

# SITE PLAN SET

## FOR

# MATTESON RIDGE CONDOS

## PLAT MAP 12, LOT 20

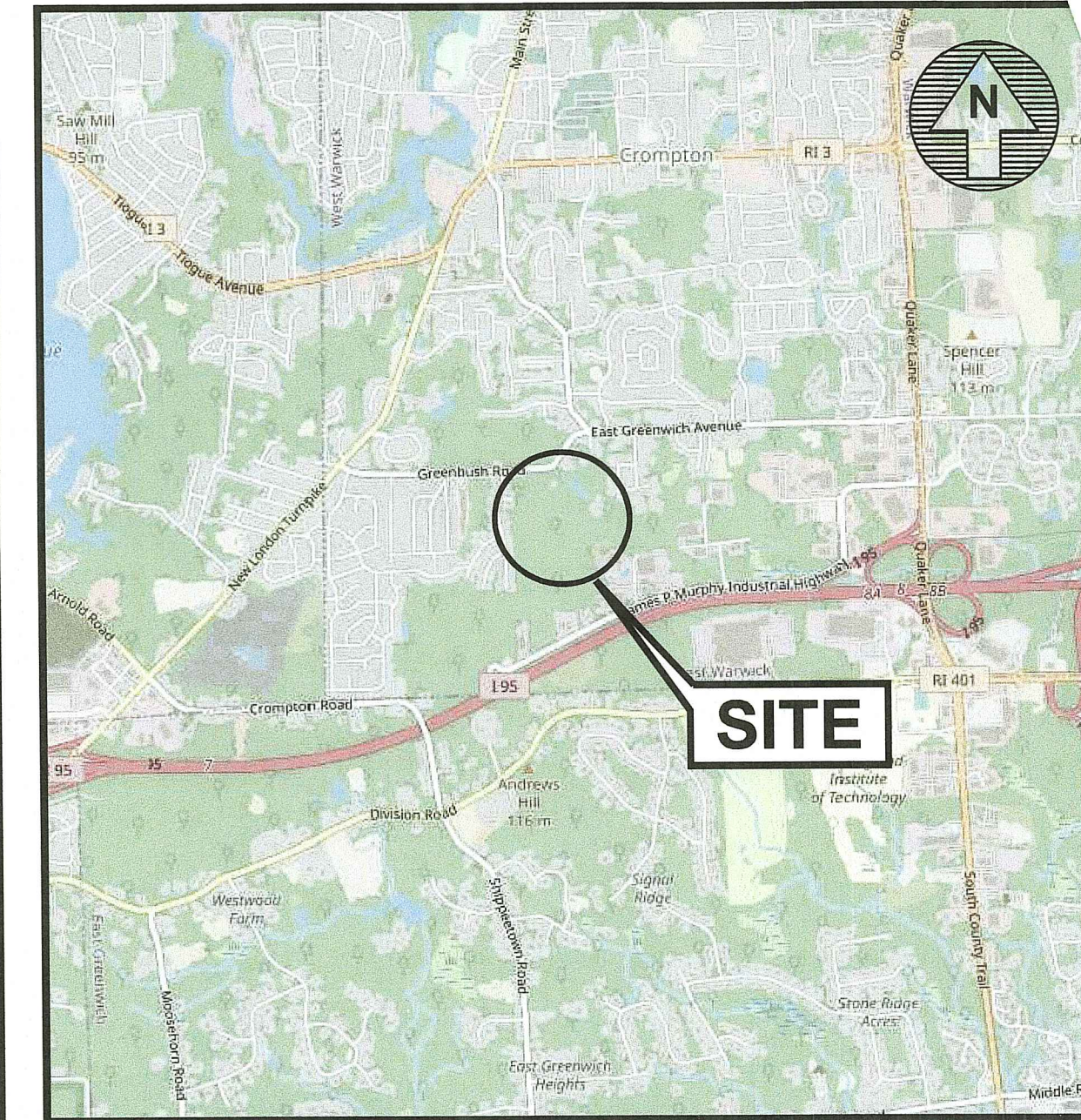
## 175 GREENBUSH ROAD

## WEST WARWICK, RHODE ISLAND

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

**NOTE PER DEM:**

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



**LOCATION MAP**  
NOT TO SCALE

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**OWNER**

MATTESON RIDGE LP  
650 S. NORTHLAKE BOULEVARD, SUITE 450  
ALTAMONTE SPRINGS, FL 32701

**PREPARED FOR**

LeCESSE DEVELOPMENT CORP.  
650 S. NORTHLAKE BOULEVARD, SUITE 450  
ALTAMONTE SPRINGS, FL 32701

**ENGINEERS and LAND SURVEYORS**



- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

**CROSSMAN ENGINEERING**

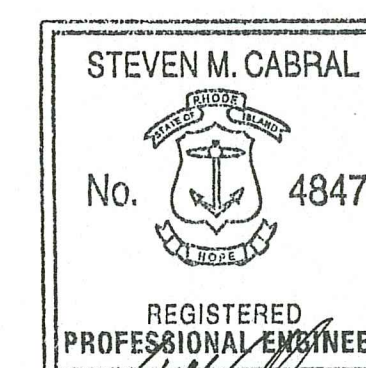
Rhode Island 151 Centerville Road Warwick, RI 02886 Phone: (401) 738-5660	Massachusetts 103 Commonwealth Avenue North Attleboro, MA 02763 Phone: (508) 695-1700
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APRIL 2023  
SHEET 1 OF 29

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE # 23-019  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Randy Clapton*



RI Environmental Management  
AUG - 9 2023

**REVISIONS:**

No.:	DATE:	DESCRIPTION:
1	7/10/23	RIDEM COMMENTS
2	8/7/23	RIDEM COMMENTS

**GENERAL NOTES**

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. ALL WORK WITHIN THE ROW WILL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, JUNE 21, 2019, AND STANDARD DETAILS, AS AMENDED AND TOWN OF WEST WARWICK LAND DEVELOPMENT AND SUBDIVISION REGULATIONS.
3. THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
4. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.
6. ALL DISTURBED AREAS SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN.
7. THE PRIVATE ROADWAY GRADES HAVE BEEN REVISED AS SHOWN ON THE GRADING AND DRAINAGE PLANS.
8. BITUMINOUS CAPE COD BERM SHALL BE INSTALLED AT EDGE OF PAVEMENT AT PROPOSED ROADS.

**LAYOUT NOTE**

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE ROADWAY RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, LATEST REVISIONS.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

**CONSTRUCTION NOTES**

1. THE CONTRACTOR IS REQUIRED TO OBTAIN AND REVIEW ALL ENGINEERING AND PERMIT DOCUMENTS COMPLETED FOR FINAL DESIGN.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF UTILITIES ON SITE. THE COORDINATION IS NECESSARY FOR THE ENGINEER TO SCHEDULE SITE INSPECTIONS AS REQUIRED.
3. CURRENTLY, BOYER ASSOCIATES HAS MAINTAINED PHASE 1 AS-BUILT INFORMATION FOR ALL THE UTILITY INSTALLATION, HOWEVER, THE PHASE 2 CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH BOYER ASSOCIATES FOR ALL PHASE 2 AS-BUILTS. AS-BUILT INFORMATION INCLUDES PIPE DEPTH NOTATIONS AND SWING TIE LOCATIONS (2 MINIMUM) FROM NEW PIPE TO PERMANENT STRUCTURES.

**FLOOD ZONE NOTE**

THE SITE IS WITHIN FLOOD ZONE X. AREAS TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN, ACCORDING TO FEMA FLOOD MAP CENTER FIRM MAP NUMBER 44003C0117H, MAP REVISED OCTOBER 2, 2015.

**PROPOSED PAVEMENT STRUCTURE - STANDARD PAVEMENT**

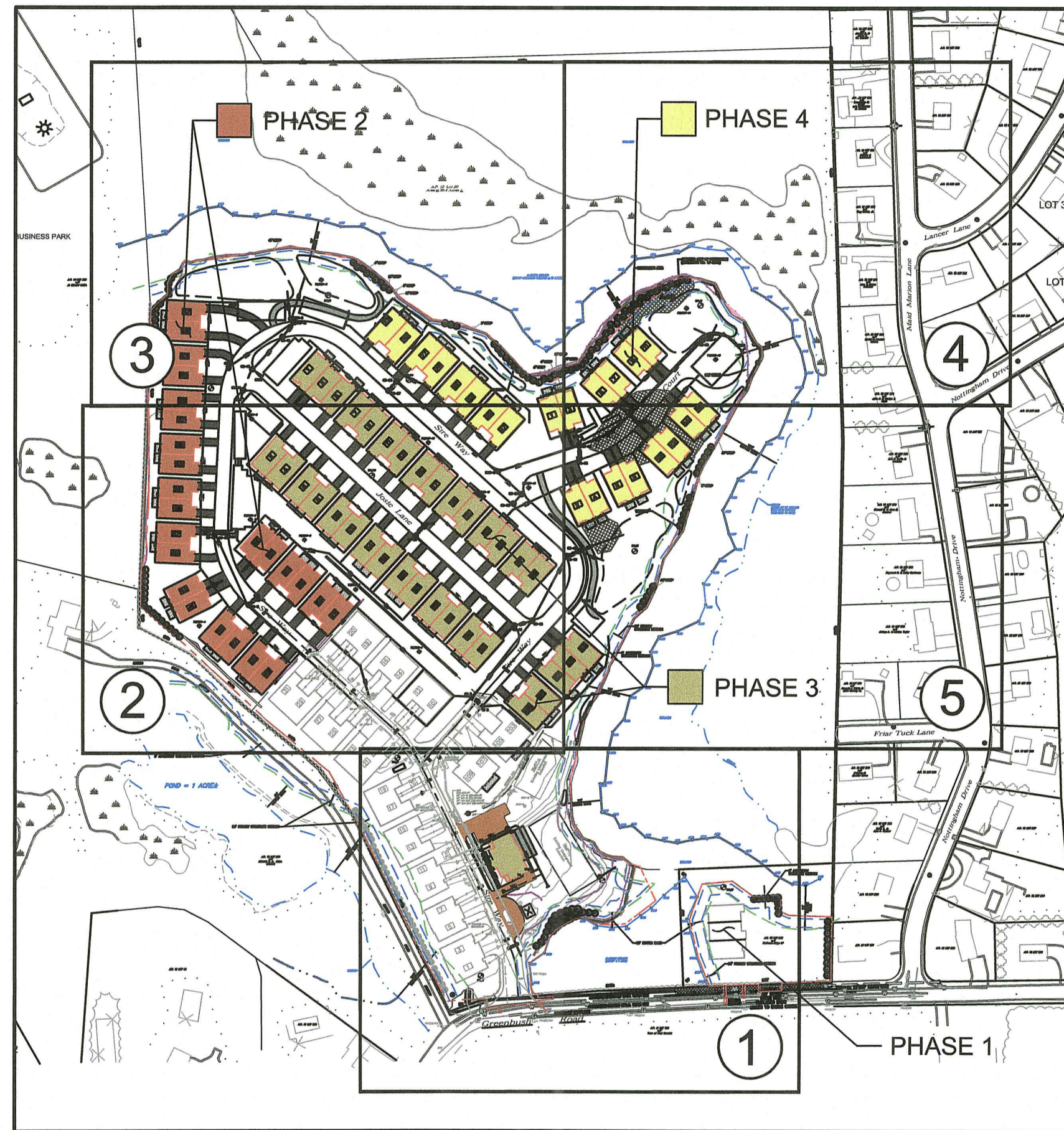
- 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, CLASS 9.5 HMA
- 2 1/2" BITUMINOUS CONCRETE BASE COURSE, CLASS 12.5 HMA
- 12" GRAVEL BORROW SUBBASE

