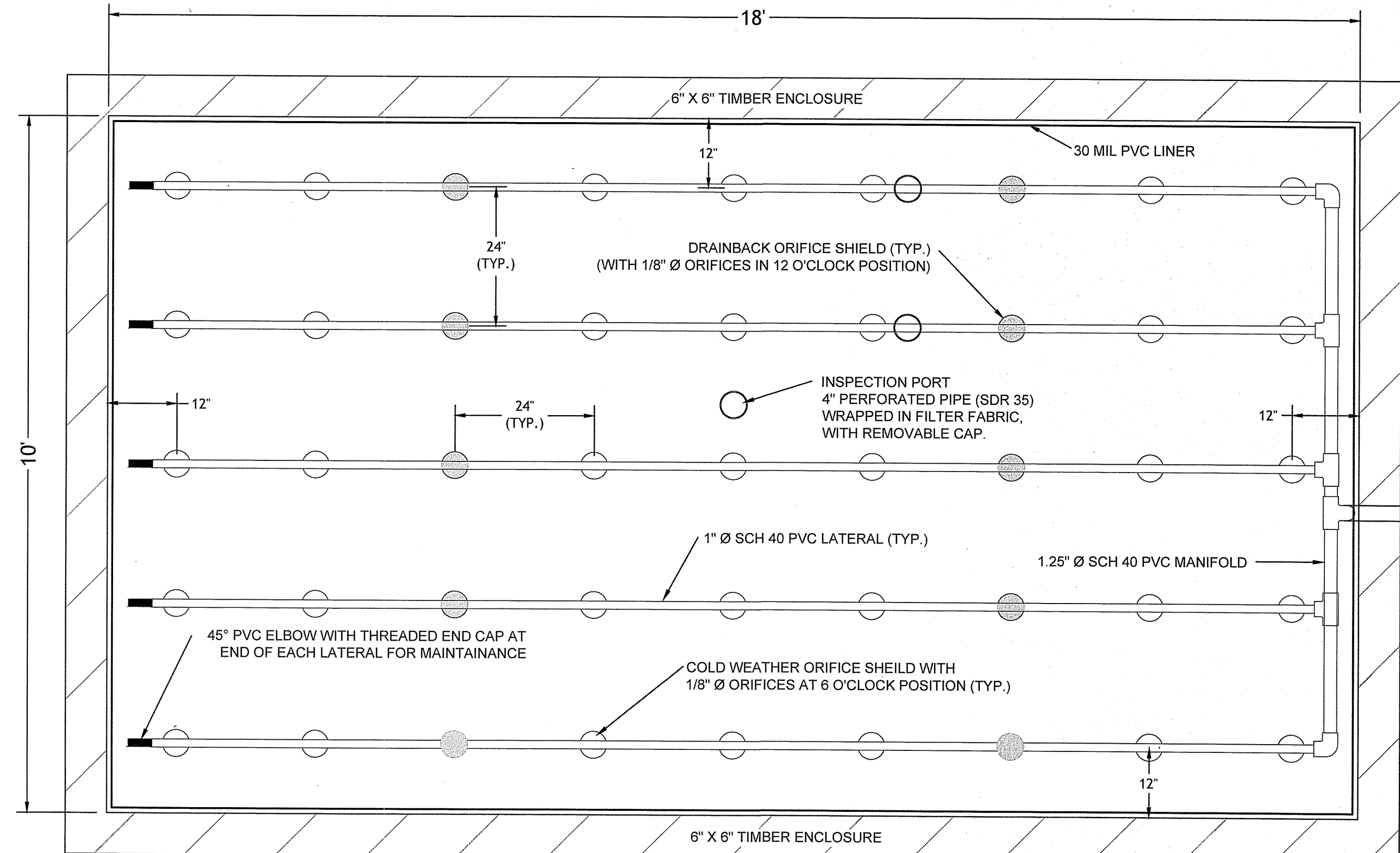
**Standard Components**

Feature	Specifications
1. VeriComm® Remote Telemetry Unit*	ARTTU-100: 28V18 VAC (center tap transformer), 8 digital inputs, 4 analog inputs, 4 digital outputs, 8 analog outputs, on-board modem (2400 baud), LED input and output indicators, 1-year battery backup of data and program settings.
2. Motor-Start Contactors	120 VAC, 16 FLA, 1 hp, 60 Hz; 2.5 million cycles at FLA (10 million at 50% of FLA).
3. Toggle Switches	240 VAC, 16 FLA, 3 hp, 60 Hz; 2.5 million cycles at FLA (10 million at 50% of FLA).
4. Control Circuit Breaker	10 A, OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.
5. Pump Circuit Breakers	20 A, OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.
6. Fuse	120 VAC Primary 30 VOLT @ 0.85 A Secondary.
7. Transformer	250 VAC, 1 A.
8. Audio Alarm	95 dB at 24 in. (810 mm), warble-tone sound.
9. Visual Alarm	7/8 in. (22 mm) diameter red lens, "Push-to-silence," NEMA 4, 1 W bulb, 120 VAC.
10. Panel Enclosure	Measures 15.5 in. high x 13.3 in. wide x 6.7 in. deep (384 mm x 338 mm x 170 mm). NEMA 4X rated. Constructed of UV-resistant fiberglass; hinges and latch are stainless steel. Conduit couplings provided.
VCOM-AXB1	120 VAC, 3/4 hp, 14 A, single-phase, 60 Hz.
VCOM-AXB2	240 VAC, 2 hp, 14 A, single-phase, 60 Hz.

**Optional Components**

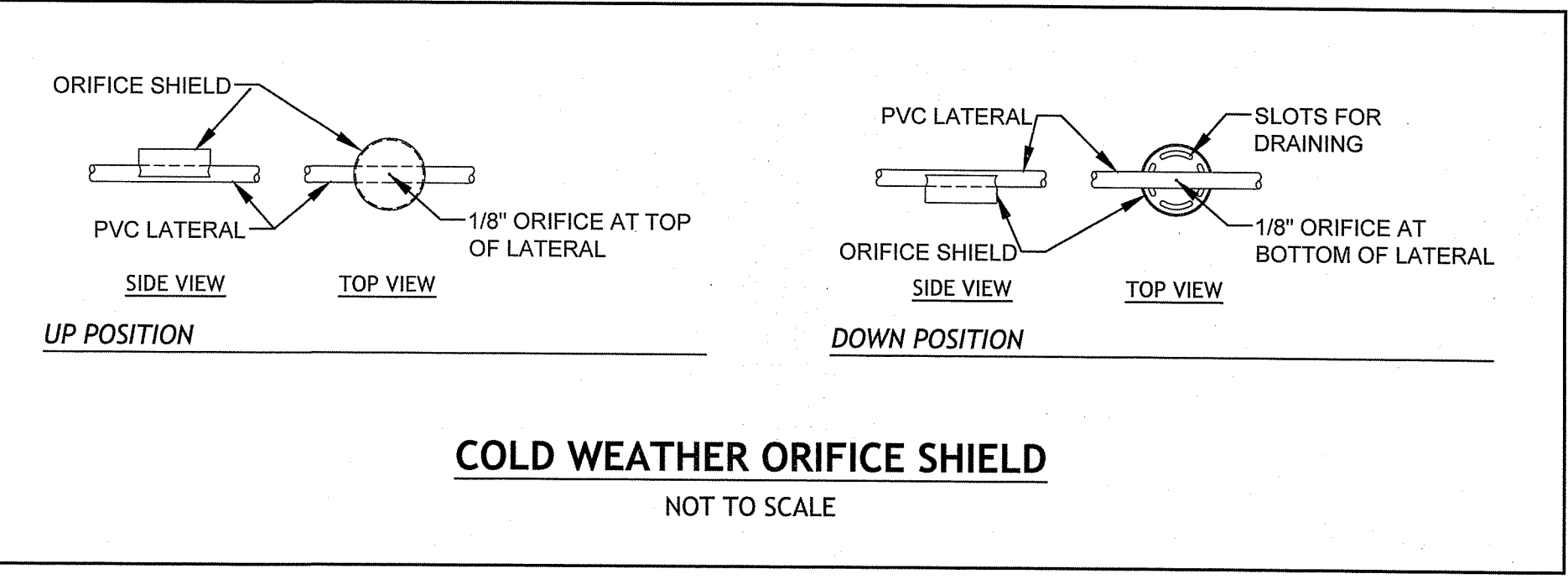
Feature	Specifications	Product Code Adder
Pump Run Light	7/8 in. (22 mm) diameter green lens, NEMA 4, 1 W bulb, 120 VAC.	PLR
Anticocondensation Heater	Self-adjusting; radiates additional wattage as temperature drops.	HT
Programmable Timer	Discharge side timed dosing.	PT
UV Disinfection Compatibility	UV grounded power circuit and alarm contacts. Pump disable upon UV failure.	UV

\* See VeriComm® Remote Telemetry Unit (ATD-CP-VCOM-1) and VeriComm® Monitoring System (ATD-WEB-VCOM-1) for more detail.



**10' X 18' BOTTOMLESS SAND FILTER**  
CONFIGURED FOR LOADING RATES UP TO 1.5 gpd/sf  
(45) ORIFICES/ZONE  
NOT TO SCALE

TWO (2) ORIFICES IN EACH LATERAL SHALL BE DRILLED POINTING UP (12 O'CLOCK POSITION); ALL OTHER ORIFICES SHALL BE DRILLED POINTING DOWN (6 O'CLOCK POSITION). THE UP-POINTING ORIFICES SHALL BE LOCATED APPROXIMATELY 1/3 AND 2/3, RESPECTIVELY, ALONG THE LENGTH OF EACH LATERAL. ORIFICE SHIELDS SHALL BE PLACED OVER EACH ORIFICE (ABOVE OR BELOW THE LATERAL, AS REQUIRED). ORIFICE SHIELDS PLACED BELOW ANY ORIFICE SHALL CONTAIN SLOTS OR HOLES TO PROVIDE FREE DRAINING (USUALLY REFERRED TO AS COLD WEATHER ORIFICE SHIELDS).



**COLD WEATHER ORIFICE SHIELD**

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF PERMITS AND COMPLIANCE  
FRESHWATER DIVISION  
APPROVED FOR CONSTRUCTION  
DATE: DEC 03 2019  
NO CHANGES ALLOWED WITHOUT PERMITTER'S APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
[Signature]

**JCE**  
JOE CASALI ENGINEERING, INC.  
3000 POST ROAD, WARWICK, RI 02889  
(401) 844-1300 (401) 844-1313 FAX  
WWW.JCEONLINE.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
12/1/19

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

**REVISIONS:**

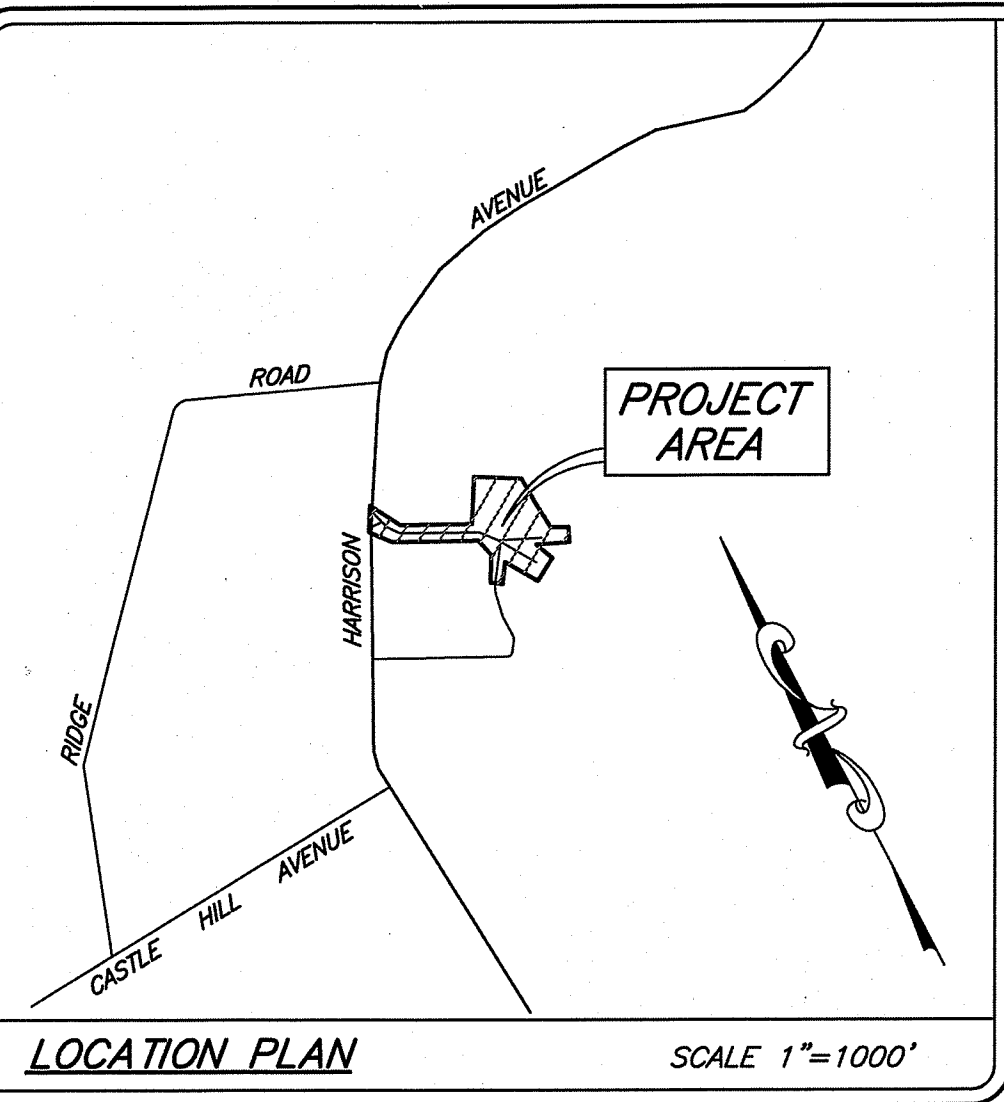
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS
2	5/20/2019	RIDEM COMMENTS
3	10/1/2019	PERMIT REVISIONS

DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

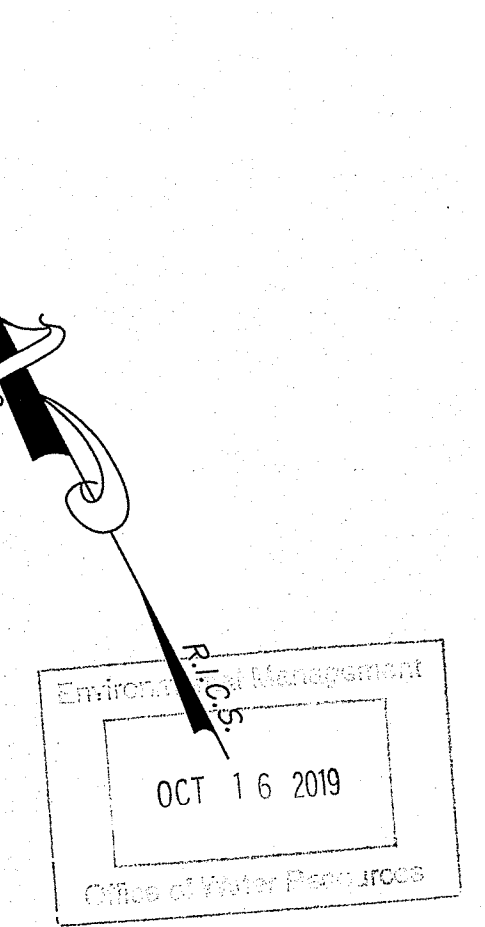
PRELIMINARY, NOT FOR CONSTRUCTION

**OWTS DETAILS II**

**SHEET 9 OF 9**



LOCATION PLAN SCALE 1"=1000'



Environment  
 Planning  
 OCT 16 2019  
 Office of Water Resources

- GENERAL NOTES**
1. THE DATA ACCUMULATION SURVEY DEPICTED HEREON IS A PRODUCT OF AN ON-THE-GROUND SURVEY CONDUCTED BY SCITUATE SURVEYS, INC. USING SURVEY GRADE GPS AND CONVENTIONAL (TOTAL STATION) SURVEY METHODS BETWEEN AUGUST AND DECEMBER OF 2018. THE SWAMP WETLANDS FLAGS WERE LOCATED BY SURVEY.
  2. THE VERTICAL DATUM NAVD 88. THE HORIZONTAL DATUM IS BASED ON THE RHODE ISLAND COORDINATE SYSTEM. BOTH WERE DERIVED FROM THE USE OF SURVEY GRADE GLOBAL POSITIONING TECHNOLOGY.
  3. EXISTING UTILITY LOCATIONS ARE BASED ON OBSERVED SURFACE EVIDENCE. UTILITY INFORMATION IS NOT COMPLETE, AND IS SUBJECT TO SUCH REVISIONS AND CHANGES AS ADDITIONAL DATA MAY DISCLOSE. ANY PLANNED EXCAVATION MUST BE PRECEDED BY CONTACTING "DIG-SAFE" FOR ACCURATE LAYOUT OF EXISTING UTILITIES.
  4. THE SITE LIES WITHIN FLOOD HAZARD ZONE X AND ZONE AE (ELEV. 15 FEET). SEE FLOOD INSURANCE RATE MAP #440090017BJ EFFECTIVE DATE SEPTEMBER 4, 2013 FOR ZONE DELINEATION.
  5. THE WETLANDS DELINEATION WAS CONDUCTED IN OCTOBER 2018 BY NATURAL RESOURCE SERVICES, INC.

**LEGEND**

---o---o--- STONE WALL / STONE LINE	• BOLLARD
---B--- WETLAND FLAG/LINE	⊗ GAS METER
--- SWALE/DITCH BOTTOM	⊞ ELECTRIC METER/BOX
--- SWALE/DITCH TOP	⊡ UTILITY POLE/GUY
---20--- EXISTING CONTOUR LINE (MAJOR 10')	⊕ DRAINAGE MANHOLE
---18--- EXISTING CONTOUR LINE (MINOR 2')	⊞ DRAINAGE GRATE INLET
---12BGR--- DRAINAGE PIPE (SIZE-INCHES/MATERIAL)	⊞ IRRIGATION VALVE/HANDHOLD
---G--- GAS LINE (MARKINGS)	⊗ WATER METER/SERVICE
--- TREE LINE / BRUSH LINE	--- FLOOD ZONE LINE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 AS SPONSOR  
 DATED DEC 03 2019  
 NO CHANGES TO BE MADE  
 APPROVED PLANS  
 19-0032  
 Nancy L. Freeman

FOR STREET AND ROAD INDEX FILE UNDER:  
 HARRISON AVENUE

**SCITUATE SURVEYS, INC.**  
 410 TIOGUE AVENUE  
 COVENTRY, RHODE ISLAND 02816  
 401-821-8101  
 LAND SURVEYING/MAPPING/SITE PLANNING

SCALE IN FEET: 0 20 40 80 120

**ANGELO M. RAIMONDI**  
 No. 1762  
 PROFESSIONAL  
 LAND SURVEYOR

STATE OF RHODE ISLAND  
 PROFESSIONAL LAND SURVEYOR NO. 1762  
 PROJECT LIMITS AS SHOWN ON THIS MAP FOR ENGINEERING PURPOSES ONLY.  
 THE PURPOSE OF THIS SURVEY WAS TO CONDUCT AN EXISTING CONDITIONS TOPOGRAPHIC SURVEY WITHIN THE PROJECT LIMITS AS SHOWN ON THIS MAP FOR ENGINEERING PURPOSES ONLY.  
 STATE OF RHODE ISLAND  
 PROFESSIONAL LAND SURVEYOR NO. 1762  
 PROJECT LIMITS AS SHOWN ON THIS MAP FOR ENGINEERING PURPOSES ONLY.  
 THE PURPOSE OF THIS SURVEY WAS TO CONDUCT AN EXISTING CONDITIONS TOPOGRAPHIC SURVEY WITHIN THE PROJECT LIMITS AS SHOWN ON THIS MAP FOR ENGINEERING PURPOSES ONLY.  
 STATE OF RHODE ISLAND  
 PROFESSIONAL LAND SURVEYOR NO. 1762  
 PROJECT LIMITS AS SHOWN ON THIS MAP FOR ENGINEERING PURPOSES ONLY.

EXISTING CONDITIONS / TOPOGRAPHIC SURVEY  
 OF A PORTION OF  
**NEWPORT COUNTRY CLUB**  
 HARRISON AVENUE  
 NEWPORT, RHODE ISLAND

PREPARED FOR: ICE CASALI ENGINEERING, INC.  
 DATE: DECEMBER 27, 2018 REVISION:

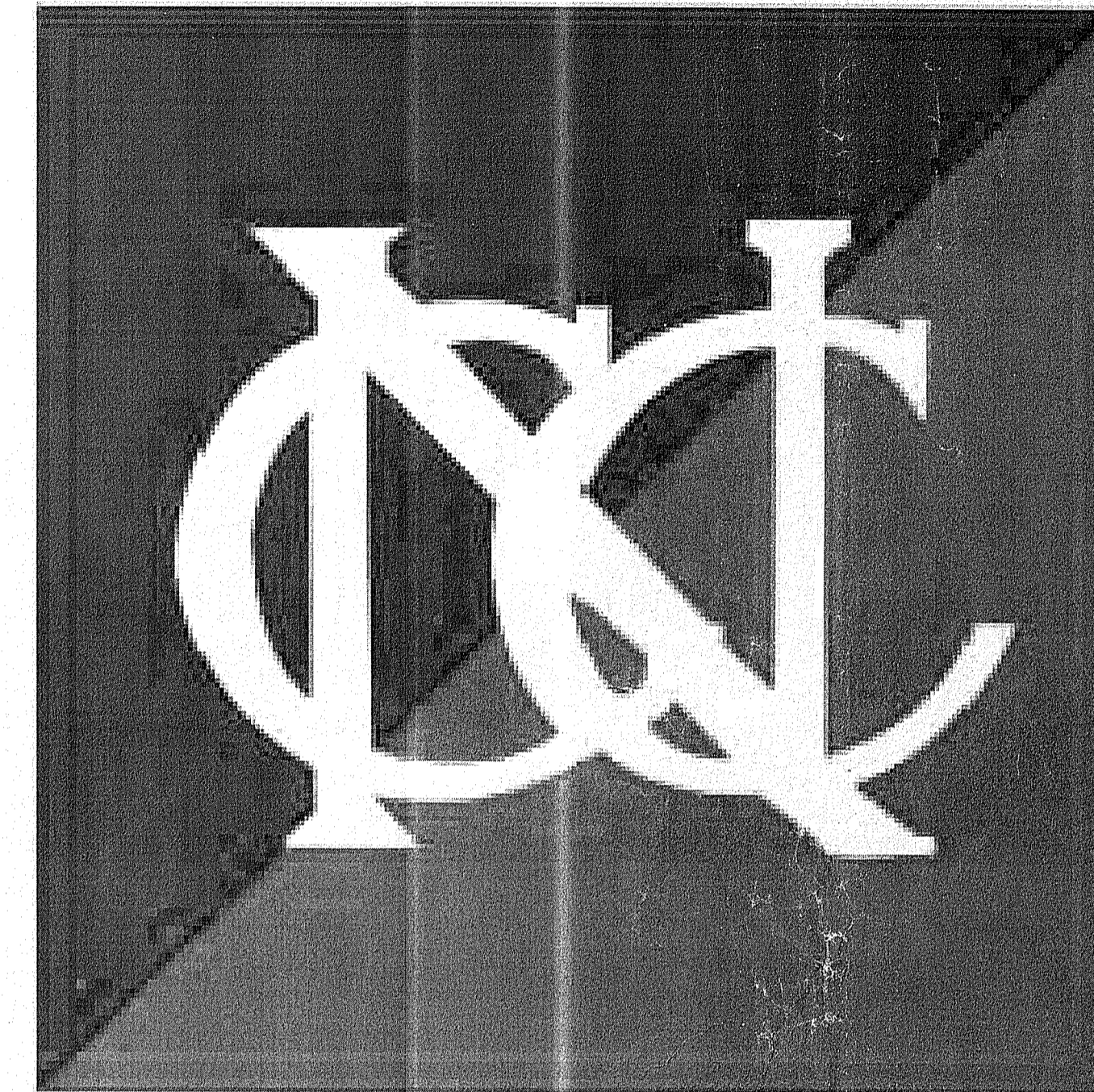
PROJECT NO.: SS2877 SHEET 1 OF 1  
 DRAWING NO.: SS4575

**SITE IMPROVEMENT PLANS FOR THE PROPOSED  
EXPANSION OF THE EXISTING TURF CARE CENTER**

# NEWPORT COUNTRY CLUB

**280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1**

**ZONING DISTRICT: R-160**



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

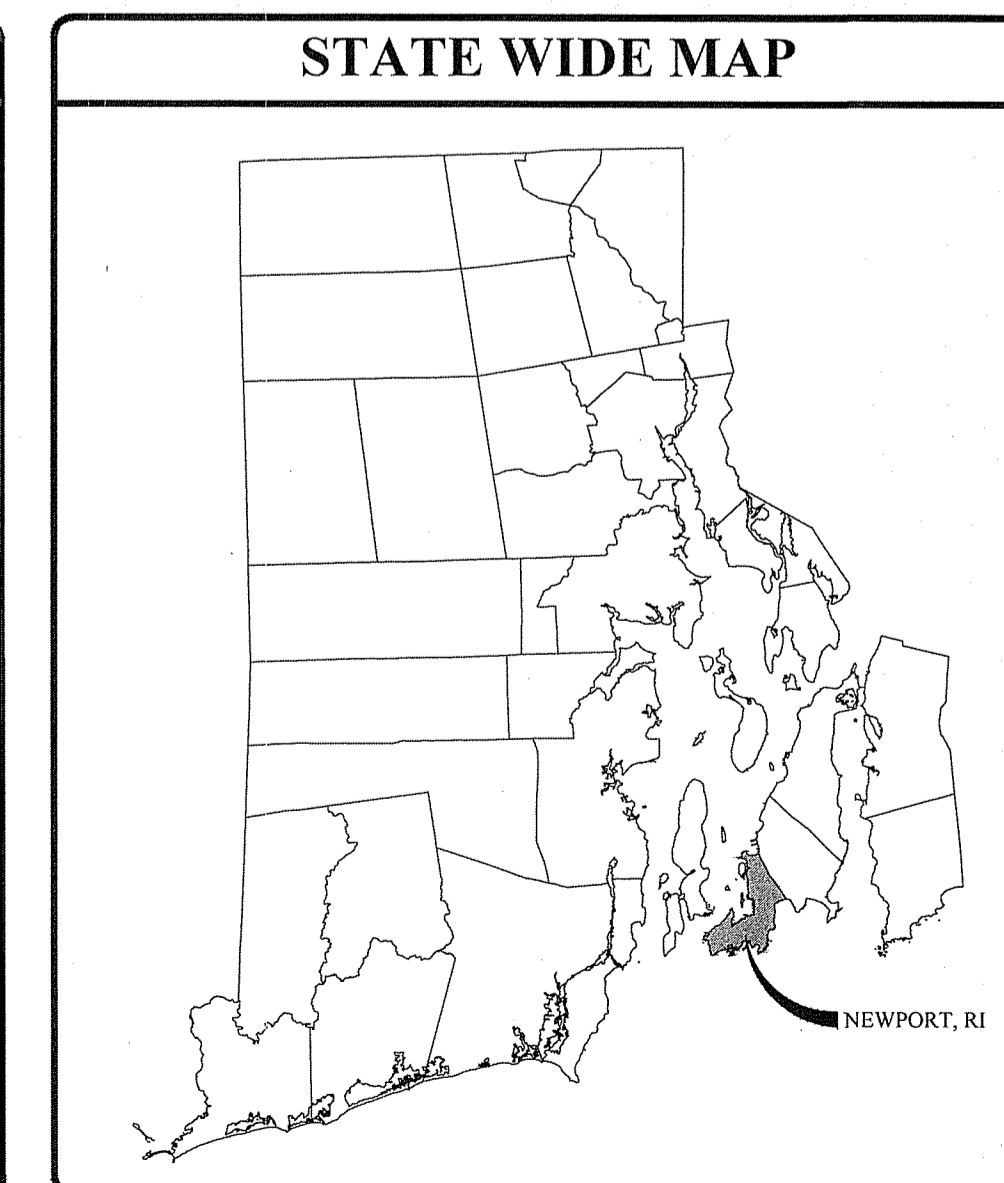
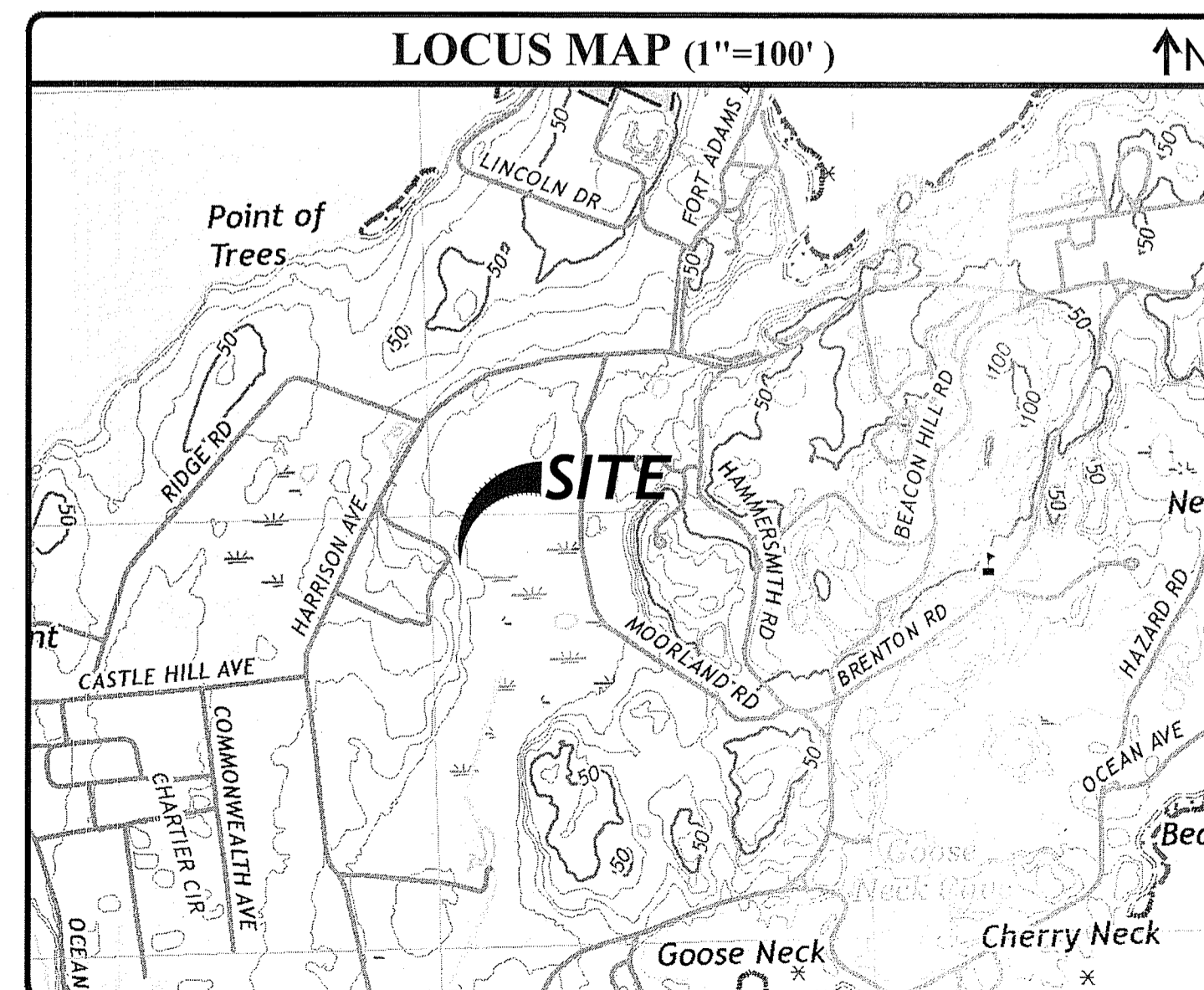
**FILINGS:**

