

SITE IMPROVEMENT PLANS FOR A PROPOSED

13,000± SQ. FT. DOGGIE DAY CARE AND BOARDING FACILITY

CAMP BOW WOW

37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E



Existing Zoning District: Planned Corporate (PC) with Economic Growth Overlay District (EGOD)

APPROVALS:

SMITHFIELD PLANNING BOARD - MASTER PLAN APPROVAL (APRIL 18, 2019)

SMITHFIELD ZONING BOARD OF REVIEW (JULY 31, 2019) - SPECIAL USE PERMIT (TO OPERATE AN ANIMAL KENNEL & DAYCARE FACILITY IN THE PC ZONING DISTRICT) AND DIMENSIONAL VARIANCES
(FOR OFF-STREET PARKING AND THE TOWN'S 100' SETBACK FROM A FRESHWATER WETLAND TO A STRUCTURE)

SMITHFIELD PLANNING BOARD - PRELIMINARY PLAN APPROVAL (OCTOBER 17, 2019)

SMITHFIELD TOWN ENGINEER'S OFFICE - SOIL EROSION PERMIT

SMITHFIELD SEWER AUTHORITY APPROVAL (JANUARY 4, 2020)

FILINGS:

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - PRELIMINARY DETERMINATION & CONSTRUCTION STORMWATER APPLICATION

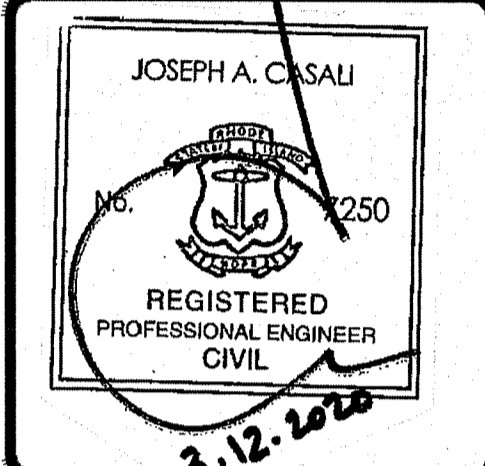
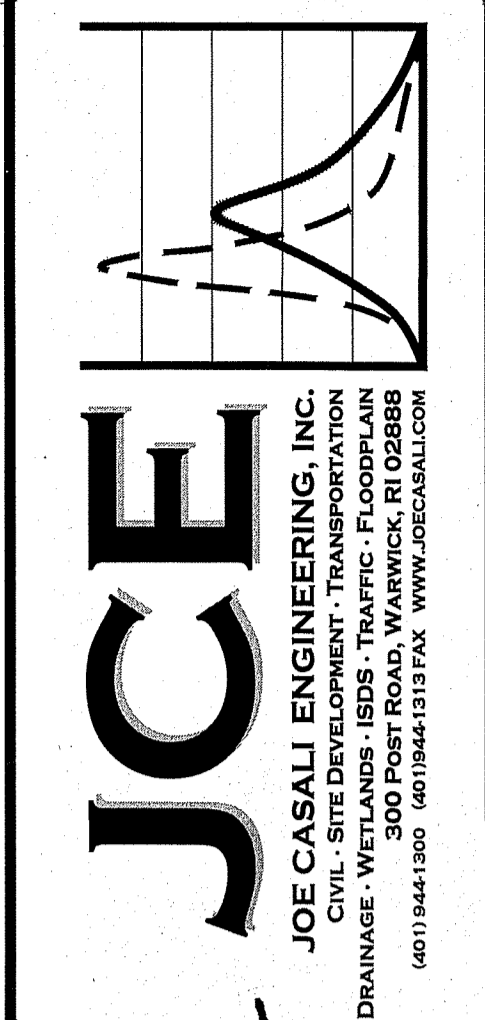
SMITHFIELD WATER SUPPLY BOARD

SMITHFIELD FIRE DEPARTMENT

SMITHFIELD LANDSCAPE ORDINANCE REVIEW

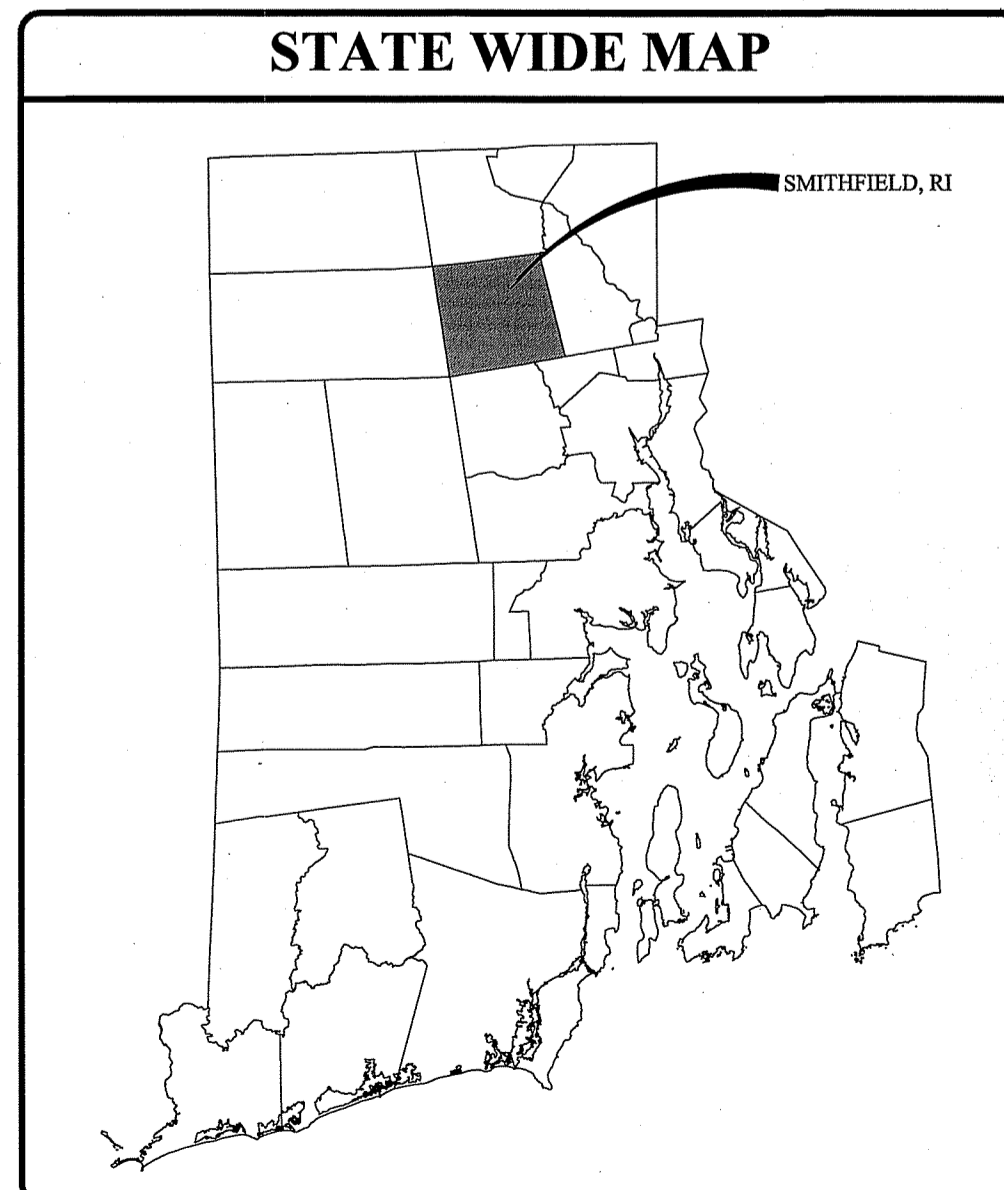
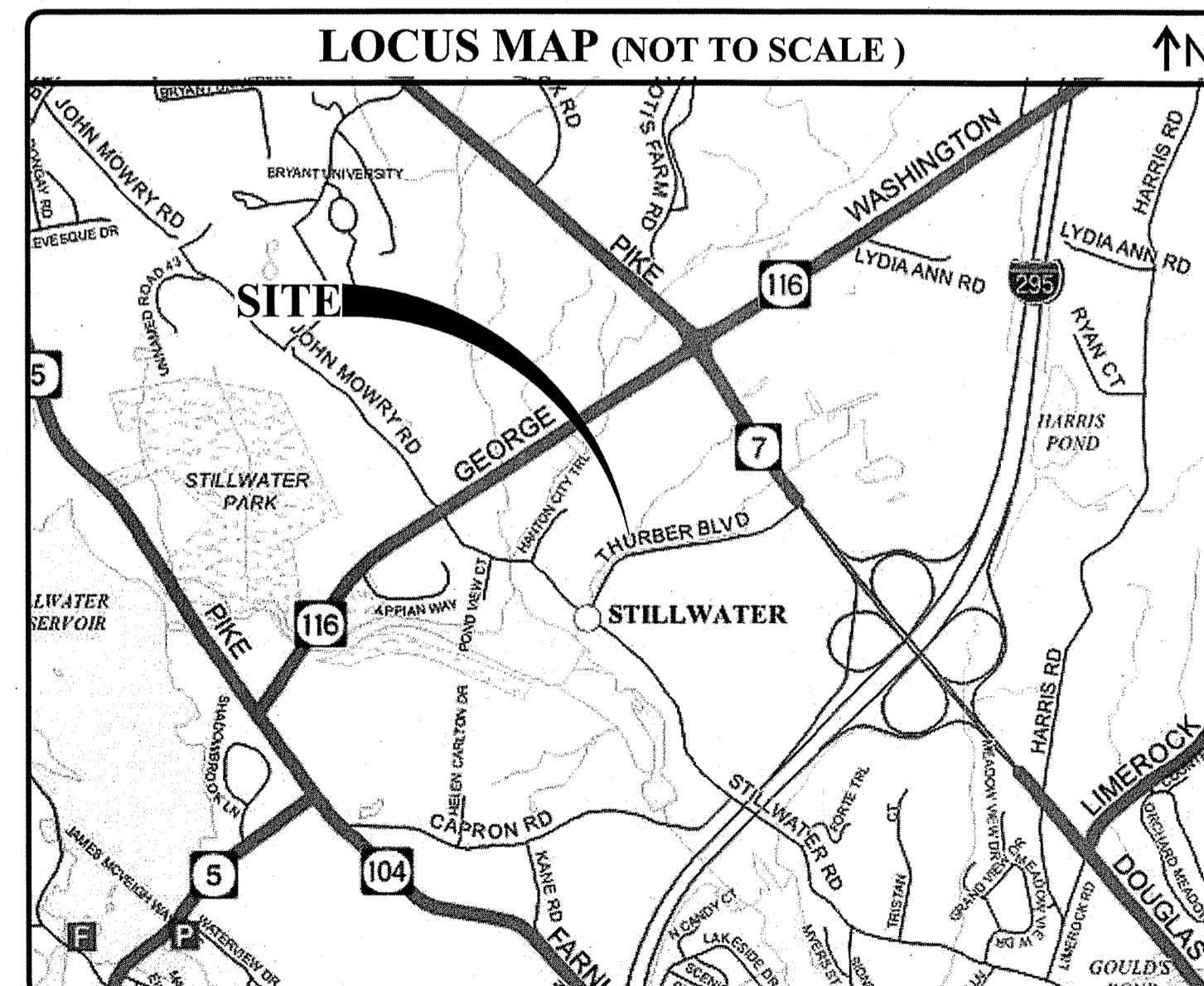
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 29 2020 FILE # 19-0281
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E



PROJECT TEAM

OWNER:	HAVAHI REAL ESTATE, LLC C/O LYNN STEPHEN 177 BRYANT STREET CUMBERLAND, RI 02864 PHONE:	ARCHITECT:	INTERPLAN LLC 604 COURTLAND STREET, SUITE 100 ORLANDO, FL 32804 PHONE: 407-645-5008
APPLICANT:	CAMP BOW WOW C/O WESLEY SKORSKI 3 KEYES WAY WEST WARWICK, RI 02893 PHONE:	LAND SURVEYOR:	INTERNATIONAL MAPPING & SURVEYING CORP. 19 INDUSTRIAL DRIVE SMITHFIELD, RI 02917 PHONE: 401-232-2620
CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313 JOECASALI.COM	LANDSCAPE ARCHITECT:	DIANE C. SOULE & ASSOCIATES, ASLA 422 FARNUM PIKE SMITHFIELD, RI 02917 PHONE: 401-231-0736



INDEX OF DRAWINGS

SHEET NO.	PLAN
1	COVER SHEET
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REFERENCE PLAN:
SHEET 1 OF 1 SURVEY PLAN, PREPARED BY INTERNATIONAL MAPPING & SURVEYING CORP., DATED AUGUST 29, 2019

REVISIONS:

NO.	DATE	DESCRIPTION
1	2/2020	DEM/TOWN COMMENTS

DESIGNED BY:	WMLJR
DRAWN BY:	SEP/SD
CHECKED BY:	JAC
DATE:	SEP. 2019
PROJECT NO.:	18-42a

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 11

C:\Users\WMLJR\AppData\Local\Temp\publish_382828\Camp Bow Wow Preliminary\JK.dwg Mar. 13. 2020 8:43am

GENERAL NOTES:

- 1. CONTRACTOR SHALL NOTIFY "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CLASS I PROPERTY LINE AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY INTERNATIONAL MAPPING & SURVEYING INC. IN AUGUST OF 2019.
3. WETLANDS FLAGS DELINEATED BY NATURAL RESOURCE SERVICES INC. IN JULY OF 2019.
4. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION...

SITE NOTES:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. 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.
3. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- 1. 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.
2. 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.

DRAINAGE SYSTEM NOTES:

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

DRAINAGE SYSTEM MAINTENANCE SCHEDULE:

- 1. MANHOLES AND DRAIN LINES: AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD, AS A MINIMUM, CONCENTRATE ON THE FOLLOWING:
* DAMAGE TO GRATE/ COVERS
* EVIDENCE OF STANDING WATER
* DEBRIS REMOVAL
* STRUCTURAL ALIGNMENT/ INTEGRITY
ANY DEFICIENCY NOTED DURING THE INSPECTION WILL BE IMMEDIATELY REPAIRED OR REPLACED.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- 1. THE COMPOST SOCK LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. 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.
3. ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED SILT FENCE (R.I. STD. 9.2.0), SILT SACK SEDIMENT TRAPS OR COMPOST SOCKS DURING CONSTRUCTION ACTIVITIES...

MISCELLANEOUS UTILITY NOTES:

- 1. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.

SEDIMENTATION CONTROL PROGRAM:

- 1. 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.
2. ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED, SHALL RECEIVE SUITABLE SLOPE PROTECTION.
3. ALL UPSLOPED AREAS ARE TO BE STABILIZED PRIOR TO CONNECTING TO THE STORMWATER FACILITIES.

ORDER OF PROCEDURE:

- 1. SEDIMENT CONTROL DEVICES SHALL SET IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION.
2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED DURING THE CONSTRUCTION.
3. IF WORK PROGRESS IS INTERRUPTED AT ANY TIME, REFERENCE EROSION & SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
4. SPECIFIED PLANTINGS ARE TO TAKE PLACE IN EARLY SPRING (APRIL 1 THRU JUNE 15) OR EARLY FALL (SEPTEMBER 1 THRU OCTOBER 15) AND ARE TO BE MAINTAINED FOR A PERIOD OF ONE GROWING SEASON AND SHALL BE REPLACED IF NECESSARY.

BMP MAINTENANCE SCHEDULE:

- 1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
A. 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.
B. 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...

CATCH BASINS/ DRAIN LINES

- INSPECTIONS SHALL BE PERFORMED A MINIMUM OF 2 TIMES PER YEAR (SPRING/FALL). UNITS SHALL BE CLEANED WHENEVER THE DEPTH OF SEDIMENT IS GREATER THAN OR EQUAL TO 2-FEET (LESS THAN 2-FEET FROM THE BOTTOM OF PIPE). ALL REMOVED SEDIMENT SHALL BE TESTED TO DETERMINE POLLUTANT CONTENT AND SHALL BE REMOVED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
• THE INLET GRATE SHALL NOT BE WELDED TO THE FRAME SO THAT THE SUMP CAN BE EASILY INSPECTED AND MAINTAINED.

ROOF DRAIN LEADERS

- PERFORM ROUTINE ROOF INSPECTIONS QUARTERLY.
• KEEP ROOFS CLEAN AND FREE OF DEBRIS.
• KEEP ROOF DRAINAGE SYSTEMS CLEAR.

SAND FILTER SYSTEMS

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE SAND FILTERS 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/SEDIMENT SHALL BE REMOVED FROM THE FILTER BEDS WHEN THE ACCUMULATION EXCEEDS ONE INCH. WHEN THE FILTERING CAPACITY OF THE SAND FILTERS DIMINISHES SUBSTANTIALLY (I.E. WHEN WATER PONDS ON THE SURFACE OF THE INFILTRATION BASIN 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.

INFILTRATION BASINS

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE INFILTRATION BASINS 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 A BI-ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2 INCHES.
• SILT AND SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASINS WHEN THE ACCUMULATION EXCEEDS 6 INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE INFILTRATION BASIN FOR MORE THAN 48 HOURS.
• SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
• THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
• TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY OR ANNUALLY.
• THE OUTFLOW WEIR SHOULD BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.

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:

- 1. 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.
2. 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),
3. 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.
4. APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
5. 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:

Table with 2 columns: SEED TYPE, PERCENT PASSING. Includes 40% CREEPING RED FESCUE, 20% IMPROVED PERENNIAL RYEGRASS, 20% IMPROVED KENTUCKY BLUEGRASS, 20% KENTUCKY BLUEGRASS.

RECOMMENDED SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

- 6. THE TOPSOIL IN THE SAND FILTER SHALL CONSIST OF 40% COMPOST AND 60% SAND (ASTM C-33) THE TOPSOIL SHALL ALSO HAVE AN ORGANIC CONTENT BETWEEN 8-10% AND THE PERCENT PASSING THE #200 SIEVE BETWEEN 2-5%. TYPICAL GRADATION OF THE TOP SOIL MIXTURE SHALL MEET THE FOLLOWING:

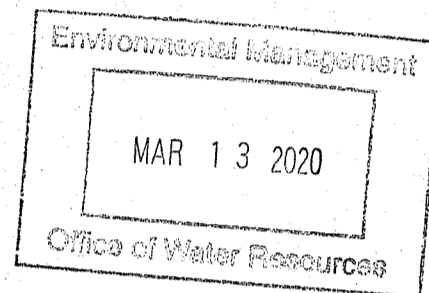
Table with 2 columns: SIEVE SIZE, PERCENT PASSING. Lists sieve sizes from 3/8" to #200 and their corresponding percent passing values.

SEQUENCE & STAGING OF PROPOSED CONSTRUCTION ACTIVITIES:

- 1. SURVEY AND STAKE THE PROPOSED DRAINAGE BMP'S (SEDIMENT FOREBAY, SAND FILTER AND DETENTION BASIN), ROADWAY CENTERLINE, WATER LINE, SEWER LINE AND LIMIT OF DISTURBANCE. THE CONTRACTOR SHALL NOT COMPACT THE AREAS OF THE DRAINAGE BMP'S DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL INSTALL CONSTRUCTION STAKE TO PROTECT BMP'S.
2. PLACE SEDIMENTATION BARRIERS (SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
3. BEGIN SITE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING ETC.) TOPSOIL IS TO STRIPPED AND STOCKPILED WITHIN DISTURBANCE LIMITS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS. STOCKPILES TO BE COVERED OR TEMPORARILY SEEDED.
4. EXCAVATE AND CONSTRUCT STORMWATER MANAGEMENT AREAS AS SHOWN ON PLAN. DIVERT ALL THE RUNOFF FROM DISTURBED AREAS TO THE PROPOSED STORMWATER STORAGE AREA.
5. INSTALL UTILITIES AND DRAINAGE INCLUDING DRAINAGE PIPE. IMMEDIATELY PLACE THE RIP-RAP AT THE DISCHARGE POINTS. SEED ALL DISTURBED AREAS. ONCE PROPOSED DETENTION BASIN AND ASSOCIATED STRUCTURE AND PIPES ARE INSTALLED, THE EXISTING DETENTION BASIN SHALL BE TAKEN OFFLINE BY CONNECTING AND ROUTING THE EXISTING DRAINAGE TO THE PROPOSED DETENTION POND.
6. BEGIN BUILDING CONSTRUCTION.
7. BEGIN PAVEMENT AND PROPOSED GRADING. BRING ROADWAY TO SUBBASE GRADE WITH GRAVEL. SEED ALL DISTURBED AREAS.
8. FINISH PAVEMENT CONSTRUCTION.
9. MAINTAIN SEDIMENT AND EROSION CONTROLS WHILE BUILDING ARE CONSTRUCTED.
10. FINISH LANDSCAPING AND PERMANENT STABILIZATION.
11. INSPECT AND REPAIR ALL DRAINAGE STRUCTURES INCLUDING DISCHARGE POINTS. REMOVE ANY DEBRIS (LEAVES, TREE LIMBS, BOULDERS, ETC.) FROM DRAINAGE INLETS AND OUTLETS. FLUSH ALL SEDIMENTS FROM DRAINAGE PIPES AND APPLY TOPSOIL TO PONDS.
12. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED TO ALL DISTURBED AREAS.

LEGEND

- EXISTING PROPERTY LINE
ABUTTING PROPERTY LINE
BUILDING SETBACK LINE
100' EXISTING CONTOUR
100' PROPOSED CONTOUR
EXISTING STONE WALL
EXISTING CURB
PROPOSED CURB
EXISTING GUARD RAIL
EXISTING DRAIN LINE
PROPOSED DRAIN LINE
EXISTING DRAINAGE MANHOLE
PROPOSED DRAINAGE MANHOLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING UTILITY POLE
PROPOSED UTILITY POLE
OVERHEAD WIRES
UNDERGROUND ELECTRIC
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING WATER LINE
PROPOSED WATER LINE
EXISTING WATER SHUT OFF VALVE
PROPOSED WATER SHUT OFF VALVE
EXISTING SEWER LINE
PROPOSED SEWER LINE
EXISTING SEWER MANHOLE
PROPOSED SEWER MANHOLE
NOW OR FORMERLY TREENLINE
SILT FENCE
LIMIT OF DISTURBANCE
TEST HOLE
WETLAND EDGE
WETLAND FLAG
50' PERIMETER WETLAND
100' RIVERBANK WETLAND
200' RIVERBANK WETLAND
EXISTING EASEMENT



JCE logo and contact information for JOE CASALI ENGINEERING, INC. including address, phone, and website.

Professional Engineer seal for JOSEPH A. CASALI, Registered Professional Engineer Civil, No. 250, dated 2-12-2020.

CAMP BOW WOW 37 THURBER BOULEVARD, UNIT 3 SMITHFIELD, RHODE ISLAND AP 46, LOT 87E

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES stamp with approval details and date MAY 29 2020.

REVISIONS table with columns: NO., DATE, DESCRIPTION, DEM/TOWN, COMMENTS.