**PROPOSED PAVEMENT STRUCTURE - POROUS PAVEMENT**

POROUS PAVEMENT IS TO BE USED FOR THE FIRST 250' OF ROADWAY FROM GREENBUSH ROAD. REFER TO MISCELLANEOUS DETAILS FOR POROUS PAVEMENT DETAIL.

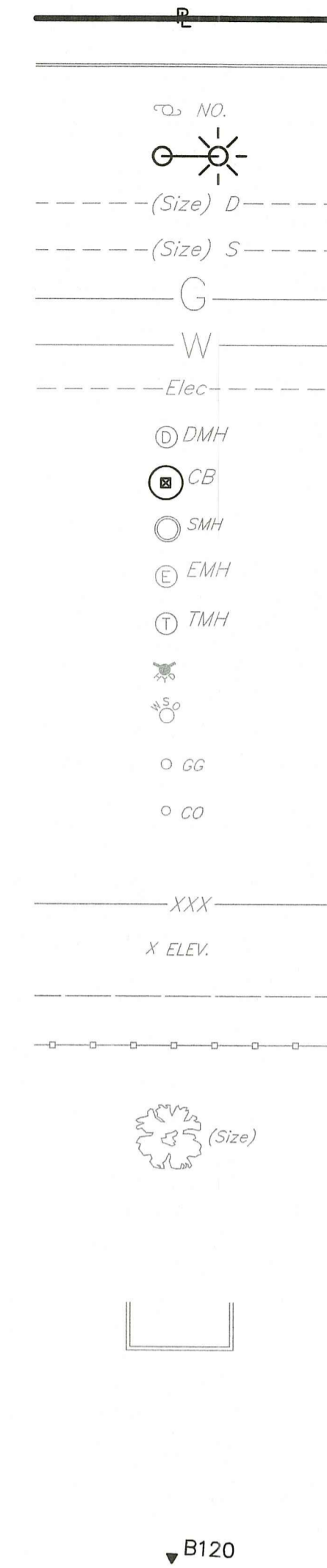
**PHASING NOTE**

PHASE 1 IS AREAS CURRENTLY UNDER CONSTRUCTION AND PHASE 2, PHASE 3, AND PHASE 4 ARE AREAS TO BE CONSTRUCTED.

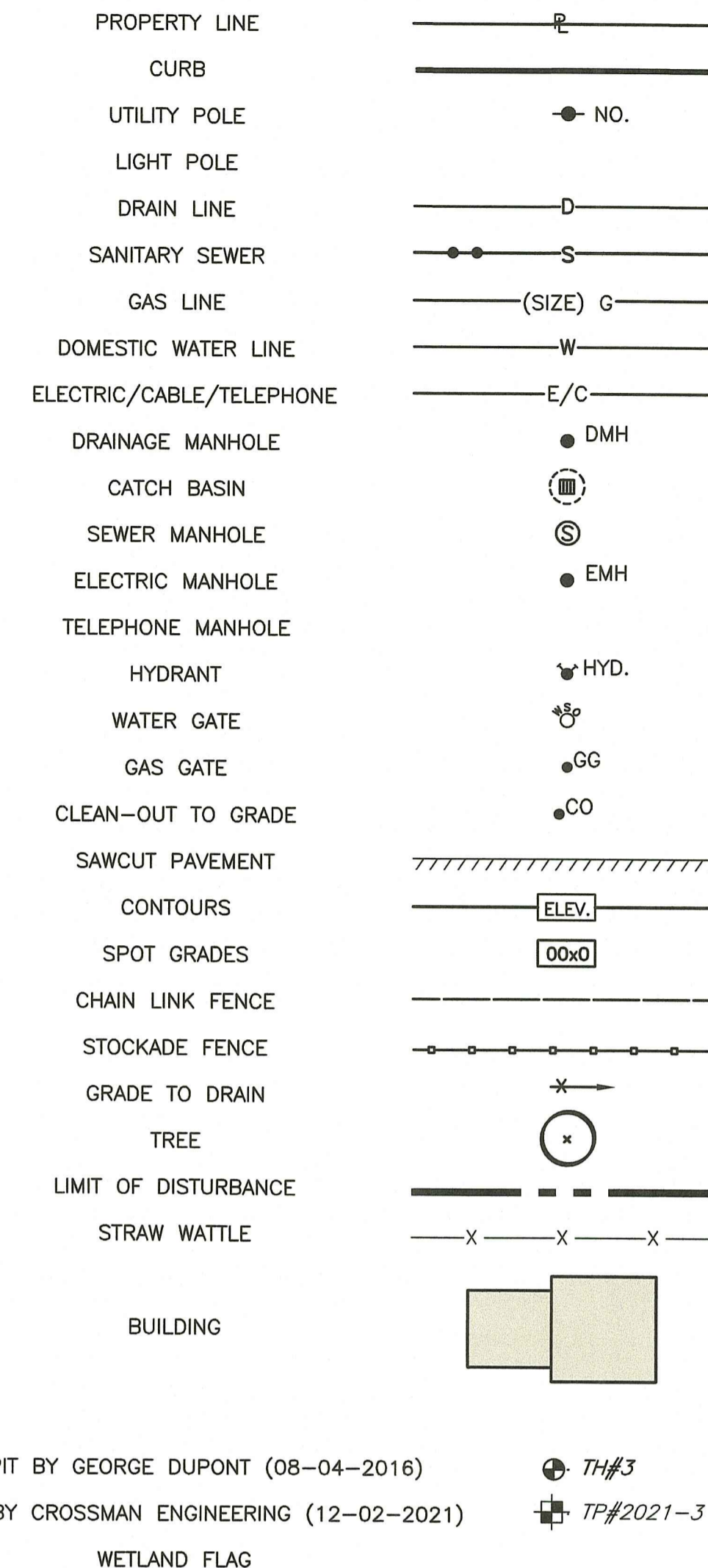


KEY PLAN  
SCALE: 1"=200'

**EXISTING**



**LEGEND**



TEST PIT BY GEORGE DUPONT (08-04-2016) TH#3  
TEST PIT BY CROSSMAN ENGINEERING (12-02-2021) TP#2021-3  
WETLAND FLAG

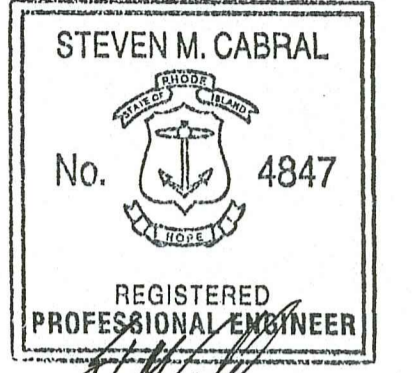


**Crossman Engineering**

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Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700

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**PROJECT TITLE:**  
  
MATTESON RIDGE CONDOS  
(APPLIC. NO. 17-0080,  
RIDDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

**PREPARED FOR:**  
  
LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

**DRAWING TITLE:**  
**GENERAL NOTES and  
LEGEND**

**DATE:** APRIL 2023 **SCALE:** NO SCALE

**DWG. NAME:** 2213-02-NOTES.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE #: 22-010  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RI Environmental Management  
AUG 09 2023  
Office of Water Resources

**DRAWING NUMBER**  
**C1**  
SHEET: 2 OF 29



### Crossman Engineering

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*Handwritten signature and date: 8-8-23*

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*Handwritten signature: Andy Cloutier*

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**MATTESON RIDGE CONDOS**  
(APPLIC NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)  
175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

### DRAWING TITLE: OVERALL EXISTING CONDITIONS PLAN

DATE: APRIL 2023 SCALE: 1"=100'