- CITY OF NEWPORT BUILDING AND UTILITIES DIVISION**
- CITY OF NEWPORT FIRE DEPARTMENT**
- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - OWTS**
- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - PRELIMINARY DETERMINATION**

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 26 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED FOR CONSTRUCTION SITE

*Charles A. M...*

PROJECT TEAM			
<b>OWNER:</b>	NEWPORT COUNTRY CLUB PO BOX 426 NEWPORT, RI 02840	<b>CIVIL ENGINEER:</b>	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313 JOECASALI.COM
<b>GENERAL CONTRACTOR:</b>	CARDINAL MANAGEMENT COMPANY C/O JOSEPH NERONE PO BOX 1141 EAST GREENWICH, RI 02818 PHONE: 401-821-0110	<b>WETLAND BIOLOGIST:</b>	NATURAL RESOURCE SERVICES 180 TINKHAM LANE HARRISVILLE, RI 02830 PHONE: 401-568-7390
<b>ARCHITECT:</b>	JGA ARCHITECTURE 700 SCHOOL STREET, UNIT 2 PAWTUCKET, RI 02860 PHONE: (401) 721-0977	<b>LAND SURVEYOR:</b>	SCITUATE SURVEYS, INC. 410 TIOGUE AVENUE COVENTRY, RI 02816 PHONE: 401-438-5775



INDEX OF DRAWINGS	
SHEET NO.	PLAN
1	COVER SHEET
2	EXISTING CONDITIONS & SITE PREPARATION PLAN
3	SITE AND UTILITY PLAN
4	GRADING AND DRAINAGE PLAN
5	RI STANDARD DETAILS
6	CIVIL DETAILS
7	OWTS DETAILS I
8	OWTS DETAILS II

REFERENCE PLAN:  
SHEET 1 OF 1 SURVEY PLAN, PREPARED BY SCITUATE SURVEYS, INC., DATED DECEMBER 27, 2018

Environmental Management  
MAY - 9 2019  
Office of Water Resources

**NEWPORT COUNTRY CLUB  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1**

REVISIONS:		
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

DESIGNED BY: WMLJR  
DRAWN BY: SDSBP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR  
CONSTRUCTION

**COVER SHEET**

**SHEET 1 OF 8**

**JOE CASALI ENGINEERING, INC.**  
CIVIL - SITE DEVELOPMENT - TRANSPORTATION  
DRAINAGE - WETLANDS - IBDS - TRAFFIC - FLOODPLAIN  
300 POST ROAD, WARWICK, RI 02888  
(401) 944-1300

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
5.11.19  
PL-117

Q:\18-26 Joe Nerone\ACAD\INCC [Site Plan] R3.dwg May, 09, 2019 11:37am

**GENERAL NOTES:**

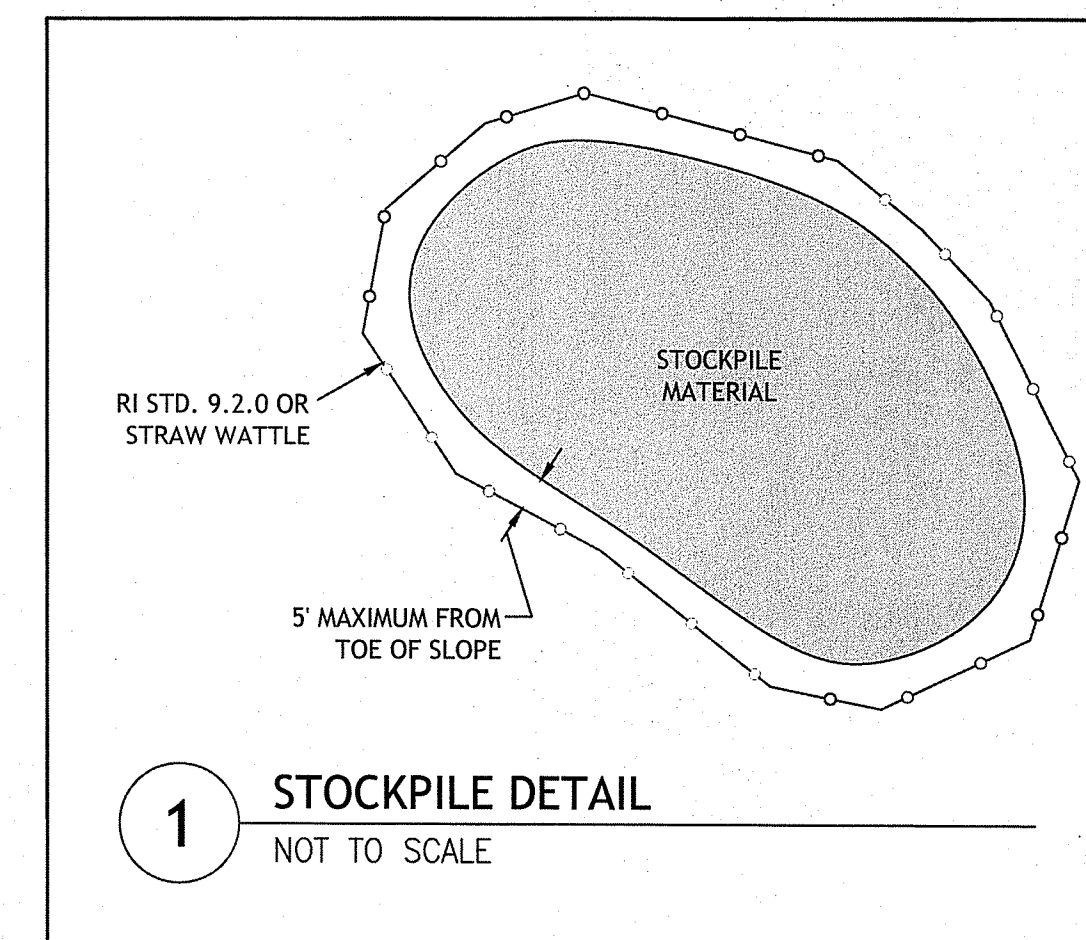
- CLASS III TOPOGRAPHIC SURVEY COMPLETED BY SCITUATE SURVEYS, INC., 410 TIOGUE AVENUE, COVENTRY, RI 02816 IN SEPTEMBER 2018.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THIS SITE LIES PARTIALLY IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD), AS SHOWN ON THE FIRM MAPS FOR NEWPORT COUNTY, COMMUNITY PANEL NO. 44005C0178J, EFFECTIVE SEPTEMBER 4, 2013. A SMALL PORTION OF THE SITE LIES WITHIN THE 0.2% ANNUAL CHANCE FLOOD ZONE. THE REMAINING PORTION OF THE SITE LIES WITHIN ZONE AE (BASE FLOOD ELEVATIONS DETERMINED) AND HAS AN ASSOCIATED BASE FLOOD ELEVATION OF 15.
- SOILS EXISTING WITHIN THE PROJECT AREA CONSISTS OF CANTON AND CHARLTON FINE SANDY LOAMS, VERY ROCKY, 3-15 PERCENT SLOPES (CcC), WHICH CLASSIFY AS HYDROLOGIC SOIL GROUP "B"; AND NEWPORT SILT LOAM, 3-8 PERCENT SLOPES (NbB), WHICH CLASSIFY AS HYDROLOGIC SOIL GROUP "C".
- WETLANDS WERE DELINEATED IN SEPTEMBER 2018 BY NATIONAL RESOURCES SERVICES, INC., P.O. BOX 311 HARRISVILLE, RI 02830.
- THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE AQUIDNECK ISLAND-FRONTAL ATLANTIC OCEAN WATERSHED. THERE ARE NO EXTRAORDINARY OR UNUSUAL FEATURES ON THE SUBJECT SITE.
- THERE ARE NO KNOWN EASEMENTS WITHIN THE SUBJECT PARCEL.
- TELEPHONE, ELECTRIC AND WATER SERVICES ARE AVAILABLE FROM WITHIN HARRISON AVENUE.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES:**

- THE STRAW WATTLE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE IN THE AREA OF THE STORMWATER MITIGATION AREAS ONCE THE SUBGRADE IS EXPOSED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
- ALL STRAW WATTLES, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE STRAW WATTLES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE STRAW WATTLE BECOMES FILLED WITH SEDIMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", UPDATED 2016.

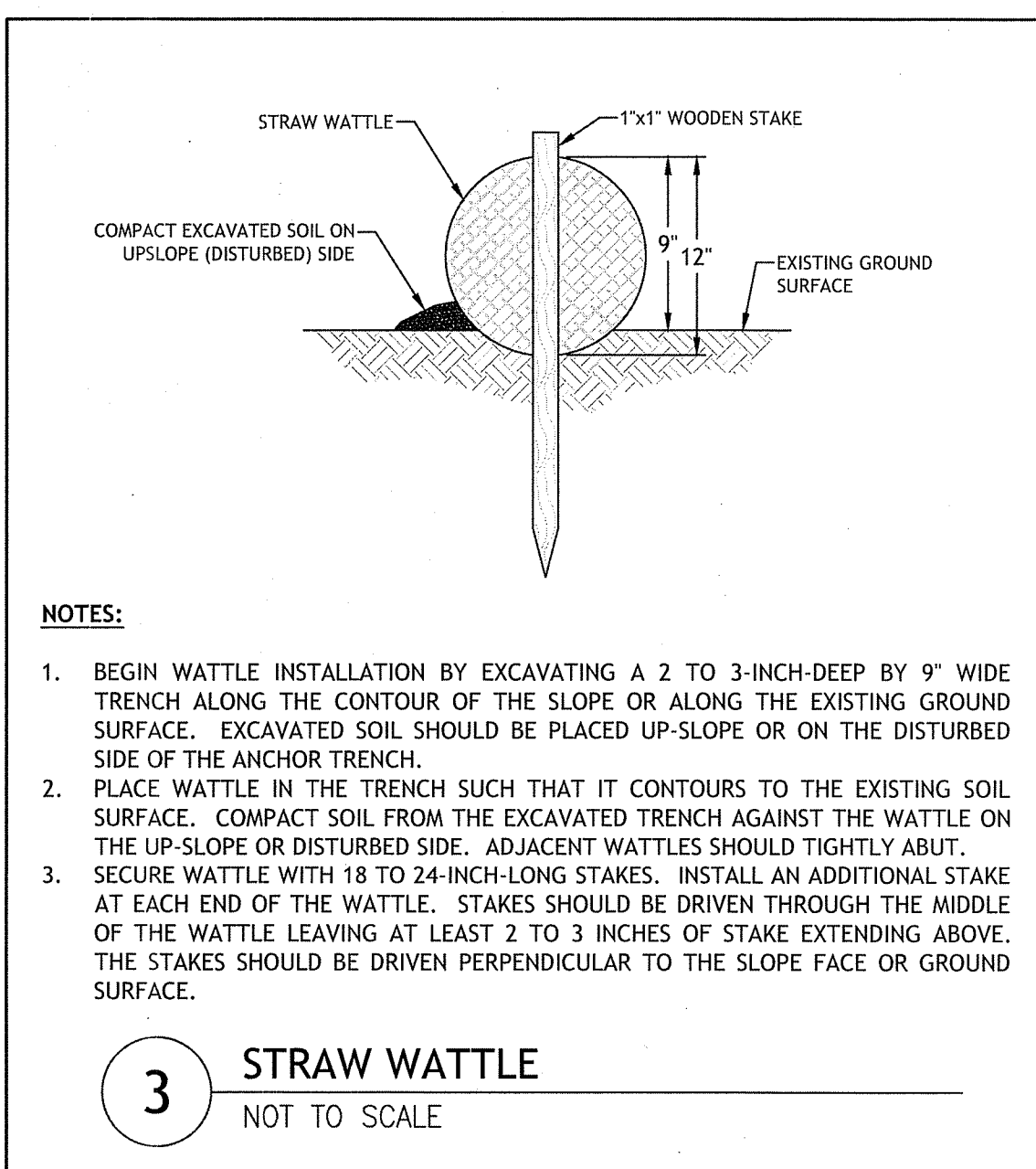
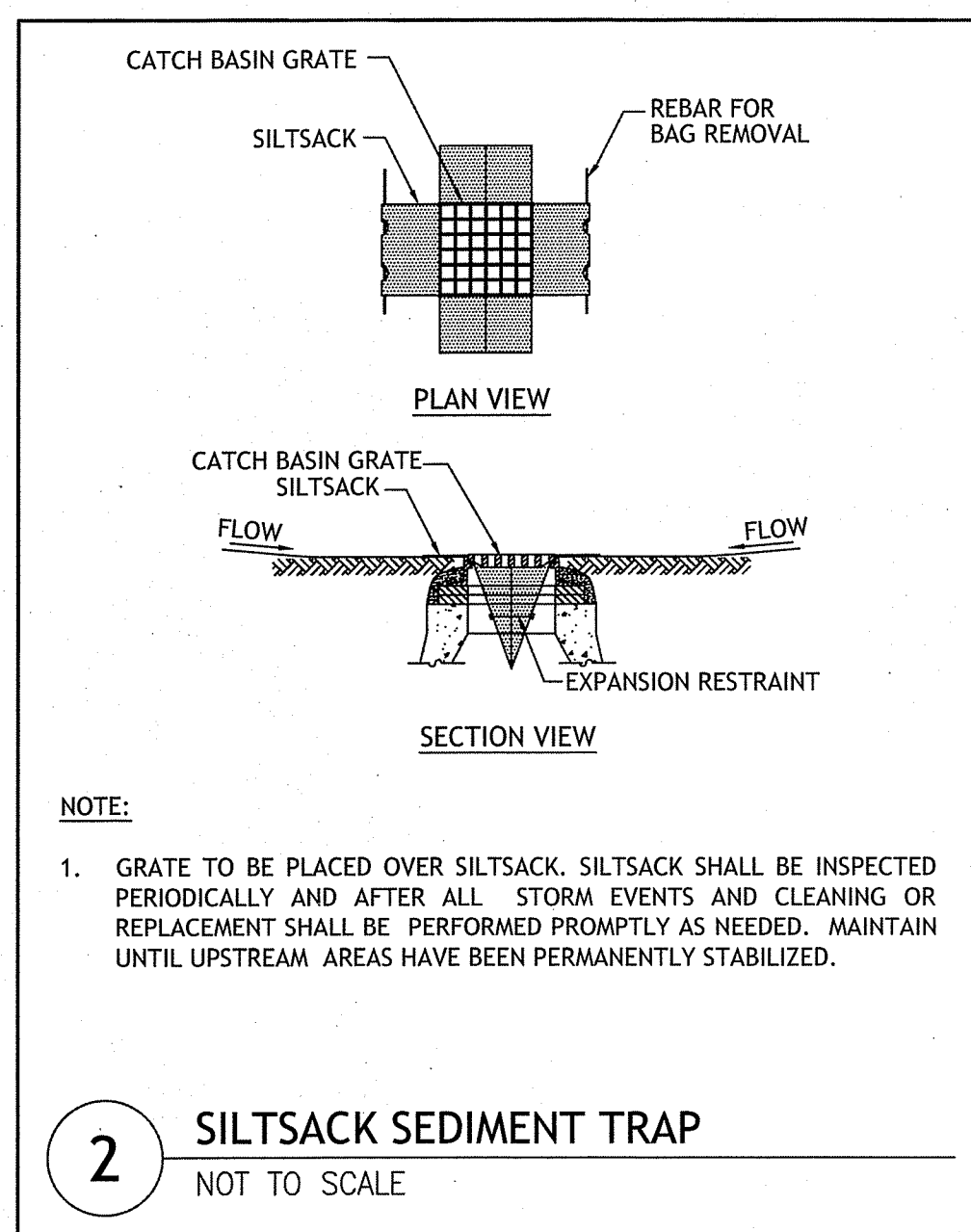
**SEDIMENTATION CONTROL PROGRAM:**

- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE STORMWATER MANAGEMENT AREAS. THESE AREAS CANNOT BE USED AS SEDIMENT CONTROL DEVICES.
  - ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED, SHALL RECEIVE SUITABLE SLOPE PROTECTION.
  - ALL UPSLOPE AREAS ARE TO BE STABILIZED PRIOR TO CONNECTING TO THE STORMWATER FACILITIES.
  - DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF DURING STORMS AND PERIODS OF RAINFALL.
  - SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
  - REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE 1989, AS A GUIDE (UPDATED 2016).
- ORDER OF PROCEDURE:**
- SEDIMENT CONTROL DEVICES SHALL SET IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION.
  - ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED DURING THE CONSTRUCTION.
  - IF WORK PROGRESS IS INTERRUPTED AT ANY TIME, REFERENCE EROSION & SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
  - SPECIFIED PLANTINGS ARE TO TAKE PLACE IN EARLY SPRING (APRIL 1 THRU MAY 30) OR EARLY FALL (SEPTEMBER 1 THRU 30) AND ARE TO BE MAINTAINED FOR A PERIOD OF ONE GROWING SEASON AND SHALL BE REPLACED IF NECESSARY.



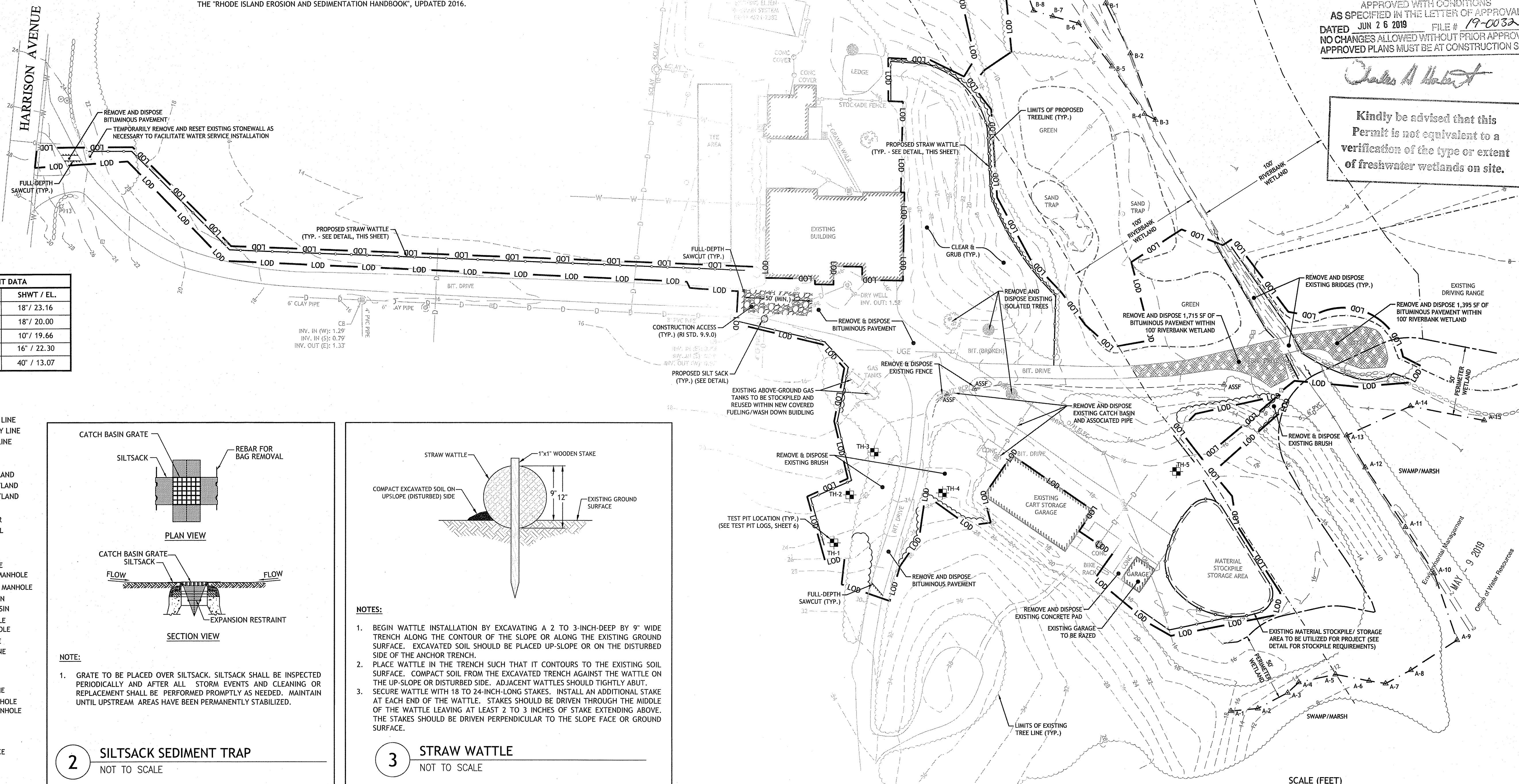
SOIL EVALUATION TEST PIT DATA		
	SURFACE EL.	SHWT / EL.
TH-1	24.66	18' / 23.16
TH-2	21.50	18' / 20.00
TH-3	20.20	10' / 19.66
TH-4	23.66	16' / 22.30
TH-5	16.41	40' / 13.07

- LEGEND**
- EXISTING PROPERTY LINE
  - ABUTTING PROPERTY LINE
  - BUILDING SETBACK LINE
  - WETLAND EDGE
  - WF WETLAND FLAG
  - 50' PERIMETER WETLAND
  - 100' RIVERBANK WETLAND
  - 200' RIVERBANK WETLAND
  - 100' EXISTING CONTOUR
  - PROPOSED CONTOUR
  - EXISTING STONE WALL
  - EXISTING FENCE
  - PROPOSED FENCE
  - EXISTING DRAIN LINE
  - PROPOSED DRAIN LINE
  - EXISTING DRAINAGE MANHOLE
  - PROPOSED DRAINAGE MANHOLE
  - EXISTING CATCH BASIN
  - PROPOSED CATCH BASIN
  - UP/UTZ --- EXISTING UTILITY POLE
  - PROPOSED UTILITY POLE
  - EXISTING WATER LINE
  - PROPOSED WATER LINE
  - WG --- WATER GATE
  - WATER VALVE
  - EXISTING SEWER LINE
  - PROPOSED SEWER LINE
  - EXISTING SEWER MANHOLE
  - PROPOSED SEWER MANHOLE
  - N/F --- NOW OR FORMERLY
  - TREELINE
  - STRAW WATTLE
  - LOD --- LIMIT OF DISTURBANCE
  - TEST HOLE



**NOTES:**

- BEGIN WATTLE INSTALLATION BY EXCAVATING A 2 TO 3-INCH-DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE OR ALONG THE EXISTING GROUND SURFACE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE OR ON THE DISTURBED SIDE OF THE ANCHOR TRENCH.
- PLACE WATTLE IN THE TRENCH SUCH THAT IT CONTOURS TO THE EXISTING SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-SLOPE OR DISTURBED SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
- SECURE WATTLE WITH 18 TO 24-INCH-LONG STAKES. INSTALL AN ADDITIONAL STAKE AT EACH END OF THE WATTLE. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2 TO 3 INCHES OF STAKE EXTENDING ABOVE. THE STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE OR GROUND SURFACE.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 26 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A. Casali*

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

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

DESIGNED BY: WMLJR  
DRAWN BY: SJS/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

**EXISTING CONDITIONS & SITE PREP. PLAN**

**SHEET 2 OF 8**

**JCE**  
JOE CASALI ENGINEERING, INC.  
CIVIL, SITE DEVELOPMENT, TRANSPORTATION  
DRAINAGE, WETLANDS, IBDS, TRAFFIC, FLOODPLAIN  
601.344.1200 601.944.1317 FAX 601.344.1208

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
5/11/17

**SITE NOTES:**

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
- ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS, FIRE PROTECTION PLANS, AND ELECTRICAL PLANS, FOR ACTUAL SIZE OF THE PROPOSED BUILDING AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDING.

- WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
- THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR CITY RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

**PROPOSED BUILDINGS NOTE:**

- DIMENSIONS OF PROPOSED BUILDINGS ARE APPROXIMATE. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS.

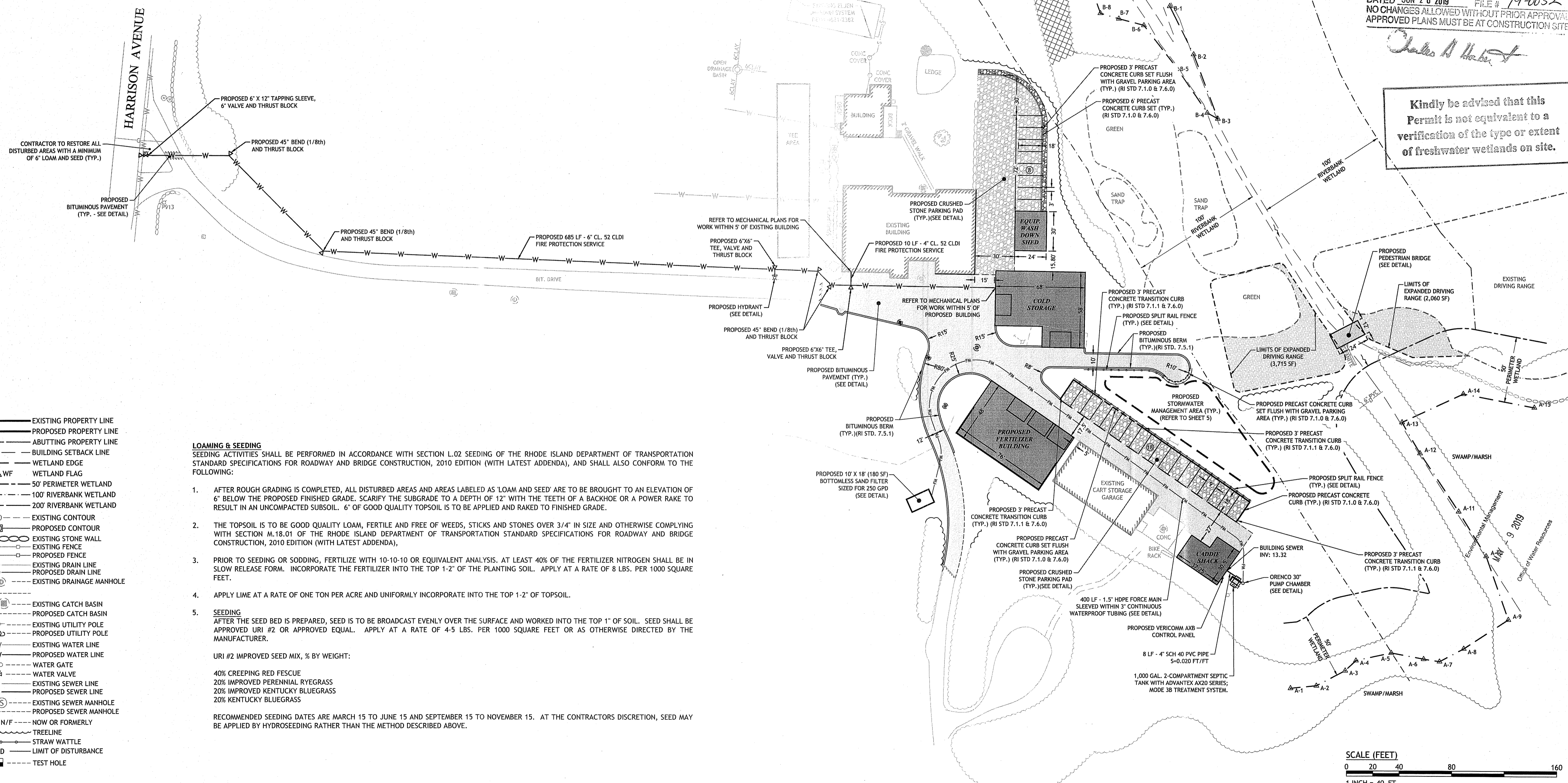
**PERIMETER & RIVERBANK WETLAND RESTORATION NOTES:**

- EROSION CONTROLS TO BE ESTABLISHED PRIOR TO COMMENCING ANY WORK.
- ALL SLASH SHALL BE MANUALLY REMOVED FROM ALTERED RIVERBANK WETLANDS.
- THE AREA SHALL BE PLANTED WITH THE FOLLOWING:
  - 20 SHADBUSH (AMELANCHIER CANADENSIS)
  - 20 ARROWWOOD (VIBURNUM DENTATUM)
  - 20 WINTERBERRY (ILEX VERTICILLATA)
- ALL SHRUBS SHALL BE 2-3 FEET TALL AFTER PLANTING. PLANT SPACING SHALL BE 4-5 ON-CENTER.
- AFTER PLANTING, THE AREA SHALL BE ALLOWED TO REVERT TO A WILD CONDITION.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 26 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A. Casali*

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



- LEGEND**
- EXISTING PROPERTY LINE
  - PROPOSED PROPERTY LINE
  - ABUTTING PROPERTY LINE
  - BUILDING SETBACK LINE
  - WETLAND EDGE
  - WETLAND FLAG
  - 50' PERIMETER WETLAND
  - 100' RIVERBANK WETLAND
  - 200' RIVERBANK WETLAND
  - 100' EXISTING CONTOUR
  - PROPOSED CONTOUR
  - EXISTING STONE WALL
  - EXISTING FENCE
  - PROPOSED FENCE
  - EXISTING DRAIN LINE
  - PROPOSED DRAIN LINE
  - EXISTING DRAINAGE MANHOLE
  - EXISTING CATCH BASIN
  - PROPOSED CATCH BASIN
  - EXISTING UTILITY POLE
  - PROPOSED UTILITY POLE
  - EXISTING WATER LINE
  - PROPOSED WATER LINE
  - WATER GATE
  - WATER VALVE
  - EXISTING SEWER LINE
  - PROPOSED SEWER LINE
  - EXISTING SEWER MANHOLE
  - PROPOSED SEWER MANHOLE
  - N/F - NOW OR FORMERLY
  - TREELINE
  - STRAW WATTLE
  - LIMIT OF DISTURBANCE
  - TEST HOLE

**LOAMING & SEEDING**

- SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:
- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
  - THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
  - PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
  - APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
  - SEEDING**  
AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.  
  