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: SEP. 2019
PROJECT NO: 18-2a

PRELIMINARY, NOT FOR CONSTRUCTION

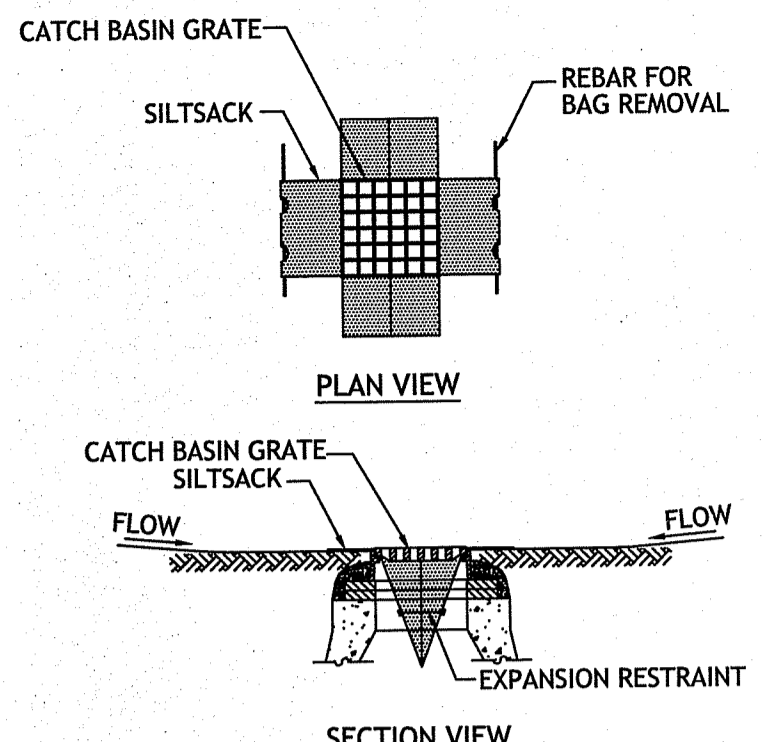
GENERAL NOTES & LEGEND

SHEET 2 OF 11

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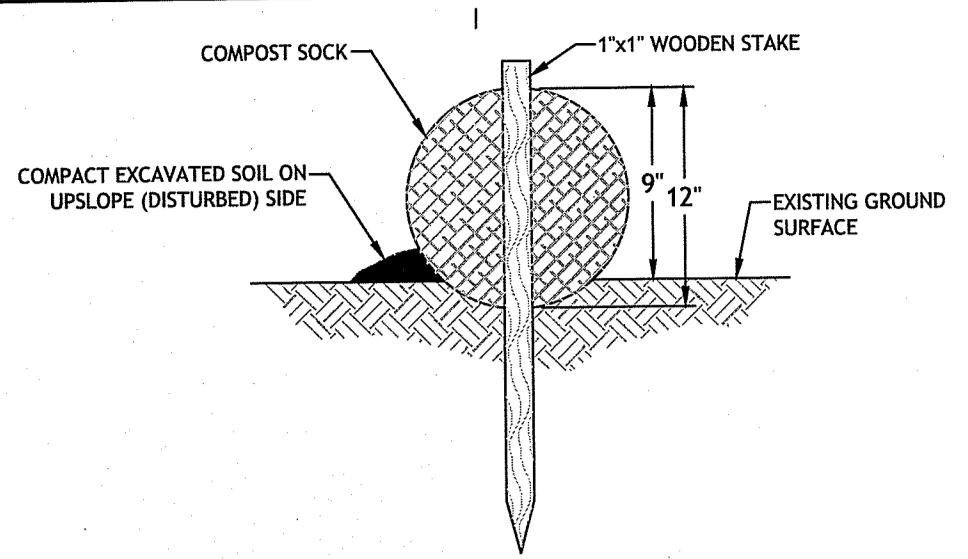


LOCATION OF EXISTING UTILITIES SHOWN ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT: 1-888-DIG-SAFE 1-888-344-7233



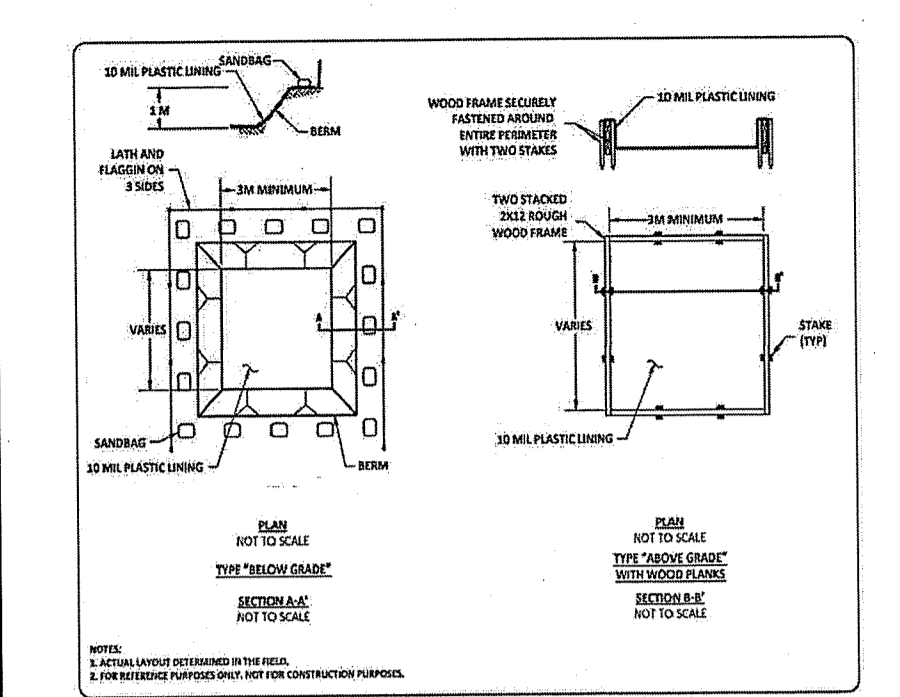
1 SILT SACK SEDIMENT TRAP
NOT TO SCALE

Notes:
1. INSTALL SILT SACK IN SELECTED CATCH BASINS IDENTIFIED ON THE EXISTING CONDITIONS AND SITE PREPARATION PLAN BEFORE COMMENCING WORK.
GRATE TO BE PLACED OVER SILT SACK. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

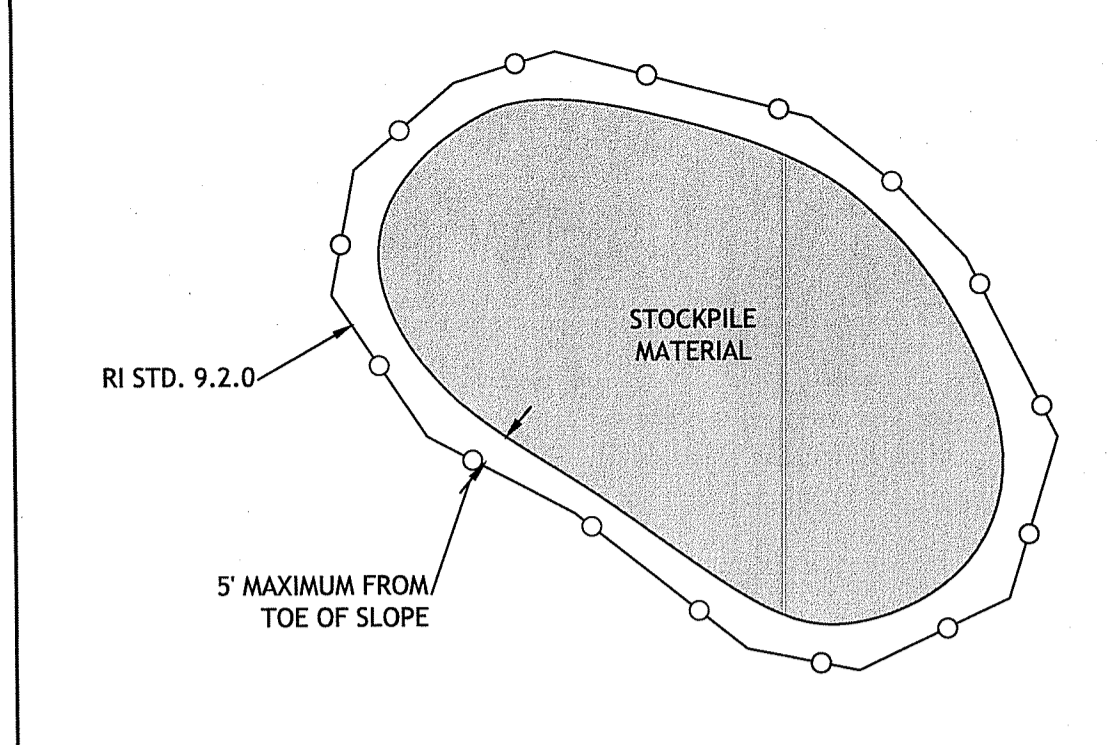


2 COMPOST SOCK
NOT TO SCALE

NOTES:
1. 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.
2. 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.
3. 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.



3 TEMP. CONCRETE WASHOUT DETAIL
NOT TO SCALE

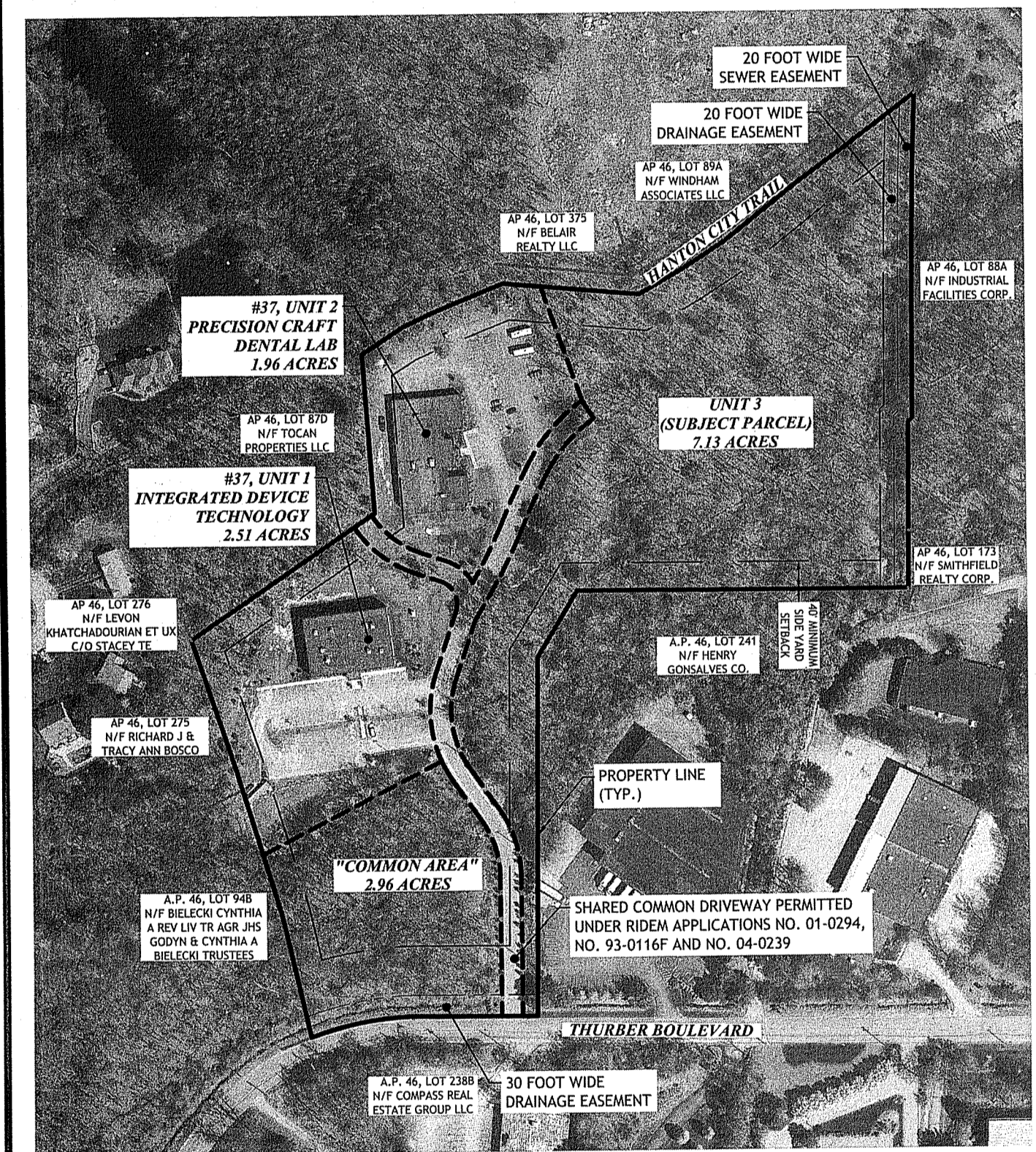


4 STOCKPILE DETAIL
NOT TO SCALE

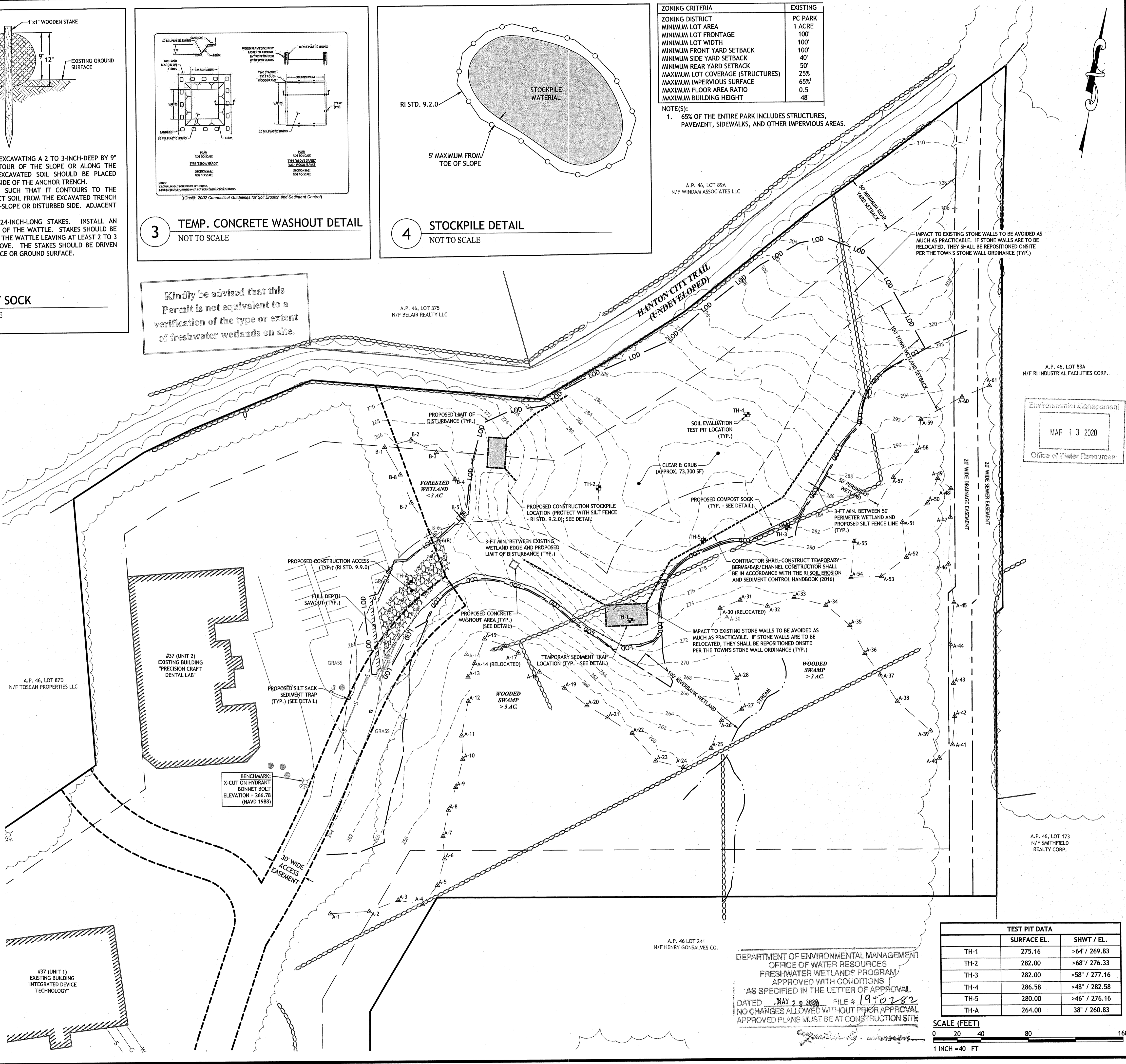
ZONING CRITERIA	EXISTING
ZONING DISTRICT	PC PARK
MINIMUM LOT AREA	1 ACRE
MINIMUM LOT FRONTAGE	100'
MINIMUM LOT WIDTH	100'
MINIMUM FRONT YARD SETBACK	100'
MINIMUM SIDE YARD SETBACK	40'
MINIMUM REAR YARD SETBACK	50'
MAXIMUM LOT COVERAGE (STRUCTURES)	25%
MAXIMUM IMPERVIOUS SURFACE	65%
MAXIMUM FLOOR AREA RATIO	0.5
MAXIMUM BUILDING HEIGHT	48'

NOTE(S):
1. 65% OF THE ENTIRE PARK INCLUDES STRUCTURES, PAVEMENT, SIDEWALKS, AND OTHER IMPERVIOUS AREAS.

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



OVERALL SITE PLAN
1" = 200'



Environmental Management
MAR 13 2020
Office of Water Resources

TEST PIT DATA		
	SURFACE EL.	SHWT / EL.
TH-1	275.16	>64' / 269.83
TH-2	282.00	>68' / 276.33
TH-3	282.00	>58' / 277.16
TH-4	286.58	>48' / 282.58
TH-5	280.00	>46' / 276.16
TH-A	264.00	38' / 260.83

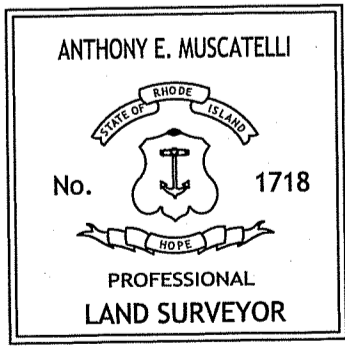
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APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 29 2020 FILE # 190282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE (FEET)
0 20 40 80 160
1 INCH = 40 FT

INTERNATIONAL MAPPING & SURVEYING CORP.
LAND SURVEYING CIVIL ENGINEERING PHOTOGRAMMETRIC MAPPING
19 INDUSTRIAL DRIVE, SMITHFIELD, R.I. 02917 (401) 232-2620

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:
TYPE OF BOUNDARY SURVEY: COMPREHENSIVE BOUNDARY SURVEY
MEASUREMENT SPECIFICATION: CLASS 1
VERTICAL CONTROL STANDARD: V-3
TOPOGRAPHIC SURVEY ACCURACY: T-2



THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:
EXISTING CONDITIONS PLAN & SURVEY

BY: *Anthony E. Muscatelli* 8/29/2019
ANTHONY E. MUSCATELLI, PLS #1718 COA #A368 DATE



LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DISREGARD.
1-888-DIG-SAFE
1-888-344-7233

JCE
JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - I&DS - TRAFFIC - FLOODING
(401) 944-1300 (401) 944-1313 FAX WWW.JCE-ENR.COM

JOSEPH A. CASALI
No. 17250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2.12.2020

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

NO.	DATE	DESCRIPTION
1	2/2020	DEM/TOWN COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: SEP. 2019
PROJECT NO: 18-42a

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS & SITE PREP. PLAN

SHEET 3 OF 11

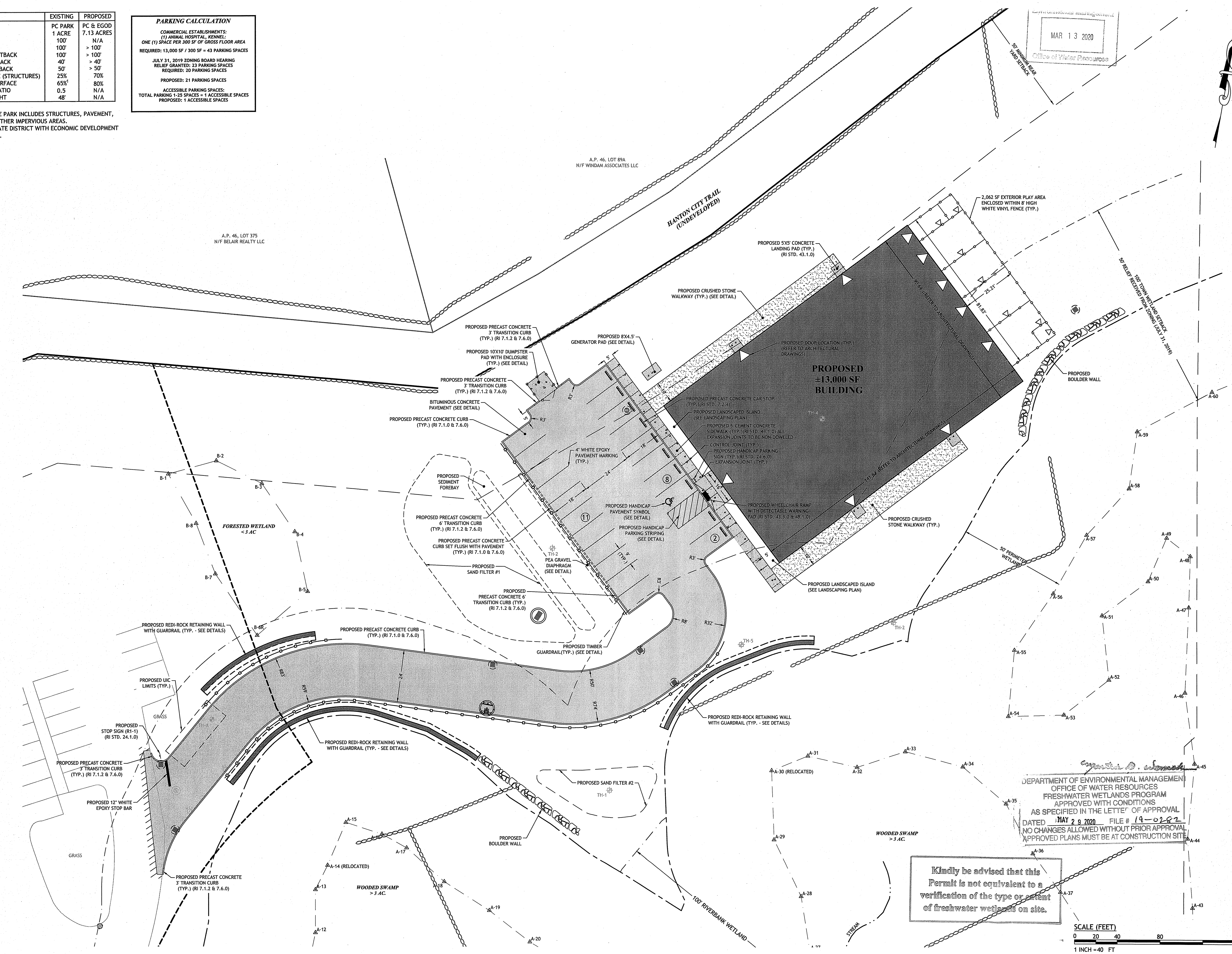
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ZONING CRITERIA	EXISTING	PROPOSED
ZONING DISTRICT	PC PARK	PC & EGOD
MINIMUM LOT AREA	1 ACRE	7.13 ACRES
MINIMUM LOT FRONTAGE	100'	N/A
MINIMUM LOT WIDTH	100'	> 100'
MINIMUM FRONT YARD SETBACK	40'	> 40'
MINIMUM SIDE YARD SETBACK	50'	> 50'
MINIMUM REAR YARD SETBACK	50'	> 50'
MAXIMUM LOT COVERAGE (STRUCTURES)	25%	70%
MAXIMUM IMPERVIOUS SURFACE	65%	80%
MAXIMUM FLOOR AREA RATIO	0.5	N/A
MAXIMUM BUILDING HEIGHT	48'	N/A

PARKING CALCULATION	
COMMERCIAL ESTABLISHMENTS: (1) ANIMAL HOSPITAL, KENNEL: ONE (1) SPACE PER 300 SF OF GROSS FLOOR AREA REQUIRED: 13,000 SF / 300 SF = 43 PARKING SPACES	
JULY 31, 2019 ZONING BOARD HEARING RELIEF GRANTED: 23 PARKING SPACES REQUIRED: 20 PARKING SPACES	
PROPOSED: 21 PARKING SPACES	
ACCESSIBLE PARKING SPACES: TOTAL PARKING 1-25 SPACES = 1 ACCESSIBLE SPACES PROPOSED: 1 ACCESSIBLE SPACES	

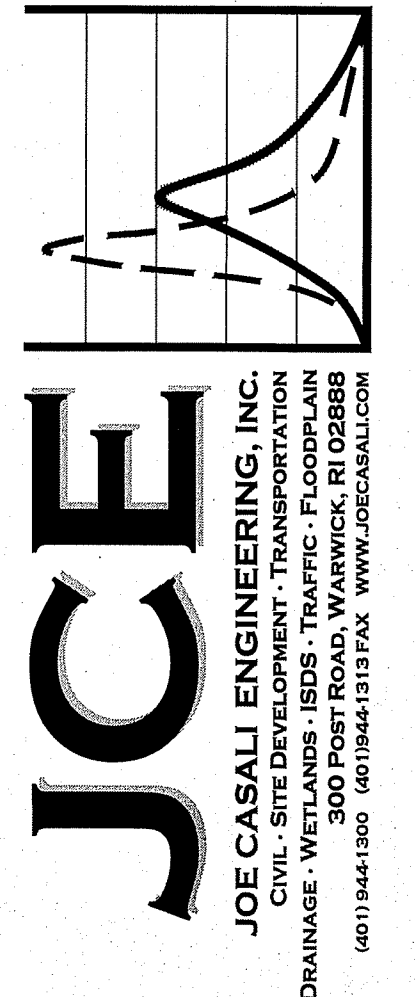
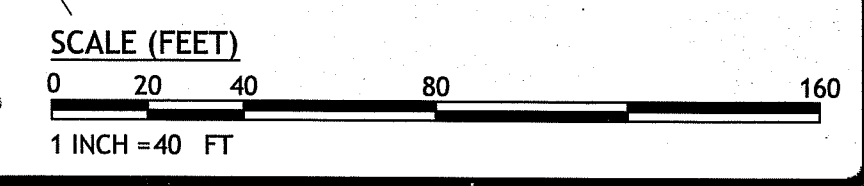
- NOTE(S):
- 65% OF THE ENTIRE PARK INCLUDES STRUCTURES, PAVEMENT, SIDEWALKS, AND OTHER IMPERVIOUS AREAS.
 - PLANNED CORPORATE DISTRICT WITH ECONOMIC DEVELOPMENT OVERLAY DISTRICT.