DWG. NAME: 2213-03-EXCN.dwg

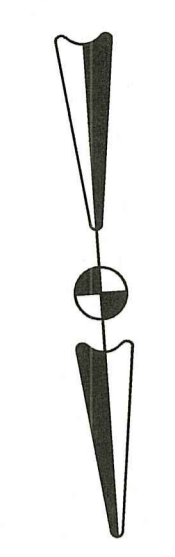
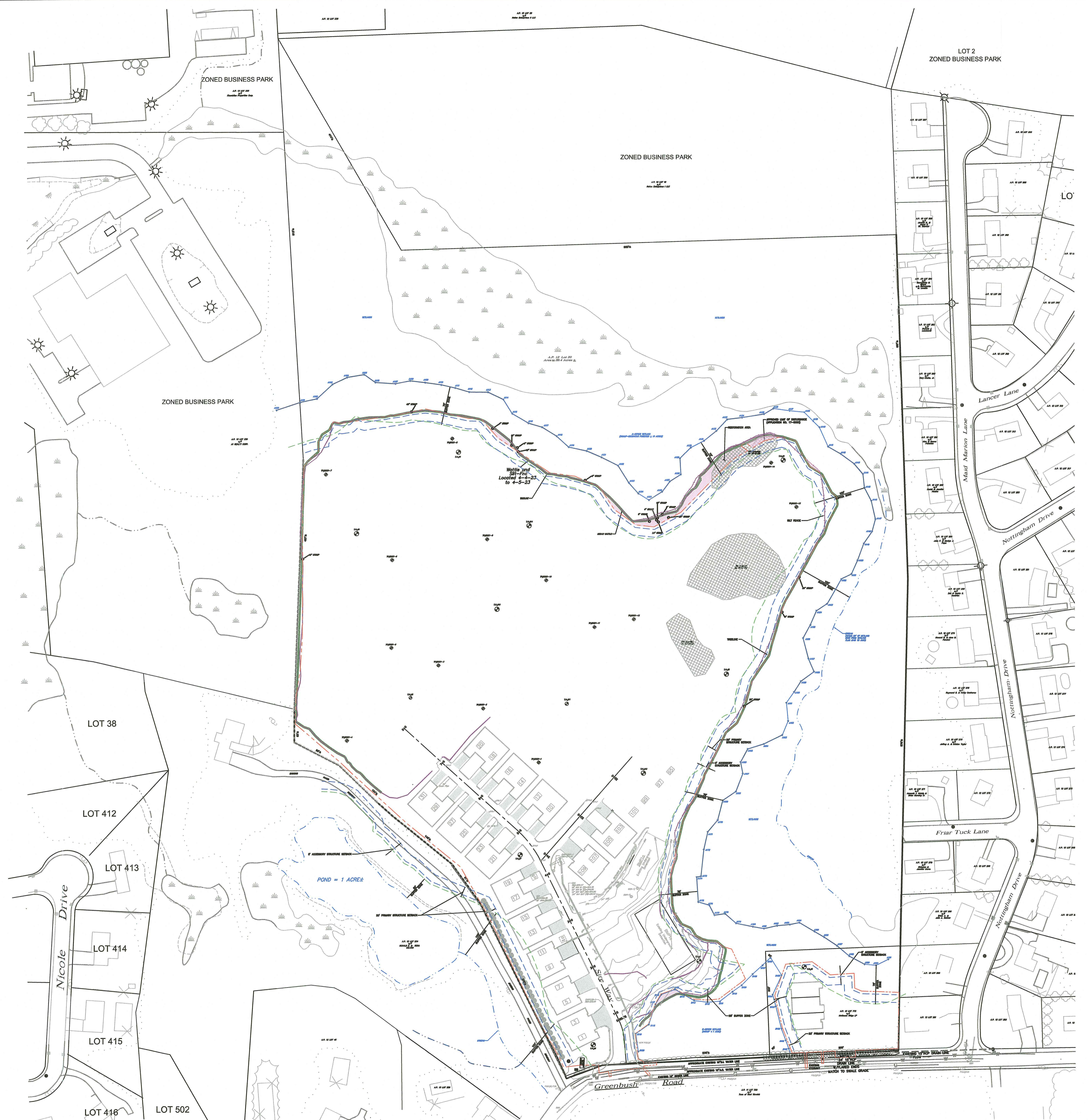
REVISIONS		
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

RI Environmental Management  
AUG 09 2023  
Office of Water Resources

DRAWING NUMBER

# C2

SHEET: 3 OF 29

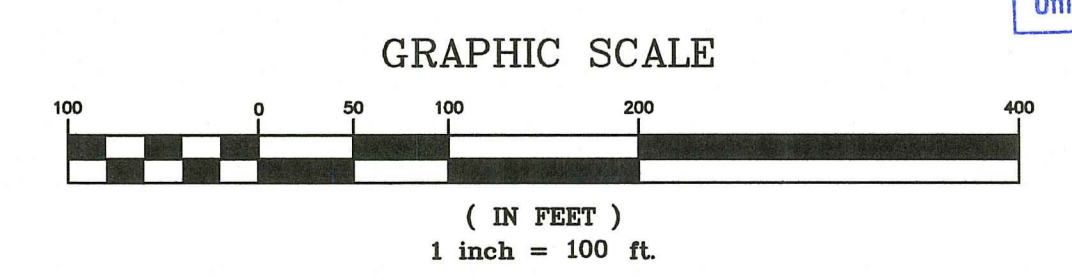


### NOTES

- EXISTING CONDITION SURVEY HAS BEEN CONDUCTED BY BOYER ASSOCIATES. THE LOCATIONS SHOWN IN THIS PLAN SET HAS BEEN PROVIDED BY BOYER ASSOCIATES.
- SITE CLEARING HAS BEEN CONDUCTED UNDER RIDEM WETLANDS 17-0080, RIPDES RIR 101570 AND UIC 001771.
- THE WETLAND FLAGS SHOWN IN THIS PLAN SET WERE ORIGINALLY DELINEATED BY ECOTONES ENVIRONMENTAL CONSULTANTS PRIOR TO THE ORIGINAL PERMITS OBTAINED FROM RIDEM. THE ORIGINAL FLAGS ARE SINCE GONE BUT HAVE BEEN REPLACED AT THE SAME LOCATIONS BY BOYER ASSOCIATES.

### LEGEND

- WETLAND FLAG
- WETLAND LINE
- STREAM LINE
- INSTALLED SILT FENCE
- INSTALLED STRAW WATTLES
- WETLAND BUFFER ZONE
- STRUCTURES SETBACK
- APPROVED LIMIT OF DISTURBANCE (APPLICATION NO. 17-0080)
- TREELINE
- RESTORATION AREA





RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
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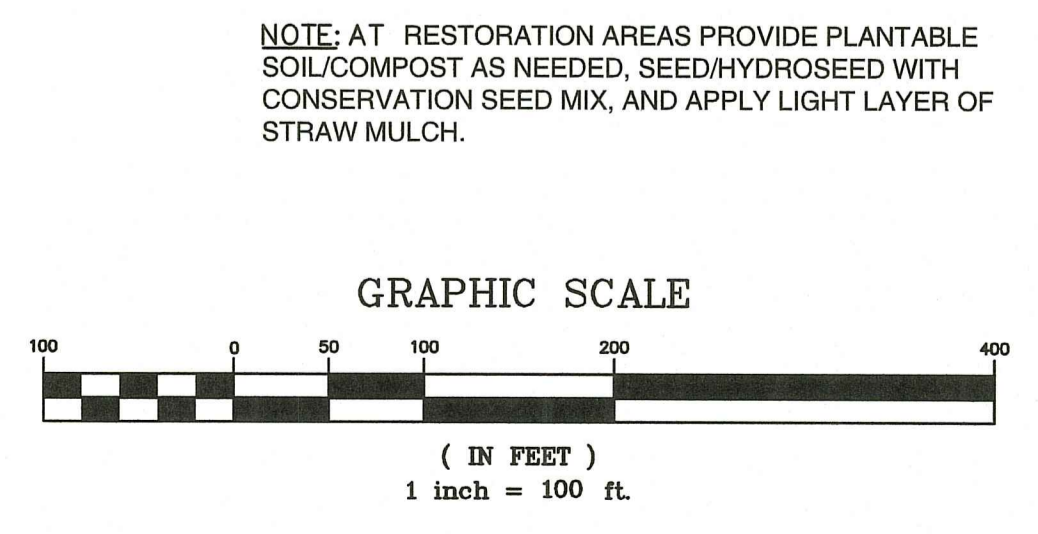
*Andy Clapton*

**PLANTING LIST**

TREES	
Acer rubrum	Red Maple
Pinus strobus	White Pine
Thuja occidentalis	Northern White Cedar
SHRUBS	
Vaccinium corymbosum	Highbush Blueberry

**LEGEND**

--- (dashed blue)	WETLAND FLAG
--- (dashed blue)	WETLAND LINE
--- (dashed blue)	STREAM LINE
--- (dashed blue)	INSTALLED SILT FENCE
--- (dashed blue)	INSTALLED STRAW WATTLES
--- (dashed blue)	WETLAND BUFFER ZONE
--- (dashed blue)	STRUCTURES SETBACK
--- (dashed blue)	TREE LINE
--- (dashed blue)	RESTORATION AREA
--- (dashed blue)	PROPOSED STRAW WATTLES
--- (dashed blue)	PROPOSED LIMIT OF DISTURBANCE



**Crossman Engineering**  
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STEVEN M. CABRAL  
 No. 4847  
 REGISTERED PROFESSIONAL ENGINEER  
*8-8-23*

**PROJECT TITLE:**  
 MATTESON RIDGE CONDOS  
 (APPLIC NO. 17-0080,  
 RIPDES, RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

