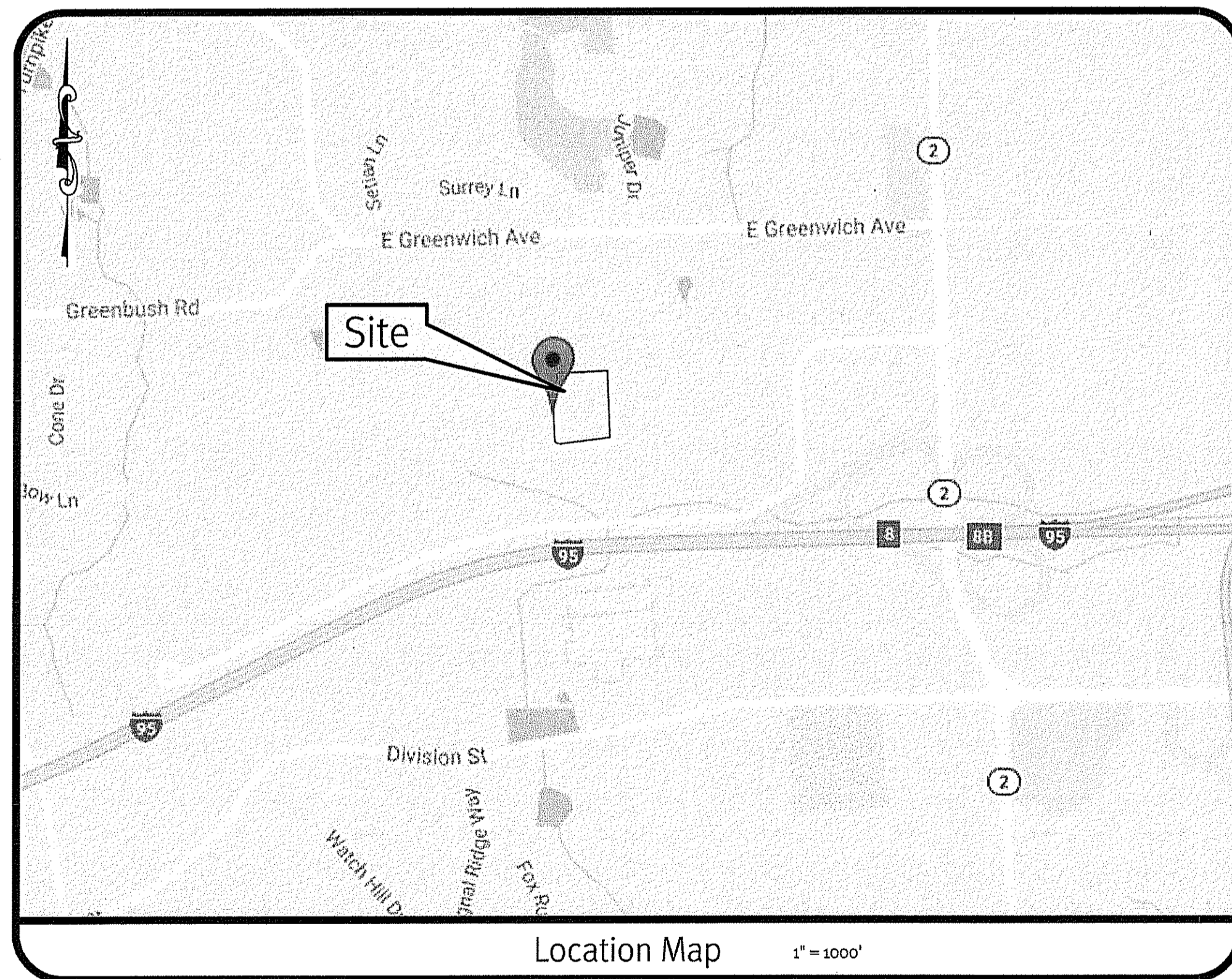


# RIDEM Preliminary Determination Submission

## Lacroix Drive

Located on Lacroix Drive  
West Warwick, Rhode Island  
Assessor's Plat 12 Lot 474



### Sheet Index

1. Cover Sheet
2. 1/2 Mile Aerial & USGS Map
3. Boundary/Topographic Survey
4. General Notes & Legend
5. Site Layout Plan
6. Grading Plan
7. Utilities Plan
8. Soil Erosion Control Plan
9. Soil Erosion Control Details
10. Pond Details
11. Underground Detention Details
12. Underground Infiltration Details
13. Site Details

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

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 30 2017 FILE # 17-0074  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION 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.

**DiPrete Engineering**

Two Stafford Court Cranston, RI 02920  
tel: 401-943-1000 fax: 401-461-6006 www.diprete-eng.com

Boston • Providence • Newport

JASON P. CLOUGH  
No. 05101  
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	Design By: J.P.C.
00242007	05/26/2017	Initial Design Comments	
00242007	05/26/2017	Initial Design Comments	
00242007	05/26/2017	Initial Design Comments	

Cover Sheet  
Lacroix Drive  
West Warwick, Rhode Island

Prepared For  
AP 12 Lot 474  
AGI Construction, Inc.  
24 Appleton Way, Smithfield, Rhode Island 02937  
tel: 401-461-5335

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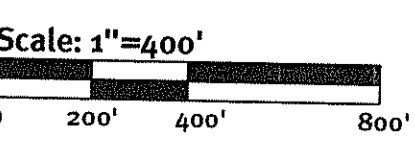
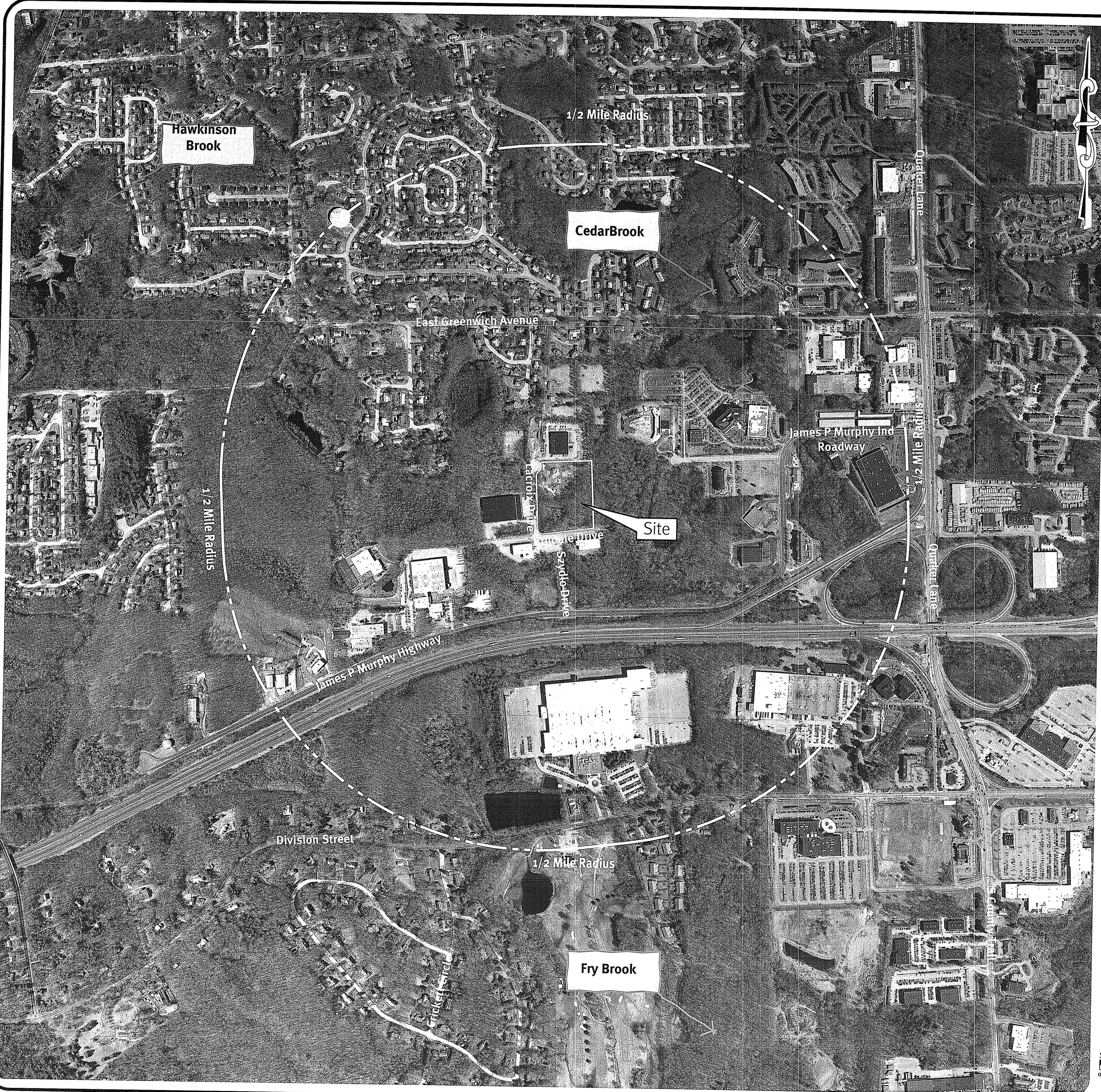
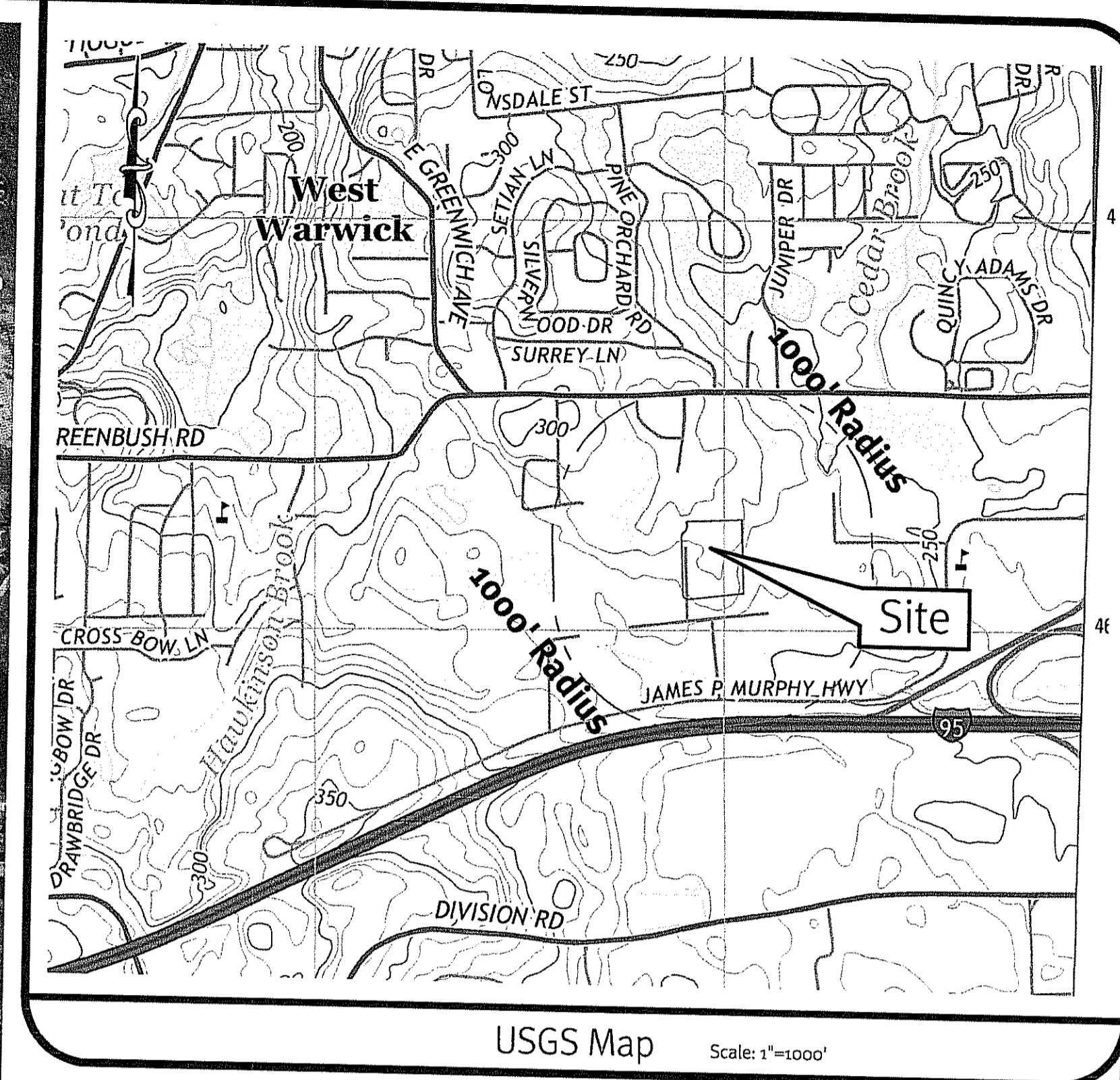


Photo obtained from the RI-GIS.

**Legend:**

- PROPERTY LINE
- PROPERTY LINE(USGS MAP)
- 1000' RADIUS LINE
- HALF MILE RADIUS LINE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Jonathan D. ...*

**1/2 Mile Aerial and USGS Map**

**Lacroix Drive**  
 West Warwick, Rhode Island  
 AP 12 Lot 47A  
**AGI Construction, Inc.**  
 34 Appian Way, Smithfield, Rhode Island 02917  
 Tel: 401-452-2533

**DiPrete Engineering**  
 Two Stafford Court Cranston, RI 02906  
 tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

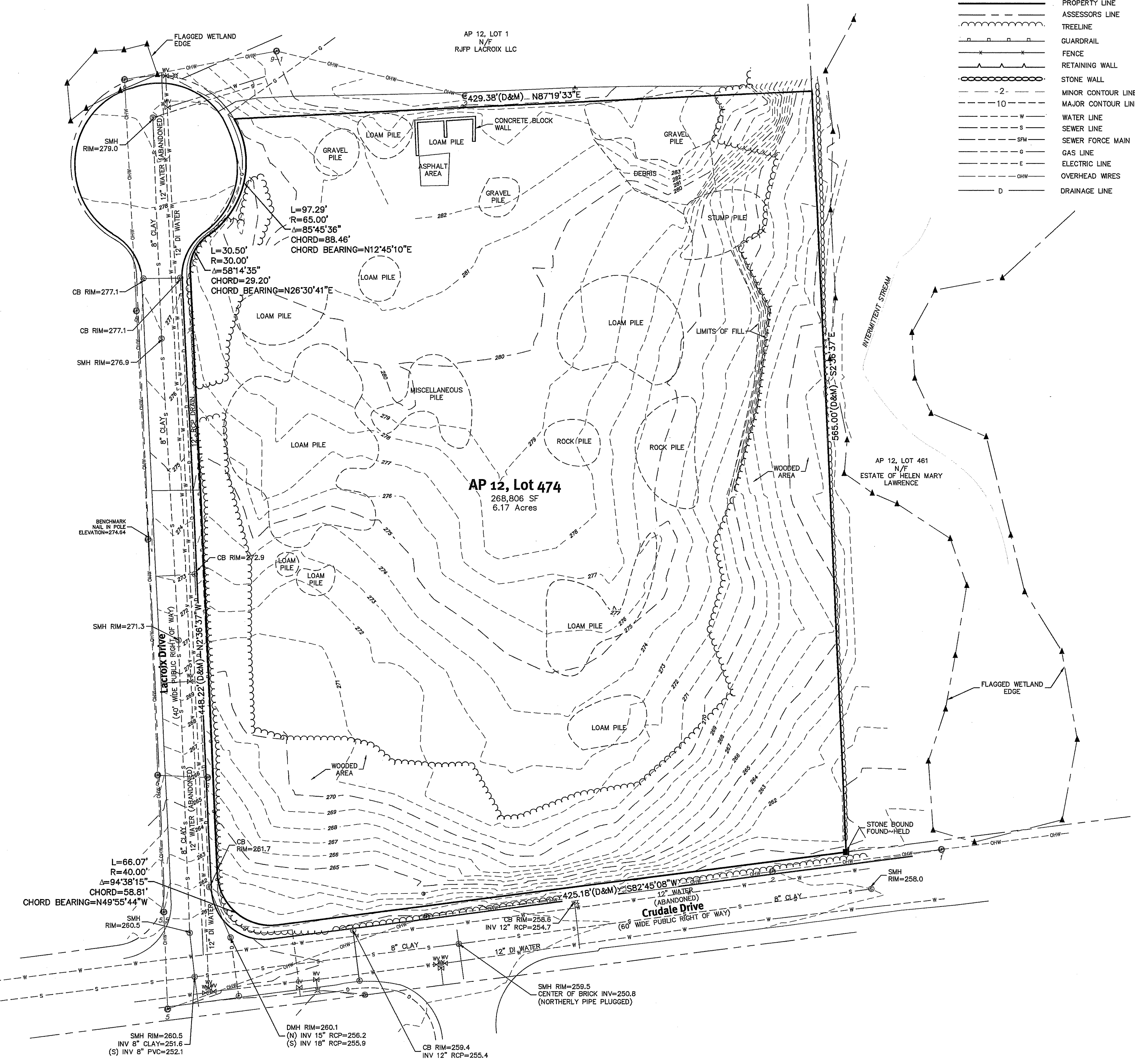
**JASON P. CLOUGH**  
 No. [Signature]  
 REGISTERED PROFESSIONAL ENGINEER CIVIL