MAR 13 2020
Office of Water Resources



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 28 2020 FILE # 19-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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



CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

REVISIONS:		
NO.	DATE	DESCRIPTION
1	2/2020	DEM/TOWN COMMENTS

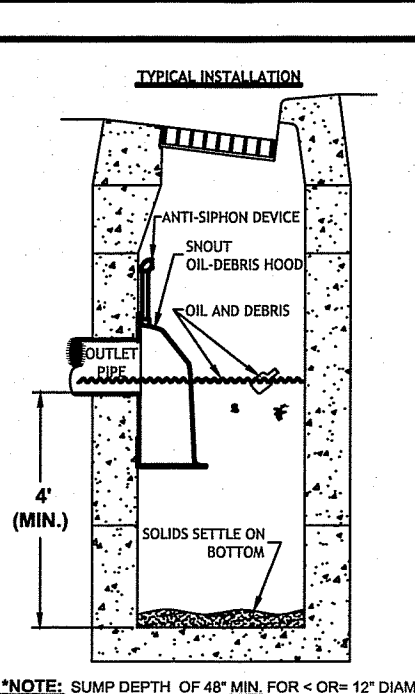
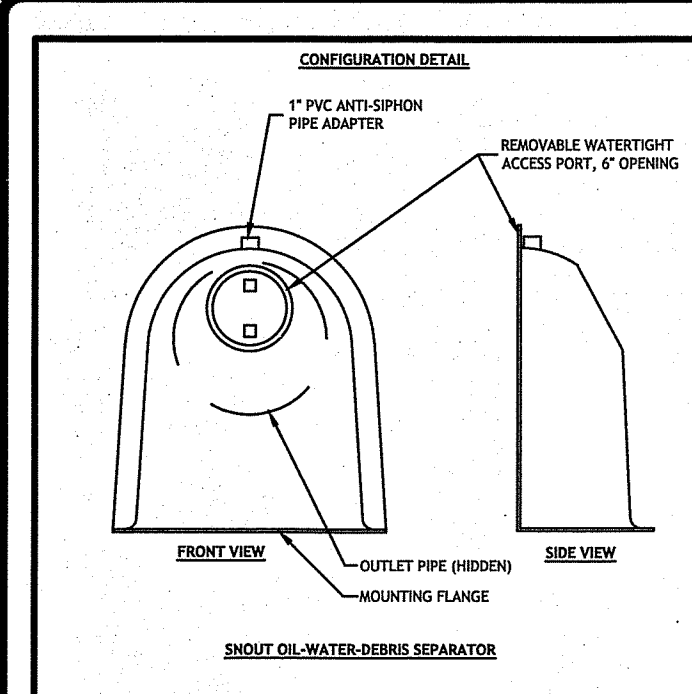
DESIGNED BY:	WMLR
DRAWN BY:	SEP/SD
CHECKED BY:	JAC
DATE:	SEP. 2019
PROJECT NO.:	18-42a

PRELIMINARY, NOT FOR CONSTRUCTION

SITE PLAN

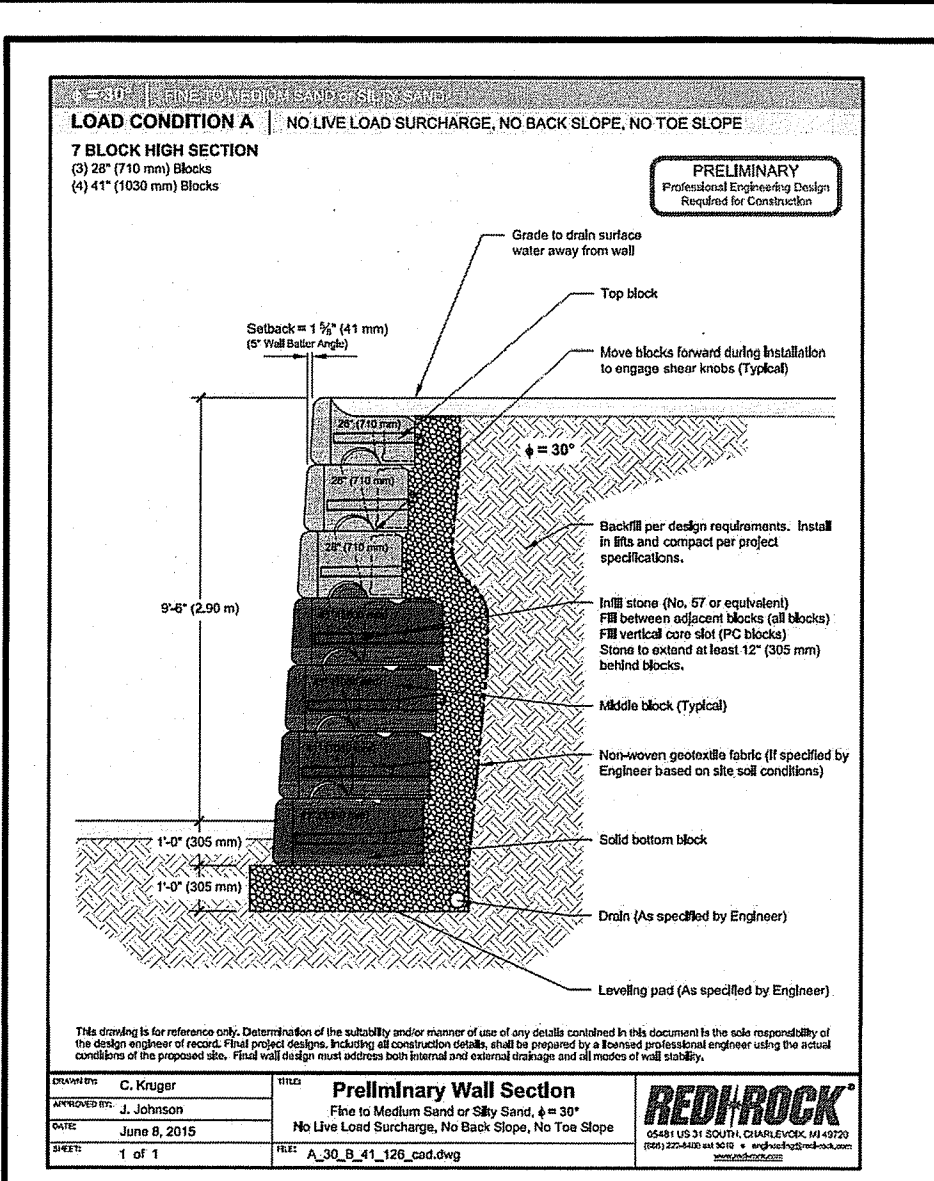
SHEET 4 OF 11

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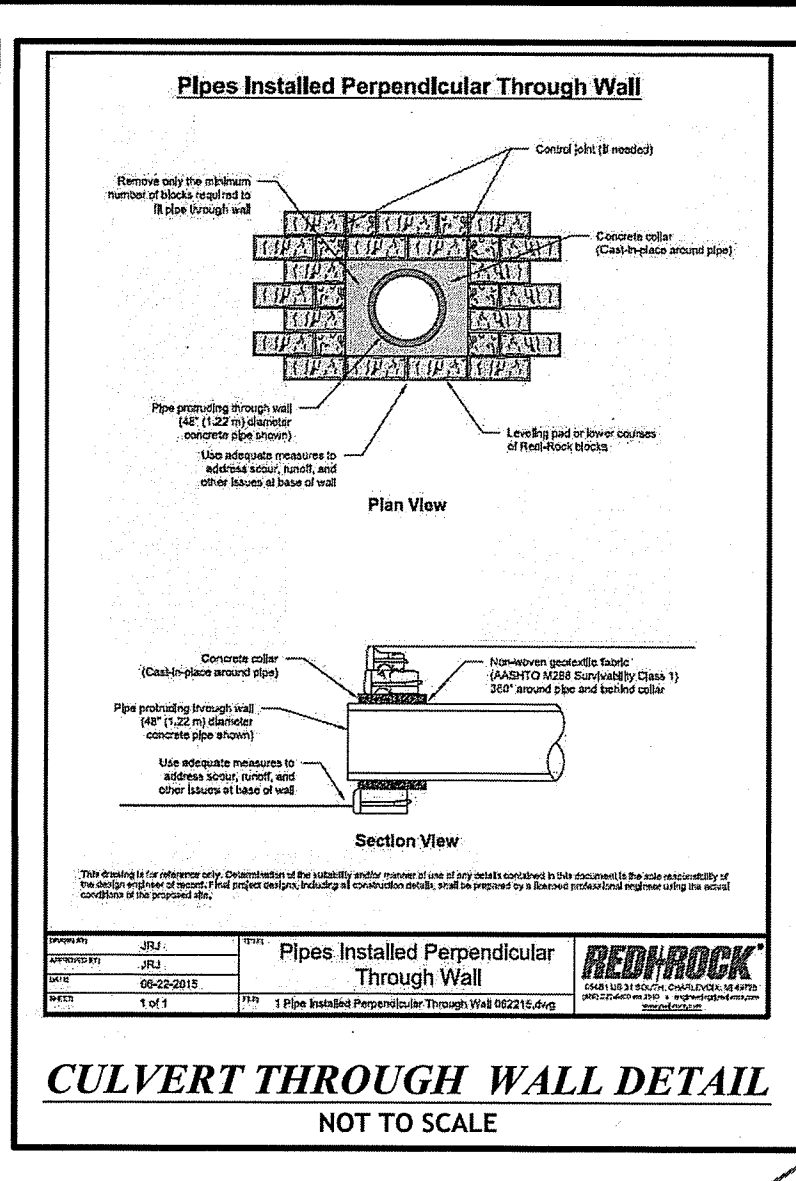


- NOTES:**
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 53 RT. ARCHER RD. LYME, CT 06271 (860) 434-3195 FAX (860) 554-8008 OR (888) 354-7885 WEB SITE: www.bestm.com OR PRE-APPROVED EQUAL.
 2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH 50 GEL COAT EXTERIOR FINISH WITH A MINIMUM 1/8" LAMINATE THICKNESS.
 3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS SHOWN. (SEE CONFIGURATION DETAIL).
 4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
 5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD 2' BELOW INVERT.
 6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
 7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
 8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL).
 9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:
 - A. INSTALLATION INSTRUCTIONS
 - B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
 - C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
 - D. ANCHORING/FASTENING BOLTS
 - E. ANCHOR SHIELDS

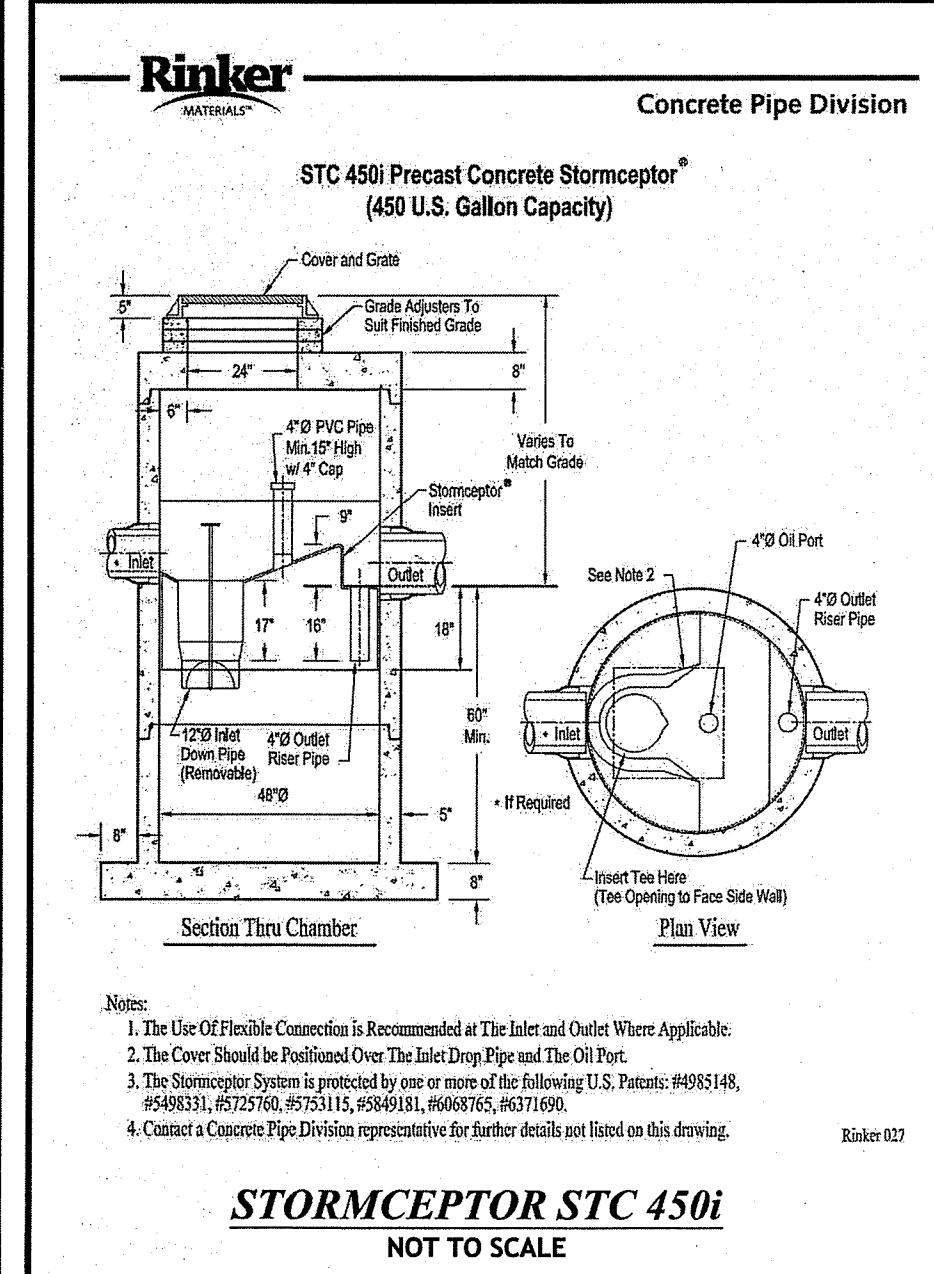
OIL/WATER SEPARATOR HOOD
NOT TO SCALE



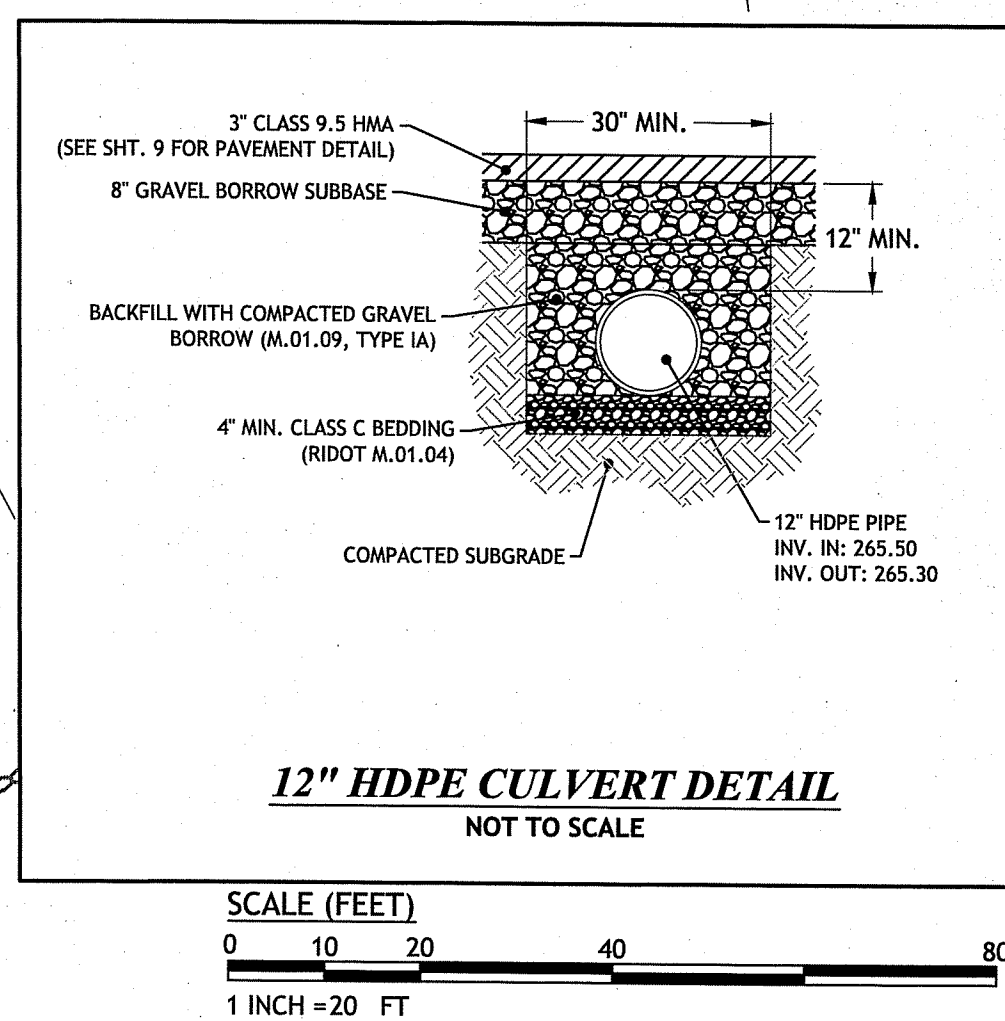
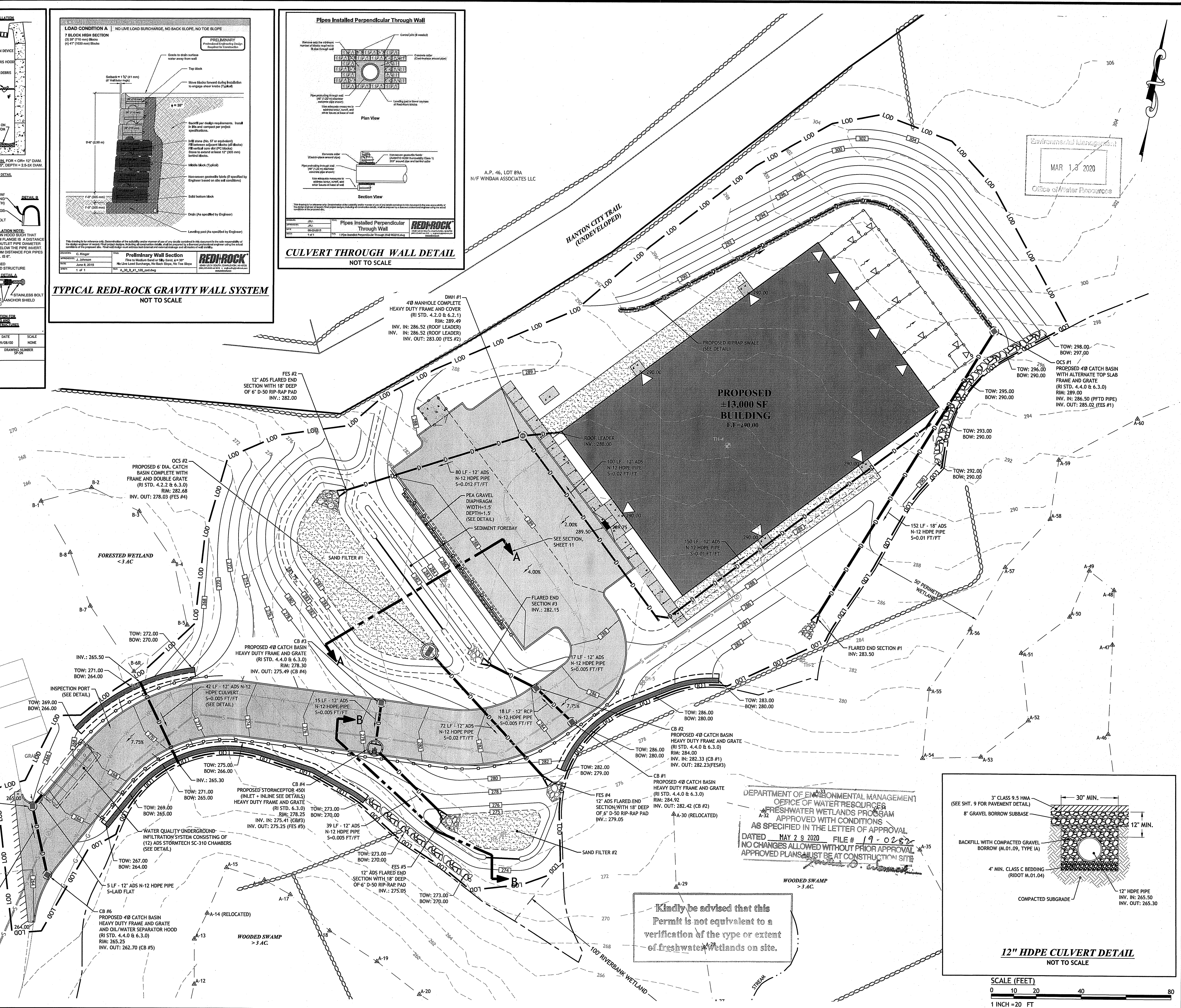
TYPICAL REDI-ROCK GRAVITY WALL SYSTEM
NOT TO SCALE



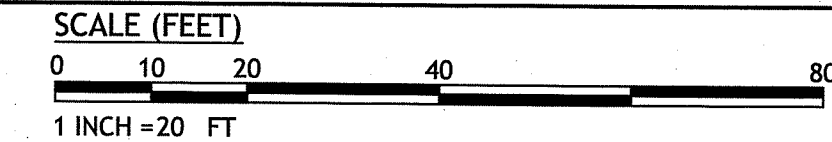
CULVERT THROUGH WALL DETAIL
NOT TO SCALE



STORMCEPTOR STC 450i
NOT TO SCALE



12" HDPE CULVERT DETAIL
NOT TO SCALE



JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRAINAGE, WETLANDS, ISDS, TRAFFIC, FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECA.SALI.COM

JOSEPH A. CASALI
No. 250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.12.2020

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

REVISIONS:

NO.	DATE	DESCRIPTION
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DESIGNED BY: WMLJR
DRAWN BY: SEPS/D
CHECKED BY: JAC
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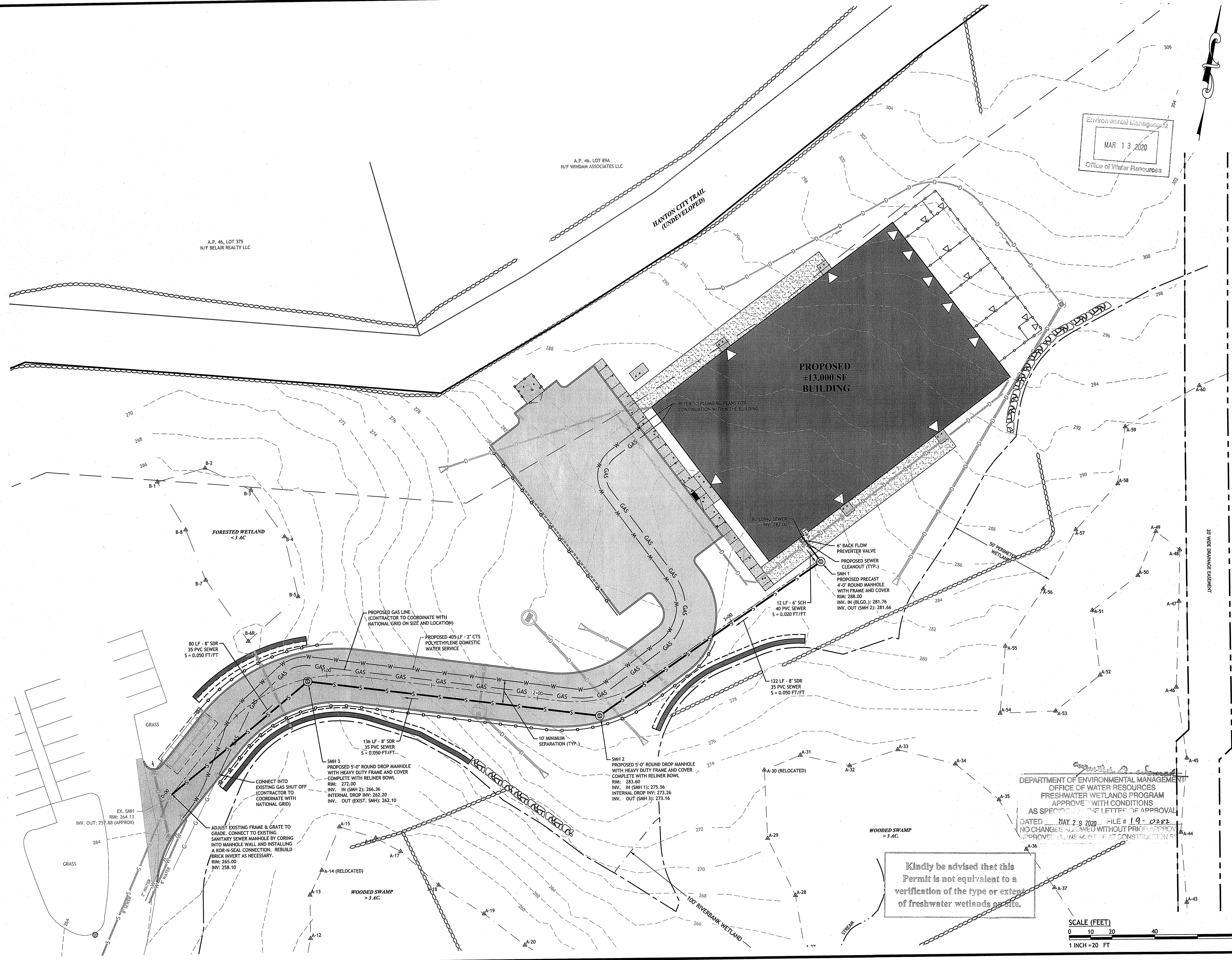
PRELIMINARY, NOT FOR CONSTRUCTION

GRADING & DRAINAGE PLAN

SHEET 5 OF 11

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Environmental Management
MAR 13 2020
Office of Water Resources

JCE
JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN
1601 9441 3300 1601 9441 3313 FAX WWW.JCEONLINE.COM