URI #2 IMPROVED SEED MIX, % BY WEIGHT:  
40% CREEPING RED FESCUE  
20% IMPROVED PERENNIAL RYEGRASS  
20% IMPROVED KENTUCKY BLUEGRASS  
20% KENTUCKY BLUEGRASS
- RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTOR'S DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

**JCE**  
JOE CASALI ENGINEERING, INC.  
CIVIL, SITE DEVELOPMENT, TRANSPORTATION  
DRAINAGE, WETLANDS, BDS, TRAFFIC, FLOODPLAIN  
6031 3444-1200 6031944-1317 FAX WWW.JCEONLINE.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
5/17/19

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

**REVISIONS:**

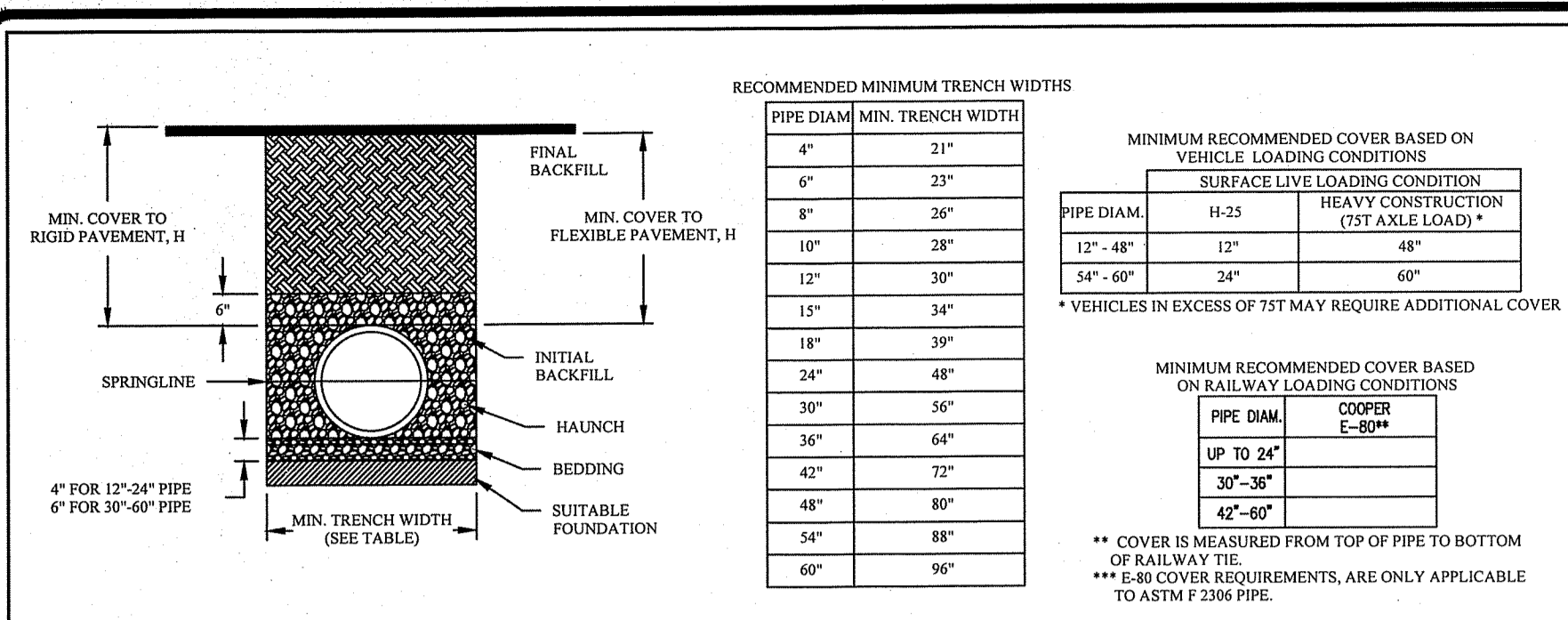
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

**SITE AND UTILITY PLAN**

**SHEET 3 OF 8**



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	RES.	HEAVY CONSTRUCTION (31K AXLE LOAD)*
12"	12"	48"
15"	15"	60"
18"	18"	72"
24"	24"	96"

\* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

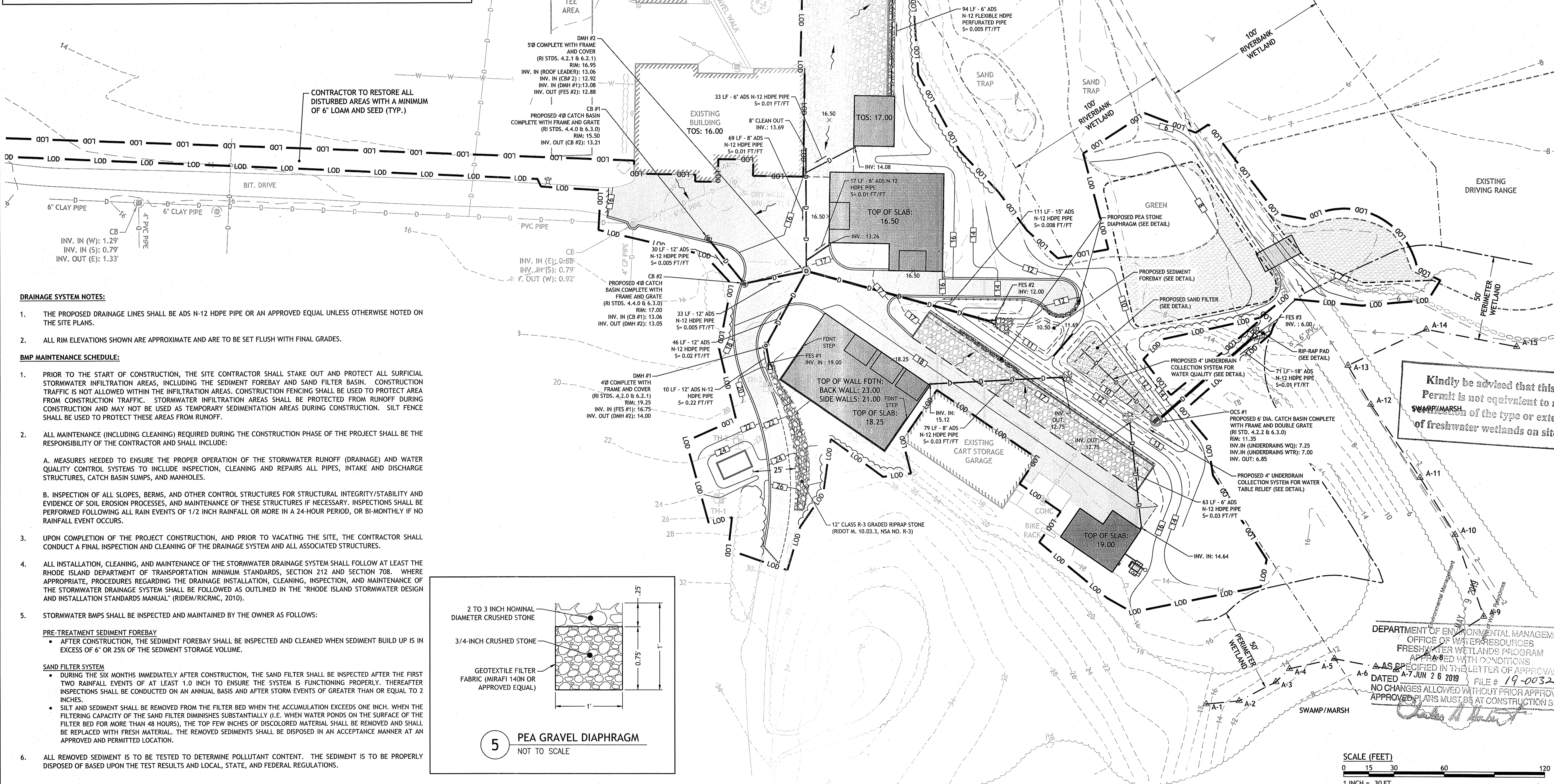
MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COVER
UP TO 24"	36"
30"-36"	48"
42"-60"	60"

\*\* COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.  
\*\*\* E-80 COVER REQUIREMENTS ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
  - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
  - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
  - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6' ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
  - MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

4 DRAIN PIPE TRENCH INSTALLATION DETAIL  
NOT TO SCALE



DRAINAGE SYSTEM NOTES:

- THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
- ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.

BMP MAINTENANCE SCHEDULE:

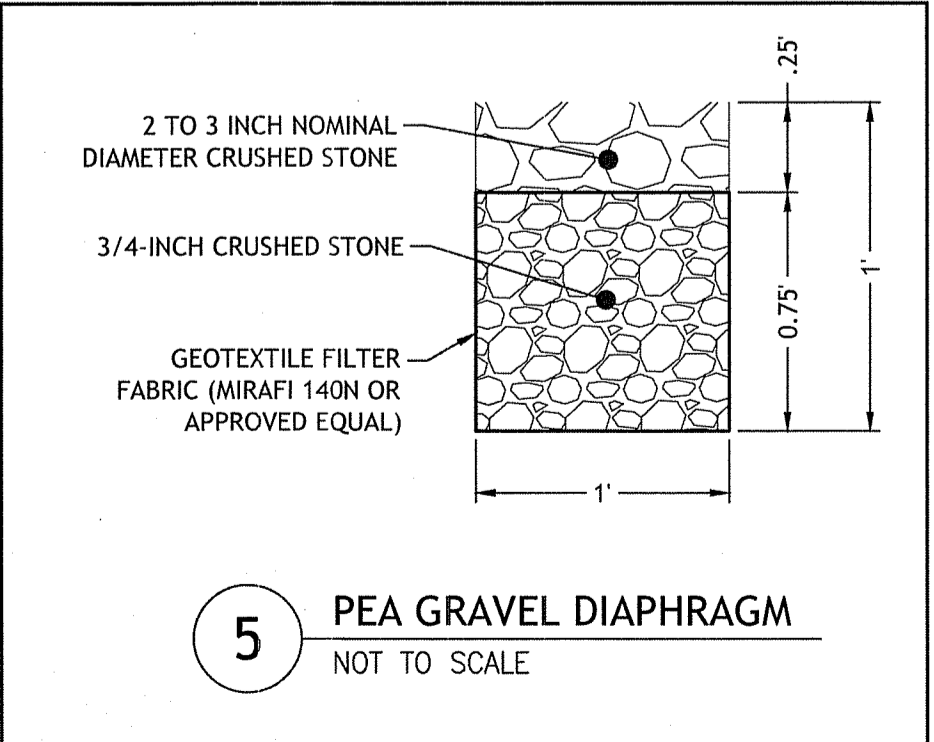
- PRIOR TO THE START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL STAKE OUT AND PROTECT ALL SURFICIAL STORMWATER INFILTRATION AREAS, INCLUDING THE SEDIMENT FOREBAY AND SAND FILTER BASIN. CONSTRUCTION TRAFFIC IS NOT ALLOWED WITHIN THE INFILTRATION AREAS. CONSTRUCTION FENCING SHALL BE USED TO PROTECT AREA FROM CONSTRUCTION TRAFFIC. STORMWATER INFILTRATION AREAS SHALL BE PROTECTED FROM RUNOFF DURING CONSTRUCTION AND MAY NOT BE USED AS TEMPORARY SEDIMENTATION AREAS DURING CONSTRUCTION. SILT FENCE SHALL BE USED TO PROTECT THESE AREAS FROM RUNOFF.
- ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
  - MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
  - INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
- UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
- ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, 2010).
- STORMWATER BMPs SHALL BE INSPECTED AND MAINTAINED BY THE OWNER AS FOLLOWS:
 

PRE-TREATMENT SEDIMENT FOREBAY

  - AFTER CONSTRUCTION, THE SEDIMENT FOREBAY SHALL BE INSPECTED AND CLEANED WHEN SEDIMENT BUILD UP IS IN EXCESS OF 6" OR 25% OF THE SEDIMENT STORAGE VOLUME.

SAND FILTER SYSTEM

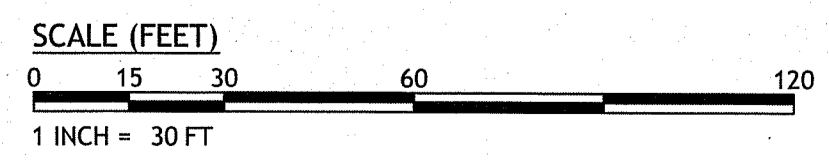
  - DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE SAND FILTER SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2 INCHES.
  - SILT AND SEDIMENT SHALL BE REMOVED FROM THE FILTER BED WHEN THE ACCUMULATION EXCEEDS ONE INCH. WHEN THE FILTERING CAPACITY OF THE SAND FILTER DIMINISHES SUBSTANTIALLY (I.E. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 48 HOURS), THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHALL BE DISPOSED IN AN ACCEPTANCE MANNER AT AN APPROVED AND PERMITTED LOCATION.
- ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. THE SEDIMENT IS TO BE PROPERLY DISPOSED OF BASED UPON THE TEST RESULTS AND LOCAL, STATE, AND FEDERAL REGULATIONS.



5 PEA GRAVEL DIAPHRAGM  
NOT TO SCALE

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

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
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DATED 6/7/2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



JOE CASALI ENGINEERING, INC.  
CIVIL - SITE DEVELOPMENT - TRANSPORTATION  
WETLANDS - ISDS - TRAFFIC - FLOODPLAIN  
300 ROBERT ROAD, WARWICK, RI 02886  
401.944.1200 FAX: 401.944.1276 WWW.JOEENGINEERING.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
PE 117

NEWPORT COUNTRY CLUB  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

REVISIONS:

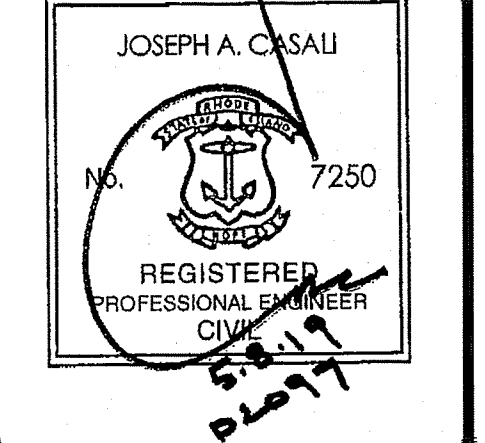
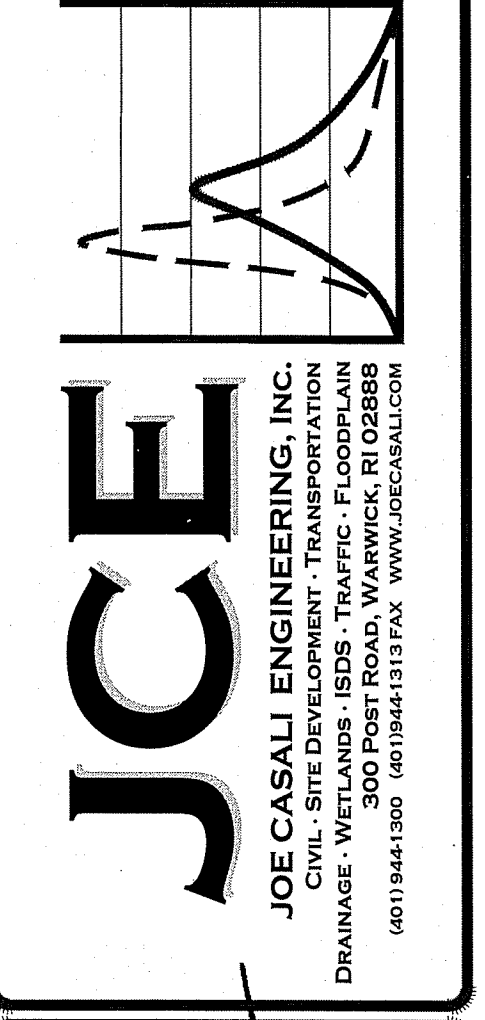
NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

DESIGNED BY: WMLJR  
DRAWN BY: SDS/EP  
CHECKED BY: JAC  
DATE: FEB, 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

