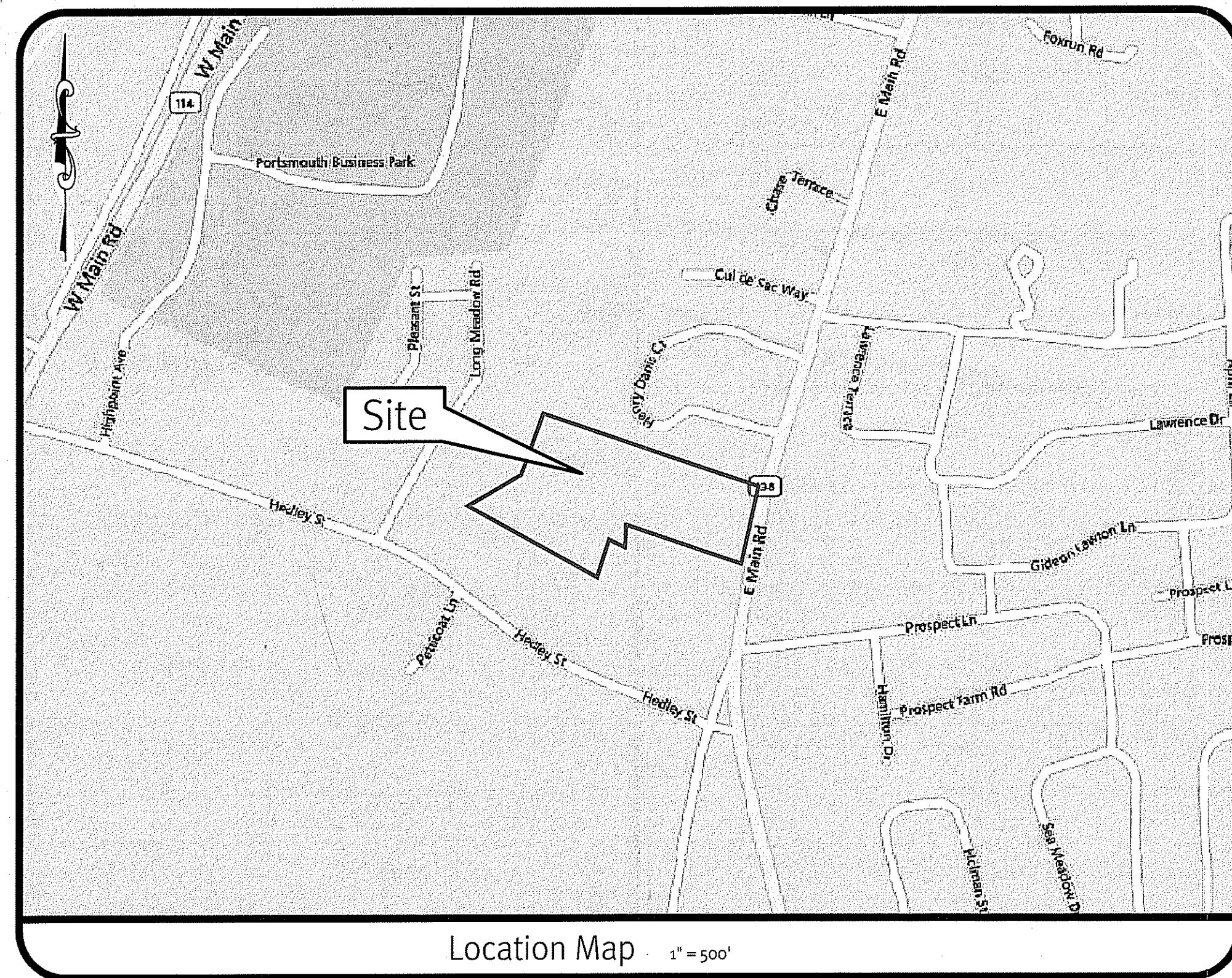


# RIDEM Preliminary Determination & RIPDES

## Portsmouth Police Station

2270 East Main Road  
Portsmouth, Rhode Island

Assessor's Plat 39 Lots 42 & 42C



Location Map 1" = 500'

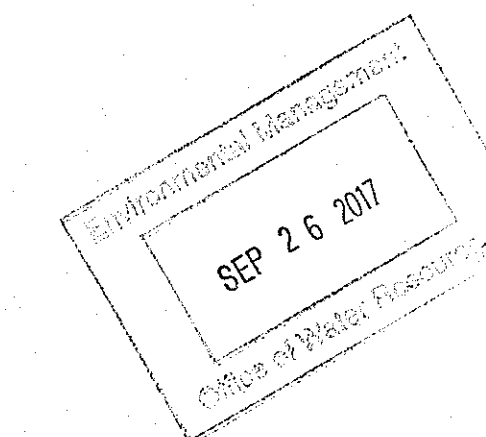
### Sheet Index

1. Cover Sheet
2. Aerial Half Mile Radius
3. Notes & Legend
4. Boundary/ Topographic Survey
5. Interim Utility Plan
6. Overall Site & SESC Plan
7. Site Layout Plan
8. Grading & Surface Drainage Plan
9. Sewer & Utility Plan
10. Underground Infiltration Systems A & B
11. Underground Detention System C
12. Detail Sheet - 1
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 17-0187  
DATED OCT 11 2017  
SEE LETTER OF SAME DATE.

*Jonathan B. Weneck*

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



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

**RIDOT**  
The Proposed Improvements Will Not Increase the Rate of Stormwater Runoff Onto the State Highway. All Work Within the State Right of Way Must Conform to the RI Standard Specifications, Details, and Addendums.

KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER CIVIL

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

No.	Date	Description	Drawn By	Design By
1	9-28-2017	RIPDES, SESC Submissions	J.A.D.	J.A.D.
2	7-28-2017	RIPDES, O&M, SESC Submissions	J.A.D.	J.A.D.
3	7-28-2017	RIPDES, Preliminary Determination & RIPDES	J.A.D.	J.A.D.

**Cover Sheet**  
**Portsmouth Police Station**  
2270 East Main Road  
Portsmouth, Rhode Island  
**Drumrey Roasane Anderson**  
225 Oakland Road, Studio 205  
South Windsor, CT 06074

z:\demers\projects\2283-001\_east\_main\_road\2270\autocad\_drawings\2283-001-001-001-001.dwg Plotdate: 9/24/2017

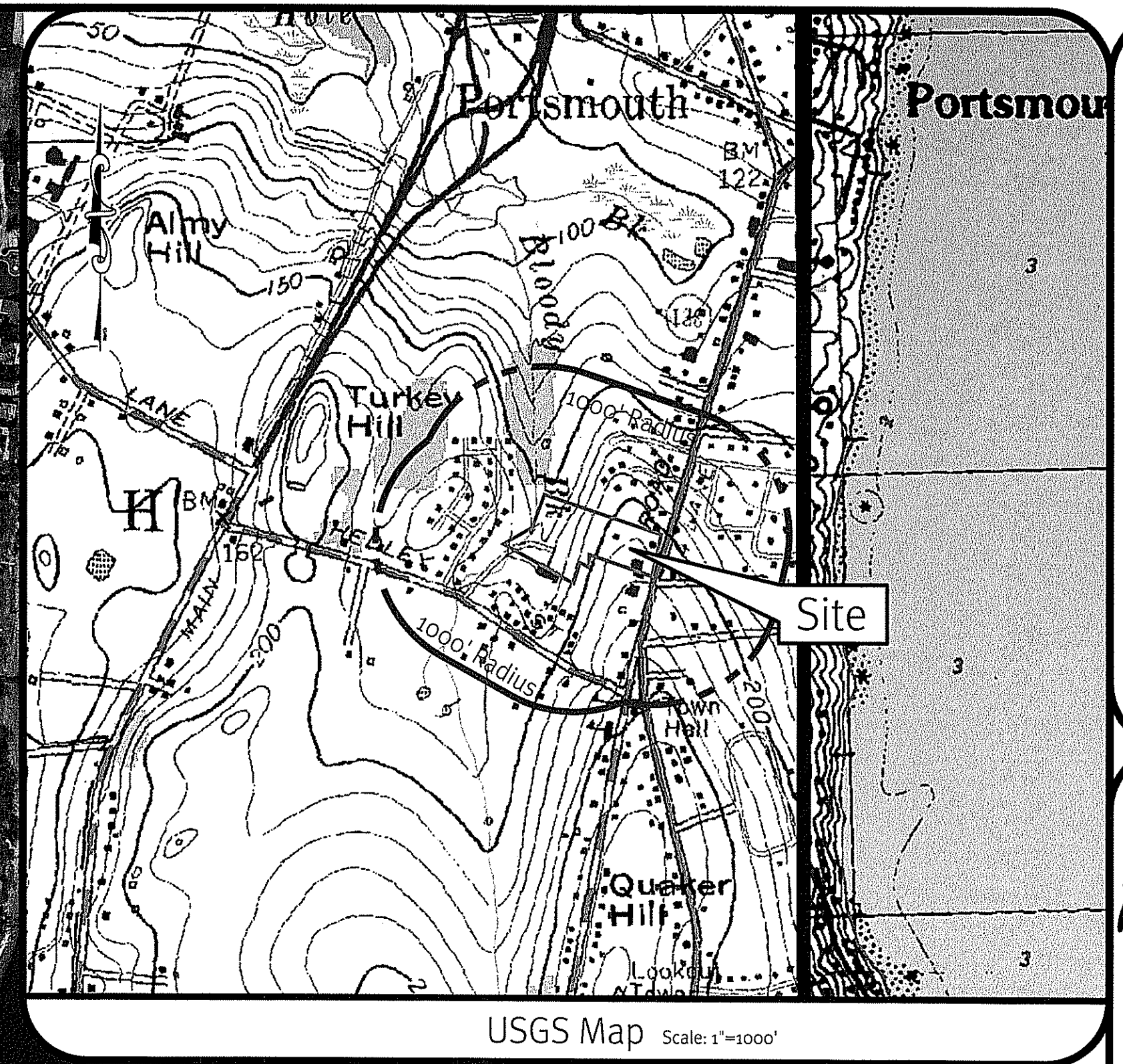
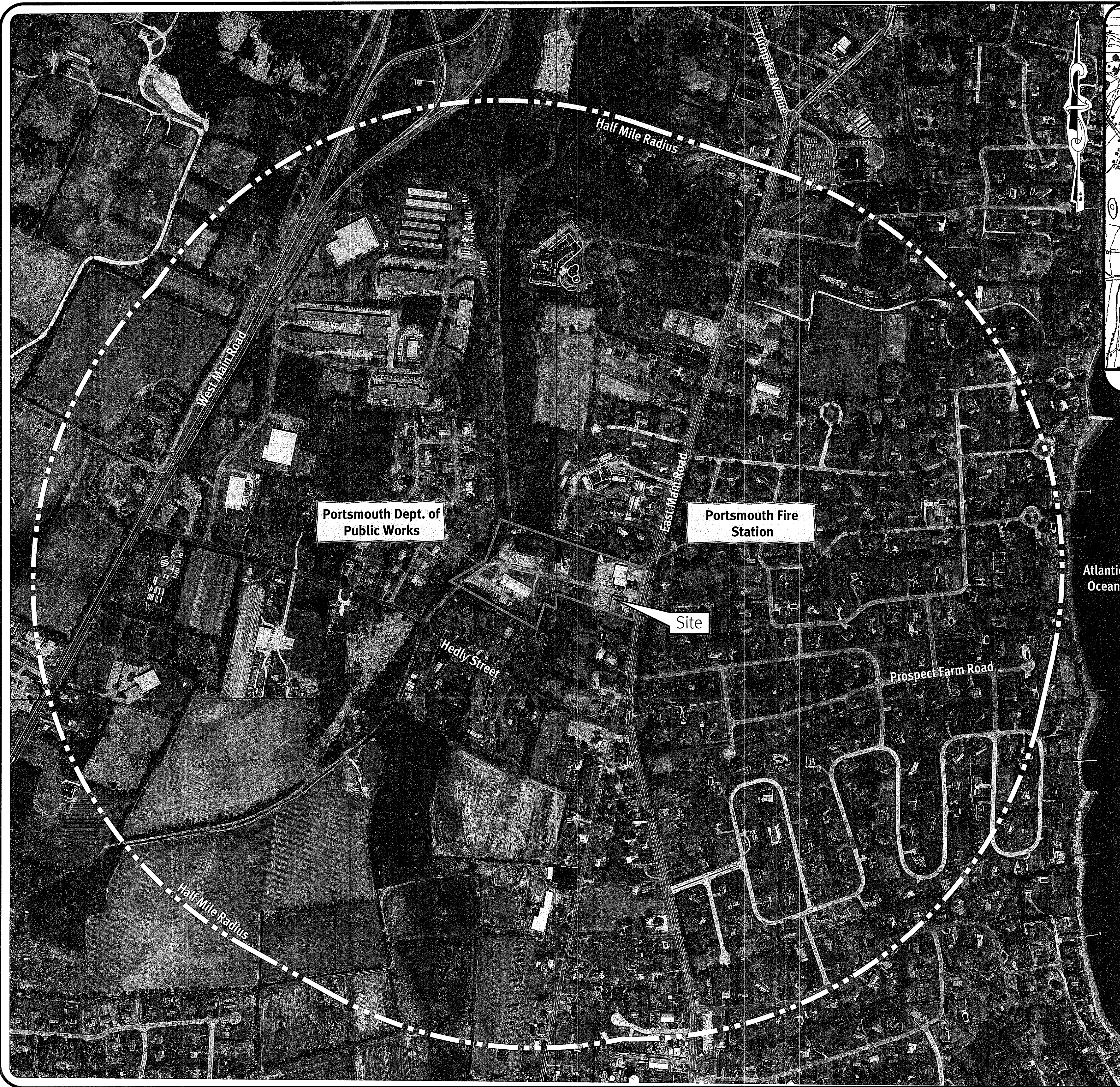
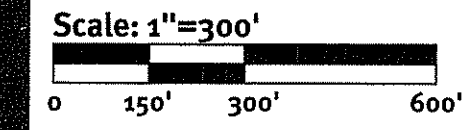


Photo Obtained from the ARCGIS 2008 Orthophotography.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 REVIEWED SITE PLAN APPLICATION NO.: 17-0187  
 DATED OCT 11 2017  
 SEE LETTER OF SAME DATE.

*Matthew R. Wrench*

Sept 26 2017

Kindly be advised that this Permit is not valid without a verification of the type or extent of freshwater wetlands on site.

**DIPrete Engineering**  
 90 Broadway Newport, RI 02840  
 tel 401-619-5990 fax 401-644-6006 www.diprete-eng.com

Boston • Providence • Newport

KEVIN DEMERS  
  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL

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

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

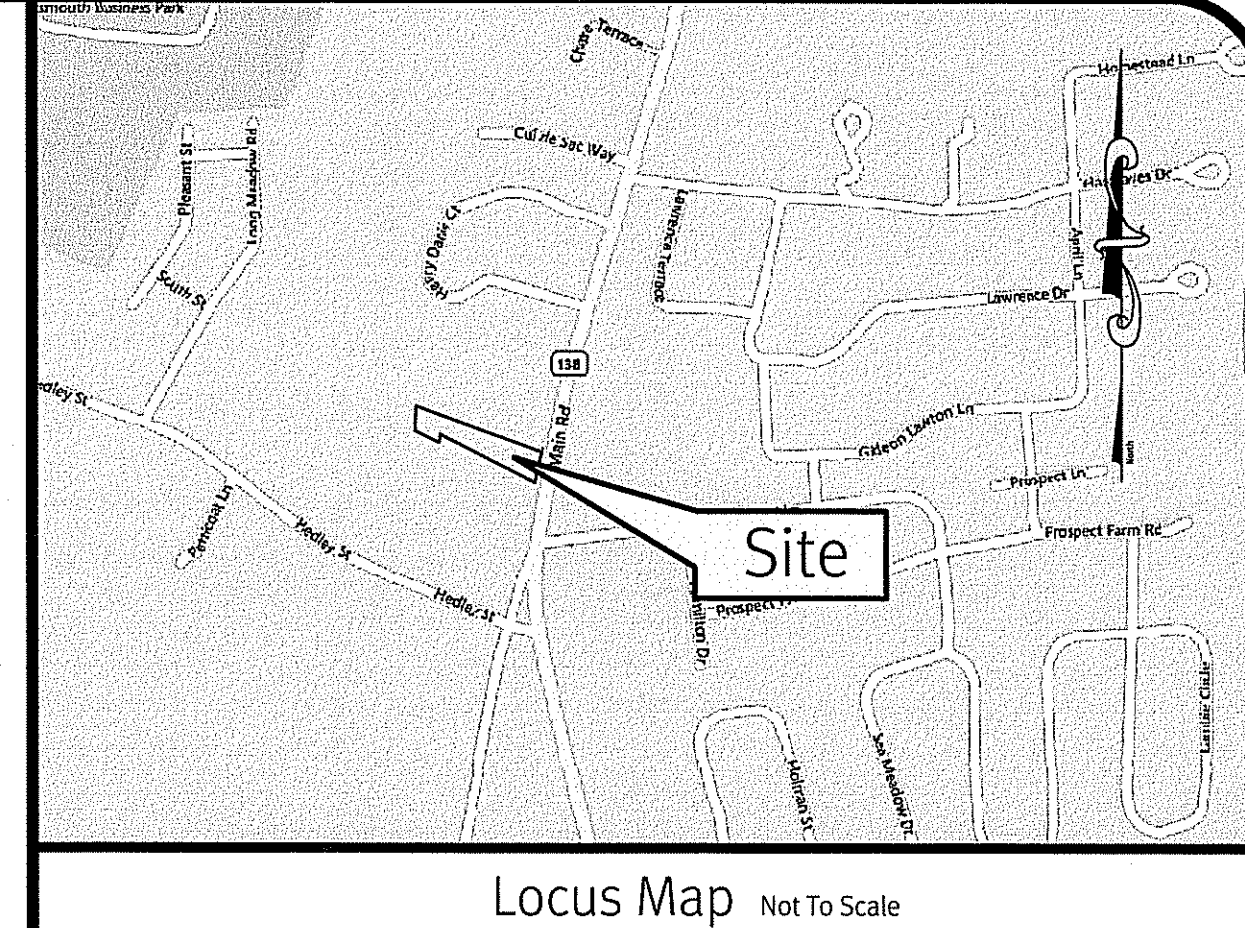
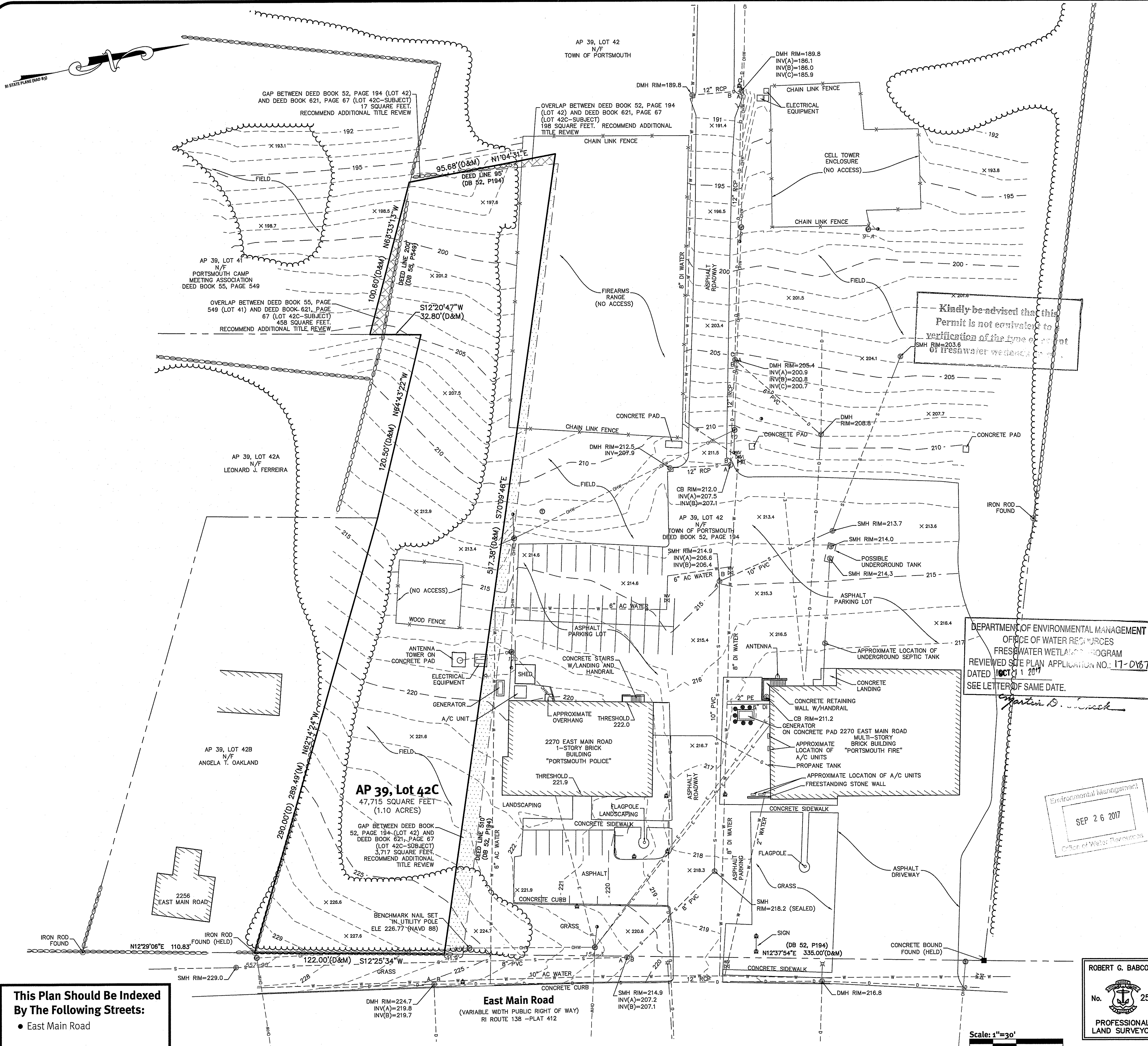
No.	Date	Description	By:
1	9-22-2017	REVISION: REVISION	J.A.D.
2	7-8-2017	REVISION: REVISION	J.A.D.
3	7-8-2017	REVISION: REVISION	J.A.D.

Design By: J.A.D.

**Half Mile Aerial & USGS Map**  
**Portsmouth Police Station**  
 2270 East Main Road  
 Portsmouth, Rhode Island  
 Owner/Applicant:  
**Drumney Roasane Anderson**  
 225 Oakland Road, Studio 205  
 South Windsor, CT 06074

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**Legend**  
NOT ALL ITEMS SHOWN WILL APPEAR ON THE SURVEY

BUILDING	▲/△	NAIL FOUND/SET
ASPHALT	●/◎	DRILL HOLE FOUND/SET
AP	⊠/⊡	IRON ROD/PIPE FOUND/SET
N/F	⊠/⊡	BOUND FOUND/SET
(D)	⊠/⊡	SIGN
(M)	⊠/⊡	BOLLARD
(C)	⊠/⊡	SOIL EVALUATION
(CA)	⊠/⊡	CATCH BASIN
HC	⊠/⊡	DOUBLE CATCH BASIN
ASSESSOR'S PLAT	⊠/⊡	DRAINAGE MANHOLE
NOW OR FORMERLY	⊠/⊡	FLARED END SECTION
DEED	⊠/⊡	GUY POLE
MEASURED	⊠/⊡	ELECTRIC MANHOLE/HANDHOLE
CALCULATED	⊠/⊡	UTILITY/POWER POLE
(CA)	⊠/⊡	LIGHTPOST
CHORD ANGLE	⊠/⊡	SEWER/SEPTIC MANHOLE
HANDICAPPED	⊠/⊡	SEWER VALVE
PROPERTY LINE	⊠/⊡	CLEANOUT
ASSESSORS LINE	⊠/⊡	HYDRANT
TREELINE	⊠/⊡	IRRIGATION VALVE
GUARDRAIL	⊠/⊡	WATER VALVE
FENCE	⊠/⊡	MONITORING WELL
RETAINING WALL	⊠/⊡	UNKNOWN MANHOLE
STONE WALL	⊠/⊡	WELL
MINOR CONTOUR LINE	⊠/⊡	GAS VALVE
MAJOR CONTOUR LINE	⊠/⊡	B-1 WETLAND FLAG
WATER LINE	⊠/⊡	BENCH MARK
SEWER LINE	⊠/⊡	BUSH
SEWER FORCE MAIN	⊠/⊡	TREE
GAS LINE	⊠/⊡	
ELECTRIC LINE	⊠/⊡	
OVERHEAD WIRES	⊠/⊡	
DRAINAGE LINE	⊠/⊡	

- General Notes**
- THE PARCEL IS FOUND ON ASSESSOR'S PLAT 39, LOT 42C IN THE TOWN OF PORTSMOUTH, NEWPORT COUNTY, RHODE ISLAND.
  - THE OWNER PER DEED BOOK 621, PAGE 67 IS TOWN OF PORTSMOUTH.
  - BASED ON GRAPHICAL PLOTTING ONLY, THE PARCEL IS LOCATED IN X PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 44005C0084J, DATED SEPTEMBER 4, 2013. THIS DESIGNATION MAY CHANGE BASED UPON REVIEW BY A FLOOD ZONE SPECIALIST OR BY THE RESULTS OF A COMPREHENSIVE FLOOD STUDY.
  - THE PARCEL IS ZONED R-20 BASED ON THE TOWN OF PORTSMOUTH PROPERTY RECORD CARD. ANY OVERLAY DISTRICTS, SPECIAL PERMITS OR VARIANCES SPECIFIC TO THIS SITE ARE NOT TAKEN INTO CONSIDERATION. PLEASE CONTACT THE ZONING DEPARTMENT FOR ANY ADDITIONAL INFORMATION OR FOR A CERTIFICATE OF ZONING.
  - THERE WERE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS OBSERVED WITHIN THE LIMITS OF THE SURVEY.
  - FIELD SURVEY PERFORMED BY DIPRETE ENGINEERING ON MARCH 6-8, 2017. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
  - THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS, DEEDS OR CLAIMS THAT A TITLE REPORT WOULD DISCLOSE.