JOSEPH A. CASALI
No. 1250
REGISTERED PROFESSIONAL ENGINEER CIVIL
2.12.2020

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

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CHECKED BY: JAG
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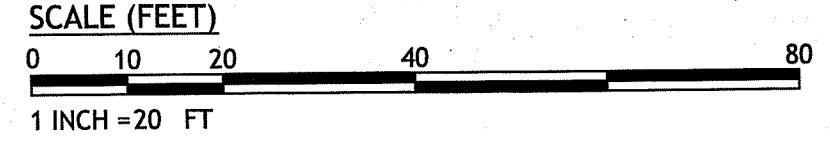
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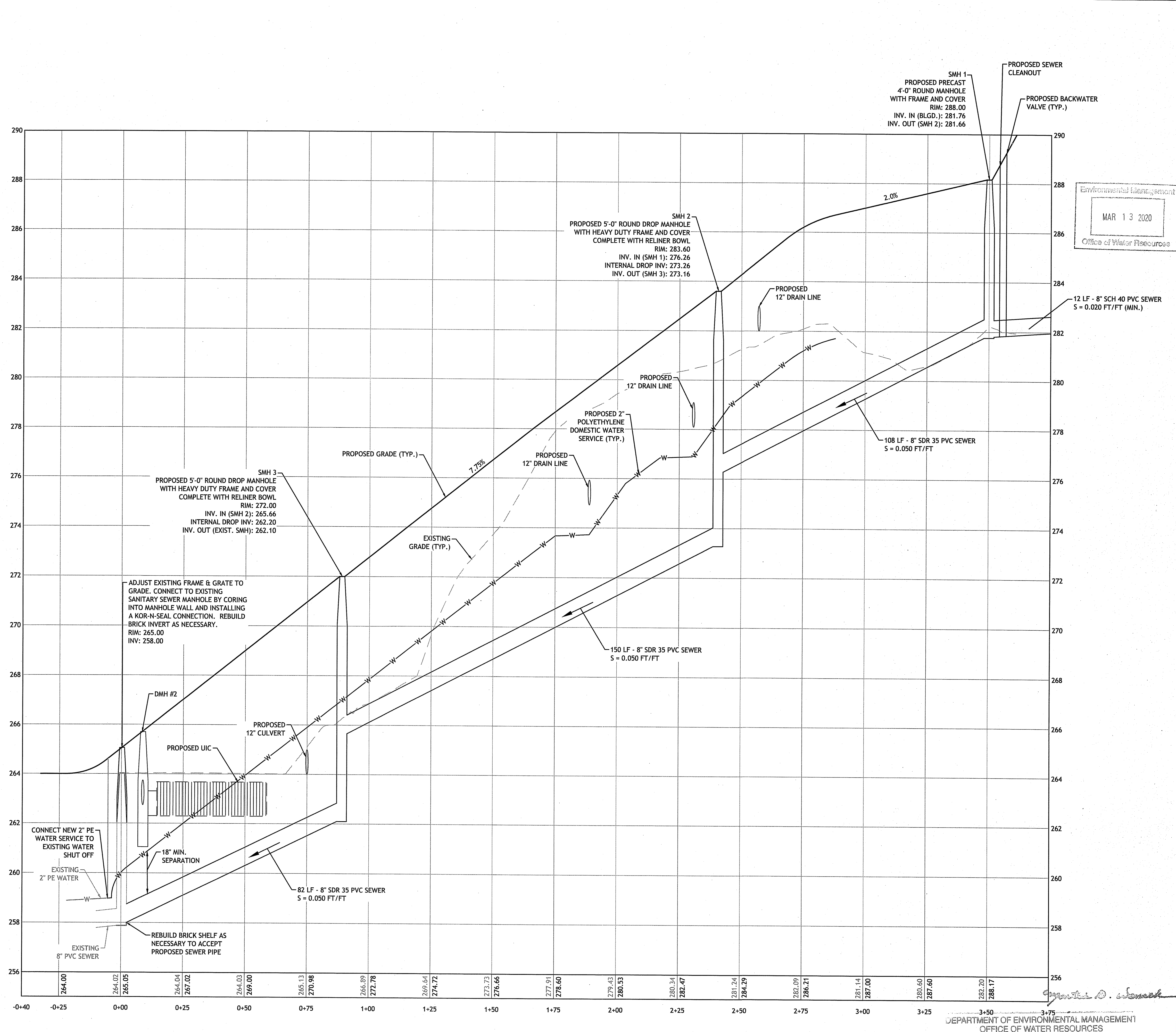
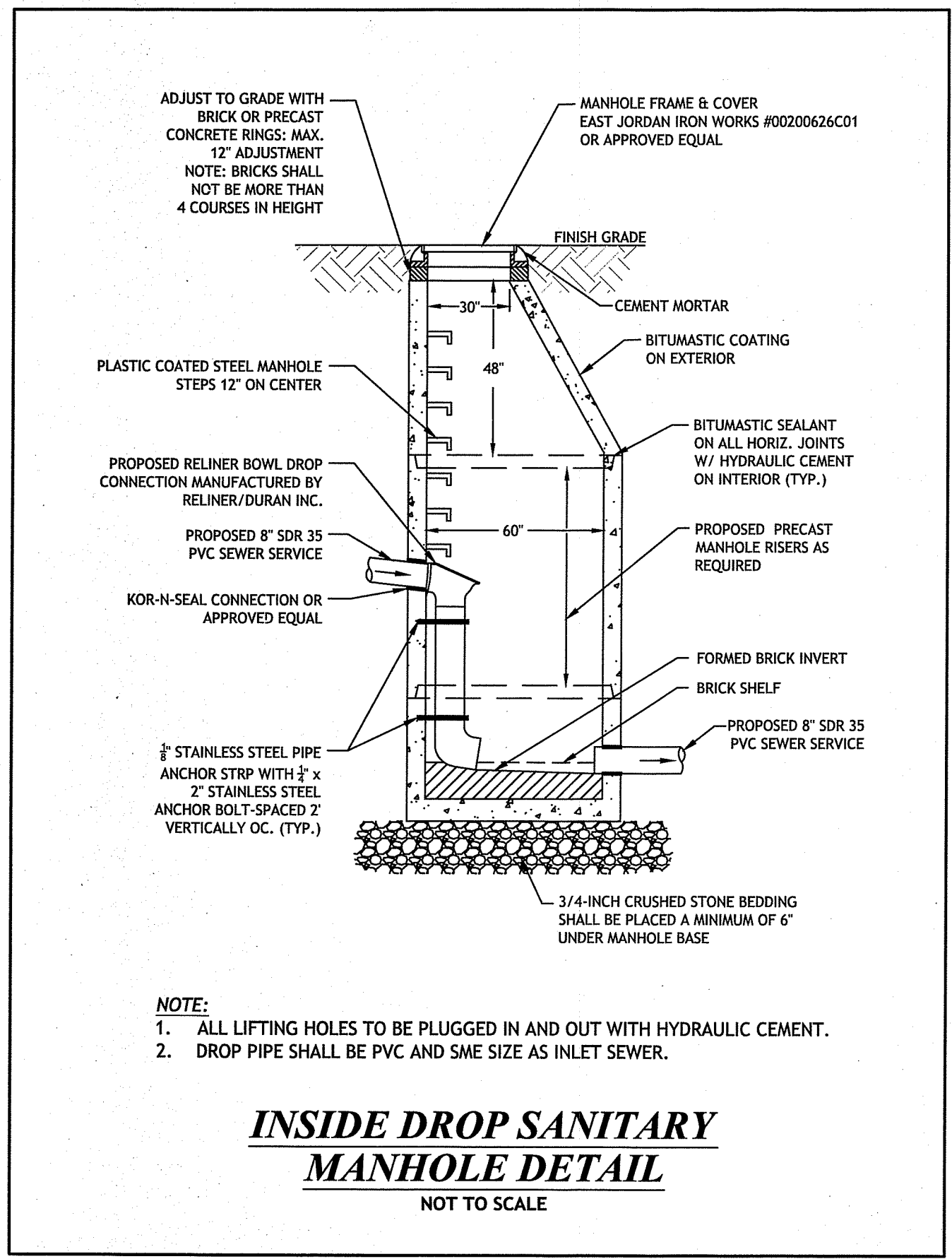
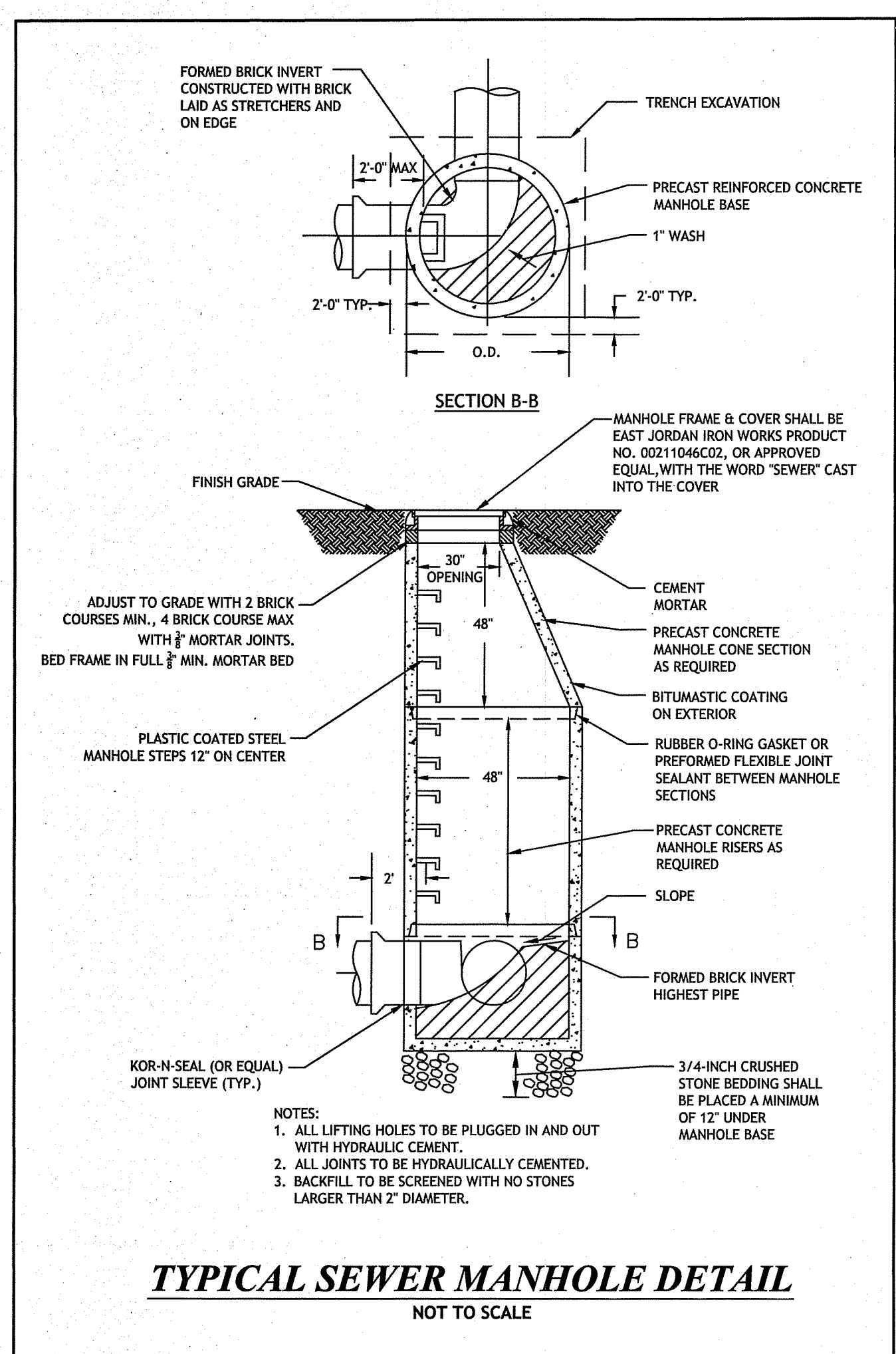
UTILITY PLAN

SHEET 6 OF 11

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVE WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 29 2020 FILE # 19-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRAFFIC, FLOODPLAIN DRAINAGE, WETLANDS, ISDS, TRAFFIC, FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECSALI.COM

JOSEPH A. CASALI
No. 250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.12.2020

CAMP BOW WOW
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SMITHFIELD, RHODE ISLAND
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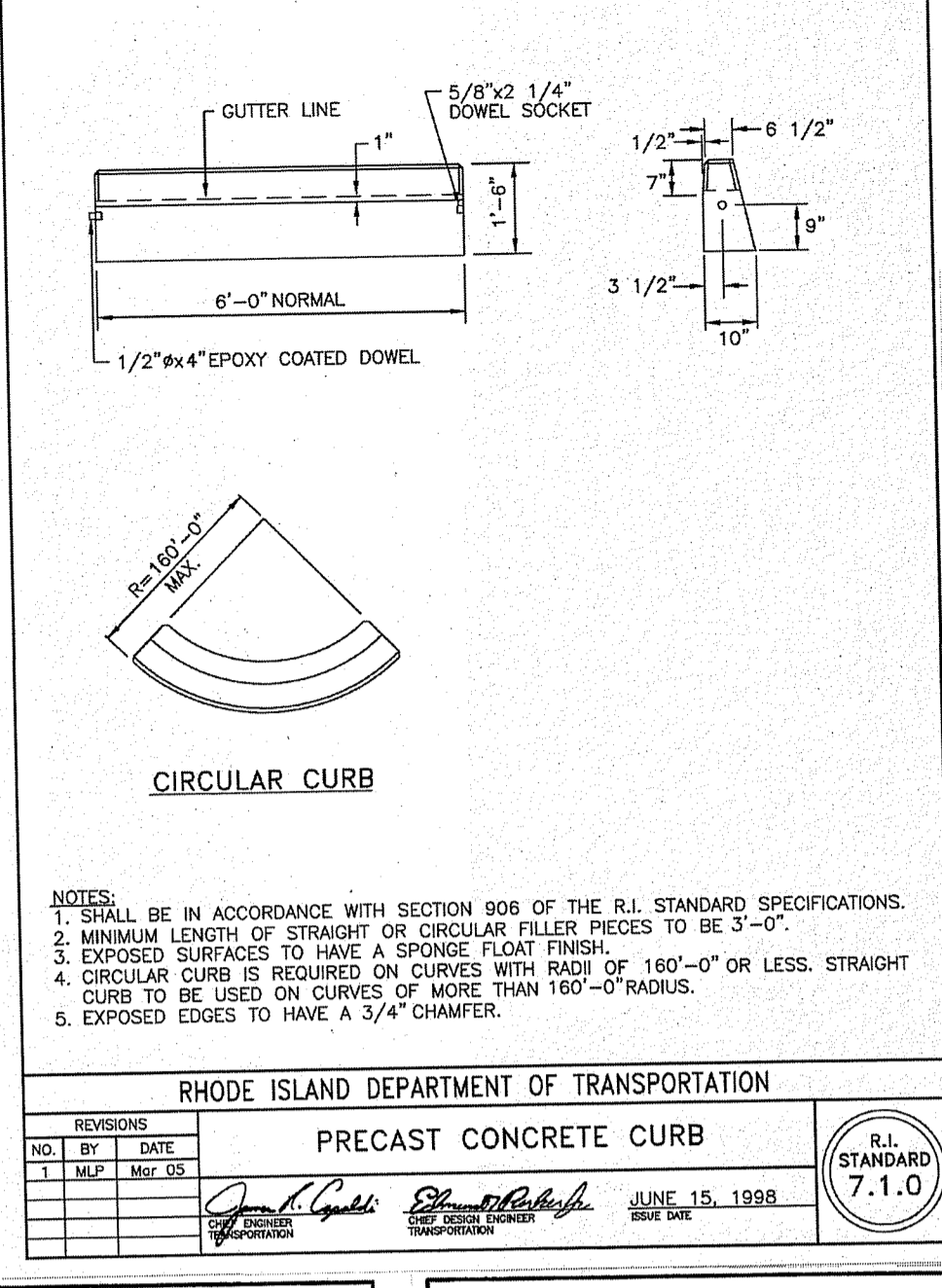
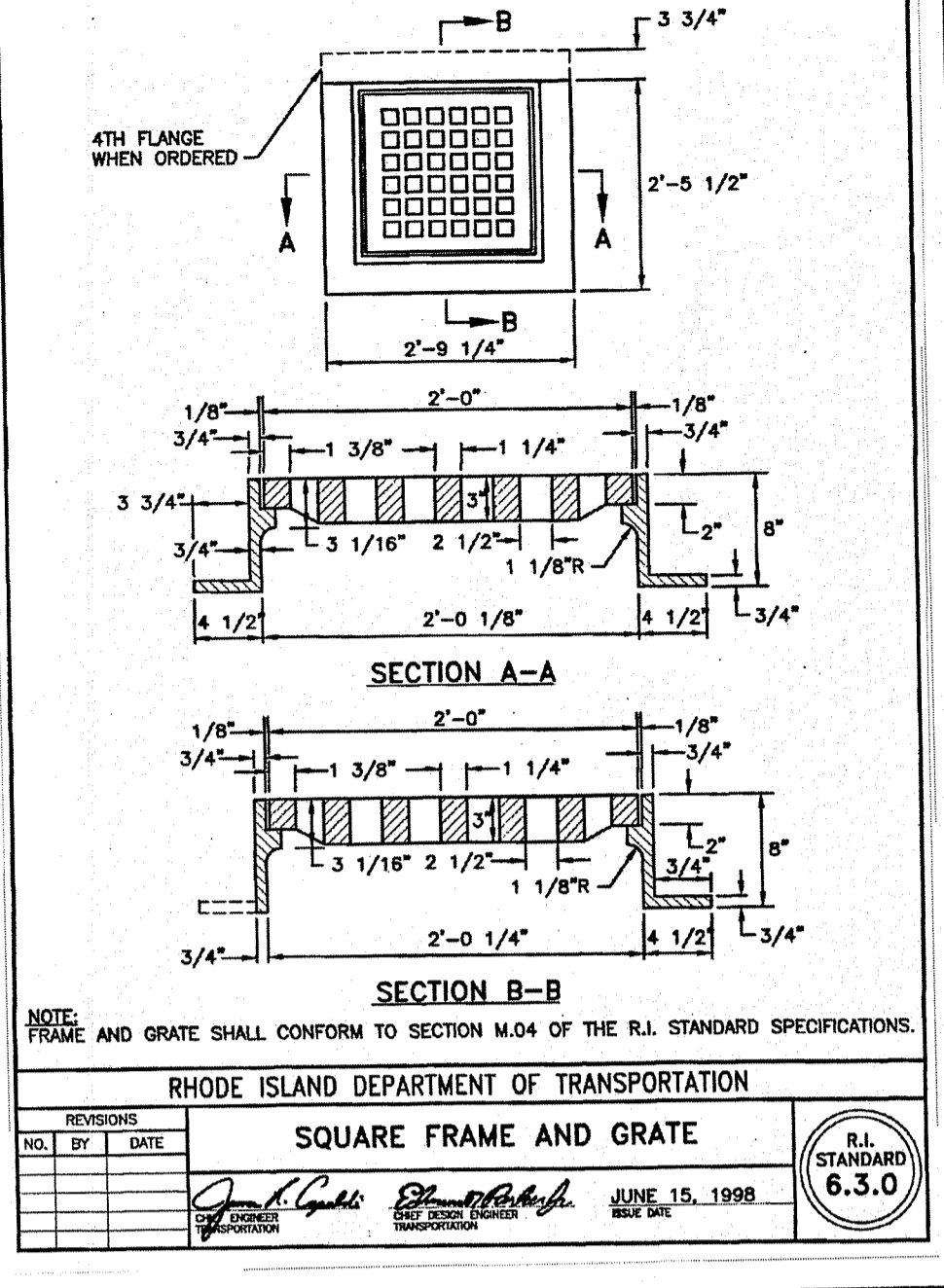
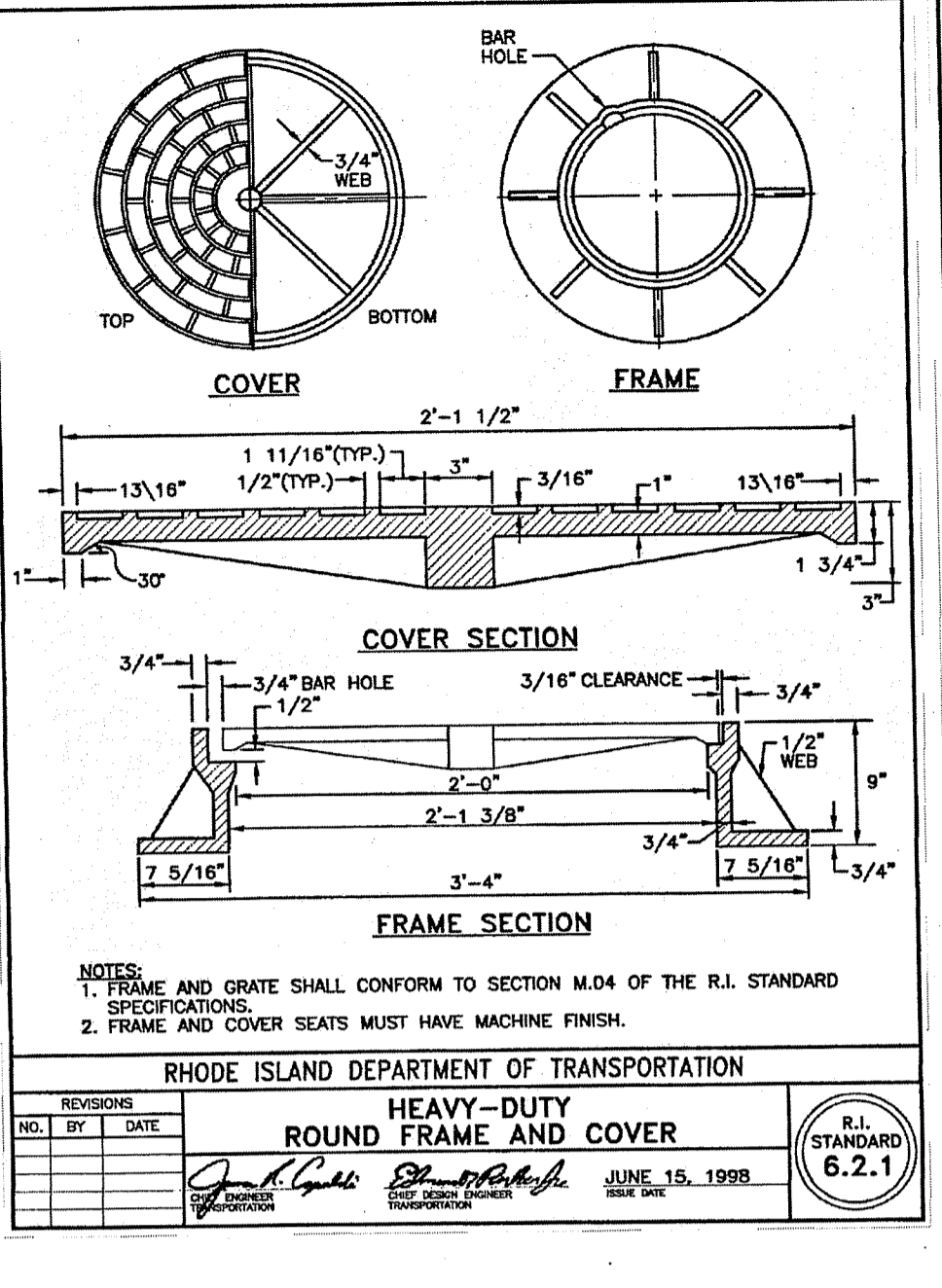
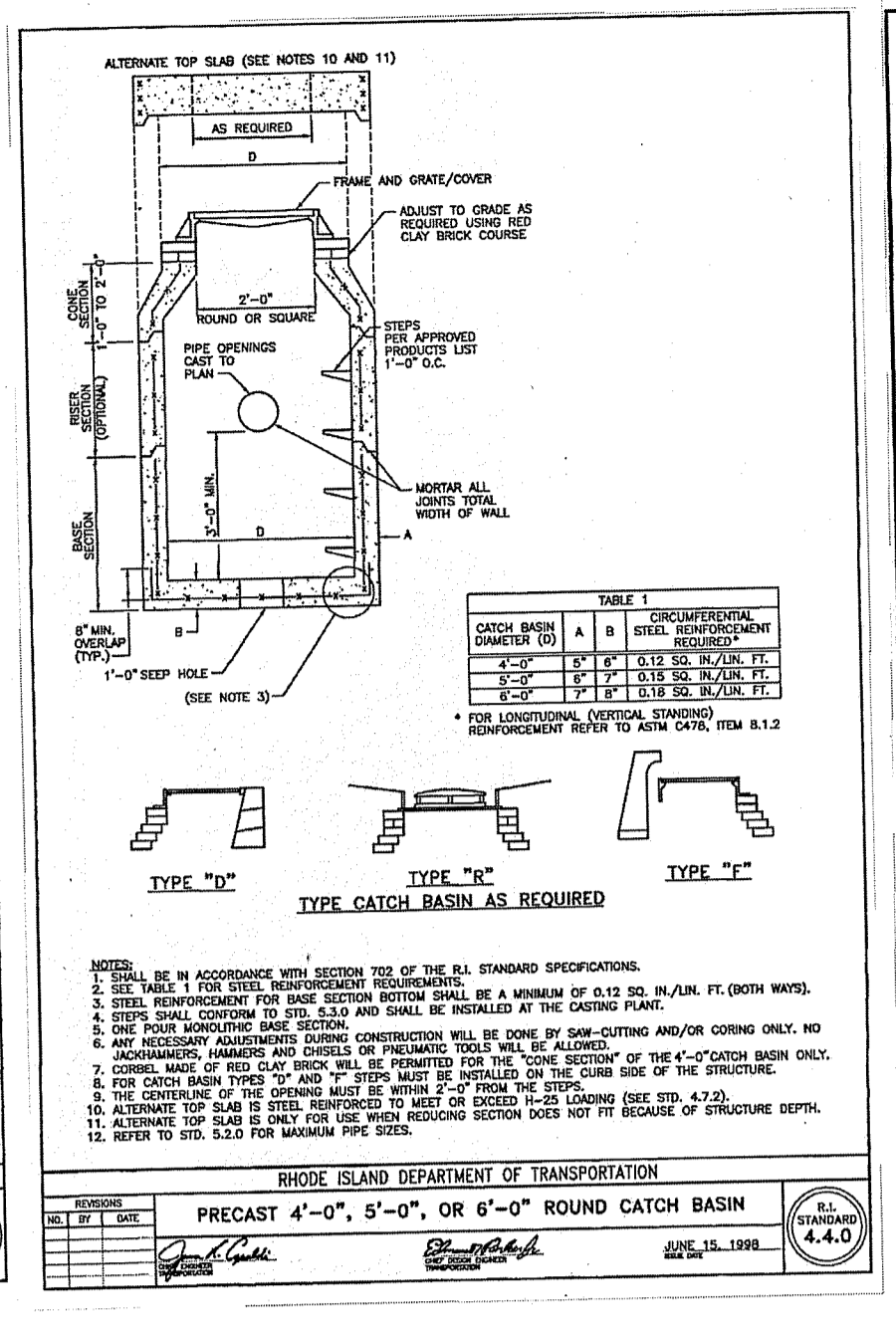
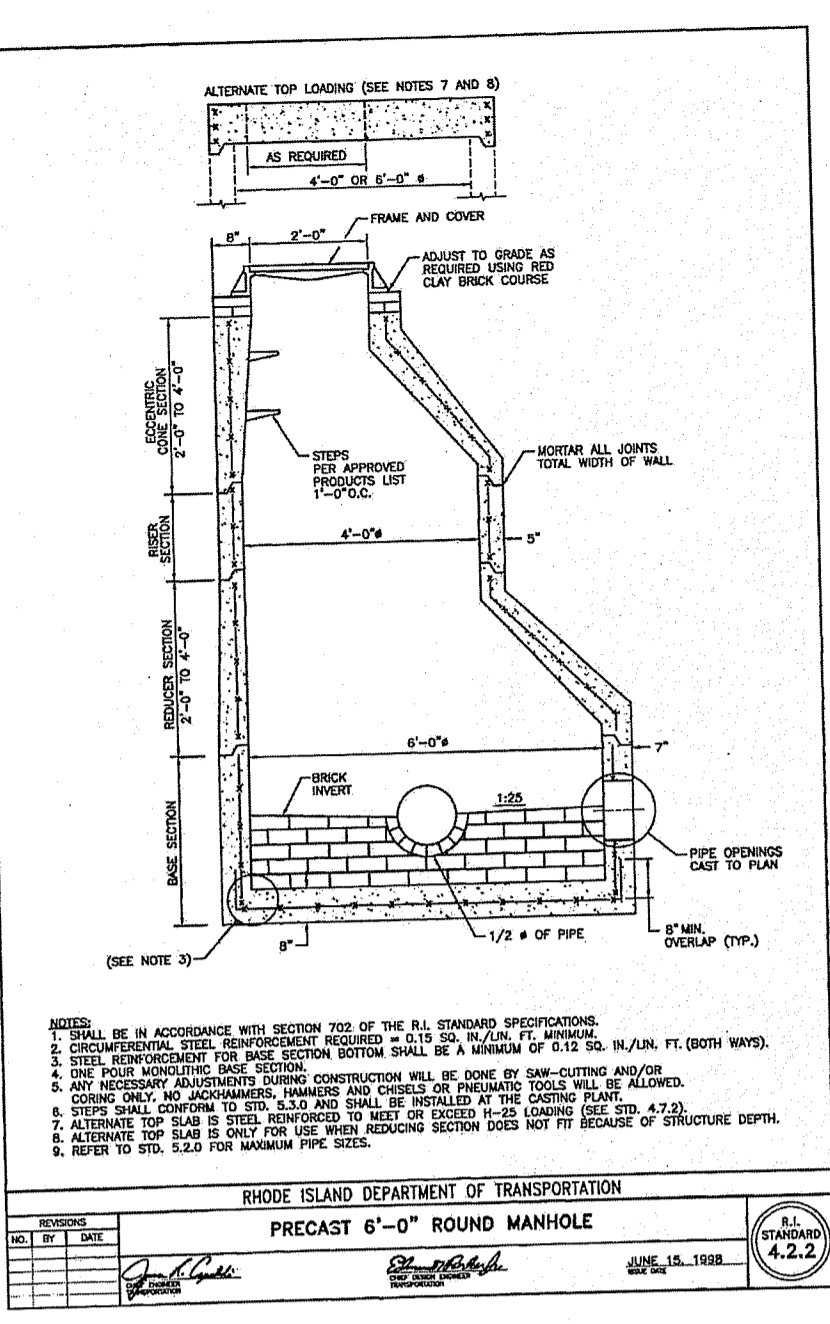
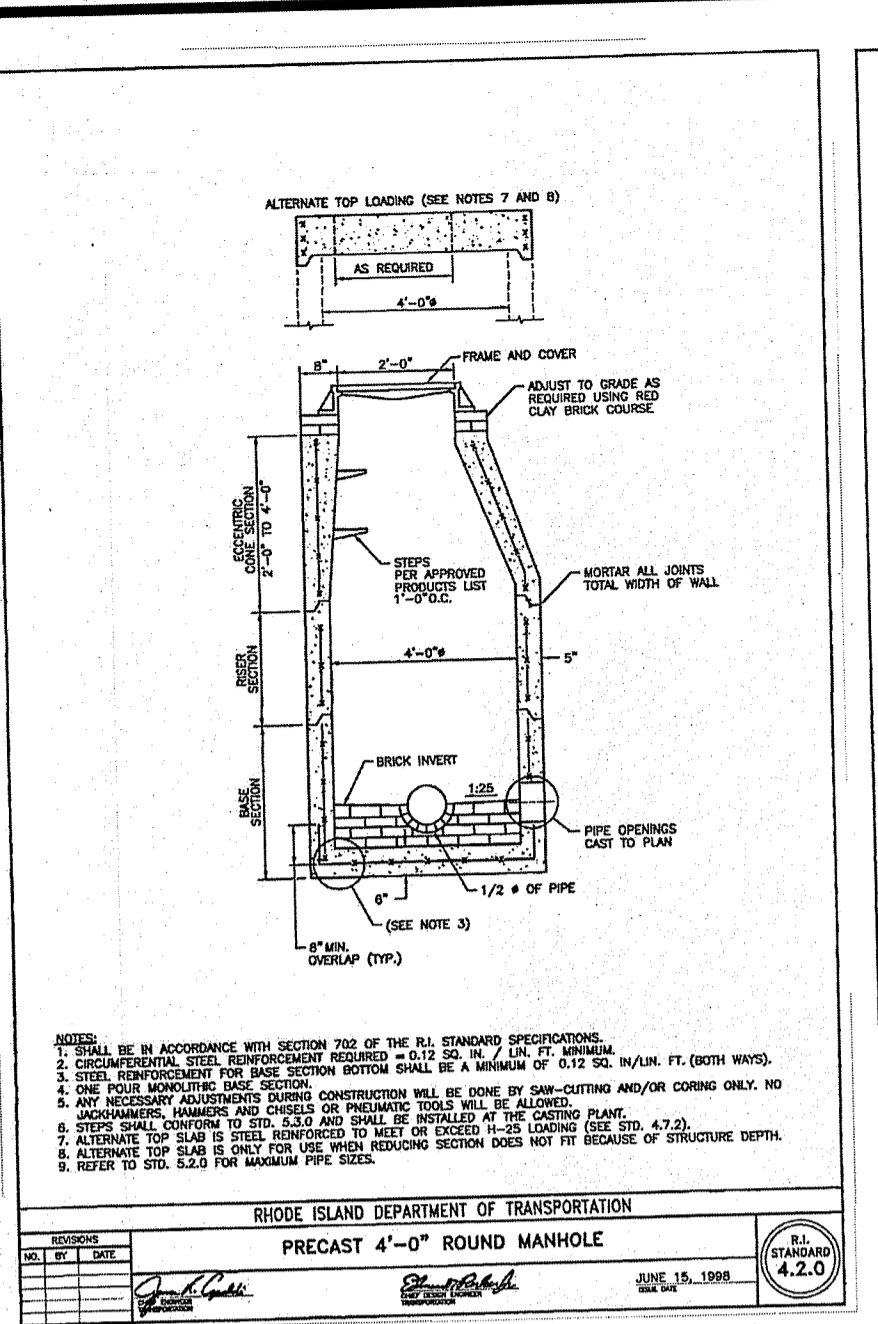
UTILITY PROFILE