**PREPARED FOR:**  
 LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

**DRAWING TITLE:**  
 OVERALL SITE PLAN

**DATE:** APRIL 2023 **SCALE:** 1"=100'

**DWG. NAME:** 2213-04-SITE.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

Office of Water Resources  
 AUG 09 2023  
**C3**  
 SHEET: 4 OF 29

MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 2



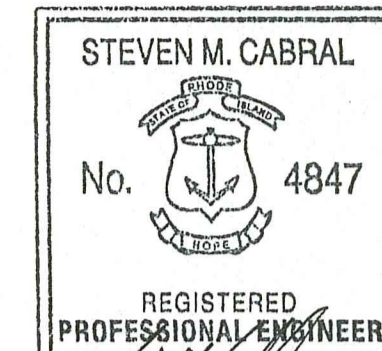
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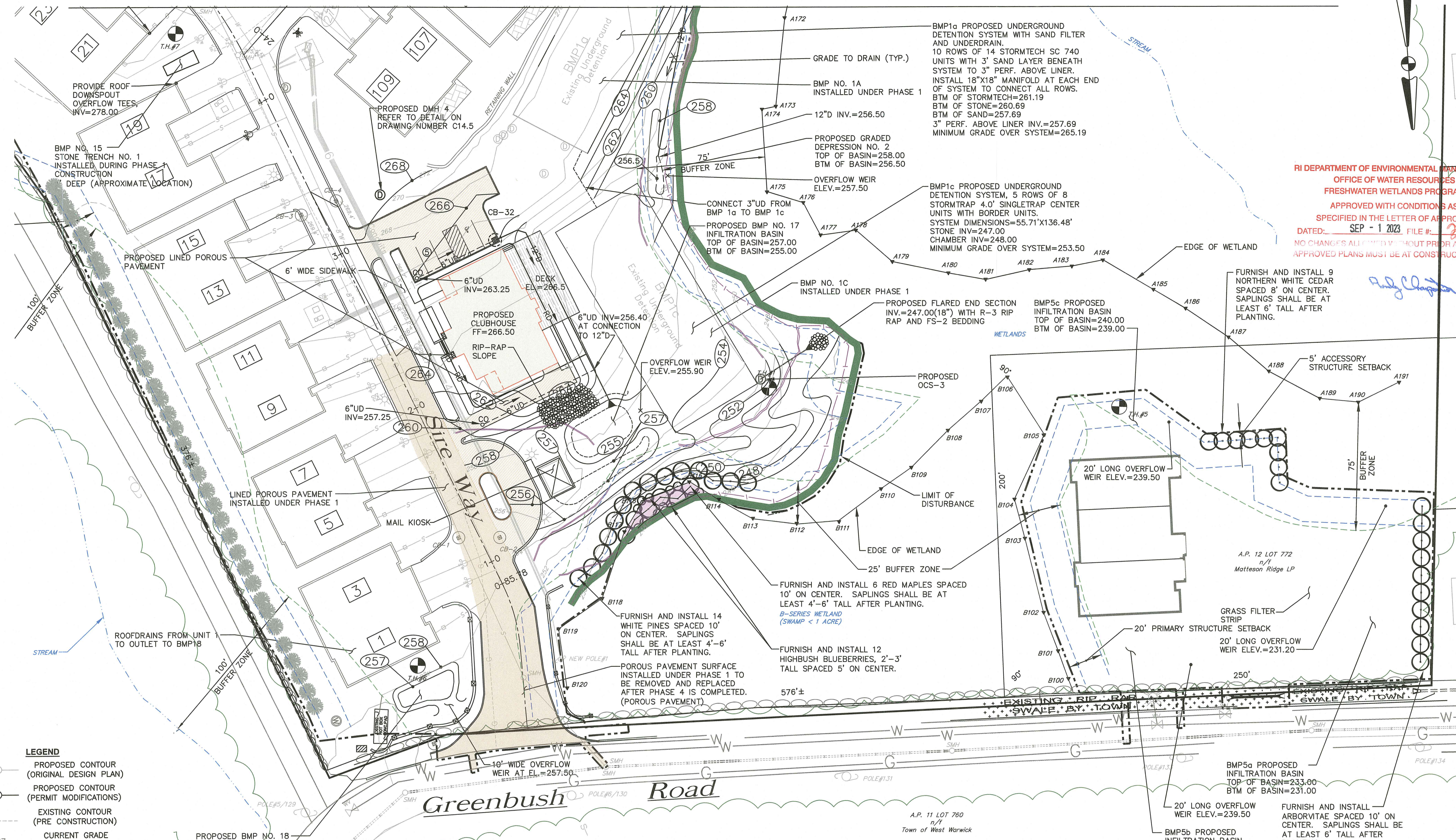
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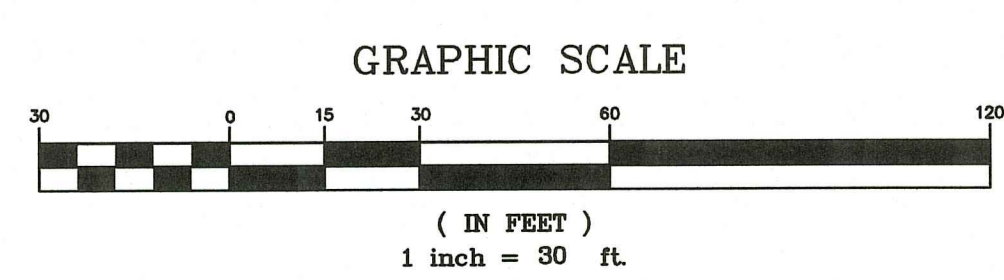


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FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE # 23-011  
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- LEGEND**
- XXX PROPOSED CONTOUR (ORIGINAL DESIGN PLAN)
  - XXX PROPOSED CONTOUR (PERMIT MODIFICATIONS)
  - EXISTING CONTOUR (PRE CONSTRUCTION)
  - x259.87 CURRENT GRADE (SITE UNDER CONSTRUCTION)
  - PROPOSED LIMIT OF DISTURBANCE
  - AS-BUILT SEWER LINE
  - AS-BUILT WATER LINE
  - AS-BUILT GAS LINE
  - AS-BUILT STANDARD PAVEMENT
  - PROPOSED POROUS PAVEMENT
  - TREE LINE
  - STREAM LINE
  - WETLAND LINE
  - A148 WETLAND FLAG
  - WETLAND BUFFER ZONE
  - STRUCTURES SETBACK
  - RESTORATION AREA
  - INSTALLED SILT FENCE
  - INSTALLED STRAW WATTLES
  - PROPOSED STRAW WATTLES



**OVERFLOW WEIR NOTE:** INSTALL PRESTO GEOWEB SLOPE PROTECTION (OR APPROVED EQUAL) AT BMP 17, BMP 18, AND DEPRESSION NO. 2 OVERFLOW WEIRS (INCLUDING SLOPES) AND LOAM AND SEED.

**CONSTRUCTION NOTE:** PHASE 1 GRADING SHOWN AROUND UNITS TO BE CONFIRMED.

**PHASE 1 ROOF DRAIN NOTES:**

- ROOF DRAINS FROM 3-11 SIRE WAY HAVE BEEN CONNECTED TO CB1.
- ROOF DRAINS FROM 13-17 SIRE WAY HAVE BEEN CONNECTED TO CB3.
- ROOF DRAINS FROM 19-21 SIRE WAY HAVE BEEN CONNECTED TO STONE TRENCH NO. 1.
- ROOF DRAINS FROM 23-31 SIRE WAY HAVE BEEN CONNECTED TO CB7.
- ROOF DRAINS FROM 103 SIRE WAY HAVE BEEN CONNECTED TO CB4.
- ROOF DRAINS FROM 103 SIRE WAY HAVE BEEN CONNECTED TO CBS.
- ROOF DRAINS FROM 10-14 SIRE WAY AND REAR ROOF DRAINS FROM 16-20 SIRE WAY HAVE BEEN CONNECTED TO CB6.
- FRONT ROOF DRAINS FROM 16-20 SIRE WAY HAVE BEEN CONNECTED TO CB8.

**DRAINAGE STRUCTURE TABLE**

NUMBER	STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
CB 1	INSTALLED IN PHASE 1	255.81	--	252.31± (15")
CB 2	INSTALLED IN PHASE 1	255.32	251.40± (15")	251.57± (18")
CB 3	INSTALLED IN PHASE 1	269.28		264.96 (18")
CB 4	INSTALLED IN PHASE 1	269.47	264.96 (18") 264.32 (18")	264.60 (12") 263.60 (24")
CB 31	INSTALLED IN PHASE 1	255±	250.50± (18")	250.00± (18")
CB 32	PRECAST CONCRETE (4" DIA.)	265.50	262.75 (6")	262.00 (12")
DMH 1	INSTALLED IN PHASE 1	274.00	268.33± (24")	268.58± (18")
DMH 4**	PRECAST CONCRETE (6" DIA.)	267.30	262.55 (24")	262.35 (24")
DMH 5	INSTALLED IN PHASE 1	266.00	257.76 (24") 262.76 (15")	253.41 (24")

NOTE: CATCH BASIN FRAMES AND GRATES SHALL BE DEPRESSED 1"  
\*\* STRUCTURE HAS INTERIOR WEIR WALL

**PROJECT TITLE:**

MATTESON RIDGE CONDOS  
(APPLIC. NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

**PREPARED FOR:**

LeCESSE DEVELOPMENT CORP.  
650 S NORTLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

**DRAWING TITLE:**

GRADING AND DRAINAGE  
PLAN NO. 1

**DATE:** APRIL 2023 **SCALE:** 1"=30'

**DWG. NAME:** 2213-05-09-GRADE.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

**DRAWING NUMBER:** C4.1  
Office of Water Resources  
AUG 09 2023  
SHEET: 5 OF: 29

MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 3



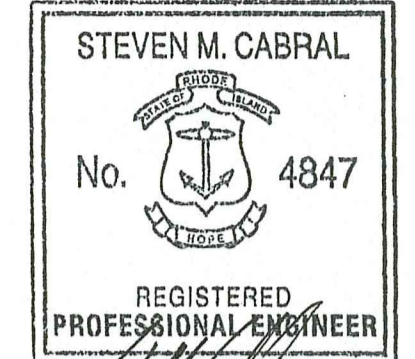
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REGISTERED PROFESSIONAL ENGINEER  
8-8-23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATE: SEP - 1 2023 FILE # 23-44  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE: *Andy Chapin*