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

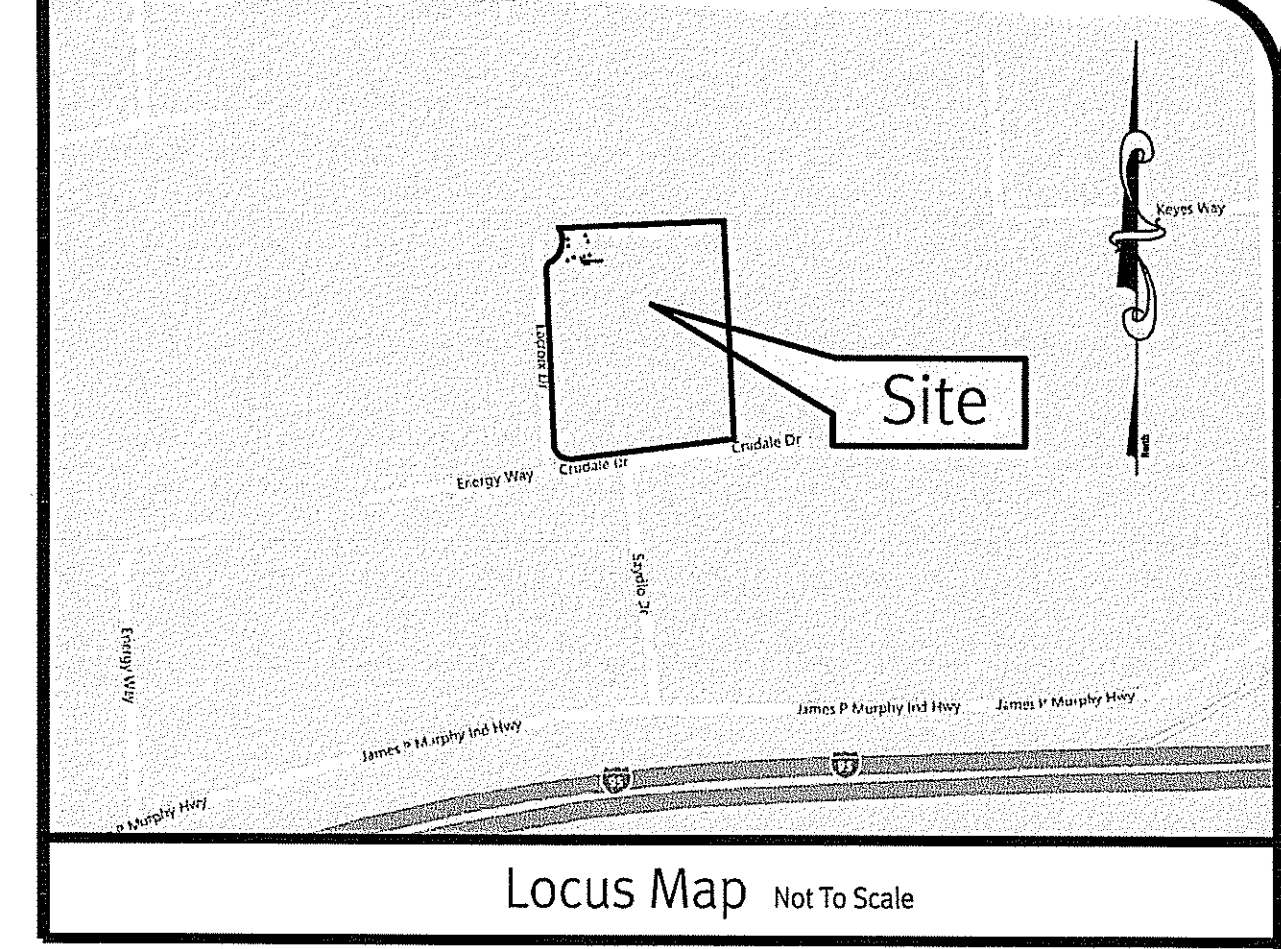
No.	Date	Description	By:
1	05/24/2017	Revised Response to Comments	D.R.N.
2	05/27/2017	RD/PA Submission	D.R.N.
			Design By: J.P.C.

\\s:\main\projects\2016-001\_lacroix\_drive\autocad\drawings\2016-001\_sco.dwg Plot Date: 11/8/2016



**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
DEED	⊙	BOLLARD
(M)	⊙	SOIL EVALUATION
(C)	⊙	CATCH BASIN
(CA)	⊙	DOUBLE CATCH BASIN
HC	⊙	DRAINAGE MANHOLE
PROPERTY LINE	⊙	FLARED END SECTION
ASSESSOR'S LINE	⊙	GUY POLE
TREELINE	⊙	EMH ELECTRIC MANHOLE/HANDHOLE
GUARDRAIL	⊙	UTILITY/POWER POLE
FENCE	⊙	LIGHTPOST
RETAINING WALL	⊙	SMH SEWER/SEPTIC MANHOLE
STONE WALL	⊙	SEWER VALVE
MINOR CONTOUR LINE	⊙	CLEANOUT
MAJOR CONTOUR LINE	⊙	HYDRANT
WATER LINE	⊙	IRRIGATION VALVE
SEWER LINE	⊙	WATER VALVE
SEWER FORCE MAIN	⊙	WELL
GAS LINE	⊙	MONITORING WELL
ELECTRIC LINE	⊙	UNKNOWN MANHOLE
OVERHEAD WIRES	⊙	GAS VALVE
DRAINAGE LINE	⊙	WETLAND FLAG
	⊙	BENCH MARK
	⊙	BUSH
	⊙	TREE



- General Notes**
- THE PARCEL IS FOUND ON ASSESSOR'S PLAT 12, LOT 474 IN THE TOWN OF WEST WARWICK, KENT COUNTY, RHODE ISLAND.
  - THE OWNER PER DEED BOOK 2242, PAGE 81 IS KJP LACROIX LLC.
  - THE PARCEL IS LOCATED IN ZONE X PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 44003C0117H, DATED OCTOBER 2, 2015.
  - THE PARCEL IS ZONED BP PER THE ASSESSOR'S ONLINE DATABASE. 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 OCTOBER 11, 2016. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
  - ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY OBSERVATIONS TOGETHER WITH EXISTING PLANS BY OTHERS. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR MISSING UNDERGROUND UTILITIES, EITHER IN SERVICE OR ABANDONED, NOT OBSERVED AT THE TIME OF THE SURVEY. (PLEASE CONTACT DIGSAFE 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 1-888-344-7233).
  - 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:**
- "DIVISION OF LAND AT LACROIX, WEST WARWICK, R.I." OWNED BY: ROY A. LACROIX BY: ALFRED E. HANSEN ASSOCIATES, INC. SCALE: 1"=50' DATED DECEMBER 1, 1995. RECORDED IN TOWN OF WEST WARWICK LAND EVIDENCE RECORDS DEED BOOK 3, PAGE 90.
  - "BEING ASSESSOR'S PLAT NO. 12 LOTS NO. 474 & 485 ALTA/ACSM LAND TITLE SURVEY HARRAHS OPERATING COMPANY, INC. 1 HARRAH'S COURT LAS VEGAS, NV 89119 SITE LOCATION: LACROIX DRIVE/ CRUDALE DRIVE WEST WARWICK, RHODE ISLAND" SCALE: 1"=60' DATED APRIL 20, 2005.

**Datum Note:**

1. 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 G.P.S. OBSERVATIONS.

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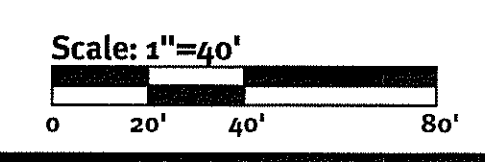
ROBERT G. BABCOCK  
No. 2504  
PROFESSIONAL LAND SURVEYOR

**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 JANUARY 1, 2016, AS FOLLOWS:

TYPE OF SURVEY	MEASUREMENT SPECIFICATION
COMPREHENSIVE BOUNDARY SURVEY	CLASS 1
TOPOGRAPHIC SURVEY	CLASS 1-2

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.



11/8/16  
ROBERT G. BABCOCK, RIPLS #2504, COA #S.000A160

Boundary/Topographic Survey  
Lacroix Drive  
West Warwick, Rhode Island  
Client: Joe Pariseault  
60 Illinois Avenue, Warwick, Rhode Island 02888  
Tel: 401-728-0534, Fax: 401-729-9270  
Job No: 2016-001 Copyright 2016 by Diprete Engineering Associates, Inc.

**General Notes:**

- THE SITE IS LOCATED IN THE CITY OF WEST WARWICK, ASSESSOR'S PLAT 12 LOT 474.
- THE SITE IS APPROXIMATELY 6.17± ACRES AND IS ZONED BP (BUSINESS PARK).
- THE OWNER OF AP 12 LOT 474 IS: LEXTEL, INC. 34 APPIAN WAY SMITHFIELD, RI 02917
- THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44003C0117H, MAP REVISED OCTOBER 2, 2015.
- THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS A CLASS I SURVEY AS PERFORMED BY DIPRETE ENGINEERING ASSOCIATES, INC. THE PLAN ITSELF CONFORMS ONLY TO A CLASS II STANDARD AS ADOPTED BY RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS PLAN IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD.
- SOIL MAPPING OBTAINED FROM SOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
- THE SITE IS NOT WITHIN A: GROUNDWATER PROTECTION AREA (RIDEM) NATURAL HERITAGE AREAS (RIDEM) NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (CRMC) SALT PONDS SPECIAL AREA MANAGEMENT PLAN (CRMC) GROUNDWATER PROTECTION OVERLAY DISTRICT (TOWN)
- THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
  - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
    - EROSION CONTROL MEASURES
    - SHORT TERM MAINTENANCE
    - ESTABLISHMENT OF VEGETATIVE COVER
    - CONSTRUCTION POLLUTION PREVENTION
    - SEQUENCE OF CONSTRUCTION
  - OPERATIONS AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS THE FOLLOWING:
    - LONG TERM MAINTENANCE
    - LONG TERM POLLUTION PREVENTION
- THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.), RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
- DETAILED SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE DESCRIBED IN THE SESC PLAN. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES CONFORM TO RIDOT BEST MANAGEMENT PRACTICES.
- THE SITE IS TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
- THE DRAINAGE SYSTEM IS DESIGNED TO MEET THE WEST WARWICK SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF CATCH BASINS, SAND FILTERS AND UNDERGROUND DRAINAGE BASINS. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
- THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE.
- SOIL EVALUATIONS WERE COMPLETED BY DIPRETE ENGINEERING ON 10/11/16 AND 3/15/17.

**Layout and Materials:**

- DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
- CURB RADI ARE 3 FEET UNLESS OTHERWISE NOTED.
- CURBING SHALL BE PRECAST CONCRETE.
- SIDEWALK SHALL BE CONCRETE.
- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
- PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
- CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

**Grading and Utility Notes:**

- THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ONSITE. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND RI DEPT. OF ENVIRONMENTAL MANAGEMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION TO COMMENCE SUMMER 2017 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
- ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND TOWN OF WEST WARWICK STANDARD SPECIFICATIONS AND DETAILS.
- SEQUENCE OF CONSTRUCTION PROVIDED SESC MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH PRIOR APPROVAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
- 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.
- 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.
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
- ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS TO BE COORDINATED WITH APPLICANT, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION INCLUDING ALL REVISIONS.
- ALL RETAINING WALLS AND STEEP SLOPES ARE SHOWN SCHEMATICALLY ONLY AND DIPRETE ENGINEERING IS NOT PROVIDING THE DESIGN OF THESE ITEMS. THE ACTUAL WALLS AND SLOPES ARE TO BE BUILT UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS TO BE SUBMITTED PRIOR TO CONSTRUCTION.
- ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING ASSOCIATES, INC. IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
- ALL COMPONENTS OF THE DRAINAGE, SEWER AND WATER SYSTEMS MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING TO SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.
- NO STOCKPILING OF MATERIAL TO BE LOCATED IN THE RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT.
- ALL LOAM IN DISTURBED AREAS TO BE STOCKPILED FOR FUTURE USE.
- ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, SHALL BE DISCARDED OFF SITE IN AN ACCEPTABLE MANNER AT AN APPROVED LOCATION. STUMPS SHALL BE GROUND ONSITE OR REMOVED.
- NO STUMP DUMPS ARE PROPOSED ONSITE.
- ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED PLANS OF RECORD AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS SHALL BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233 72 HOURS PRIOR TO EXCAVATION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE SITE CONTRACTORS' RESPONSIBILITY.
- IF CONCRETE TRUCKS ARE WASHED OUT ONSITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.
- DOWNSPOUTS AND DOWNSPOUT LOCATIONS BY ARCHITECT. ALL ROOF DRAINAGE TO BE DIRECTED VIA DOWNSPOUTS AND ROOF LEADERS TO UNDERGROUND INFILTRATION SYSTEM.

**Traffic Notes:**

- DURING CONSTRUCTION TRAFFIC CONES ARE TO BE USED FOR SEPARATION OF ACTIVE TRAFFIC FROM WORK ZONE.
- DURING CONSTRUCTION FLAGGERS SHALL BE EMPLOYED TO ENSURE SAFETY FOR INTERACTION OF CONSTRUCTION VEHICLES AND ACTIVE TRAFFIC.
- ALL SIGNS, FLAGGERS, TRAFFIC CONTROL DEVICES, AND TEMPORARY TRAFFIC ZONE ACTIVITIES SHALL MEET THE REQUIREMENTS OF THE MUTCD LATEST EDITION AND SUBSEQUENT ADDENDA.
- TEMPORARY CONSTRUCTION SIGNS SHALL BE MOUNTED ON RIDOT APPROVED SUPPORTS AND SHALL BE REMOVED OR COVERED WHEN NOT APPLICABLE.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION.

**As-Built Notes:**

- ALL COMPONENTS OF THE DRAINAGE MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

**Erosion Control Notes:**

- THE SITE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE. THE SITE CONTRACTOR IS TO NOTIFY THE OWNER, DESIGN ENGINEER AND RI DEPT. OF ENVIRONMENTAL MANAGEMENT AT LEAST 5 DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE SITE CONTRACTOR SHALL PLACE EROSION CONTROLS PRIOR TO DEMOLITION AND MAINTAIN THESE EROSION CONTROLS THROUGHOUT DURATION OF THE PROJECT.
- CONTRACTOR TO PROVIDE INLET SEDIMENT CONTROL AND STORMWATER FILTRATION DEVICES AT ALL EXISTING CATCH BASINS DOWNGRADIENT FROM THE LIMIT OF DISTURBANCE.
- STOCKPILE AND CONCRETE WASHOUT LOCATIONS TO BE DETERMINED BY CIVIL ENGINEER, AND SITE CONTRACTOR PRIOR TO CONSTRUCTION. NO STOCKPILING OF MATERIAL TO BE LOCATED IN RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, SHALL BE DISCARDED OFF SITE AS DIRECTED BY THE OWNER.
- SITE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST THAT MAY CAUSE OFF SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE, AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY. DUST CONTROL TREATMENTS SHALL BE CONSISTENT WITH RIDEM BEST MANAGEMENT PRACTICES.
- IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.

**ABBREVIATIONS LEGEND**

AP	ASSESSOR'S PLAT
BW	BOTTOM OF WALL (FINISHED GRADE AT BOTTOM OF WALL)
CB	CATCH BASIN
CL	CENTERLINE
CONC	CONCRETE
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
DMH	DRAINAGE MANHOLE
FES	FLARED END SECTION
HDPE	HIGH DENSITY POLYETHYLENE
HW	HEADWALL
INV	INVERT
LF	LINEAR FEET
LOD	LIMIT OF DISTURBANCE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PE	POLYETHYLENE
PL	PROPERTY LINE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SMH	SEWER MANHOLE
SS	SIDE SLOPE
TW	TOP OF WALL (FINISHED GRADE AT TOP OF WALL)
TYP	TYPICAL
UDS	UNDERGROUND DETENTION SYSTEM
UIS	UNDERGROUND INFILTRATION SYSTEM
UP	UTILITY POLE

**EXISTING LEGEND**

(AS SHOWN ON PROPOSED PLANS)  
NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

BUILDING		GWT	GROUND WATER TABLE
RHIB		BT	BOTTOM TESTHOLE MEASURED
AP		(C)	CALCULATED
N/F		(CA)	CHORD ANGLE
(D)		HC	HANDICAPPED
PROPERTY LINE		△/△	NAIL FOUND/SET
ASSESSORS LINE		○/○	DRILL HOLE FOUND/SET
BRUSHLINE		■/□	BOUND FOUND/SET
TREELINE		○	SIGN
GUARDRAIL		○	BOLLARD
FENCE		○ CB	SOIL EVALUATION
RETAINING WALL		○ DCB	CATCH BASIN
STONE WALL		○ DMH	DOUBLE CATCH BASIN
MINOR CONTOUR LINE		FES	DRAINAGE MANHOLE
MAJOR CONTOUR LINE			FLARED END SECTION
WATER LINE		○ GUY	POLE
SEWER LINE		○ EMH	ELECTRIC MANHOLE
SEWER FORCE MAIN		○ UP	UTILITY/POWER POLE
GAS LINE		○	LIGHTPOST
ELECTRIC LINE		○ SMH	SEWER/SEPTIC MANHOLE
OVERHEAD WIRES		SV	SEWER VALVE
DRAINAGE LINE		○	CLEANOUT
SOILS LINES		○	HYDRANT
50' PERIMETER WETLAND		○	IRRIGATION VALVE
100' RIVERBANK WETLAND		○	WATER VALVE
STREAM		○	WELL
		○	MONITORING WELL
		○	UNKNOWN MANHOLE
		○	GAS VALVE
		○	WETLAND LINE & FLAG BENCH MARK

**Proposed Legend**

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

	MINOR CONTOUR LINE	W	WATER LINE
	MAJOR CONTOUR LINE	S	SEWER LINE
	SPOT ELEVATION	G	GAS LINE
	BUILDING SETBACKS	E	ELECTRIC LINE
	LIMIT OF DISTURBANCE - NO EROSION CONTROL	T	TELECOM LINE
	SILT FENCE (RIDOT STD 9.2.0) OR APPROVED EQUAL	OHW	OVERHEAD WIRE
	EDGE OF PAVEMENT	DR	DRAINAGE LINE
	CONCRETE CURB (RIDOT STD 7.1.0)	SD	PERFORATED SUBDRAIN
	BUILDING FOOTPRINT	RL	ROOFLEADER
	ASPHALT PAVEMENT	○	CATCH BASIN (RIDOT STD 4.4.0)
	HEAVY DUTY ASPHALT PAVEMENT	○	MANHOLE (RIDOT STD 4.2.0 OR 4.2.1)
	HEAVY DUTY CONCRETE		HEAD WALL (RIDOT STD 2.1.0 OR APPROVED EQUAL)
	CONCRETE SIDEWALK		TRANSFORMER PAD WITH BOLLARDS (PER NATIONAL GRID STANDARD)
	TREELINE		GENERATOR
	GUARDRAIL (RIDOT STD 34.2.0, 34.4.0 OR APPROVED EQUAL)		SITE LIGHTS (BY OTHERS)
	RETAINING WALL		SIGN
	RIP RAP		WATER VALVE
	UNDERGROUND SYSTEM OUTLINE		THRUST BLOCK
	SAND FILTER		ACCESSIBLE PARKING SPACE SYMBOLS
	2:1 SLOPES (REINFORCED TURF)		

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

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**JASON P. CLOUGH**  
No. 051000000  
REGISTERED PROFESSIONAL ENGINEER CIVIL