GRADING & DRAINAGE PLAN

SHEET 4 OF 8



NEWPORT COUNTRY CLUB
280 HARRISON AVENUE
NEWPORT, RHODE ISLAND
AP 43, LOT 1

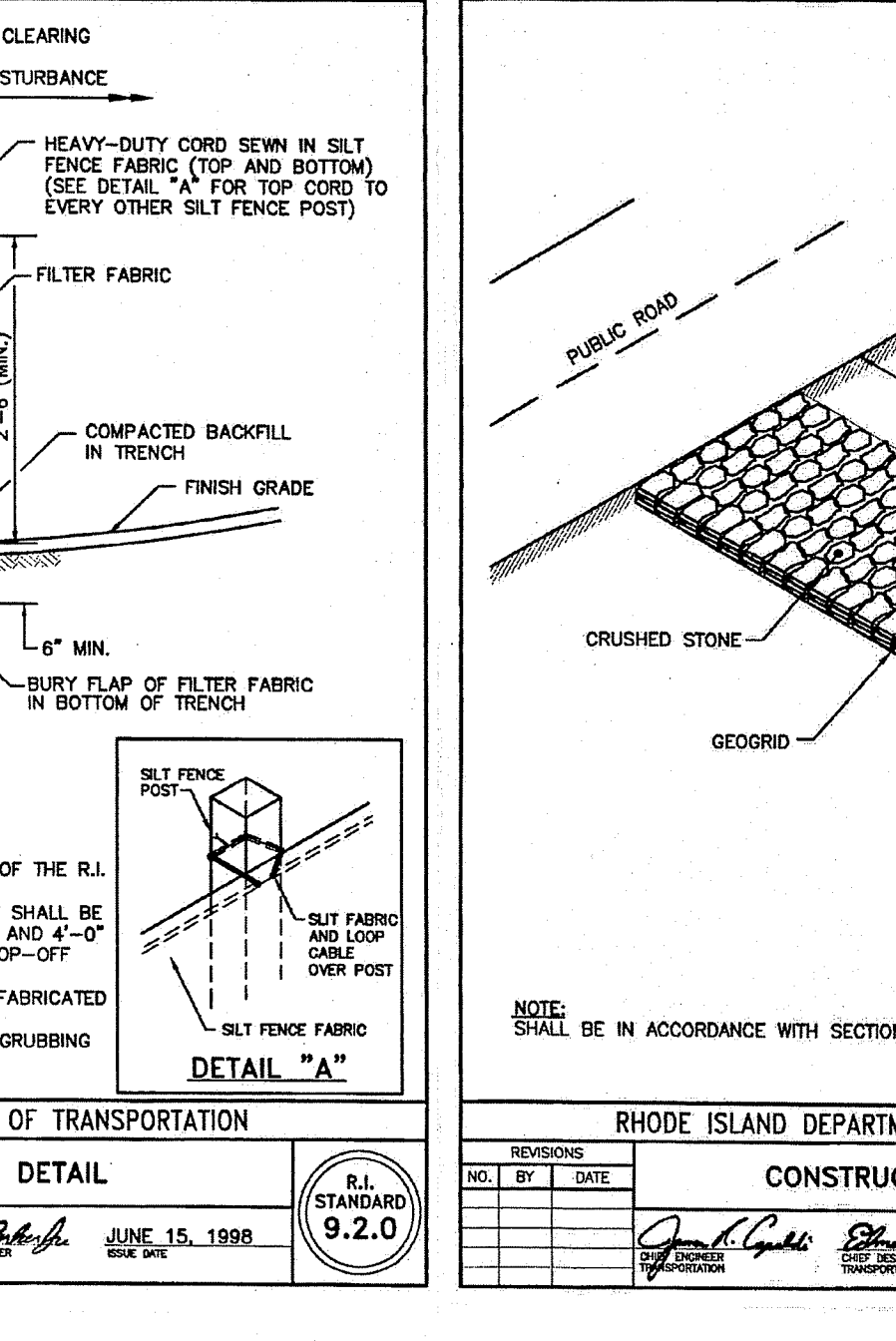
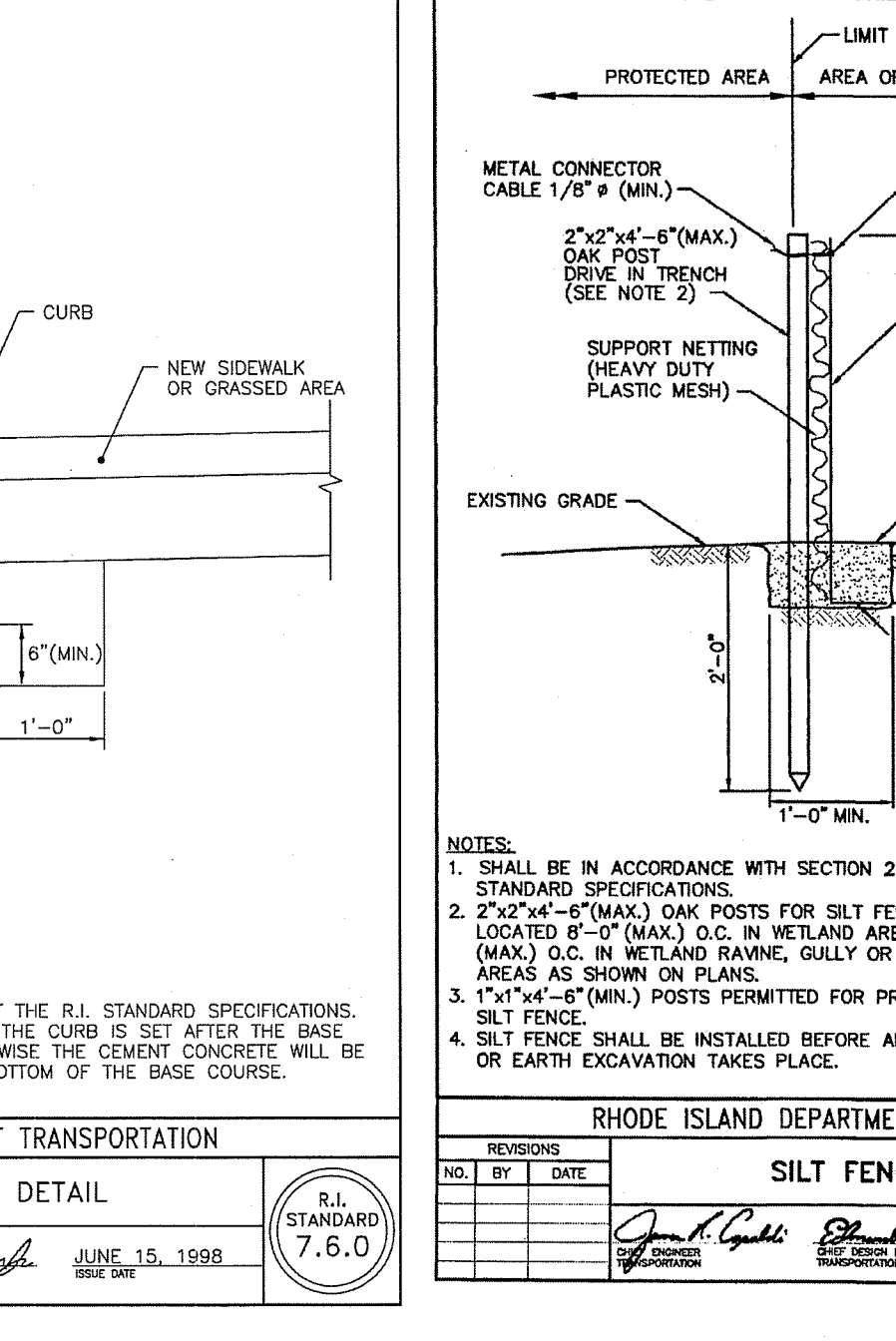
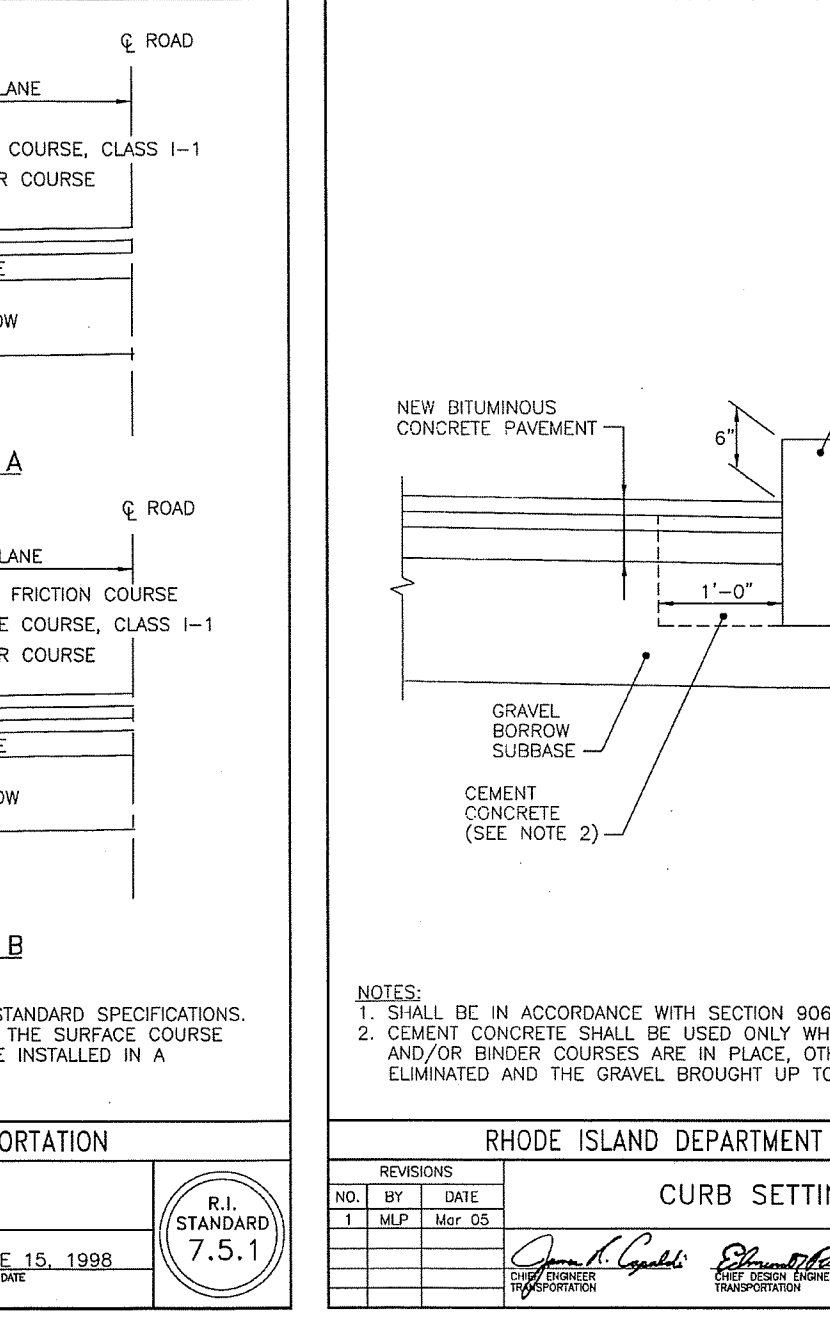
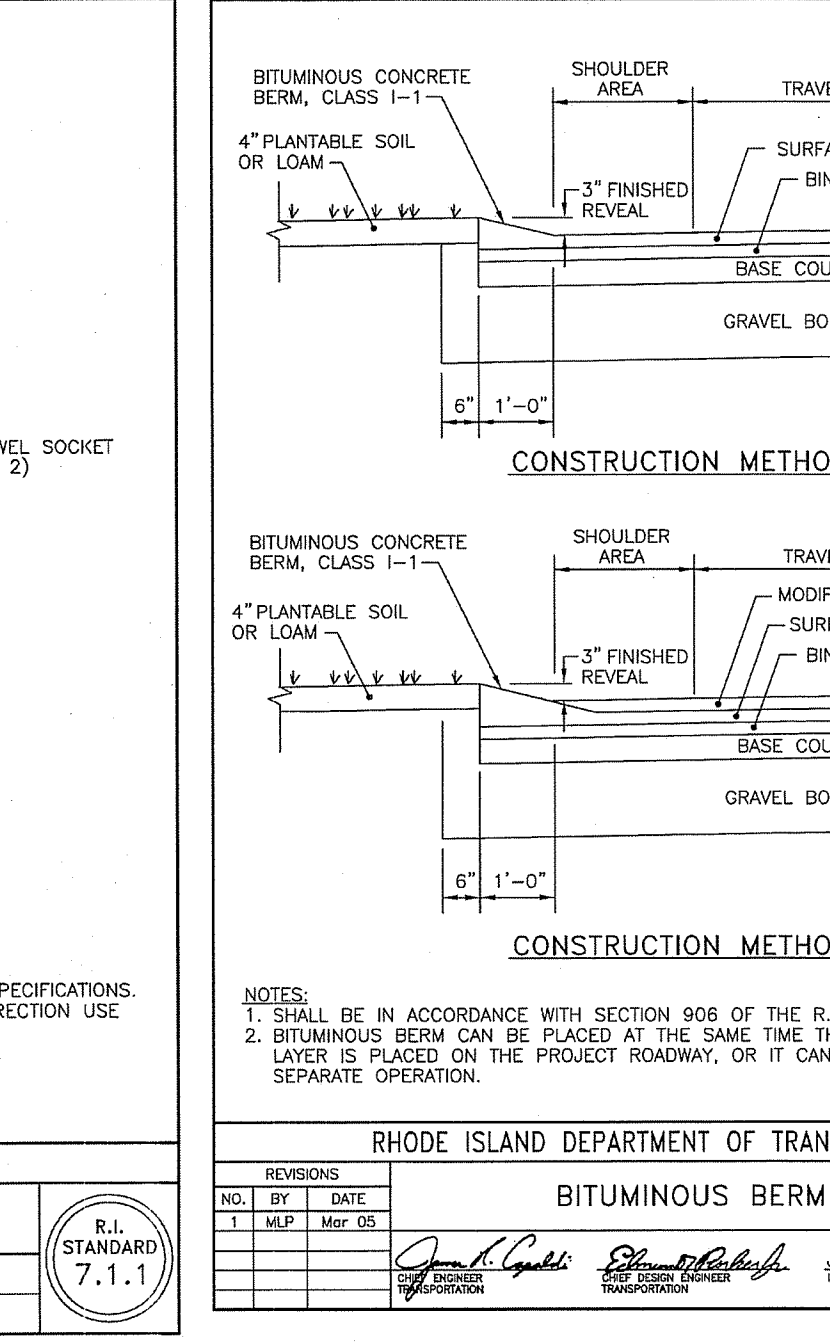
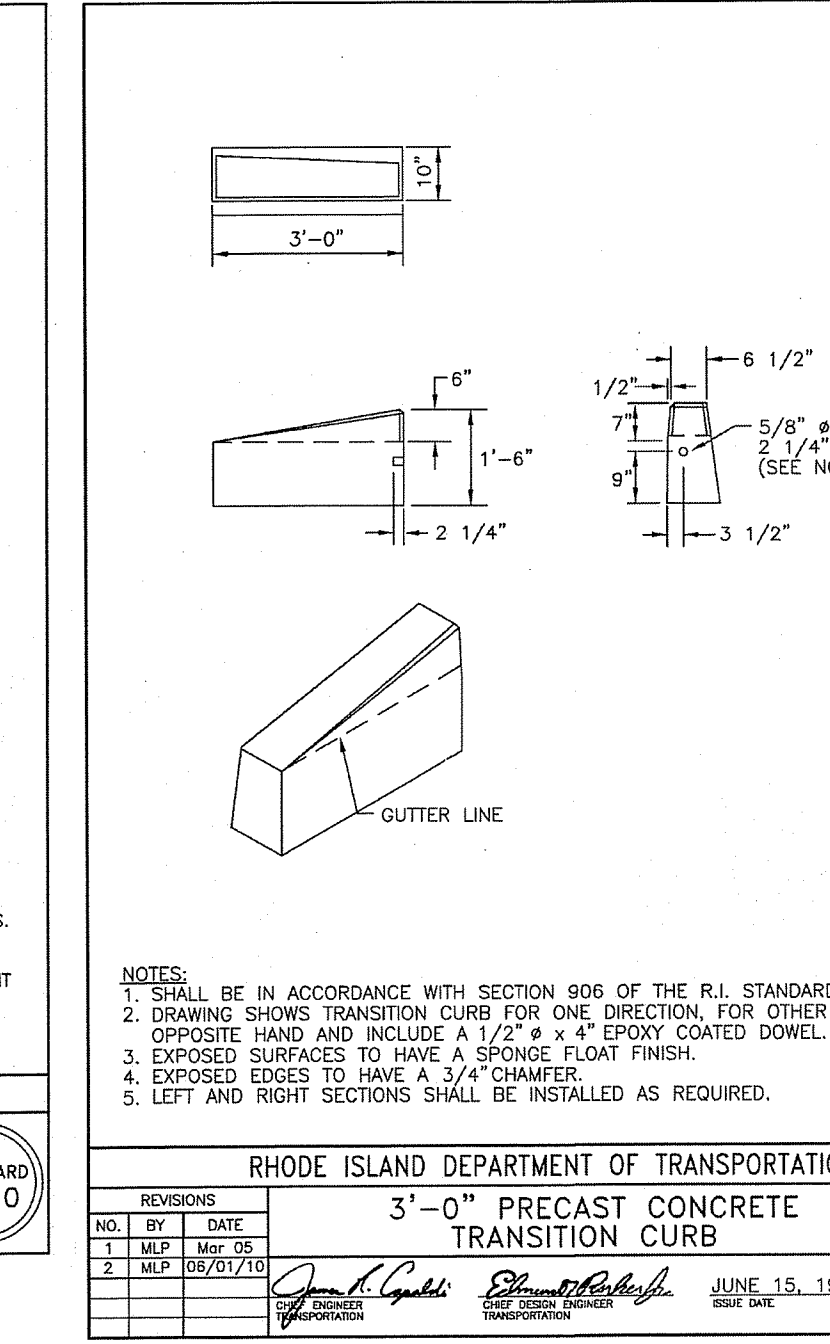
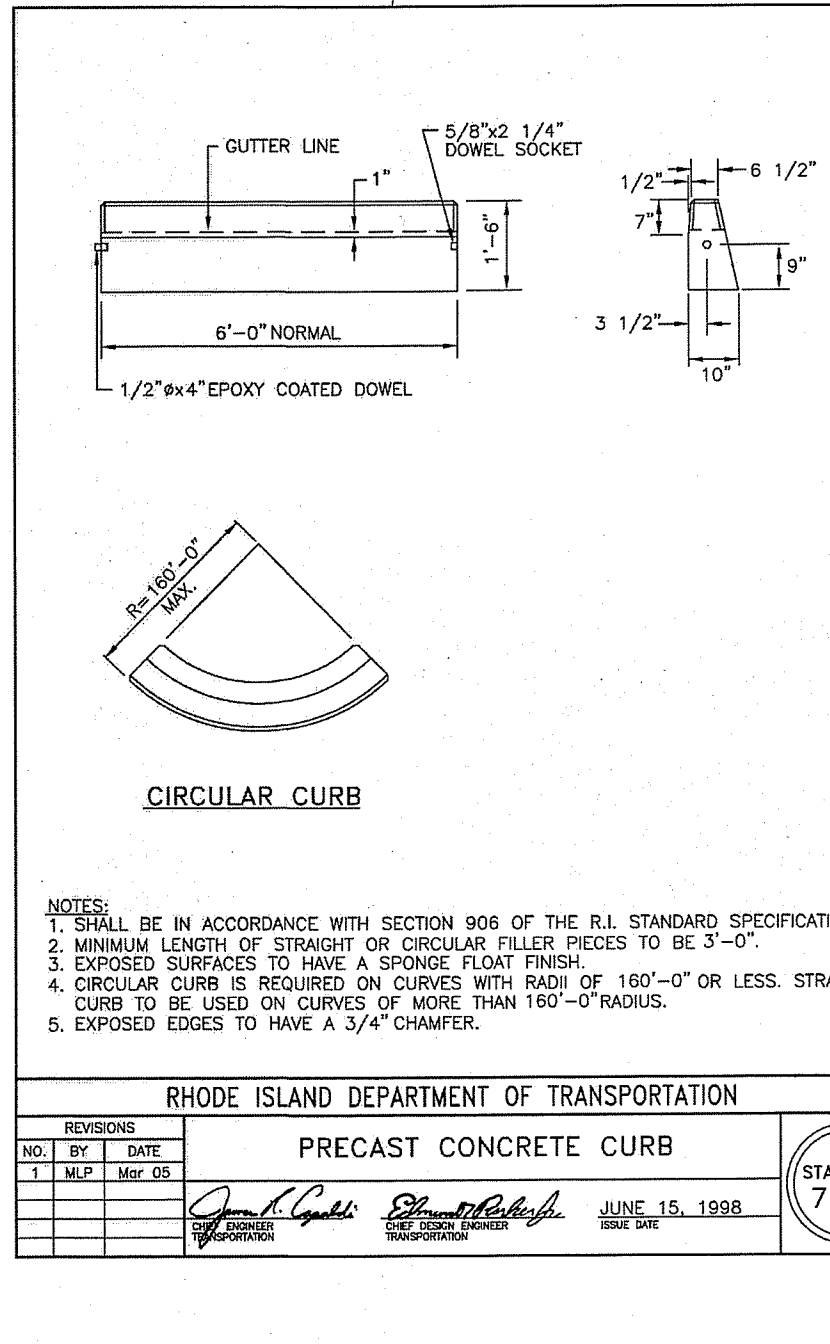
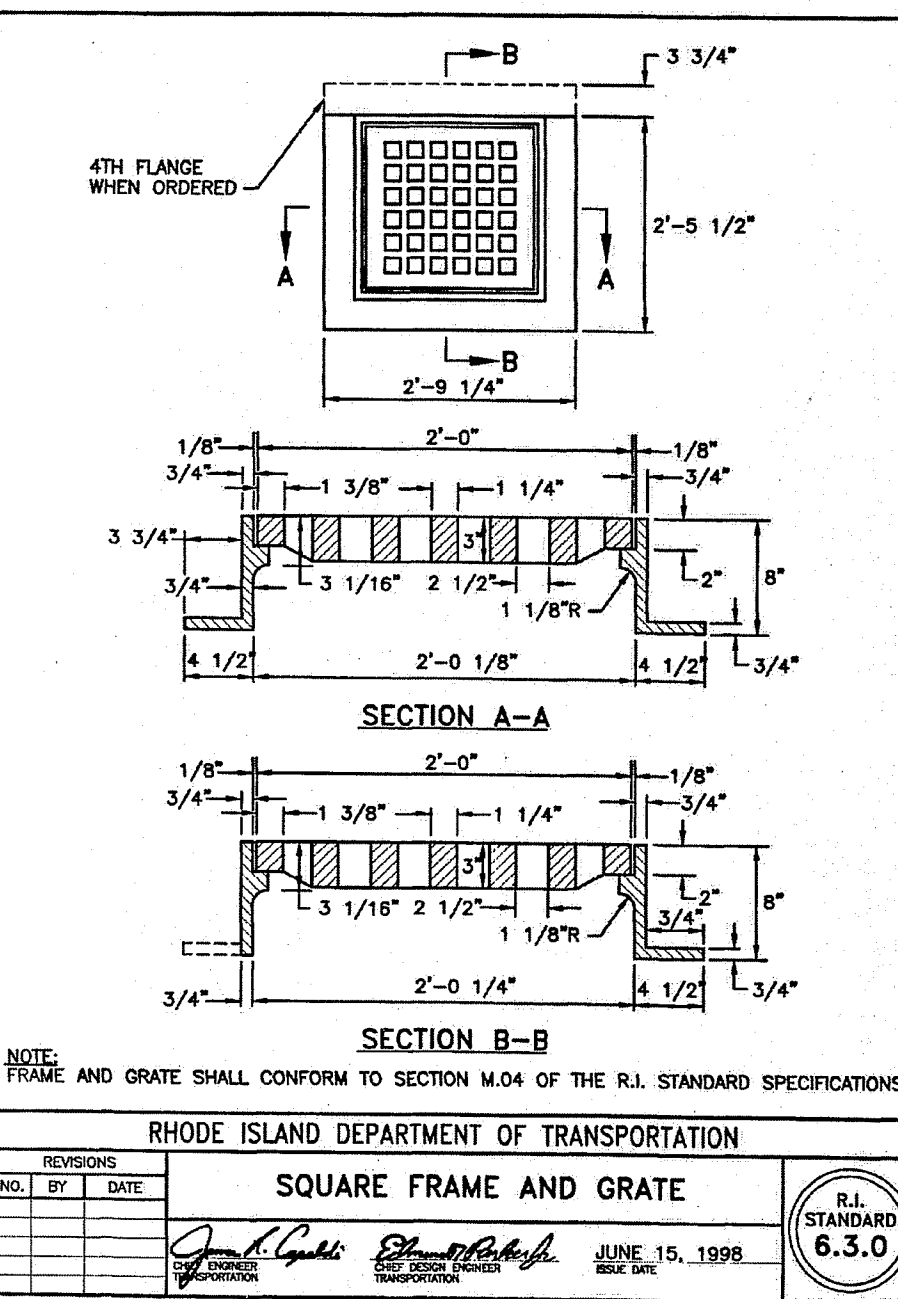
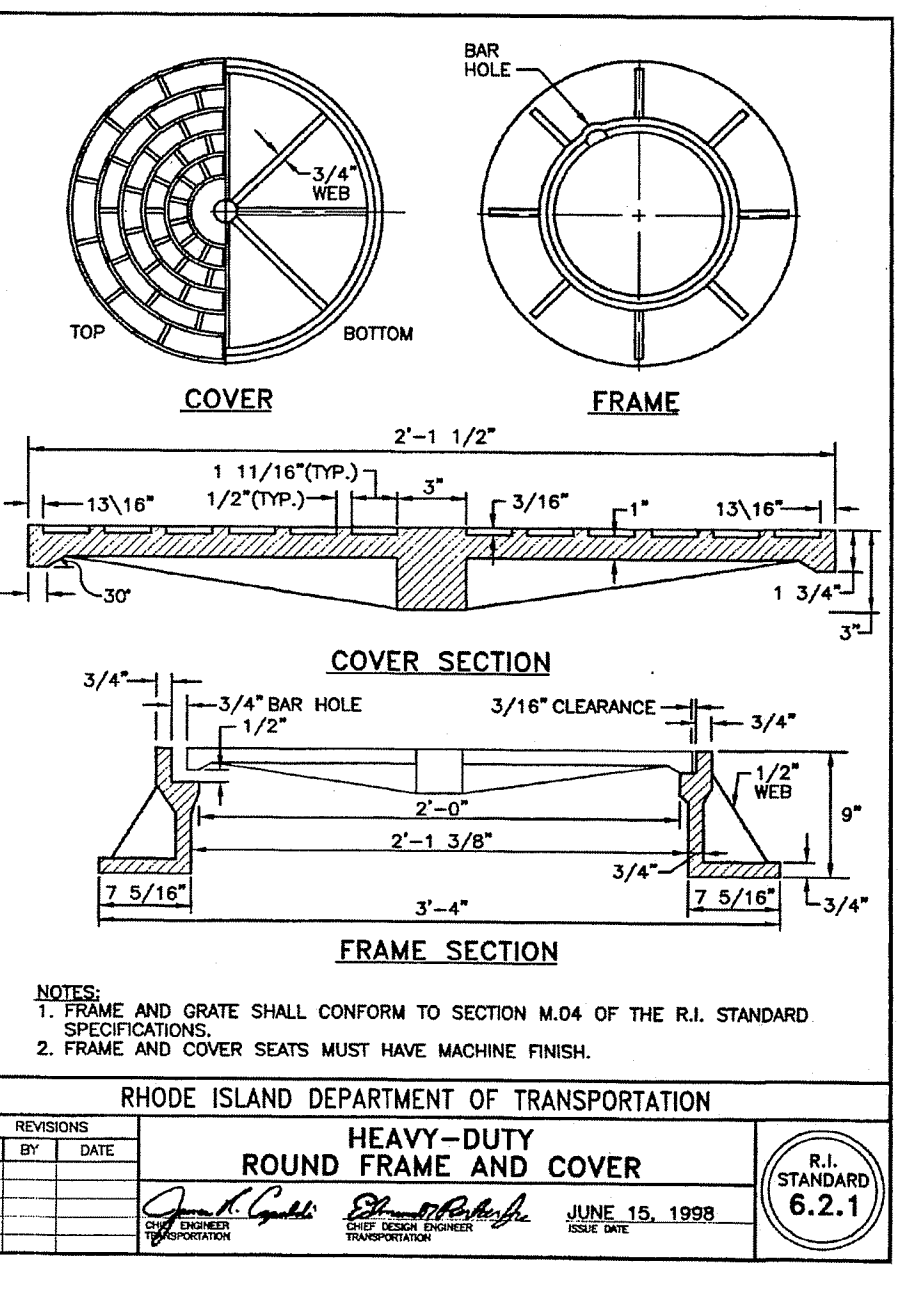
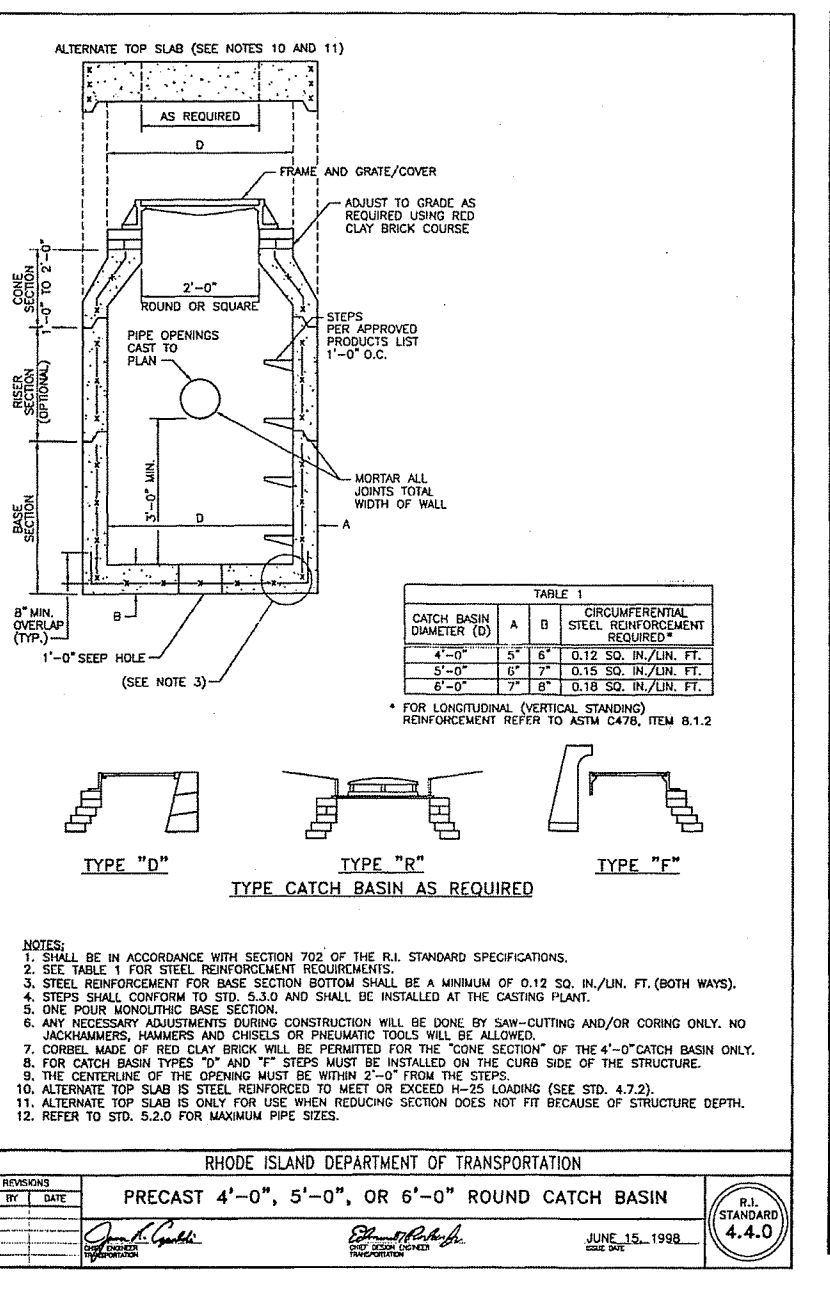
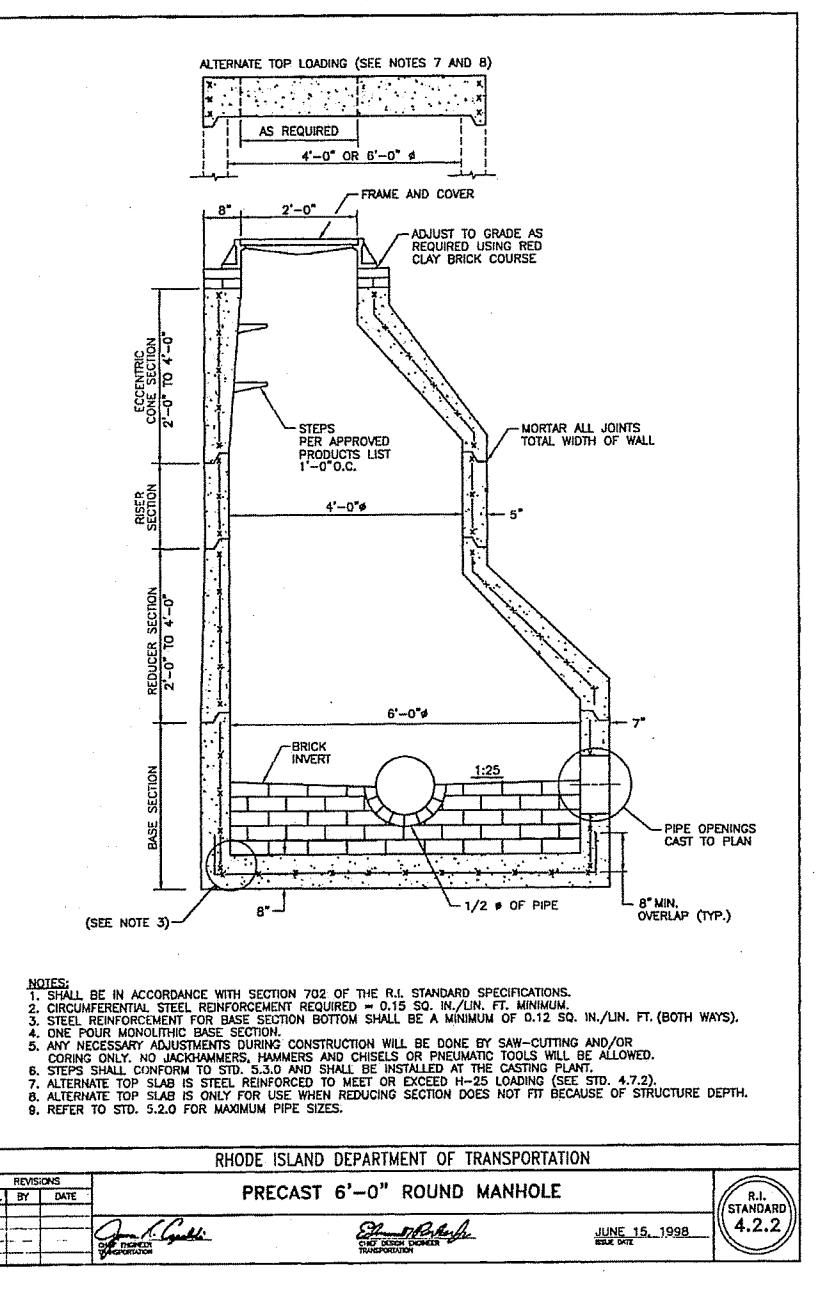
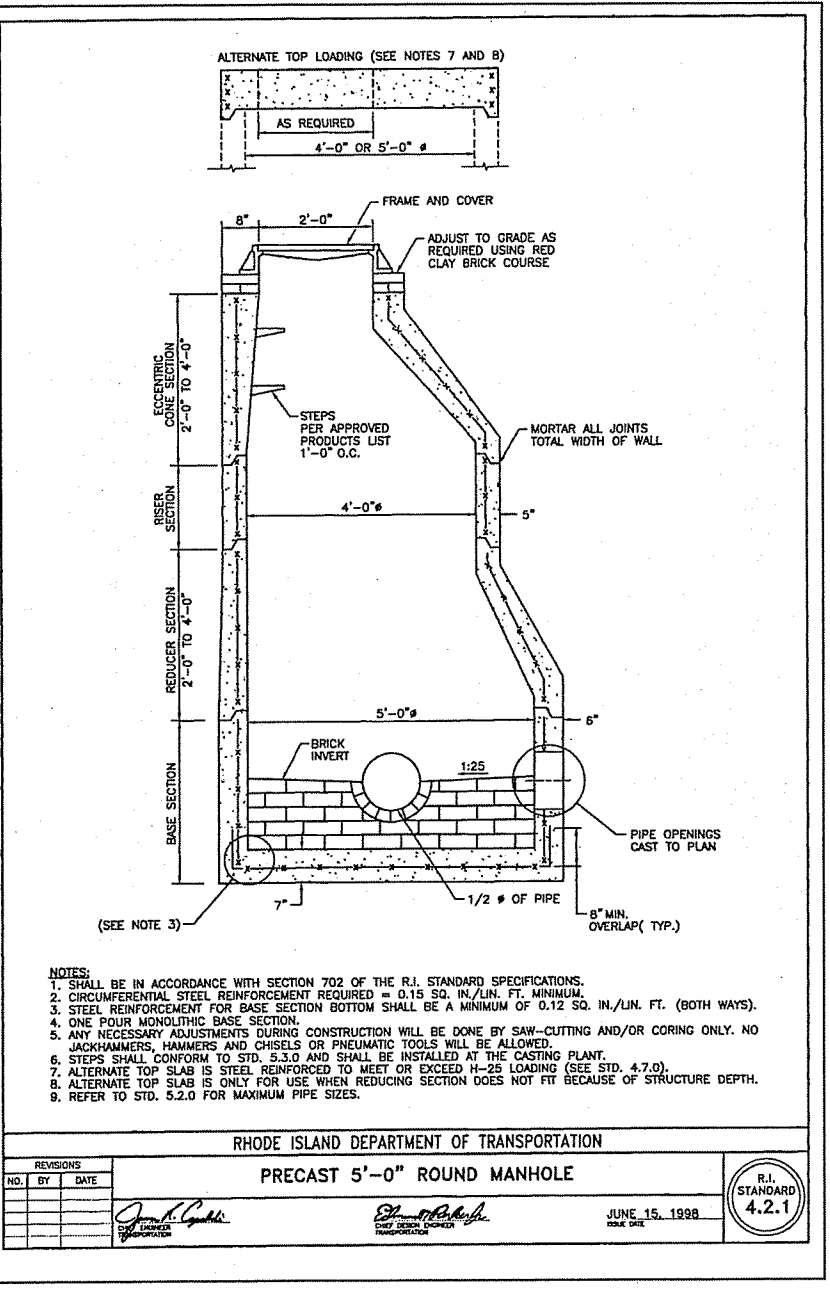
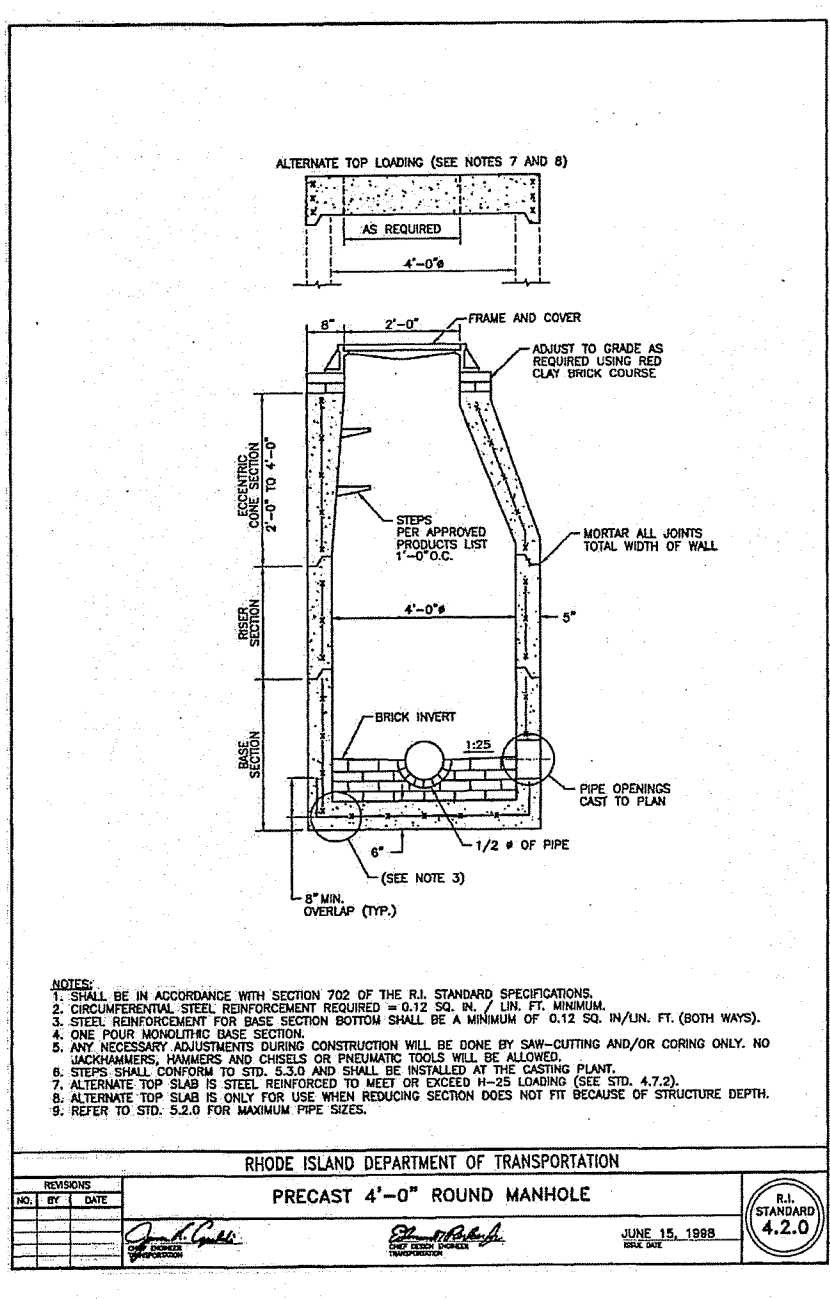


Table 1: Soil Evaluation Form for Newport Country Club, Site No. 1. Columns include Station, Depth, Soil Class, and Soil Category.

Table 2: Soil Evaluation Form for Newport Country Club, Site No. 2. Columns include Station, Depth, Soil Class, and Soil Category.

Table 3: Soil Evaluation Form for Newport Country Club, Site No. 3. Columns include Station, Depth, Soil Class, and Soil Category.

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 26 2019 FILE # 19-0032
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED BY: [Signature]

Table: REVISIONS. Columns: NO., DATE, DESCRIPTION.