MATTESON RIDGE CONDOS  
(APPLIC NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**GRADING AND DRAINAGE  
PLAN NO. 2**

DATE: APRIL 2023 SCALE: 1"=30'

DWG. NAME: 2213-05-09-GRADE.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER

Office of Water Resources  
AUG 09 2023  
**C4.2**  
SHEET: 6 OF 29

BMP8 PROPOSED UNDERGROUND INFILTRATION SYSTEM-UIS NO. 3, 64 CULTEC R-280HD CHAMBERS (5 ROWS OF 10 AND 2 ROWS OF 7), ROW LENGTH VARIES. PROVIDE 6" STONE BASE AND COVER, 6" ROW SPACING, AND 12" END AND SIDE STONE. STONE INV.= 281.50, CHAMBER INV.=282.00, TOP OF STONE=284.71. MINIMUM PROPOSED GRADE OVER SYSTEM=285.60

BMP7 PROPOSED UNDERGROUND INFILTRATION SYSTEM-UIS NO. 2, 44 CULTEC R-280HD CHAMBERS, 4 ROWS OF 11 CHAMBERS. PROVIDE 6" STONE BASE AND COVER, 6" ROW SPACING, AND 12" END AND SIDE STONE. STONE INV.= 279.50, CHAMBER INV.=280.00, TOP OF STONE=282.71.

3-12" D PIPES FROM UIS 1 TO UIS 2 (INV=281.00)

BMP6 PROPOSED UNDERGROUND INFILTRATION SYSTEM-UIS NO. 1, 128 CULTEC R-280HD CHAMBERS, ROW LENGTH VARIES. PROVIDE 6" STONE BASE AND COVER, 6" ROW SPACING, AND 12" END AND SIDE STONE. STONE INV.= 278.70, CHAMBER INV.=279.20, TOP OF STONE=281.91.

OUTLET CONTROL STRUCTURE 4 (OCS4), PROVIDE ADS NYLOPLAST DRAIN BASIN WITH SOLID COVER. RIM=284.50. 6"D INV IN=279.20. 6"D INV OUT=282.70

- LEGEND**
- XXX PROPOSED CONTOUR (ORIGINAL DESIGN PLAN)
  - XXX PROPOSED CONTOUR (PERMIT MODIFICATIONS)
  - EXISTING CONTOUR (PRE CONSTRUCTION)
  - x259.87 CURRENT GRADE (SITE UNDER CONSTRUCTION)
  - PROPOSED LIMIT OF DISTURBANCE
  - AS-BUILT SEWER LINE
  - AS-BUILT WATER LINE
  - AS-BUILT GAS LINE
  - AS-BUILT STANDARD PAVEMENT
  - PROPOSED POROUS PAVEMENT
  - TREE LINE
  - STREAM LINE
  - WETLAND LINE
  - A148 WETLAND FLAG
  - WETLAND BUFFER ZONE
  - STRUCTURES SETBACK
  - RESTORATION AREA
  - INSTALLED SILT FENCE
  - INSTALLED STRAW WATTLES
  - PROPOSED STRAW WATTLES

**DRAINAGE STRUCTURE TABLE**

NUMBER	STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
CB 5	INSTALLED IN PHASE 1	277±	274.25 (6")	274.25± (15")
CB 6	INSTALLED IN PHASE 1	277±	274.33± (15") 275.00 (6")	275.00± (18")
CB 7	INSTALLED IN PHASE 1	276.3±	271.72± (15") 272.30± (24")	271.30± (24")
CB 8	INSTALLED IN PHASE 1	276.3±	---	272.38± (15")
CB 9	PRECAST CONCRETE (4" DIA.)	281.35	276.00(12")SW 276.50(12")SE	275.80 (24")
CB 10	PRECAST CONCRETE (4" DIA.)	281.35	---	276.80 (12")
CB 18	PRECAST CONCRETE (4" DIA.)	278.60	272.00 (18") 273.00 (18")	272.00 (18")
CB 19	PRECAST CONCRETE (4" DIA.)	278.60	274.00 (12") 274.90 (6")	273.60 (18")
CB 20	PRECAST CONCRETE (4" DIA.)	281.92	276.60 (12")	276.50 (12")
CB 21	PRECAST CONCRETE (4" DIA.)	281.92	---	276.90 (12")
CB 29	PRECAST CONCRETE (4" DIA.)	284.42	279.30 (12")	279.30 (12")
CB 30	PRECAST CONCRETE (4" DIA.)	284.42	280.80 (6")	279.80 (12")
CB 33	PRECAST CONCRETE (4" DIA.)	281.45	---	277.90 (12")
CB 34	PRECAST CONCRETE (4" DIA.)	281.45	277.50 (12")	277.50 (12")
DMH 8	PRECAST CONCRETE (4" DIA.)	282.00	277.00 (12")	277.00 (18")

NOTE: CATCH BASIN FRAMES AND GRATES SHALL BE DEPRESSED 1"

FURNISH AND INSTALL 15 ARBORVITAE SPACED 10' ON CENTER. SAPLINGS SHALL BE AT LEAST 6' TALL AFTER PLANTING.

MODULAR BLOCK RETAINING WALL

MATCH GRADES/WALL TO PHASE 1 (UNDER CONSTRUCTION)

REAR DOWNSPOUT OF UNIT 31 TO BMP NO. 16 PROPOSED STONE TRENCH NO. 2, BTM. OF STONE=272.33, TOP OF STONE=275.00

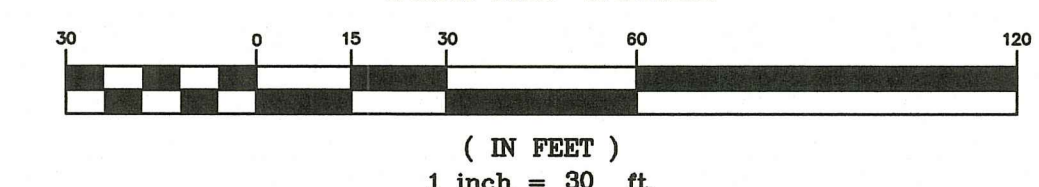
5' ACCESSORY STRUCTURE SETBACK

MODULAR BLOCK RETAINING WALL UNDER CONSTRUCTION- PHASE 1

PROVIDE ROOF DOWNSPOUT OVERFLOW TEES, INV=278.00

MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 1

GRAPHIC SCALE



MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 5

**LEGEND**

- XXX PROPOSED CONTOUR (ORIGINAL DESIGN PLAN)
- XXX PROPOSED CONTOUR (PERMIT MODIFICATIONS)
- EXISTING CONTOUR (PRE CONSTRUCTION)
- CURRENT GRADE (SITE UNDER CONSTRUCTION)
- PROPOSED LIMIT OF DISTURBANCE
- AS-BUILT SEWER LINE
- AS-BUILT WATER LINE
- AS-BUILT GAS LINE
- AS-BUILT STANDARD PAVEMENT
- PROPOSED POROUS PAVEMENT
- TREE LINE
- STREAM LINE
- WETLAND LINE
- A148 WETLAND FLAG
- WETLAND BUFFER ZONE
- STRUCTURES SETBACK
- RESTORATION AREA
- INSTALLED SILT FENCE
- INSTALLED STRAW WATTLES
- PROPOSED STRAW WATTLES

**DRAINAGE STRUCTURE TABLE**

NUMBER	STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
CB 11	PRECAST CONCRETE (4' DIA.) (DOUBLE GRATE)	284.65	---	281.00 (12")
CB 12	PRECAST CONCRETE (4' DIA.)	285.18	280.70 (12")	280.70 (18")
CB 13	PRECAST CONCRETE (6' DIA.)	285.31	280.40 (12")	280.40 (24")
CB 14	PRECAST CONCRETE (4' DIA.)	284.87	281.50 (6")	281.30 (12")
CB 15	PRECAST CONCRETE (4' DIA.)	284.85	281.50 (6")	281.00 (12")
CB 27	PRECAST CONCRETE (4' DIA.)	284.30	---	280.50 (12")
CB 28	PRECAST CONCRETE (4' DIA.)	284.30	280.00 (12")	280.00 (12")
DMH 3	PRECAST CONCRETE (6' DIA.)	285.50	280.40 (24")	281.00 (24")

NOTE: CATCH BASIN FRAMES AND GRATES SHALL BE DEPRESSED 1"

**Crossman Engineering**

Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-5660  
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700

Email: cel@crossmaneng.com

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STEVEN M. CABRAL  
 No. 4847  
 REGISTERED PROFESSIONAL ENGINEER  
 8-8-23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: SEP - 1 2023 FILE #: 23-014  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
 MATTESON RIDGE CONDOS (APPLIC NO. 17-0080, RIPDES, RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
 LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD, SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