- Plan References:**
- LAND OF CLARA ANTHONY PORTSMOUTH, RI. DATED FEBRUARY 29, 1960. PLAN BY HAROLD E. ST. JOHN. PLAT BOOK 6 PAGE 52.
  - PROPOSED 4-UNIT APARTMENT BUILDING. DATED APRIL, 1986. PLAN BY R. FRYZEL & SON BUILDER. RECORDED AS HC 8-A-2 MAP 1.

- Datum Note:**
- ELEVATIONS SHOWN HEREON, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY DIPRETE ENGINEERING USING REAL TIME KINEMATIC (RTK) G.P.S. OBSERVATIONS.

- Utility Notes**
- ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN WERE PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY. LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS SURVEY. (PLEASE CONTACT DIGSAFE 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 1-888-344-7233). DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR MISSING UNDERGROUND UTILITIES, EITHER IN SERVICE OR ABANDONED, NOT OBSERVED AT THE TIME OF THE SURVEY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
  - UNDERGROUND WATER, SEWER & ELECTRIC INFORMATION OBTAINED FROM PLAN OF TOWN ACCESS ROAD WATER MAIN EXTENSION PORTSMOUTH WATER AND FIRE DISTRICT. PLAN DATE SEPTEMBER 28, 2005.
  - UNDERGROUND GAS INFORMATION OBTAINED FROM MAP PROVIDED BY NATIONAL GRID.
  - UNDERGROUND DRAINAGE INFORMATION OBTAINED ON THE GROUND BY DIPRETE ENGINEERING. (SEE GENERAL NOTES FOR DATE OF FIELD SURVEY) AND PLAN OF TOWN ACCESS ROAD WATER MAIN EXTENSION PORTSMOUTH WATER AND FIRE DISTRICT. PLAN DATE SEPTEMBER 28, 2005.

**Certification**

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 6 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON JANUARY 1, 2016, AS FOLLOWS:

TYPE OF SURVEY: COMPREHENSIVE BOUNDARY SURVEY  
 DATA ACCUMULATION SURVEY (LIMITED)

MEASUREMENT SPECIFICATION: CLASS 1 CLASS T-2

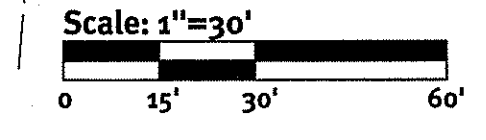
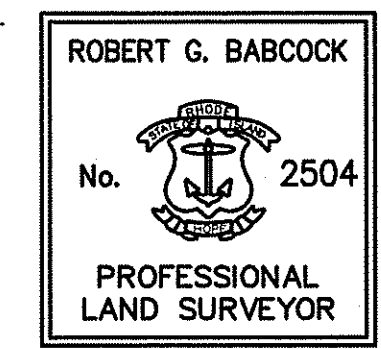
THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: PERIMETER RETRACEMENT PERFORMED BY DIPRETE ENGINEERING FOR THE PURPOSE OF SITE ENGINEERING AND PERMITTING.

ROBERT G. BABCOCK, RIPLS #2504, COA #S.000A160

3/31/17

**This Plan Should Be Indexed By The Following Streets:**

- East Main Road



**Diprete Engineering**  
 Two Stafford Court, Cranston, RI 02920  
 tel: 401-943-1000 fax: 401-664-6006 www.diprete-eng.com

**Boston · Providence · Newport**

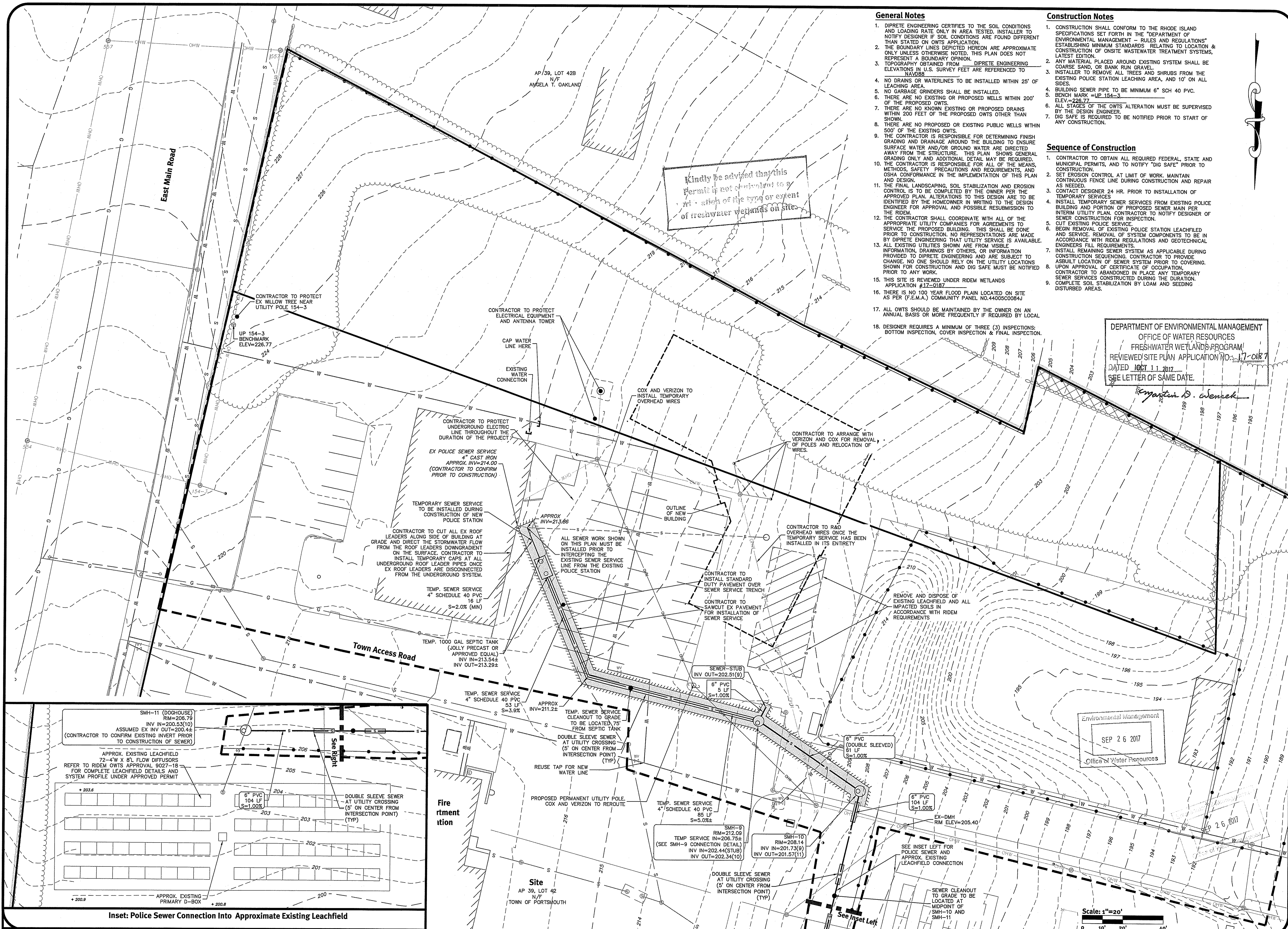
No.	Date	Revision/Description	By
0	3/21/17	Boundary/Topographic Survey	

Drawn By: MIT

**Boundary/Topographic Survey**  
**2270 East Main Road**  
 Portsmouth, Rhode Island

**Client**  
**Drumey Rosane Anderson**  
 225 Oakland Road, Studio 205, South Windsor, Connecticut 06704  
 Phone: 679-964-1700

DE Job No. 2285-001 Copyright 2017 by Diprete Engineering Associates, Inc.



**General Notes**

- DIPRETE ENGINEERING CERTIFIES TO THE SOIL CONDITIONS AND LOADING RATE ONLY IN AREA TESTED. INSTALLER TO NOTIFY DESIGNER IF SOIL CONDITIONS ARE FOUND DIFFERENT THAN STATED ON OWTS APPLICATION.
- THE BOUNDARY LINES DEPICTED HEREON ARE APPROXIMATE ONLY UNLESS OTHERWISE NOTED. THIS PLAN DOES NOT REPRESENT A BOUNDARY OPINION.
- TOPOGRAPHY OBTAINED FROM DIPRETE ENGINEERING ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD83.
- NO DRAINS OR WATERLINES TO BE INSTALLED WITHIN 25' OF LEACHING AREA.
- NO GARBAGE GRINDERS SHALL BE INSTALLED.
- THERE ARE NO EXISTING OR PROPOSED WELLS WITHIN 200' OF THE PROPOSED OWTS.
- THERE ARE NO KNOWN EXISTING OR PROPOSED DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS OTHER THAN SHOWN.
- THERE ARE NO PROPOSED OR EXISTING PUBLIC WELLS WITHIN 500' OF THE EXISTING OWTS.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUND WATER ARE DIRECTED AWAY FROM THE STRUCTURE. THIS PLAN SHOWS GENERAL GRADING ONLY AND ADDITIONAL DETAIL MAY BE REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, SAFETY PRECAUTIONS AND REQUIREMENTS, AND OSHA CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND DESIGN.
- THE FINAL LANDSCAPING, SOIL STABILIZATION AND EROSION CONTROL IS TO BE COMPLETED BY THE OWNER PER THE APPROVED PLAN. ALTERATIONS TO THIS DESIGN ARE TO BE IDENTIFIED BY THE HOMEOWNER IN WRITING TO THE DESIGN ENGINEER FOR APPROVAL AND POSSIBLE RESUBMISSION TO THE RIDEM.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS SHALL BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
- ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS BY OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. NO ONE SHOULD RELY ON THE UTILITY LOCATIONS SHOWN FOR CONSTRUCTION AND DIG SAFE MUST BE NOTIFIED PRIOR TO ANY WORK.
- THIS SITE IS REVIEWED UNDER RIDEM WETLANDS APPLICATION #17-0187.
- THERE IS NO 100 YEAR FLOOD PLAIN LOCATED ON SITE AS PER (F.E.M.A.) COMMUNITY PANEL NO.44005C0084J.
- ALL OWTS SHOULD BE MAINTAINED BY THE OWNER ON AN ANNUAL BASIS OR MORE FREQUENTLY IF REQUIRED BY LOCAL.
- DESIGNER REQUIRES A MINIMUM OF THREE (3) INSPECTIONS: BOTTOM INSPECTION, COVER INSPECTION & FINAL INSPECTION.

**Construction Notes**

- CONSTRUCTION SHALL CONFORM TO THE RHODE ISLAND SPECIFICATIONS SET FORTH IN THE "DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - RULES AND REGULATIONS" ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION & CONSTRUCTION OF ONSITE WASTEWATER TREATMENT SYSTEMS, LATEST EDITION.
- ANY MATERIAL PLACED AROUND EXISTING SYSTEM SHALL BE COARSE SAND, OR BANK-RUN GRAVEL.
- INSTALLER TO REMOVE ALL TREES AND SHRUBS FROM THE EXISTING POLICE STATION LEACHING AREA, AND 10' ON ALL SIDES.
- BUILDING SEWER PIPE TO BE MINIMUM 6" SCH 40 PVC. ELEV.=226.77
- BENCH MARK = UP 154-3
- ALL STAGES OF THE OWTS ALTERATION MUST BE SUPERVISED BY THE DESIGN ENGINEER.
- DIG SAFE IS REQUIRED TO BE NOTIFIED PRIOR TO START OF ANY CONSTRUCTION.

**Sequence of Construction**

- CONTRACTOR TO OBTAIN ALL REQUIRED FEDERAL, STATE AND MUNICIPAL PERMITS, AND TO NOTIFY "DIG SAFE" PRIOR TO CONSTRUCTION.
- SET EROSION CONTROL. AT LIMIT OF WORK, MAINTAIN CONTINUOUS FENCE LINE DURING CONSTRUCTION AND REPAIR AS NEEDED.
- CONTACT DESIGNER 24 HR. PRIOR TO INSTALLATION OF TEMPORARY SERVICES.
- INSTALL TEMPORARY SEWER SERVICES FROM EXISTING POLICE BUILDING AND PORTION OF PROPOSED SEWER MAIN PER INTERIM UTILITY PLAN. CONTRACTOR TO NOTIFY DESIGNER OF SEWER CONSTRUCTION FOR INSPECTION.
- OUT EXISTING POLICE SERVICE.
- BEGIN REMOVAL OF EXISTING POLICE STATION LEACHFIELD AND SERVICE. REMOVAL OF SYSTEM COMPONENTS TO BE IN ACCORDANCE WITH RIDEM REGULATIONS AND GEOTECHNICAL ENGINEERS FILL REQUIREMENTS.
- INSTALL REMAINING SEWER SYSTEM AS APPLICABLE DURING CONSTRUCTION SEQUENCING. CONTRACTOR TO PROVIDE ASBUILT LOCATION OF SEWER SYSTEM PRIOR TO COVERING. UPON APPROVAL OF CERTIFICATE OF OCCUPATION, CONTRACTOR TO ABANDONED IN PLACE ANY TEMPORARY SEWER SERVICES CONSTRUCTED DURING THE DURATION.
- COMPLETE SOIL STABILIZATION BY LOAM AND SEEDING DISTURBED AREAS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO. 17-0187  
DATED OCT 11 2017  
SEE LETTER OF SAME DATE.

*Signature: Martin D. Wenczek*

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

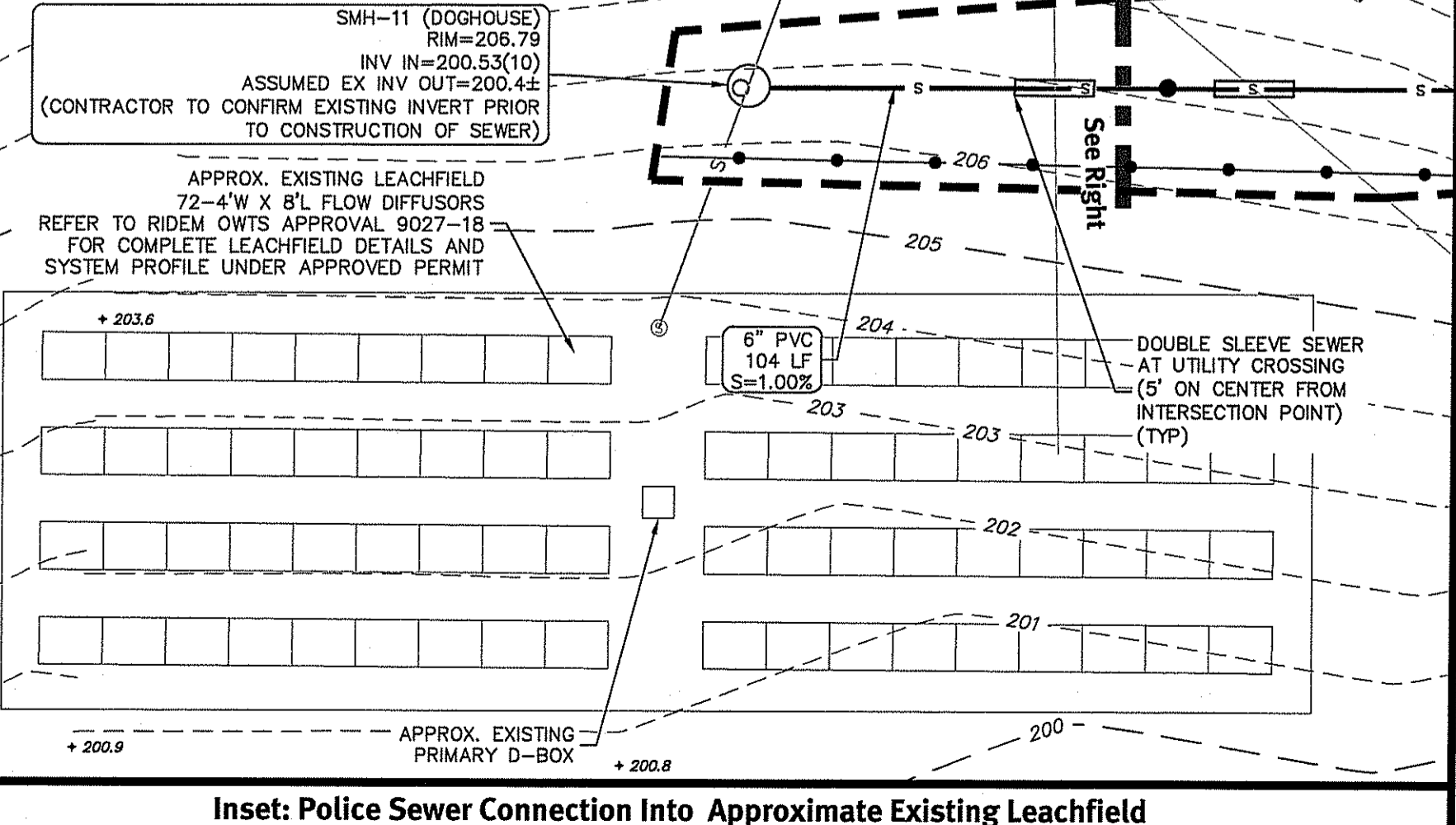
KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By
2	02-22-2017	REVISION: BEC. Submissions	J.A.D.
1	12-28-2017	REVISION: CIVILS. Alteration Submission	J.A.D.
1	12-28-2017	REVISION: PRE. Determination & IMPROV.	J.A.D.

Drawn By: J.A.D. Design By: K.I.D.



Inset: Police Sewer Connection Into Approximate Existing Leachfield

**Interim Utility Plan**

**Portsmouth Police Station**

Client: **Drumrey Roasane Anderson**  
2290 East Main Road  
Portsmouth, Rhode Island 02871

Owner/Applicant: **Drumrey Roasane Anderson**  
2290 East Main Road  
Portsmouth, RI 02871

South Wintisor, CT 06074  
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**RISDISM Section 3.2.6 Redevelopment Calculation:**

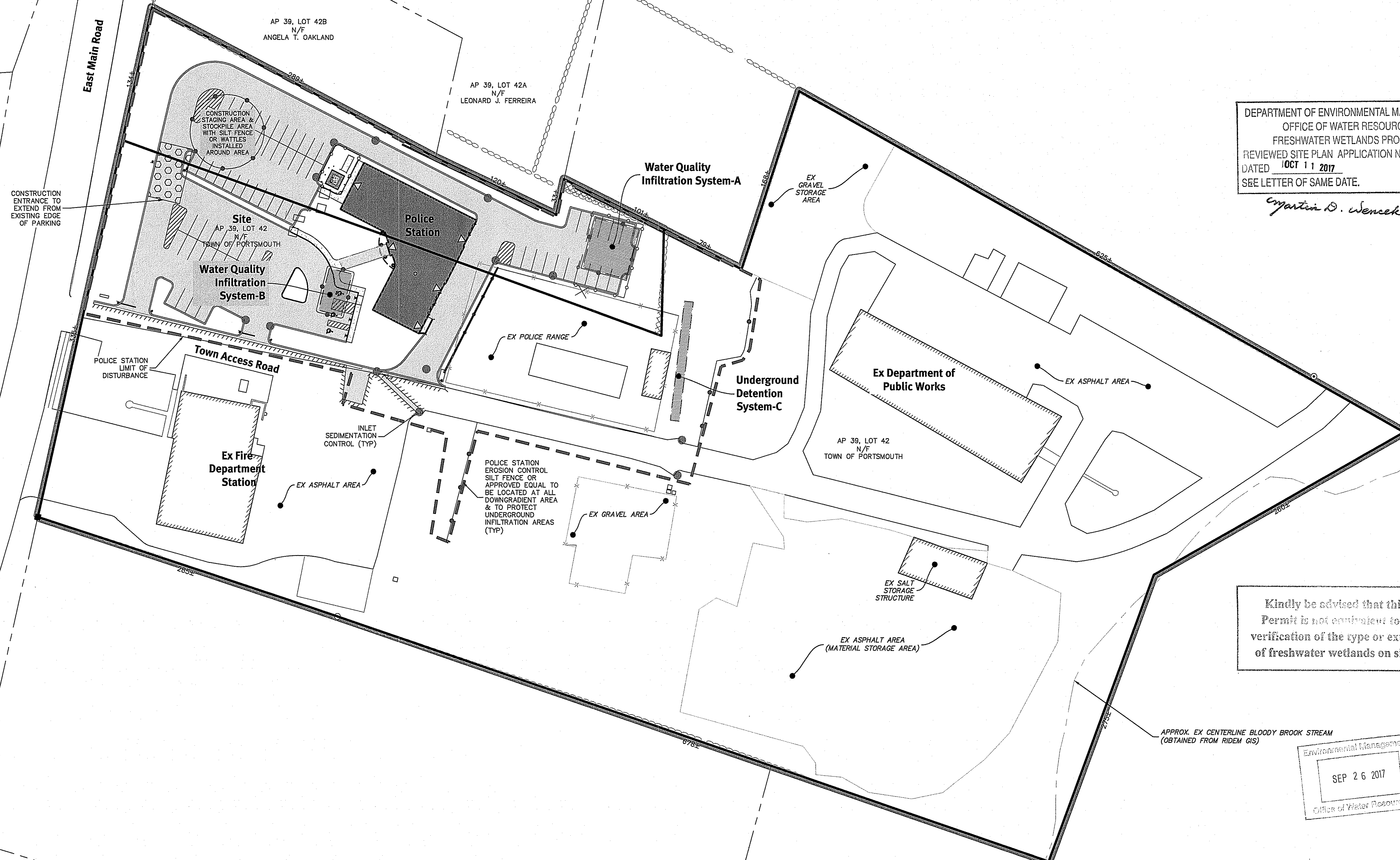
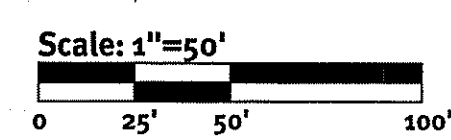
PURPOSE OF THIS PLAN IS TO DETAIL THE EXISTING AND PROPOSED IMPERVIOUS AREAS FOR THE PROPOSED PORTSMOUTH POLICE STATION REDEVELOPMENT CALCULATION PER RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL SECTION 3.2.6.

AP 39 LOTS 42 & 42C	10.197 ACRES
TOTAL SITE AREA (TSA)	0.571 ACRES
JURISDICTIONAL WETLANDS (JW)	9.626 ACRES
SITE SIZE (SS)	4.874 ACRES
EXISTING TOTAL IMPERVIOUS AREA (TIA)	4.874 ACRES
REDEVELOPMENT PERCENTAGE CALCULATION REQUIREMENT	> 40% REQUIREMENT
TIA/SS = 4.874 AC / 9.626 =	51%
STORMWATER TREATMENT AREA (STA) =	DI X 50% + NIP
DISTURBED IMPERVIOUS (DI) =	0.525 ACRES
NET INCREASED PERVIOUS (NIP) =	0.819 ACRES
STA =	1.081 ACRES
PROVIDED STA =	1.305 ACRES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 17-0187  
DATED OCT 11 2017  
SEE LETTER OF SAME DATE.  
*Martin D. Wenczek*

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

Environmental Management  
SEP 26 2017  
Office of Water Resources



KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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

No.	Date	Description	By:
1	0-15-2017	80501 REC. SUBMITTANCE	J.A.D.
2	7-18-2017	80501 CIVIL ALLOCATION SUBMISSION	J.A.D.
3	7-18-2017	80501 PRE-DETERMINATION & PERMITS	J.A.D.

Drawn By: J.A.D. Design By: K.L.D.

**Overall Site & SESC Plan**  
**Portsmouth Police Station**  
2270 East Main Road  
Portsmouth, Rhode Island  
Owner/Applicant:  
Town of Portsmouth  
2200 East Main Road  
Portsmouth, RI 02871  
Drummeys Roasane Anderson  
225 Oakland Road, Studio 205  
South Windsor, CT 06074  
DE Job No: 2283-001. Copyright 2017 by DiPrete Engineering Associates, Inc.