SHEET 7 OF 11

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 29, 2020 FILE # 19-0282
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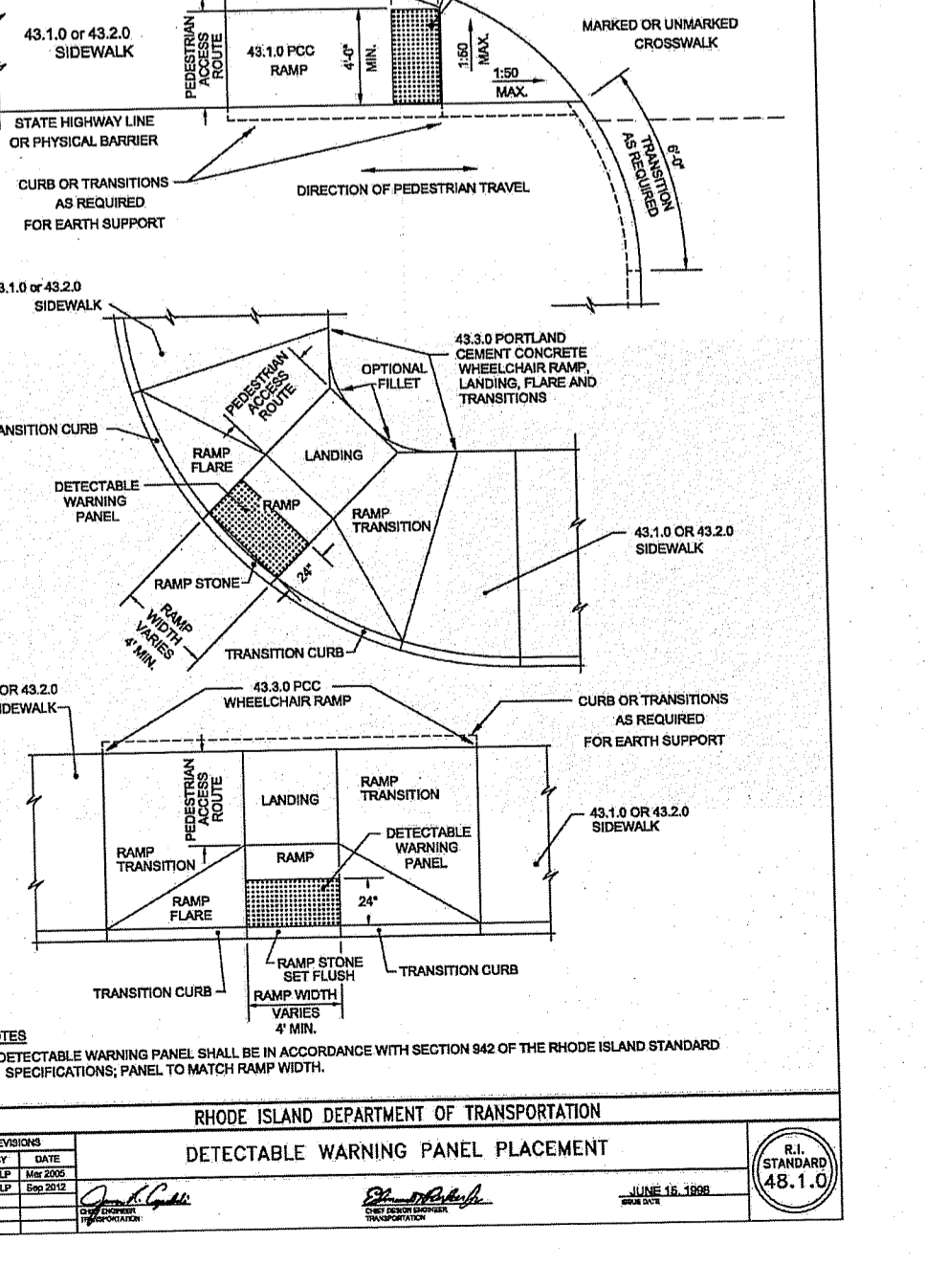
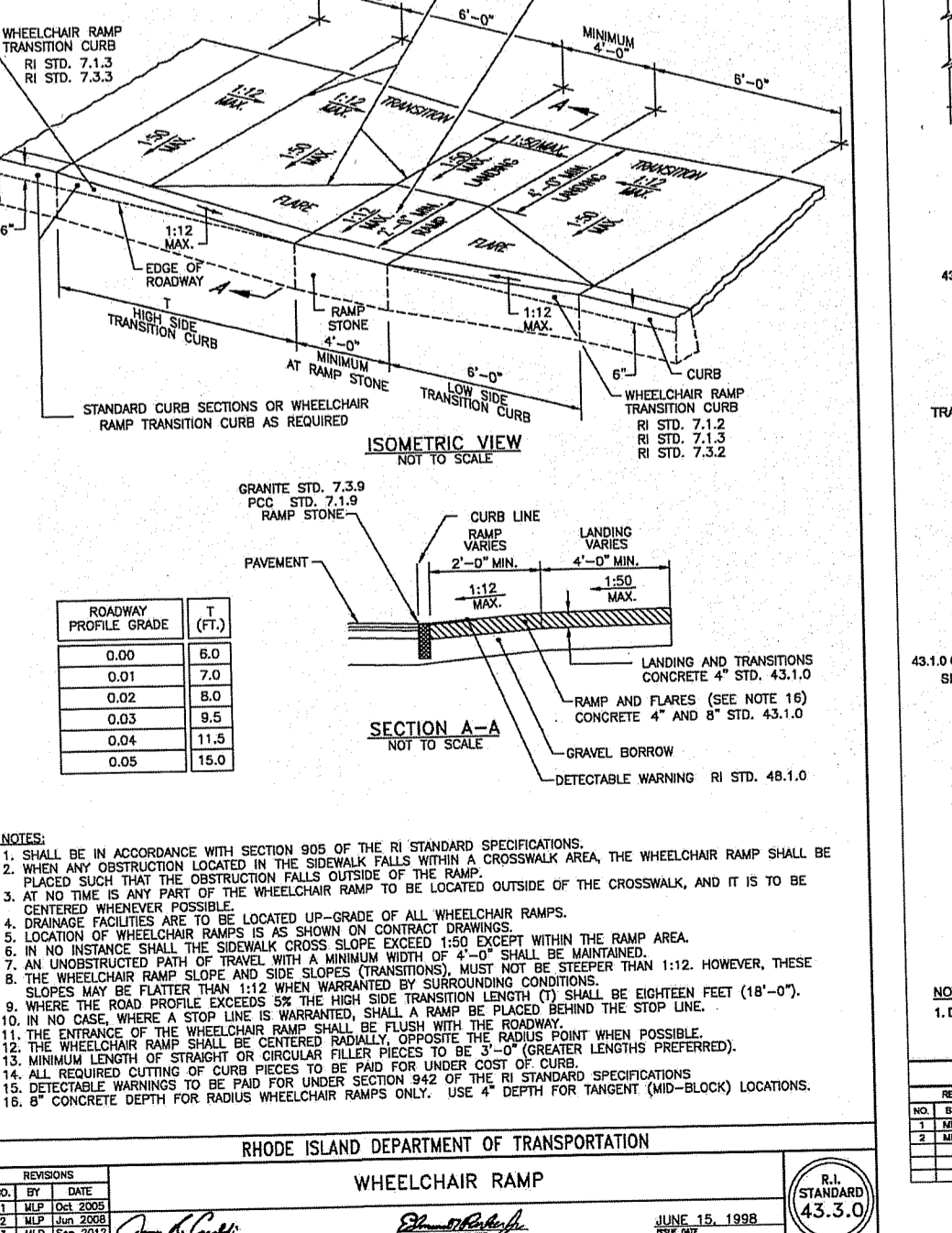
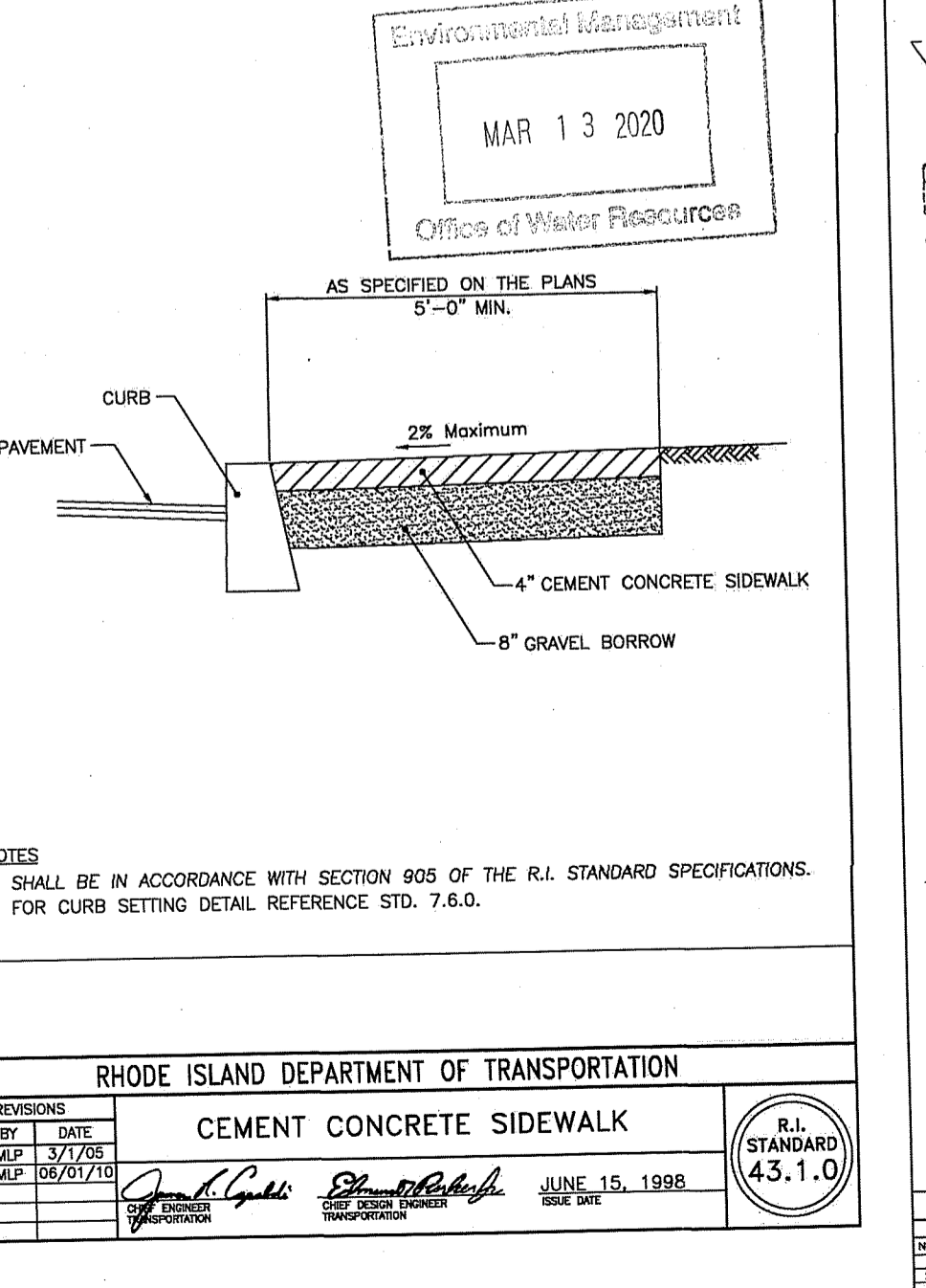
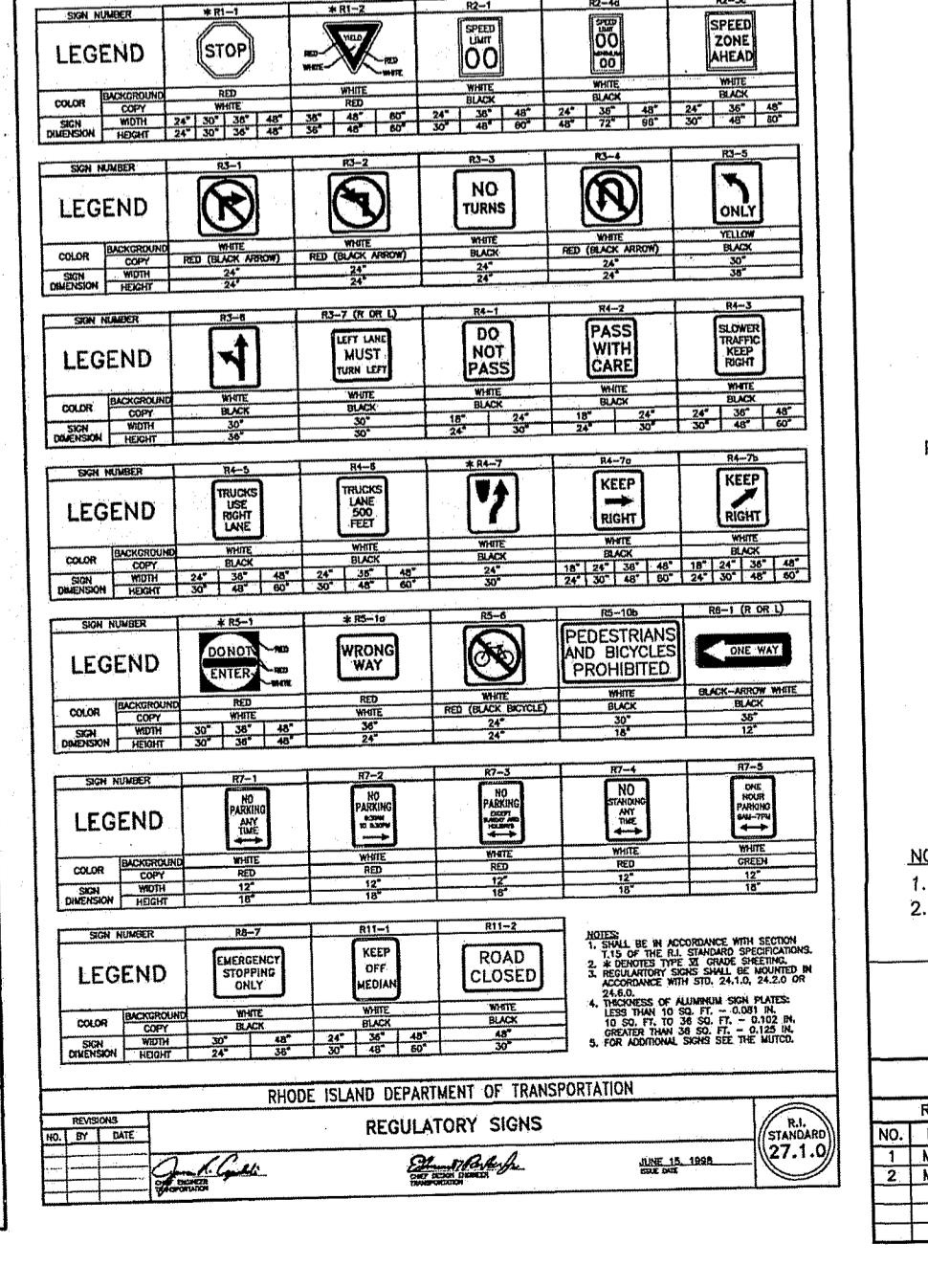
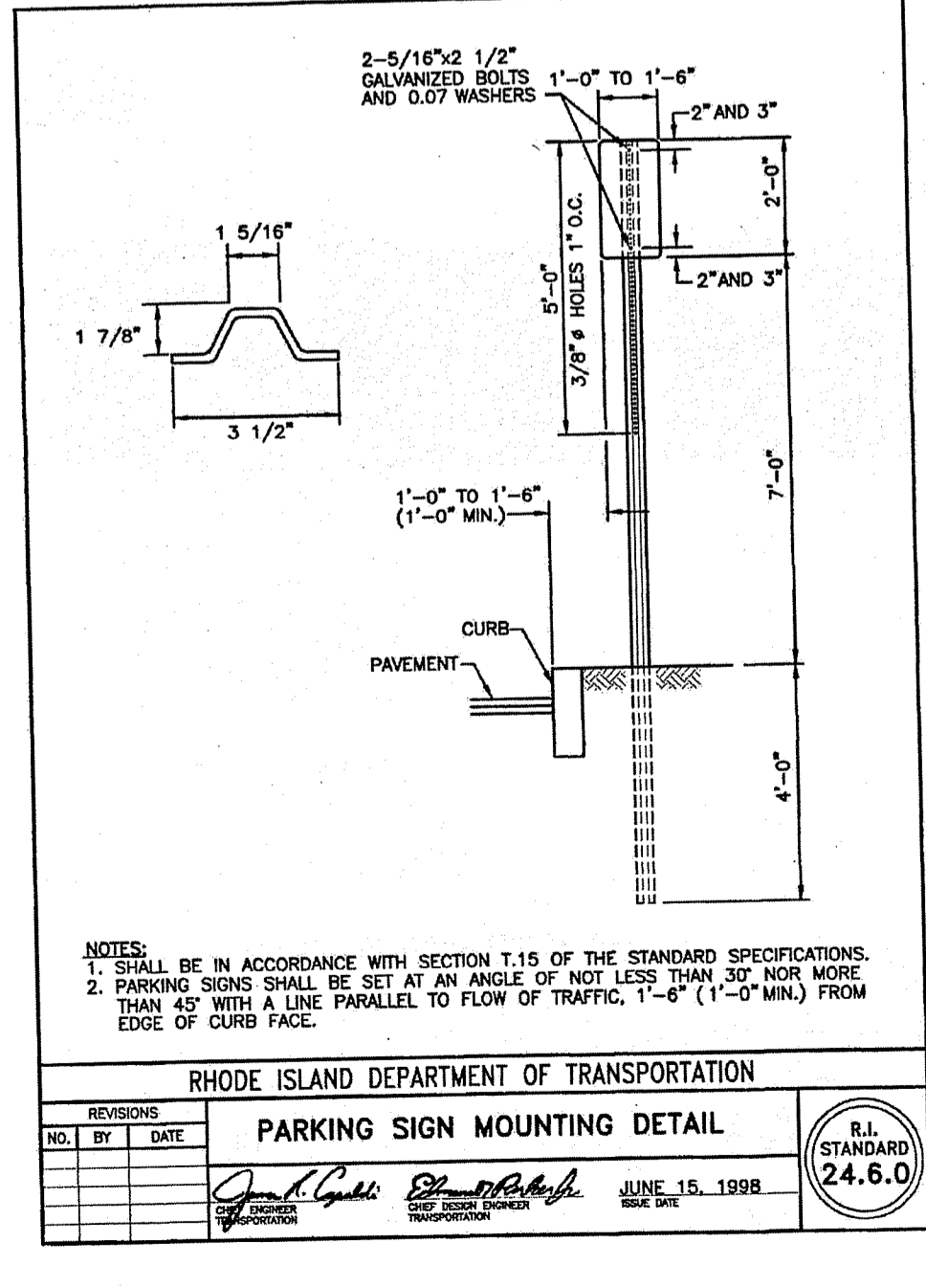
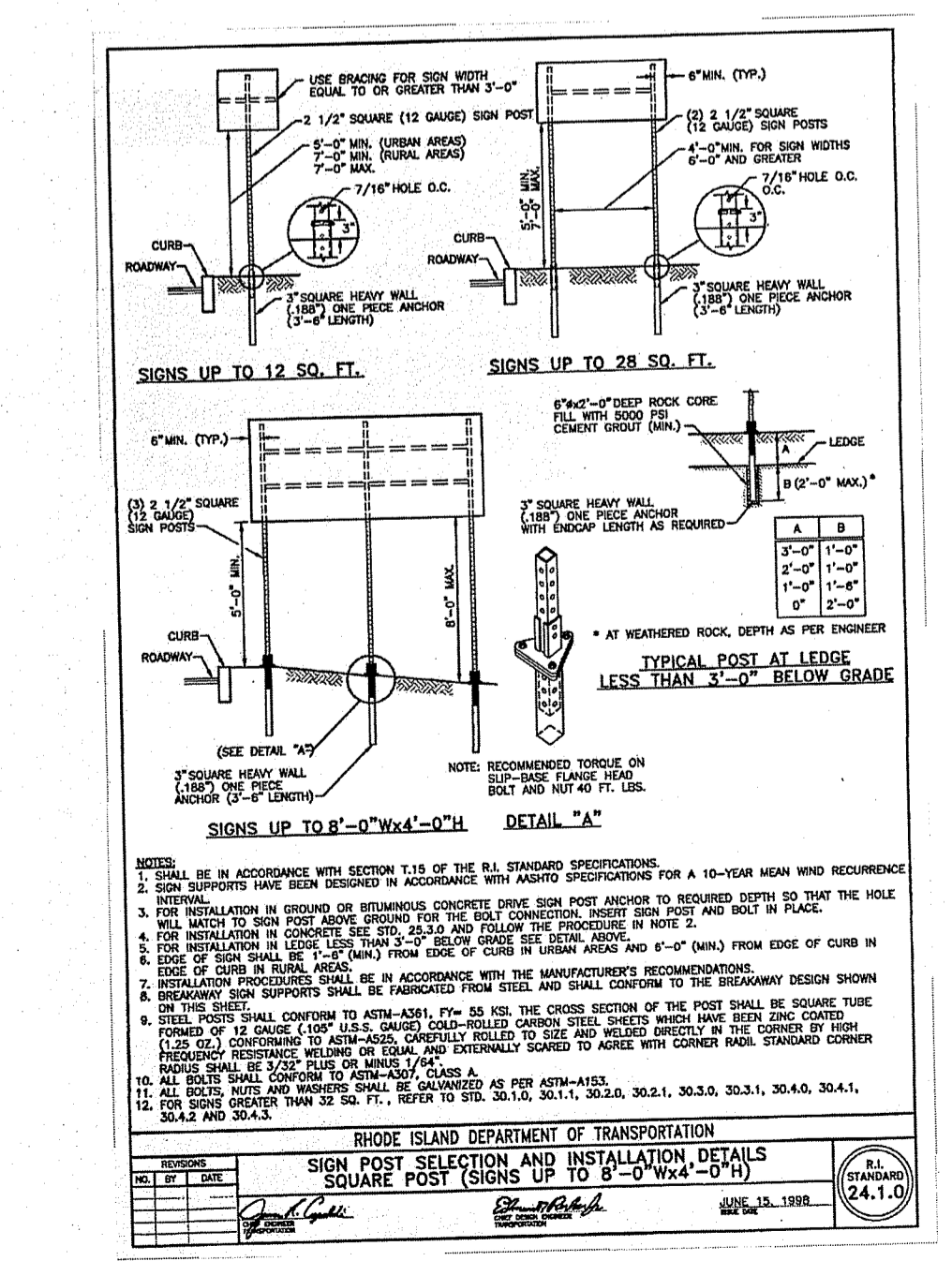
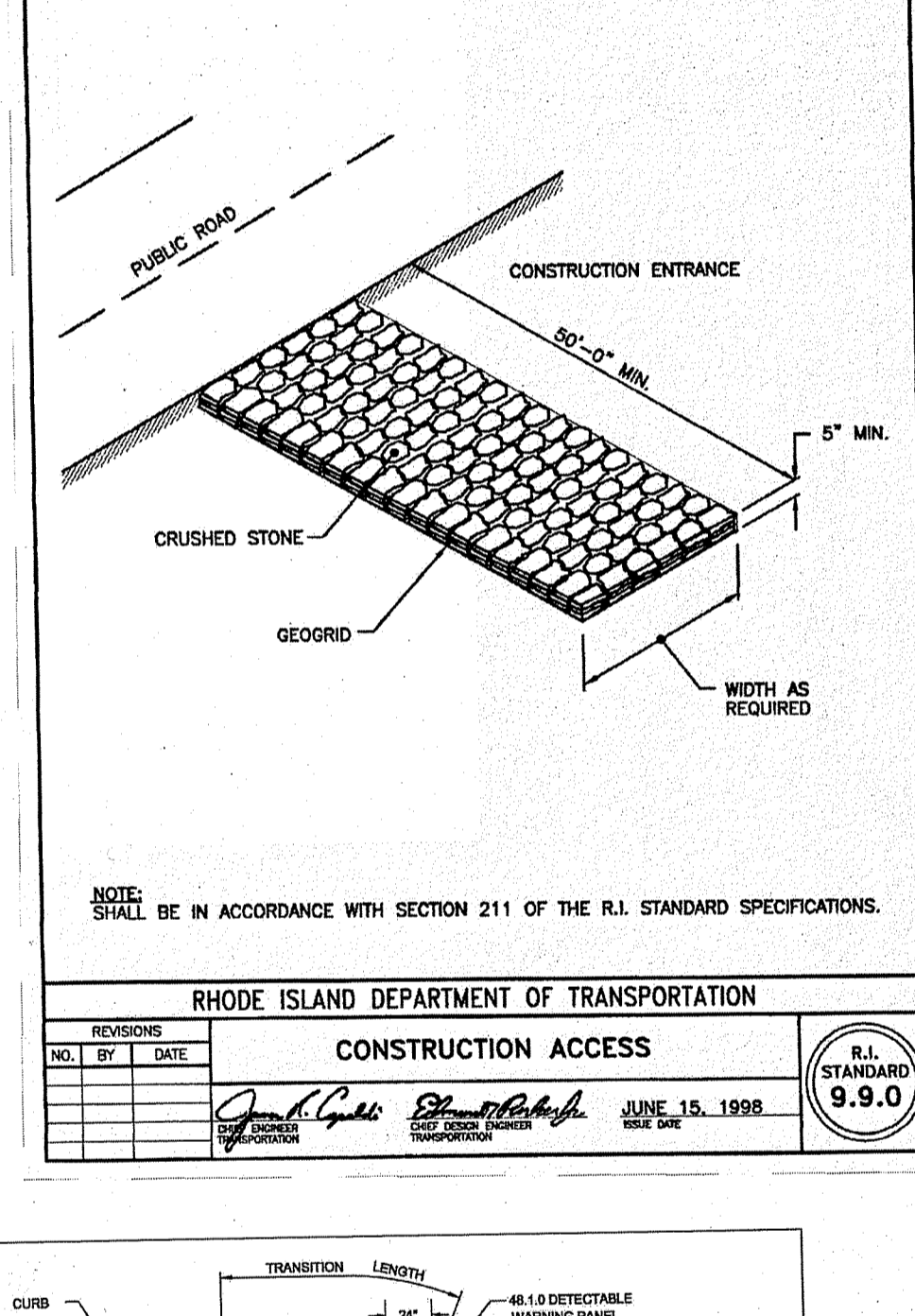
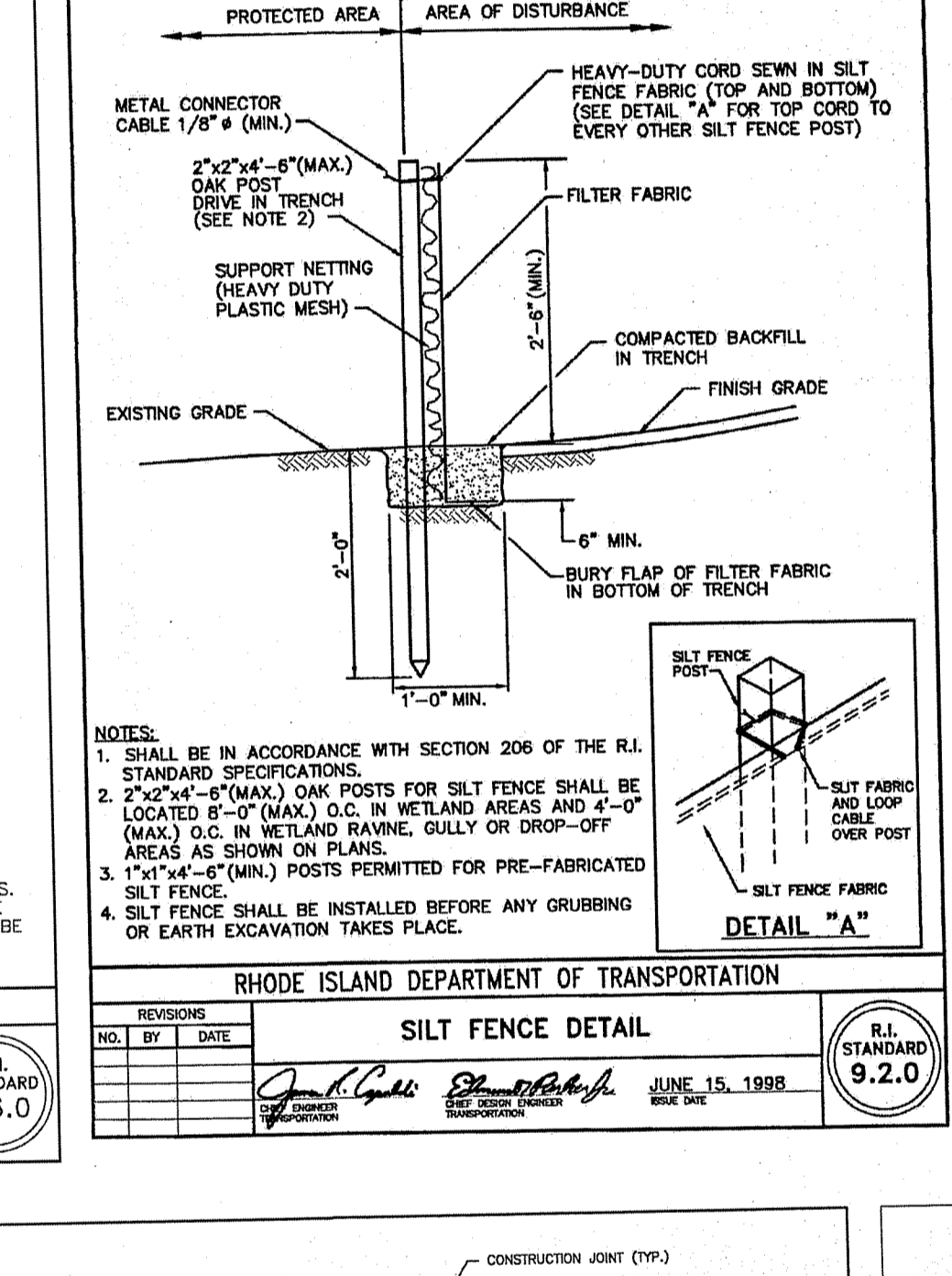
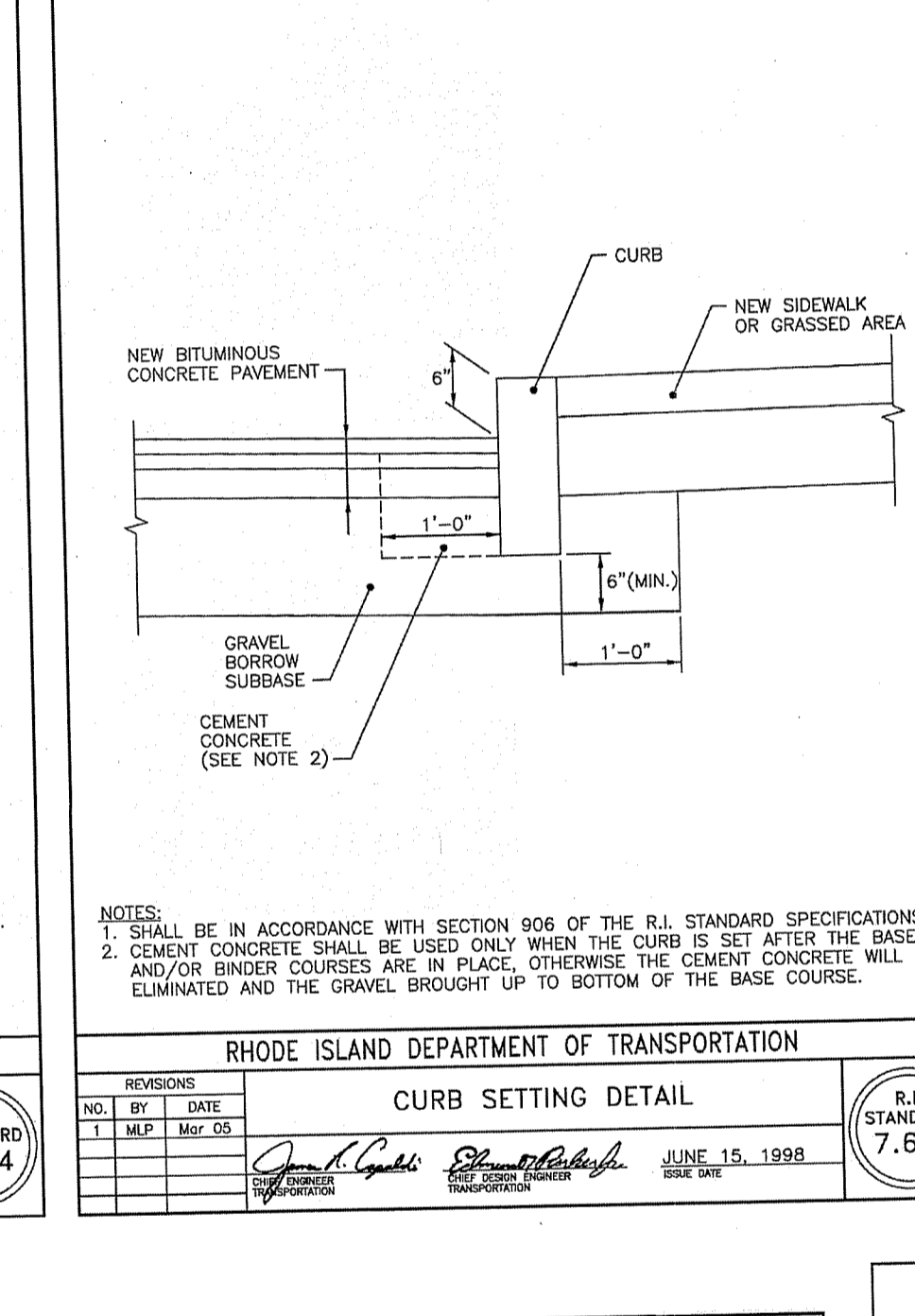
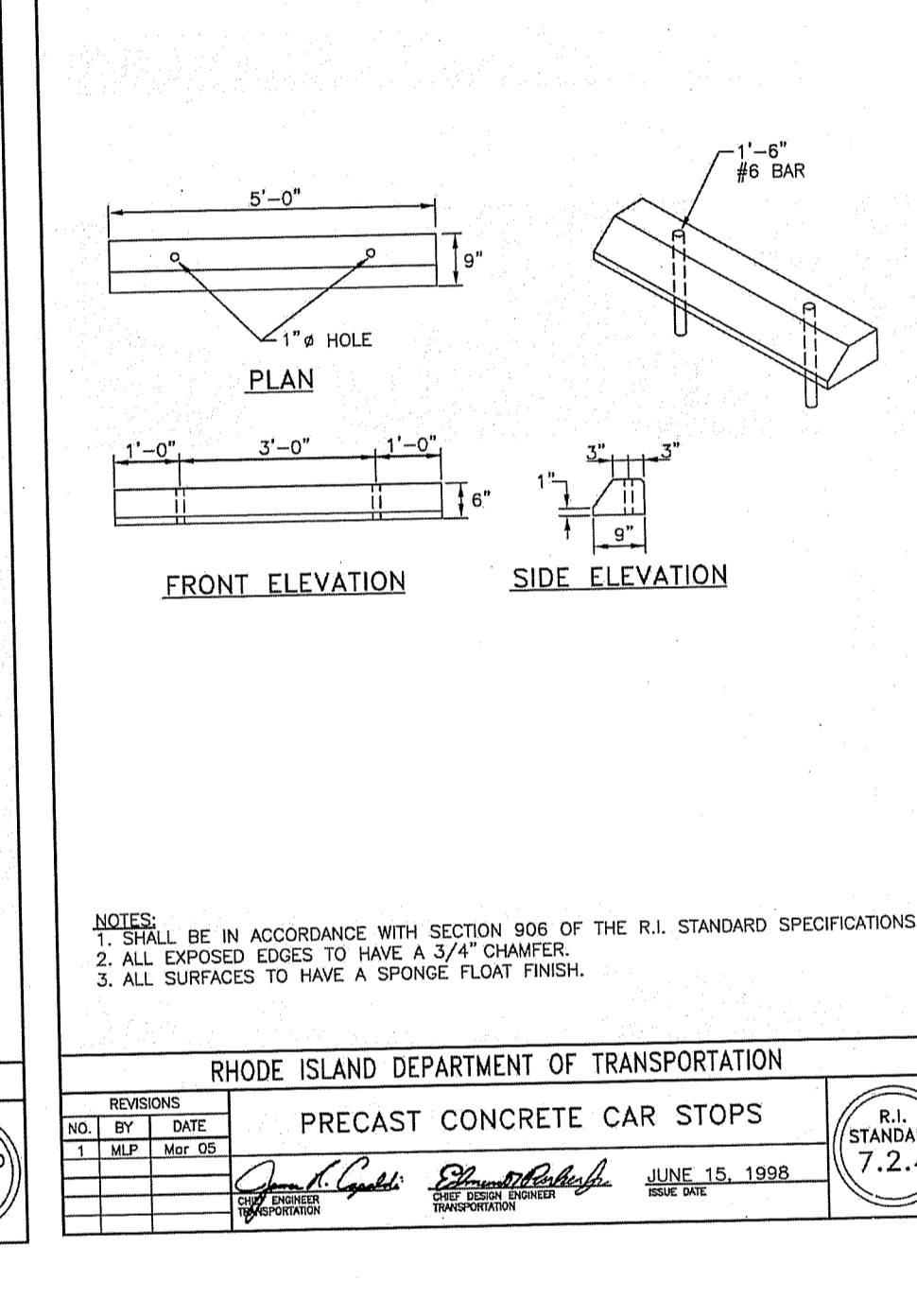
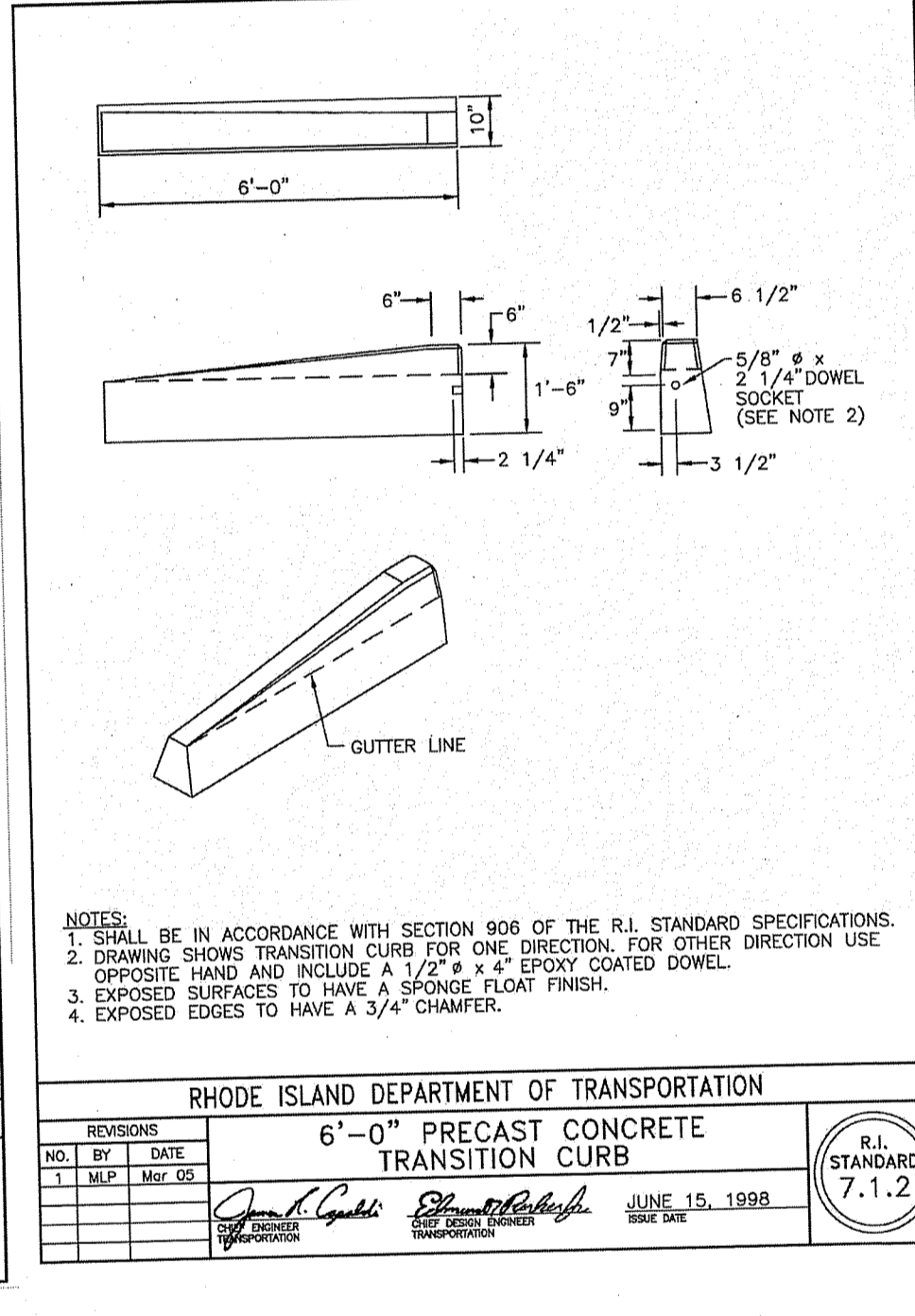
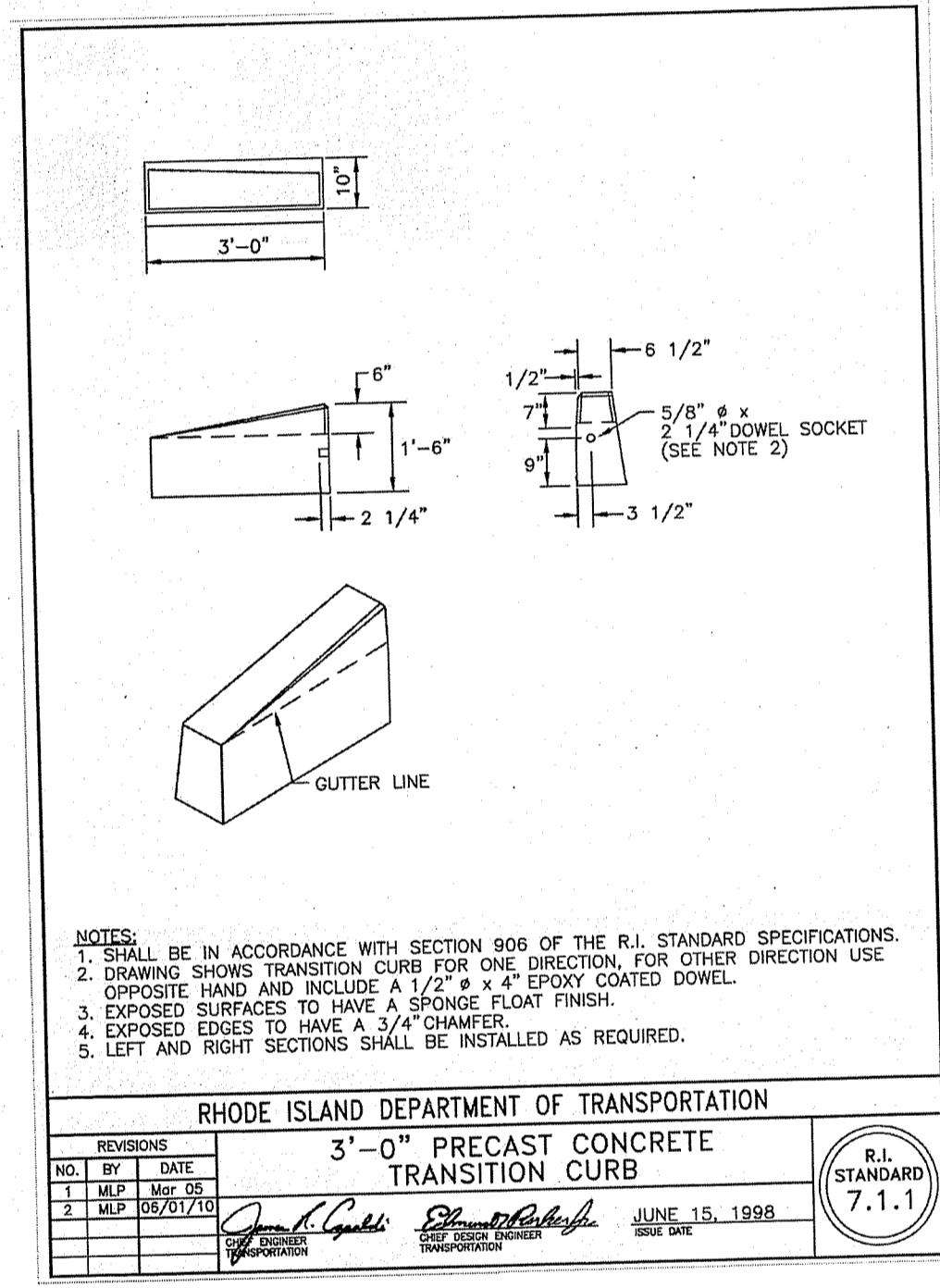
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 7, 2008 FILE # 19-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

JOSEPH A. CASALI
No. 1250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.12.2022



CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