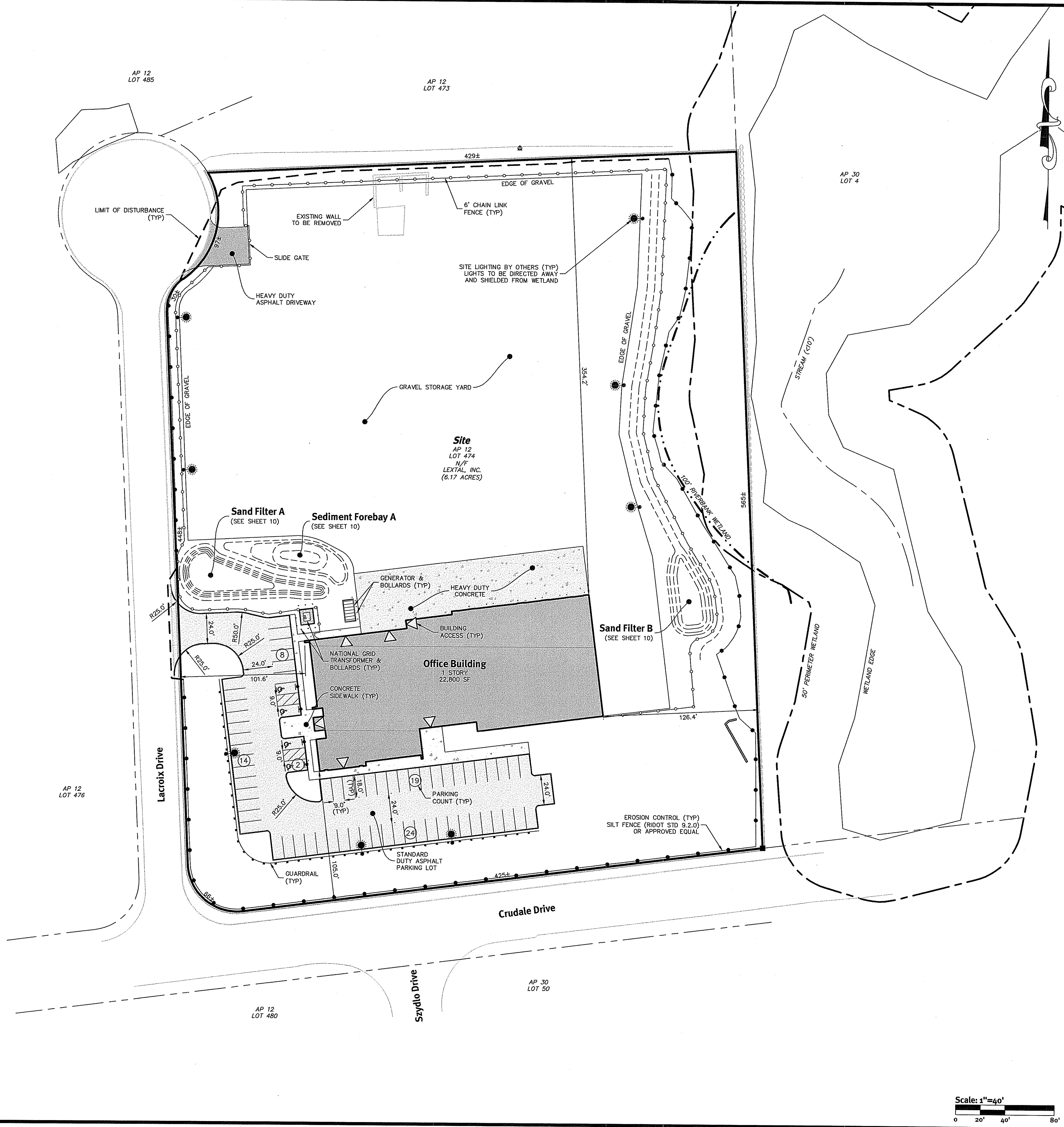
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DESIGNED BY	DATE	BY
REVIEWED BY	DATE	BY
DATE	DATE	DATE
No.	Description	
Drawn By: D.B.N.	Design By: J.P.C.	

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 30 2017 FILE # 17-0074  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Martin D. Wenzel*

**General Notes & Legend**  
Lacroix Drive  
West Warwick, Rhode Island  
Prepared For  
**AGI Construction, Inc.**  
34 Appian Way, Smithfield, Rhode Island 02917  
tel 401-416-2535



**Dimensional Regulations:**

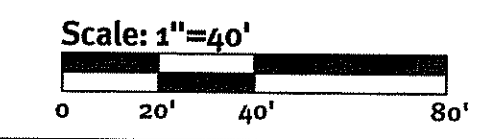
CURRENT ZONING:	BP	REQUIRED	PROVIDED
MINIMUM LOT AREA:	40,000 SF	268,805 SF (EXISTING)	
MINIMUM FRONTAGE AND LOT WIDTH:	150'	448' (EXISTING)	
MINIMUM LOT DEPTH:	200'	425' (EXISTING)	
MINIMUM FRONT AND CORNER SIDE YARD:	50'	101.6'	
MINIMUM SIDE YARD:	20'	105.0'	
MINIMUM REAR YARD:	50'	126.4'	
MAXIMUM STRUCTURE HEIGHT:	90'	<90'	
MAXIMUM BUILDING LOT COVERAGE:	50%	8.5%	

**Parking Regulations:**

PARKING USE:	BUSINESS/COMMERCIAL SERVICE
PARKING REQUIREMENT:	1 SPACE PER 200 SF (GFA)
BUILDING GFA:	11,400 SF*
PARKING CALCULATION:	11,500 SF X 1/200 SF = 57 SPACES
ADA PARKING REQUIRED:	3 SPACES
REQUIRED PARKING SPACES:	57 SPACES
PARKING SPACES PROVIDED:	67 SPACES
ADA PARKING PROVIDED:	4 SPACES

\*APPROXIMATELY HALF OF THE PROPOSED BUILDING (22,814 SF TOTAL) WILL BE FOR BUSINESS USE. THE REMAINING AREA WILL BE UTILIZED AS A GARAGE FOR EQUIPMENT PARKING AND STORAGE. AN ADDITIONAL 10 PARKING SPACES HAVE BEEN PROVIDED TO ACCOMMODATE THIS AREA.

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*Yarlan D. Wencel*



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**JASON P. CLOUGH**  
 No. [Signature]  
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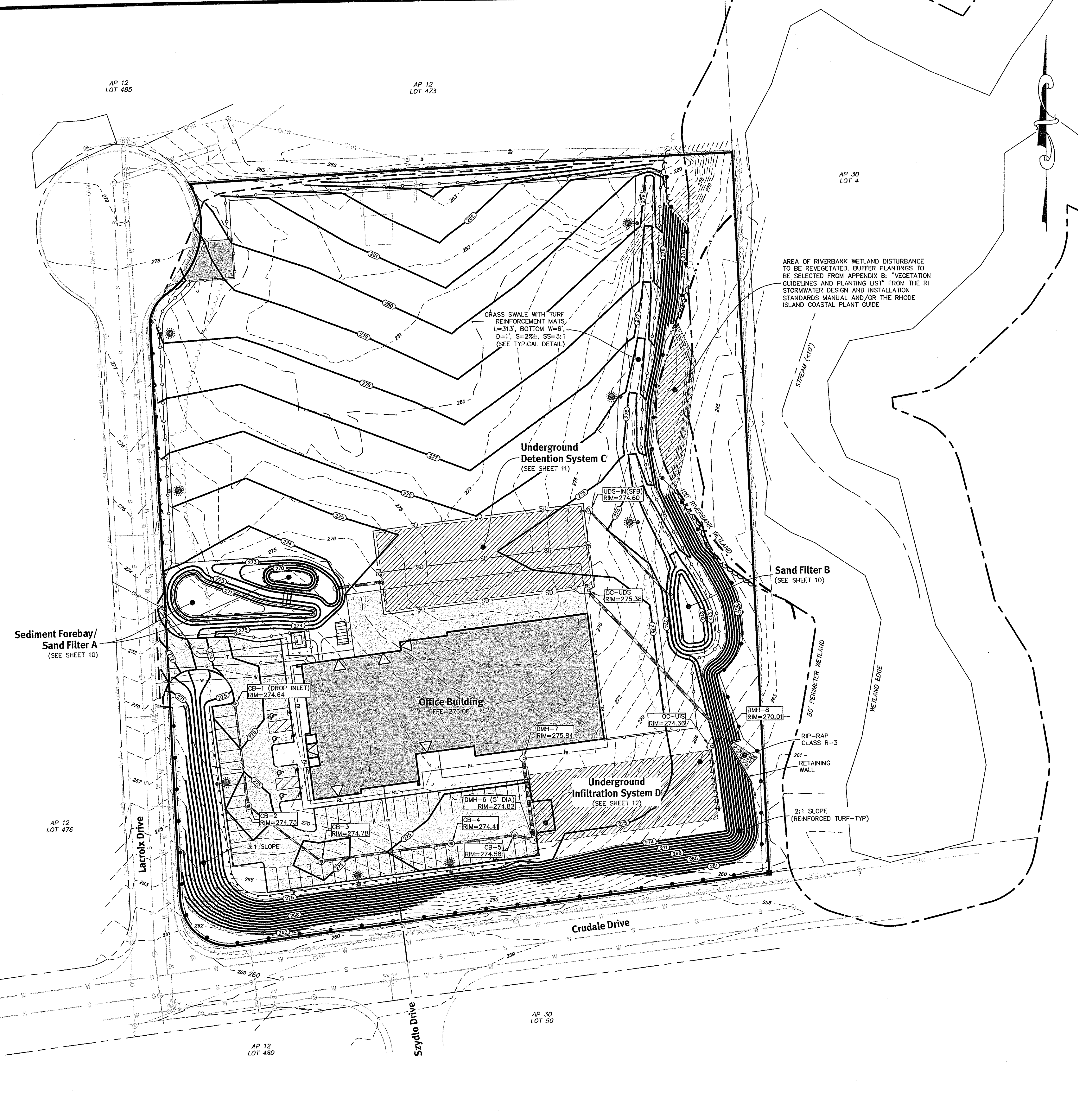
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No.	Date	Description	By:
1	05-24-2017	REVIEW RESPONSE TO COMMENTS	D.R.N.
2	03-22-2017	REVISION SUBMISSION	D.R.N.

Drawn By: D.R.N. Design By: J.P.C.

**Site Layout Plan**  
**Lacroix Drive**  
 West Warwick, Rhode Island  
 AP 12 LOT 474  
**AGI Construction, Inc.**  
 34 Appian Way, Smithfield, Rhode Island 02917  
 Tel: 401-616-5535  
 DE No. 2052-001. Copyright 2017 by DiPrete Engineering Associates, Inc.

z:\meham\projects\1052-001\_lacroix.dwg\layout\drawings\1052-001.dsn.dwg Plotter: 5/24/2017



AREA OF RIVERBANK WETLAND DISTURBANCE TO BE REVEGETATED. BUFFER PLANTINGS TO BE SELECTED FROM APPENDIX B: "VEGETATION GUIDELINES AND PLANTING LIST" FROM THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL AND/OR THE RHODE ISLAND COASTAL PLANT GUIDE

GRASS SWALE WITH TURF REINFORCEMENT MATS  
L=31.3', BOTTOM W=6'  
D=1', S=2.5%, SS=3:1  
(SEE TYPICAL DETAIL)

Underground Detention System C  
(SEE SHEET 11)

Sand Filter B  
(SEE SHEET 10)

Sediment Forebay/  
Sand Filter A  
(SEE SHEET 10)

Office Building  
FFE=276.00

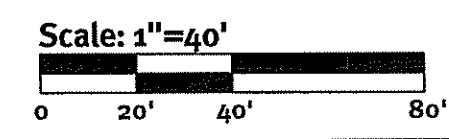
Underground Infiltration System D  
(SEE SHEET 12)

RIP-RAP CLASS R-3  
20' RETAINING WALL

2:1 SLOPE (REINFORCED TURF-TYP)

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*Martin D. Wenczek*



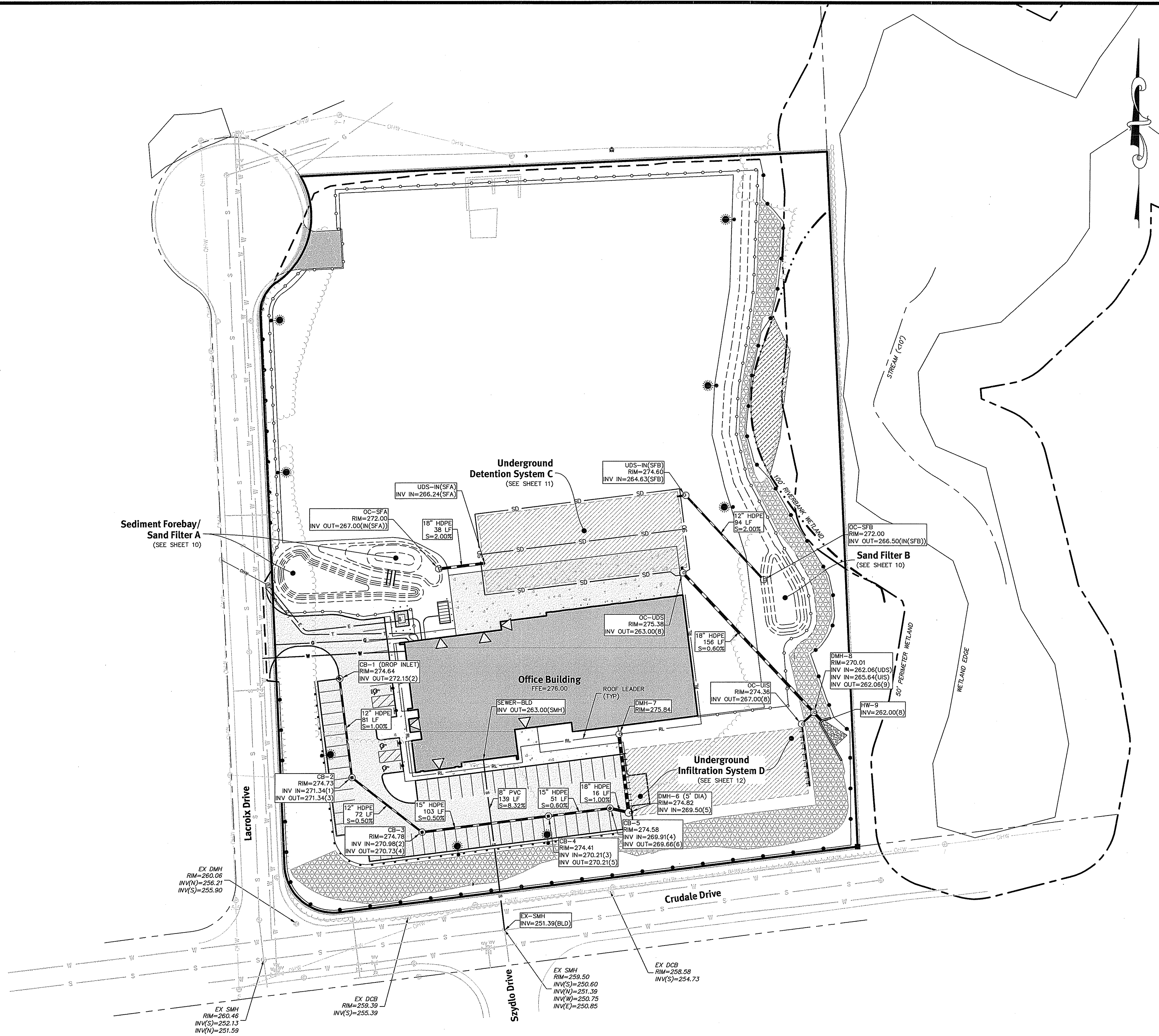
JASON P. CLOUGH  
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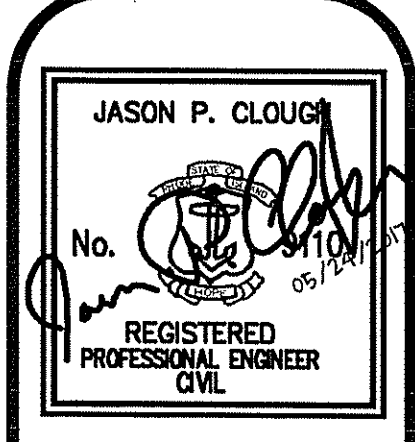
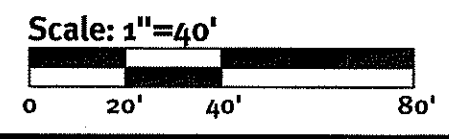
No.	Date	By	Description
1	05/24/2017	JPC	Response to Comments
2	05/25/2017	JPC	Revised

Drawn By: D.R.N. Design By: J.P.C.



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Rev.	Date	Description	Drawn By	Design By
1	05-24-2017	Submittal Response to Comments	J.P.C.	J.P.C.
2	05-25-2017	Revised Submittal	J.P.C.	J.P.C.

AP 12  
LOT 485

AP 12  
LOT 473

AP 30  
LOT 4

AP 12  
LOT 476

AP 12  
LOT 480

AP 30  
LOT 50

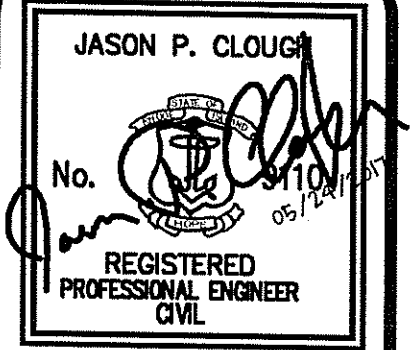
### Erosion Control Notes:

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE. THE SITE CONTRACTOR IS TO NOTIFY THE OWNER, DESIGN ENGINEER AND RI DEPT. OF ENVIRONMENTAL MANAGEMENT AT LEAST 5 DAYS PRIOR TO THE START OF CONSTRUCTION.
2. THE SITE CONTRACTOR SHALL PLACE EROSION CONTROLS PRIOR TO DEMOLITION AND MAINTAIN THESE EROSION CONTROLS THROUGHOUT DURATION OF THE PROJECT.
3. CONTRACTOR TO PROVIDE INLET SEDIMENT CONTROL AND STORMWATER FILTRATION DEVICES AT ALL EXISTING CATCH BASINS DOWNGRADE FROM THE LIMIT OF DISTURBANCE.
4. STOCKPILE AND CONCRETE WASHOUT LOCATIONS TO BE DETERMINED BY CIVIL ENGINEER, AND SITE CONTRACTOR PRIOR TO CONSTRUCTION. NO STOCKPILING OF MATERIAL TO BE LOCATED IN RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, SHALL BE DISCARDED OFF SITE AS DIRECTED BY THE OWNER.
5. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST THAT MAY CAUSE OFF SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE, AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY. DUST CONTROL TREATMENTS SHALL BE CONSISTENT WITH RIDEM BEST MANAGEMENT PRACTICES.
6. IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.