**DiPrete Engineering**  
90 Broadway, Newport, RI 02840  
tel 401-639-5990 fax 401-634-6006 www.diprete-eng.com  
Boston • Providence • Newport

AP 39, LOT 42B  
N/F  
ANGELA T. OAKLAND

AP 39, LOT 42A  
N/F  
LEONARD J. FERREIRA

East Main Road

Town Access Road

Ex Fire  
Department  
Station

Site  
AP 39, LOT 42  
N/F  
TOWN OF PORTSMOUTH

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 17-087  
DATED: OCT 11 2017  
SEE LETTER OF SAME DATE.  
*Martin D. Wenczek*

SECURITY FENCE  
(COORDINATE TYPE  
WITH OWNER PRIOR  
TO CONSTRUCTION)

SLIDING GATE  
(SEE DETAIL)

RETAINING WALLS  
DESIGN BY OTHERS  
(TYP)

GENERATOR PADS  
(CONTRACTOR TO  
COORDINATE WITH  
MEP PLANS)

6.0' HIGH WHITE  
STOCKADE FENCE  
WITH ACCESS DOOR

9.0' TYP FOR  
POLICE PATROL CAR  
PARKING

TRANSFORMER PAD WITH  
BOLLARDS (CONTRACTOR TO  
COORDINATE WITH  
NATIONAL GRID PRIOR TO  
CONSTRUCTION)

POLICE PATROL CARS  
PARKING ONLY  
(37 SPACES TOTAL)

5.0' WIDE CONCRETE  
SIDEWALK (TYP)

BUILDING OVERHANG &  
COLUMNS PER  
ARCHITECTS PLANS

BRICK WALKWAY.  
DETAILS TO BE  
COORDINATED  
WITH ARCHITECT

STANDARD DUTY  
PAVEMENT (TYP  
SEE SHEET 12)

4W45 (TYP)

7.1.0 (TYP)

7.5.1 (TYP)

12W (TYP)

12W (TYP)

12W (TYP)

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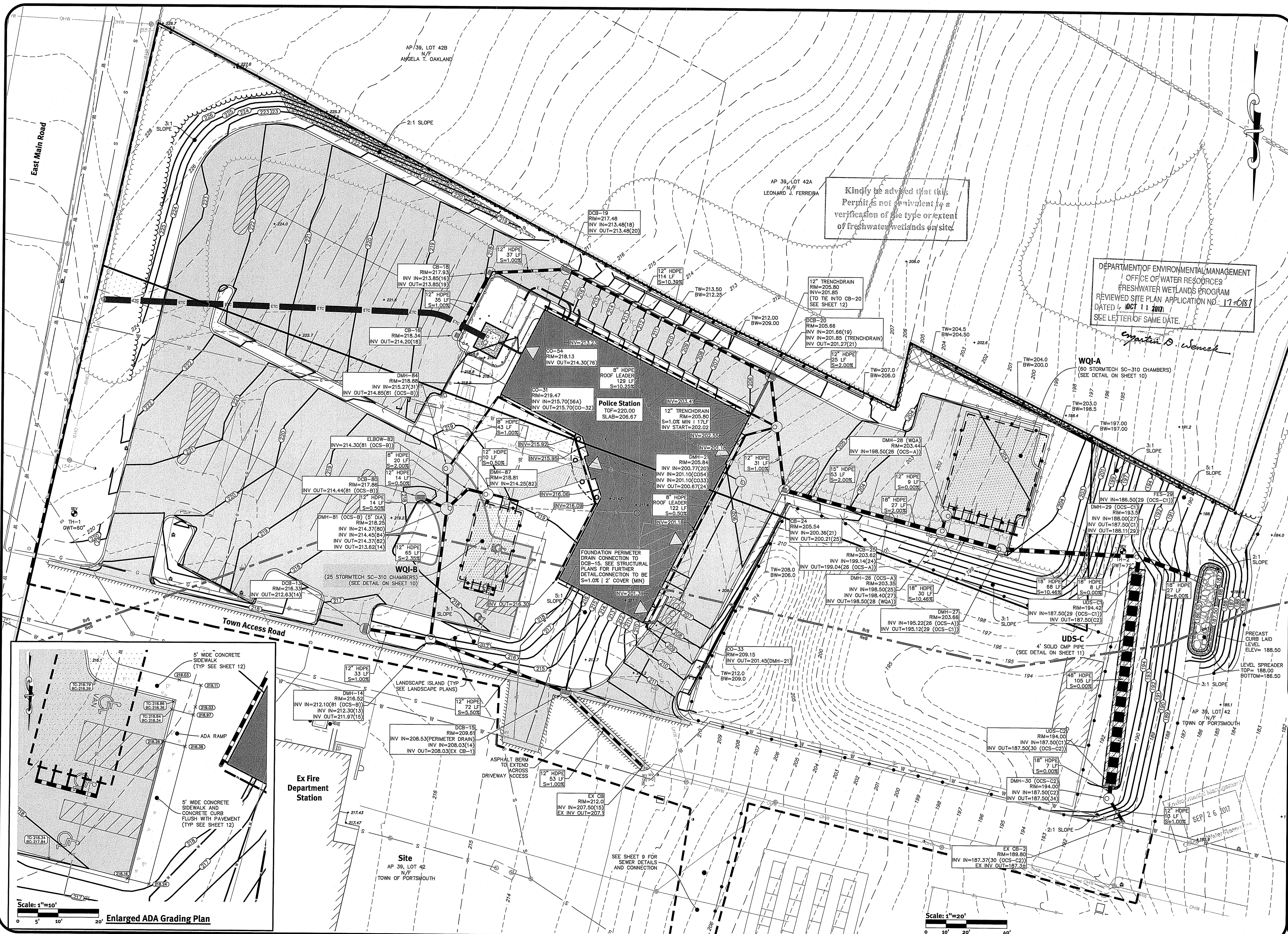
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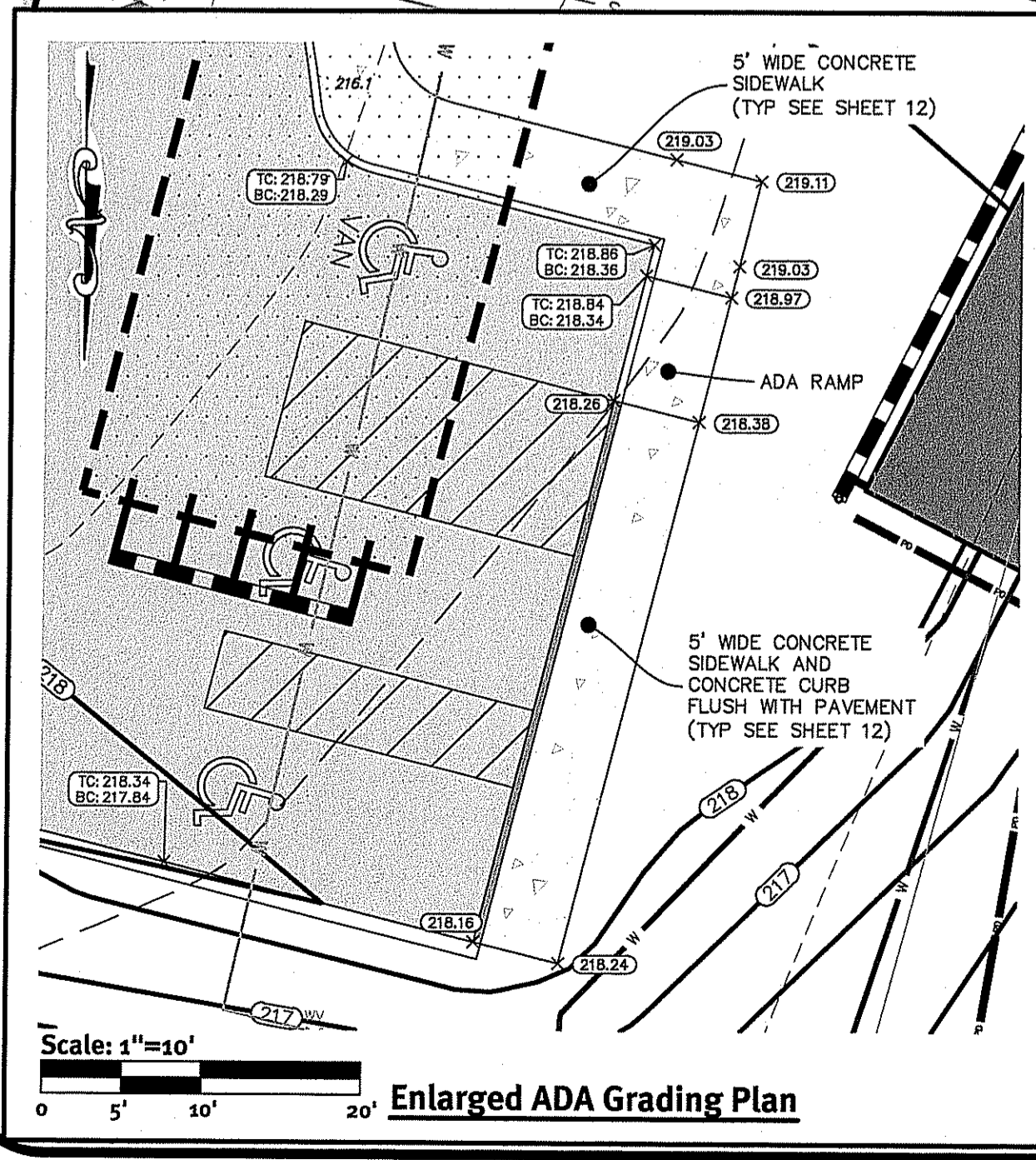
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO. 17-0187  
DATED 4 OCT 11 2017  
SEE LETTER OF SAME DATE.

WQI-A  
(60 STORMTECH SC-310 CHAMBERS)  
(SEE DETAIL ON SHEET 10)

Police Station  
TOP=220.00  
SLAB=206.67

UDS-C  
4" SOLID OMP PIPE  
(SEE DETAIL ON SHEET 11)



Scale: 1"=10'  
Enlarged ADA Grading Plan

Scale: 1"=20'

Grading & Surface Drainage Plan  
Portsmouth Police Station

Owner/Applicant:  
Town of Portsmouth  
2270 East Main Road  
Portsmouth, Rhode Island  
Client:  
Drumrey Roasane Anderson  
225 Oakland Road, Studio 205  
South Windsor, CT 06074

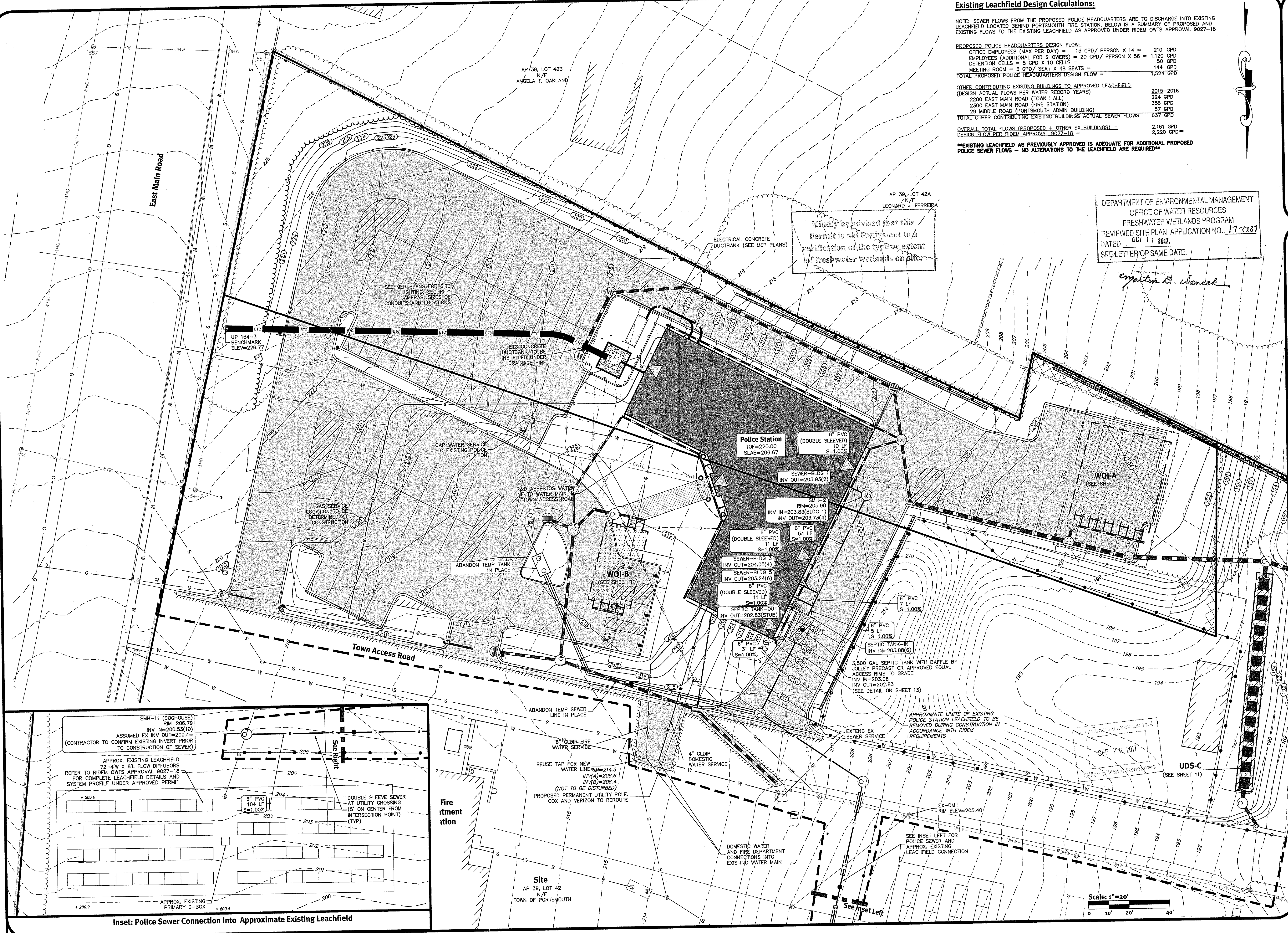
KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

No.	Date	Description	Drawn By: J.A.D.	Design By: K.I.D.
2	9-22-2017	0203A REVC. Submissions		
1	12-18-2017	0203A DWG Alteration-Submissions		
1	12-18-2017	0203A DWG Alteration-Submissions		

**DiPrete Engineering**  
90 Broadway Newport, RI 02840  
Tel: 401-639-5890 Fax: 401-661-6006 www.diprete-eng.com  
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**Existing Leachfield Design Calculations:**

NOTE: SEWER FLOWS FROM THE PROPOSED POLICE HEADQUARTERS ARE TO DISCHARGE INTO EXISTING LEACHFIELD LOCATED BEHIND PORTSMOUTH FIRE STATION. BELOW IS A SUMMARY OF PROPOSED AND EXISTING FLOWS TO THE EXISTING LEACHFIELD AS APPROVED UNDER RIDEM OWTIS APPROVAL 9027-18

<b>PROPOSED POLICE HEADQUARTERS DESIGN FLOW:</b>	
OFFICE EMPLOYEES (MAX PER DAY) = 15 GPD / PERSON X 14 =	210 GPD
EMPLOYEES (ADDITIONAL FOR SHOWERS) = 20 GPD / PERSON X 56 =	1,120 GPD
DETENTION CELLS = 5 GPD X 10 CELLS =	50 GPD
MEETING ROOM = 3 GPD / SEAT X 48 SEATS =	144 GPD
<b>TOTAL PROPOSED POLICE HEADQUARTERS DESIGN FLOW =</b>	<b>1,524 GPD</b>
<b>OTHER CONTRIBUTING EXISTING BUILDINGS TO APPROVED LEACHFIELD (DESIGN ACTUAL FLOWS PER WATER RECORD YEARS)</b>	
2200 EAST MAIN ROAD (TOWN HALL)	224 GPD
2300 EAST MAIN ROAD (FIRE STATION)	356 GPD
29 MIDDLE ROAD (PORTSMOUTH ADMIN BUILDING)	57 GPD
<b>TOTAL OTHER CONTRIBUTING EXISTING BUILDINGS ACTUAL SEWER FLOWS</b>	<b>637 GPD</b>
<b>OVERALL TOTAL FLOWS (PROPOSED + OTHER EX BUILDINGS) =</b>	<b>2,161 GPD</b>
<b>DESIGN FLOW PER RIDEM APPROVAL 9027-18 =</b>	<b>2,220 GPD**</b>

\*\*EXISTING LEACHFIELD AS PREVIOUSLY APPROVED IS ADEQUATE FOR ADDITIONAL PROPOSED POLICE SEWER FLOWS - NO ALTERATIONS TO THE LEACHFIELD ARE REQUIRED\*\*

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

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 17-0187  
DATED OCT 11 2017.  
SEE LETTER OF SAME DATE.

*Christopher D. Demers*

**Diprete Engineering**  
90 Broadway Newport, RI 02840  
tel. 401-659-8890 fax. 401-661-6006 www.diprete-eng.com

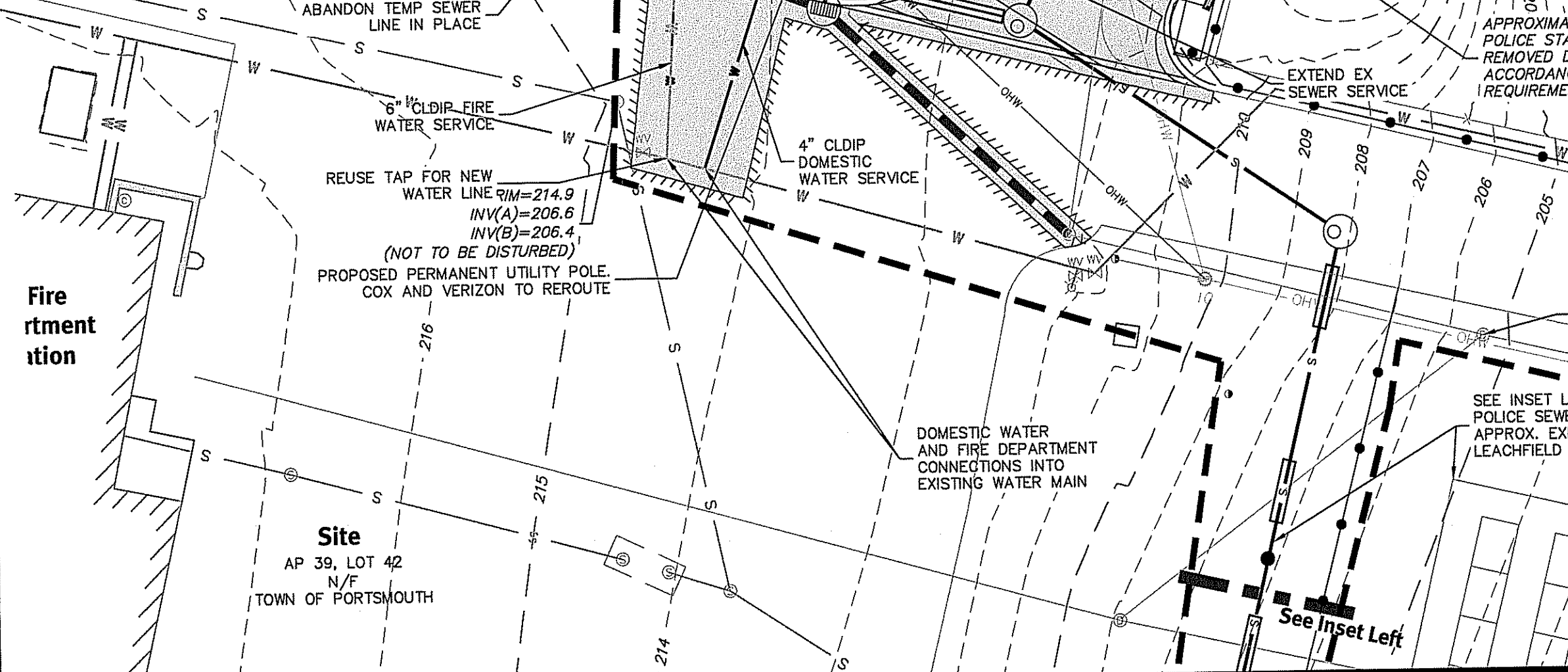
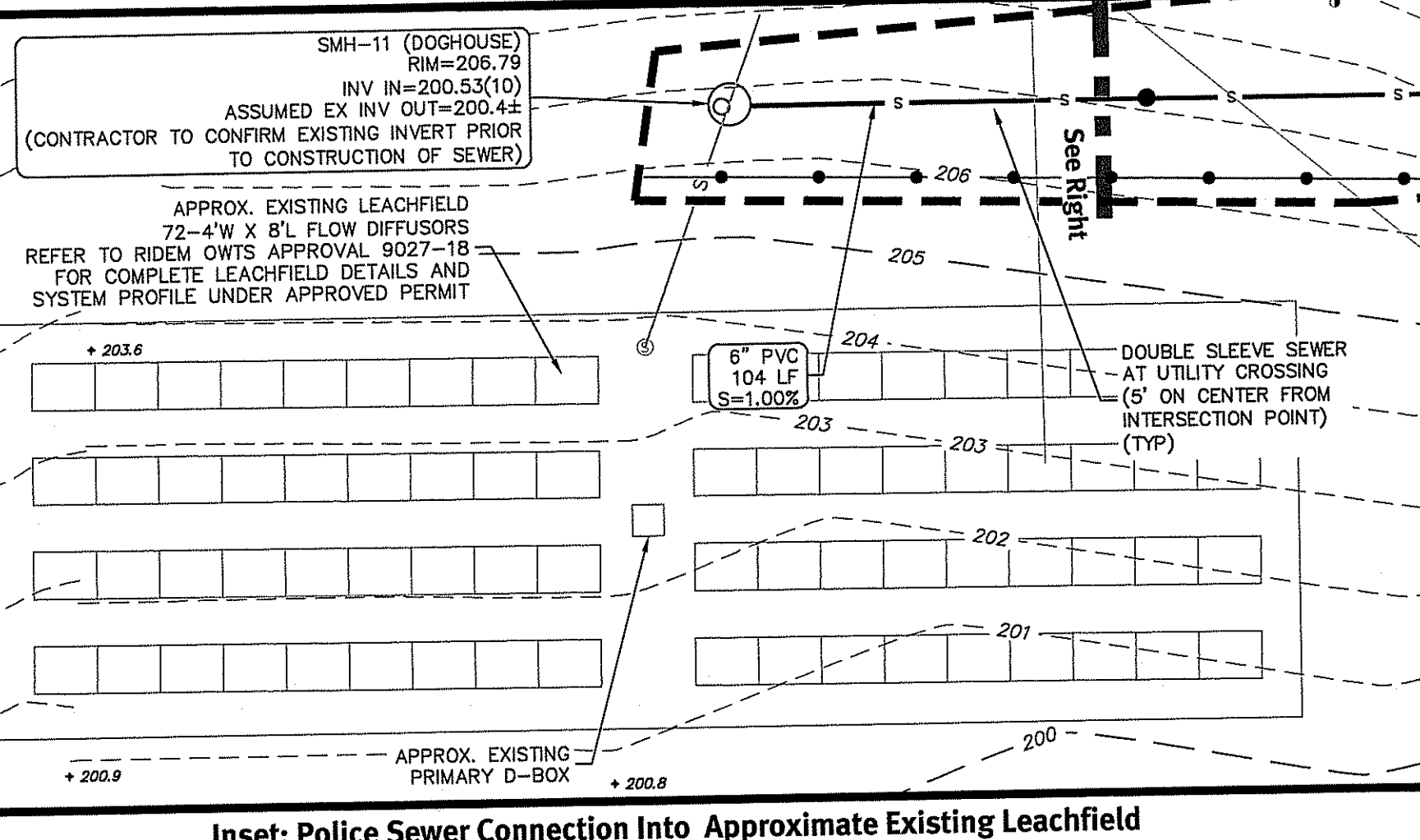
KEVIN DEMERS  
*Kevin Demers*  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

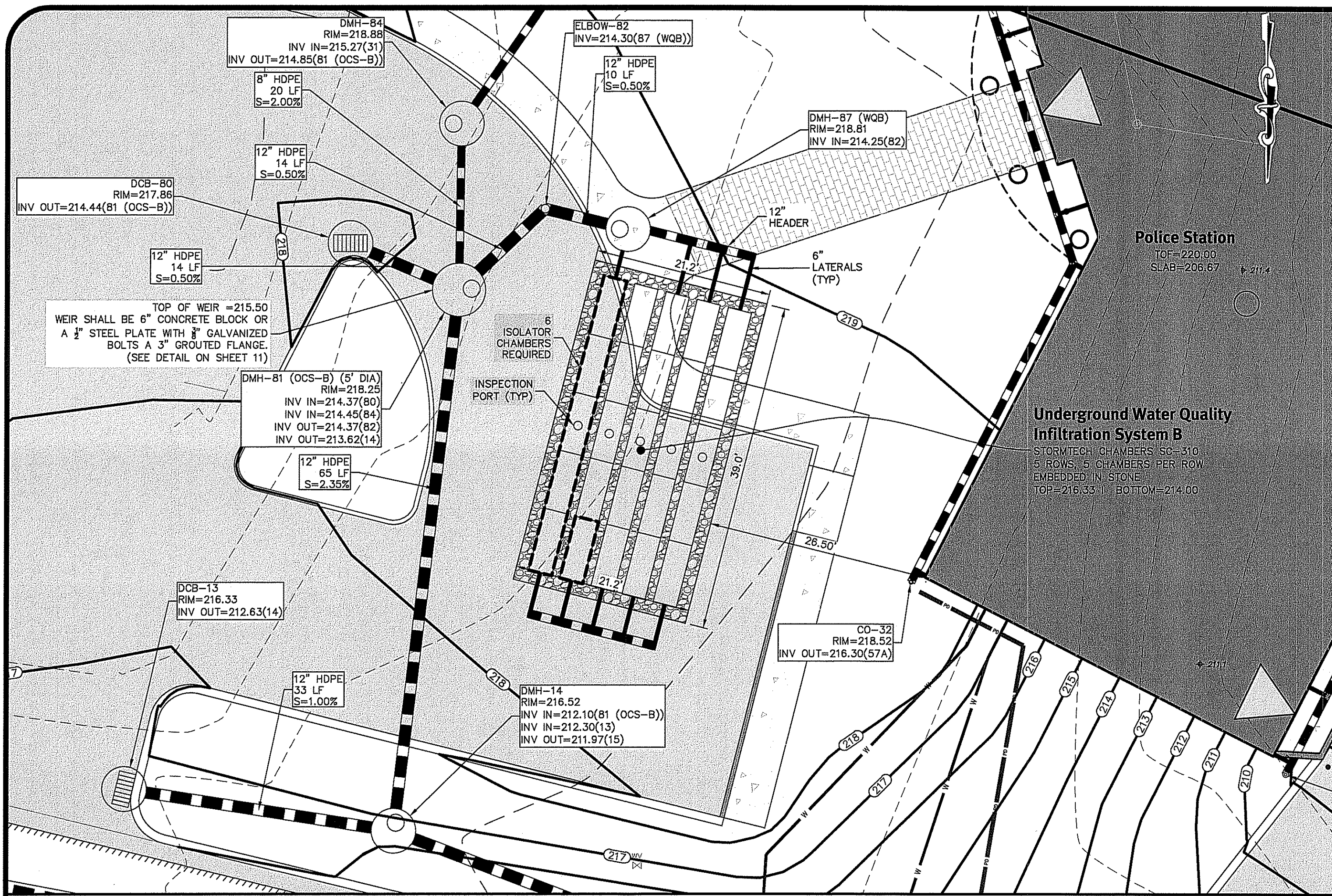
This regulatory submission set shall not be used for construction purposes unless stamped "Issued for Construction" and signed by a Diprete Engineering representative.