REVISIONS:

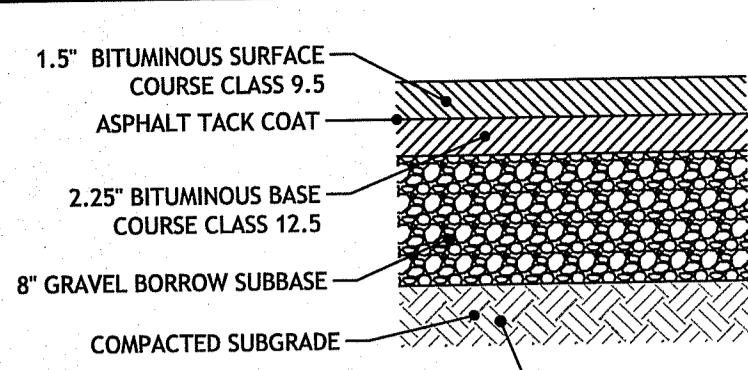
NO.	DATE	DESCRIPTION
1	2/20/20	DEM/TOWN COMMENTS

DESIGNED BY: WMLR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: SEP 2019
PROJECT NO: 18-42a

PRELIMINARY, NOT FOR CONSTRUCTION

RI STANDARD DETAILS

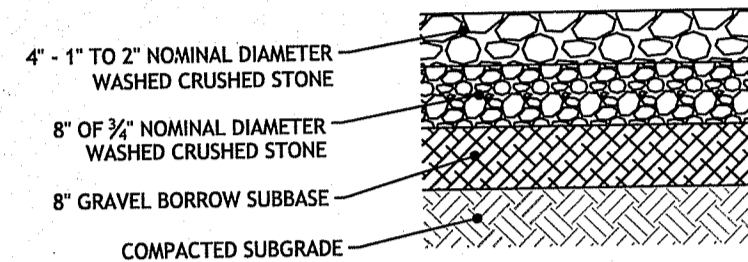
SHEET 8 OF 11



NOTE:

- IN AREAS OF EARTH EXCAVATION FOR BITUMINOUS CONCRETE PAVEMENT, THE CONTRACTOR SHALL REMOVE ALL EXISTING TOPSOIL AND SUBSOIL OR AT A MINIMUM OF 12 INCHES OF EXISTING MATERIAL. REFER TO TEST PIT LOGS FOR ESTIMATED DEPTHS. IF UNSUITABLE MATERIALS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
- PAVEMENT DETAIL IS FOR THE DRIVEWAY AND PRIVATE ROADWAYS ONLY. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSUITABLE MATERIAL FOUND DURING EXCAVATION. UNSUITABLE MATERIAL TO BE REMOVED AND DISPOSED TO A DEPTH DETERMINED IN THE FIELD BY THE ENGINEER.