Two Stafford Court, Cranston, RI 02920  
tel: (401) 949-5000 fax: (401) 461-6000 www.diprete-eng.com

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No.	Date	Description	Drawn By: D.R.N.	Design By: J.P.C.
1	05/24/2017	RIBEM Response to Comments	D.R.N.	J.P.C.
2	05/24/2017	RIBEM Submission	D.R.N.	J.P.C.

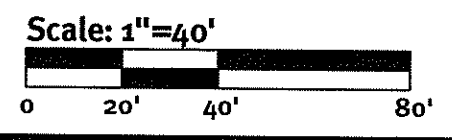
### Construction Phasing:

- 1- FLAG/SURVEY LIMIT OF DISTURBANCE  
INSTALL PERIMETER EROSION CONTROL DEVICES (SILT FENCE)
- 2- CLEAR AND GRUB SITE, INSTALL TEMPORARY SWALES AND SEDIMENTATION TRAPS
- 3- BEGIN MASS GRADING.
- 4- STABILIZE ROUGH GRADED AREAS.
- 5- CONSTRUCT FOUNDATION WALLS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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*Martin D. Wensel*

### Legend

PROPERTY LINE	———	50' PERIMETER WETLAND	----
EX MAJOR FOOT CONTOUR	---160---	100' RIVERBANK WETLAND	-.-.-.-
EX MINOR FOOT CONTOUR	---158---	WETLAND LINE	~~~~~
CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)	⊙⊙⊙⊙⊙	STREAMLINE	~~~~~
PR TEMPORARY SWALE	—○—	TREELINE	~~~~~
SILT FENCE (RIDOT 9.2.0)	—●—		
LIMIT OF DISTURBANCE	--- ---		
INFILTRATING AREA (TO BE PROTECTED BY STRAW WATTLE)	⊗⊗⊗		



### Soil Erosion Control Plan

Lacroix Drive

West Wrenick, Rhode Island

AP 12 LOT 474

AGI Construction, Inc. May 26 2017

34 Appian Way, Smithfield, Rhode Island 02917

tel: (401) 416-2535

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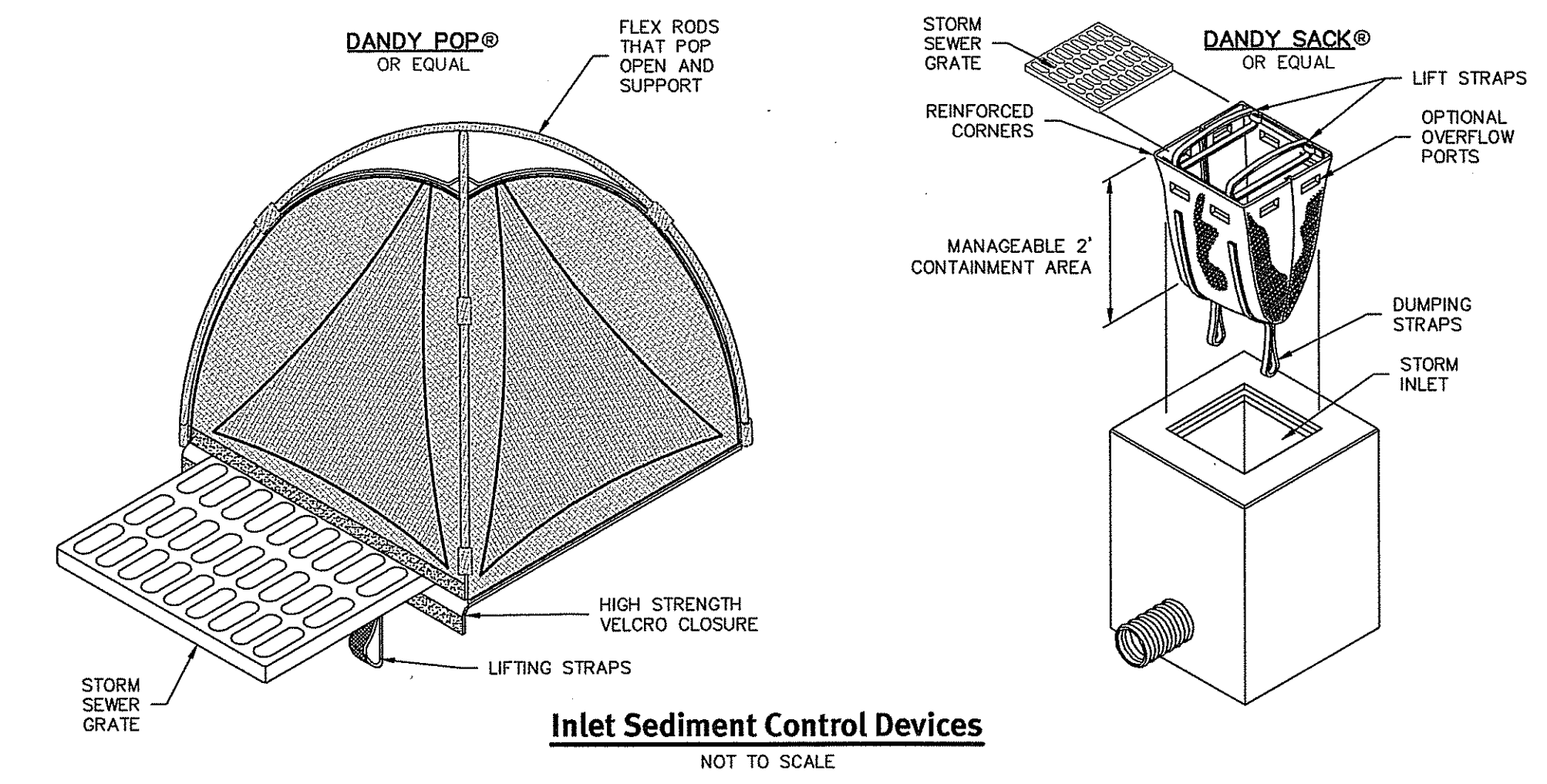
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*Jonathan D. Wenzel*

JASON P. CLOUGH  
No. [Signature]  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

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NO.	Date	Description	Drawn By: DRN	Design By: J.P.C.
1	05/24/2017	REVISION: RESPONSE TO COMMENTS	DRN	J.P.C.
2	05/22/2017	REVISION: SUBMISSION	DRN	J.P.C.



**GENERAL NOTES:**

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

**INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS:**

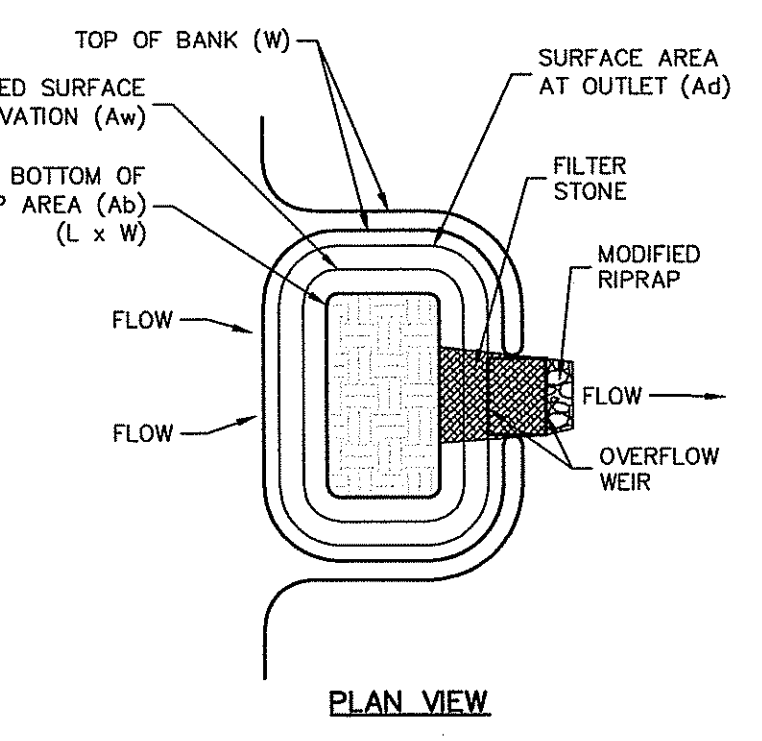
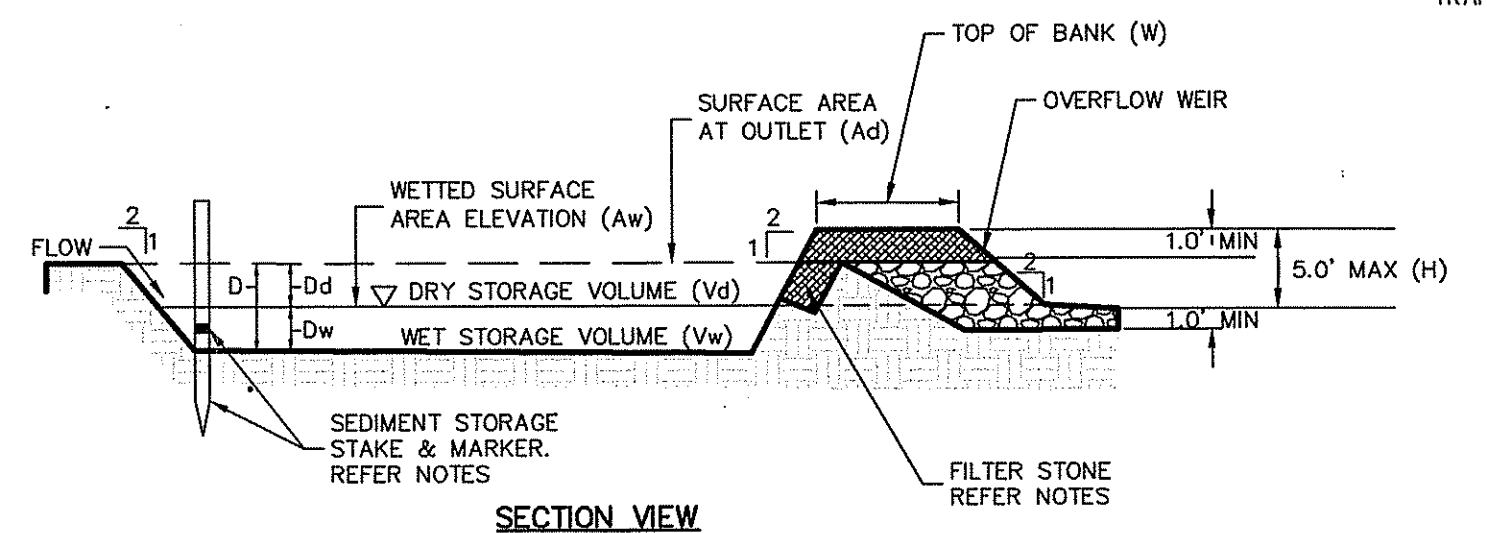
1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND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

**INSTALLATION NOTES:**

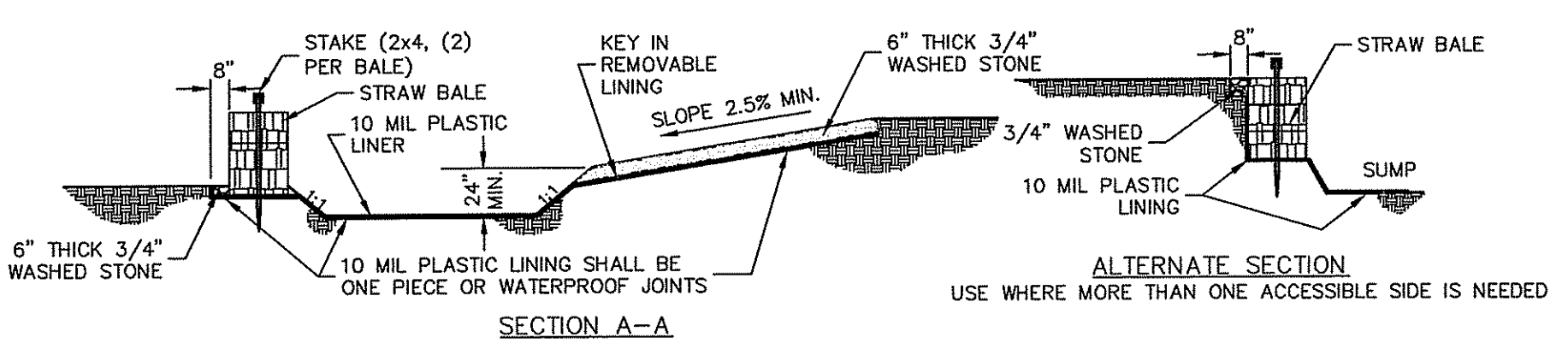
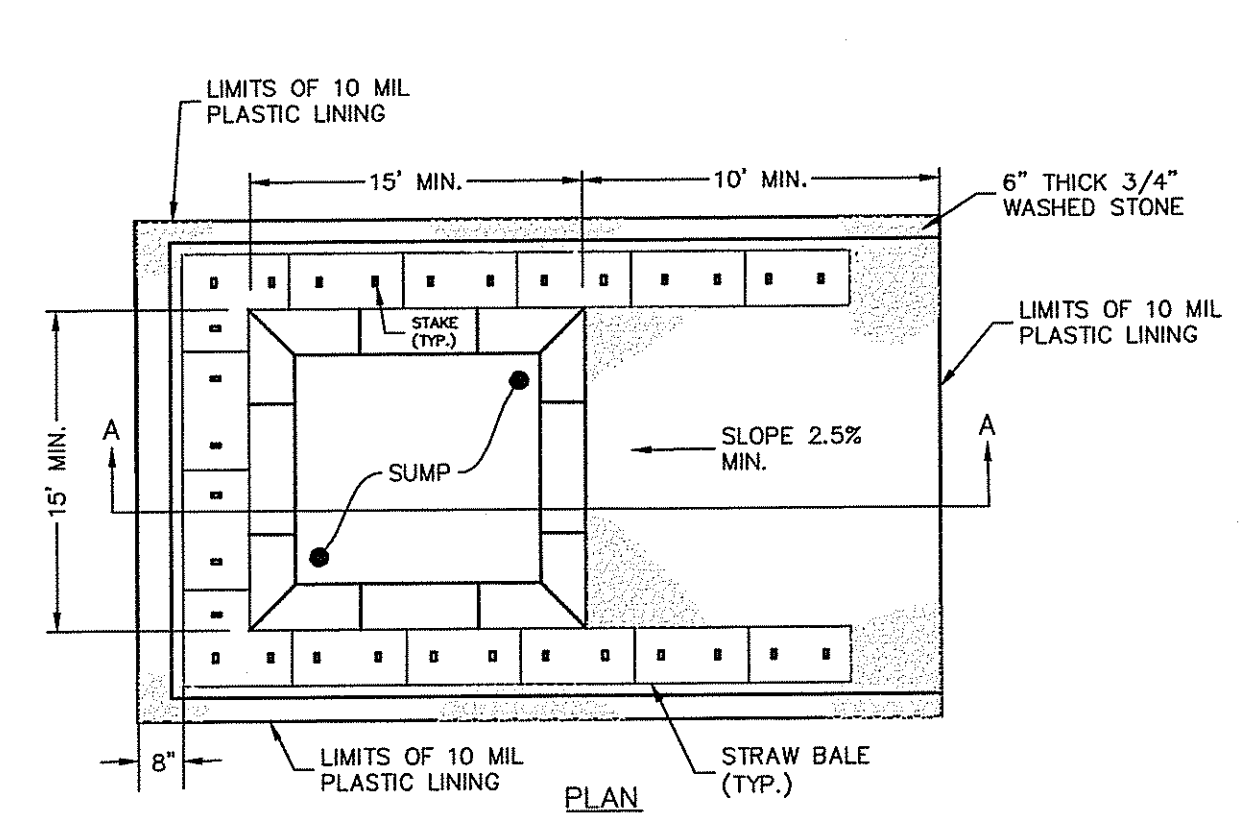
1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
2. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE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

SEDIMENT TRAP DIMENSIONS	TRAPS 1&2
TRIBUTARY DRAINAGE AREA	2.75 ac
WET STORAGE DEPTH (Dw)	2.50 ft
DRY STORAGE DEPTH (Dd)	2.00 ft
TOTAL DEPTH (D)	4.50 ft
BOTTOM OF TRAP AREA (Ab)	1,520 sq.ft
WETTED SURFACE AREA (Aw)	2,560 sq.ft
SURFACE AREA AT OUTLET (Ad)	3,300 sq.ft

TOP WIDTH VS HEIGHT	
H=HEIGHT OF EMBANKMENT	W=TOP WIDTH OF EMBANKMENT
H (ft)	W (ft)
1.5	2.0
2.0	2.0
2.5	3.0
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

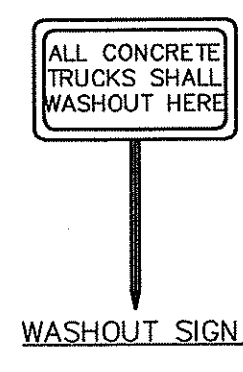


**Temporary Sediment Trap Details**  
NOT TO SCALE



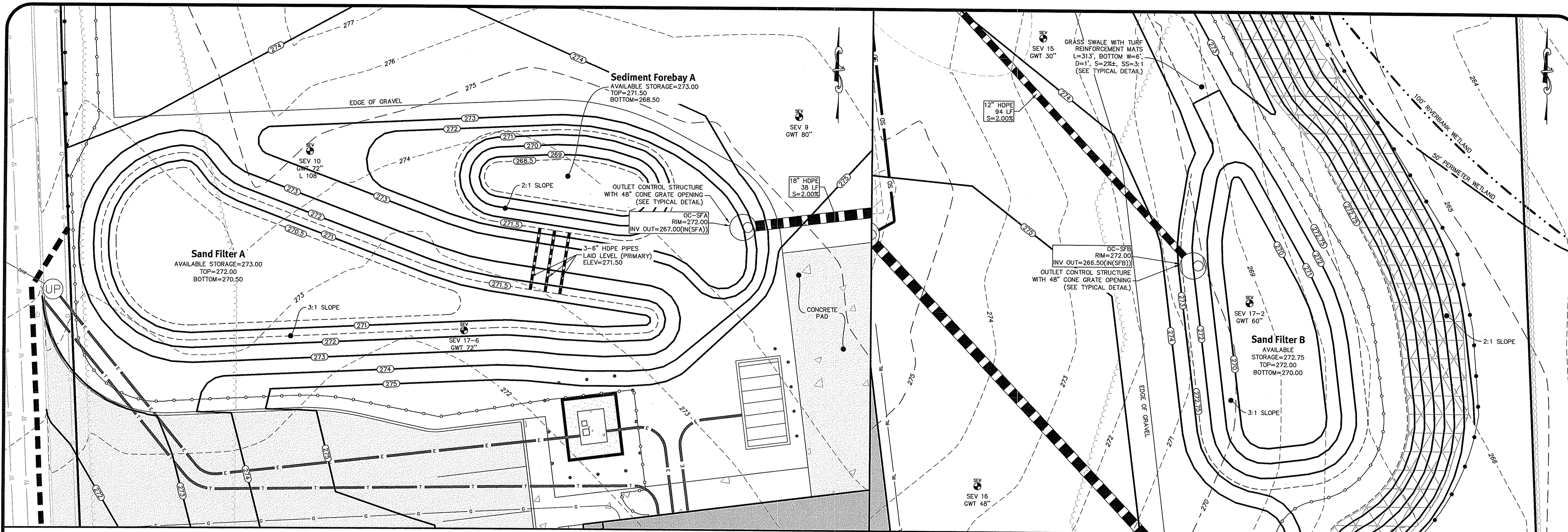
- NOTES:**
1. PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
  2. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
  3. FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
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