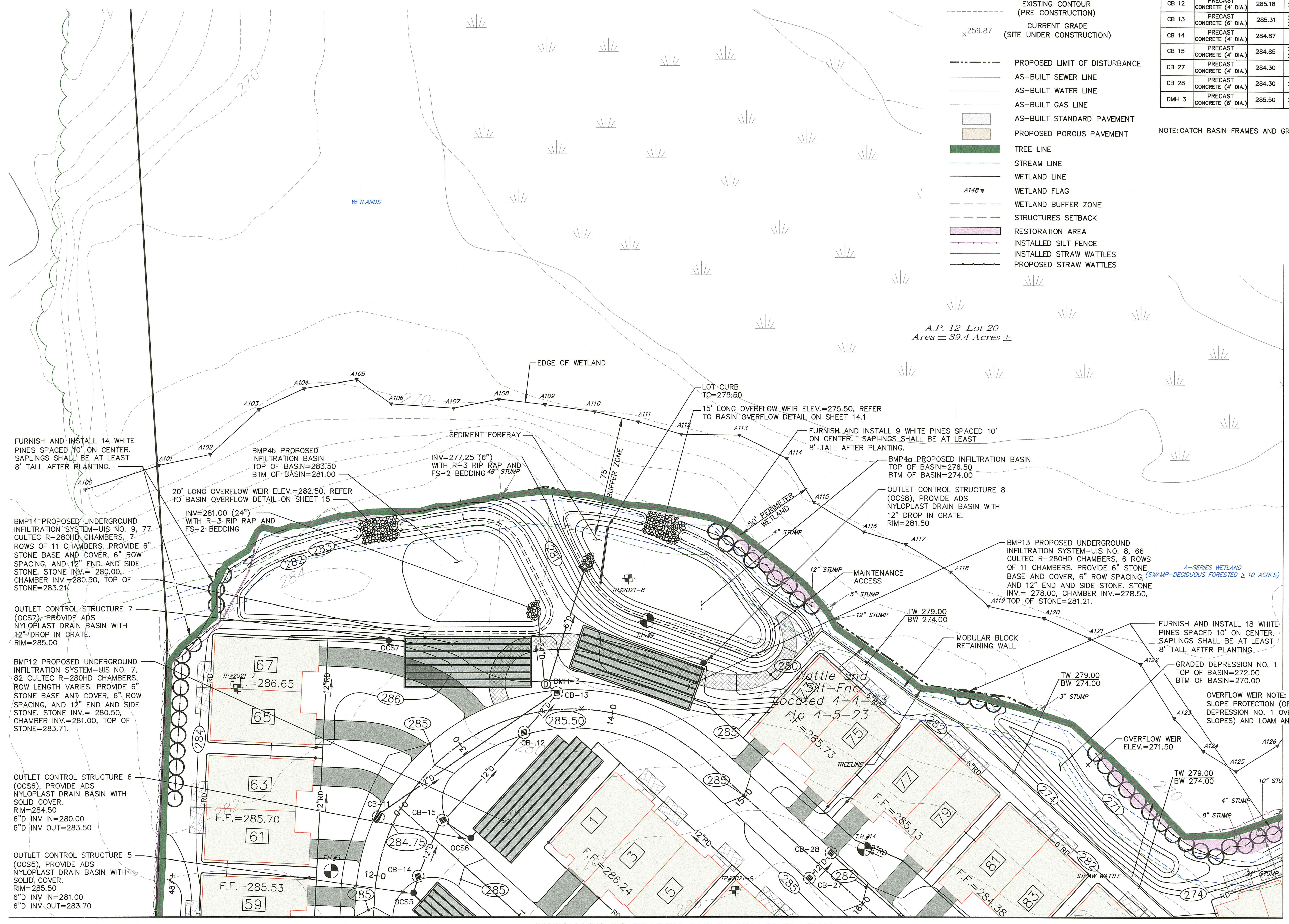
DRAWING TITLE:  
 GRADING AND DRAINAGE PLAN NO. 3

DATE: APRIL 2023 SCALE: 1"=30'  
 DWG. NAME: 2213-05-09-GRADE.dwg

REVISIONS

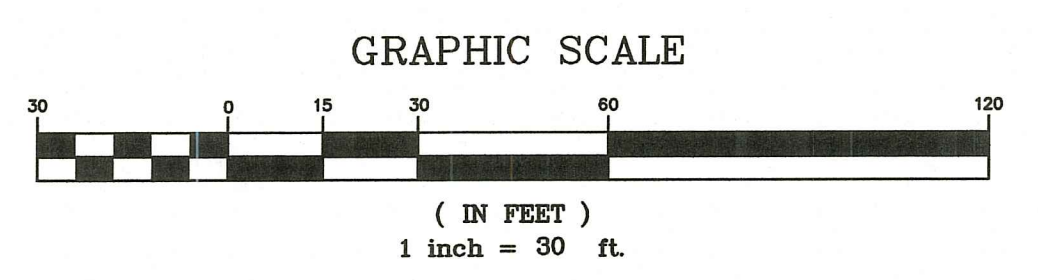
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER: **C4.3**  
 SHEET: 7 OF 29



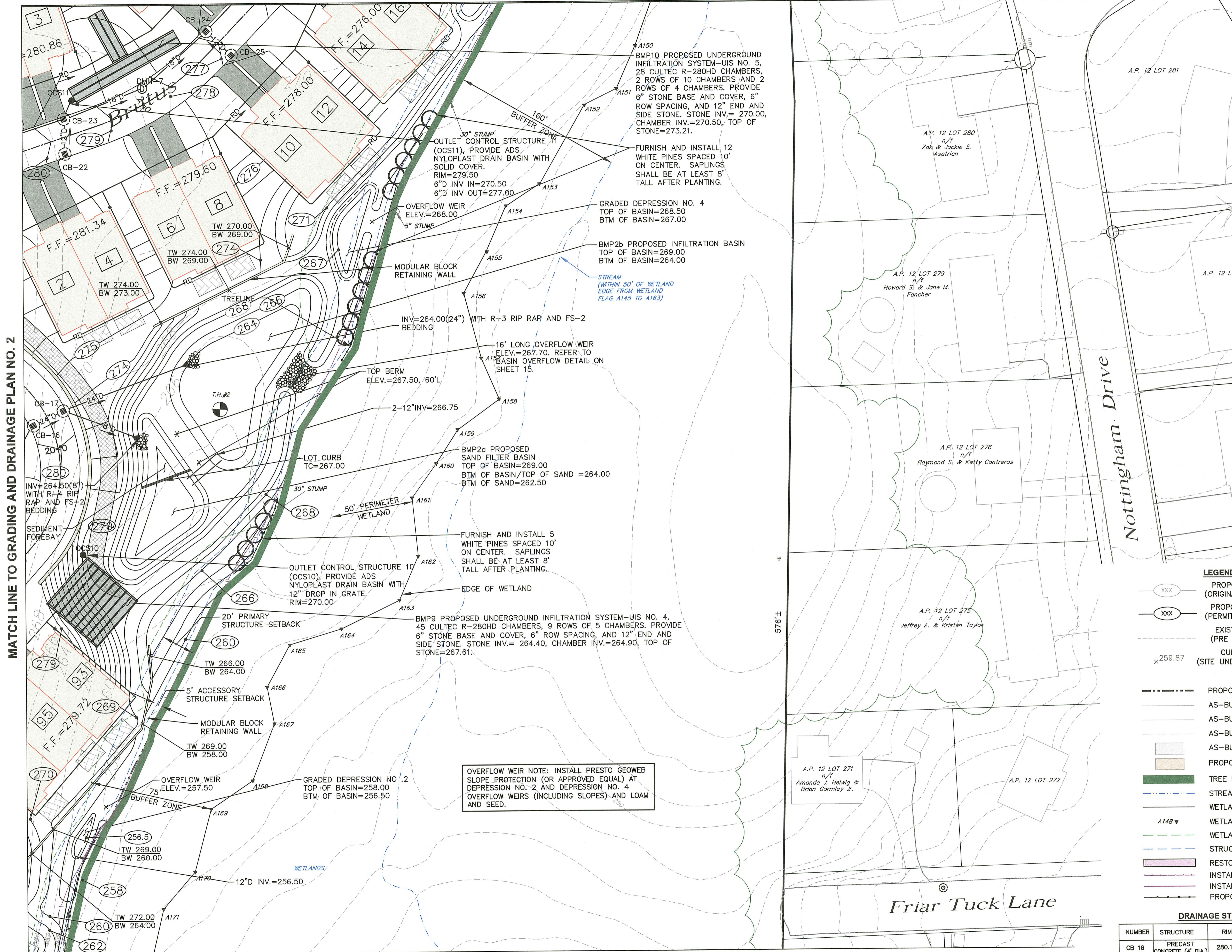
MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 4

MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 2



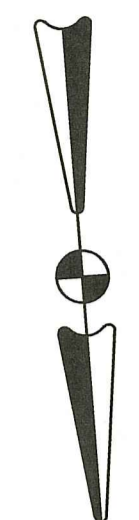


MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 4



MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 2

MATCH LINE TO GRADING AND DRAINAGE PLAN NO. 1

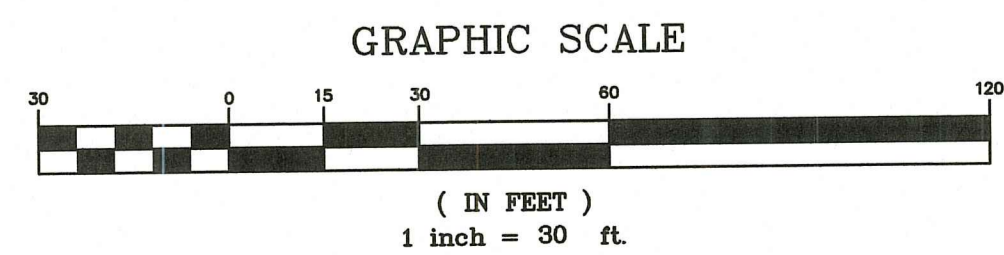


**LEGEND**

- XXX PROPOSED CONTOUR (ORIGINAL DESIGN PLAN)
- XXX PROPOSED CONTOUR (PERMIT MODIFICATIONS)
- EXISTING CONTOUR (PRE CONSTRUCTION)
- x259.87 CURRENT GRADE (SITE UNDER CONSTRUCTION)
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- A148 WETLAND FLAG
- WETLAND BUFFER ZONE
- STRUCTURES SETBACK
- RESTORATION AREA
- INSTALLED SILT FENCE
- INSTALLED STRAW WATTLES
- PROPOSED STRAW WATTLES