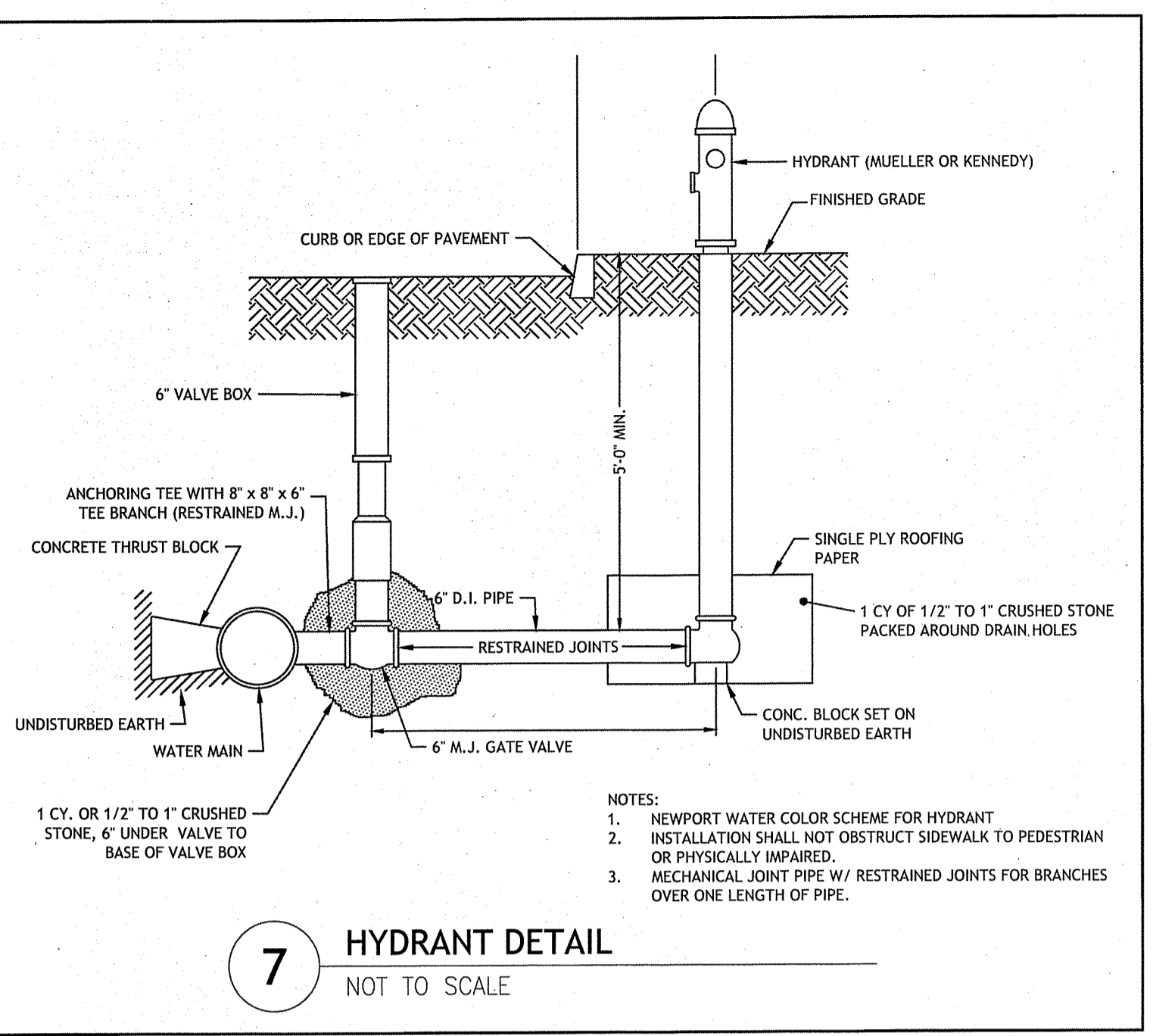
DESIGNED BY: WMLJR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: FEB. 2019
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

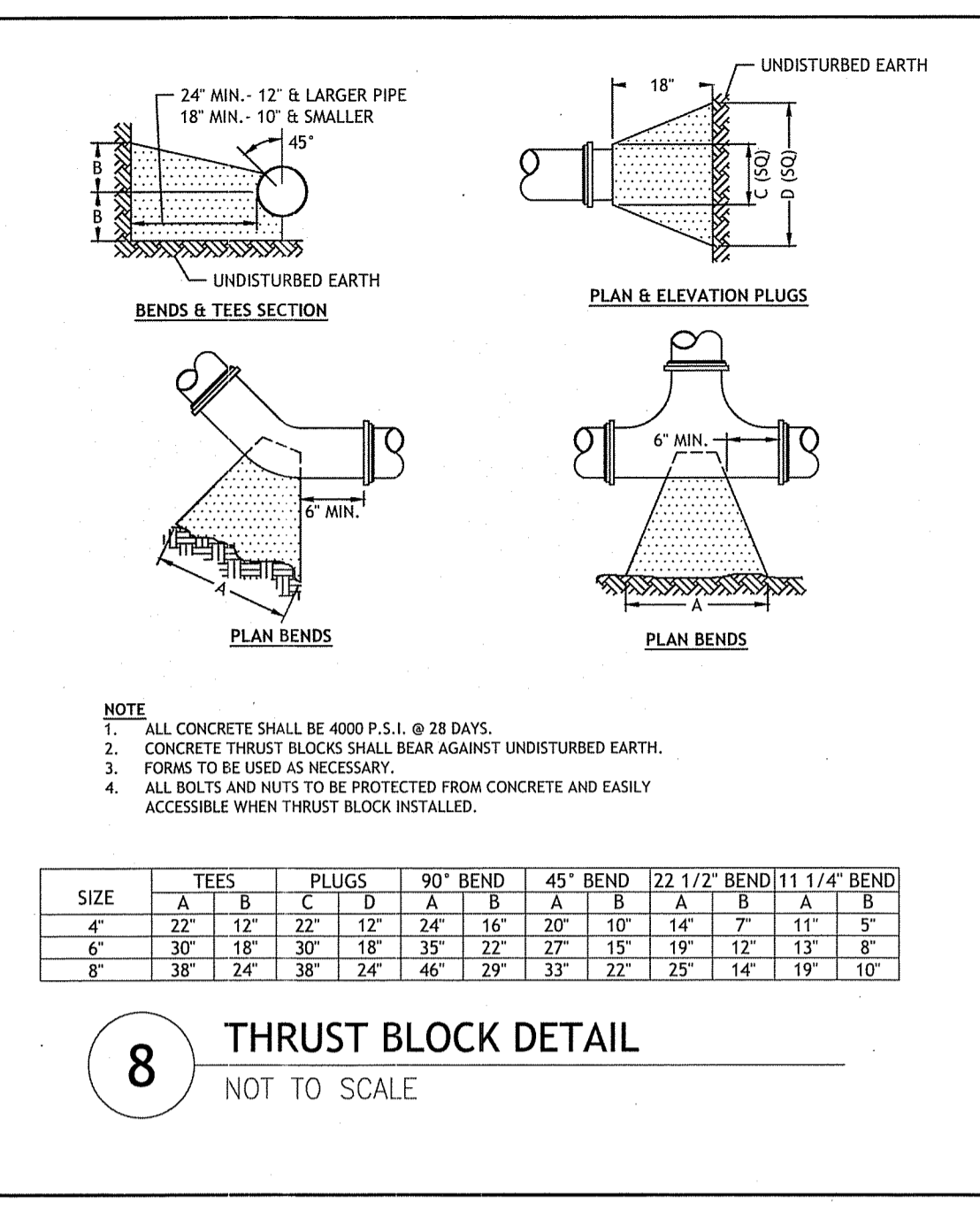
RI STANDARD DETAILS

SHEET 5 OF 8

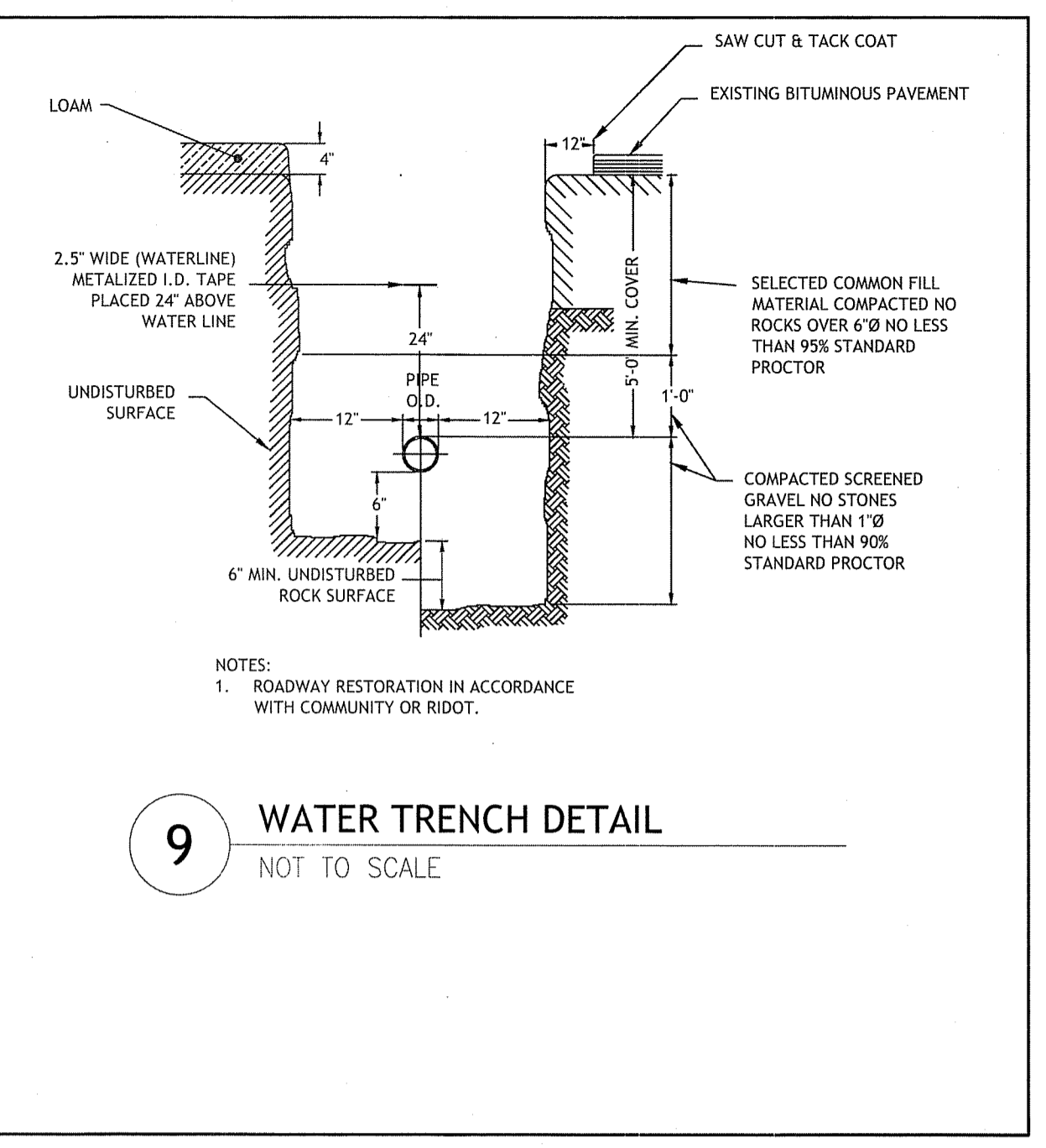
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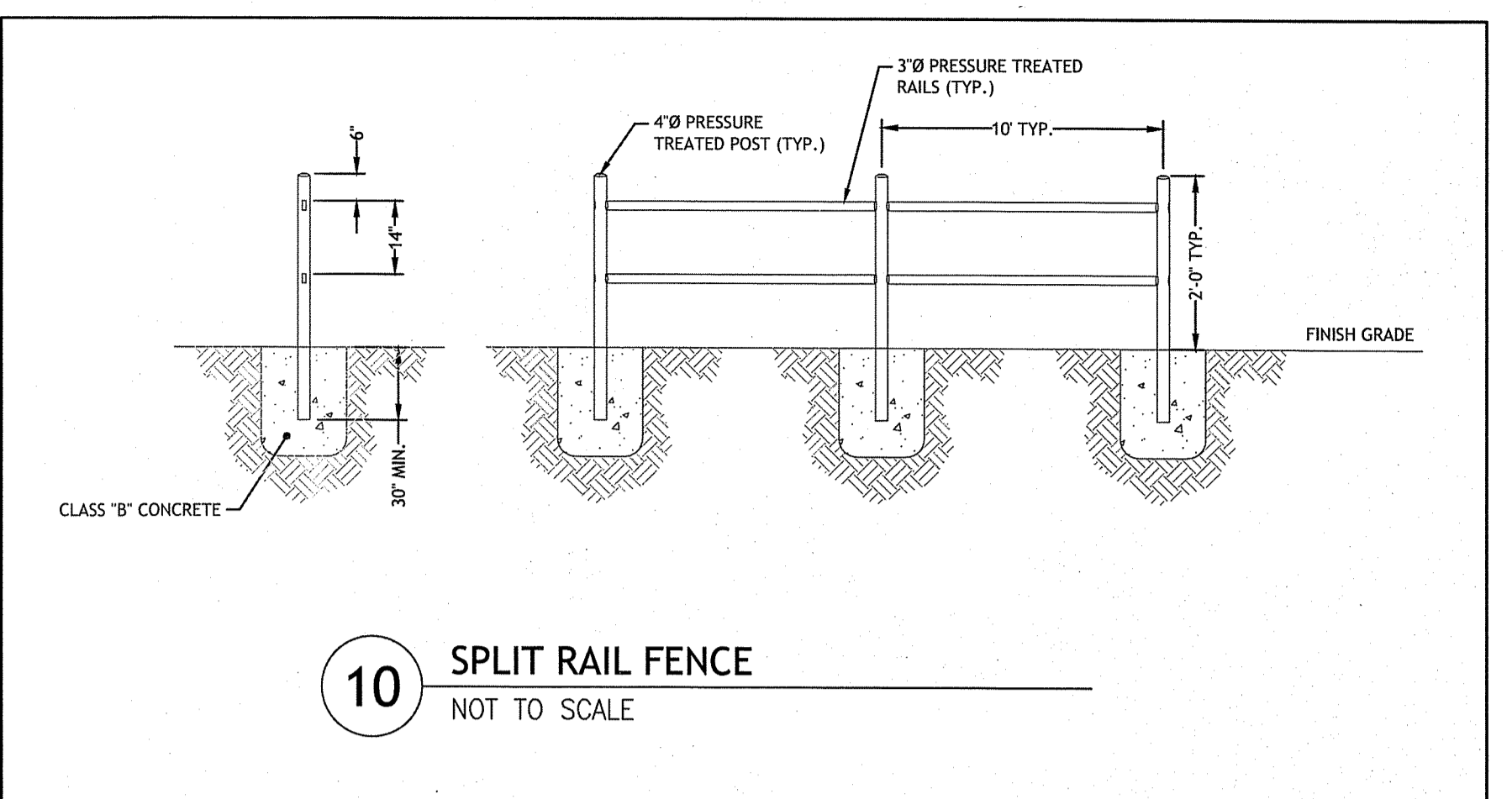
**7** HYDRANT DETAIL  
NOT TO SCALE