**CONCRETE WASHOUT AREA**  
(NOT TO SCALE)

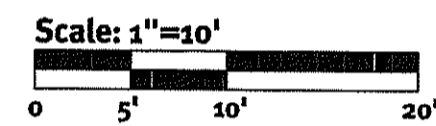


**Soil Erosion Control Details**

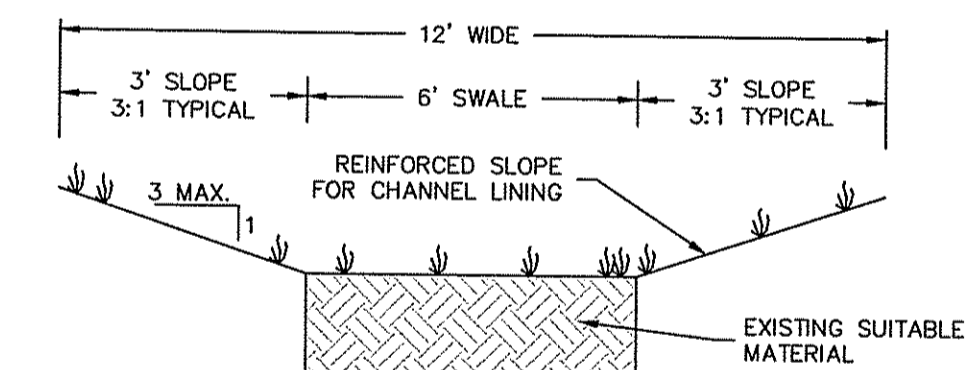
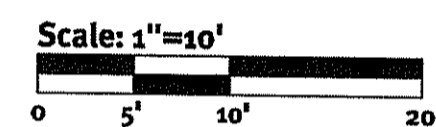
**Lacroix Drive**  
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AP 21, Loc. 474  
**AGI Construction, Inc.**  
34 Appian Way, Smithfield, Rhode Island 02917  
tel. 401-941-9235



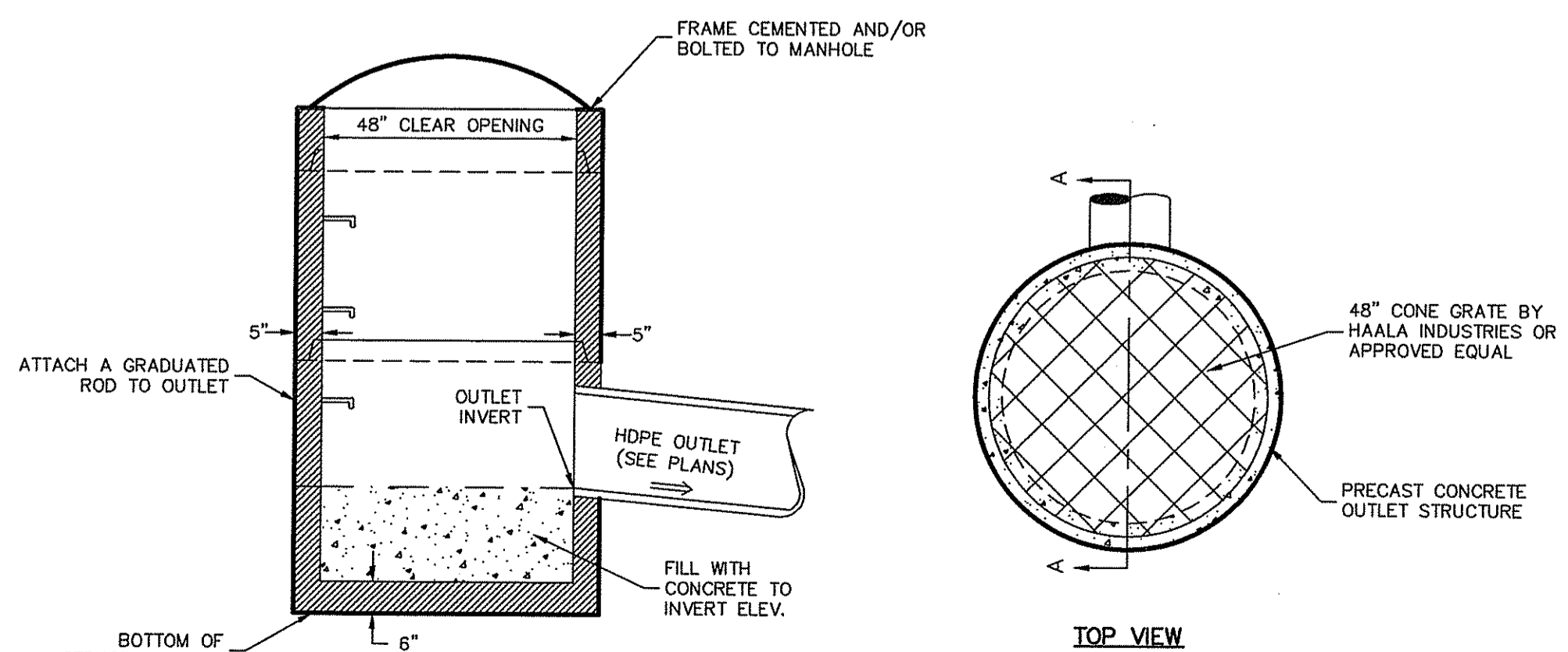
Sand Filter A



Sand Filter B

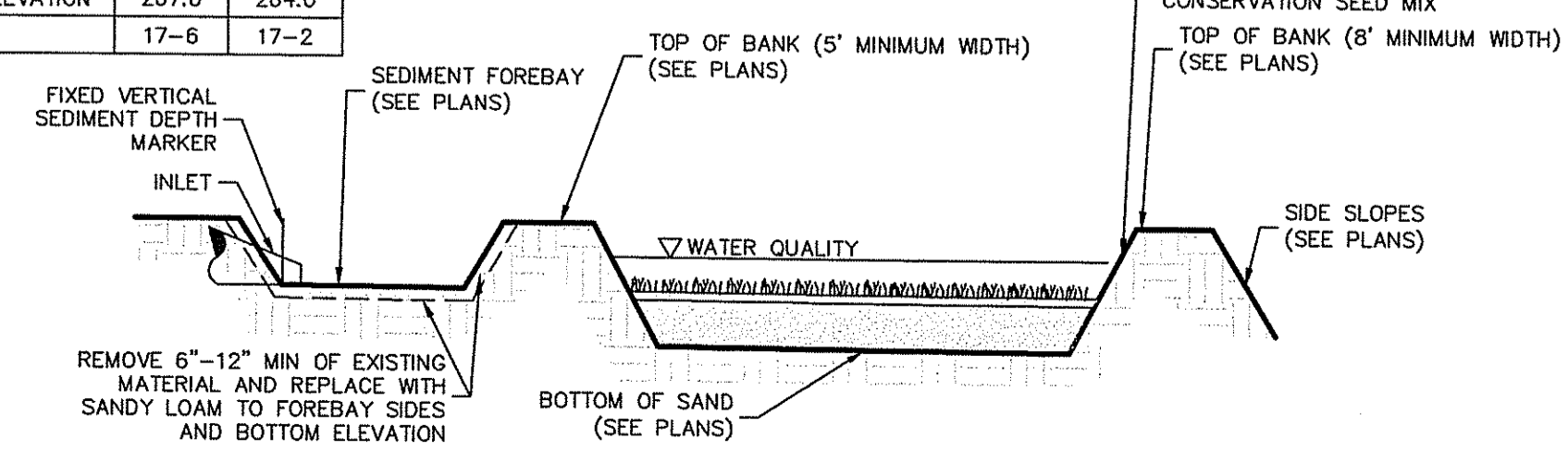
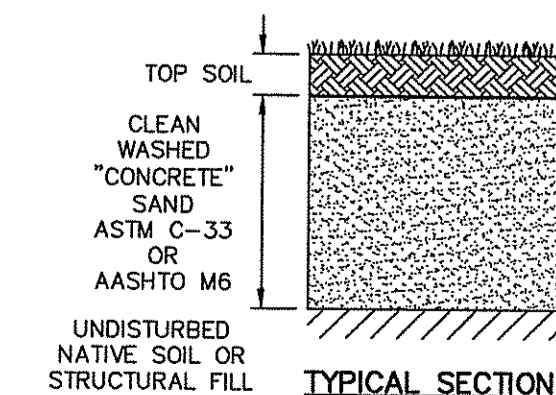


GRASS SWALE CROSS SECTION  
NOT TO SCALE



Typical Outlet Control Structure Detail  
(Sediment Forebay A & Sand Filter B)  
NOT TO SCALE

DESCRIPTION	SF-A	SF-B
AVAILABLE STORAGE ELEVATION	273.00	272.75
WQ STORAGE ELEVATION	272.00	272.00
100 YEAR STORM ELEVATION	272.44	272.41
10 YEAR STORM ELEVATION	272.24	272.24
1 YEAR STORM ELEVATION	272.04	272.04
FINISHED GRADE	270.50	270.00
TOP SOIL DEPTH	6"	6"
SAND DEPTH	24"	24"
BOTTOM OF SAND ELEVATION	268.00	267.50
SEASONAL HIGH GWT ELEVATION	267.0	264.0
SOIL EVALUATION	17-6	17-2



Sand Filter (Infiltration)  
NOT TO SCALE

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*Jonathan D. Wenzel*

**Pond Details**  
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AP-15, Loc. 474  
Prepared for  
**AGI Construction, Inc.**  
34 Appian Way, Smithfield, Rhode Island 02917  
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**DiPrete Engineering**  
Two Stafford Court Cranston, RI 02920  
tel 401-943-1000 fax 401-641-6006 www.diprete-eng.com

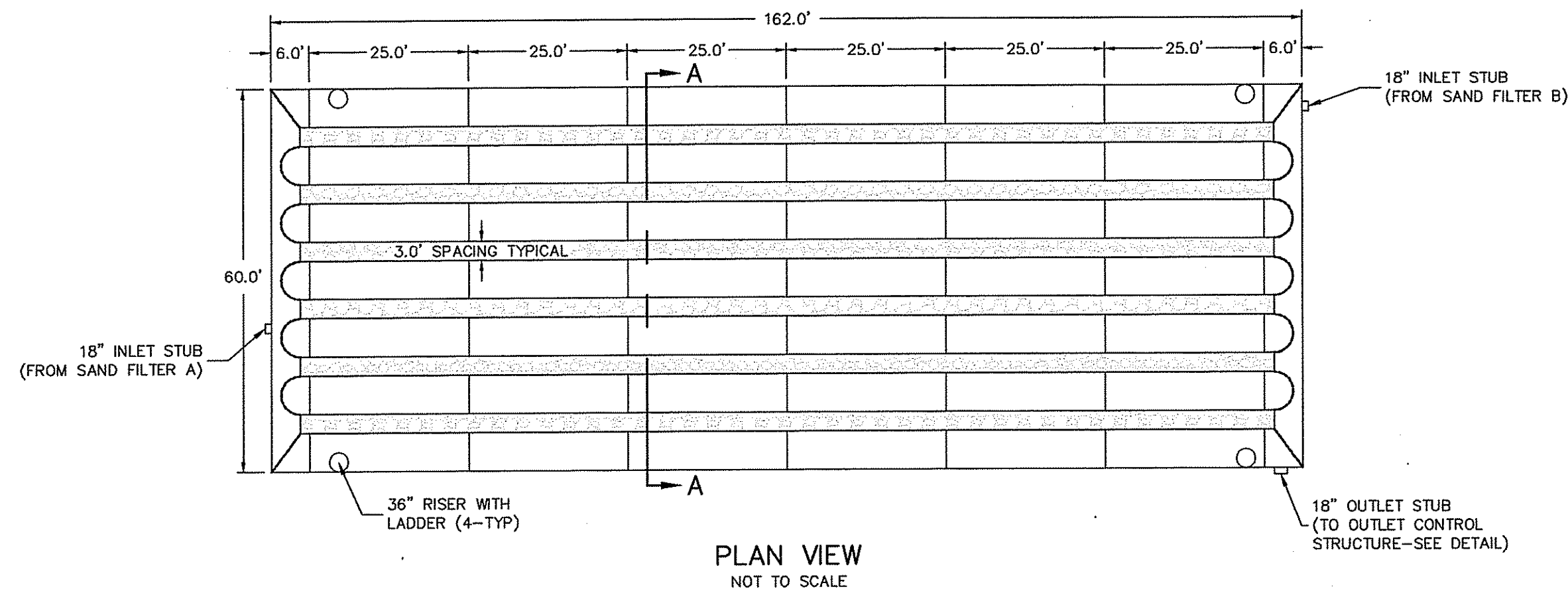
**JASON P. CLOUGH**  
No. [Signature]  
REGISTERED PROFESSIONAL ENGINEER CIVIL

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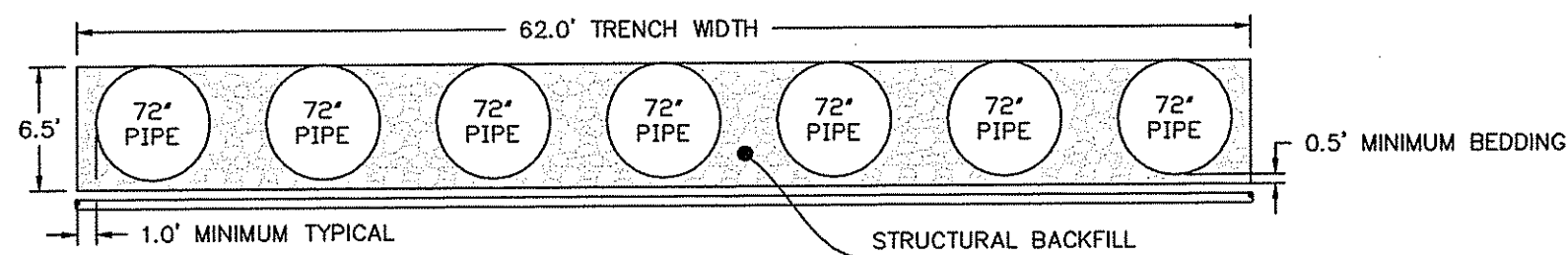
The contractor is responsible for all of the means, methods, precautions and requirements, and OSHA compliance in the implementation of this plan and design.

No.	Date	Description	Drawn By: D.R.N.	Design By: J.P.C.
1	05/14/2017	ISSUE PROGRESS TO COMMENTS	D.R.N.	J.P.C.
2	05/22/2017	ISSUE FOR SUBMISSION	D.R.N.	J.P.C.

Z:\deman\project\2025-003\_lacroix\_drive\autocad drawing\2025-003-deman.dwg Plotdate: 5/24/2017



PLAN VIEW  
NOT TO SCALE



SECTION A-A  
NOT TO SCALE

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.

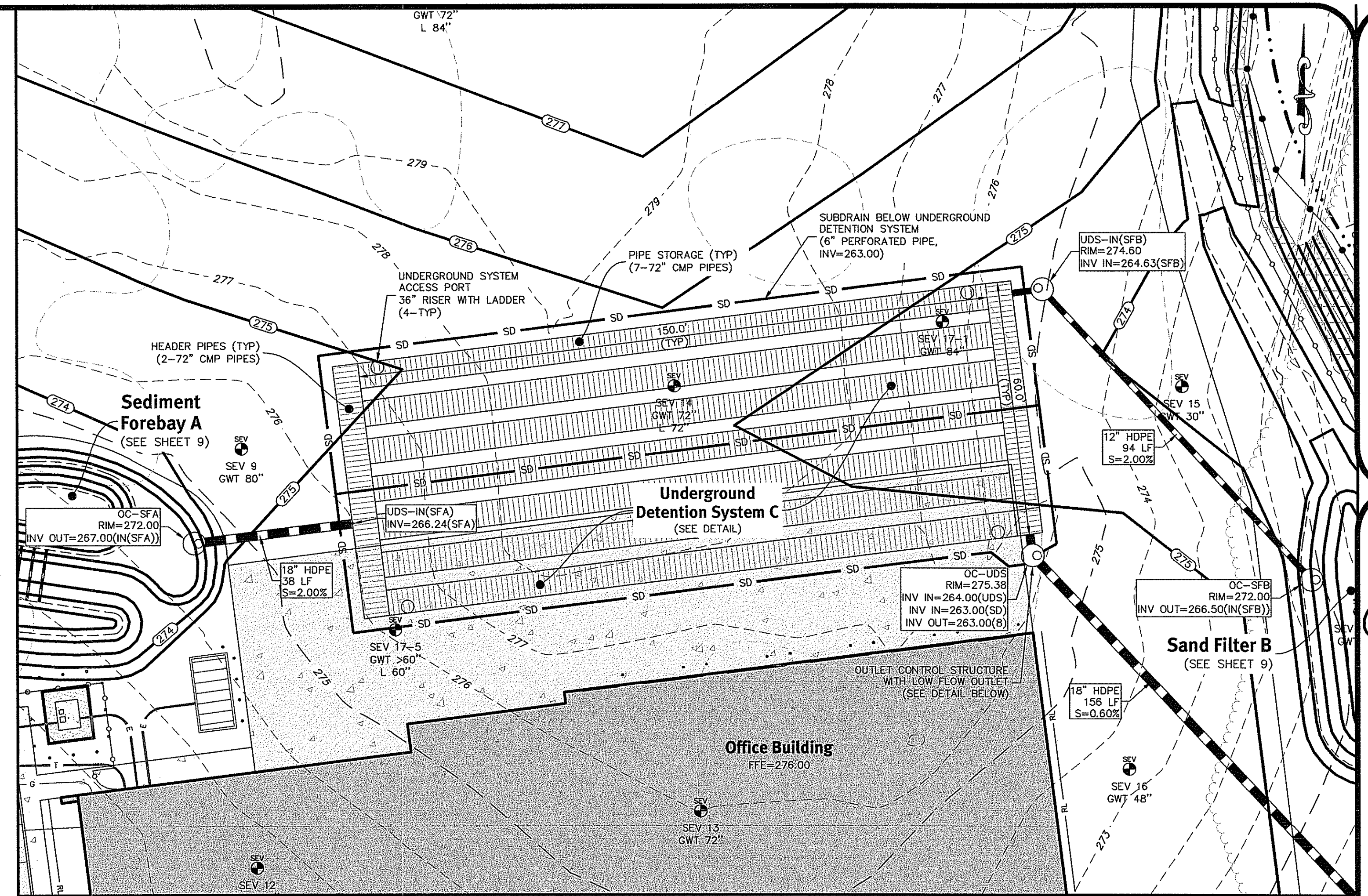
**STRUCTURAL BACKFILL PLACEMENT**  
STRUCTURAL BACKFILL SHALL BE PLACED IN LAYERS FROM 6 TO 12 IN. IN DEPTH DEPENDING ON THE TYPE OF MATERIAL AND COMPACTION EQUIPMENT OR METHOD. EACH LAYER OR "LIFT" SHALL BE COMPACTED TO 95% PROCTOR DENSITY BEFORE ADDING THE NEXT.