1	08/23/2017	ISSUED FOR CONSTRUCTION	By: K.D.
2	08/23/2017	ISSUED FOR CONSTRUCTION	By: K.D.
3	08/23/2017	ISSUED FOR CONSTRUCTION	By: K.D.
4	08/23/2017	ISSUED FOR CONSTRUCTION	By: K.D.
5	08/23/2017	ISSUED FOR CONSTRUCTION	By: K.D.

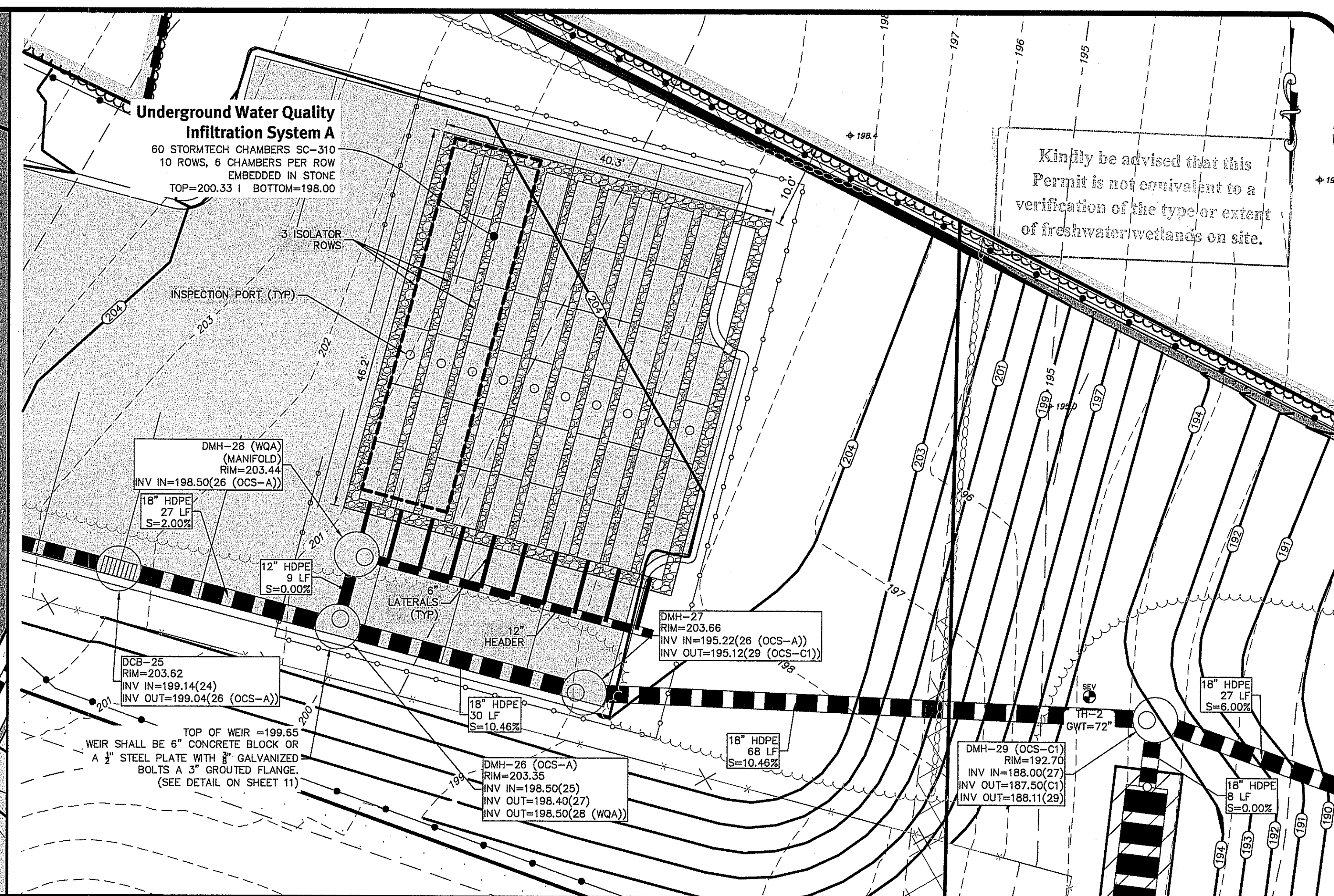
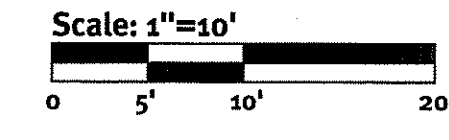
**Sewer & Utility Plan**  
**Portsmouth Police Station**  
2270 East Main Road  
Portsmouth, Rhode Island  
Client: **Drumrey Roasane Anderson**  
225 Oakland Road, Studio 205  
South Windsor, CT 06074

Z:\Main\Projects\2283-001\_east main road 2270\autocad drawings\2283-001\_sdw.dwg Plotset: 9/22/2017

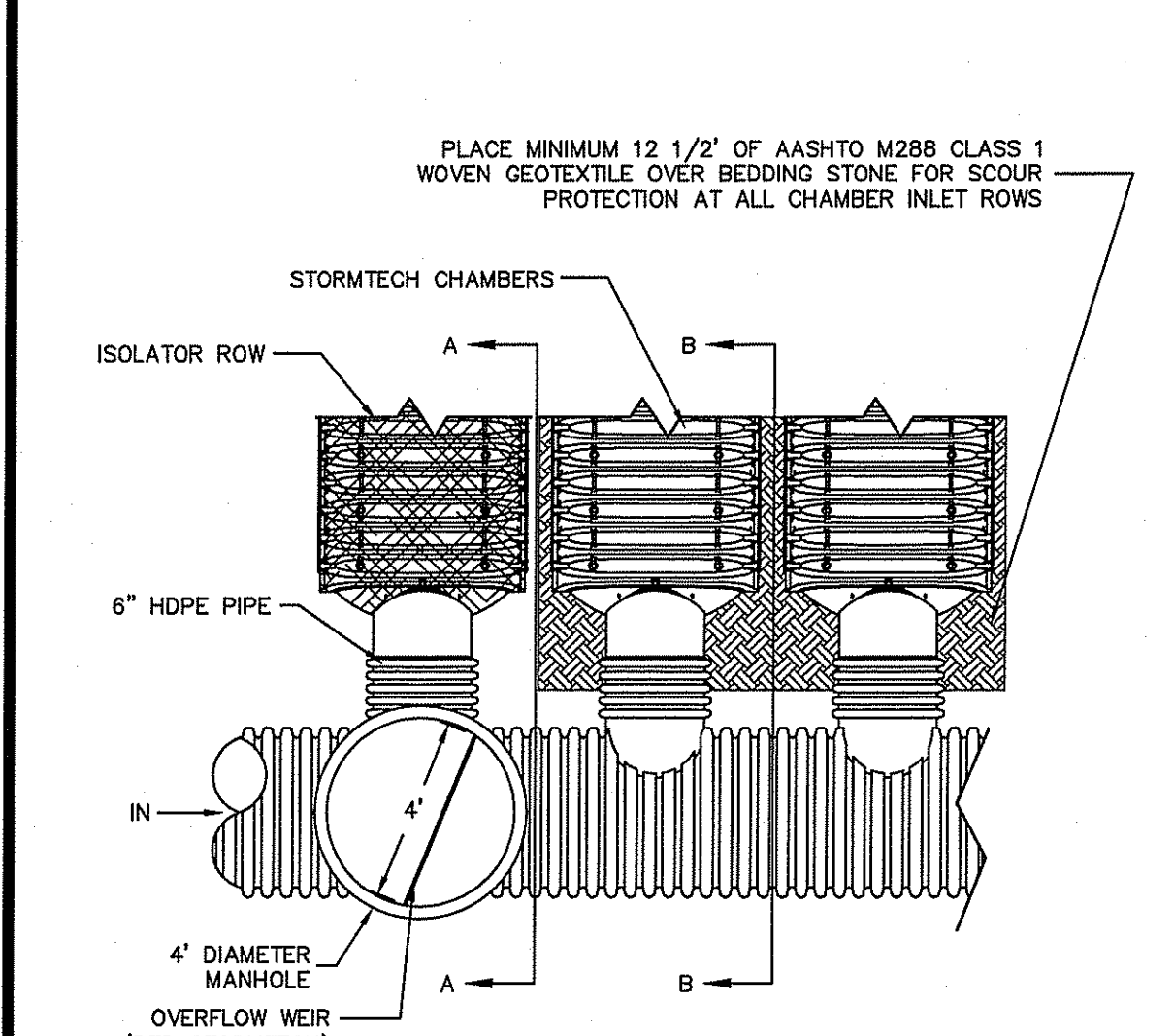
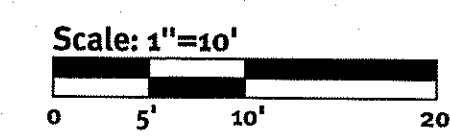




**Underground Water Quality Infiltration System B**

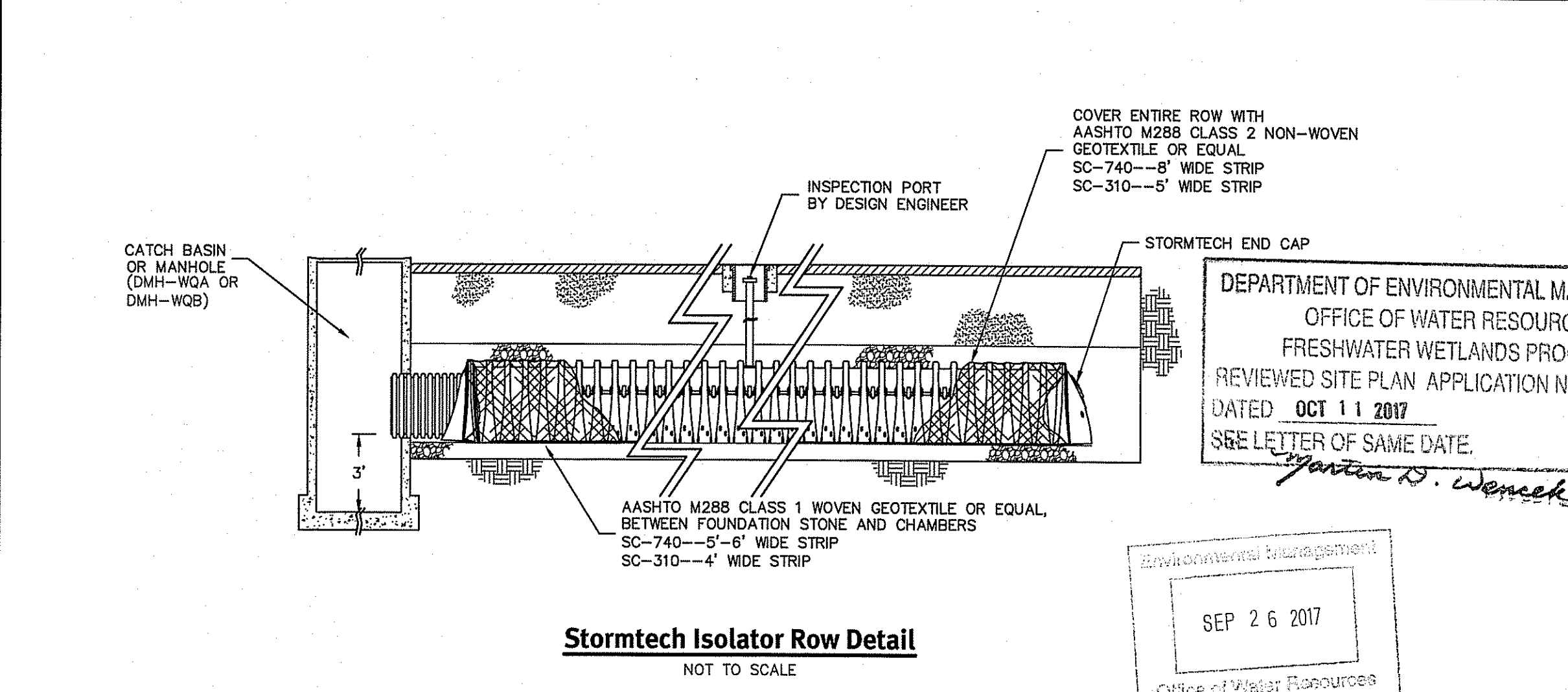


**Underground Water Quality Infiltration System A**



**Stormtech Isolator Row Manifold Detail**

NOT TO SCALE



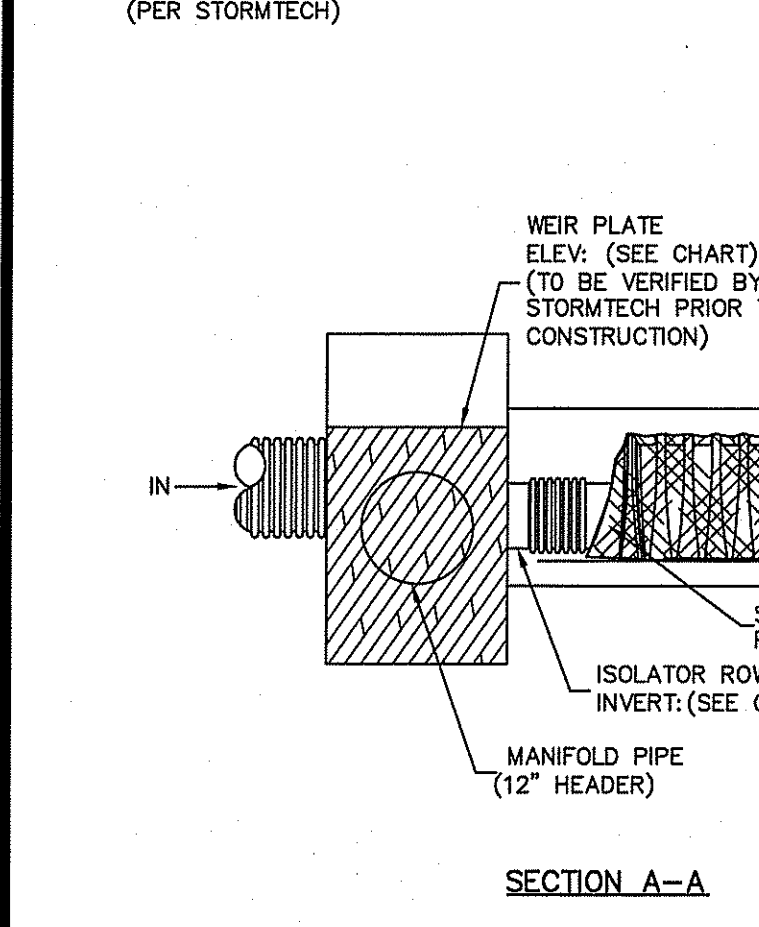
**Stormtech Isolator Row Detail**

NOT TO SCALE

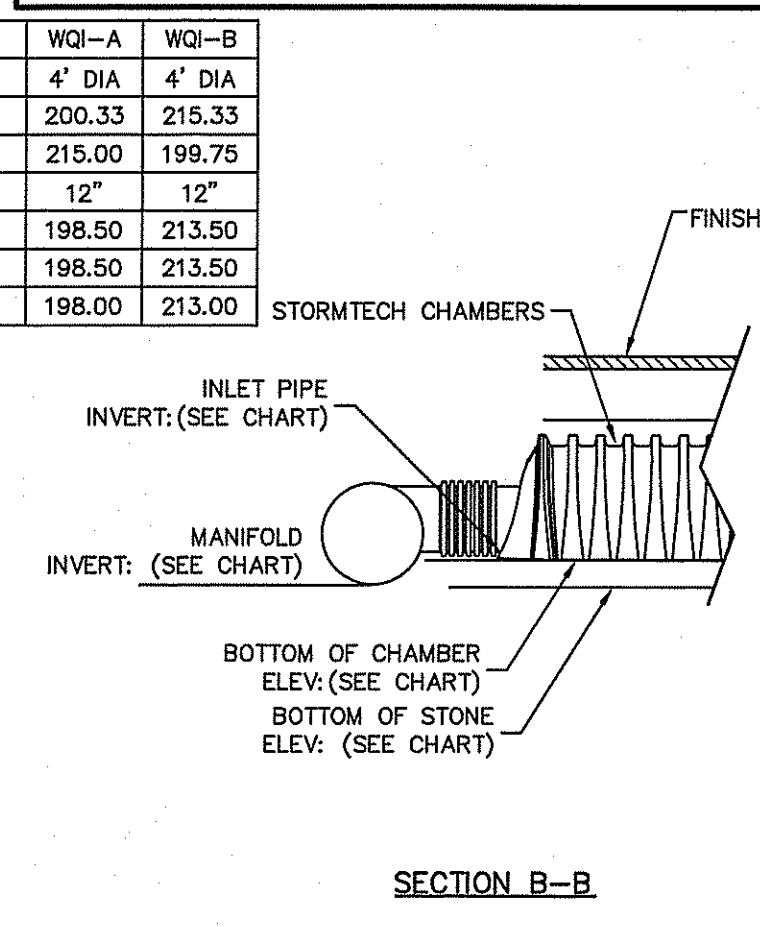
DESCRIPTION: STORMTECH 310	WQI-A	WQI-B
MANIFOLD STRUCTURE SIZE	4' DIA	4' DIA
TOP OF UIS STONE ELEVATION	200.33	215.33
MANIFOLD WEIR ELEVATION	215.00	199.75
HEADER PIPE PIPE SIZE	12"	12"
MANIFOLD PIPE INVERT	198.50	213.50
BOTTOM OF CHAMBER	198.50	213.50
BOTTOM OF STONE	198.00	213.00

**Stormtech Elevations**

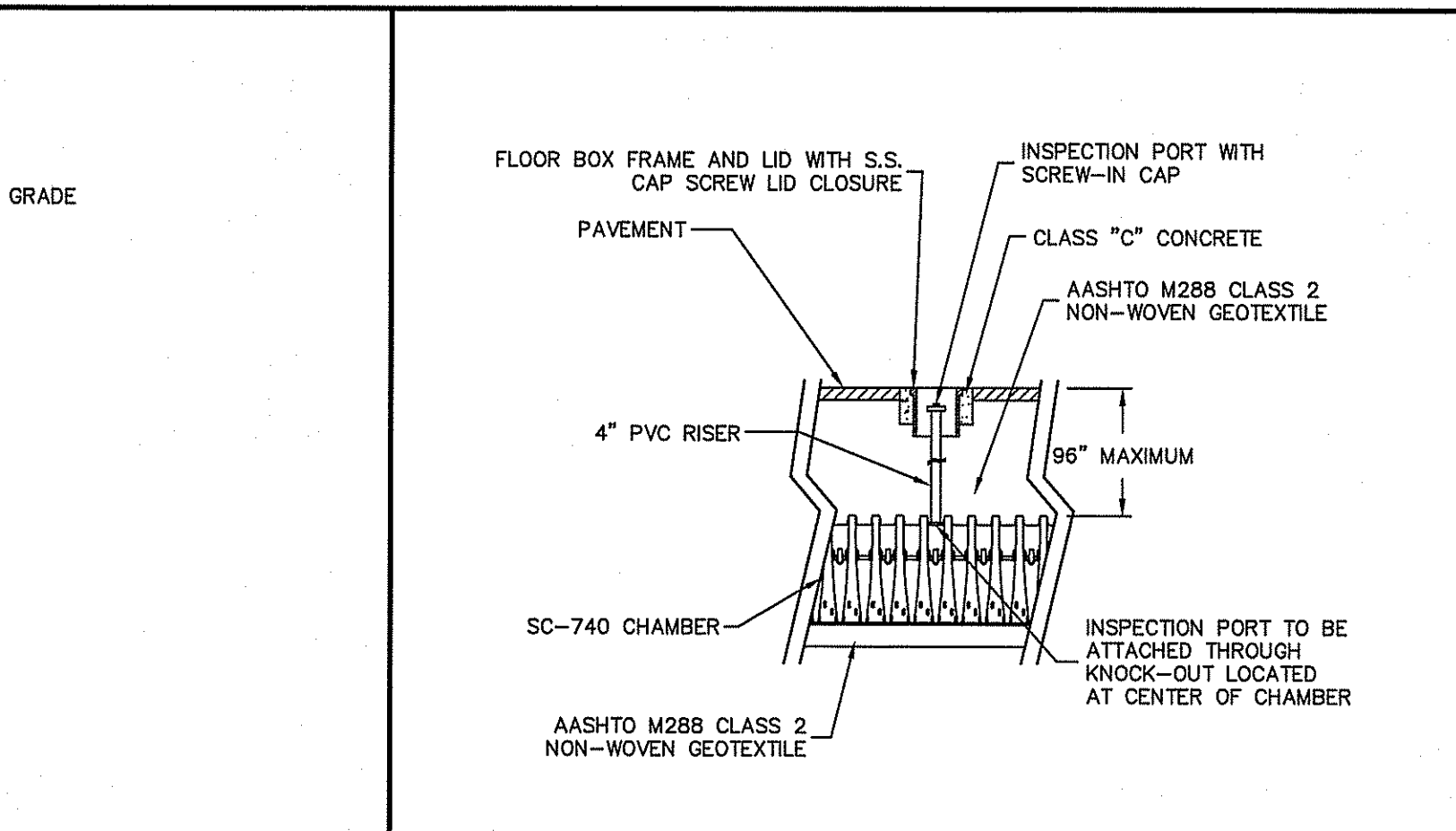
NOT TO SCALE



**SECTION A-A**

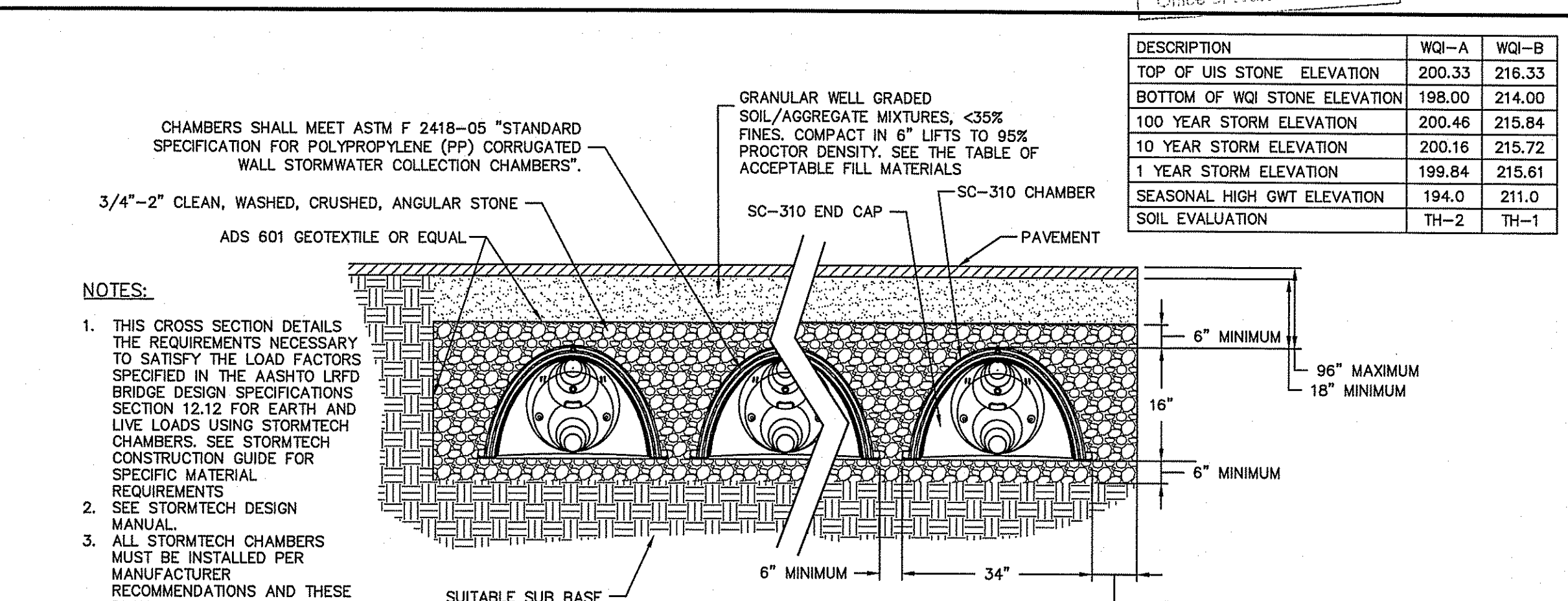


**SECTION B-B**



**Stormtech Inspection Port Detail**

NOT TO SCALE



**Stormtech SC-310 Typical Cross Section**

NOT TO SCALE

**NOTES:**

1. THIS CROSS SECTION DETAILS THE REQUIREMENTS NECESSARY TO SATISFY THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS USING STORMTECH CHAMBERS. SEE STORMTECH CONSTRUCTION GUIDE FOR SPECIFIC MATERIAL REQUIREMENTS.
2. SEE STORMTECH DESIGN MANUAL.
3. ALL STORMTECH CHAMBERS MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS AND THESE PLANS. CONTRACTOR TO NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES.