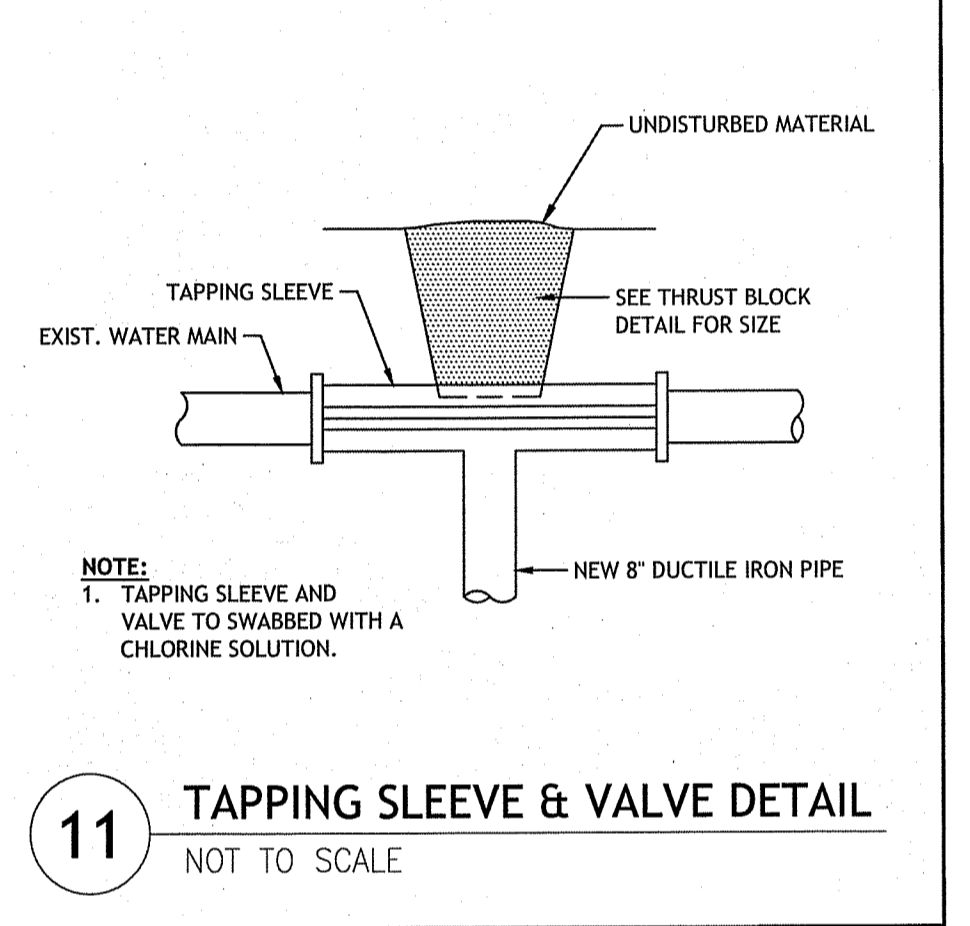
**8** THRUST BLOCK DETAIL  
NOT TO SCALE



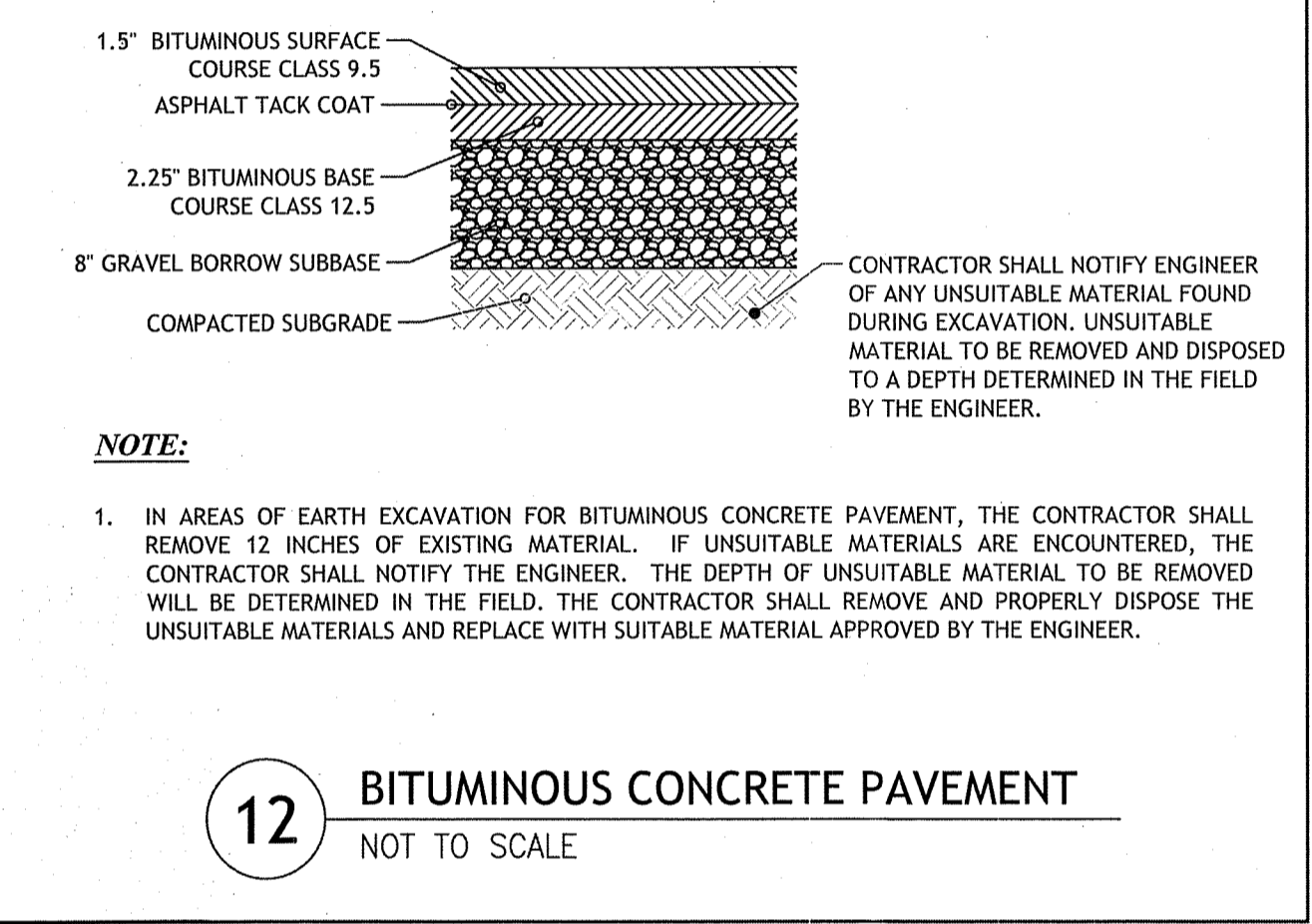
**9** WATER TRENCH DETAIL  
NOT TO SCALE



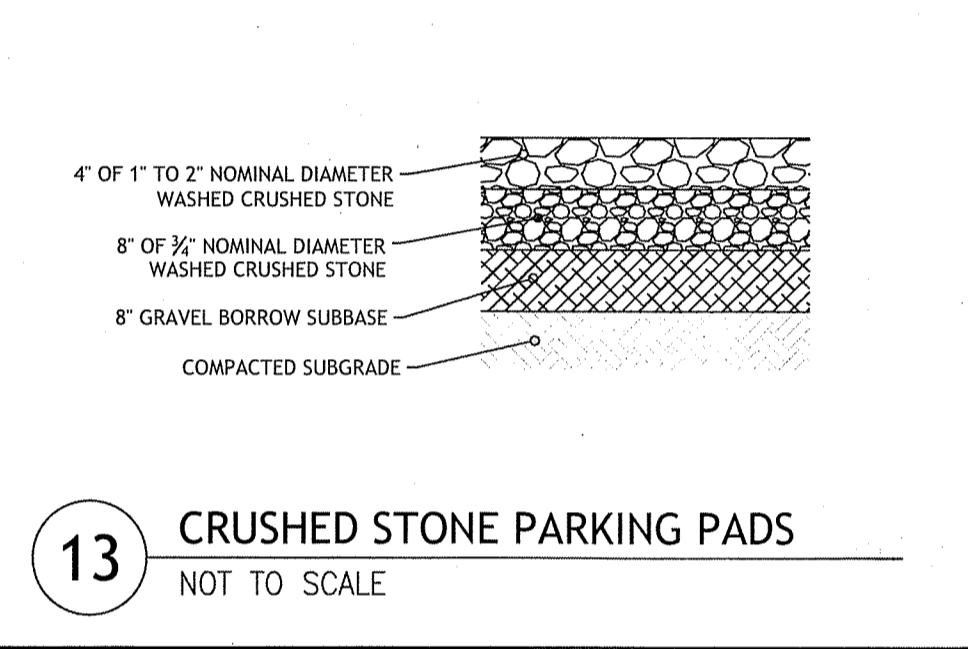
**10** SPLIT RAIL FENCE  
NOT TO SCALE



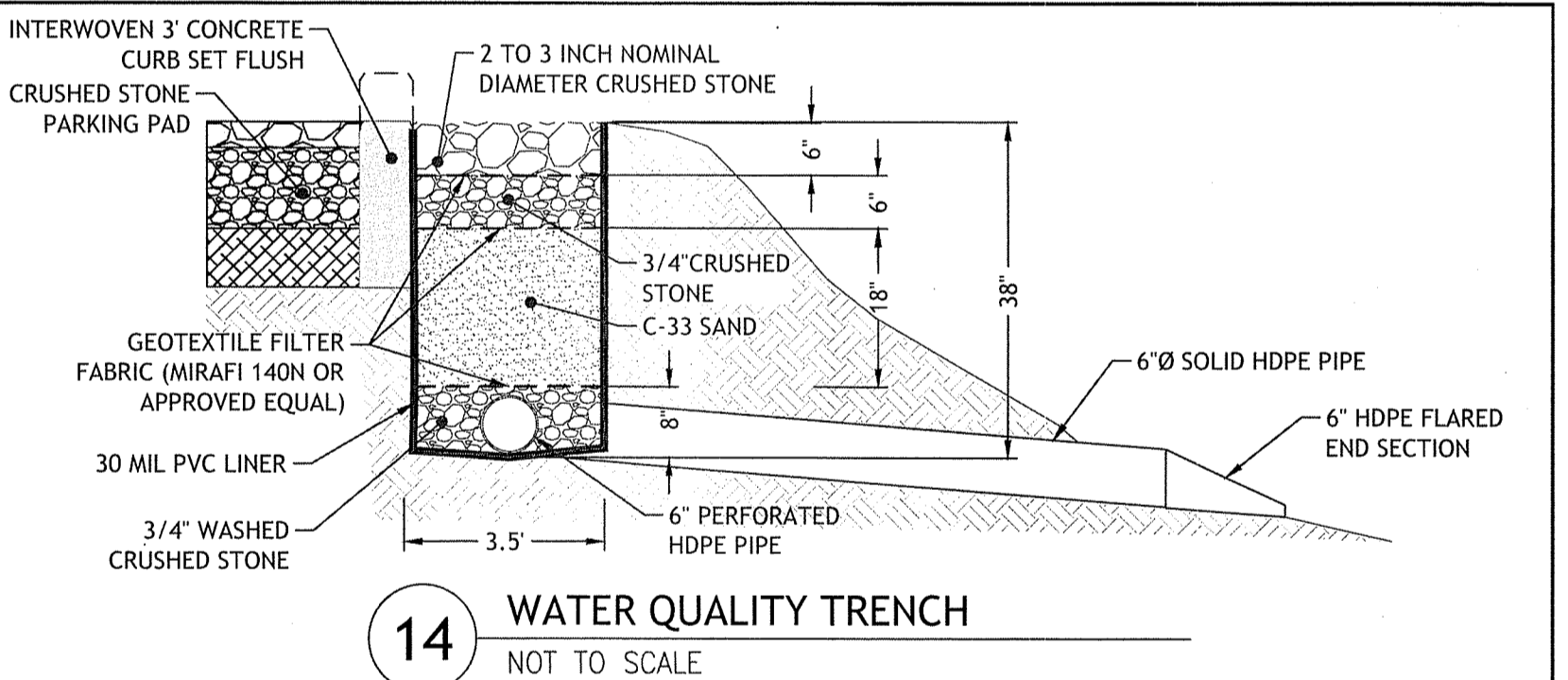
**11** TAPPING SLEEVE & VALVE DETAIL  
NOT TO SCALE



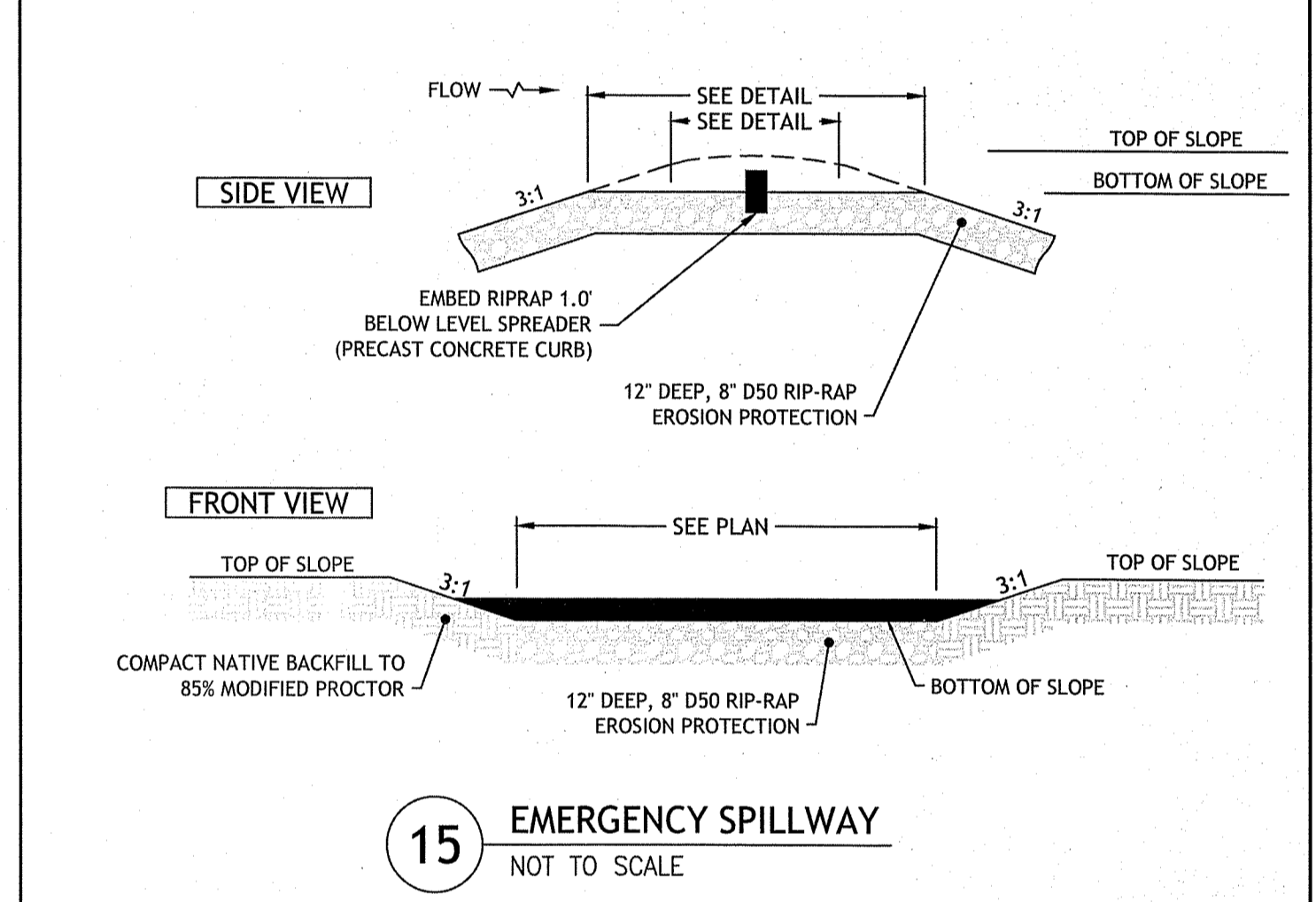
**12** BITUMINOUS CONCRETE PAVEMENT  
NOT TO SCALE



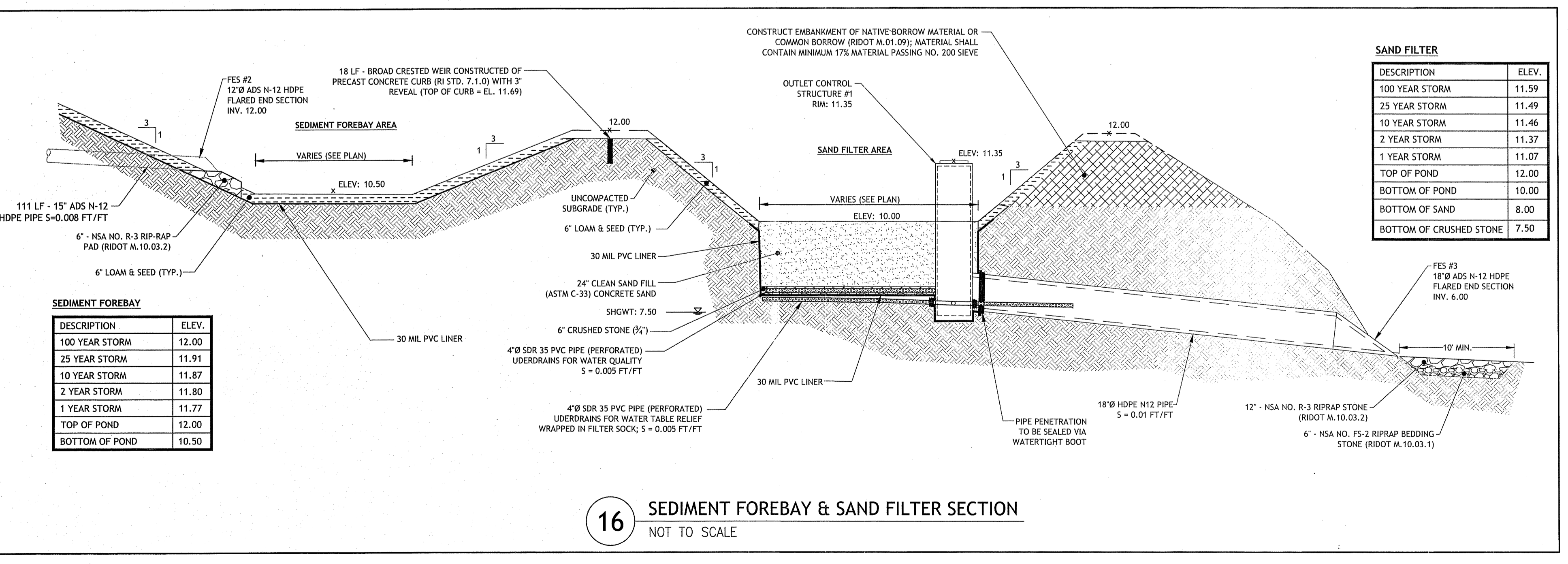
**13** CRUSHED STONE PARKING PADS  
NOT TO SCALE



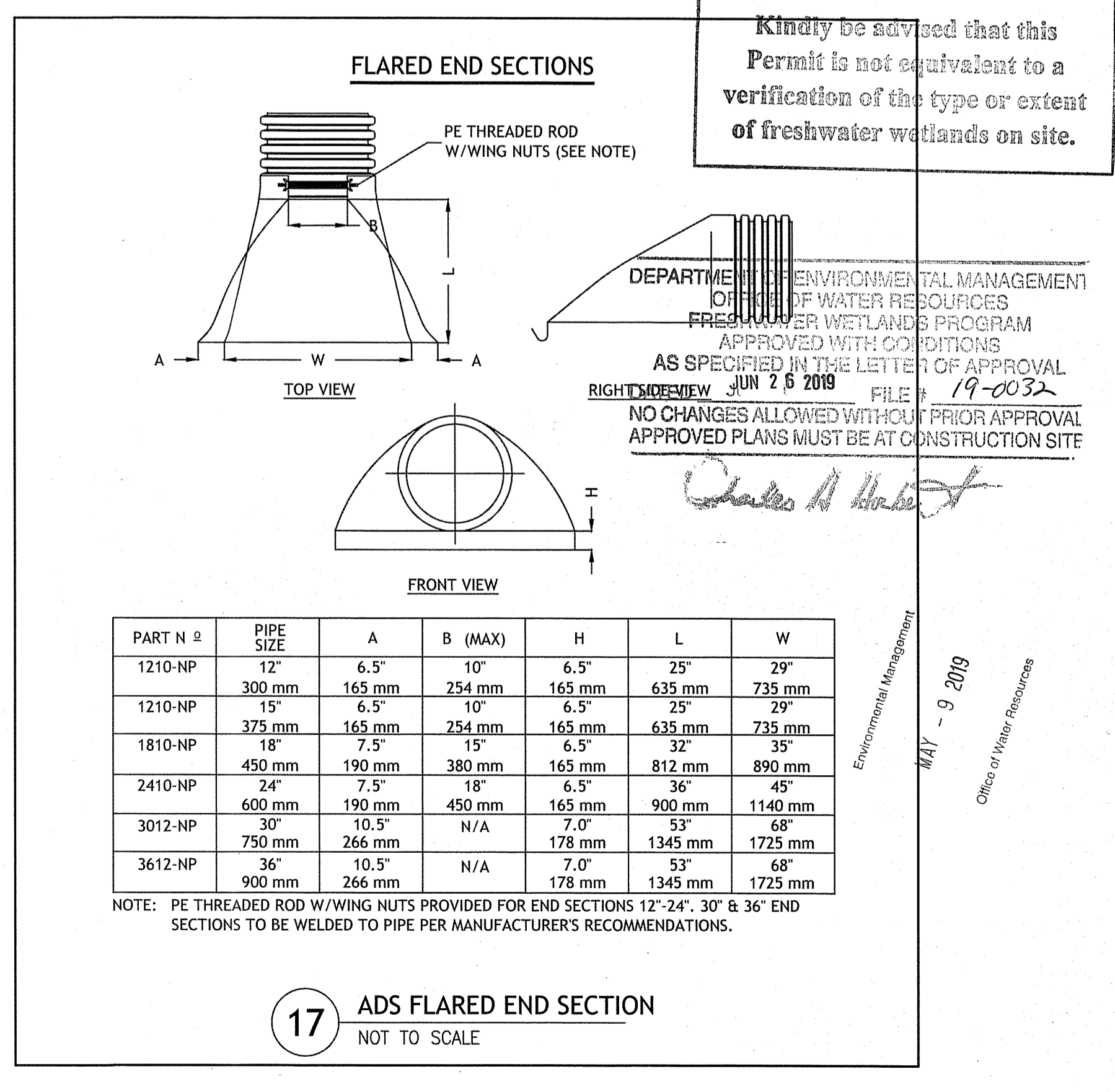
**14** WATER QUALITY TRENCH  
NOT TO SCALE



**15** EMERGENCY SPILLWAY  
NOT TO SCALE



**16** SEDIMENT FOREBAY & SAND FILTER SECTION  
NOT TO SCALE



**17** ADS FLARED END SECTION  
NOT TO SCALE

**JCE**  
JOE CASALI ENGINEERING, INC.  
CIVIL - SITE DEVELOPMENT - TRANSPORTATION  
DRAINAGE - WETLANDS - IBDS - TRAFFIC - FLOODPLAIN  
1601184441000 00109841101000 00109841101000

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
19-0032

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

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 FRESHWATER WETLANDS  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
RIGHTS REVIEW JUN 26 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

REVISIONS:

NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

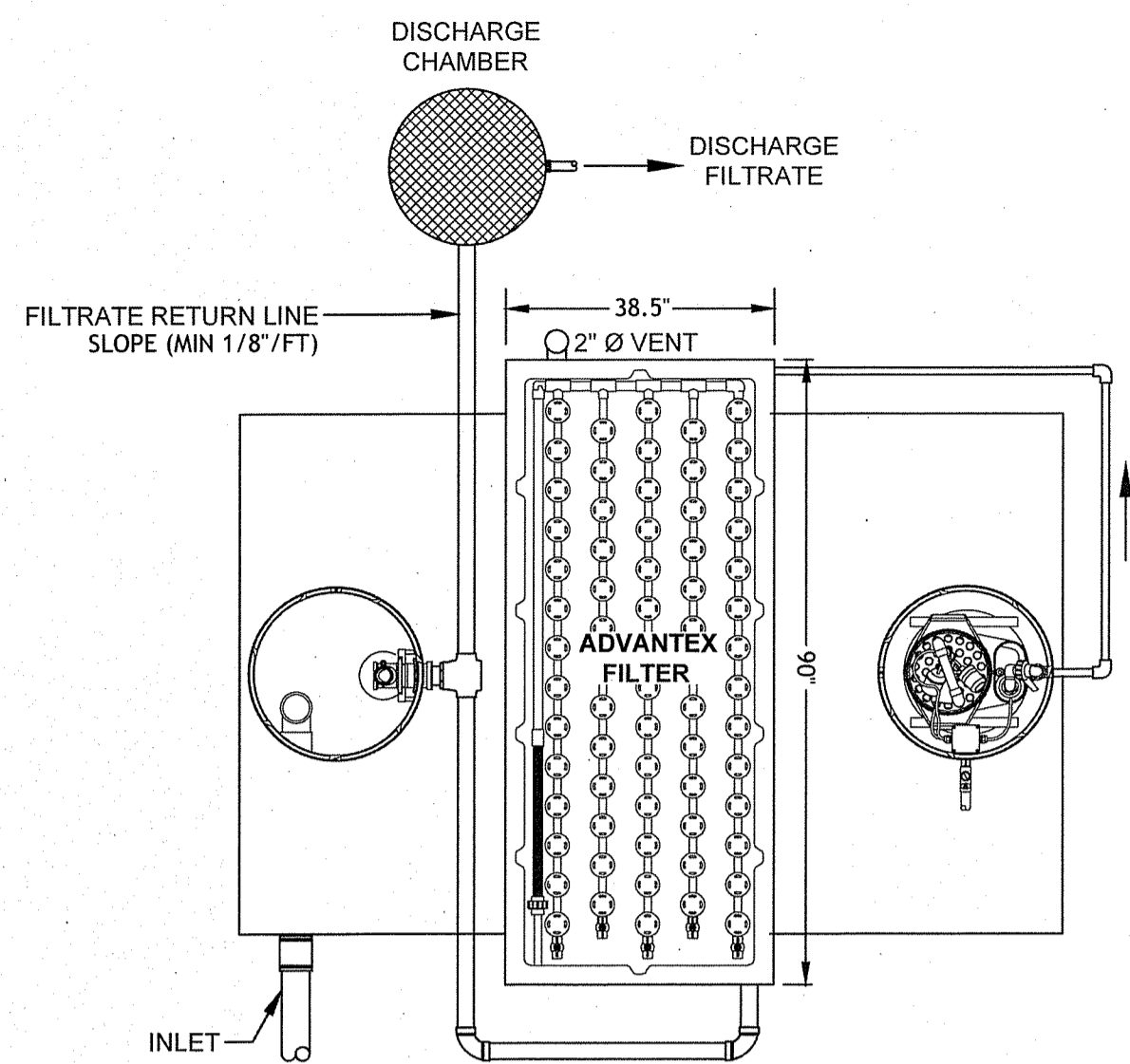
DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

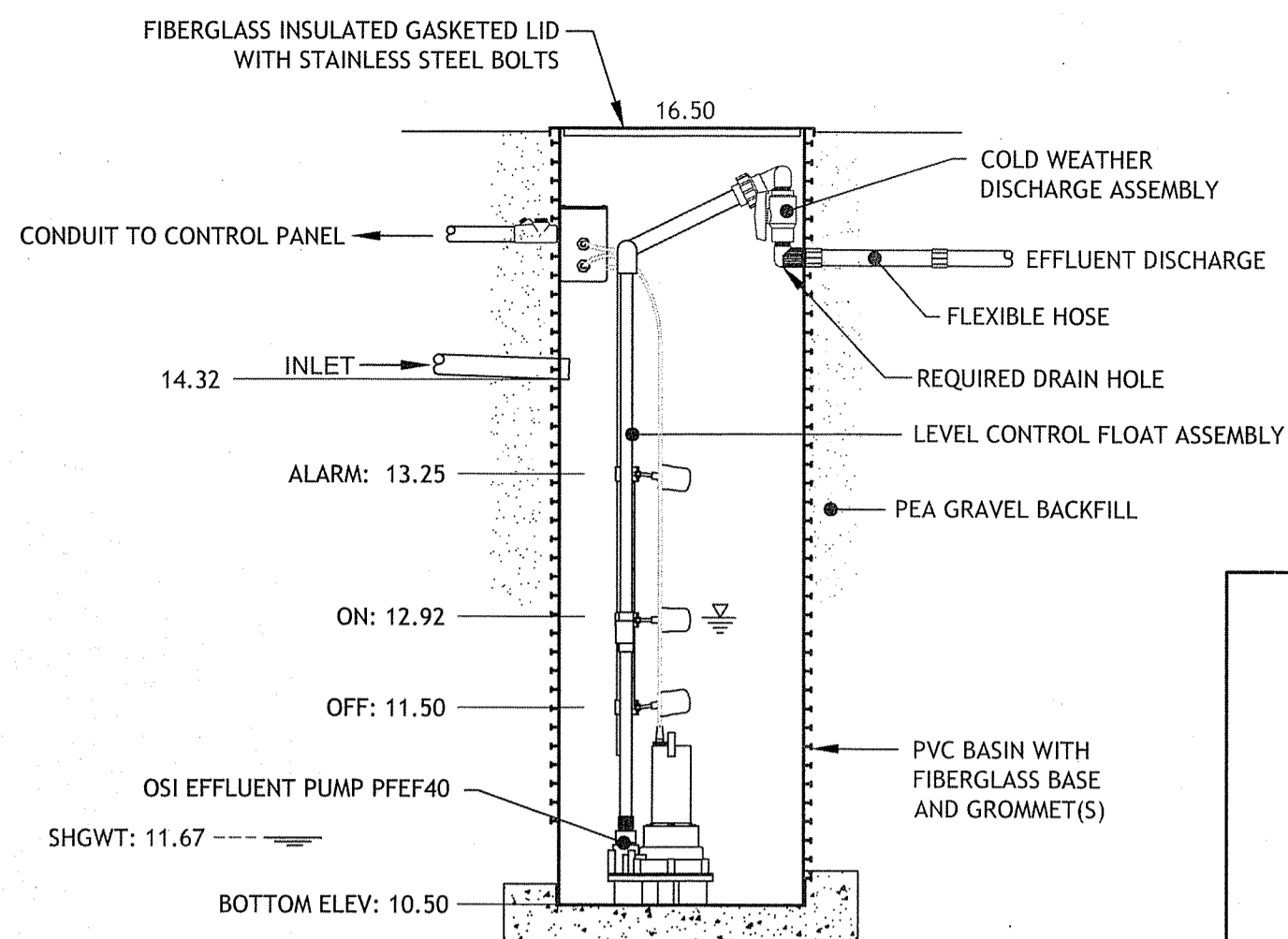
**CIVIL DETAILS**

**SHEET 6 OF 8**

Q:\18-26 Joe Nerome\ACAD\NCCC [Site Plan] R3.dwg May, 09, 2019 11:38am



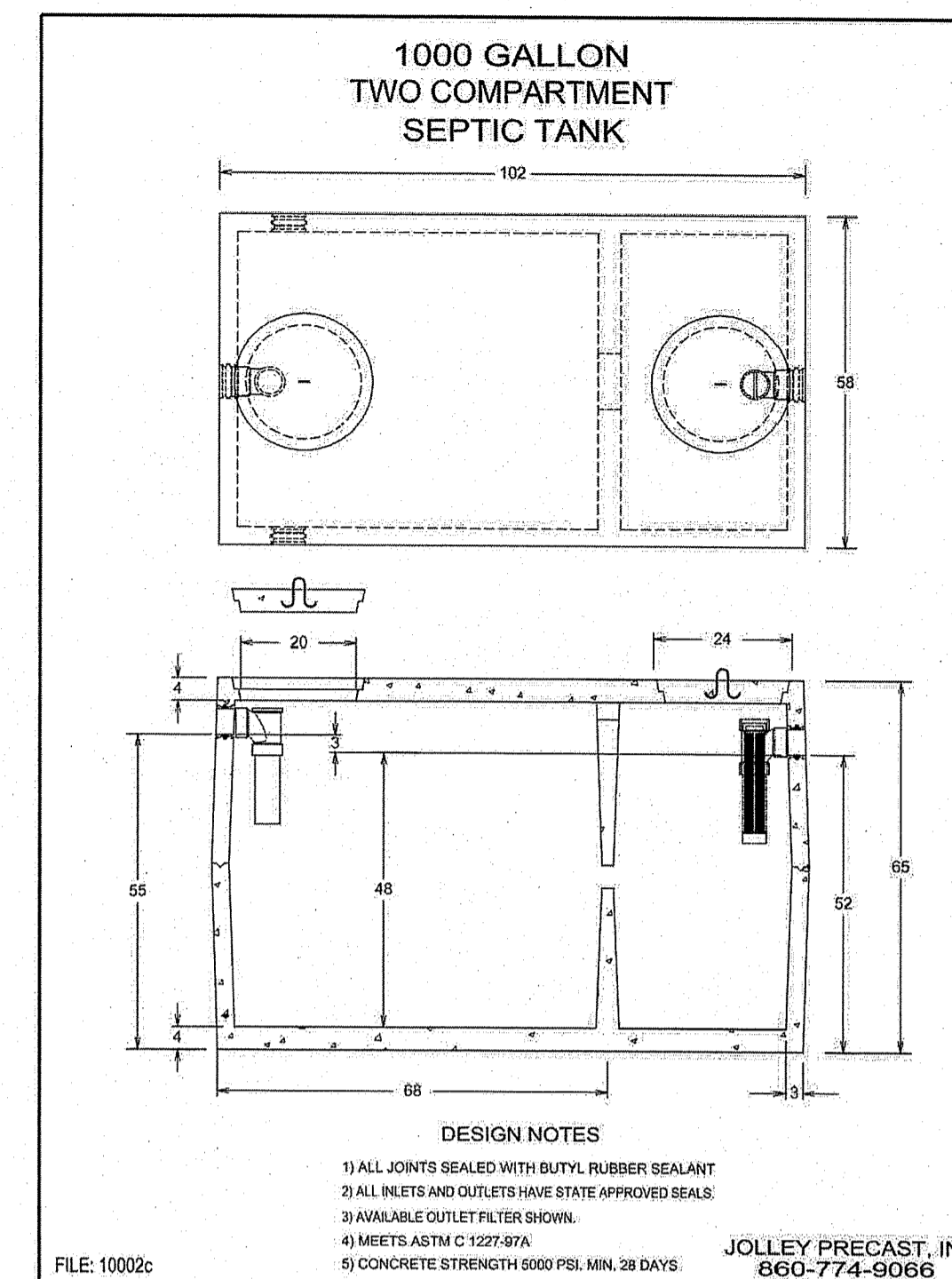
TOP VIEW



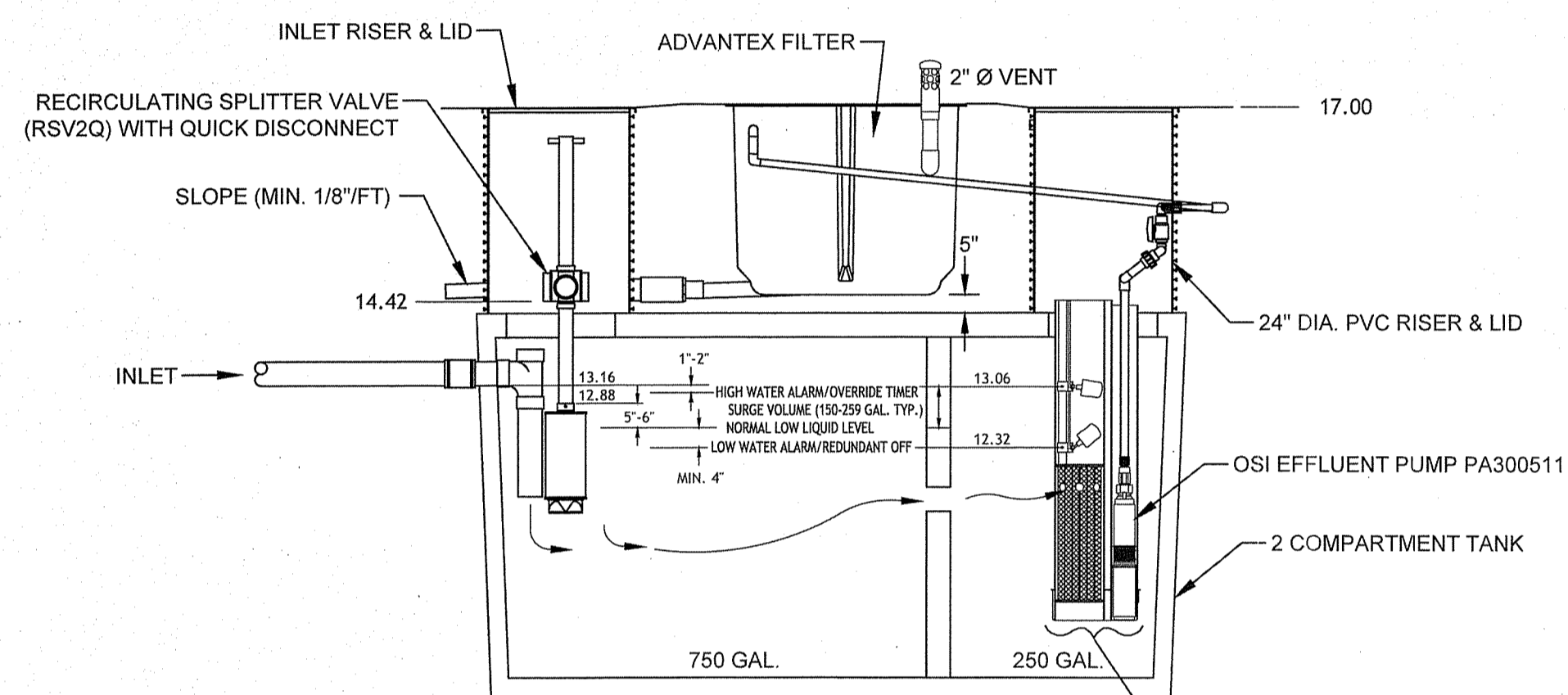
ORENCO PUMPING SYSTEM  
30" Ø PUMP CHAMBER

NOTE:  
DISCHARGE ASSEMBLY DRAWN TO SHOW KEY COMPONENTS.  
ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE  
DRAIN-BACK INTO THE PUMP BASIN TO AVOID FREEZING OF  
SHALLOW BURY DISCHARGE PIPING (WHERE APPLICABLE).

**ACTUAL VOLUME PER DOSE:**  
45 ORIFICES (1 ZONE) DOSED AT 0.20 GAL/DOSE = 9 GAL  
PIPE FILL-UP VOLUME (PER AUTOCALCS) = 43.08 GAL.  
TOTAL FLOW PER DOSE: 52.08 GAL.  
DESIGN CHECK:  
250 GAL PER DAY / 9.00 GAL. PER DOSE = 27.78 TIMES PER DAY  
24 PER DAY < 27.78 < 48 PER DAY \ OK  
FLOAT SETTINGS:  
9.00 GAL + 43.08 GAL = 52.08 GAL  
52.08 / 36.73 GALLONS/VERTICAL FT PUMP CHAMBER = 1.42 FT  
OFF TO ON FLOAT = 1.42 FT SEPARATION



DESIGN NOTES  
1) ALL JOINTS SEALED WITH BUTYL RUBBER SEALANT  
2) ALL INLETS AND OUTLETS HAVE STATE APPROVED SEALS  
3) AVAILABLE OUTLET FILTER SIZES  
4) MEETS ASTM C 1227-87a  
5) CONCRETE STRENGTH 5000 PSI, MIN. 28 DAYS  
JOLLEY PRECAST, INC. 860-774-9086  
FILE: 10002c



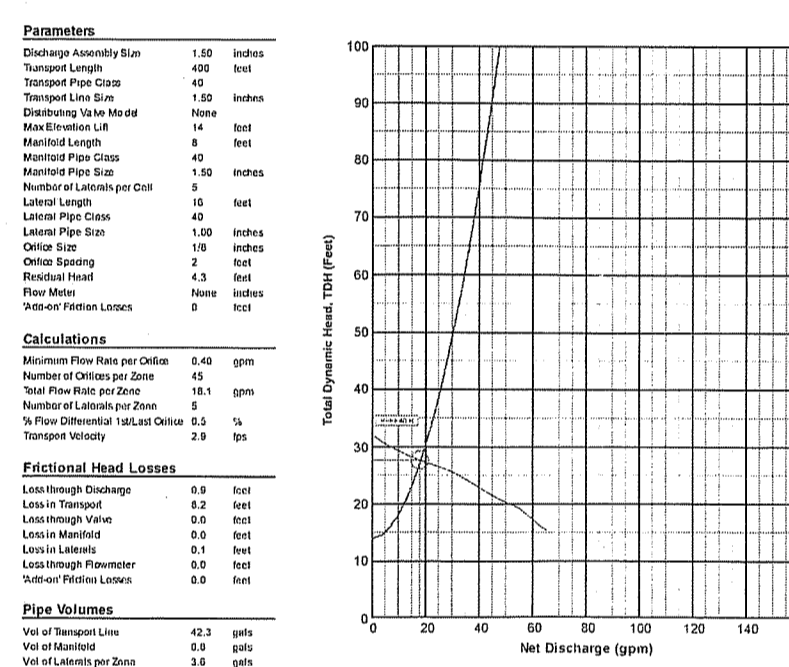
SECTION VIEW

ADVANTEX TREATMENT SYSTEM - AX20 SERIES - MODE 3B

NOT TO SCALE

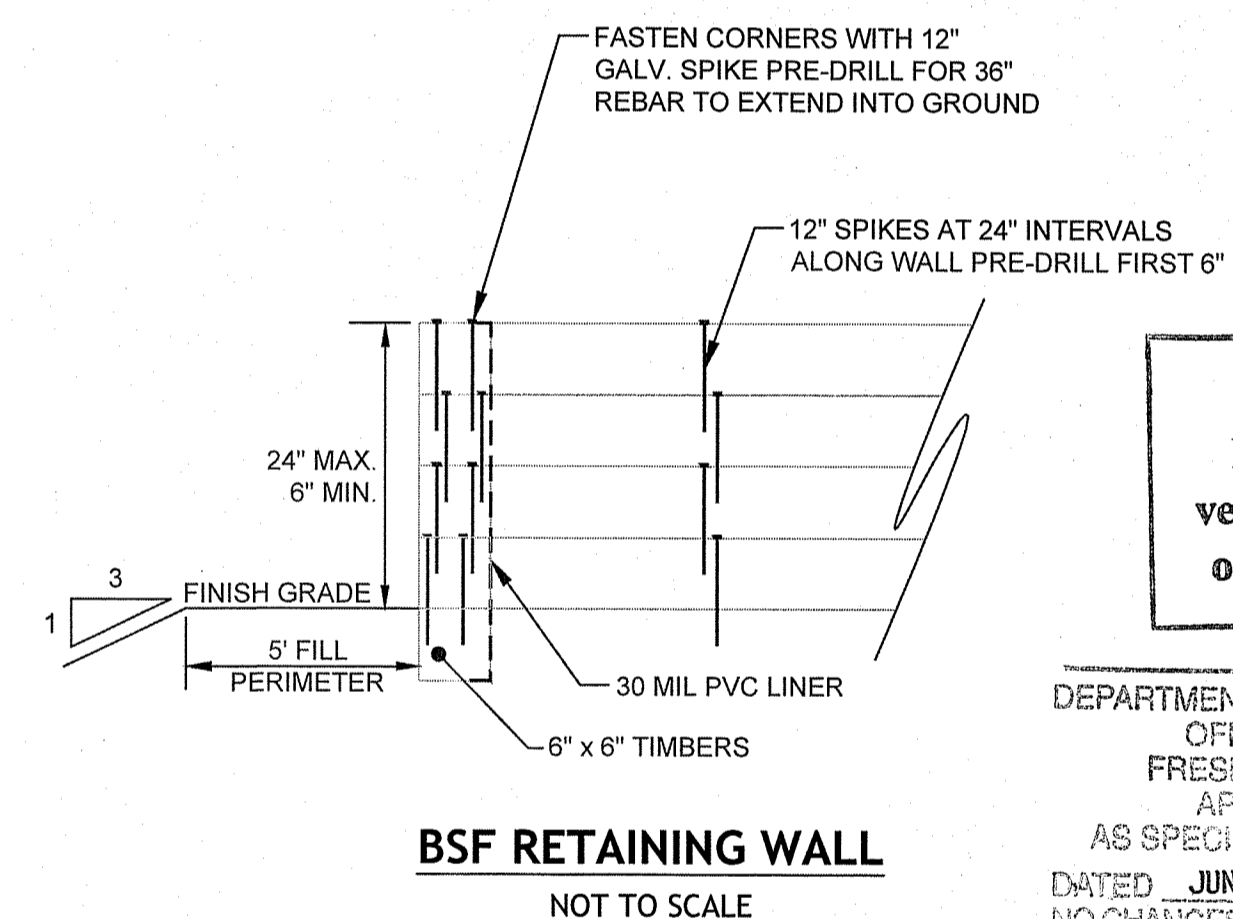
NOTE:  
ADVANTEX AX20 TREATMENT SYSTEM IS DESIGNED WITH THE USE OF A VERICOMM  
TELEMETRY CONTROL PANEL MODEL VCOM-AXB1HT. HOUSE ELECTRICIAN TO PROVIDE  
1-10 AMP CIRCUIT, 1-20 AMP CIRCUIT AND PHONE JACK FOR PANEL CONTROLS.