- NOTES:
1. ALL 72" PIPE IS 16 GAUGE, 3" X 1" CORRUGATION, ALUMINIZED TYPE 2.
  2. ALL 36" & 18" PIPE IS 16 GAUGE, 2 2/3" X 1/2" CORRUGATION, ALUMINIZED TYPE 2.
  3. DASHED LINES INDICATES WELD.
  4. USE NECESSARY CONNECTING BANDS.
  5. ALL REINFORCEMENT SHALL MEET ASTM A998. -UNDERGROUND DETENTION BASIN SYSTEM COMPONENTS TO BE LANE ENTERPRISES, INC. OR APPROVED EQUAL.

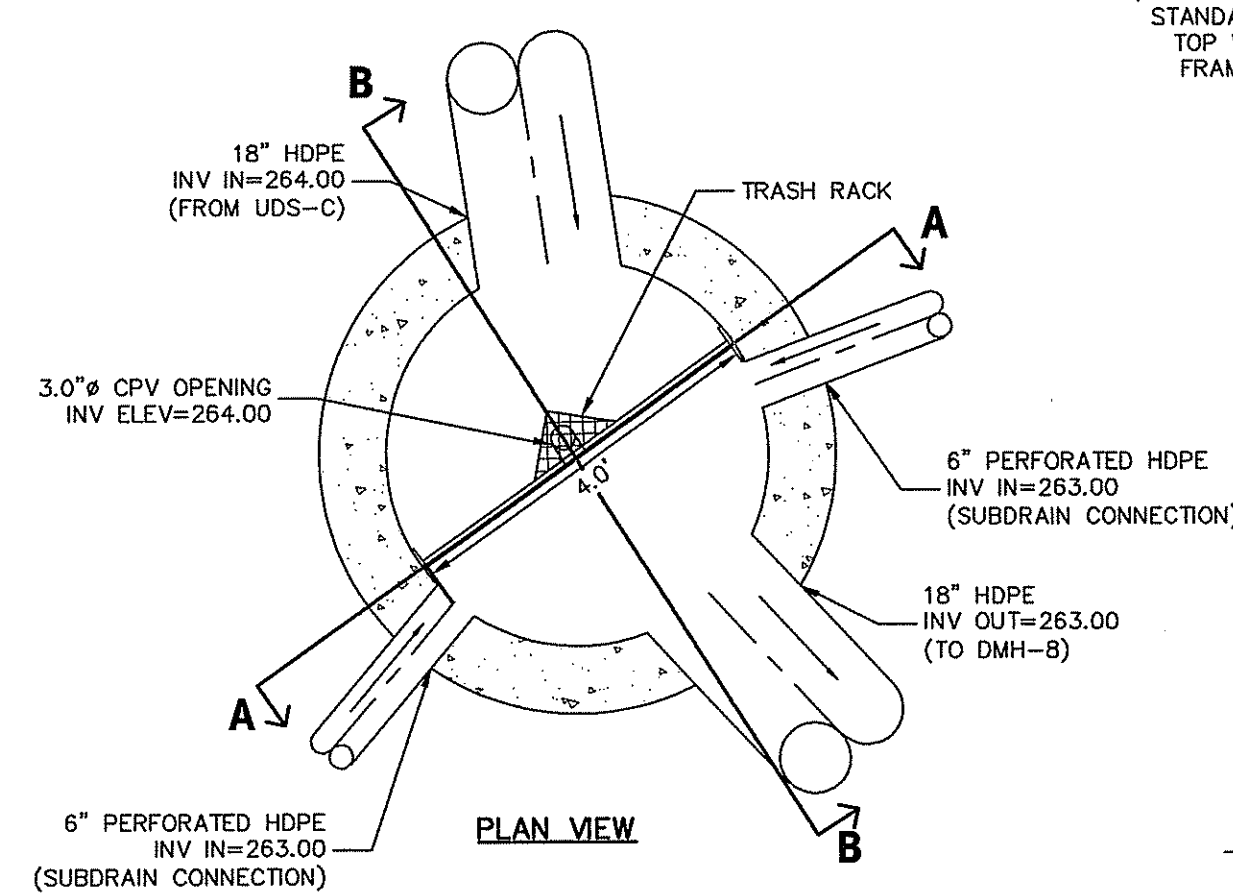
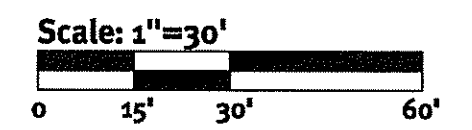
UDS-C TABLE

DESCRIPTION	UDS-C
INVERT OF PIPES	264.00
100 YEAR STORM ELEVATION	269.44
10 YEAR STORM ELEVATION	267.65
1 YEAR STORM ELEVATION	264.93

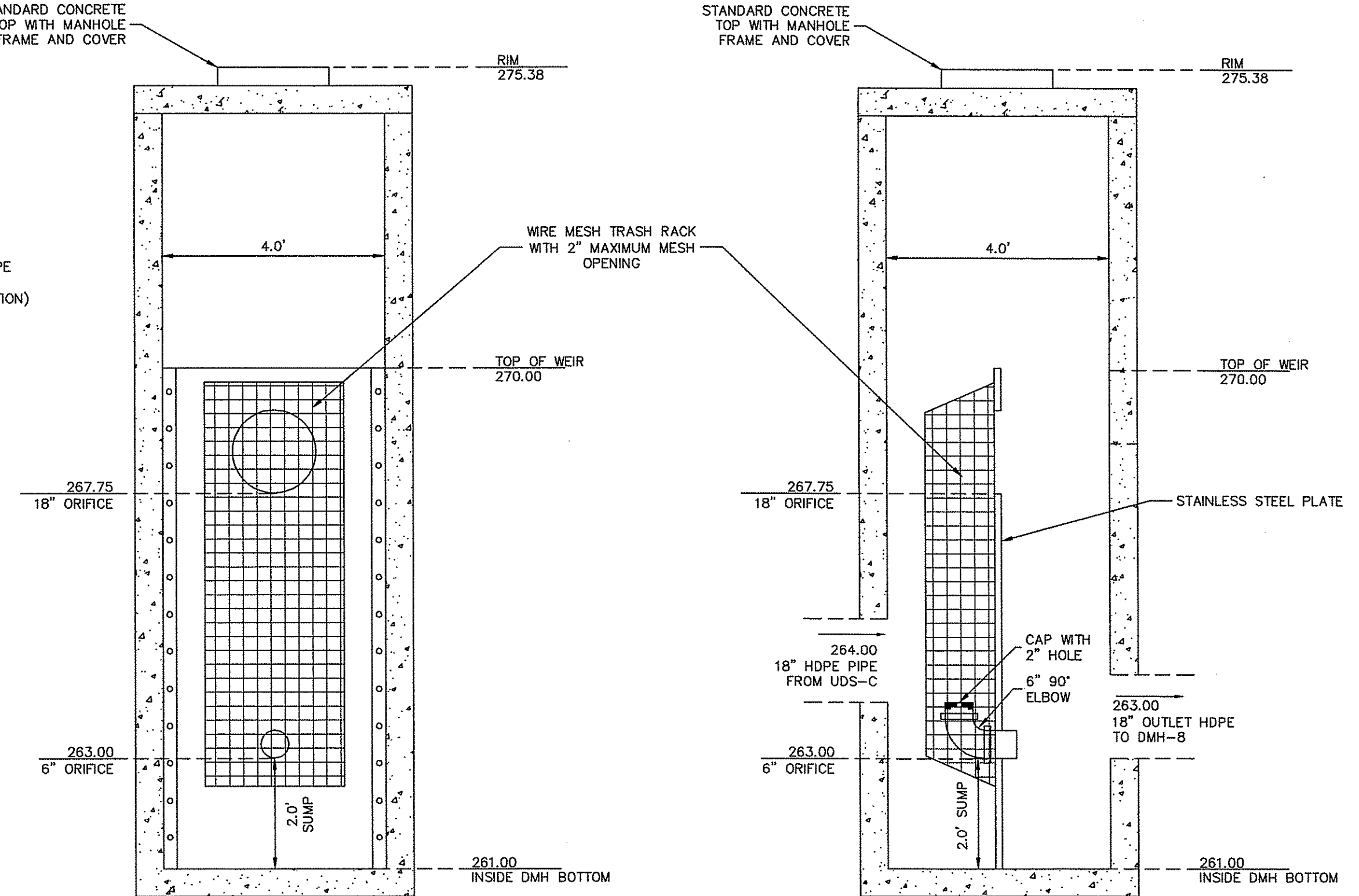
Underground Detention System C  
NOT TO SCALE



Underground Detention System C (UDS-C)



PLAN VIEW



SECTION A-A

SECTION B-B

Underground Detention  
Outlet Control Structure (OC-UDS)

SCALE: 1"=2'

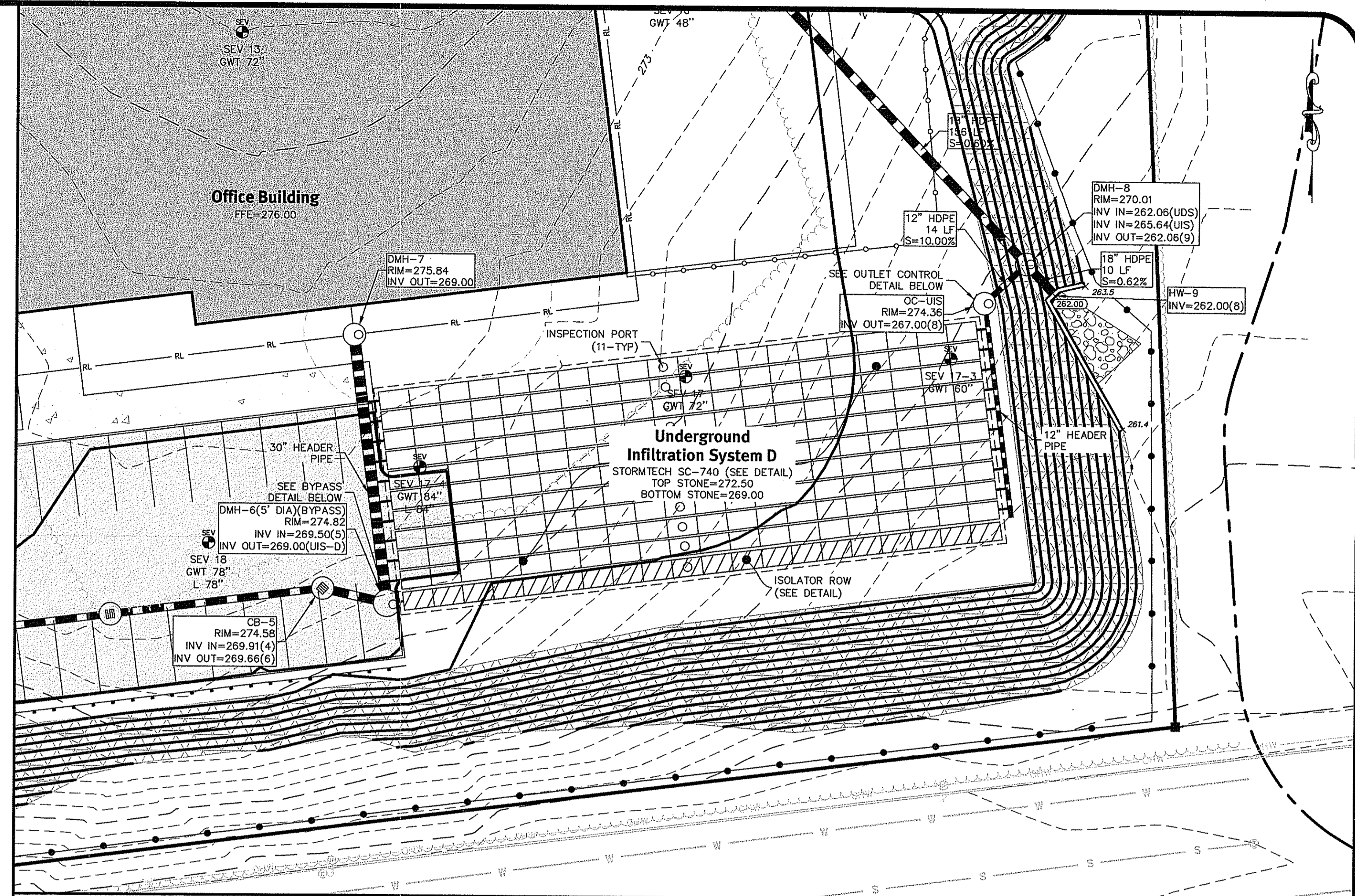
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESH WATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 30 2017 FILE # 17-0074  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Martin D. Wencik*