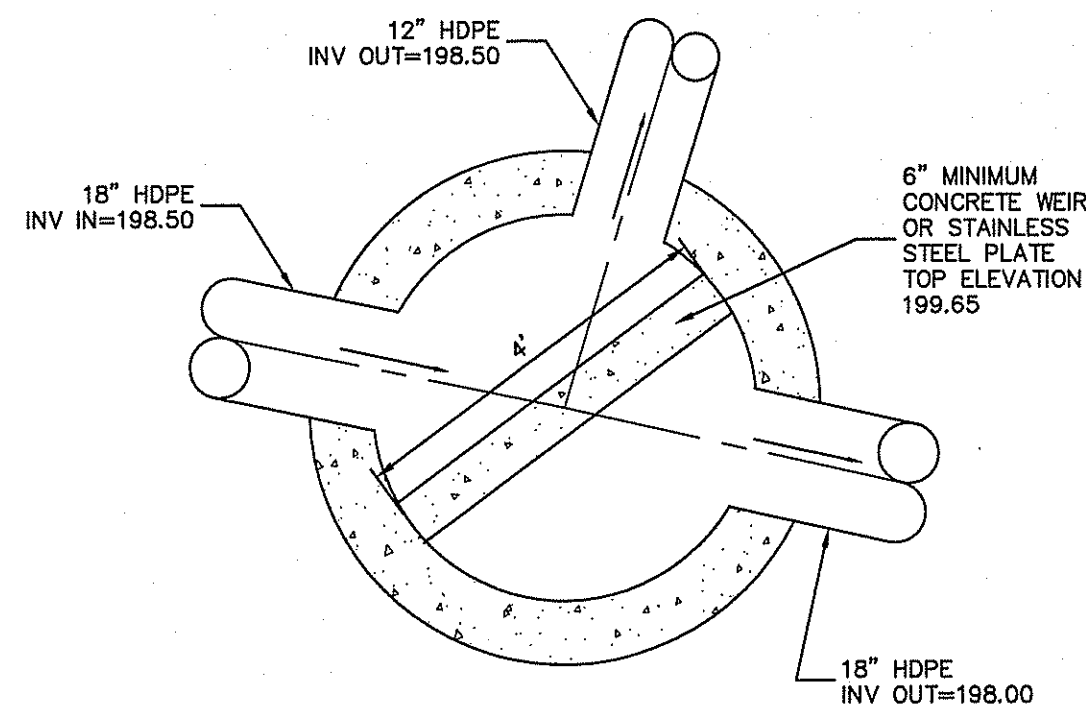
**DiPrete Engineering**  
 90 Broadway, Newport, RI 02840  
 tel 401-619-5990, fax 401-664-6006, www.diprete-eng.com  
 Boston • Providence • Newport

**KEVIN DEMERS**  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL

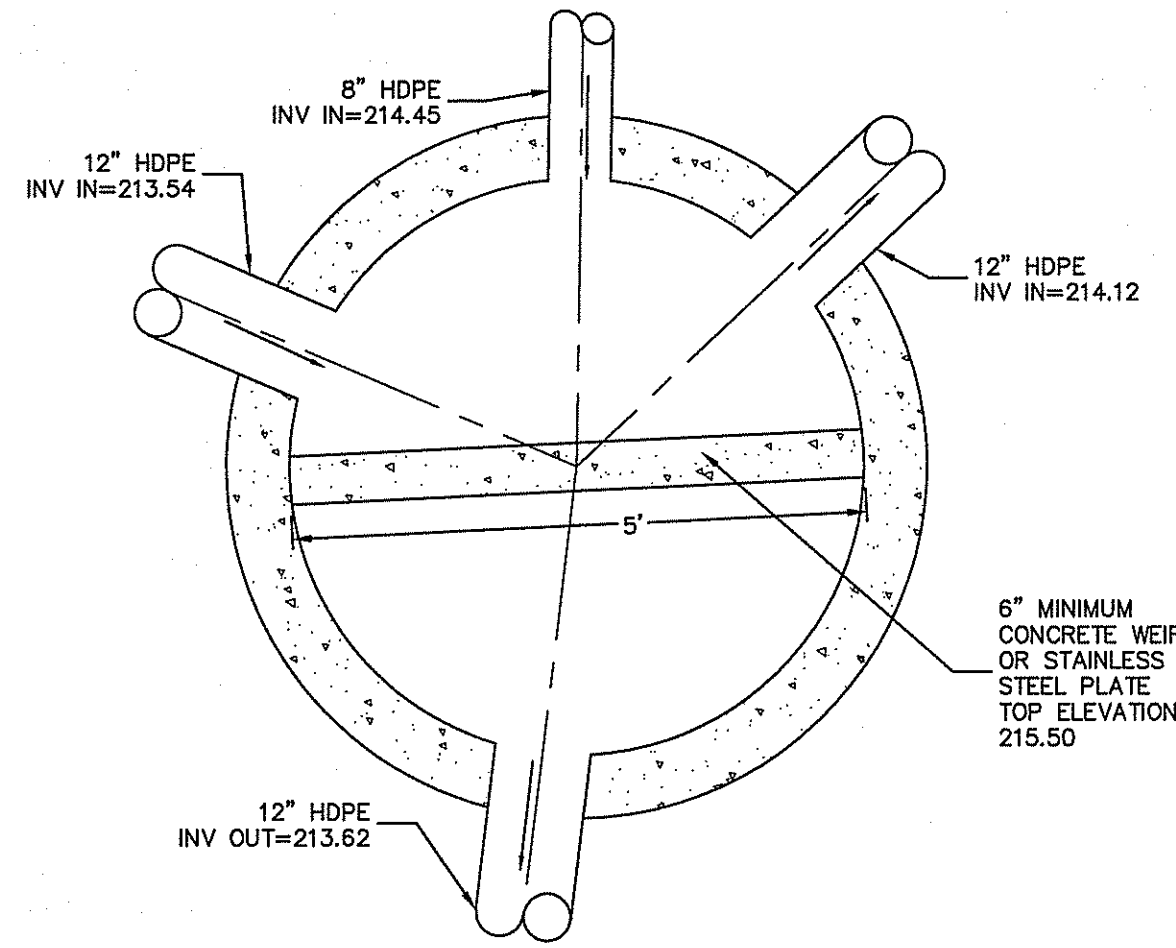
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 REVIEWED SITE PLAN APPLICATION NO. 17-0181  
 DATED OCT 11 2017  
 SEE LETTER OF SAME DATE.  
 Jonathan W. Wenzel  
 Office of Water Resources  
 SEP 26 2017  
 Drawn By: JAD.  
 Design By: K.I.D.

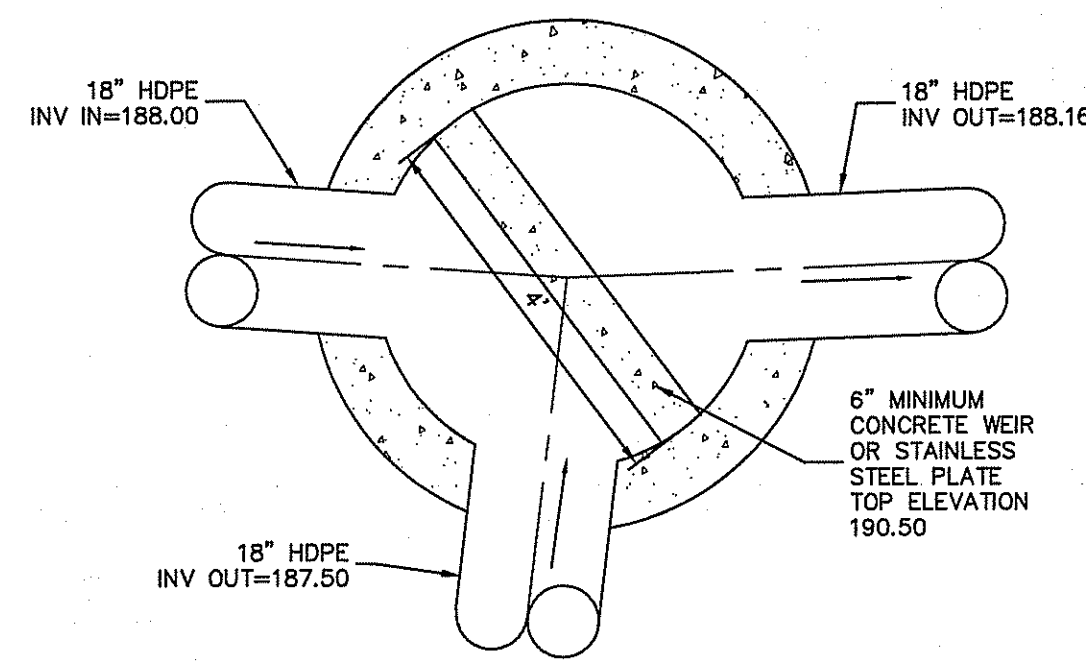
**Water Quality Infiltration Systems A & B**  
**Portsmouth Police Station**  
 Client: Drummy Roasane Anderson  
 2370 East Main Road, Portsmouth, Rhode Island 02871  
 2200 East Main Road, Portsmouth, RI 02871  
 South Windsor, CT 06074  
 DE Job No: 2383-001. Copyright 2017 by DiPrete Engineering Associates, Inc.



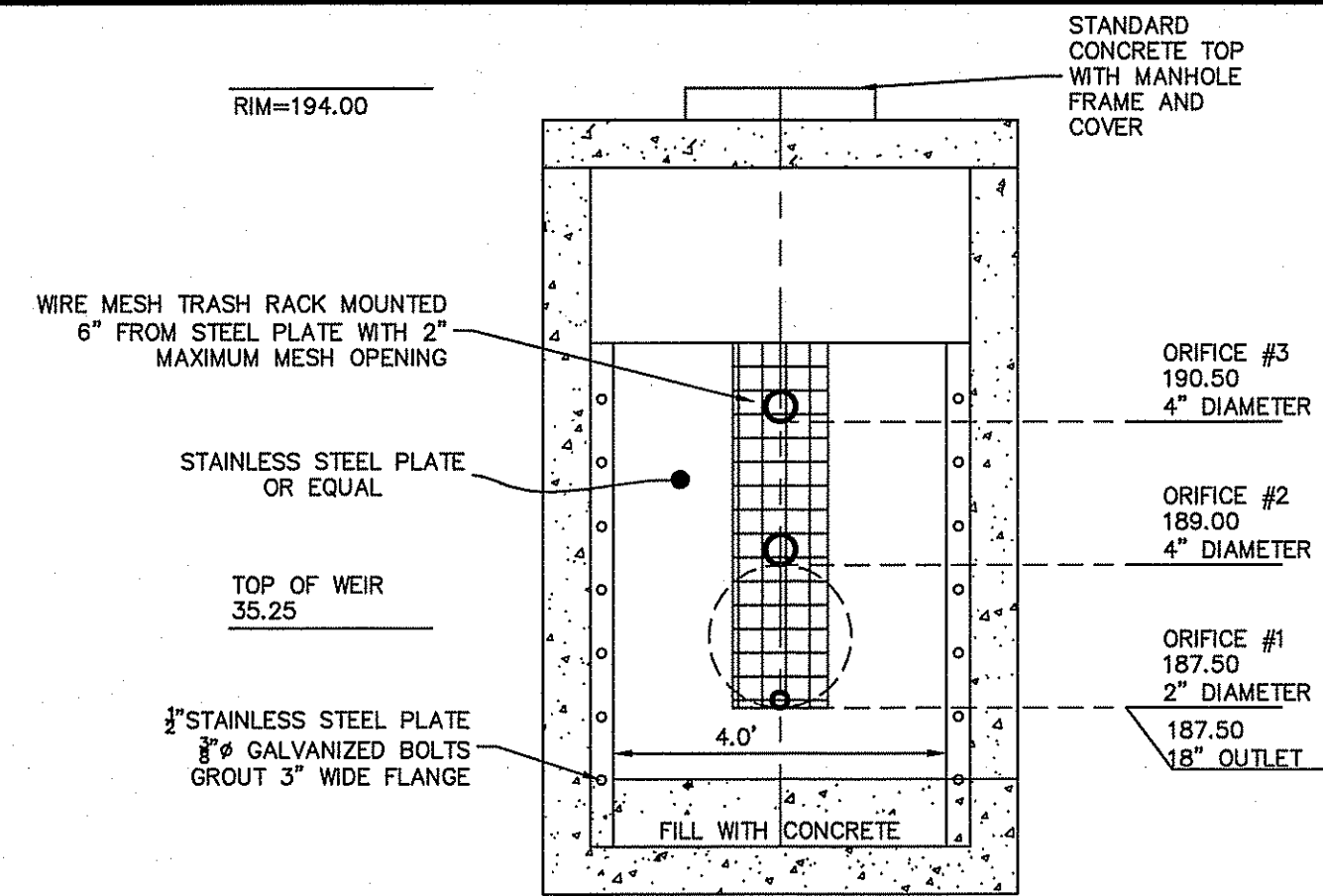
**Outlet Control Manhole (DMH-26 OCS-A)**  
SCALE 1"=2'



**Outlet Control Manhole (DMH-81 OCS-B)**  
SCALE 1"=2'



**Outlet Control Manhole (OCS-C1)**  
SCALE 1"=2'

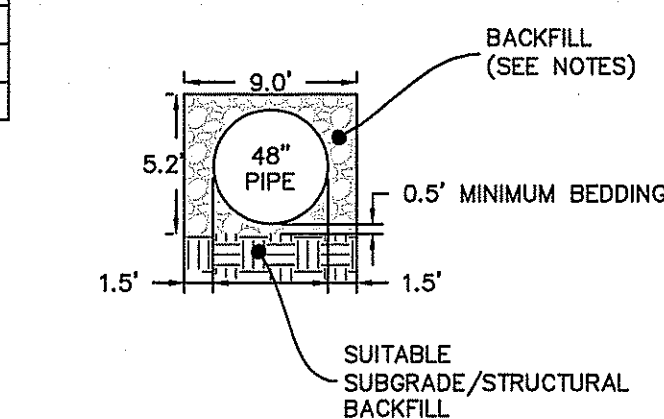


**Outlet Control Manhole (OCS-C2)**  
SCALE: 1"=2'

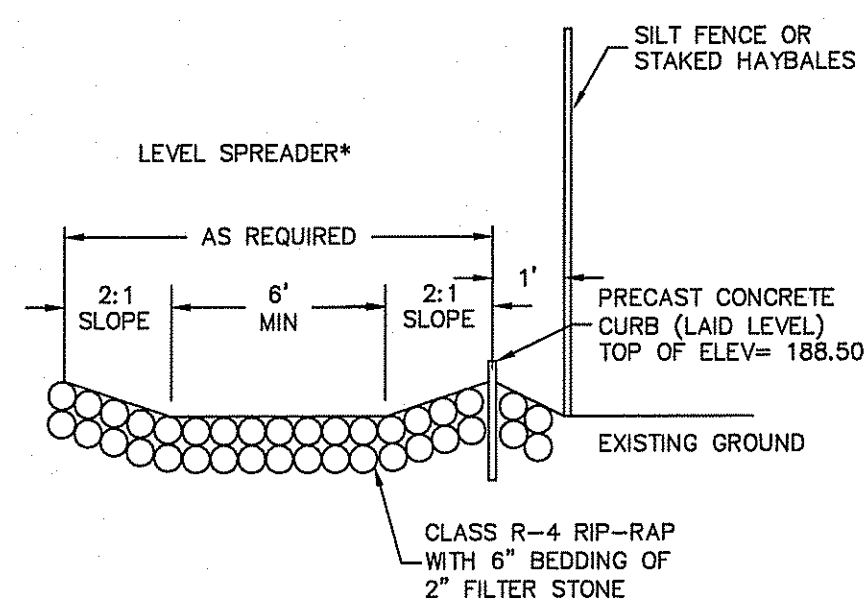
**NOTES:**

- STRUCTURAL BACKFILL MATERIAL: SELECT MATERIALS SUCH AS BANK RUN GRAVEL OR OTHER PROCESSED GRANULAR MATERIALS LESS THAN 3 IN. MAXIMUM WITH EXCELLENT STRUCTURAL CHARACTERISTICS ARE PREFERRED. CONTRACTOR TO PROVIDE SIEVE ANALYSIS OF BACKFILL MATERIAL TO DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- STRUCTURAL BACKFILL PLACEMENT: STRUCTURAL BACKFILL SHALL BE PLACED IN LAYERS FROM 6 TO 12 IN. IN DEPTH DEPENDING ON THE TYPE OF MATERIAL AND COMPACTION EQUIPMENT OR METHOD. EACH LAYER OR "LIFT" SHALL BE COMPACTED TO 95% PROCTOR DENSITY BEFORE ADDING THE NEXT.
- PIPE SHALL BE HDPE OR ALUMINIZED TYPE 2. ALL PIPE MUST BE WATERTIGHT. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO DESIGN ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

DESCRIPTION	UDS-C
TOP OF UDS STONE ELEVATION	192.2
BOTTOM OF UDS STONE ELEVATION	187.00
100 YEAR STORM ELEVATION	191.28
10 YEAR STORM ELEVATION	190.96
1 YEAR STORM ELEVATION	190.61
SEASONAL HIGH GWT ELEVATION	187.00
SOIL EVALUATION	TH-2

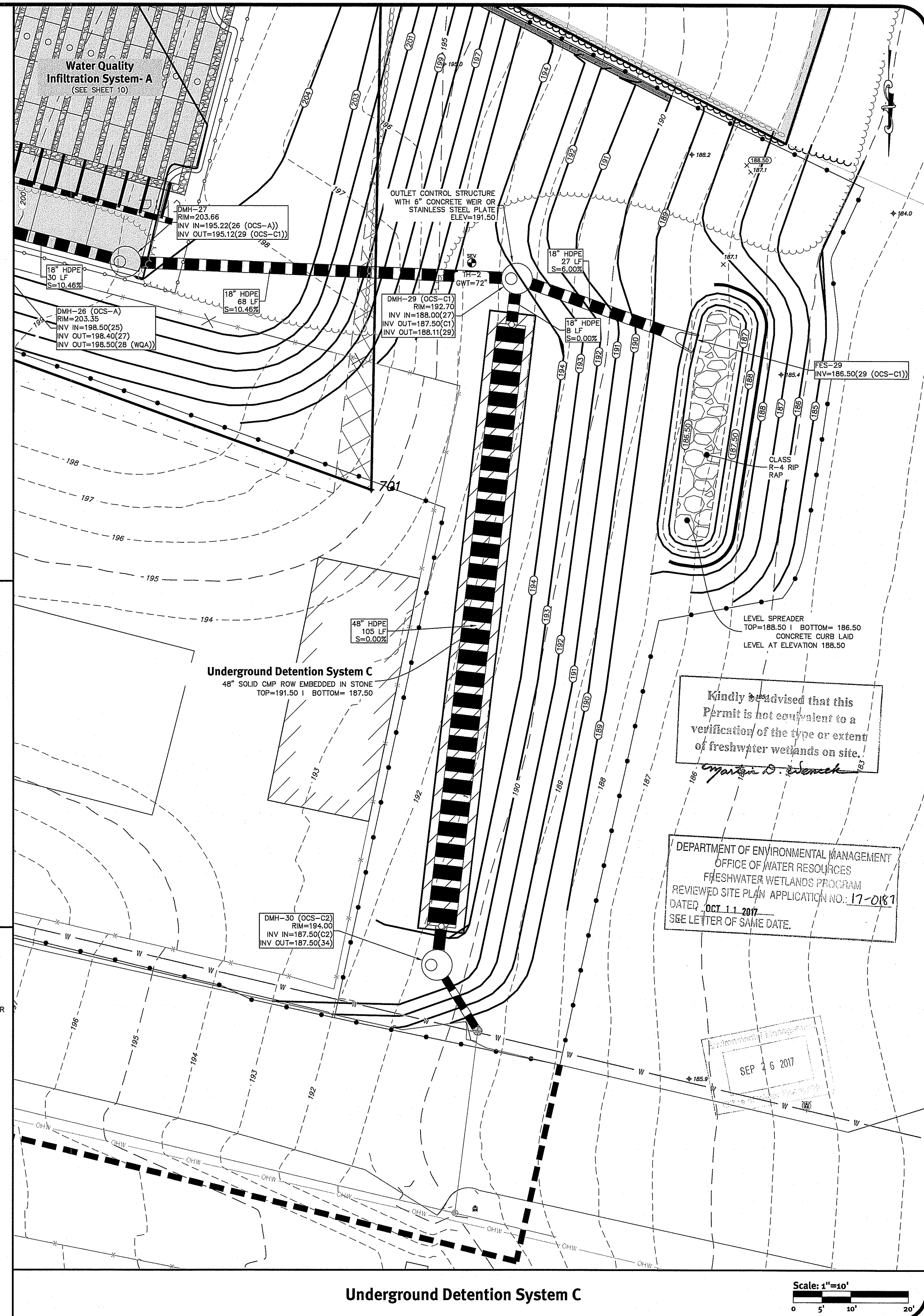


**Underground Detention System**  
NOT TO SCALE



NOTE:  
\* LENGTHS AS SPECIFIED ON SITE PLANS

**Level Spreader**  
NOT TO SCALE



**Underground Detention System C**

**Diprete Engineering**  
90 Broadway Newport, RI 02840  
tel 401-619-5890 fax 401-641-6006 www.diprete-eng.com  
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**KEVIN DEMERS**  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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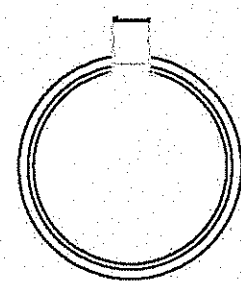
No.	Date	Description	Drawn By:	J.A.D.
2	9-22-2017	RDAM, BEIC, Submittals	J.A.D.	
1	7-18-2017	RDAM, BEIC, Attention Submittals	J.A.D.	
0	7-18-2017	RDAM, BEIC, Attention Submittals	J.A.D.	

Design By: J.A.D.