Pump Selection for a Pressurized System - Commercial Project



Parameter	Value
Design Discharge (gpm)	100
Design Head (FT)	60
Minimum Flow (gpm)	40
Maximum Flow (gpm)	140
Design Head (FT)	60
Minimum Head (FT)	40
Maximum Head (FT)	80

ORENCO PUMP SELECTION

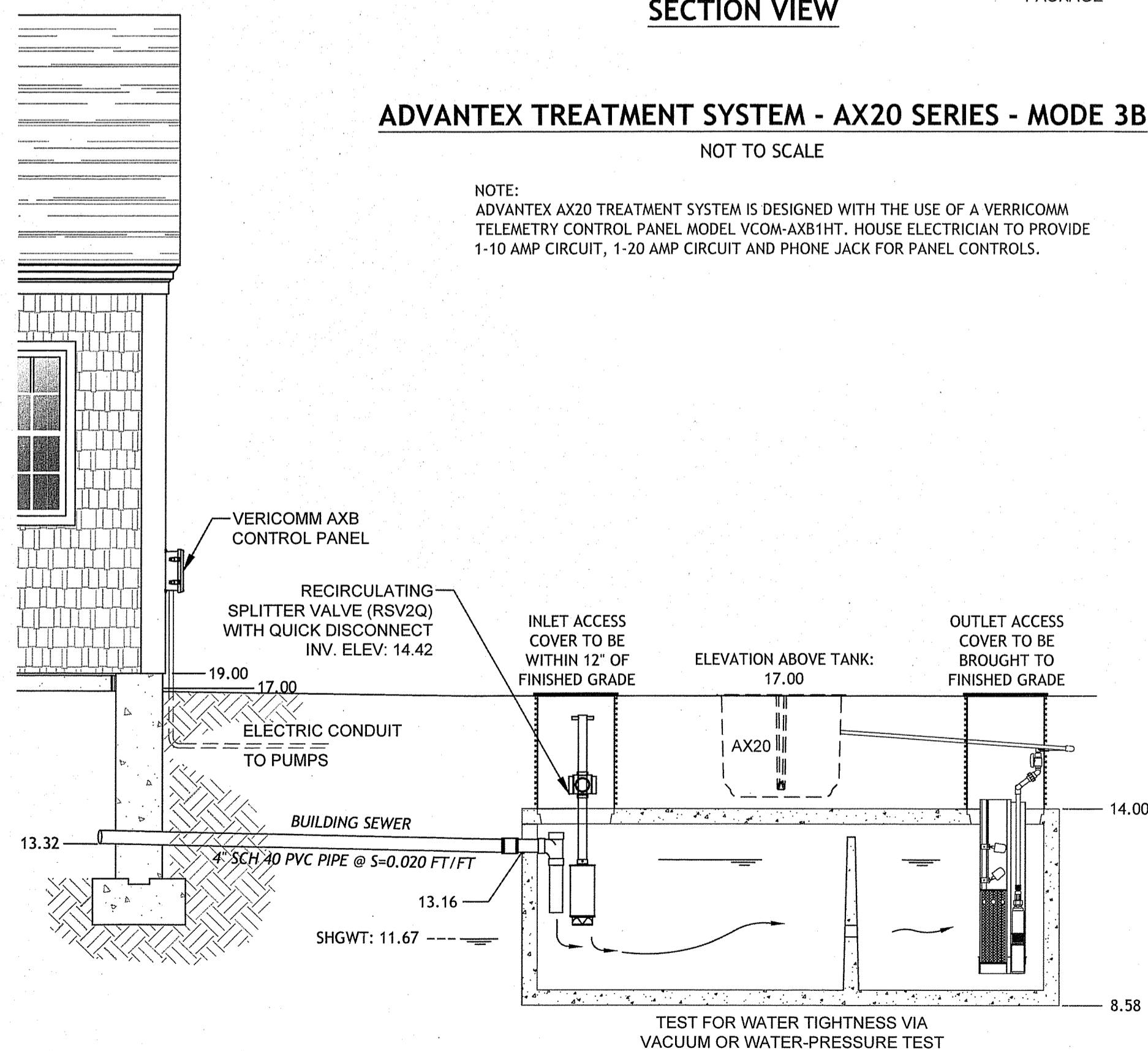


BSF RETAINING WALL

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.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
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DATED JUN 26 2019 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



TYPICAL SYSTEM PROFILE

NOT TO SCALE

ALL SOD, ORGANIC MATTER AND FILL IN THE PROPOSED LEACHFIELD  
AND FIVE (5) FEET AROUND AND BELOW SHALL BE REMOVED TO AN  
ELEVATION OF APPROXIMATELY 20.50 TO 22.50 PRIOR TO OWTS  
INSTALLATION. SCARIFY TOP 3" OF NATIVE MINERAL SOIL AND BRING  
TO SOIL/SAND INTERFACE WITH CLEAN BANK RUN GRAVEL.  
BANK RUN GRAVEL SPECIFICATIONS TO BE APPROVED BY DESIGN  
ENGINEER OF RECORD PRIOR TO INSTALLATION.

THREADED END CAP

NOT TO SCALE

NEWPORT COUNTRY CLUB  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

REVISIONS:  
NO. DATE DESCRIPTION  
1 5/8/2019 RIDEM COMMENTS

DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR  
CONSTRUCTION

OWTS  
DETAILS I

SHEET  
7 OF 8

**GENERAL OWTS NOTES:**

THIS DESIGN IS SUBMITTED TO RIDEM TO BE REVIEWED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. CONSTRUCTION OF THIS SYSTEM WILL REQUIRE THE DESIGNER'S CERTIFICATE OF CONSTRUCTION FOR OWTS.

UNLESS OTHERWISE SPECIFIED, THE SYSTEM HAS NOT BEEN DESIGNED WITH THE PROVISIONS FOR GARBAGE GRINDERS.

THERE ARE NO KNOWN PUBLIC WELLS, EXISTING OR PROPOSED, WITHIN 500 FEET OF THE DESIGNED SYSTEM UNLESS SHOWN.

LEACHFIELD SHALL NOT BE WITHIN 25 FEET OF ANY UPGRADIENT SUBSURFACE DRAIN OR WITHIN 50 FEET OF ANY DOWNGRADE DRAIN, INCLUDING FOUNDATION DRAINS. THERE ARE NO KNOWN SUBSURFACE DRAINS 25 FEET UPGRADIENT OR 50 FEET DOWNGRADE OF THE PROPOSED LEACHFIELD.

NO DRIVING, PARKING OR PAVING WITHIN 10' OF BSF.

THIS SEWERAGE DISPOSAL SYSTEM SHALL CONFORM TO ALL THE REGULATIONS UNDER SECTIONS 42-17-1-2(1), (M) (R) AND (S) AND SECTION 23-19-5-4 AND CHAPTER 42-35 OF THE GENERAL LAWS OF RHODE ISLAND.

ALL PIPES EXCEPT IN THE LEACHING FIELD SHALL BE SOLID 4 INCH DIAMETER SDR 35 WITH WATER TIGHT JOINTS OR EQUIVALENT UNLESS OTHERWISE SPECIFIED.

ALL GRAVITY PIPES UNLESS OTHERWISE SPECIFIED SHALL HAVE A SLOPE NOT LESS THAN 1/8 INCH PER FOOT BUT NO GREATER THAN 3%.

SEPTIC TANK AND DOSING TANK SHALL BE SET ON A LEVEL STABLE BASE THAT WILL NOT SETTLE.

INSPECTIONS OR AS-BUILT PLANS ARE REQUIRED, DESIGNER MUST BE NOTIFIED 48 HOURS IN ADVANCE AND COMPONENTS OF SYSTEM MUST BE LEFT EXPOSED.

**BOTTOMLESS SAND FILTER NOTES:**

THE BOTTOMLESS SAND FILTER (BSF) IS INCORPORATED AS THE DISPOSAL BED IN THIS DESIGN TO MAXIMIZE THE REMOVAL OF PATHOGENIC ORGANISMS (PAGE 6 RIDEM TRC GUIDELINES).

PER RIDEM NOTICE 4/30/04, TOTAL PEA STONE DEPTH IS INCREASED TO 9" TO REDUCE WINTER FREEZE POTENTIAL.

THE BSF AREA IS TO BE LOCATED AND STAINED IN THE FIELD BY THE INSTALLER PRIOR TO CONSTRUCTION. PROTECTION AGAINST HEAVY VEHICLE TRAFFIC MUST BE ESTABLISHED IN THE BSF AREA PRIOR TO INITIATING ANY CONSTRUCTION OPERATIONS ON THE SITE. DEGRADATION OF THE PROPOSED SITE AREA WILL REQUIRE A RE-DESIGN.

SYSTEM COMPONENTS WITHIN THIS DESIGN ARE AVAILABLE FROM ORENCO SYSTEMS INC., 814 AIRWAY AVENUE, SUTHERLIN, OR. 97479. LOCAL DEALER INFORMATION IS AVAILABLE AT 1-800-348-9843 OR WWW.ORENCO.COM.

A MINIMUM TEN (10) FEET MUST BE MAINTAINED BETWEEN THE BSF AND ADJACENT TREES AND SHRUBS.

INTERMITTENT PRESSURE DOSED EFFLUENT WILL PROVIDE A UNIFORM DISTRIBUTION OF WASTE WATER OVER THE BSF AREA, MINIMIZING LOCALIZED SATURATION. LATERAL GATE VALVES ARE DESIGNED FOR PLACEMENT OFF THE HEADER LINE SO AS TO EQUALIZE HYDRAULIC PRESSURE IN THE DISPERSAL.

THE PRESSURE LINE IS TO BE SLOPED BACK TOWARDS THE PUMP CHAMBER FROM THE BSF FIELD TO ELIMINATE FREEZING.

THE BSF SAND MEDIA MUST CONFORM TO ASTM C-33 SPECIFICATIONS. EFFECTIVE SIZE (D10) OF 0.3 MM AND A UNIFORMITY COEFFICIENT (D60/D10) OF 3.0 TO 4.0. MAXIMUM MATERIAL PASSING THE NUMBER 200 SIEVE SHALL BE 1%. THE INSTALLER SHALL PRODUCE GRADATION ANALYSIS RESULTS FOR THE MATERIAL PROVIDED FROM THE SUPPLIER.

PERIMETER STRIPPING OF THE SOIL MATERIAL BELOW THE BSF IS PROHIBITED, UNLESS FILL MATERIAL IS PRESENT.

THE WALLS OF THE BSF ENCLOSURE MUST BE LINED WITH A 30 MIL PVC LINER WITH ALL BOOTS, PATCHES, REPAIRS, AND SEAMS HAVING THE SAME PROPERTIES AS THE LINER.

ANY PENETRATION THROUGH THE PVC LINER WALL SHALL BE DONE WITH A PVC BOOT ATTACHMENT GLUED TO THE LINER WITH APPROPRIATE RESILIENT SEALER.

EXCAVATOR/BACKHOE BUCKET USED TO PLACE MEDIA SHALL BE WASHED THOROUGHLY BEFORE LOADING PROCESS.

SAND MEDIA SHALL BE PLACED IN 6 INCH LIFTS AND WETTED TO PROVIDE EVEN SETTLING. AFTER PLACEMENT OF EACH LIFT EDGES OF THE FILTER SHALL BE WALKED DOWN, CLEAN SHOES ARE REQUIRED FOR THIS PROCESS.

AFTER SAND MEDIA HAS SETTLED, 3 INCHES OF 3/8 INCH WASHED PEA STONE SHALL BE PLACED OVER SAND MEDIA. AFTER INSTALLATION OF DISTRIBUTION LATERALS ADD 6 INCHES OF WASHED PEA STONE TO COVER THE SYSTEM. NO FILTER FABRIC OF ANY KIND IS TO BE USED BETWEEN THE SAND AND OVERLYING PEA STONE LAYERS.

THE ELEVATION OF THE BSF INVERT SHALL EXTEND 5 FEET BEYOND THE WALL PERIMETER.

WHILE NOT NORMALLY EXPERIENCED, THERE HAVE BEEN REPORTED INSTANCES WHERE SAND FILTER SYSTEMS HAVE BEEN KNOWN TO EXPERIENCE PROBLEMS WITH FREEZING OF PIPES UNDER EXTREME COLD CONDITIONS. WHILE MOST SAND FILTER INSTALLATIONS OPERATE PROPERLY AND WITHOUT FREEZING PROBLEMS, THE POSSIBILITY OF FREEZING MAY EXIST UNDER CERTAIN CIRCUMSTANCES. SHOULD THE OWNER WISH TO MAXIMIZE THE AVOIDANCE OF THIS POSSIBILITY, THE OWNER MAY ELECT THE OPTION OF INSTALLING AN ELECTRIC HEAT TRACING SYSTEM ON THE PIPELINES. OWNER SHOULD CONTACT MANUFACTURERS/SUPPLIERS OF SUCH EQUIPMENT FOR FURTHER INFORMATION.

SUPPORT WALLS ARE NEEDED TO PREVENT CAVING OF FILTER WALLS DURING CONSTRUCTION. THESE WALLS SHALL BE RIGID AND MADE OF PLYWOOD (OR EQUIVALENT) AND 2" X 4" SUPPORT BOARDS.

A PERMANENT TOP FRAME STRUCTURE MUST BE PROVIDED ON ANY PORTION OF THE BSF THAT IS INSTALLED ABOVE GRADE (MAX OF 24" ABOVE GRADE). THE PERIMETER OF THE BSF, BELOW THE REQUIRED PERIMETER OF TIMBERS, MAY BE BERMED WITH NATIVE SOIL OR OTHER MATERIAL SUCH AS LANDSCAPE STONE OR OTHER NON-DEGRADING MATERIAL. BELOW GRADE USE OF TIMBERS IS PROHIBITED.

**ADVANTEX AX 20 TREATMENT SYSTEM NOTES:**

THE AX 20 SYSTEM IS AN ORENCO COMPONENT SYSTEM AND THIS DESIGN IS PREDICATED UPON AN INSTALLATION IN THE SERIES 38 MODE. IN MODE 38 THE FILTRATE RECIRCULATES BACK TO THE HIGH-CARBON, LOW OXYGEN ENVIRONMENT OF THE PROCESSING TANK. THIS PROCESS ALLOWS MICROBES TO REDUCE NITRATES TO NITROGEN GAS, DENITRIFYING THE EFFLUENT. THE INSTALLER OF THIS SYSTEM MUST BE LICENSED BY ORENCO, INC.

THE UNIT UTILIZED IN THIS DESIGN IS AN ORENCO AX 20, WITH COLD WEATHER CONFIGURATION.

IT IS CONDITIONAL IN THIS DESIGN THAT THE LID OF THE AX 20 UNIT BE TREATED WITH 2 INCHES OF FOAM INSULATION TO REDUCE FREEZING POTENTIAL.

A THERMOSTATICALLY CONTROLLED IN-LINE HEATER TO PRE-HEAT TREATMENT AIR IS AN OPTION WHICH IS RECOMMENDED IN THIS CLIMATE.

THE INCORPORATION OF THE AX 20 SYSTEM WILL PROVIDE FOR A CATEGORY 1 TREATMENT SYSTEM, AN ADVANCED TREATMENT UNIT THAT IS TIME DOSED AS CLASSIFIED BY THE RIDEM.

EXTREME CARE TO BE TAKEN IN THE PLACEMENT OF THE EFFLUENT PRESSURE LINE FROM THE AX-20 PUMP CHAMBER TO THE BOTTOMLESS SAND FILTER. SOIL BASE IS TO BE COMPACTED TO PREVENT SETTLEMENT AND A MINIMUM SLOPE OF 1/8 INCH PER FOOT FROM BSF TO THE PUMP CHAMBER.

RVS LEVELS: FOR STINGER PIPE LENGTHS UP TO 24" LONG, THE LOW LIQUID LEVEL WILL BE APPROXIMATELY 5'-6" BELOW THE TOP OF THE RVS CAGE. (LOW LIQUID LEVEL IS THE LEVEL AT WHICH 100% OF THE FILTRATE RETURNS TO THE TANK.) FOR MOST RESIDENTIAL APPLICATIONS, THE RECOMMENDED SURGE VOLUME IS APPROXIMATELY 150 TO 250 GALLONS (APPROX. 50% TO 100% OF ACTUAL FLOW). THE SURGE VOLUME IS THE VOLUME BETWEEN THE LOW LIQUID LEVEL AND THE HIGH WATER ALARM FLOAT. FOR MODE 3 INSTALLATIONS, THE DUCKBILL MODEL RVS IS REQUIRED, WHICH HAS A FLEXIBLE PVC TUBE THAT VENTS THE RVS CAGE TO THE ATMOSPHERE.

FLOAT LEVELS: TYPICALLY THE BOTTOM FLOAT SHOULD BE POSITIONED AS CLOSE TO THE TOP OF THE BIOTUBE CARTRIDGE AS POSSIBLE. THE TOP FLOAT IS NORMALLY SET ONE TO TWO INCHES BELOW THE INVERT OF THE TANK INLET. FOR MOST RESIDENTIAL APPLICATIONS, THE RECOMMENDED SURGE VOLUME IS APPROXIMATELY 150 TO 250 GALLONS (APPROX. 50% TO 100% OF ACTUAL FLOW). THE SURGE VOLUME IS THE VOLUME BETWEEN THE LOW LIQUID LEVEL AND THE HIGH WATER ALARM FLOAT. BE SURE TO CHECK PLANS FOR ANY SITE SPECIFIC OR TANK SPECIFIC FLOAT SETTINGS.

**OPERATIONAL AND MAINTENANCE NOTES:**

THIS SYSTEM SHALL PROVIDE FOR AN AUDIBLE ALARM FOR HIGH WATER IN THE PUMP CHAMBERS WHICH MAY BE SILENCED BY PUSHING A BUTTON ON THE CONTROL PANEL. THIS SITUATION MAY DEVELOP WITH UNUSUALLY HIGH WATER USAGE AND WILL NOT INDICATE AN ONGOING PROBLEM. REPEATED ALARMS, OR ALARMS WITH NO UNUSUAL WATER USAGE SHOULD BE REPORTED TO YOUR MAINTENANCE PROVIDER.

THE PROPERTY OWNER SHALL ENTER INTO MAINTENANCE CONTRACTS FOR BOTH THE ADVANTEX AX SYSTEM AND THE BSF DISPOSAL FIELD. EACH UNIT SHOULD HAVE A MINIMUM OF 2 INSPECTIONS ANNUALLY.

THE MAINTENANCE PROVIDER SHALL AFFIX THEIR NAME AND 24-HOUR CONTACT PHONE INSIDE THE CONTROL BOX LOCATED ON THE EXTERIOR OF THE HOUSE.

THE BSF INSPECTION SHALL INCLUDE A SAMPLING OF THE BSF EFFLUENT TO CHECK FOR CLARITY.

BSF LATERALS SHALL BE CLEANED ANNUALLY BY OPENING THE LATERAL THREADED END CAP AND CLEANING THE ENTIRE LENGTH OF THE LATERAL WITH A BOTTLE BRUSH. THE ACCUMULATED CLEANED MATERIAL MAY BE DEPOSITED IN THE INLET OF THE SEPTIC TANK. EACH LATERAL IS TO BE FLUSHED AS REQUIRED.

THE TOP OF THE BSF FIELD IS TO BE KEPT CLEAN OF DEBRIS AND UNWANTED VEGETATION (WEEDS, LEAVES, BRUSH, ETC.). LANDSCAPE TIMBERS AS DESIGNED SHALL BE MAINTAINED TO PREVENT CRUSHING OF THE SYSTEM BY UNWANTED LOADS, AND SURFACE WATER INDICATION OF THE SYSTEM.

ELECTRONIC COMPONENTS OF THE ADVANTEX AND THE BSF SYSTEMS SHALL BE CHECKED ANNUALLY FOR OPERATION.

ALL FLOATS IN THE PUMP CHAMBERS SHALL BE HOSED DOWN AND CLEANED FROM BUILD-UP.

THE INLET OF THE SEPTIC TANK AND THE DOSING TANK SHALL BE INSPECTED FOR SLUDGE AND SCUM ACCUMULATION. WHEN THESE MATERIALS BUILD UP TO 33% OF THE SEPTIC TANK HEIGHT, THE TANK SHOULD BE PUMPED AND THE ACCUMULATIONS APPROPRIATELY REMOVED.

THE FILTER IN THE PUMP CHAMBERS SHALL BE CLEANED ANNUALLY.

SHOULD THE PUMP ASSEMBLY BE REMOVED, THE VAULT SHALL BE CLEANED AND FILLED WITH CLEAN WATER TO PREVENT THE SCREEN FROM BEING FOULED WITH SOLIDS.

TIMER SETTINGS SHALL BE CHECKED AT EVERY ESTABLISHED MAINTENANCE AND INSPECTION VISIT AND ADJUSTED AS NEEDED BY THE SERVICE PROVIDER.

ALL TANKS AND BASINS SHALL BE VISUALLY INSPECTED FOR WATER TIGHTNESS.

PROPERTY OWNER TO REDUCE ANY SHADING IN THE AREA OF THE BOTTOMLESS SAND FILTER TO REDUCE FREEZE POTENTIAL. ANY ACTIVITY TO REDUCE SHADING MUST BE IN ACCORDANCE WITH THE RIDEM WETLANDS APPROVALS.

**TEST HOLE RESULTS**

APPLICATION #1821-1660  
PERFORMED BY EDWARD J. AVIZINIS, D4083

DATE OF TEST 11/8/2018  
**TEST HOLE 1**  
SURFACE ELEV: 24.50  
SHGWT: 23.00 (18")  
LEDGE AT: 18.83 (68")

**TEST HOLE 2**  
SURFACE ELEV: 21.50  
SHGWT: 20.00 (18")  
LEDGE AT: 13.00 (102")

**PERCOLATION TEST**

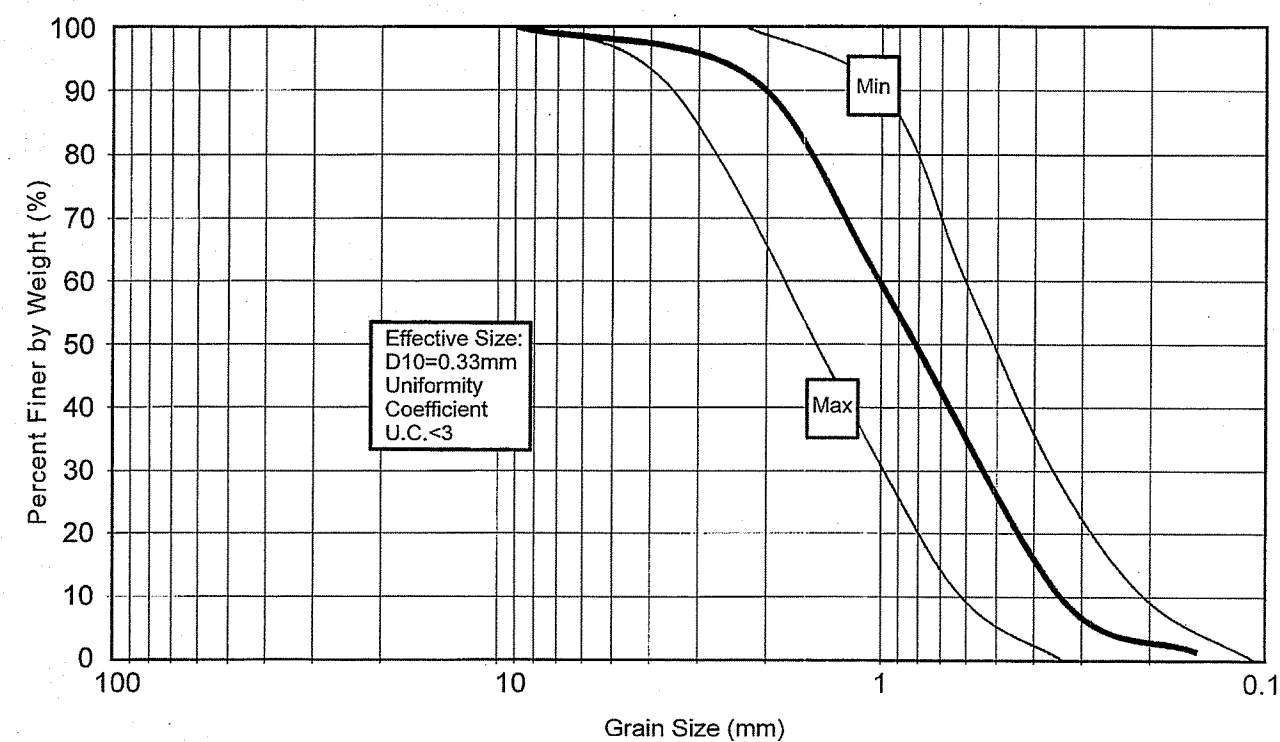
LOADING RATE= 1.5 GAL/SF/DAY  
PER LIMITING SOIL LAYER CATEGORY 9

**DESIGN DATA**

50 CADDYS 5 GPD = 250 GAL/DAY  
250 GAL/DAY @ 1.5 GAL/SF/DAY= 166.67 SF  
CATEGORY-1 TIME DOSED SYSTEM

**SAND FILTER**

10' X 18' = 180 SF  
180 SF > 166.67 SF ∴ OK



**BOTTOMLESS SAND FILTER MEDIA SPECIFICATIONS**

NOT TO SCALE

**VeriComm® AXB Control Panels**

Technical Data Sheet

**For AdvanTex® Treatment Systems**

**Applications**

VeriComm® AXB1 and AXB2 remote telemetry control panels are used with two-pump operations — recirculation and discharge (on-demand or timed) — for AdvanTex® Treatment Systems. Interfaced controls prevent the recirculation pump from running if there is a high level alarm on the discharge pipe. Coupled with the VeriComm Web-based Monitoring System, these affordable control panels give water/wastewater system operators and maintenance organizations the ability to monitor and control each individual system's operation remotely, with real-time efficiency, while remaining invisible to the homeowner. VeriComm AXB panels allow remote operators to change system parameters, including timer settings, from the Web interface.

**Communication and Alarm Management**

Remote telemetry capabilities coupled with a Web-based monitoring application (see VeriComm Monitoring System, ATD-WEB-VCOM-1) for communication and alarm management. Updating of point values (including timer settings) and receipt of queued changes during each communication session with host. Communication sessions that occur monthly, at a minimum, and more frequently during alarm conditions.

Multiple methods of communication, as follows:

- Call-in to VeriComm® Host
  - Automatic notification to host of "Alarms," which signal fault conditions that need to be addressed immediately (e.g., pump failure).
  - Automatic notification to host of "Alerts," which signal less critical fault conditions and which trigger the panel's troubleshooting logic and alternative operating mode (e.g., stuck float switch).
  - Automatic notification to host of "Updates," which include alarm updates or all-clear notifications following Alarms/Alerts, as well as normally scheduled monthly panel reports.
- Manual, forced communication from panel to host to effect an updating of point values and receipt of queued changes.

**Real-Time Direct Connection to Panel**

Manual, direct connection at the site via RS-232 serial port, to allow a local operator real-time access to detailed logged data and the ability to change point values from a laptop.

Manual, forced communication by local operator/homeowner at the site to initiate an auto-answer mode, allowing a remote operator real-time access to detailed logged data and the ability to change point values.

**Basic Control Logic: Three Operating Modes**

- A "Start-up Mode" for the initial 30 days, during which the system collects trend data to establish operating standards for future reference.
- A "Normal Mode" that manages day-to-day functions.
- A "Test Mode" that suspends data collection and alarm reporting during installation and service.

**Data Collection and Utilization**

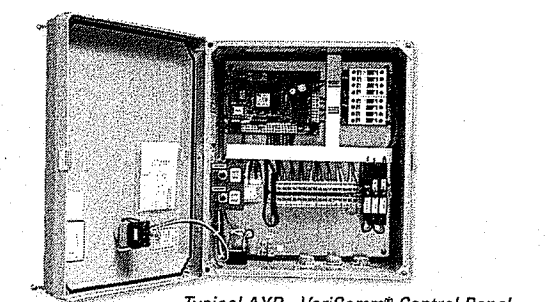
Data logs of system conditions and events, such as pump run times, pump cycles, and alarm conditions.

**Troubleshooting and Diagnostic Logic**

Troubleshooting capabilities that can report suspected failed components, which then trigger Alarms.

**Advanced Control Logic**

Advanced control logic that activates during float malfunctions to diagnose the situation and keep the system operating normally until servicing.



Typical AXB VeriComm® Control Panel  
Standard Models: VCOM AXB1, VCOM AXB2

To specify this panel for your installation, require the following:

**Basic Control Logic: Three Operating Modes**

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- A "Normal Mode" that manages day-to-day functions.
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Advanced control logic that activates during float malfunctions to diagnose the situation and keep the system operating normally until servicing.

**Communication and Alarm Management**

Remote telemetry capabilities coupled with a Web-based monitoring application (see VeriComm Monitoring System, ATD-WEB-VCOM-1) for communication and alarm management. Updating of point values (including timer settings) and receipt of queued changes during each communication session with host. Communication sessions that occur monthly, at a minimum, and more frequently during alarm conditions.

Multiple methods of communication, as follows:

- Call-in to VeriComm® Host
  - Automatic notification to host of "Alarms," which signal fault conditions that need to be addressed immediately (e.g., pump failure).
  - Automatic notification to host of "Alerts," which signal less critical fault conditions and which trigger the panel's troubleshooting logic and alternative operating mode (e.g., stuck float switch).
  - Automatic notification to host of "Updates," which include alarm updates or all-clear notifications following Alarms/Alerts, as well as normally scheduled monthly panel reports.
- Manual, forced communication from panel to host to effect an updating of point values and receipt of queued changes.

**Real-Time Direct Connection to Panel**

Manual, direct connection at the site via RS-232 serial port, to allow a local operator real-time access to detailed logged data and the ability to change point values from a laptop.

Manual, forced communication by local operator/homeowner at the site to initiate an auto-answer mode, allowing a remote operator real-time access to detailed logged data and the ability to change point values.

**Basic Control Logic: Three Operating Modes**

- A "Start-up Mode" for the initial 30 days, during which the system collects trend data to establish operating standards for future reference.
- A "Normal Mode" that manages day-to-day functions.
- A "Test Mode" that suspends data collection and alarm reporting during installation and service.

**Data Collection and Utilization**

Data logs of system conditions and events, such as pump run times, pump cycles, and alarm conditions.

**Troubleshooting and Diagnostic Logic**

Troubleshooting capabilities that can report suspected failed components, which then trigger Alarms.

**Advanced Control Logic**

Advanced control logic that activates during float malfunctions to diagnose the situation and keep the system operating normally until servicing.

Standard Components

Feature	Specifications	Product Code/Address
1. VeriComm® Remote Telemetry Unit*	ATRTU-100: 36V/8 VAC (center tap transformer), 8 digital inputs, 4 analog inputs, 4 digital outputs, 0 analog outputs, on-board modem (2400 baud), LED input and output indicators, 1-year battery backup of data and program settings.	
2. Motor-Start Contactors	120 VAC, 18 FLA, 1 hp, 60 Hz; 25 million cycles at FLA (10 million at 50% of FLA).	
3. Toggle Switches	Single-pole switch, automatic On, with spring-loaded, momentary, manual On, 20 A, 1 hp.	
4. Control Circuit Breaker	16 A, OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.	
5. Pump Circuit Breakers	20 A, OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.	
6. Fuse	120 VAC Primary, 38 VCT @ 68 A Secondary.	
7. Transformer	250 VAC, 1 A.	
8. Audio Alarm	95 dB at 24 in. (610 mm), warble-tone sound.	
9. Visual Alarm	7/8 in. (22 mm) diameter red lens, "Push-to-silence," NEMA 4, 1 W bulb, 120 VAC.	
10. Panel Enclosure	Measures 15.5 in. high x 13.3 in. wide x 6.1 in. deep (394 mm x 338 mm x 152 mm), NEMA 4X rated. Constructed of UV-resistant fiberglass; hinges and latch are stainless steel. Conduit couplings provided.	
VCOM-AXB1	120 VAC, 24 hp, 14 A, single-phase, 60 Hz.	
VCOM-AXB2	240 VAC, 2 hp, 14 A, single-phase, 60 Hz.	