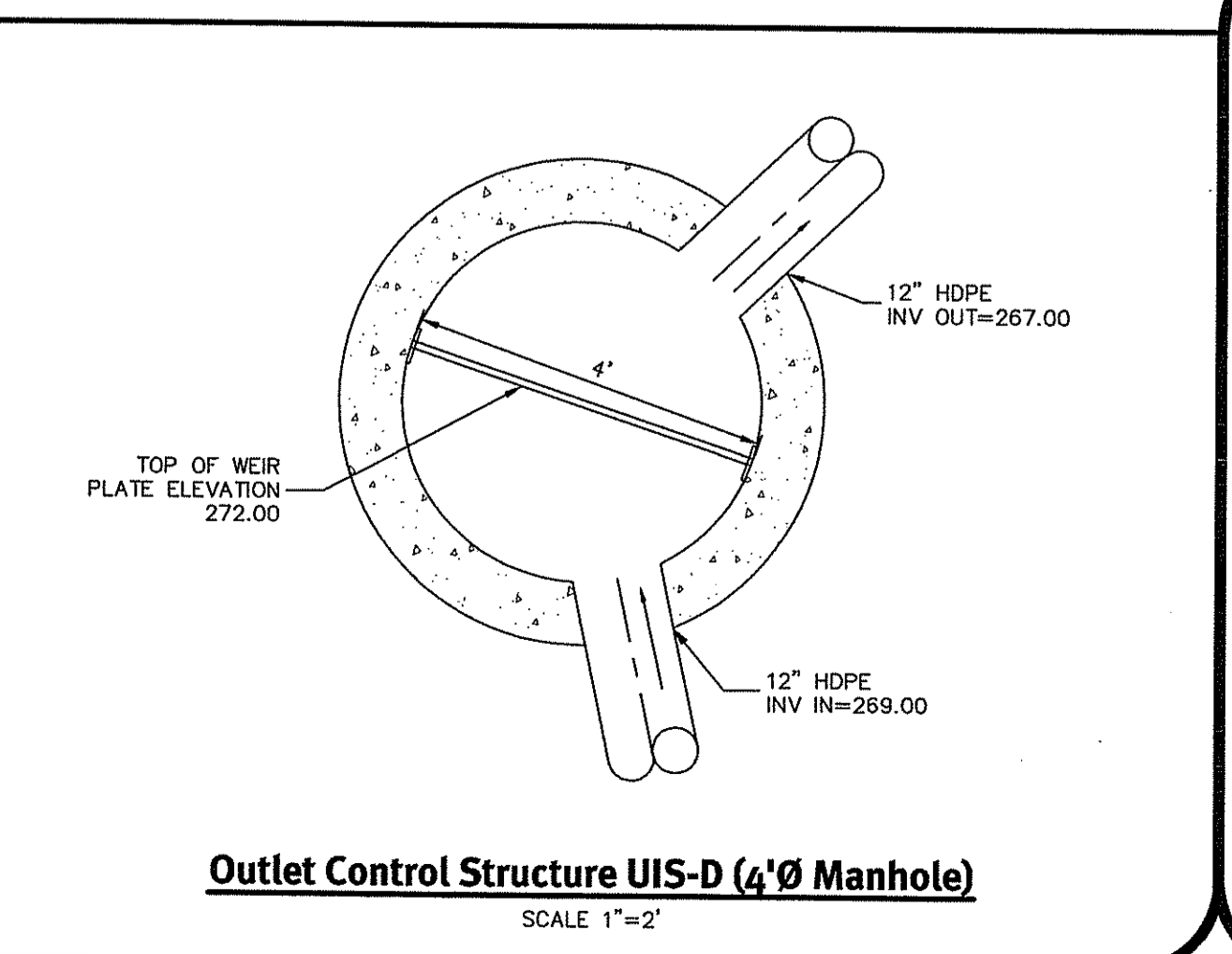
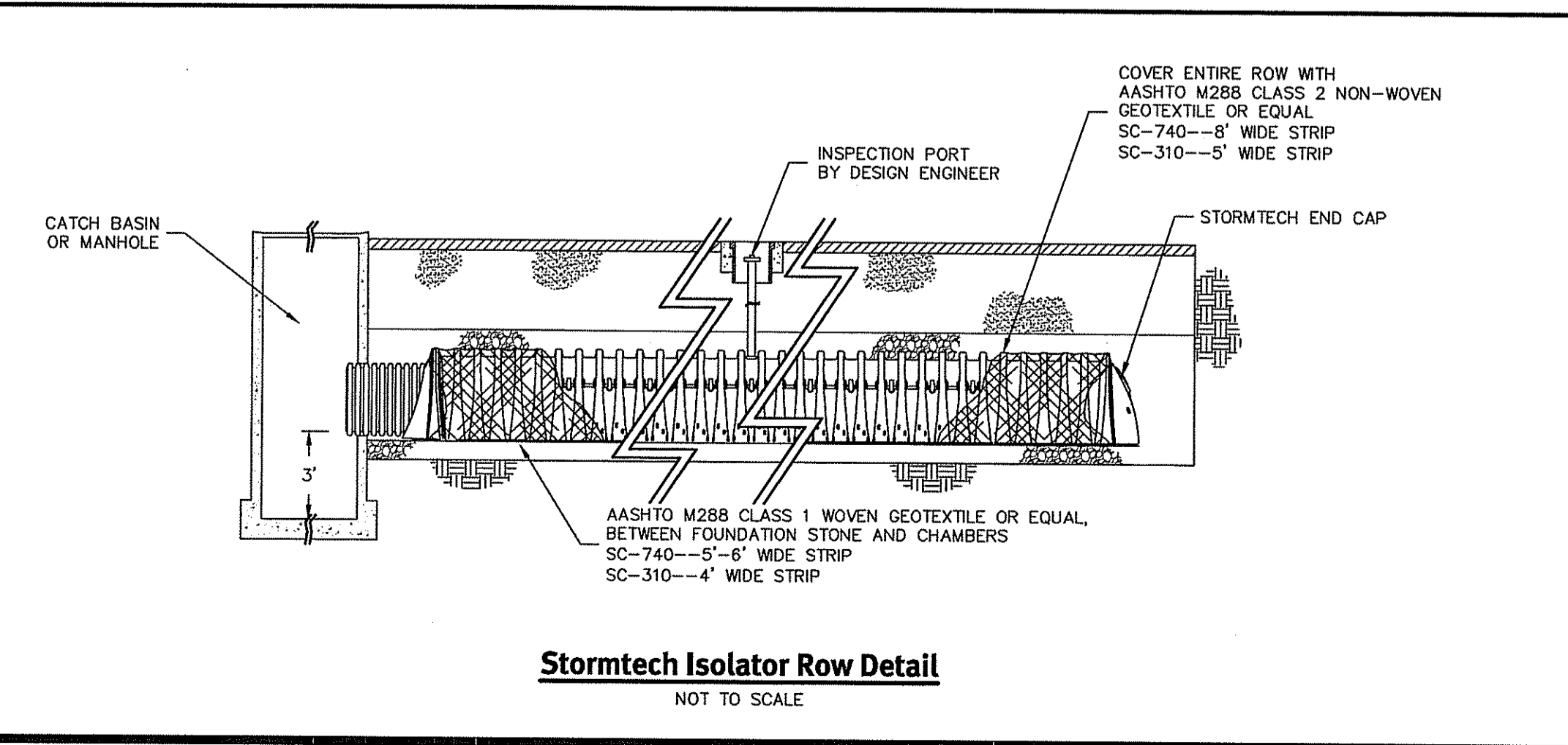
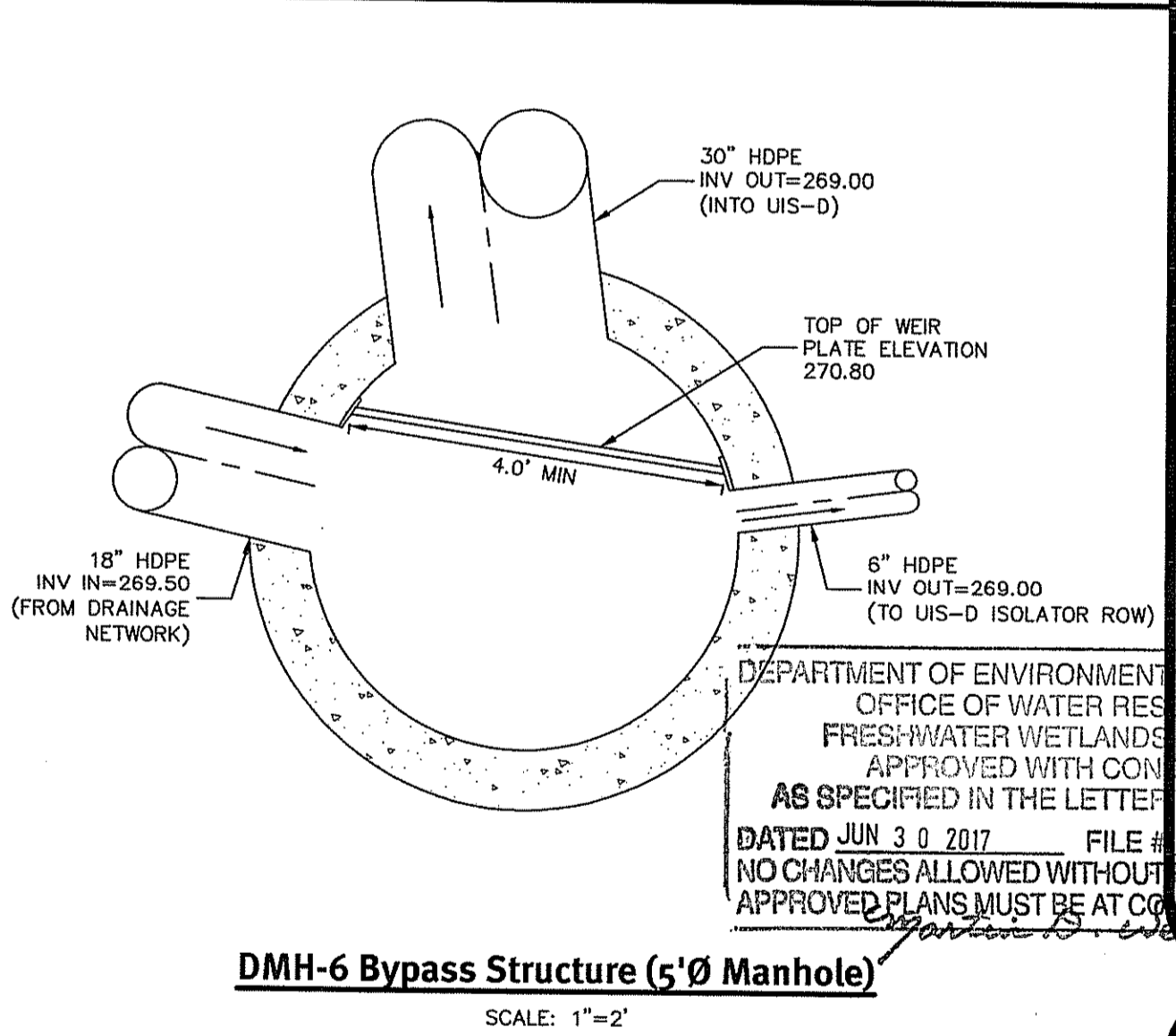
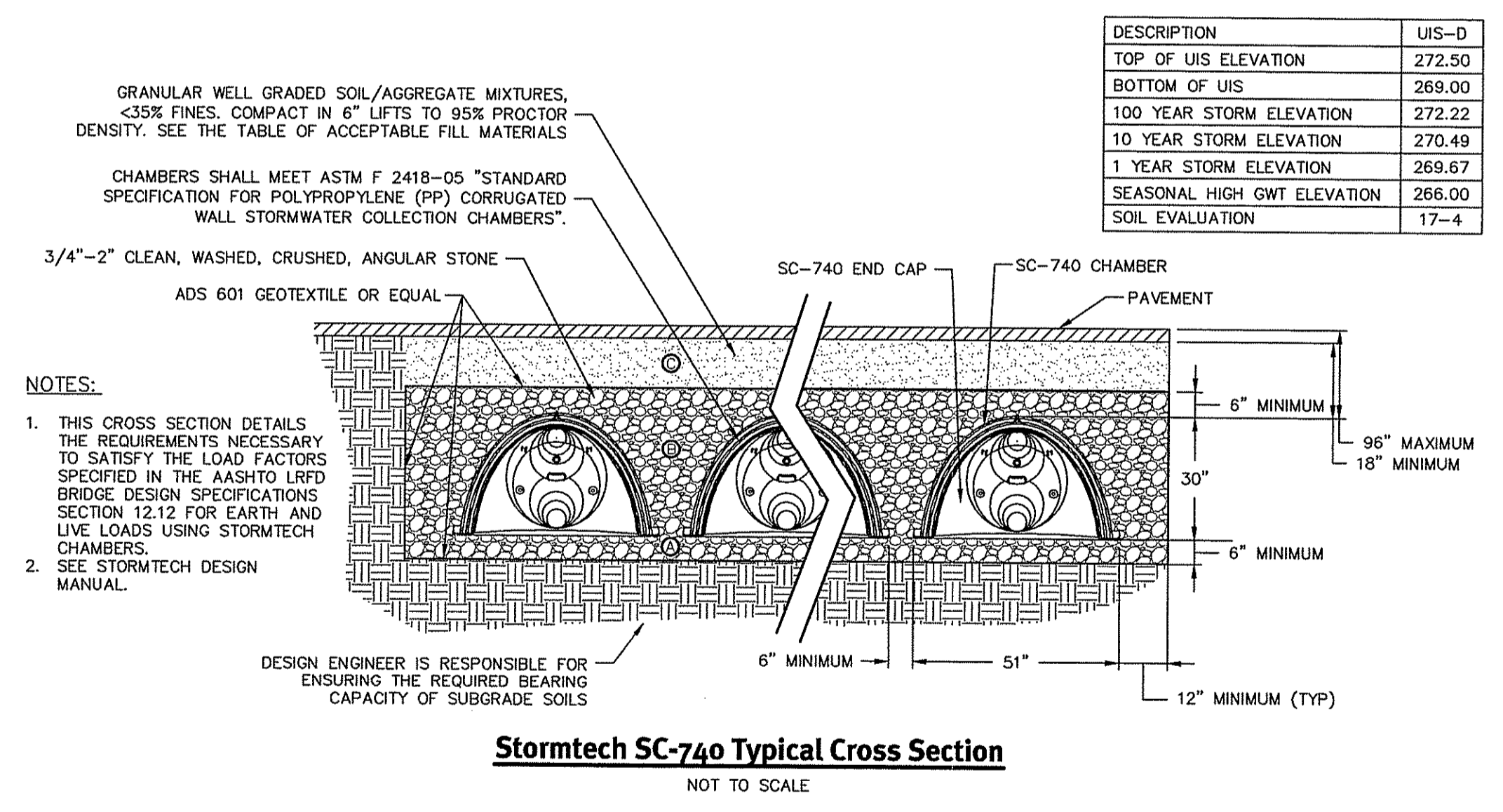
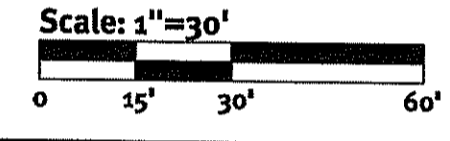
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No.	Date	Description	Drawn By: D.R.N.	Design By: J.P.C.
1	05-24-2017	REVISION RESPONSE TO COMMENTS		
2	05-22-2017	REVISION		



Underground Infiltration System D (UIS-D)



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

Boston • Providence • Newport

JASON P. CLOUGH  
No. 051010000  
REGISTERED PROFESSIONAL ENGINEER CIVIL

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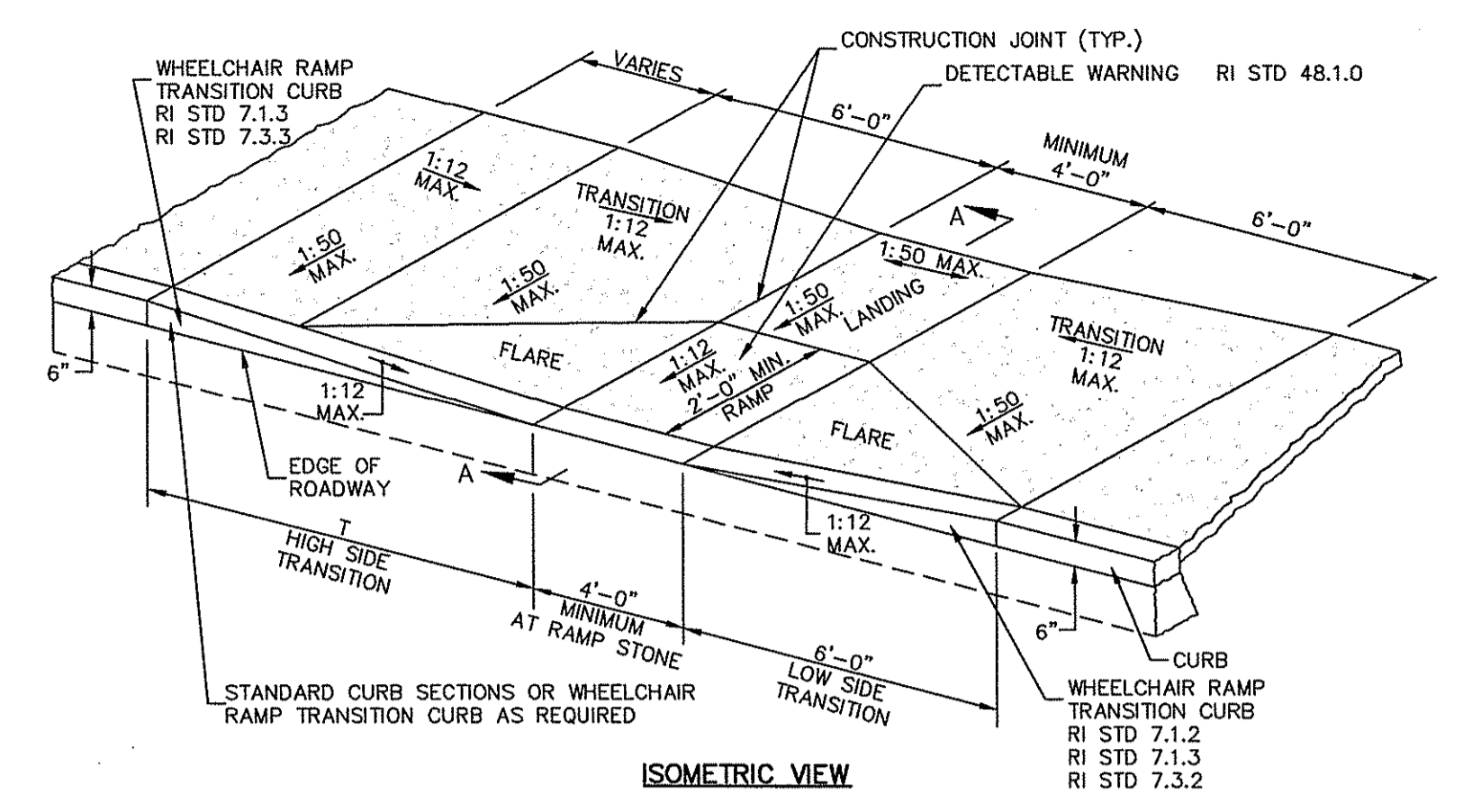
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JUN 30 2017 FILE # 17-0074  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Drawn By: D.R.N.  
Design By: J.P.C.

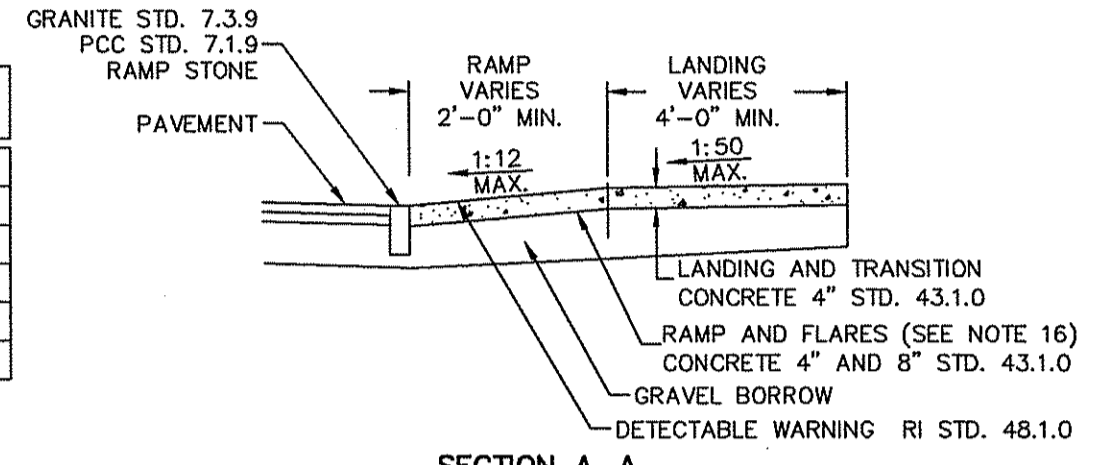
**Underground System Details**  
Lacroix Drive  
West Warwick, Rhode Island  
AP-12, Lot 474

Prepared for:  
**AGI Construction, Inc.**  
34 Appian Way, Smithfield, Rhode Island 02937  
tel. 401-416-2535

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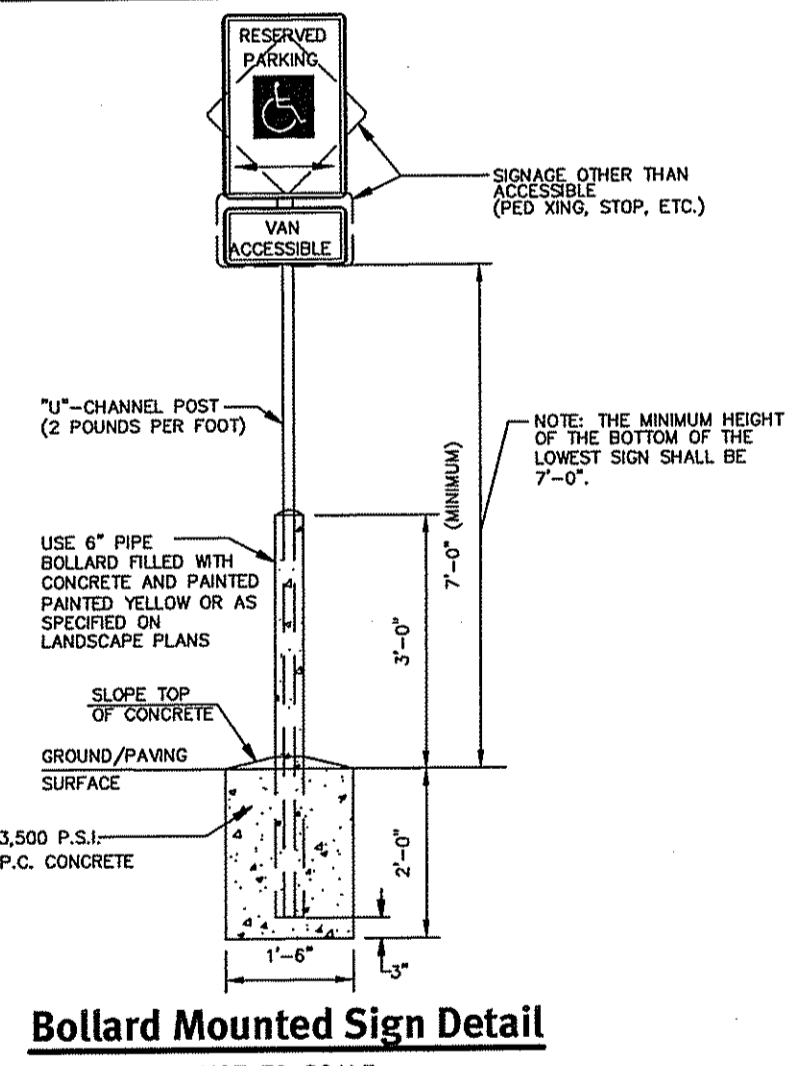


ROADWAY PROFILE GRADE	T (FT.)
0.00	7.5
0.01	9.0
0.02	11.0
0.03	13.5
0.04	19.0
0.05	30.0



- 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.
  - 8" 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.