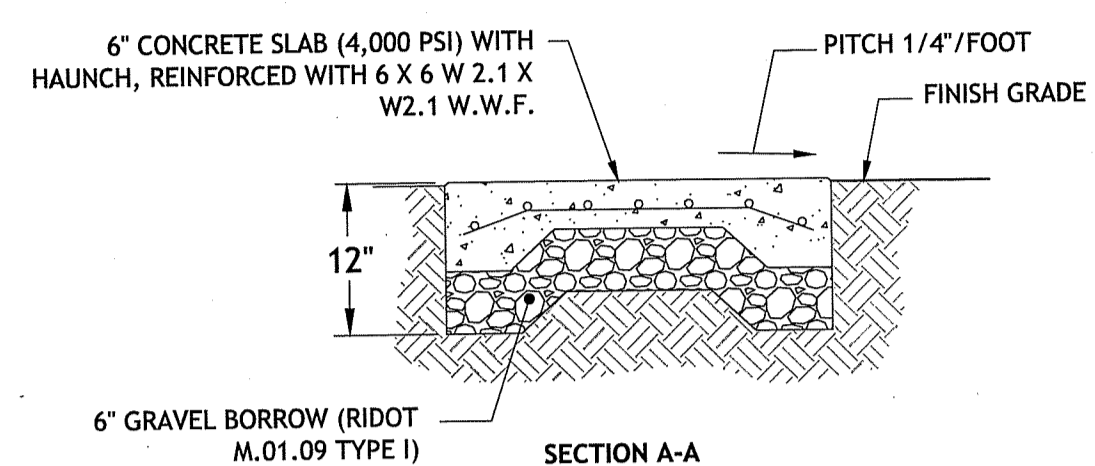
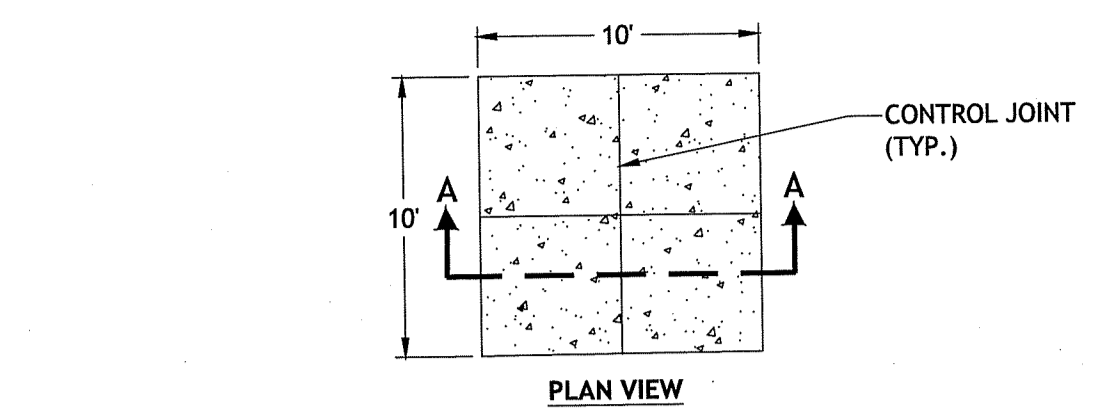
5 BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



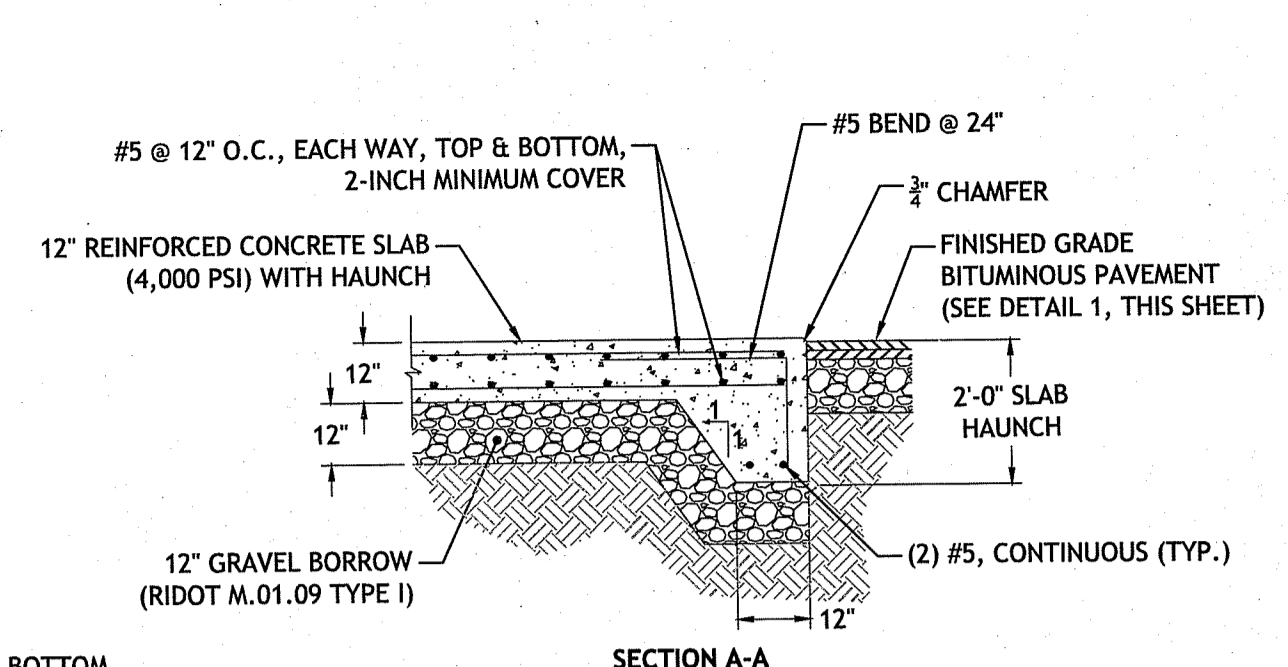
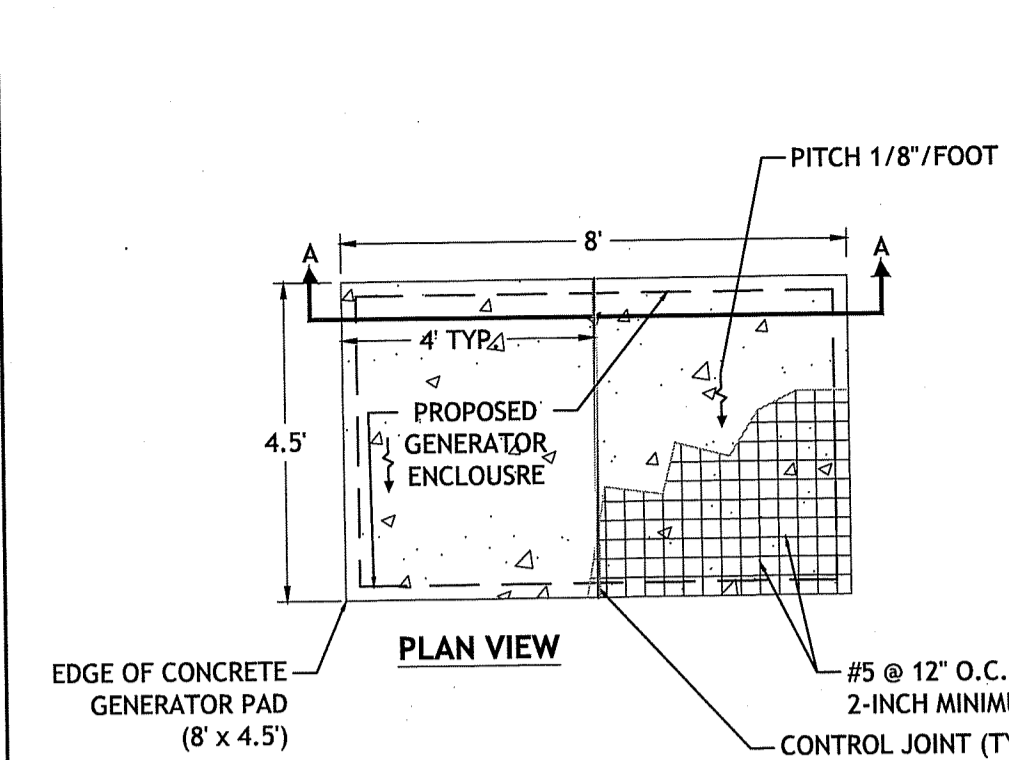
NOTE:

- THE PROPOSED WALKWAY IS TO BE INSTALLED ADJACENT WITH EXISTING/PROPOSED GRADES AND IS NOT TO BE "BUILT-UP" ATOP EXISTING GRADES.

6 CRUSHED STONE WALKWAY
NOT TO SCALE



7 DUMPSTER PAD DETAIL
NOT TO SCALE



8 GENERATOR PAD CONCRETE DETAIL
NOT TO SCALE



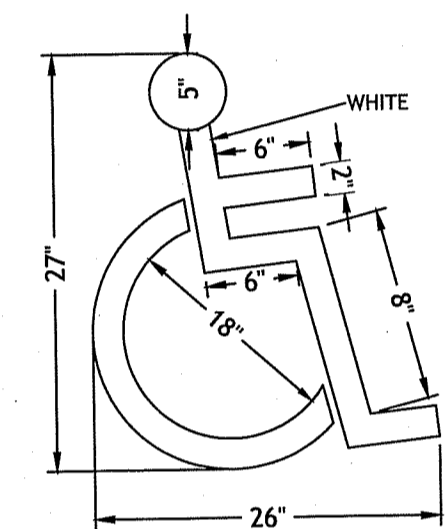
NOTE:
SIGNS ARE TO CONFORM WITH THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

* VAN ACCESSIBLE SIGNS FOR SPACES ADJACENT TO THE 8' STRIPED ISLE.

SIGN NOTES:

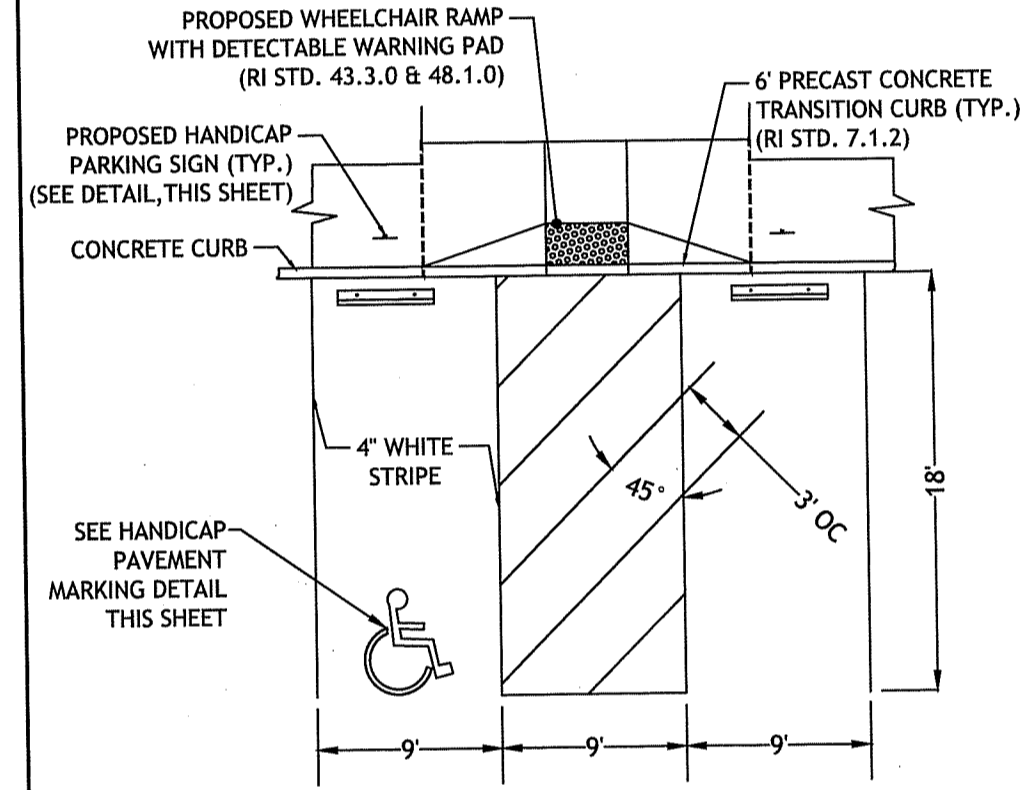
- SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN) AND INSTALLED IN CONFORMANCE TO M.U.T.C.D. AND RHODE ISLAND STANDARD SPECIFICATIONS.
- POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN).
- THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
- WITHIN SIDEWALK LOCATIONS THE SIGN POST WILL BE INSTALLED WITHIN A 8'X8'X6" SQUARE BOX FORM.

9 HANDICAP PARKING SIGN
NOT TO SCALE

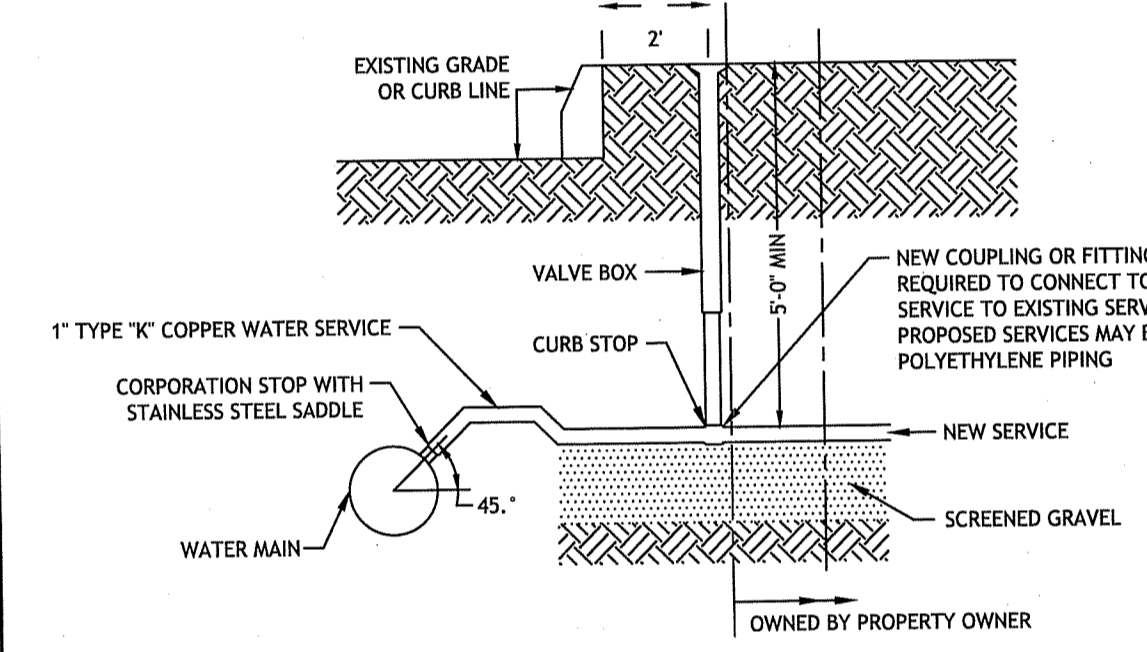


NOTE:
1. ALL HANDICAP PARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND STATE BUILDING CODE.

10 HANDICAP PAVEMENT MARKING
NOT TO SCALE

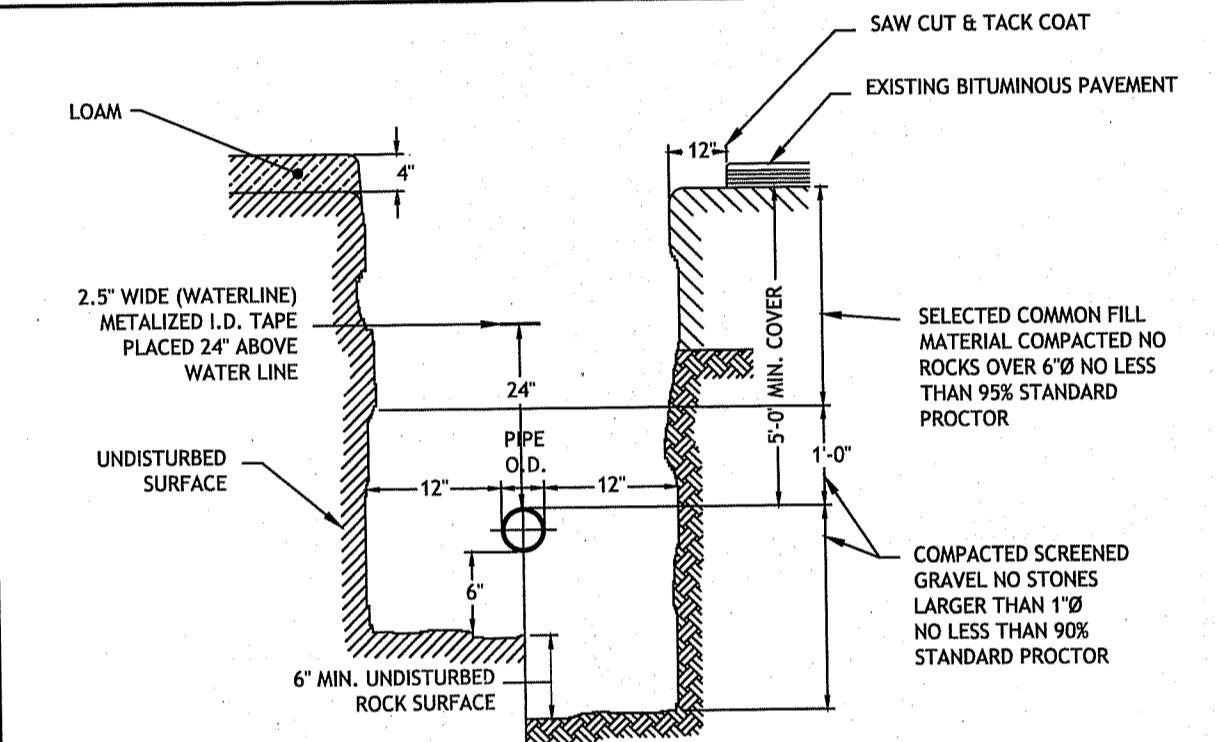


11 HANDICAP PARKING STALLS
NOT TO SCALE



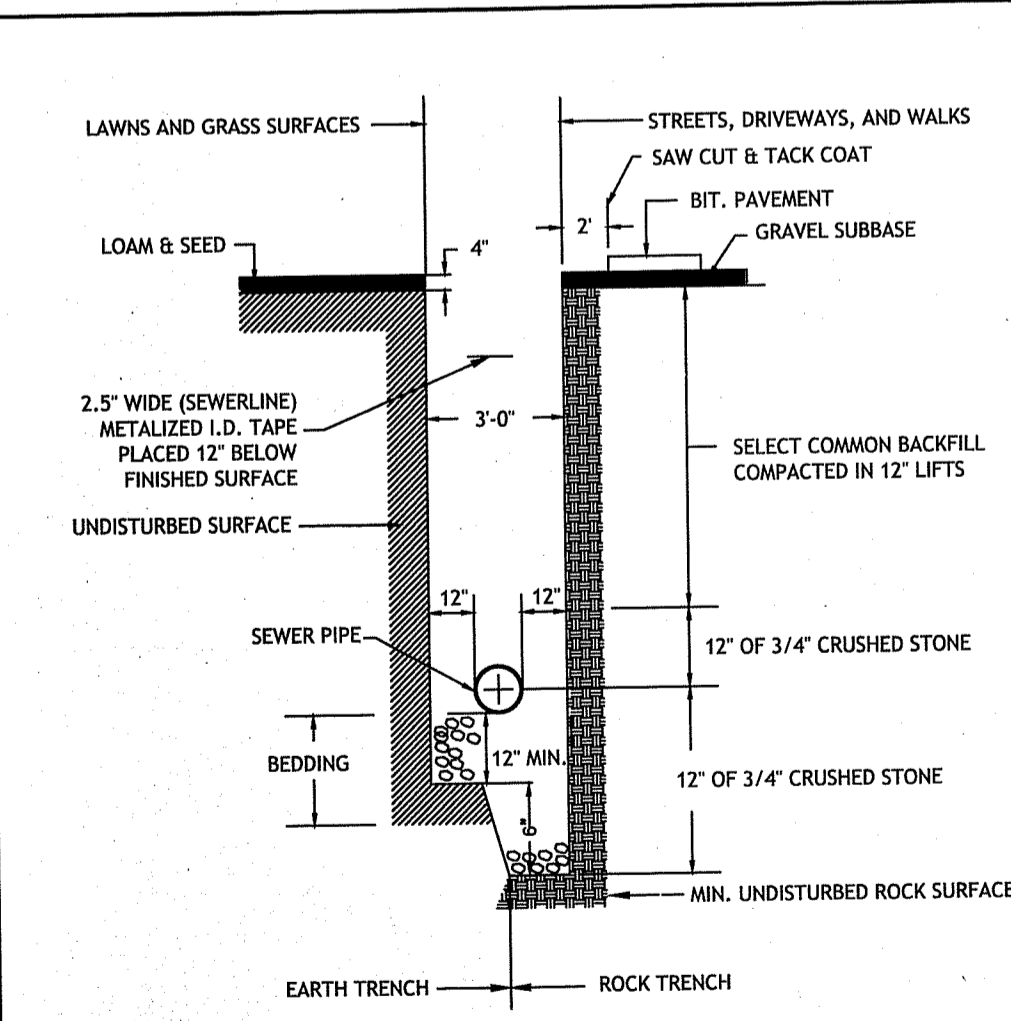
NOTE:
1. SERVICE LINE FROM CURB BOX TO BUILDING SHALL BE INSPECTED, TESTED AND APPROVED BY THE LOCAL PLUMBING INSPECTOR.