**DRAINAGE STRUCTURE TABLE**

NUMBER	STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
CB 16	PRECAST CONCRETE (4' DIA.)	280.15	271.70 (24")	271.50 (24")
CB 17	PRECAST CONCRETE (6' DIA.)	280.15	271.00 (24")	268.10 (8") 269.70 (24")
CB 22	PRECAST CONCRETE (4' DIA.)	279.70	---	275.70 (12")
CB 23	PRECAST CONCRETE (4' DIA.)	279.55	275.40 (18") 276.00 (6")	275.40 (18")
CB 24	PRECAST CONCRETE (4' DIA.)	276.80	273.00(12")NE 272.00(12")NW	272.00 (18")
CB 25	PRECAST CONCRETE (4' DIA.)	276.80	---	272.50 (12")
DMH 7	PRECAST CONCRETE (4' DIA.)	278.20	274.00 (18")	274.00 (18")



NOTE: CATCH BASIN FRAMES AND GRATES SHALL BE DEPRESSED 1"

**Crossman Engineering**

Rhode Island  
151 Centerville Road  
Warwick, RI 02886  
Phone (401) 738-5660

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103 Commonwealth Avenue  
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Phone (508) 695-1700

Email: cel@crossmaneng.com

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE # 23-019  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE: *Matteson Ridge*

MATTESSON RIDGE CONDOS  
(APPLIC NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**GRADING AND DRAINAGE  
PLAN NO. 5**

DATE: APRIL 2023 SCALE: 1"=30'

DWG. NAME: 2213-05-09-GRADE.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER: **C4.5**

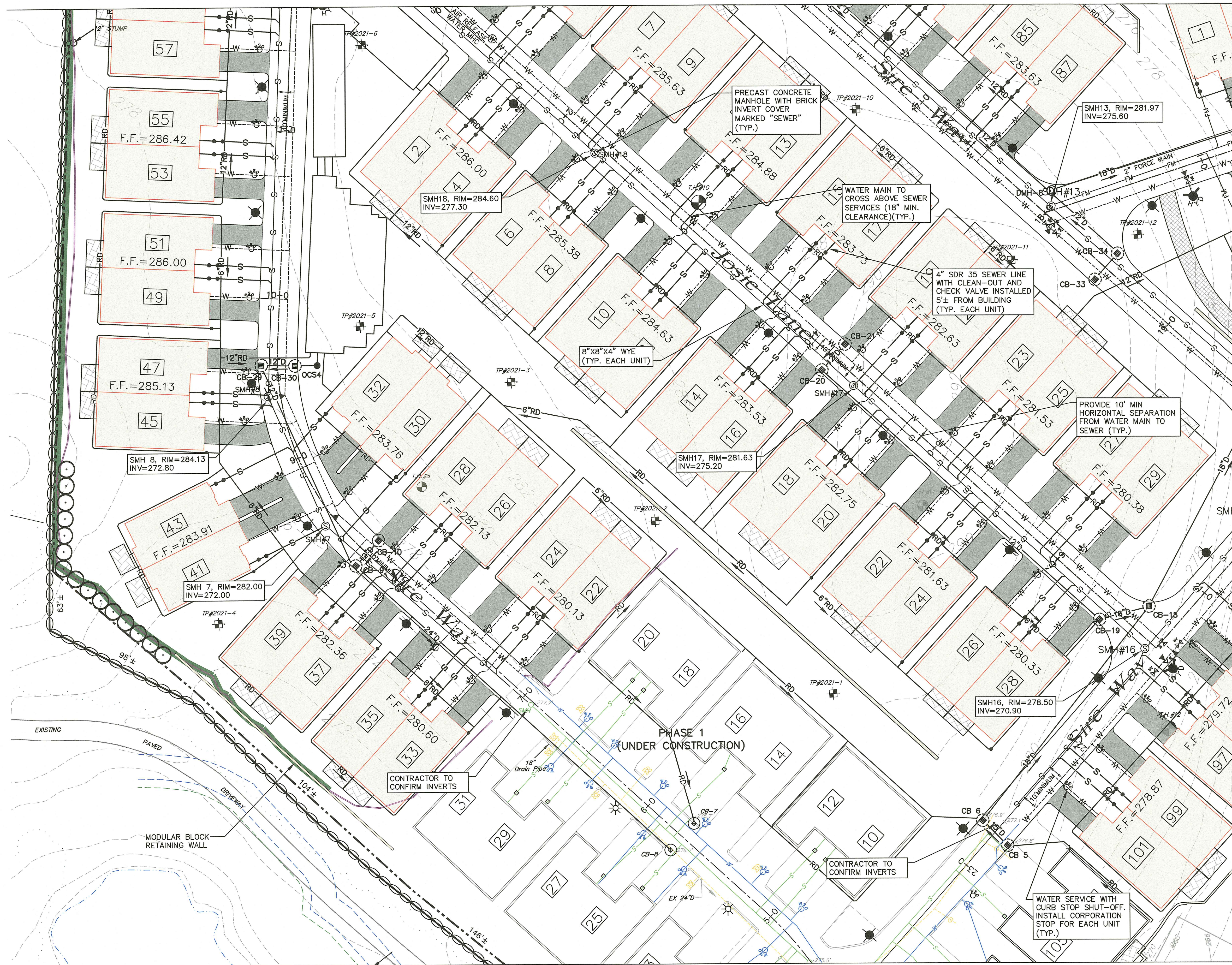
AUG 09 2023

Office of Water Resources

SHEET 9 OF 29



MATCH LINE TO UTILITY PLAN NO. 3



MATCH LINE TO UTILITY PLAN NO. 1

MATCH LINE TO UTILITY PLAN NO. 5



**Crossman Engineering**

Rhode Island: 151 Centerville Road, Warwick, RI 02896  
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763  
 Phone (401) 738-5660 Phone (508) 695-1700

Email: ce@crossmaneng.com

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STEVEN M. CABRAL

No. 4847

REGISTERED PROFESSIONAL ENGINEER

*Handwritten signature and date*

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: SEP - 1 2023 FILE #: 23-011  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:

MATTESON RIDGE CONDOS  
 (APPLIC. NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:

UTILITY PLAN NO. 2

DATE: APRIL 2023 SCALE: 1"=30'

DWG. NAME: 2213-11-14-UTILITY.dwg

REVISIONS	NUMBER	REMARKS	DATE
△	1	RIDEM COMMENTS	7/10/23
△	2	RIDEM COMMENTS	8/7/23

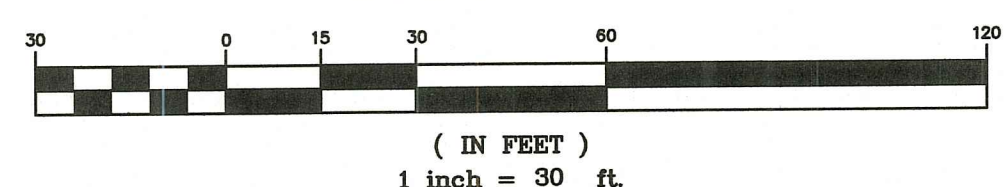
DRAWING NUMBER

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources

**C5.2**

SHEET 11 OF 29

GRAPHIC SCALE





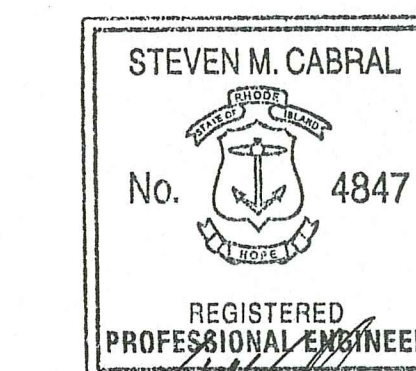
**Crossman Engineering**

Rhode Island  
151 Centerville Road  
Warwick, RI 02886  
Phone (401) 738-5660

Massachusetts  
103 Commonwealth Avenue  
North Attleboro, MA 02763  
Phone (508) 695-1700

Email: [cei@crossmaneng.com](mailto:cei@crossmaneng.com)

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*Steven M. Cabral*  
8-8-23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATE: SEP - 1 2023 FILE # 23-010  
NO CHANGES PERMITTED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE: *2220*

MATTESON RIDGE CONDOS  
(APPLIC. NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