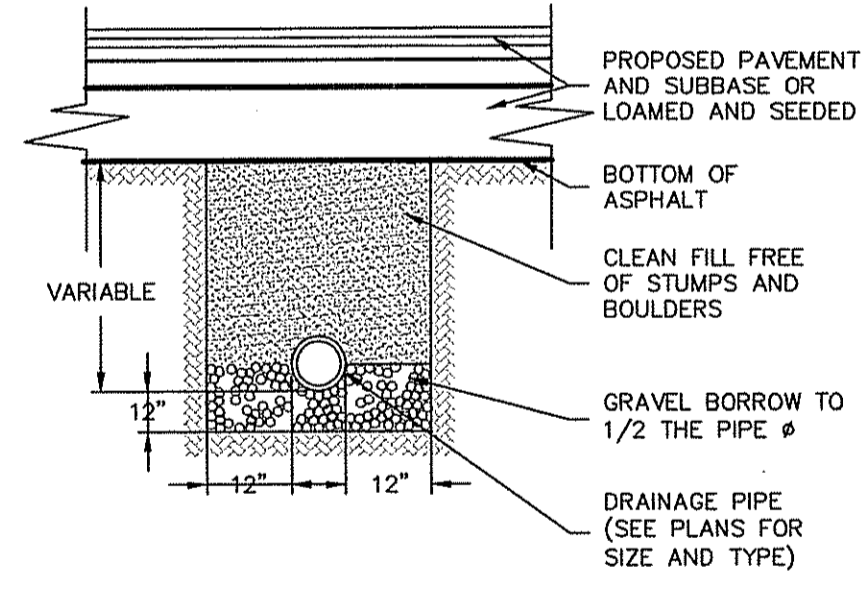
**Wheelchair Ramp (ADA)**  
NOT TO SCALE



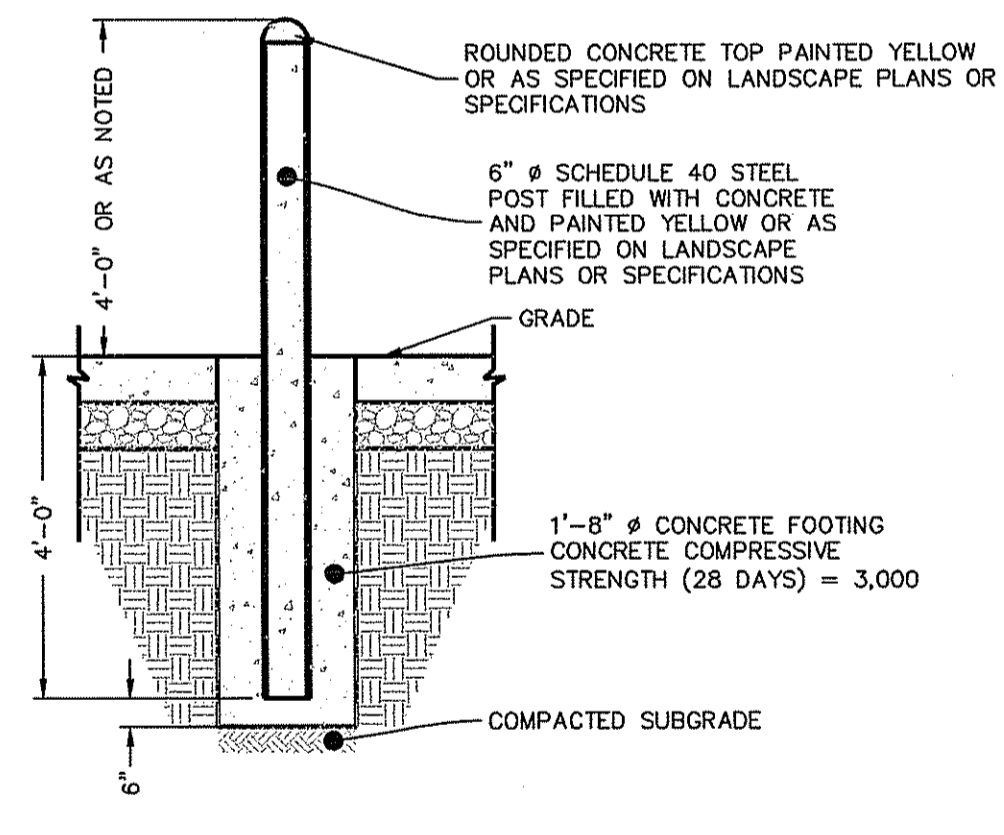
**Bollard Mounted Sign Detail**  
NOT TO SCALE

**INSTALLATION NOTES:**

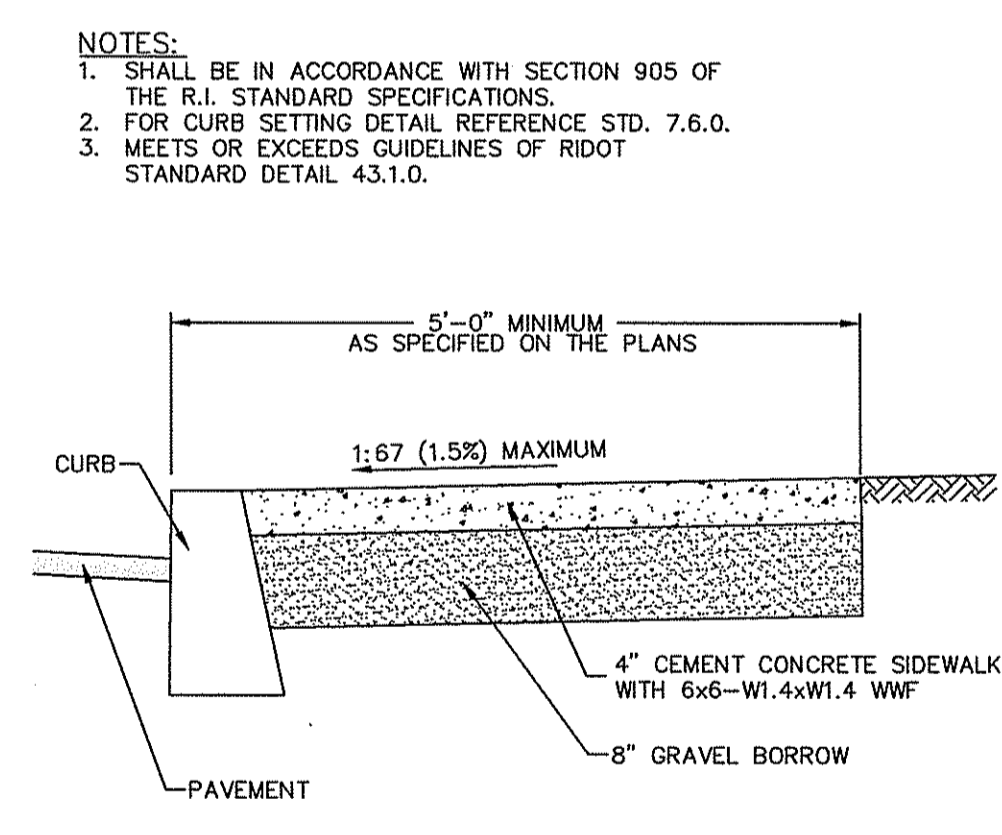
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS, LATEST EDITION.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.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



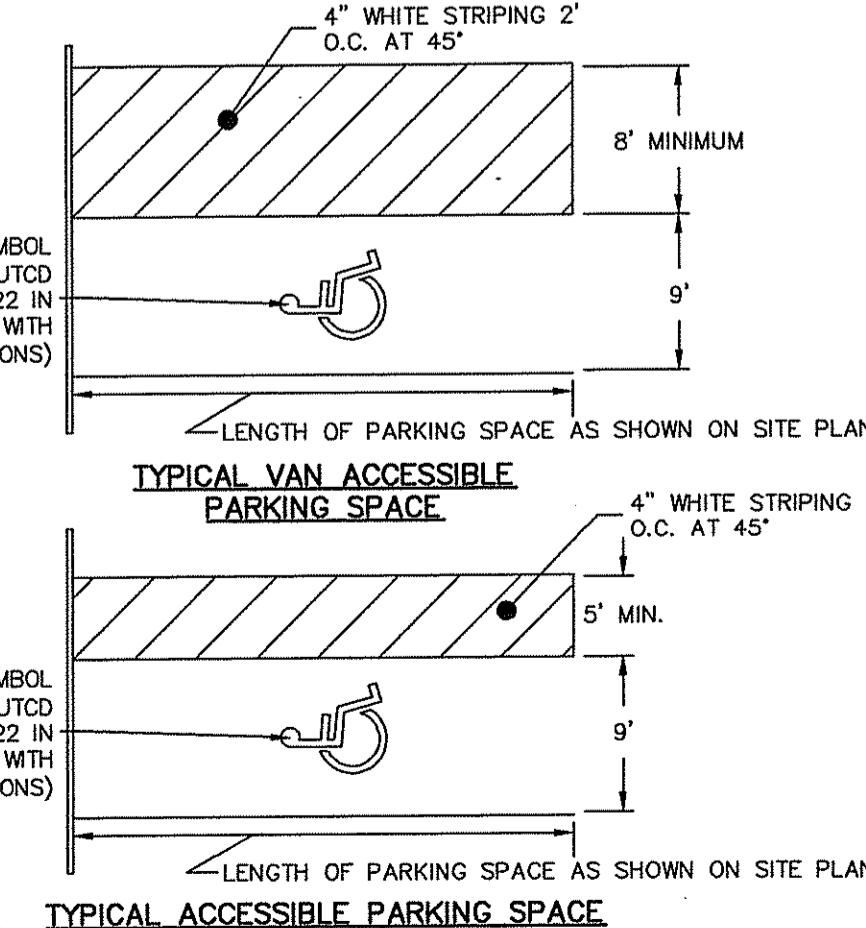
**HDPE Trench Detail**  
NOT TO SCALE



**Bollard Detail**  
NOT TO SCALE

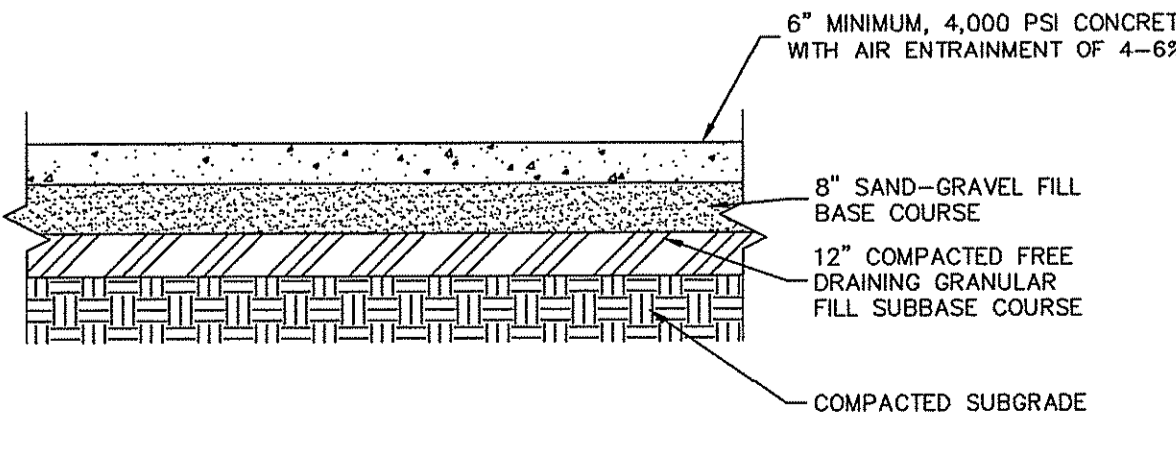


**Cement Concrete Sidewalk**  
NOT TO SCALE



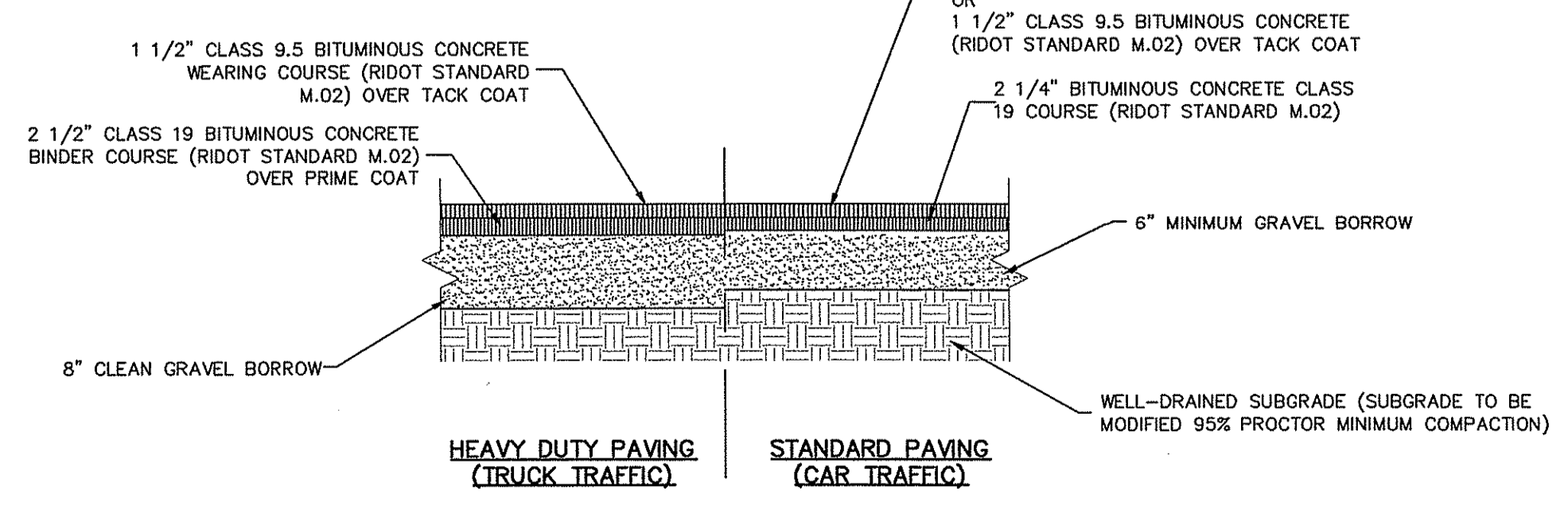
**Typical Accessible Parking Spaces**  
NOT TO SCALE

- NOTE:**
- CONTRACTOR TO REVIEW AND VERIFY SECTIONS PRIOR TO CONSTRUCTION.
  - THIS PAVEMENT SECTION DETAIL REFLECTS MINIMUM REQUIREMENTS. ENGINEER TO DETERMINE DESIGN BASED ON GEOTECHNICAL DATA OF SPECIFIC PROJECT AND DAILY TRAFFIC DESIGN REQUIREMENT. CONCRETE PAVEMENT MATERIALS SHALL CONFORM TO THE RIDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DESIGNATIONS. SUBBASE AND BASE COURSES SHOULD BE COMPACTED IN 1" (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557. FILL BELOW THE SUBBASE SHOULD BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY.
  - CONCRETE PAVEMENT SECTION TO HAVE WELDED WIRE STEEL REINFORCING WITH A MINIMUM STEEL AREA OF 0.011 SQUARE INCHES PER FOOT IN EACH DIRECTION (GRADE-60 6" X 6" W5.5" X W5.5" WELDED WIRE FABRIC).
  - CONTROL JOINTS SHALL BE CUT IN BOTH DIRECTIONS AT A MAXIMUM SPACING OF 15' O.C. EXPANSION JOINTS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 80'. THE CONTROL JOINTS SHALL BE CUT INTO THE SLABS AS SOON AS THE CONCRETE IS CAPABLE OF SUPPORTING THE CUTTING EQUIPMENT BUT IN NOT CASE MORE THAN 8 HOURS AFTER CONCRETE PLACEMENT.
  - THE EXPANSION JOINTS SHALL BE SEALED WITH AN AASHTO APPROVED ELASTOMERIC JOINT SEALER. SLABS SEPARATED BY AN EXPANSION JOINT SHOULD BE TIED TOGETHER WITH SMOOTH STAINLESS STEEL DOWELS THAT ARE 1 1/2" Ø, 30" LONG AND LOCATED 18" O.C. DOWELS SHALL BE SLEEVED AND GREASED USING STAINLESS STEEL SLEEVES ON ONE SIDE OF THE JOINT TO ALLOW FOR MOVEMENT WHEN CRACKING. THROUGHOUT THE LENGTH OF THE JOINT. ALTERNATELY, A 3/8" BY 4 1/2" DIAMOND DOWEL AT AN 18" SPACING MAYBE BE SUBSTITUTED FOR THE SMOOTH DOWEL. DO NOT EXTEND THE SLAB REINFORCEMENT THROUGH THE EXPANSION JOINT.



**Typical Heavy-Duty Concrete 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.



**Typical Pavement Section**  
NOT TO SCALE

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No.	DATE	DESCRIPTION	By:	Design By: J.P.C.
1	05-28-2017	ISSUED FOR CONSTRUCTION	J.P.C.	
2	05-28-2017	ISSUED FOR CONSTRUCTION	J.P.C.	

OFFICE OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
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*Martin D. Wenzel*

**Site Details**  
**Lacroix Drive**  
West Warwick, Rhode Island  
Prepared for:  
**AGI Construction, Inc.**  
34 Appian Way, Smithfield, Rhode Island 02917  
Tel: 401-410-2595