12 TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



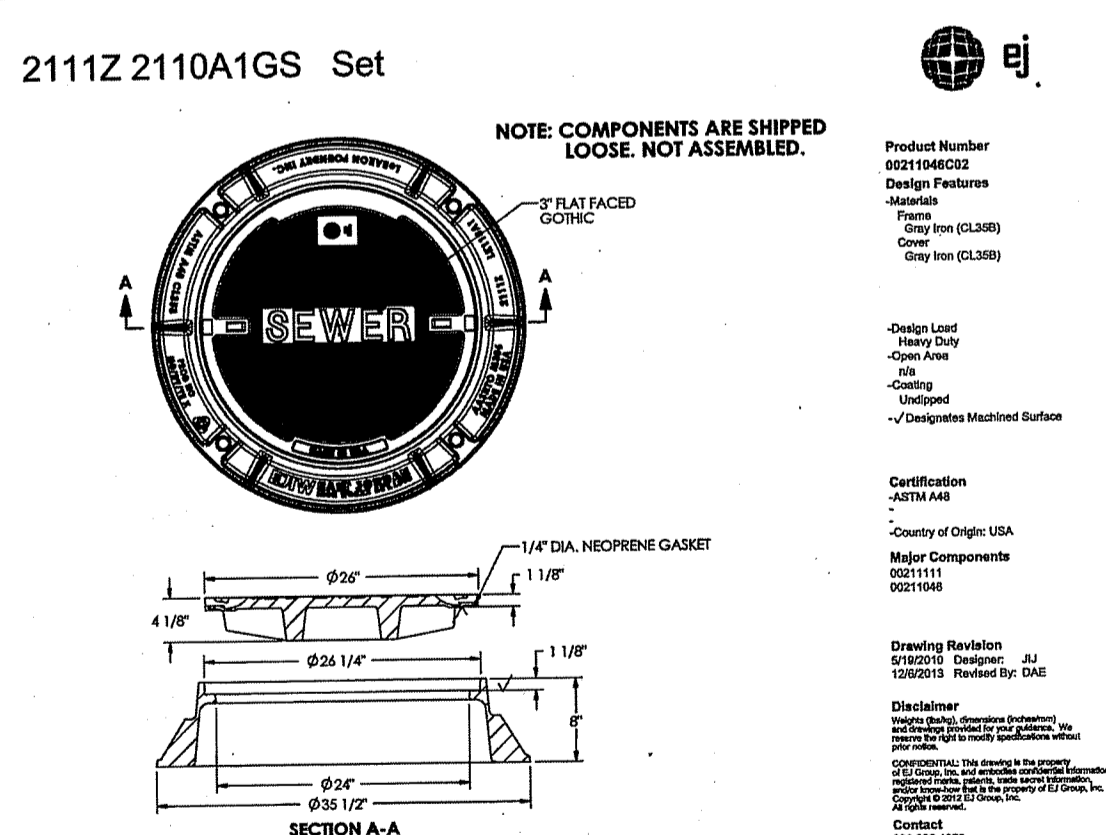
NOTE:
1. ROADWAY RESTORATION IN ACCORDANCE WITH COMMUNITY OR RIDOT.

13 WATER TRENCH DETAIL
NOT TO SCALE

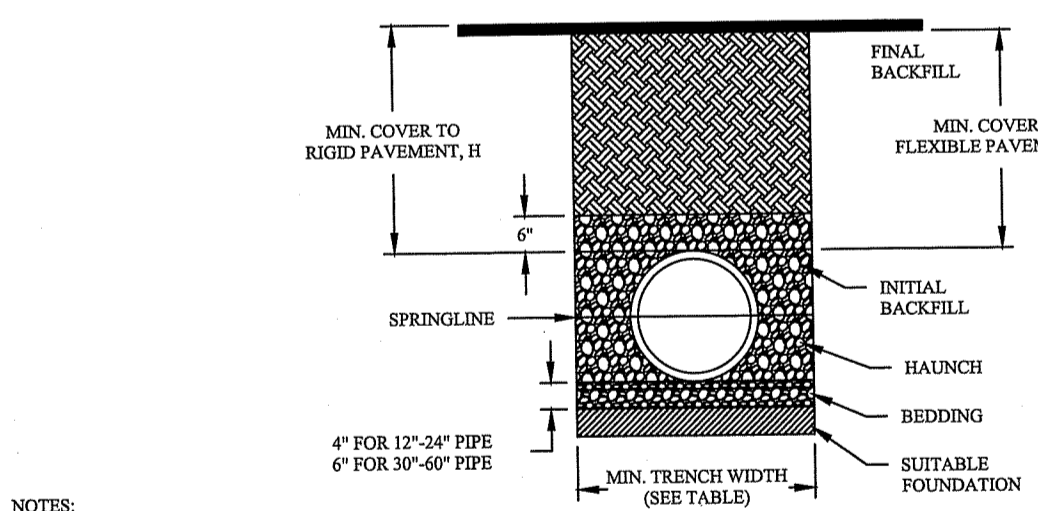


NOTE:
1. 3/4-INCH CRUSHED STONE FOUNDATION SHALL BE PLACED 12" UNDER THE PIPE UP TO THE PIPE GRADE, THE PIPE LAID THEREON, AND 3/4-INCH CRUSHED STONE PULLED AGAINST THE PIPE SIDE TO FIRMLY HOLD THE PIPE IN PLACE. NO BLOCKS OR STONES SHALL BE USED TO SUPPORT THE PIPE.
2. 3/4-INCH CRUSHED STONE HAUNCHING SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE. 3/4-INCH CRUSHED STONE BLANKET SHALL BE PLACED 12" ABOVE THE PIPE.

14 TYPICAL SEWER LINE TRENCH DETAIL
NOT TO SCALE



15 SEWER MANHOLE FRAME & COVER DETAIL
NOT TO SCALE

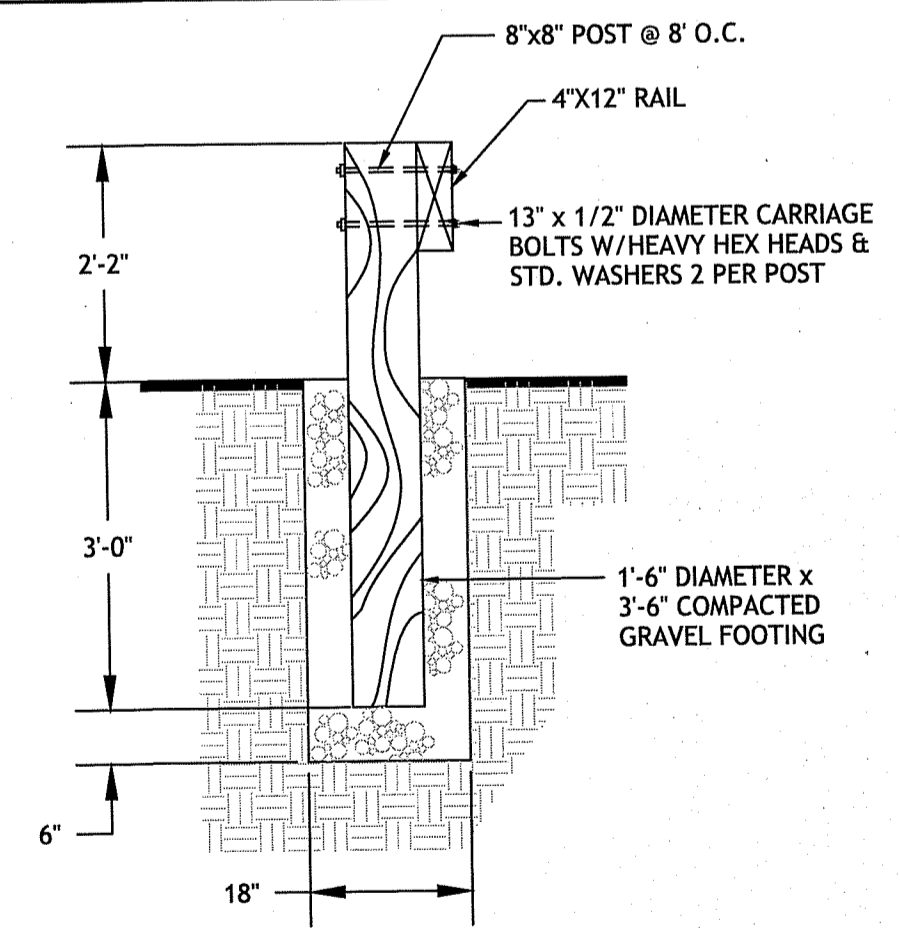


NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS," LATEST EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE PINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSUITABLE, 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 GEOTECHNICAL MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" (100mm) PIPE AND 6" (150mm) FOR 6" (150mm) PIPE.
5. INITIAL BACKFILL: 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 COVER SHALL BE 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, II, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, II, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, II, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF FLOATION.
6. MINIMUM COVER: MINIMUM COVER, II, 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, II, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, II, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF FLOATION.

16 DRAIN PIPE TRENCH INSTALLATION DETAIL
NOT TO SCALE

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"

PIPE DIAM.	MINIMUM RECOMMENDED COVER BASED ON SURFACE LIVE LOADING CONDITION
12" - 48"	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	24"
54" - 60"	24"



NOTE:
1. ALL WOOD SHALL BE PRESSURE TREATED.

17 TIMBER GUARDRAIL DETAIL
NOT TO SCALE

Environmental Management
MAR 13 2020
Office of Water Resources

JCE
JOE CASALI ENGINEERING, INC.
TECHNOLOGICAL CONSULTANTS
DRAINAGE - WETLANDS - EIDS - TRAFFIC - FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1100 (401) 944-1313 FAX WWW.JCEENGINEERING.COM

JOSEPH A. CASALI
No. 0250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.12.2020

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

REVISIONS:

NO.	DATE	DESCRIPTION
1	2/2020	DEM/TOWN COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: SEP. 2019
PROJECT NO: 18-42

PRELIMINARY, NOT FOR CONSTRUCTION

SITE DETAILS I
SHEET 9 OF 11

Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-1
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	15	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
4.0		Practical refusal at 4'. Backfilled with previously excavated material upon completion.	
Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-2
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	11	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
4.0		Practical refusal at 4'. Backfilled with previously excavated material upon completion.	
Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

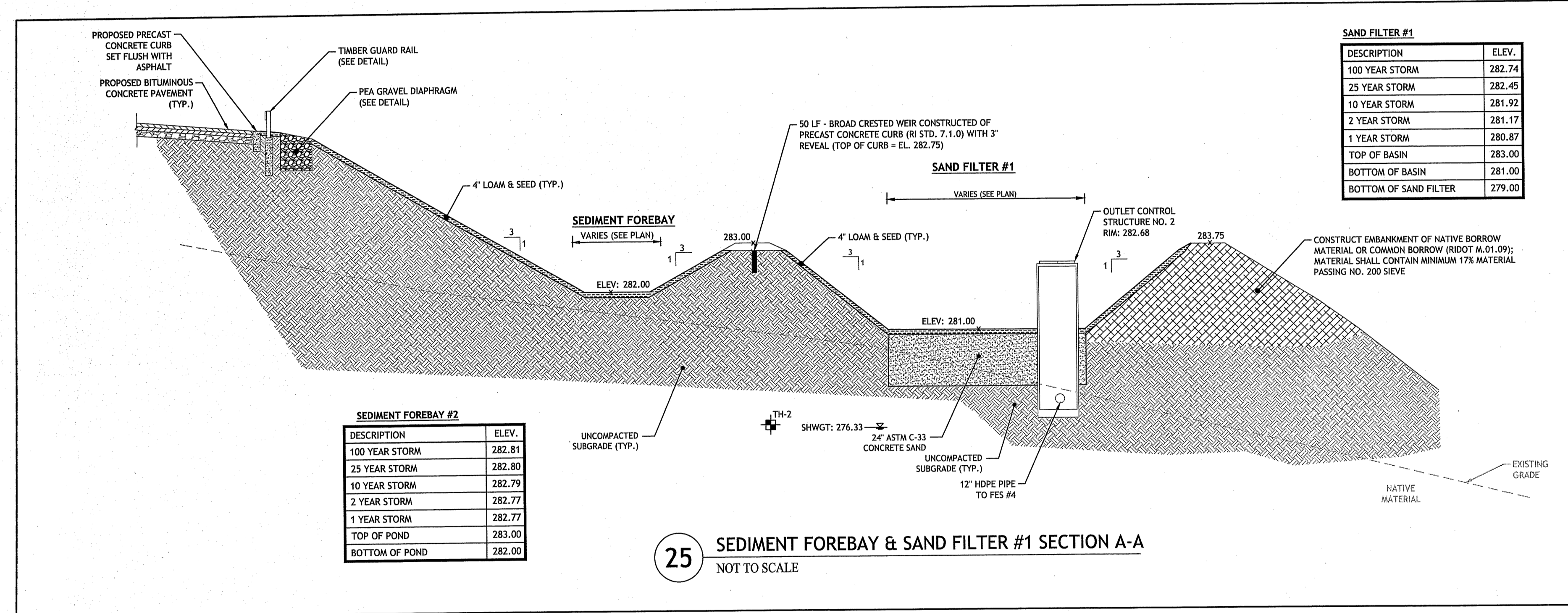
Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-3
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	11	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
4.0		Practical refusal at 4'. Backfilled with previously excavated material upon completion.	
Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-4
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	15	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
4.0		Practical refusal at 4'. Backfilled with previously excavated material upon completion.	
Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

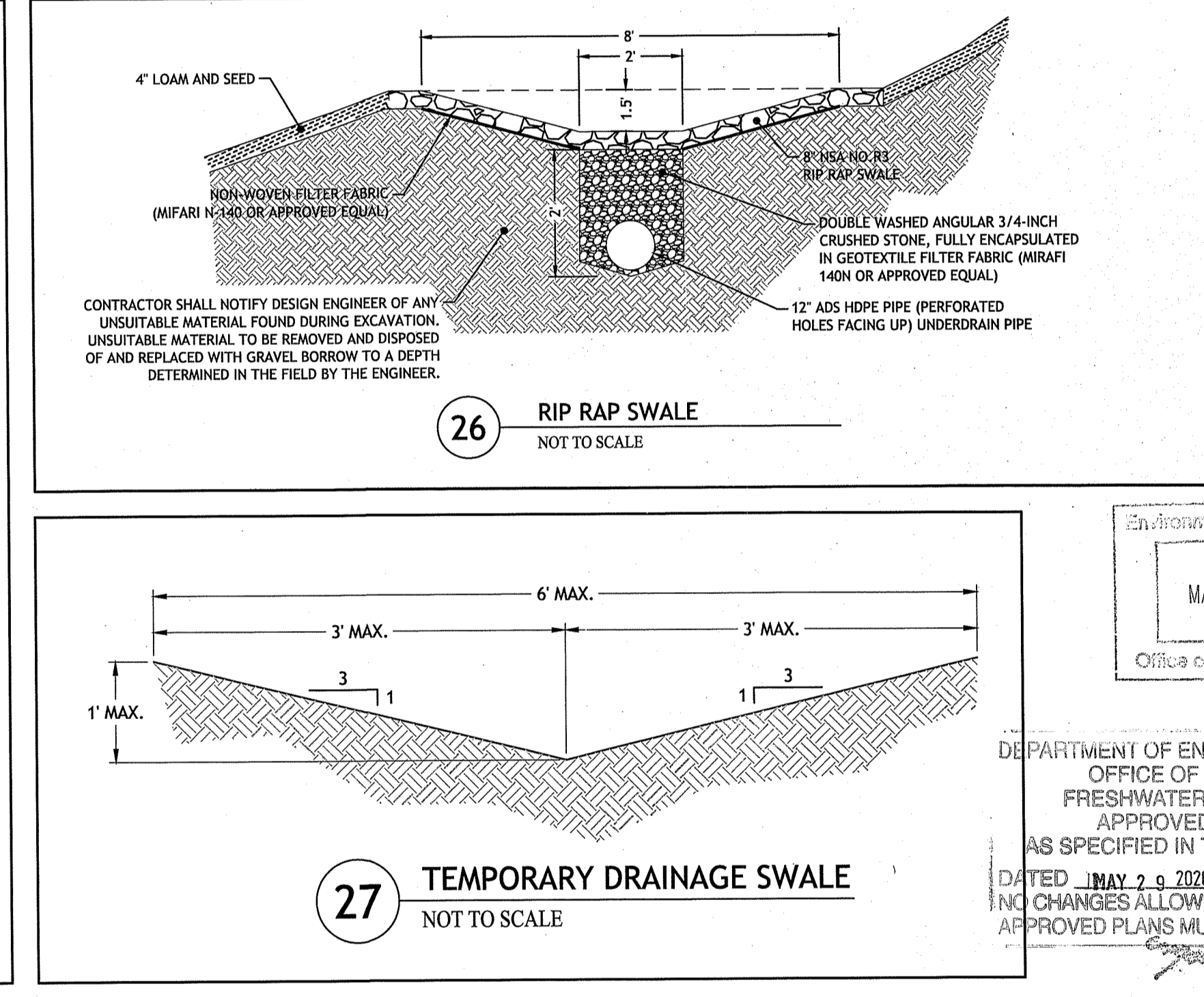
Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-5
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	11	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
4.0		Practical refusal at 4'. Backfilled with previously excavated material upon completion.	
Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

Test Pit Location: See Plan		Date Start / Finish: July 13, 2019	TH-A
Ground Surface Elevation: 10.00		Conditions: 100% Sat. Clay, 40% Fines	Page 1 of 1
Excavator Type: 3000 LBS Mini-Excavator		Excavator Reach: 10.00	
Operator: J. Casali		Operator: J. Casali	
Depth (ft)	Sample Type/No.	Remarks	Estimated Hydraulic Conductivity
0.0	11	0'-1" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, dark brown, moist, roots throughout, TOPSOIL, heavy sand.	NA
1.0		Numerous cobbles/boulders throughout.	HSG B (1.02 in/hr)
2.0		0'-2" SILTY SAND (SM) - 10% fine to coarse sand, 15% non-plastic fines, 10% fine to coarse gravel, brown, reddish brown, dry, sandy silt.	HSG B (1.02 in/hr)
3.0		0'-4" SILTY SAND WITH GRAVEL (SM) - 10% fine to coarse sand, 10% fine to coarse gravel, 15% non-plastic fines, light brown, heavy sand.	HSG B (1.41 in/hr)
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Notes: Test pit terminated in very dense, tightly packed fill material.		SHWT: Not Encountered	Impervious/Limiting Layer Depth: 40 inches
Project Name: Camp Bow Wow, Smithfield, RI		Project Number: 18-02	JOE CASALI ENGINEERING, INC.

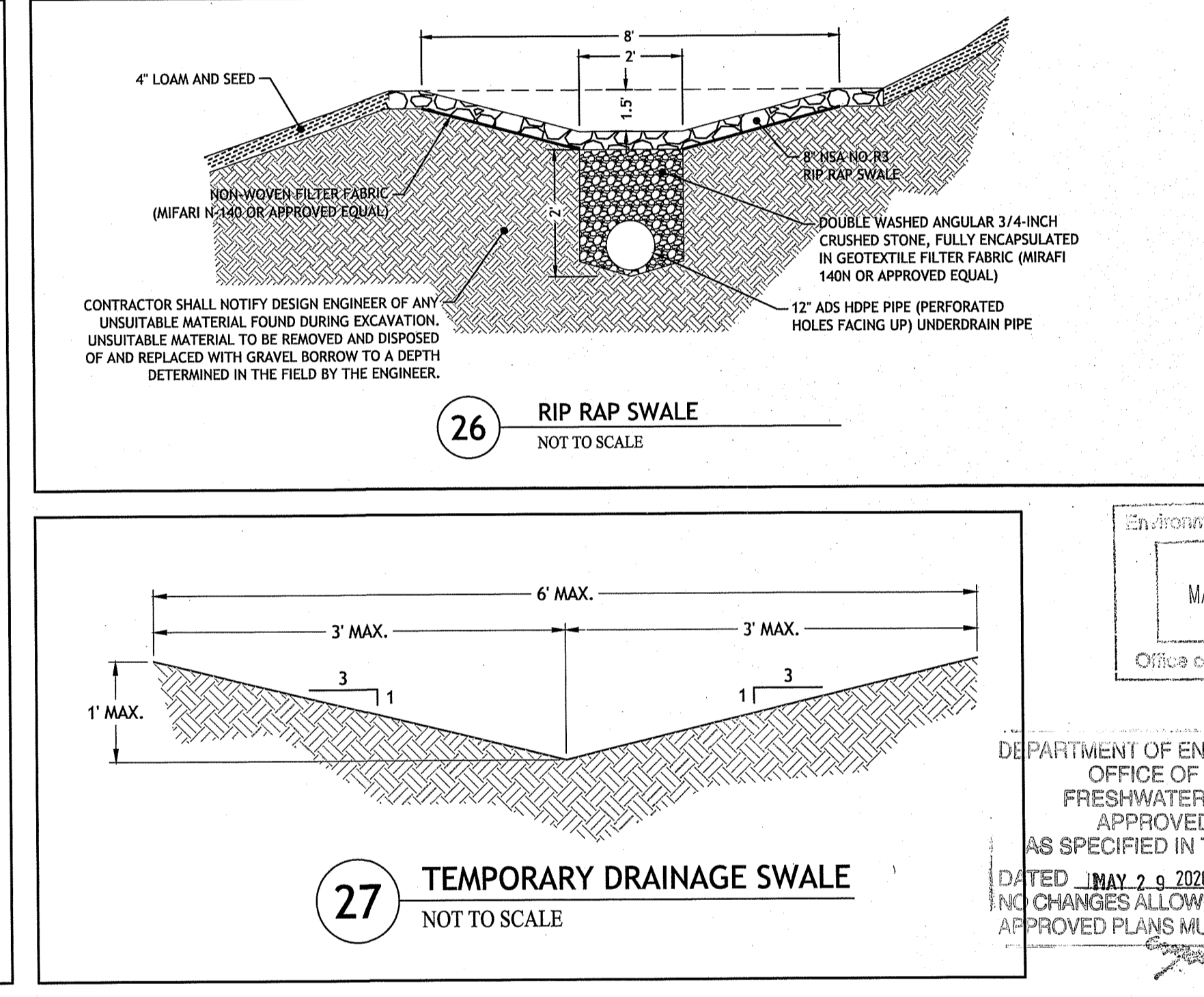
24 TEST PIT LOGS
NOT TO SCALE



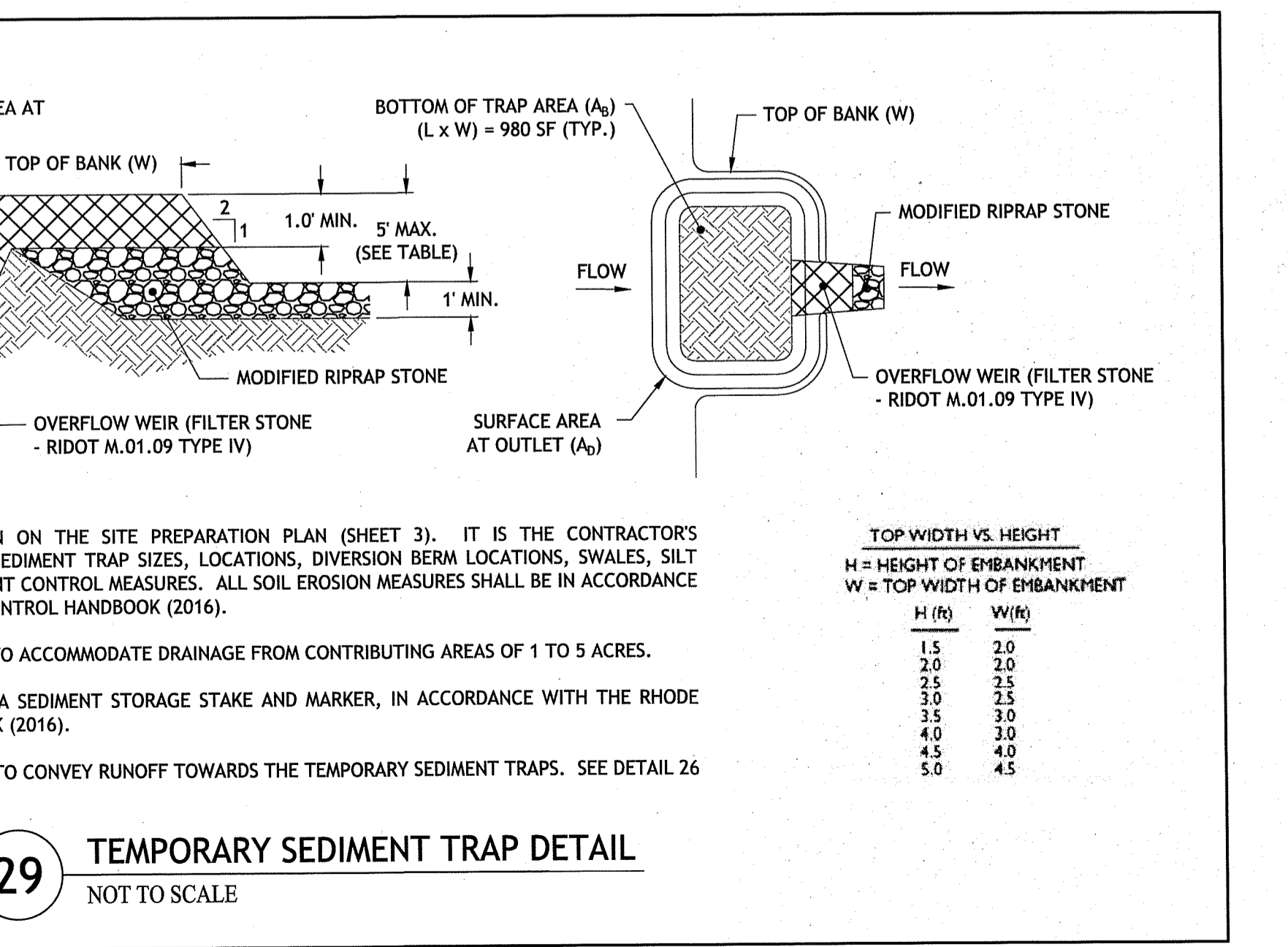
25 SEDIMENT FOREBAY & SAND FILTER #1 SECTION A-A
NOT TO SCALE



28 SAND FILTER #2 SECTION B-B
NOT TO SCALE



26 RIP RAP SWALE
NOT TO SCALE



29 TEMPORARY SEDIMENT TRAP DETAIL
NOT TO SCALE

Environmental Management
MAR 13 2020
Office of Water Resources
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 29 2020 FILE # 19-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

JCE
JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRAINAGE - WETLAND PERMITS, WASTEWATER, RI 02888
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JOSEPH A. CASALI
No. 250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.12.2020

CAMP BOW WOW
37 THURBER BOULEVARD, UNIT 3
SMITHFIELD, RHODE ISLAND
AP 46, LOT 87E

REVISIONS:	NO.	DATE	DESCRIPTION	DEM/TOWN	COMMENTS
	1	2/2020			

DESIGNED BY: WMLR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: SEP. 2019
PROJECT NO: 18-42a

PRELIMINARY, NOT FOR CONSTRUCTION

SITE DETAILS III

SHEET 11 OF 11

C:\Users\WMLR\AppData\Local\Temp\AcPublish_18328\Camp Bow Wow [Preliminary]04.dwg, Mar. 13, 2020 8:45am