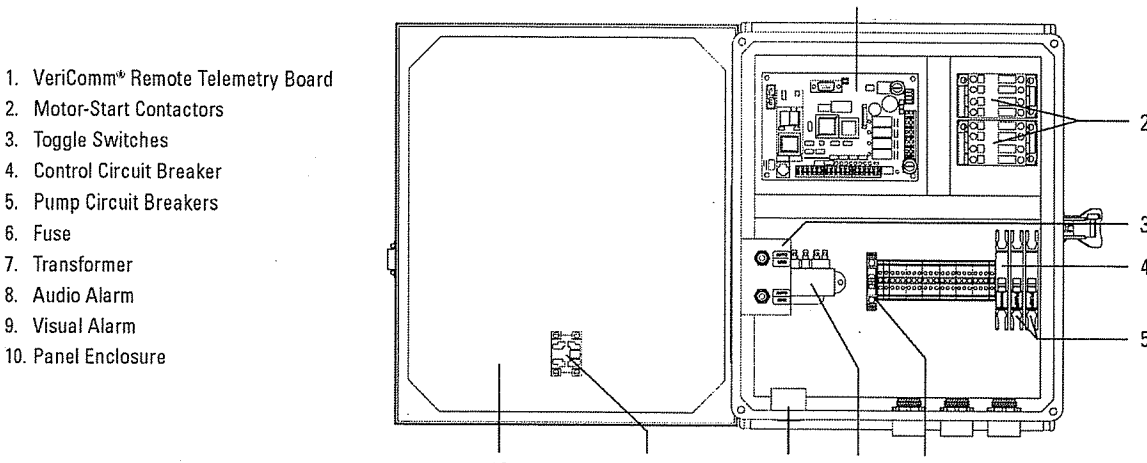
\* See VeriComm® Remote Telemetry Unit (ATD-CP-VCOM-1) and VeriComm® Monitoring System (ATD-WEB-VCOM-1) for more detail.

For more information, try our online demo at www.vericomm.net (no password required).

ATD-CP-VCOM-1  
Rev. 2.5 0-036  
Page 2 of 2

**VeriComm® AXB Control Panels**

Technical Data Sheet



Standard Components

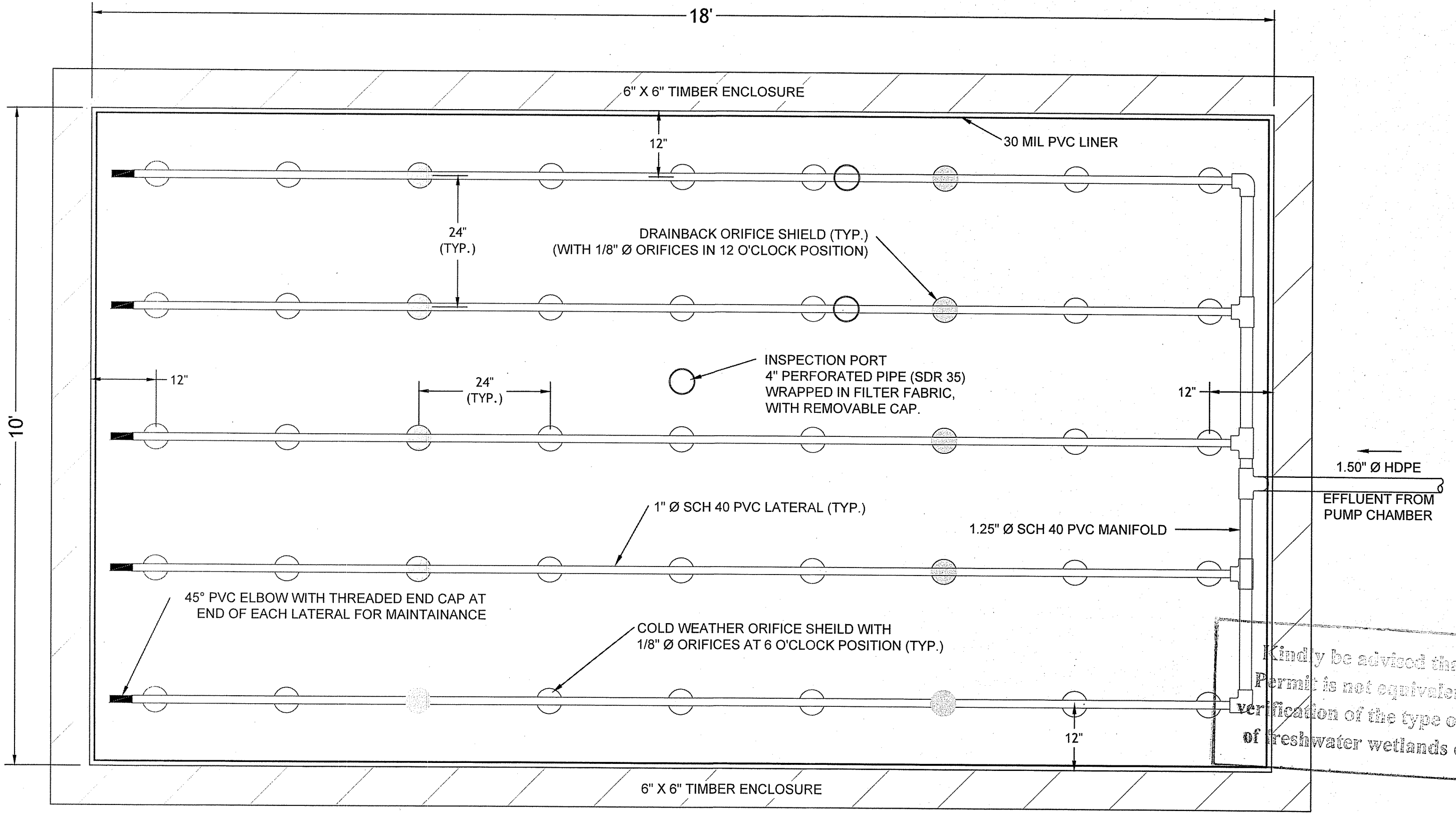
Feature	Specifications	Product Code/Address
1. VeriComm® Remote Telemetry Unit*	ATRTU-100: 36V/8 VAC (center tap transformer), 8 digital inputs, 4 analog inputs, 4 digital outputs, 0 analog outputs, on-board modem (2400 baud), LED input and output indicators, 1-year battery backup of data and program settings.	
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VCOM-AXB1	120 VAC, 24 hp, 14 A, single-phase, 60 Hz.	
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\* See VeriComm® Remote Telemetry Unit (ATD-CP-VCOM-1) and VeriComm® Monitoring System (ATD-WEB-VCOM-1) for more detail.

Optional Components

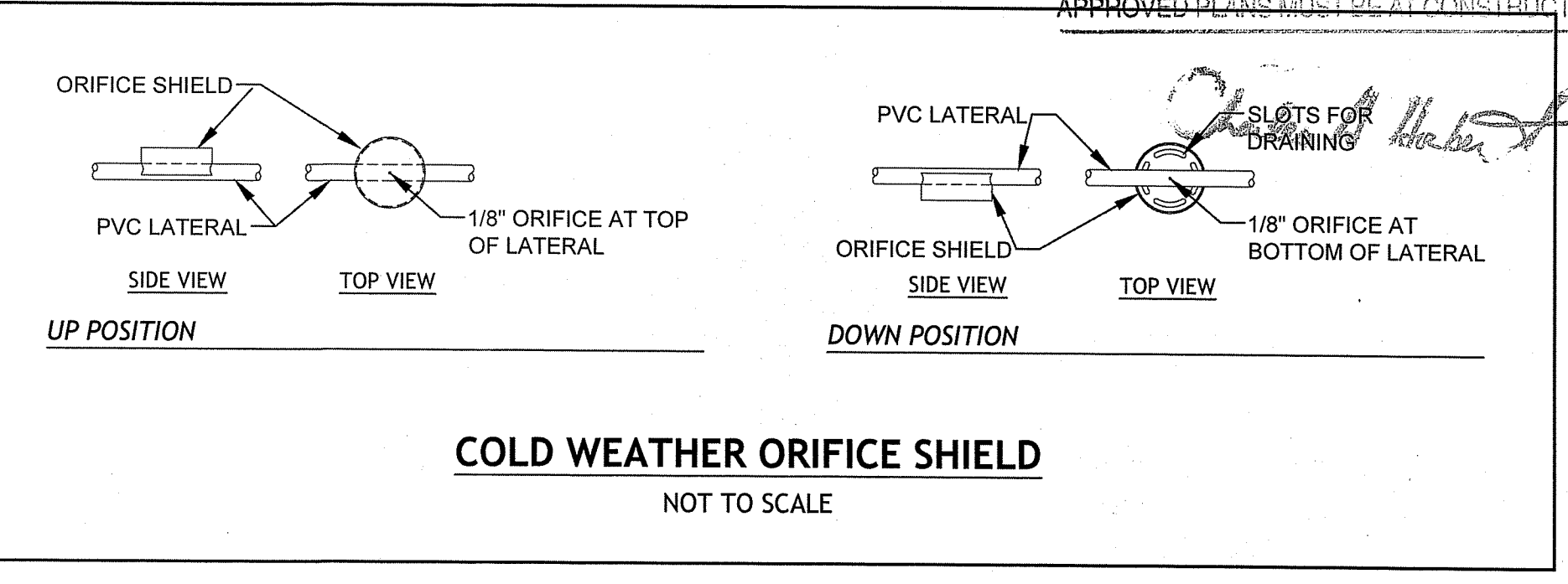
Feature	Specifications	Product Code/Address
Pump Run Light	7/8 in. (22 mm) diameter green lens, NEMA 4, 1 W bulb, 120 VAC.	PRL
Anticondensation Heater	Self-adjusting; radiates additional wattage as temperature drops.	HT
Programmable Timer	Discharging side timed dosing.	PT
UV Disinfection Compatibility	UV grounded power circuit and alarm contacts. Pump disable upon UV failure.	UV

\* See VeriComm® Remote Telemetry Unit (ATD-CP-VCOM-1) and VeriComm® Monitoring System (ATD-WEB-VCOM-1) for more detail.

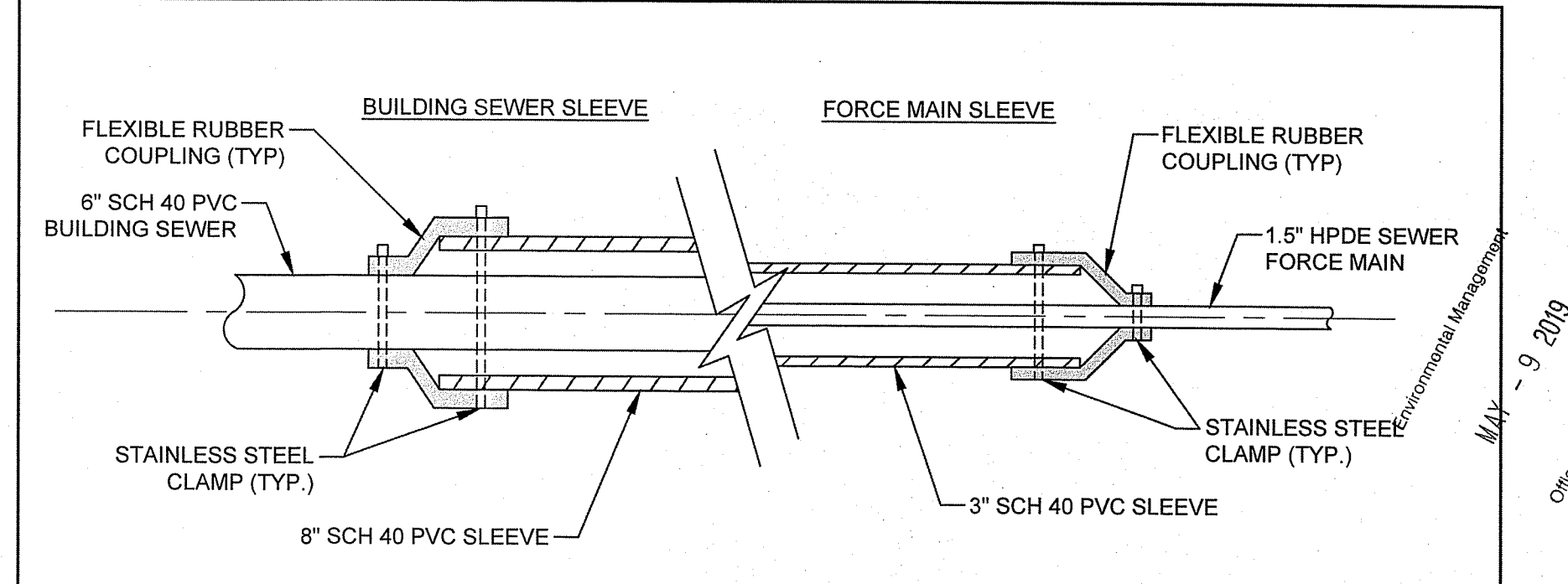


**10' X 18' BOTTOMLESS SAND FILTER**  
CONFIGURED FOR LOADING RATES UP TO 1.5 gpd/sf  
(45) ORIFICES/ZONE  
NOT TO SCALE

TWO (2) ORIFICES IN EACH LATERAL SHALL BE DRILLED POINTING UP (12 O'CLOCK POSITION); ALL OTHER ORIFICES SHALL BE DRILLED POINTING DOWN (6 O'CLOCK POSITION). THE UP-POINTING ORIFICES SHALL BE LOCATED APPROXIMATELY 1/3 AND 2/3, RESPECTIVELY, ALONG THE LENGTH OF EACH LATERAL. ORIFICE SHIELDS SHALL BE PLACED OVER EACH ORIFICE (ABOVE OR BELOW THE LATERAL, AS REQUIRED). ORIFICE SHIELDS PLACED BELOW ANY ORIFICE SHALL CONTAIN SLOTS OR HOLES TO PROVIDE FREE DRAINAGE USUALLY REFERRED TO AS COLD WEATHER ORIFICE SHIELDS. THESE WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED JUN 25 2019 FILE # 19-0032 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE



**COLD WEATHER ORIFICE SHIELD**  
NOT TO SCALE



**TYPICAL PIPE SLEEVING DETAIL**  
NOT TO SCALE

NOTES:  
1. SLEEVE SHALL BE SEAMLESS OR SCHEDULE 40 PVC OR EQUIVALENT WITH WATERTIGHT JOINTS.  
2. SLEEVE SHALL HAVE A WATERTIGHT SEAL FASTENED TO PIPE WITH A STAINLESS STEEL RETRACTABLE CLAMP.

**JCE**  
JOSEPH A. CASALI ENGINEERING, INC.  
CIVIL - SITE DEVELOPMENT - TRANSPORTATION  
DRAINAGE - WETLANDS - I&DS - TRAFFIC - FLOODPLAIN  
1500 POCKET ROAD, WARWICK, RI 02886  
(401) 944-1300 / (401) 944-1374 / www.jceinc.com

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
5/11/17  
PL 0417

**NEWPORT COUNTRY CLUB**  
280 HARRISON AVENUE  
NEWPORT, RHODE ISLAND  
AP 43, LOT 1

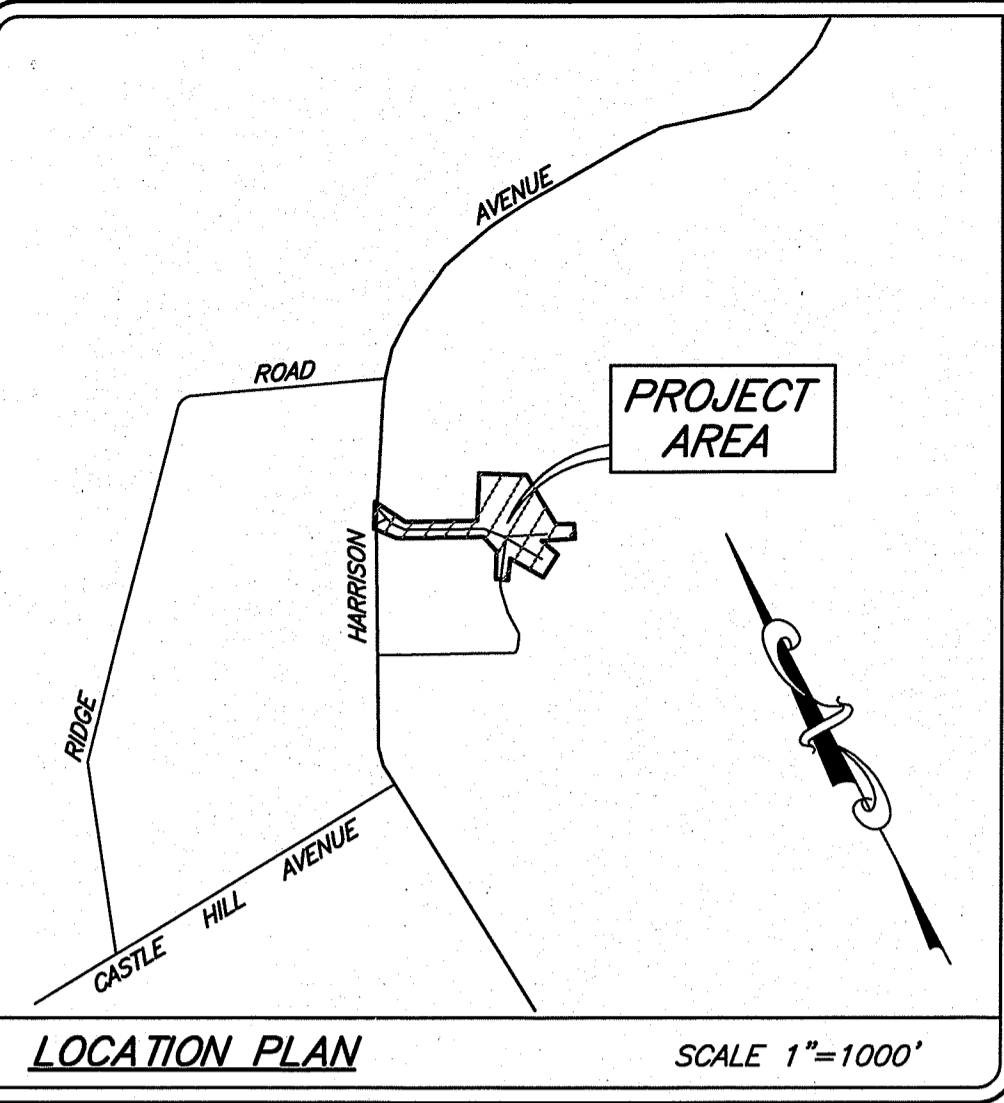
REVISIONS:

NO.	DATE	DESCRIPTION
1	5/8/2019	RIDEM COMMENTS

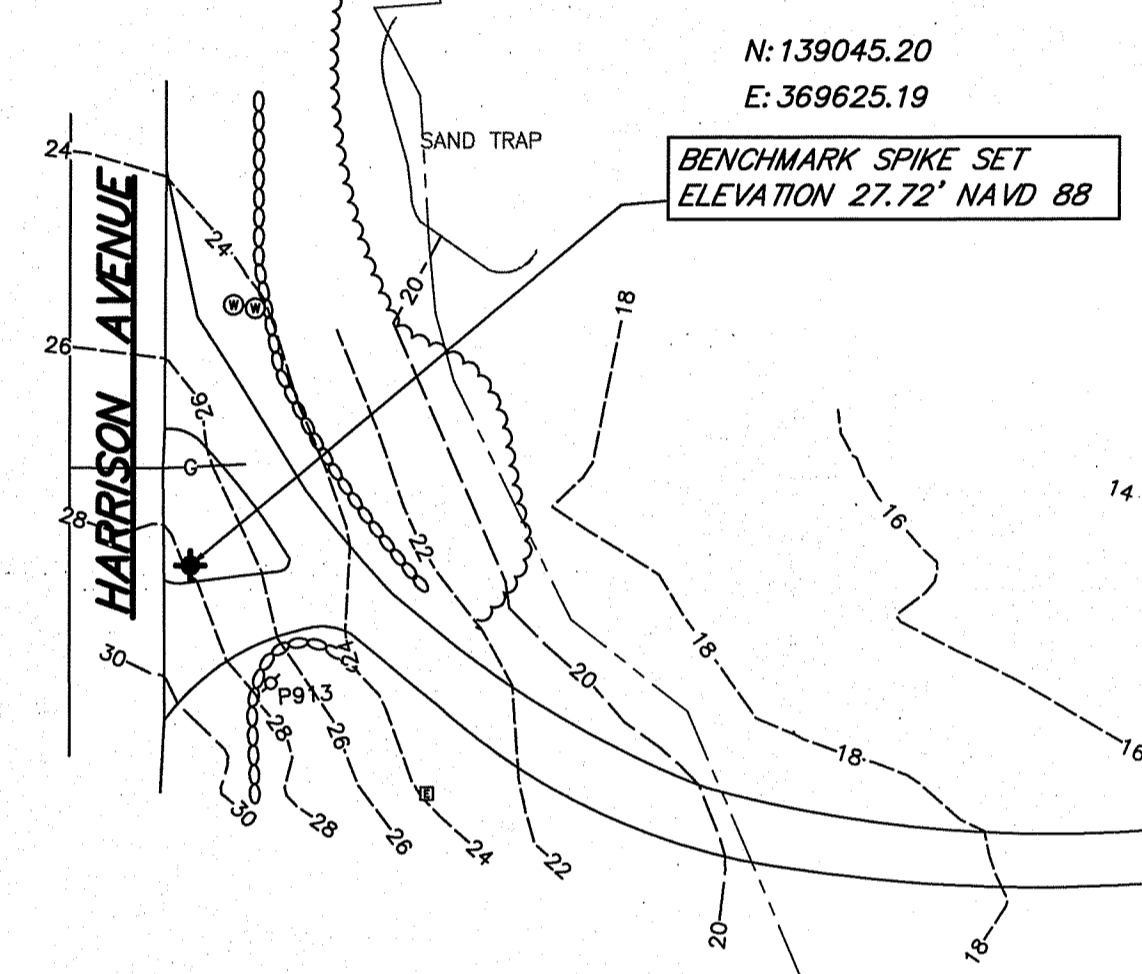
DESIGNED BY: WMLJR  
DRAWN BY: SD/SEP  
CHECKED BY: JAC  
DATE: FEB. 2019  
PROJECT NO: 18-26

PRELIMINARY, NOT FOR CONSTRUCTION

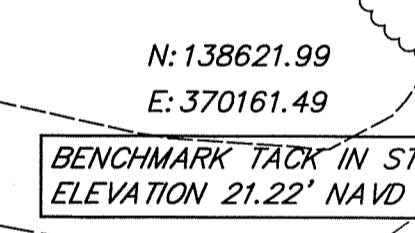
**OWTS DETAILS II**</



LOCATION PLAN SCALE 1"=1000'



N: 139045.20  
E: 369625.19  
BENCHMARK SPIKE SET  
ELEVATION 27.72' NAVD 88



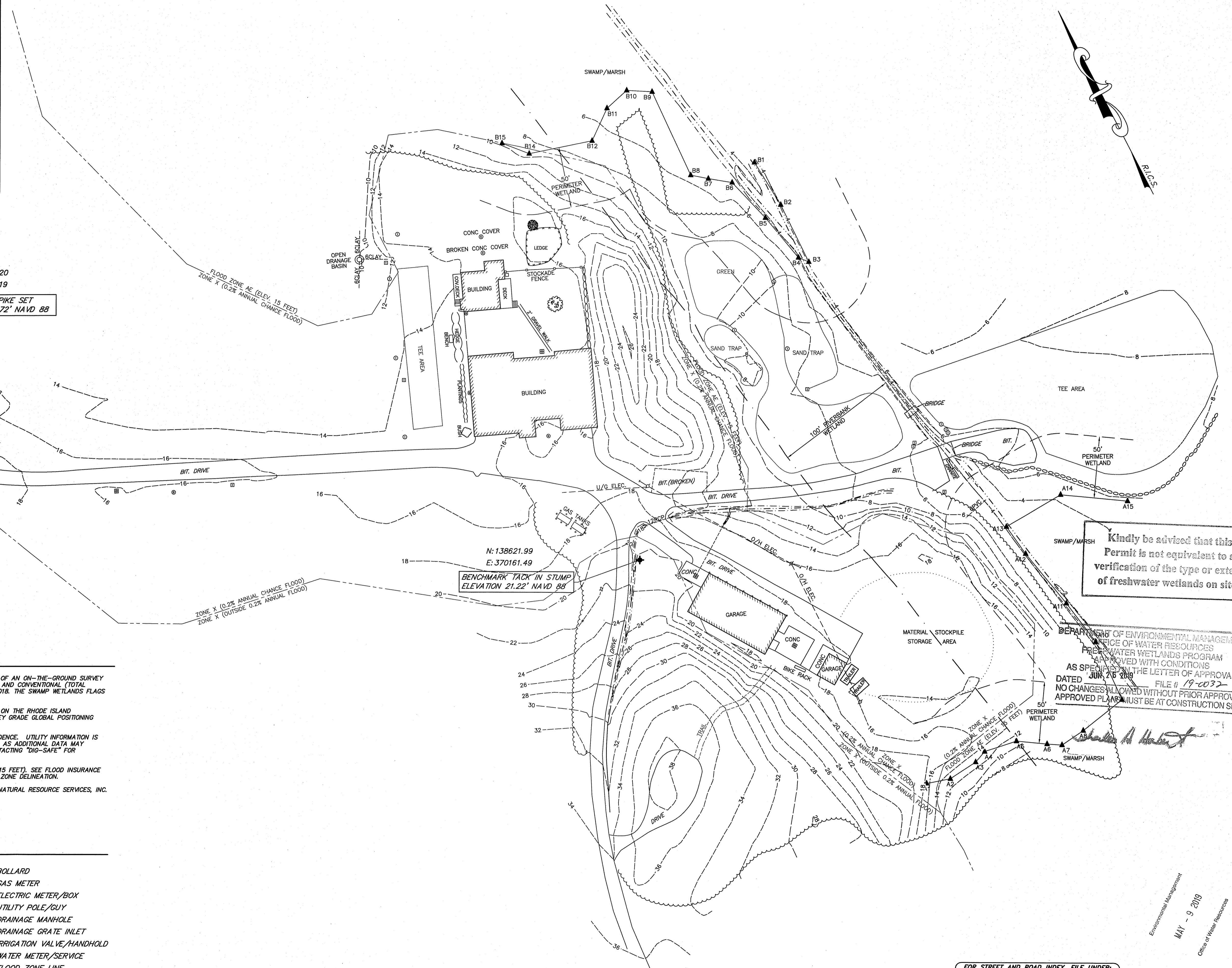
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BENCHMARK TACK IN STUMP  
ELEVATION 21.22' NAVD 88

**GENERAL NOTES**

1. THE DATA ACCUMULATION SURVEY DEPICTED HEREON IS A PRODUCT OF AN ON-THE-GROUND SURVEY CONDUCTED BY SCITUATE SURVEYS, INC. USING SURVEY GRADE GPS AND CONVENTIONAL (TOTAL STATION) SURVEY METHODS BETWEEN AUGUST AND DECEMBER OF 2018. THE SWAMP WETLANDS FLAGS WERE LOCATED BY SURVEY.
2. THE VERTICAL DATUM NAVD 88. THE HORIZONTAL DATUM IS BASED ON THE RHODE ISLAND COORDINATE SYSTEM. BOTH WERE DERIVED FROM THE USE OF SURVEY GRADE GLOBAL POSITIONING TECHNOLOGY.
3. EXISTING UTILITY LOCATIONS ARE BASED ON OBSERVED SURFACE EVIDENCE. UTILITY INFORMATION IS NOT COMPLETE, AND IS SUBJECT TO SUCH REVISIONS AND CHANGES AS ADDITIONAL DATA MAY DISCLOSE. ANY PLANNED EXCAVATION MUST BE PRECEDED BY CONTACTING "DIG-SAFE" FOR ACCURATE LAYOUT OF EXISTING UTILITIES.
4. THE SITE LIES WITHIN FLOOD HAZARD ZONE X AND ZONE AE (ELEV. 15 FEET). SEE FLOOD INSURANCE RATE MAP #440050017BJ EFFECTIVE DATE SEPTEMBER 4, 2013 FOR ZONE DELINEATION.
5. THE WETLANDS DELINEATION WAS CONDUCTED IN OCTOBER 2018 BY NATURAL RESOURCE SERVICES, INC.

**LEGEND**

- |                 |                                      |                             |                 |
|-----------------|--------------------------------------|-----------------------------|-----------------|
| ---o---o---o--- | STONE WALL / STONE LINE              | * BOLLARD                   |                 |
| ---B15---       | WETLAND FLAG/LINE                    | ⊙ GAS METER                 |                 |
| ---             | SWALE/DITCH BOTTOM                   | ⊙ ELECTRIC METER/BOX        |                 |
| ---             | SWALE/DITCH TOP                      | ⊙ UTILITY POLE/GUY          |                 |
| ---20---        | EXISTING CONTOUR LINE (MAJOR 10')    | ⊙ DRAINAGE MANHOLE          |                 |
| ---18---        | EXISTING CONTOUR LINE (MINOR 2')     | ⊙ DRAINAGE GRATE INLET      |                 |
| ---12BSC---     | DRAINAGE PIPE (SIZE-INCHES/MATERIAL) | ⊙ IRRIGATION VALVE/HANDHOLD |                 |
| ---             | GAS LINE (MARKINGS)                  | ⊙ WATER METER/SERVICE       |                 |
| ---             | TREE LINE / BRUSH LINE               | ---                         | FLOOD ZONE LINE |



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 26 2018 FILE # 19-0032  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

FOR STREET AND ROAD INDEX, FILE UNDER:  
HARRISON AVENUE

**SCITUATE SURVEYS, INC.**  
 10 TIOUDE AVENUE  
 COVENTRY, RI 02816  
 401-821-8101  
 LAND SURVEYING/MAPPING/SITE PLANNING

REGISTRATION HAS BEEN CONDUCTED AND THE PLAN HAS BEEN RECORDED PURSUANT TO SECTION 6 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 28, 2015, AS FOLLOWS:  
 TYPE OF SURVEY: NOT A BOUNDARY SURVEY  
 TYPE OF SURVEY: MEASUREMENT/REGISTRATION  
 CLASS: CLASS III  
 MEASUREMENT/REGISTRATION: MEASUREMENT/REGISTRATION  
 DATA ACCUMULATION SURVEY: DATA ACCUMULATION SURVEY  
 STATEMENT OF PURPOSE: THIS IS TO CORRECT AN EXISTING SURVEYING/TOPOGRAPHIC SURVEY WITHIN THE PROJECT LIMITS AS SHOWN ON THE MAP FOR THE PROJECT.  
 BY: Angelo M. Raimondi  
 ANGELO M. RAIMONDI, PROFESSIONAL LAND SURVEYOR AND REGISTERED PROFESSIONAL SURVEYOR, REG. NO. 1762

ANGELO M. RAIMONDI  
 No. 1762  
 PROFESSIONAL  
 LAND SURVEYOR

EXISTING CONDITIONS / TOPOGRAPHIC SURVEY  
 OF A PORTION OF  
**NEWPORT COUNTRY CLUB**  
 HARRISON AVENUE  
 NEWPORT, RHODE ISLAND  
 PREPARED FOR ICE CASALI ENGINEERING, INC.  
 DATE: DECEMBER 27, 2018 REVISION:  
 SCALE: 1"=40'