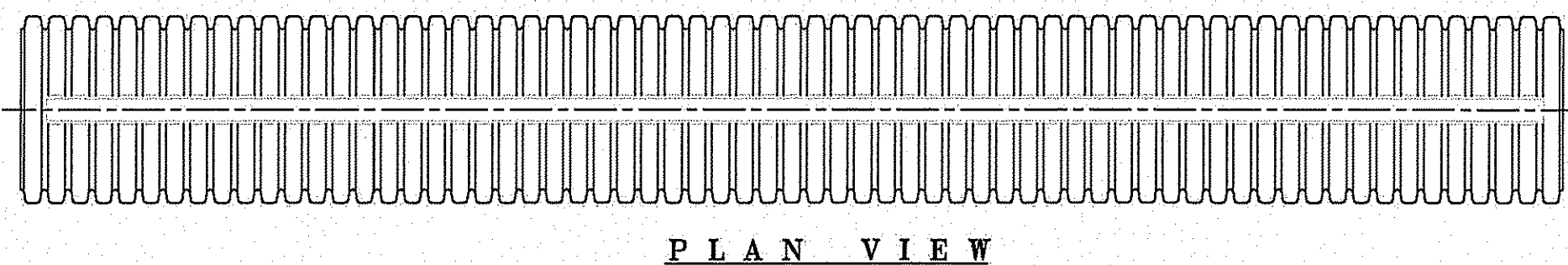
**Underground Detention System C**  
**Portsmouth Police Station**  
2270 East Main Road  
Portsmouth, Rhode Island  
Client: **Drumrey Roasane Anderson**  
225 Oakland Road, Studio 205  
South Windsor, CT 06074  
DE Job No: 2283-001. Copyright 2017 by Diprete Engineering, Associates, Inc.

12" DURASLOT® WITH 2 1/2" SLOT

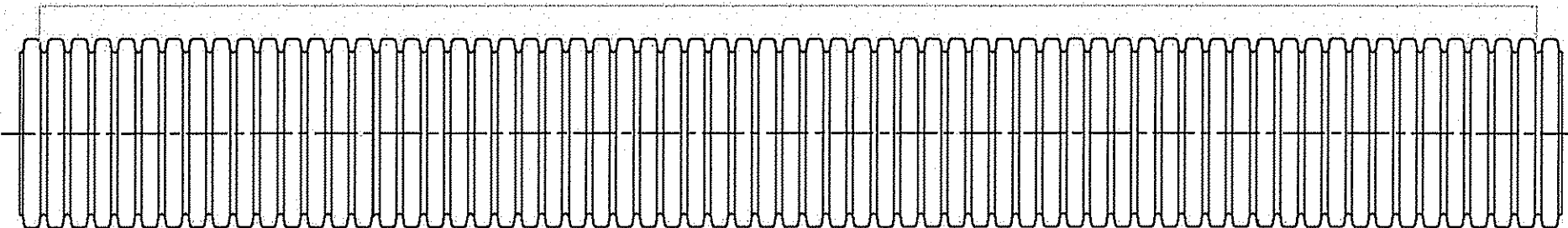
PIPE SIZE	PART NO
12"	1220-DS



CROSS SECTION



PLAN VIEW

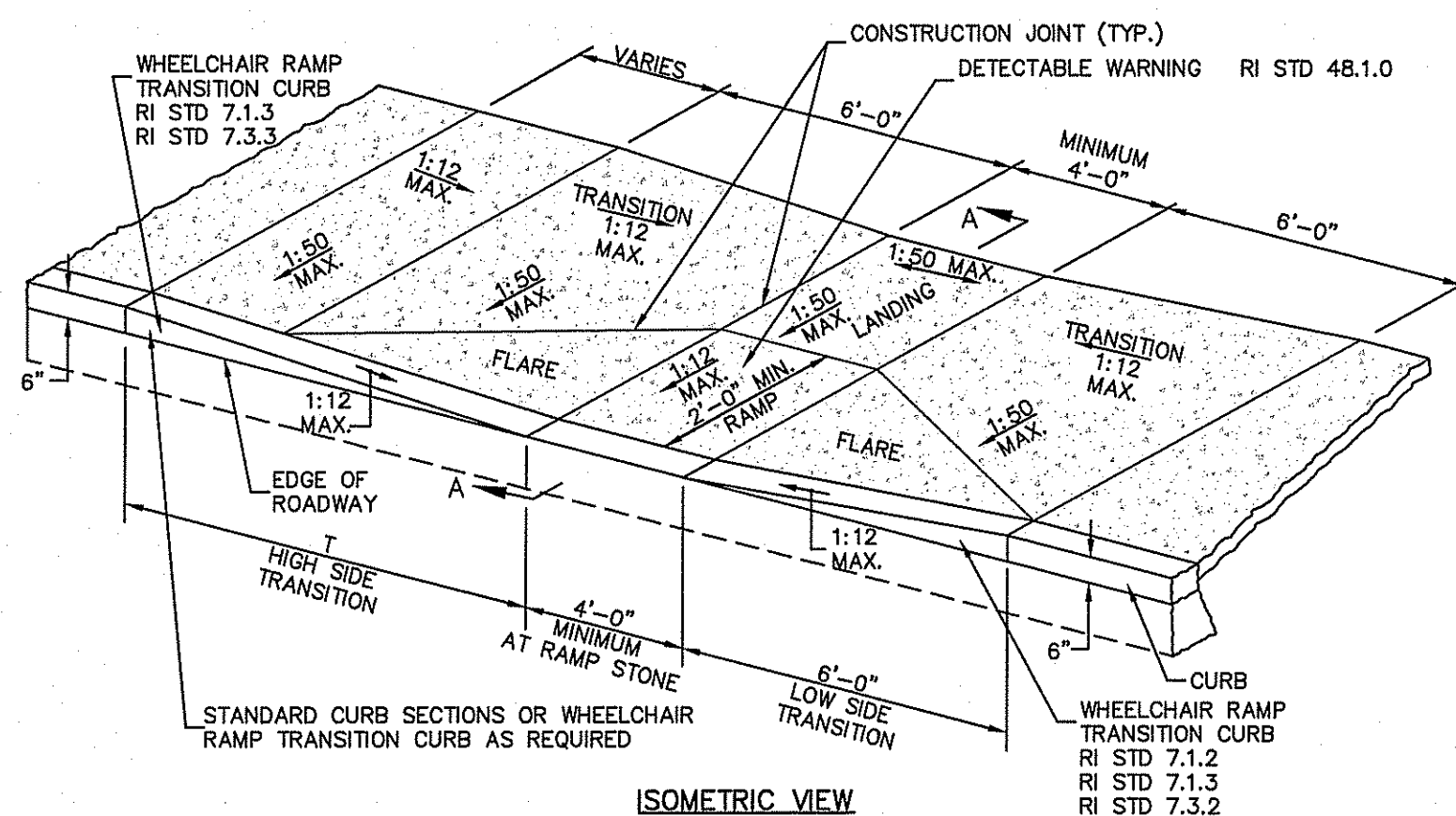


ELEVATION

HCPS DWG #PI-6

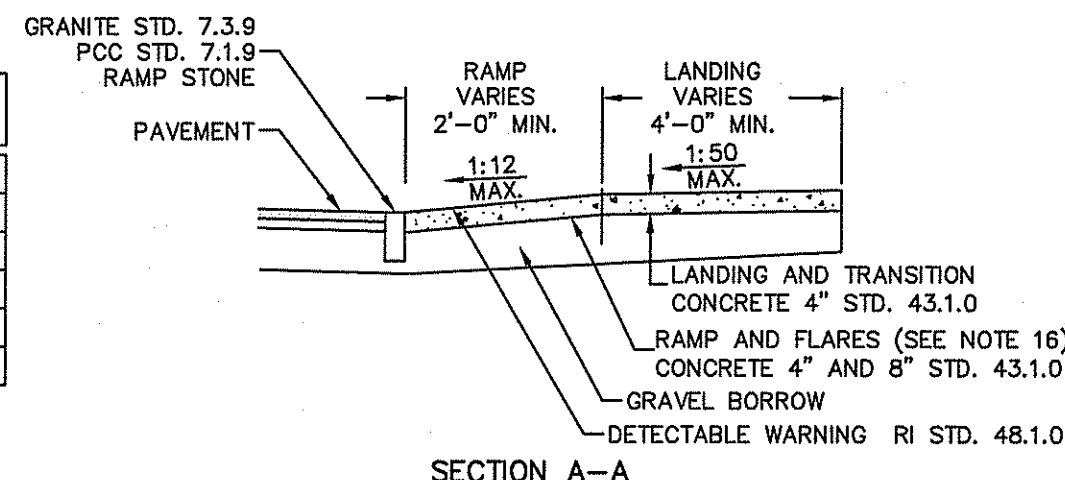
Trench Drain Detail

NOT TO SCALE



ISOMETRIC VIEW

ROADWAY PROFILE GRADE	T (FT.)
0.00	7.5
0.01	9.0
0.02	11.0
0.03	13.5
0.04	18.0
0.05	30.0



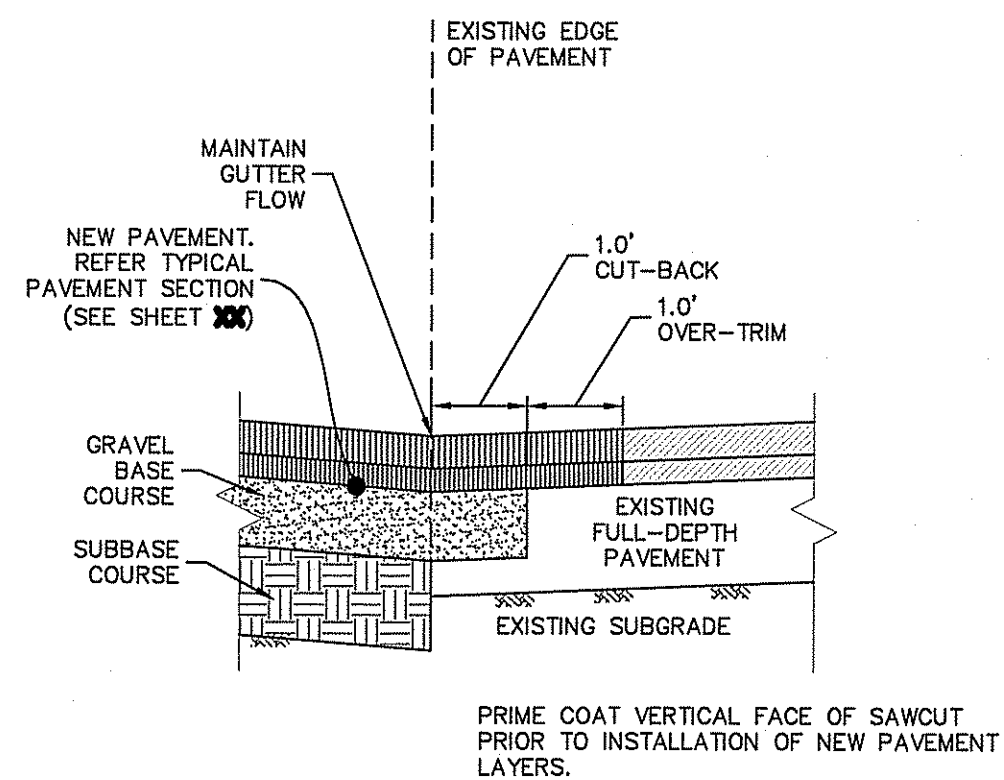
SECTION A-A

NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
- LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
- IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
- THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0"). IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE R.I. STANDARD SPECIFICATIONS.
- CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.
- MEETS OR EXCEEDS GUIDELINES OF RIDOT STANDARD DETAIL 43.3.0.

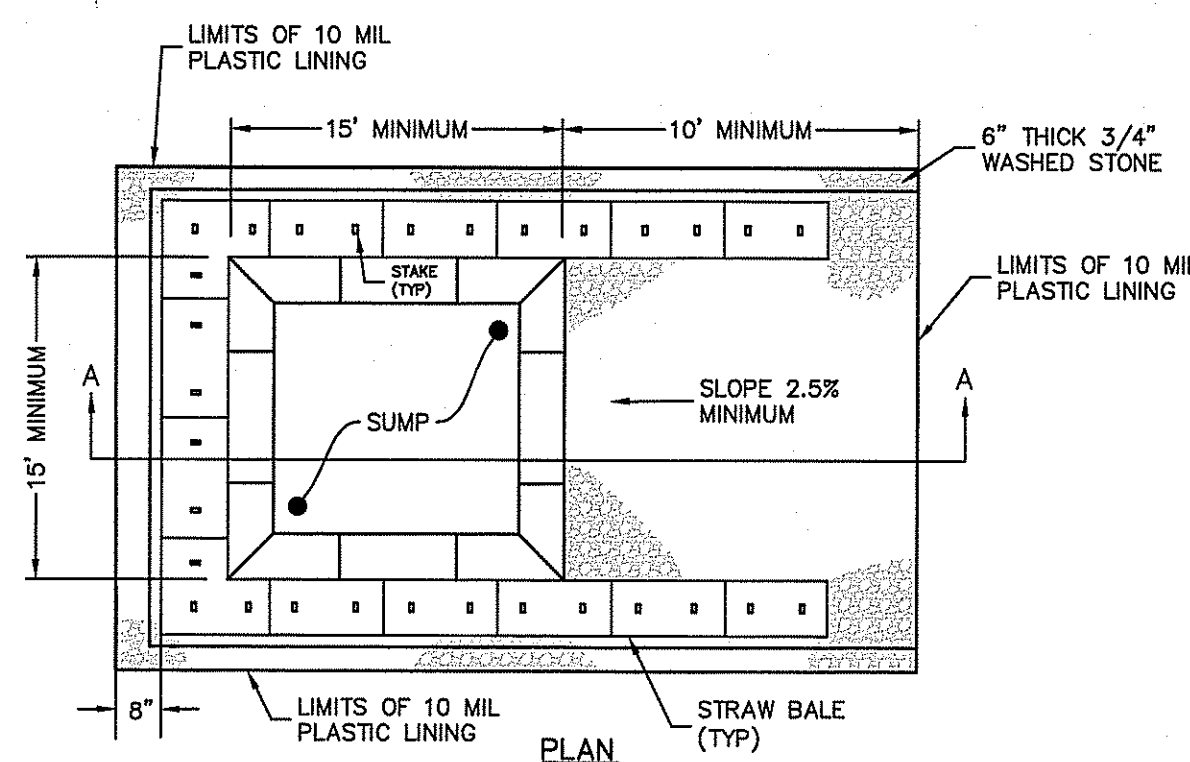
Wheelchair Ramp (ADA)

NOT TO SCALE

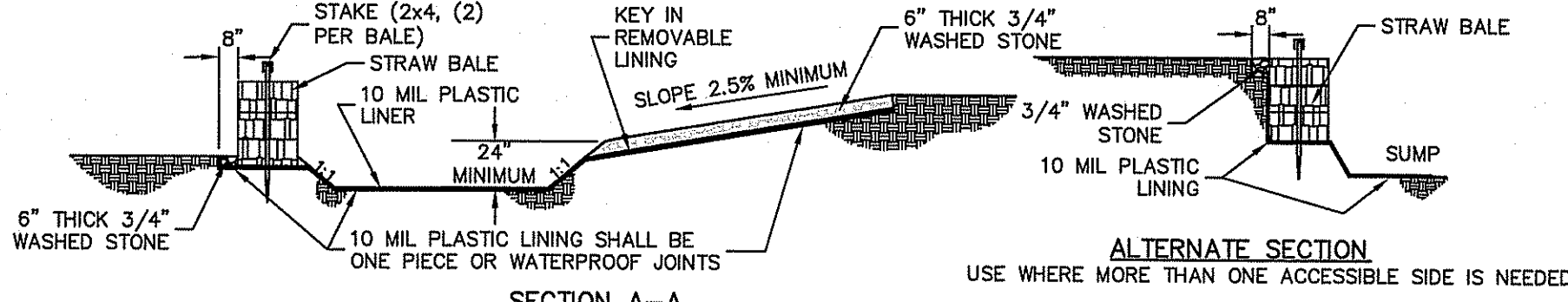


Pavement Tie-In Detail

NOT TO SCALE

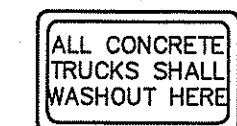


PLAN



ALTERNATE SECTION

USE WHERE MORE THAN ONE ACCESSIBLE SIDE IS NEEDED



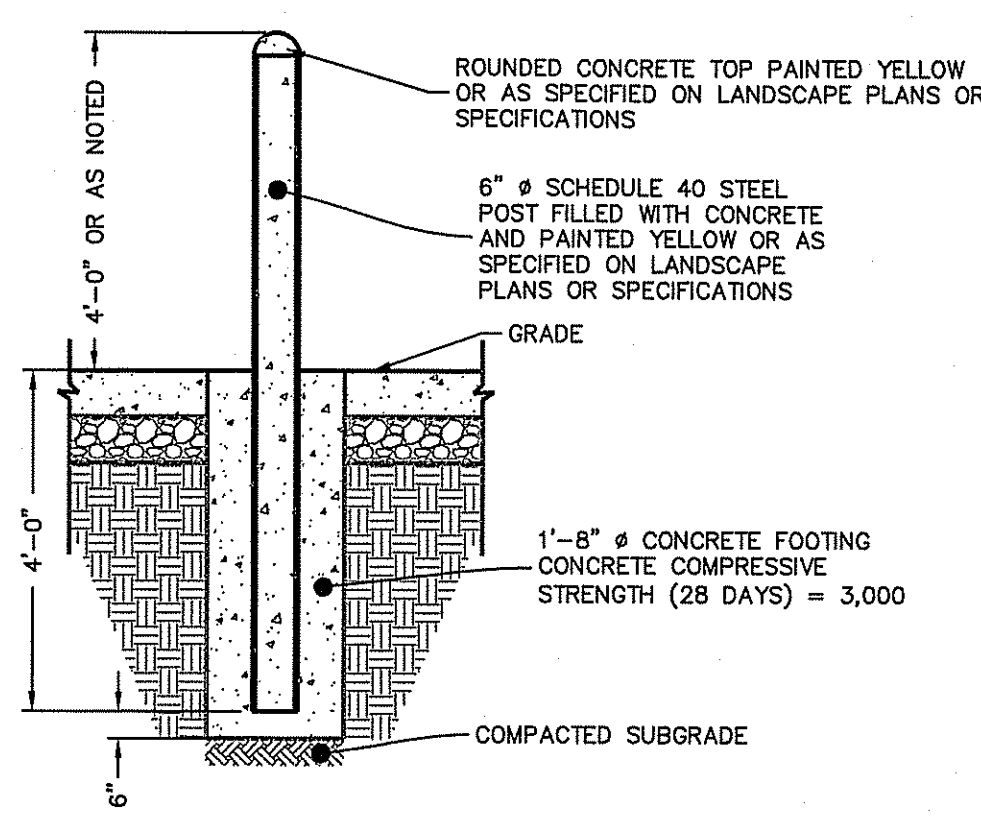
WASHOUT SIGN

Concrete Washout Area

(NOT TO SCALE)

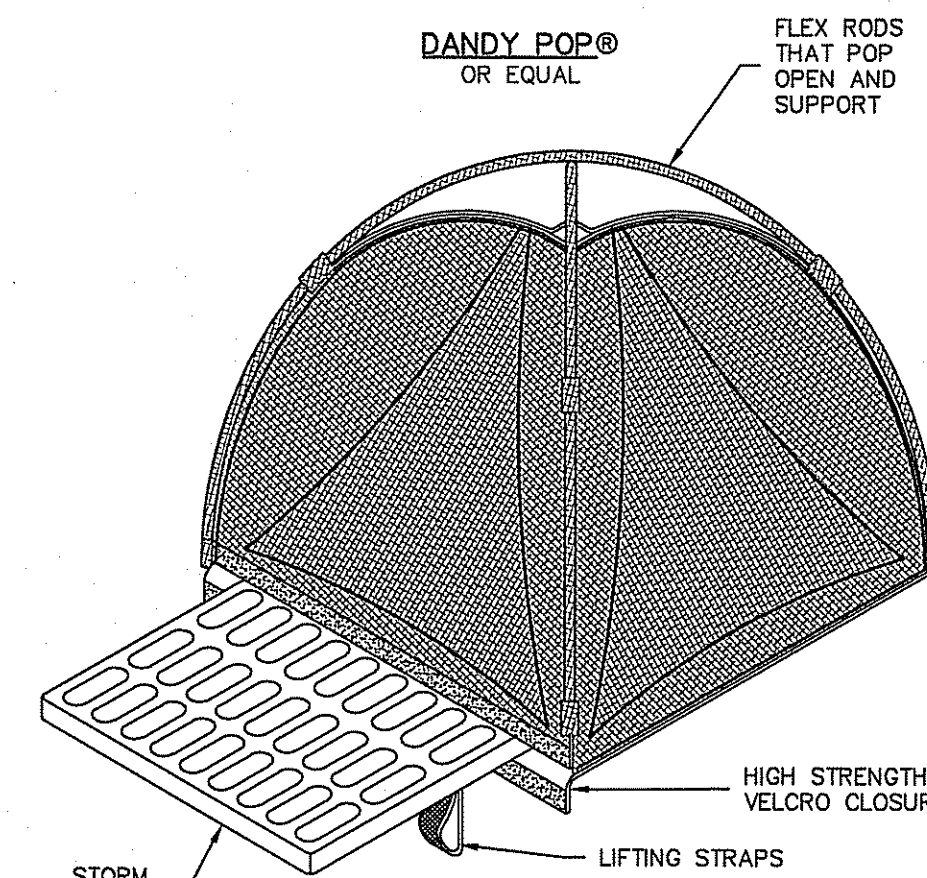
NOTES:

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



Bollard Detail

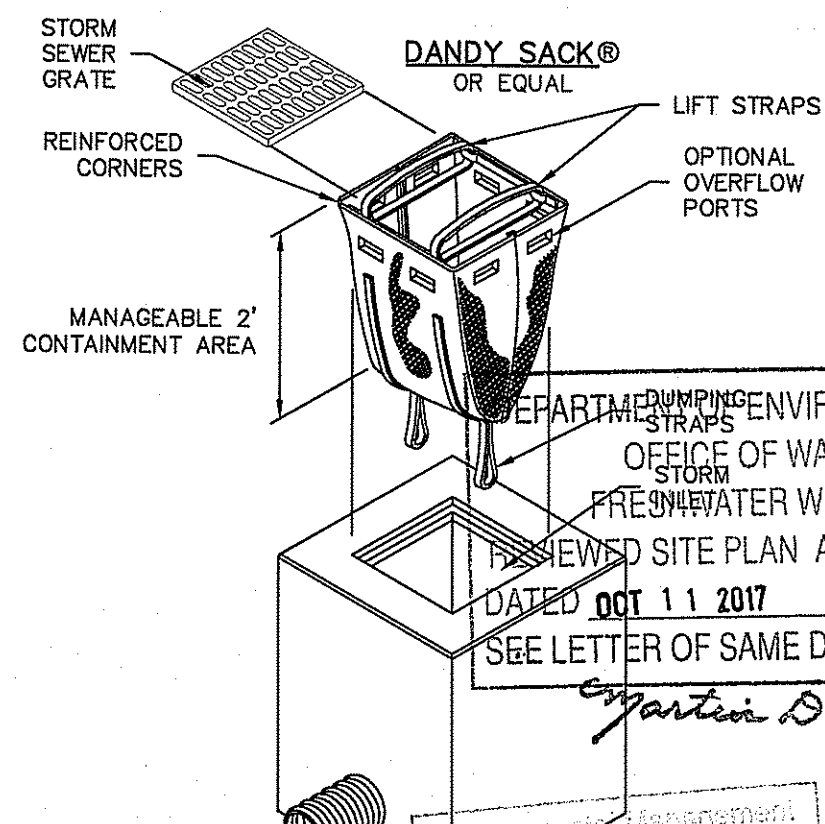
NOT TO SCALE



DANDY POP®

Inlet Sediment Control Devices

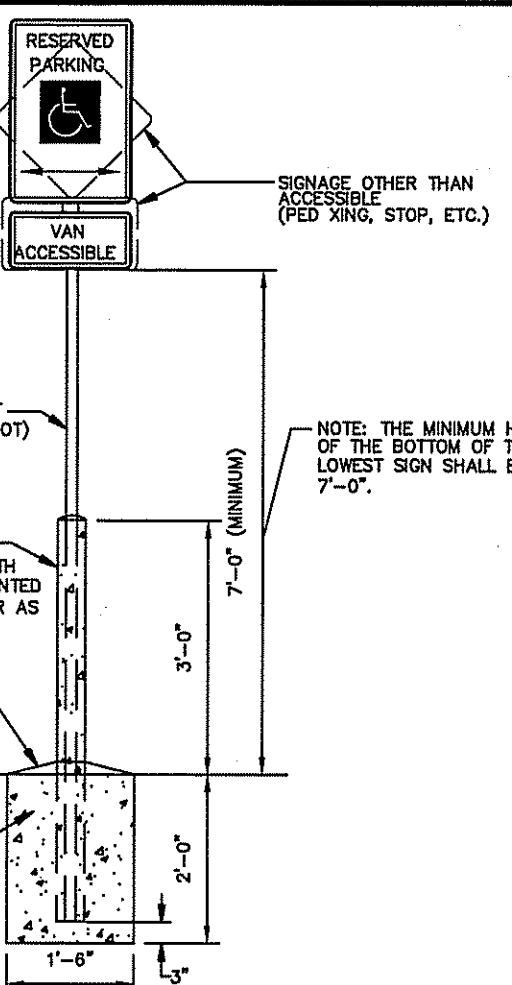
NOT TO SCALE



DANDY SACK®

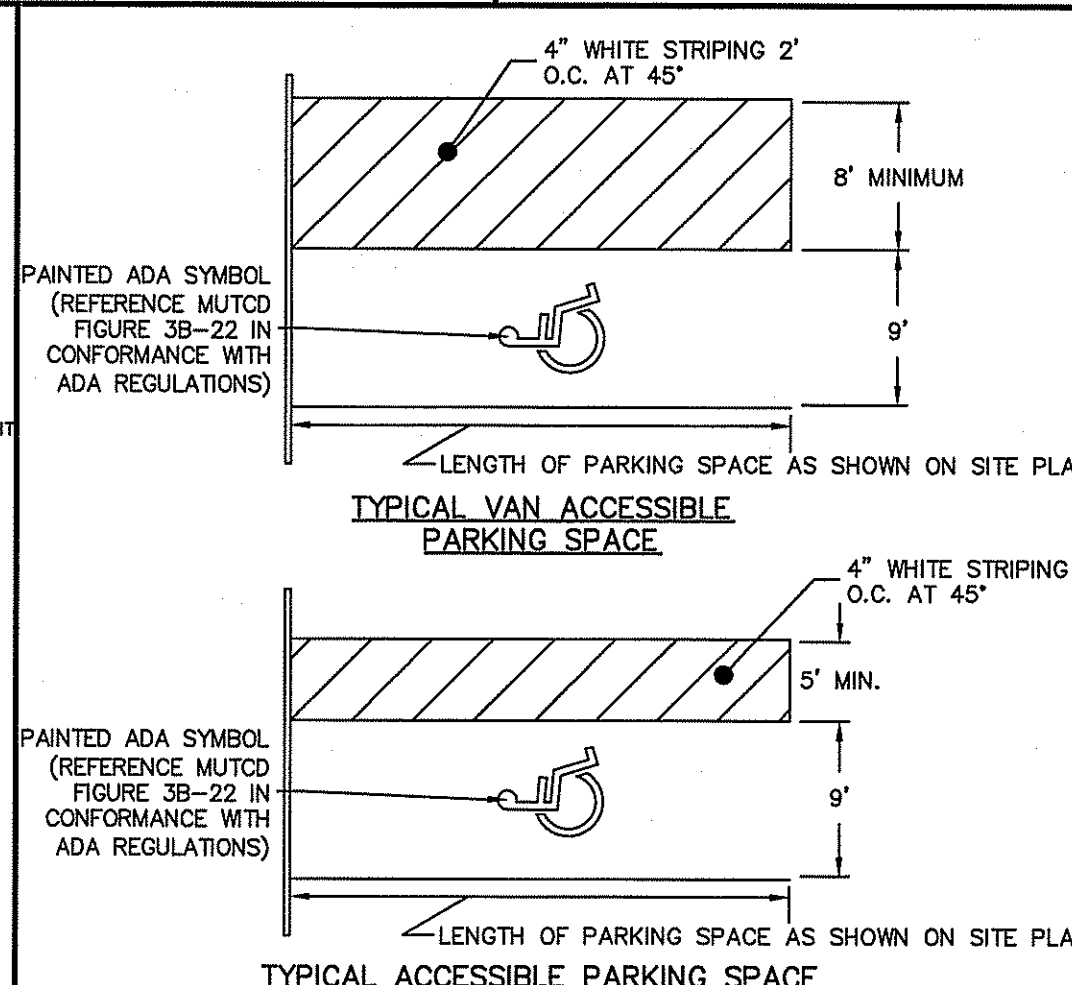
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO. 17-087  
DATED OCT 11 2017  
SEE LETTER OF SAME DATE.  
Martin D. Wemck

SEP 26 2017



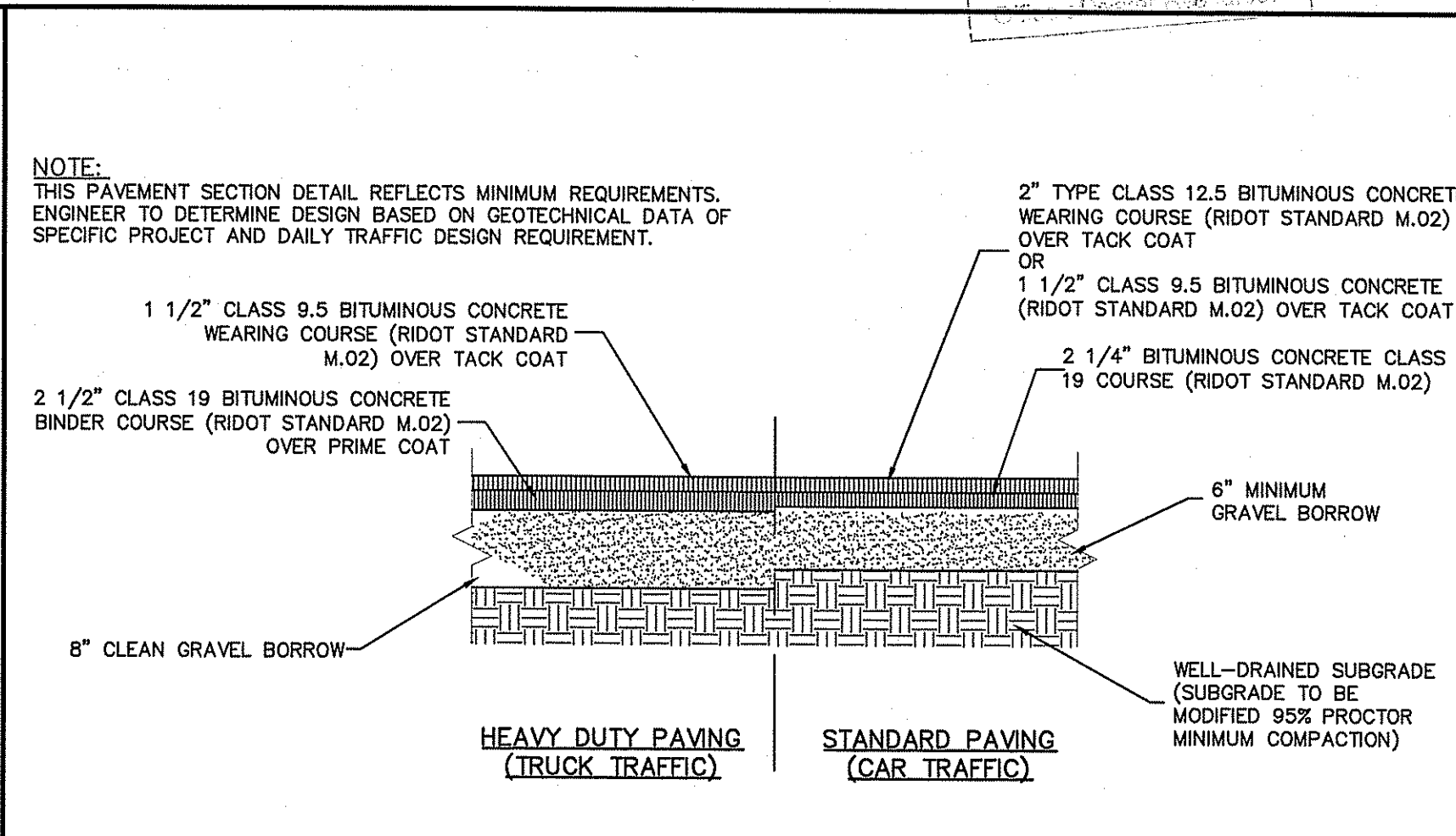
Bollard Mounted Sign Detail

NOT TO SCALE



Typical Accessible Parking Spaces

NOT TO SCALE



Typical Pavement Section

NOT TO SCALE

NOTE: THIS PAVEMENT SECTION DETAIL REFLECTS MINIMUM REQUIREMENTS. ENGINEER TO DETERMINE DESIGN BASED ON GEOTECHNICAL DATA OF SPECIFIC PROJECT AND DAILY TRAFFIC DESIGN REQUIREMENT.

- 2" TYPE CLASS 12.5 BITUMINOUS CONCRETE WEARING COURSE (RIDOT STANDARD M.02) OVER TACK COAT
- OR 1 1/2" CLASS 9.5 BITUMINOUS CONCRETE (RIDOT STANDARD M.02) OVER TACK COAT
- 2 1/2" CLASS 19 BITUMINOUS CONCRETE BINDER COURSE (RIDOT STANDARD M.02) OVER PRIME COAT
- 6" MINIMUM GRAVEL BORROW
- WELL-DRAINED SUBGRADE (SUBGRADE TO BE MODIFIED 95% PROCTOR MINIMUM COMPACTION)
- 8" CLEAN GRAVEL BORROW

Detail Sheet - 1  
Portsmouth Police Station

Owner/Applicant:  
2270 East Main Road  
Portsmouth, Rhode Island  
Client:  
Drumey Roasane Anderson  
225 Oakland Road, Studio 205  
South Windsor, CT 06094  
DE Job No: 2285-001. Copyright 2017 by DiPrete Engineering Associates, Inc.

KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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

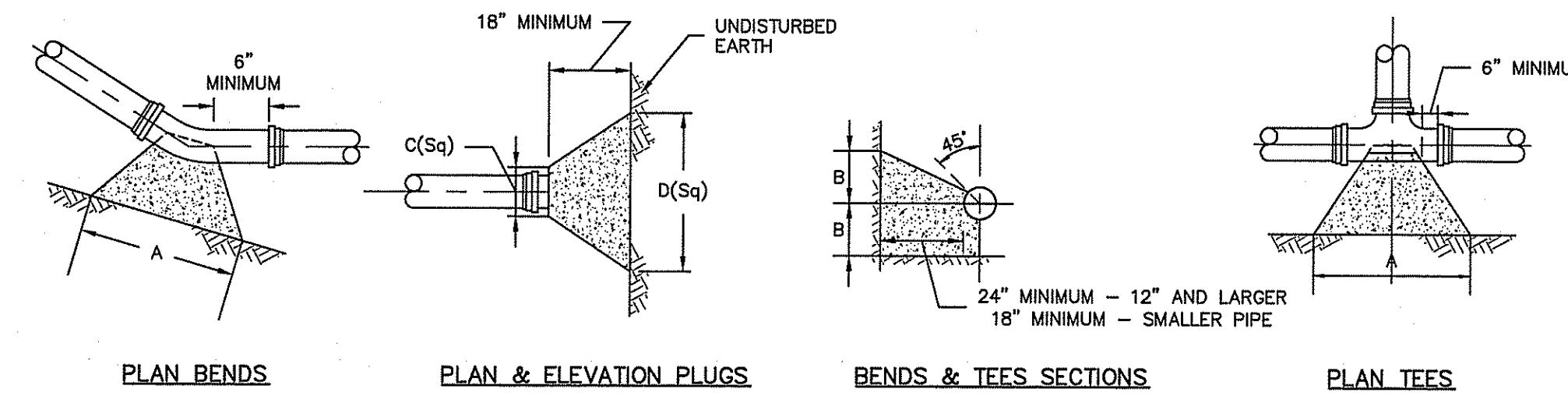
The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

DESIGNED BY: K.D.  
DRAWN BY: J.A.D.  
CHECKED BY: J.A.D.  
DATE: 9-28-2017  
PROJECT: 17-087  
DESCRIPTION: Portsmouth Police Station

**NOTES:**

1. ALL CONCRETE SHALL BE 4,000 P.S.I. @ 28 DAYS
2. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH
3. FORMS TO BE USED AS NECESSARY
4. ALL BOLTS AND NUTS TO BE PROTECTED FROM CONCRETE AND EASILY ACCESSIBLE WHEN THRUST BLOCK INSTALLED
5. REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF RHODE ISLAND SHALL VERIFY CALCULATIONS DURING DESIGN TO MEET CONDITIONS OF PROJECT.

SIZE	TEES				PLUGS		90° BEND		45° BEND		22.5° BEND		11.25° BEND	
	A	B	C	D	A	B	A	B	A	B	A	B	A	B
6"	20"	10"	10"	21"	24"	12"	18"	9"	13"	7"	9"	5"		
8"	26"	13"	12"	28"	32"	16"	24"	12"	17"	9"	12"	6"		
10"	34"	17"	14"	34"	40"	20"	30"	15"	22"	11"	15"	8"		
12"	41"	20"	16"	41"	48"	24"	35"	18"	26"	13"	18"	9"		
16"	54"	27"	20"	54"	64"	32"	47"	23"	34"	17"	24"	12"		



**Thrust Block**  
NOT TO SCALE

**Sewer Line/Water Line Separation Policy**

**A. LATERAL PLACEMENT OF SEWERS AND WATER LINES**

SEWERS SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE. THE DISTANCE SHALL BE MEASURED OUTSIDE EDGE-TO-OUTSIDE EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10' HORIZONTAL SEPARATION IS MAINTAINED.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10' HORIZONTAL SEPARATION, THE DIVISION MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER LINE, PROVIDED THAT:

1. THE SEWER AND WATER LINE ARE LAID IN SEPARATE TRENCHES, OR
2. THE SEWER AND WATER LINE MAY BE INSTALLED IN THE SAME TRENCH WITH THE WATER LINE PLACED ON A BENCH OF UNDISTURBED EARTH, AND
3. IN EITHER CASE, THE CROWN OF THE SEWER SHALL BE AT LEAST 18" BELOW THE INVERT OF THE WATER LINE.

IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:

1. ENCASUREMENT OF THE SEWER PIPE IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR AT LEAST 10' EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION, OR
2. DESIGN AND CONSTRUCTION OF THE SEWER EQUAL TO WATER LINE (CEMENT-LINED DUCTILE IRON OR OTHER AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE), AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS.

**B. SEWERS CROSSING WATER LINES**

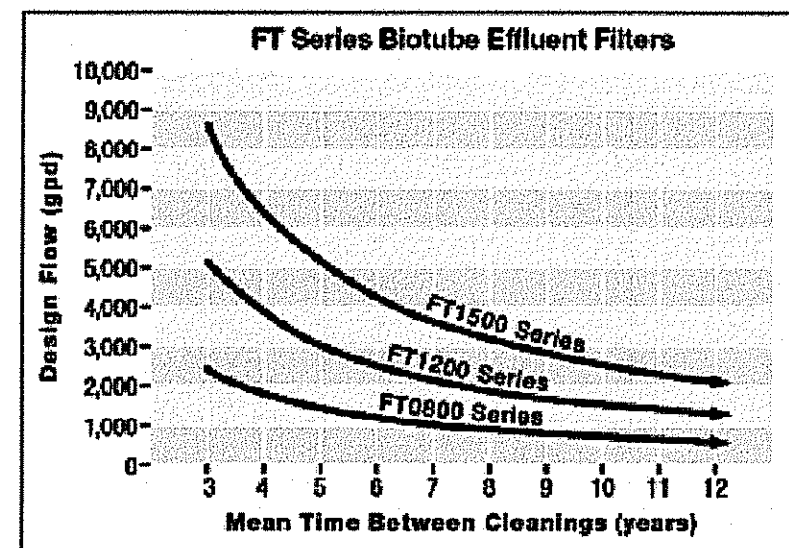
SEWERS CROSSING OVER WATER LINES SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATER LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE INVERT OF THE WATER LINE AND THE CROWN OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER LINE JOINTS.

WHERE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:

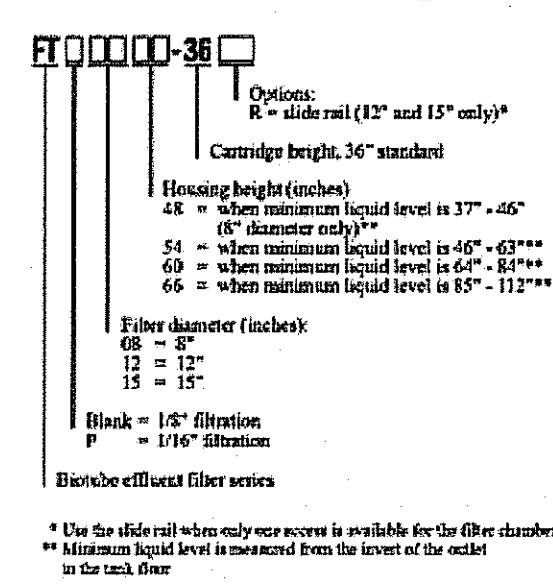
1. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER LINE (CEMENT-LINED DUCTILE IRON PIPE, PVC OR OTHER AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE) FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER LINE AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS, OR
2. EITHER THE WATER LINE OR THE SEWER MAY BE ENCASED IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER LINE. THE CARRIER PIPE SHALL BE DESIGNED AND CONSTRUCTED OF MATERIALS WHICH ARE SATISFACTORY TO THE DIVISION, OR
3. ANY OTHER METHODS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER, WHICH ENSURE ADEQUATE WATER TIGHTNESS AND ARE SATISFACTORY TO THE DIVISION.

**Select Biotube Filter to Match Design Flow and Desired Cleaning Interval**

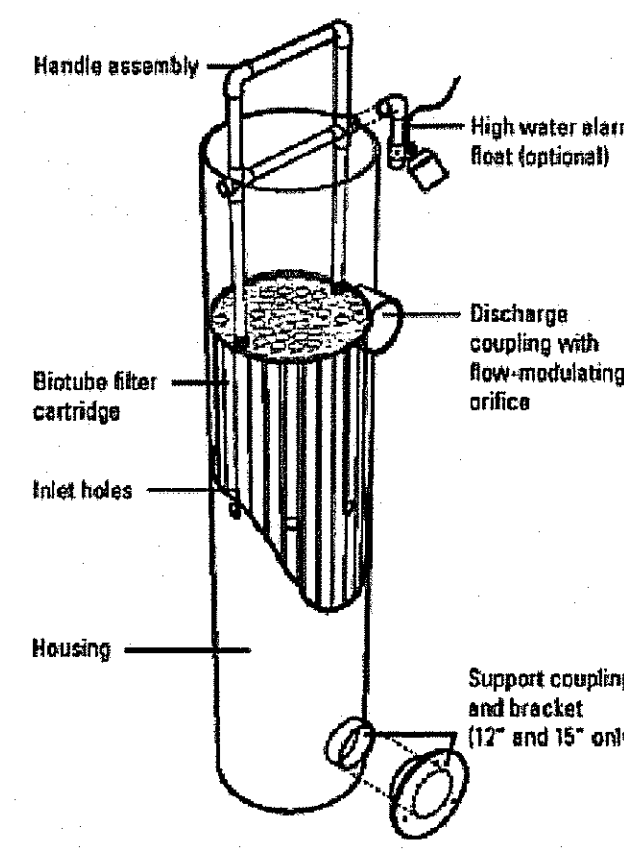
This chart shows the relationship between Biotube Filter size (diameter), design flow, and mean time between cleanings. The larger the filter and the smaller the flow, the longer you can go between cleanings. For example, a typical 3-year cleaning frequency would require an 8" filter for up to 2500 gpd, a 12" filter for up to 5000 gpd, and a 15" filter for up to 8500 gpd. See NDA-FI-FI-1, "Biotube Effluent Filter Sizing," for more sizing information. Modifying orifice calculations are also required for applications with large surge flows. Contact Drenco for assistance.



**Model Codes for Ordering**

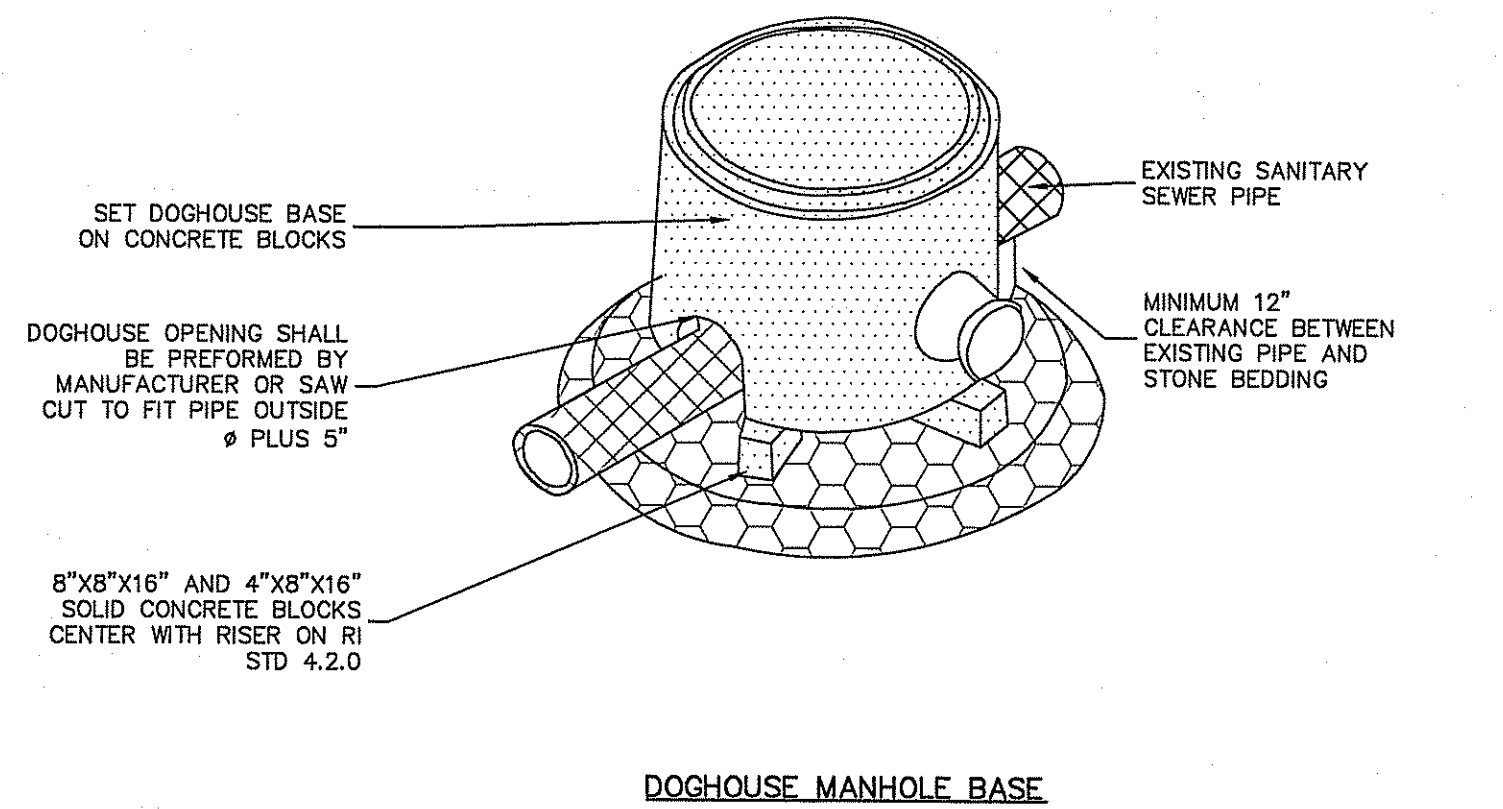


**8", 12", and 15" Biotube Effluent Filter**

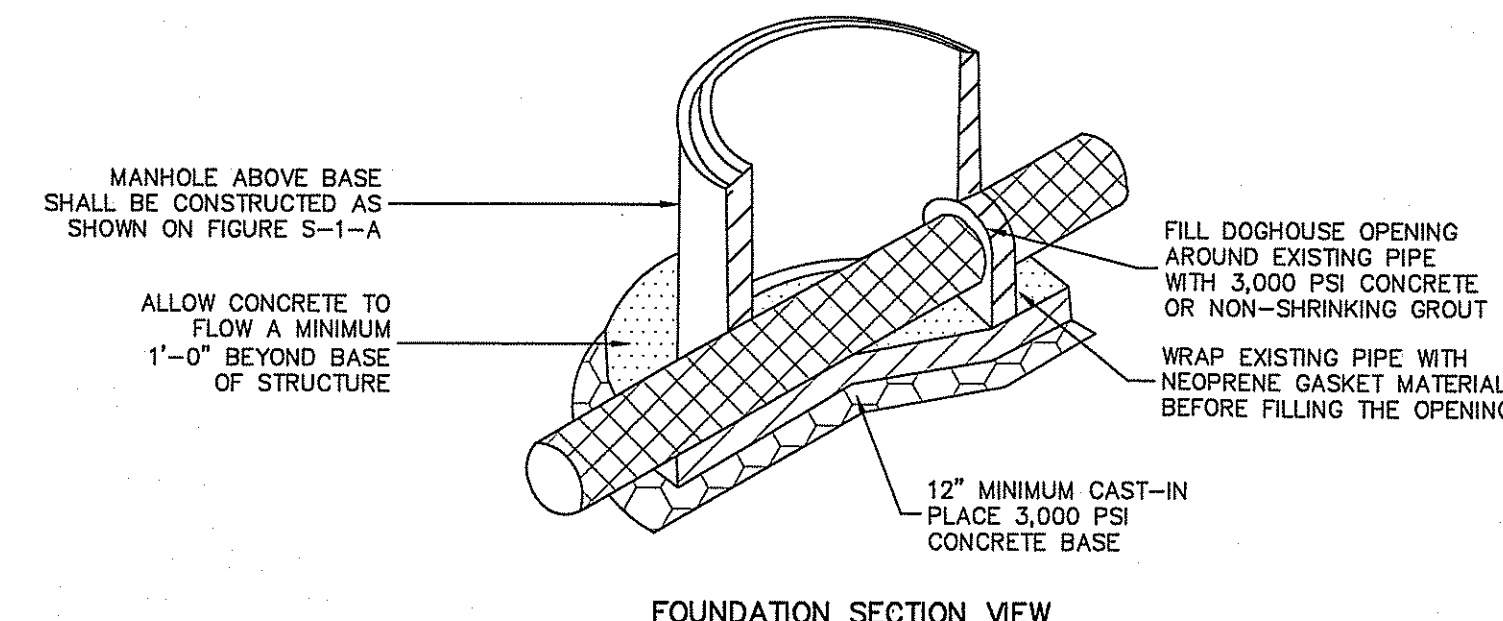


NOTE: USE FT 15 66-36R

**Effluent Filter Detail**  
NOT TO SCALE



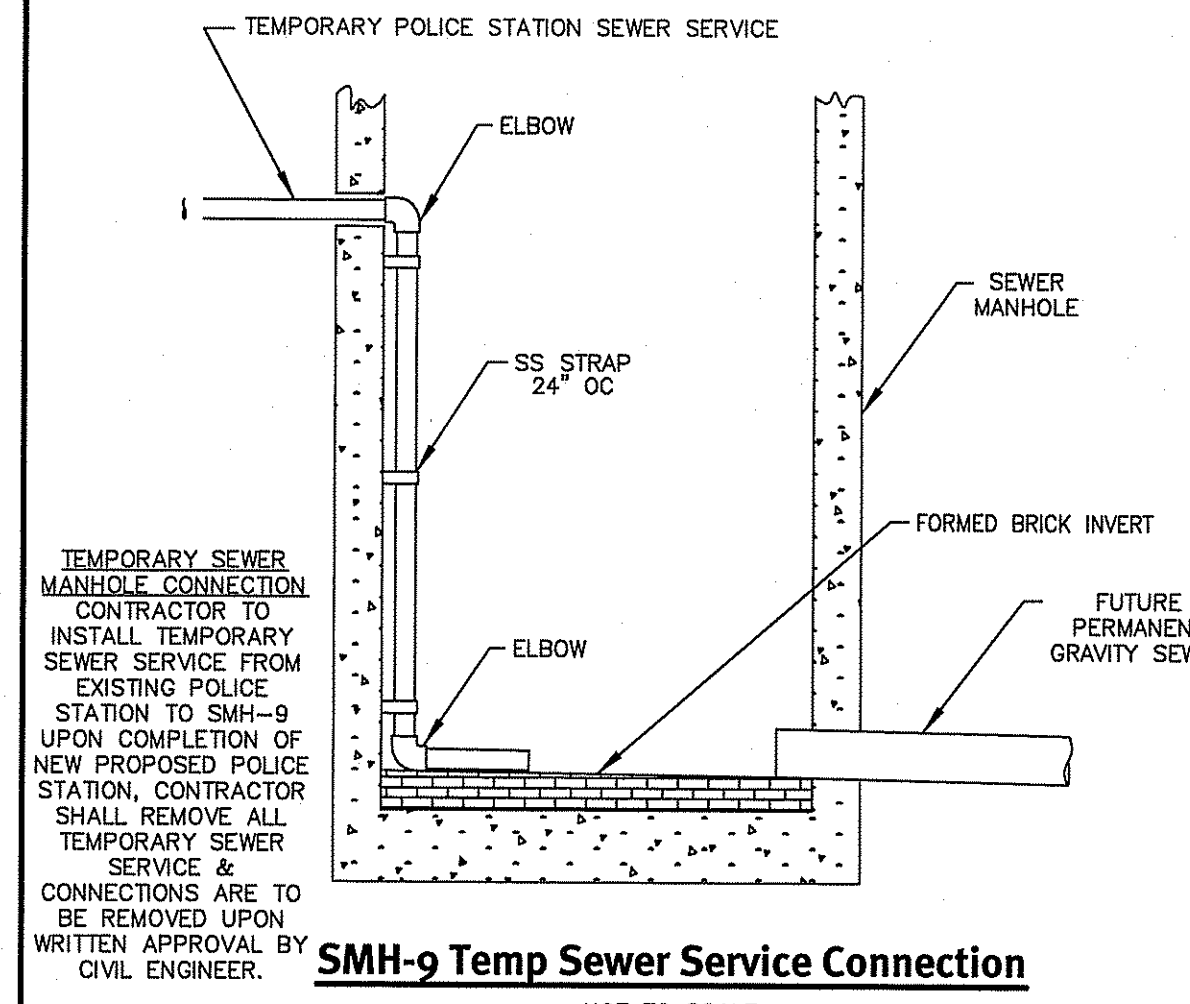
**DOGHOUSE MANHOLE BASE**



**FOUNDATION SECTION VIEW**

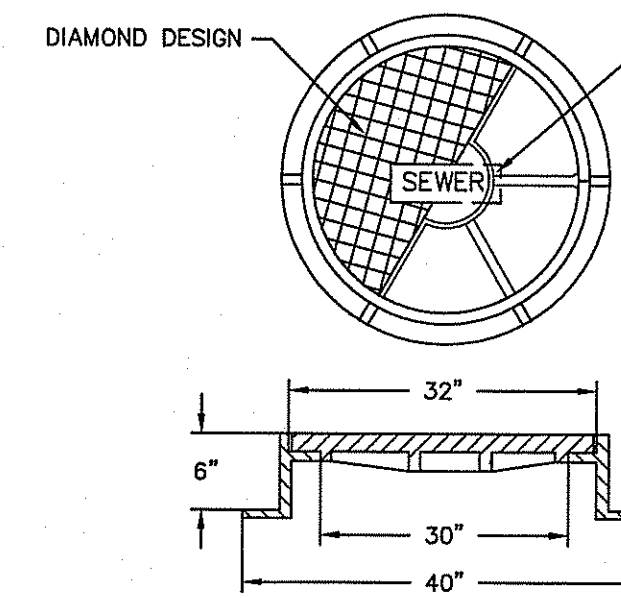
- NOTES:**
1. CONSTRUCT A FORMED INVERT FROM NEW SEWER LINE TO ALLOW FLOW TO THE EXISTING PIPE.
  2. POUR A SHELF TO THE LOWER HALF OF THE EXISTING PIPE.
  3. CUT AND REMOVE THE TOP HALF OF EXISTING PIPE TO WITHIN 6" OF THE MANHOLE WALLS AFTER THE INVERT AND SHELF HAVE BEEN FORMED AND THE MANHOLE HAS BEEN FULLY TESTED IN ACCORDANCE WITH THE SEWER AUTHORITY SPECIFICATIONS.

**Typical Manhole Base (Doghouse Installation)**  
NOT TO SCALE



**SMH-9 Temp Sewer Service Connection**  
NOT TO SCALE

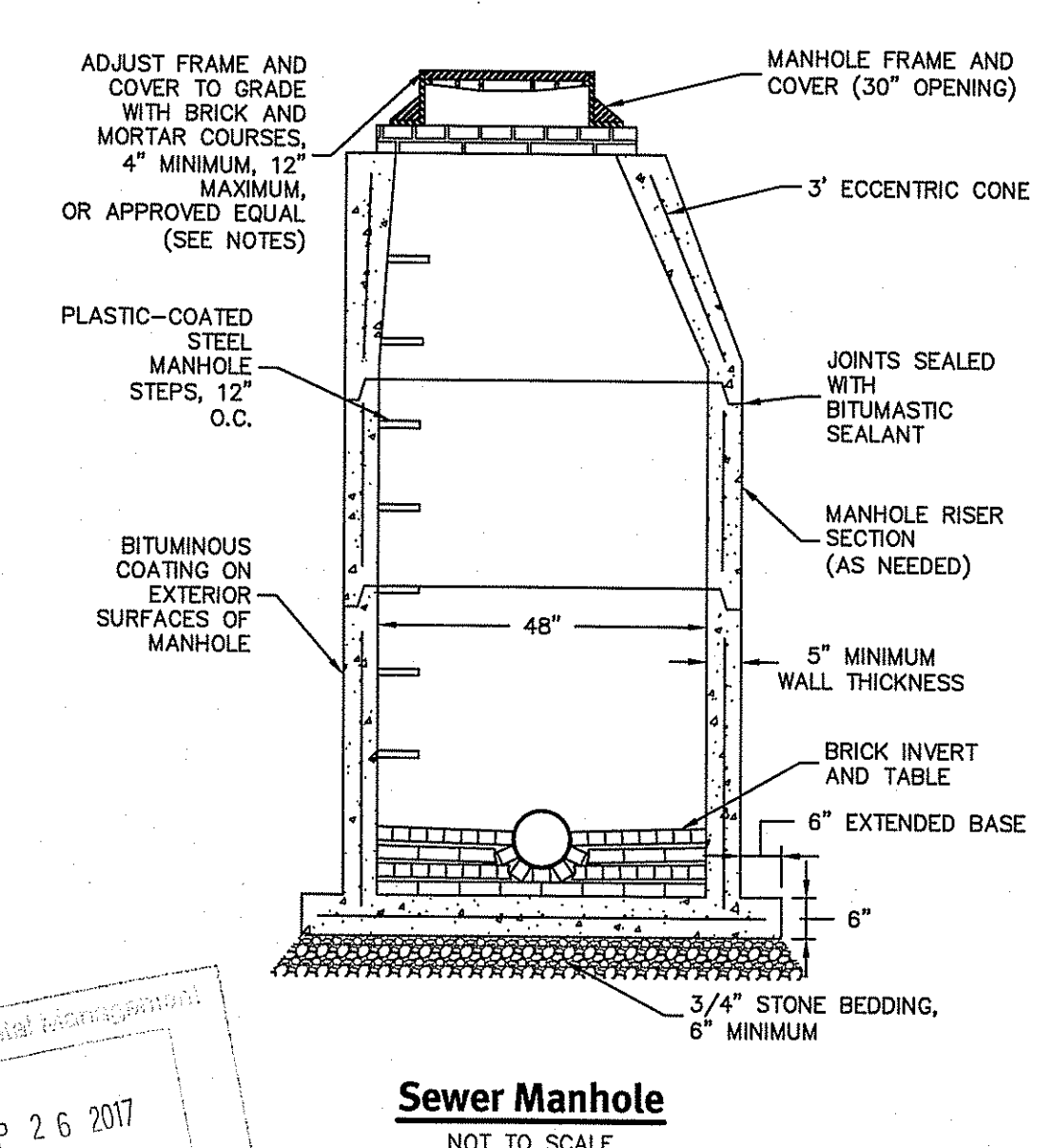
1. SEWER MANHOLE FRAME AND COVER SHALL BE LEBARON MODEL LC328-2 OR APPROVED EQUAL.



**Water-Tight Sewer Manhole Frame & Cover Detail**  
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 17-0187  
DATED OCT 11 2017

- NOTES:**
1. MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM-C478.
  2. INVERT AND TABLE SHALL CONFORM TO SEWER AUTHORITY SPECIFICATIONS. NO SAND FILLER SHALL BE ALLOWED.
  3. MANHOLES SHALL BE VACUUM TESTED PRIOR TO ACCEPTANCE, IN ACCORDANCE WITH THE SEWER AUTHORITY SANITARY RULES AND REGULATIONS. UNDER NO CIRCUMSTANCES WILL EXFILTRATION TESTING BE ACCEPTED.
  4. BOLTED AND GASKETED COVERS SHALL BE USED ON MANHOLES IN OFF-ROAD AREAS.
  5. TAPPING OF MANHOLES MUST BE AUTHORIZED AND INSPECTED BY THE SEWER AUTHORITY. THE ONLY APPROVED METHOD FOR TAPPING MANHOLES SHALL BE BY CORE-DRILLING THE MANHOLE AND INSTALLING A "KOR-N-SEAL" BOOT.
  6. PRECAST CONCRETE GRADE RINGS, HDPE GRADE RINGS, OR OTHER RIM ADJUSTMENT PRODUCTS MAY BE USED IN LIEU OF BRICK AND MORTAR WITH THE PERMISSION OF THE SEWER AUTHORITY.

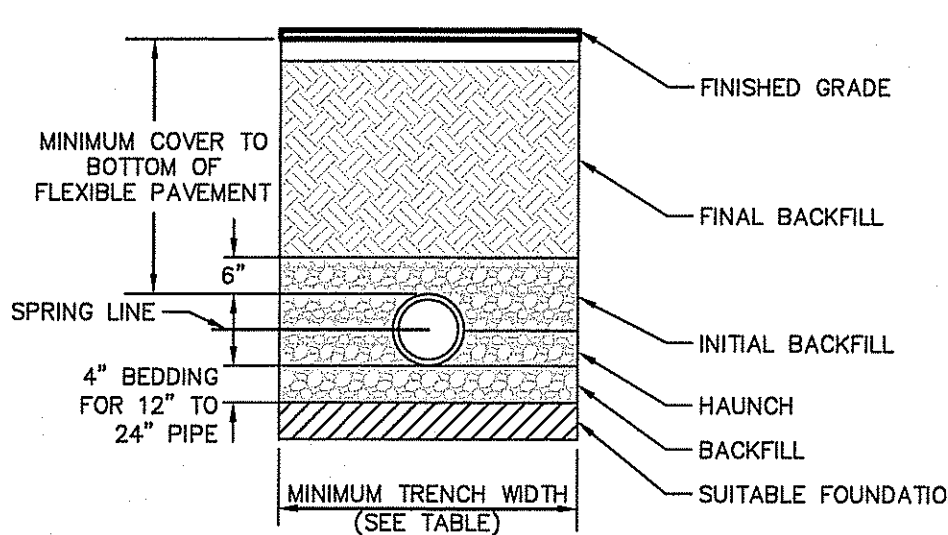


**Sewer Manhole**  
NOT TO SCALE

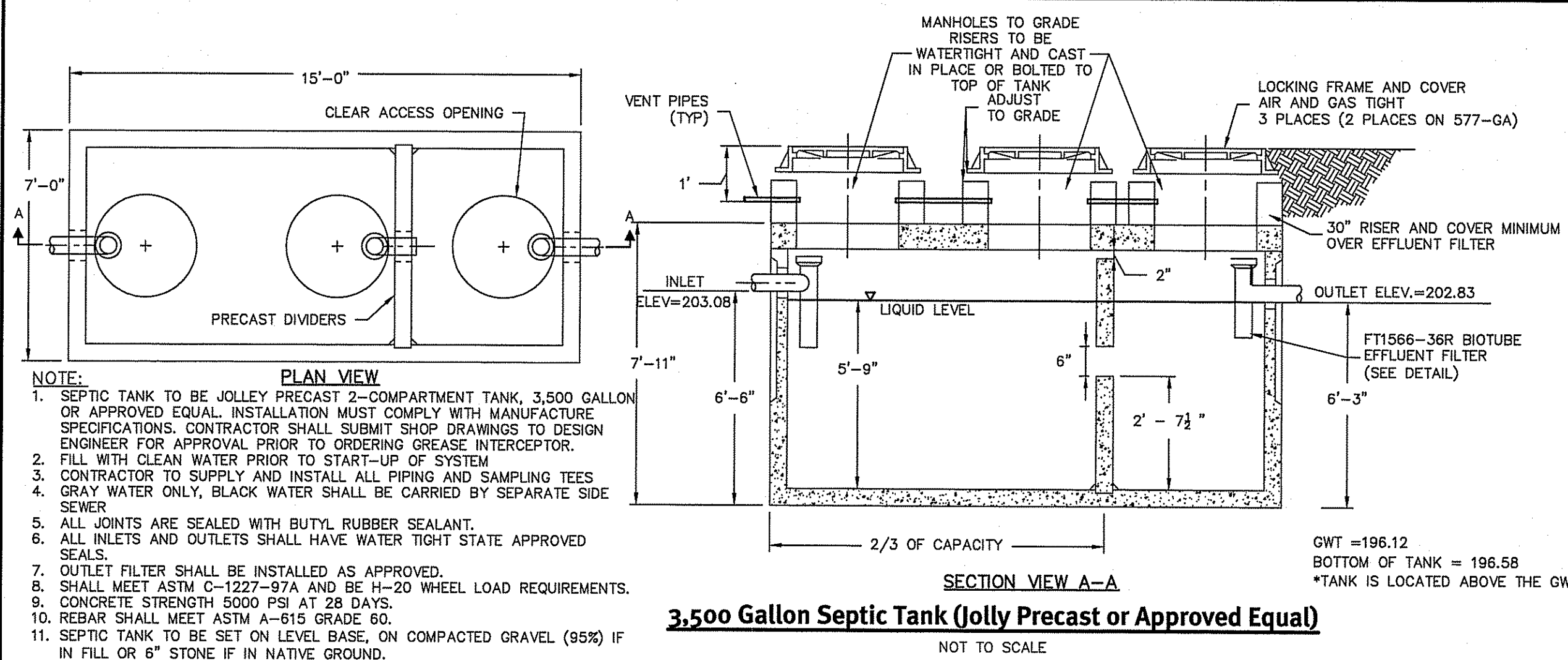
**INSTALLATION NOTES:**

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 FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. 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.
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"-24" (100MM-600MM); 6" (150MM) FOR 30"-60" (750MM-900MM).
5. 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.
6. 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 FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" Ø PIPE AND 24" OF COVER FOR 54"-60" Ø PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

PIPE Ø	MINIMUM TRENCH WIDTH
6"	23"
8"	26"
12"	30"
15"	34"
24"	39"

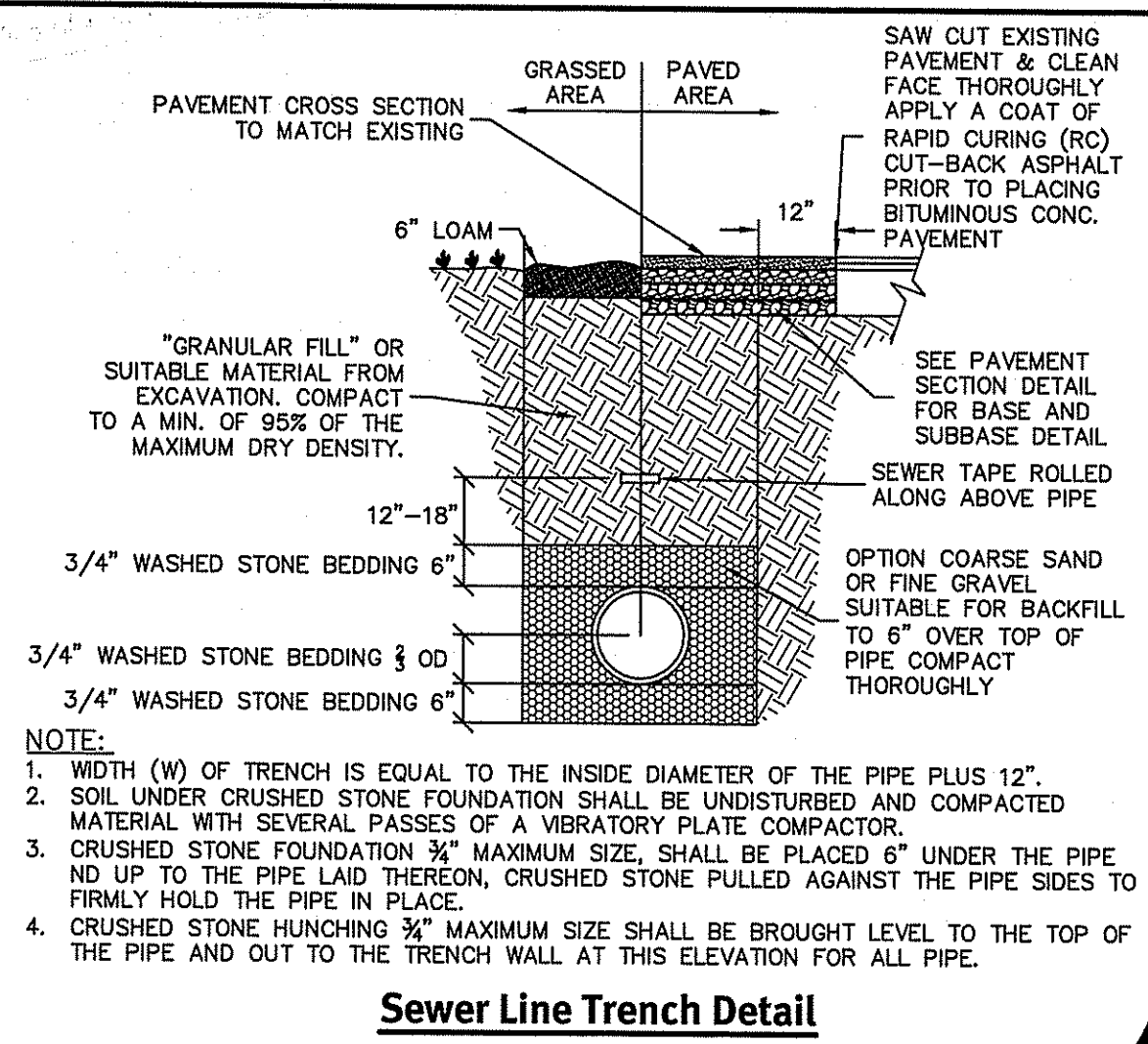


**HDPE Trench Detail**  
NOT TO SCALE



**3,500 Gallon Septic Tank (Jolly Precast or Approved Equal)**  
NOT TO SCALE

- NOTE:**
1. SEPTIC TANK TO BE JOLLY PRECAST 2-COMPARTMENT TANK, 3,500 GALLON OR APPROVED EQUAL. INSTALLATION MUST COMPLY WITH MANUFACTURE SPECIFICATIONS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO DESIGN ENGINEER FOR APPROVAL PRIOR TO ORDERING GREASE INTERCEPTOR.
  2. FILL WITH CLEAN WATER PRIOR TO START-UP OF SYSTEM
  3. CONTRACTOR TO SUPPLY AND INSTALL ALL PIPING AND SAMPLING TEES
  4. GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER
  5. ALL JOINTS ARE SEALED WITH BUTYL RUBBER SEALANT.
  6. ALL INLETS AND OUTLETS SHALL HAVE WATER TIGHT STATE APPROVED SEALS.
  7. OUTLET FILTER SHALL BE INSTALLED AS APPROVED.
  8. SHALL MEET ASTM C-1227-97A AND BE H-20 WHEEL LOAD REQUIREMENTS.
  9. CONCRETE STRENGTH 5000 PSI AT 28 DAYS.
  10. REBAR SHALL MEET ASTM A-615 GRADE 60.
  11. SEPTIC TANK TO BE SET ON LEVEL BASE, ON COMPACTED GRAVEL (95%) IF IN FILL OR 6" STONE IF IN NATIVE GROUND.



**Sewer Line Trench Detail**  
NOT TO SCALE

- NOTE:**
1. WIDTH (W) OF TRENCH IS EQUAL TO THE INSIDE DIAMETER OF THE PIPE PLUS 12".
  2. SOIL UNDER CRUSHED STONE FOUNDATION SHALL BE UNDISTURBED AND COMPACTED MATERIAL WITH SEVERAL PASSES OF A VIBRATORY PLATE COMPACTOR.
  3. CRUSHED STONE FOUNDATION 3/4" MAXIMUM SIZE, SHALL BE PLACED 6" UNDER THE PIPE AND UP TO THE PIPE LAID THEREON. CRUSHED STONE PULLED AGAINST THE PIPE SIDES TO FIRMLY HOLD THE PIPE IN PLACE.
  4. CRUSHED STONE HUNCHED 3/4" MAXIMUM SIZE SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE.

KEVIN DEMERS  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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

No.	Date	Description	By	Design By: K.I.D.
1	02/28/2017	DESIGN	J.A.D.	
2	2/28/2017	REVISION	J.A.D.	
3	2/28/2017	REVISION	J.A.D.	
4	2/28/2017	REVISION	J.A.D.	

**Portsmouth Police Station**  
2076 East Main Road  
Portsmouth, Rhode Island  
02871  
**Drumey Roasane Anderson**  
225 Oakland Road, Studio 205  
South Williston, CT 06094