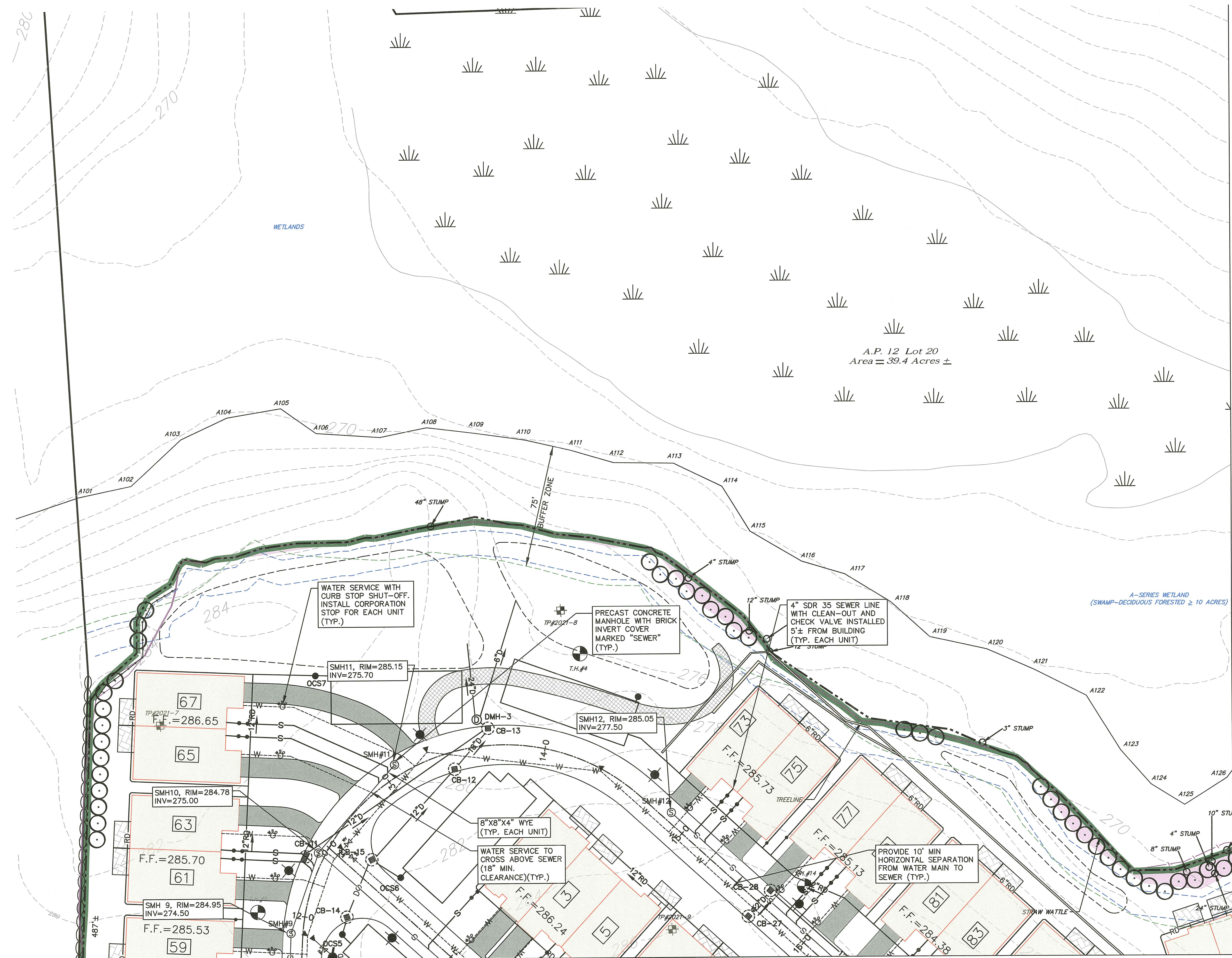
PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**UTILITY PLAN NO. 3**

DATE: APRIL 2023 SCALE: 1"=30'  
DWG. NAME: 2213-11-14-UTILITY.dwg

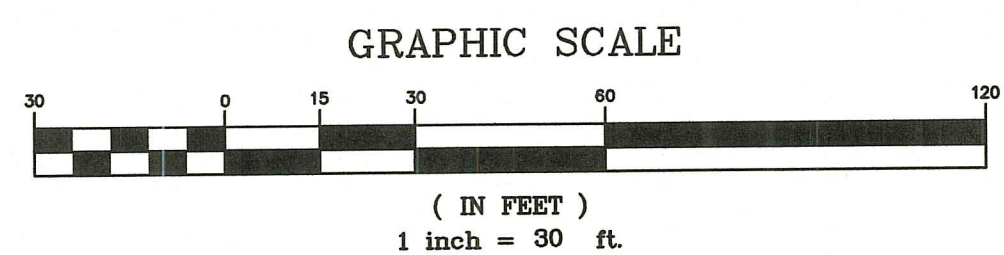
REVISIONS	NUMBER	REMARKS	DATE
△	1	RIDEM COMMENTS	7/10/23
△	2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER  
RI Environmental Management  
AUG 09 2023  
Office of Water Resources  
**C5.3**  
SHEET: 12 OF 29



MATCH LINE TO UTILITY PLAN NO. 4

MATCH LINE TO UTILITY PLAN NO. 2



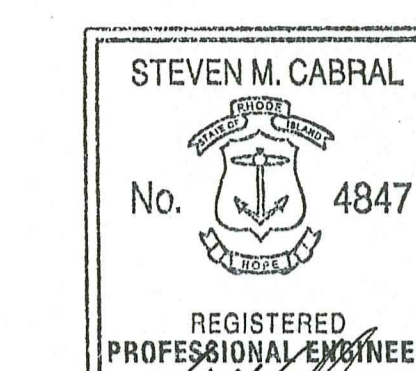


### Crossman Engineering

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REGISTERED PROFESSIONAL ENGINEER  
Steven M. Cabral  
8-8-23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE #: 23-010  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Andy Cloutier

PROJECT TITLE:  
**MATTESON RIDGE CONDOS**  
(APPLIC. NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)  
  
175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

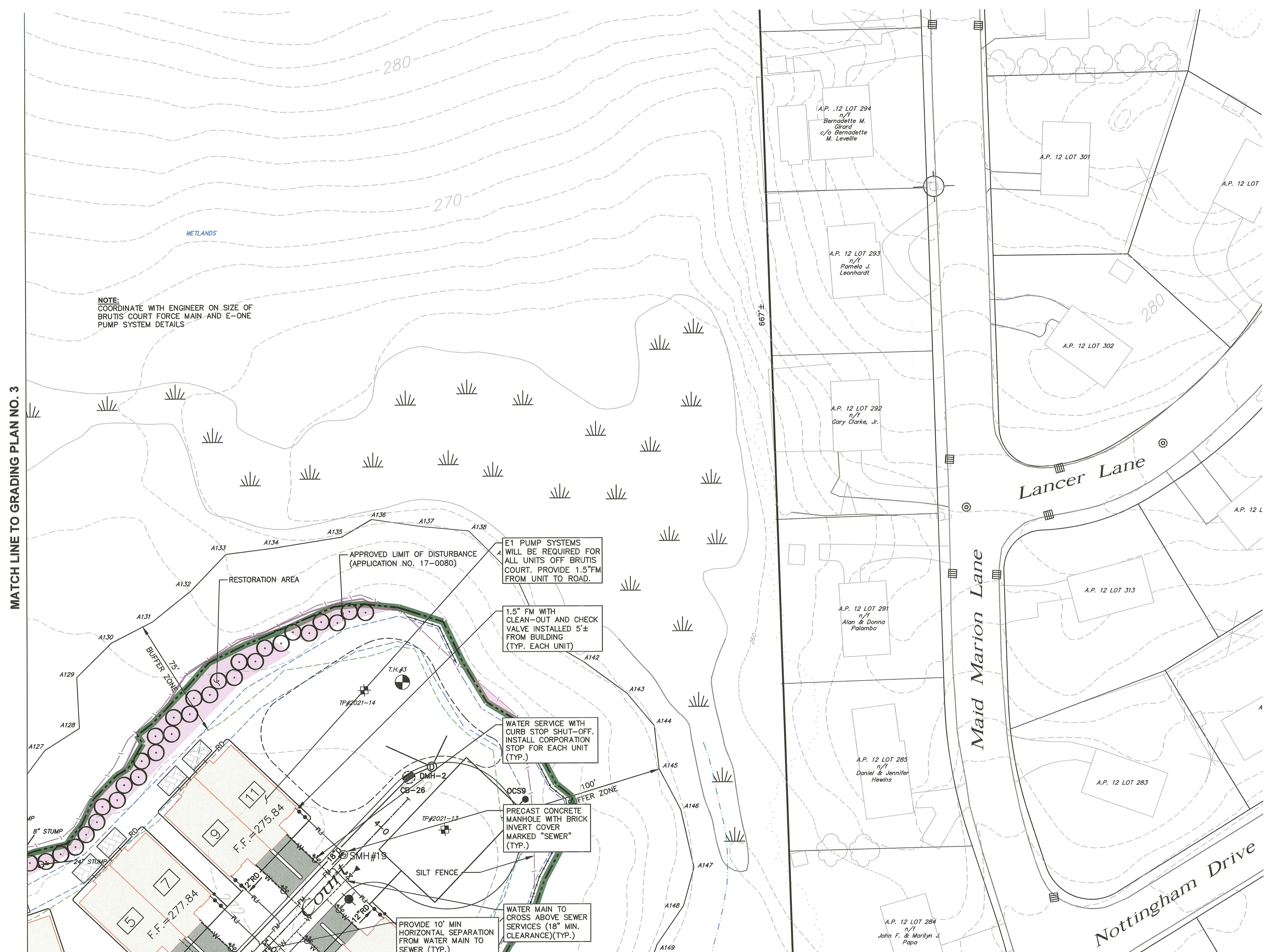
DRAWING TITLE:  
**UTILITY PLAN NO. 4**

DATE: APRIL 2023 SCALE: 1"=30'  
DWG. NAME: 2213-11-14-UTILITY.dwg

NUMBER	REVISIONS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

REVISIONS	NUMBER	REMARKS	DATE

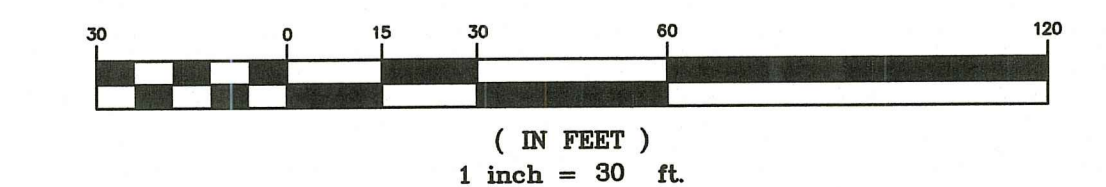
RI Environmental Office of Water Resources  
DRAWING NUMBER  
AUG 0 2023  
**C5.4**  
SHEET: 13 OF 29



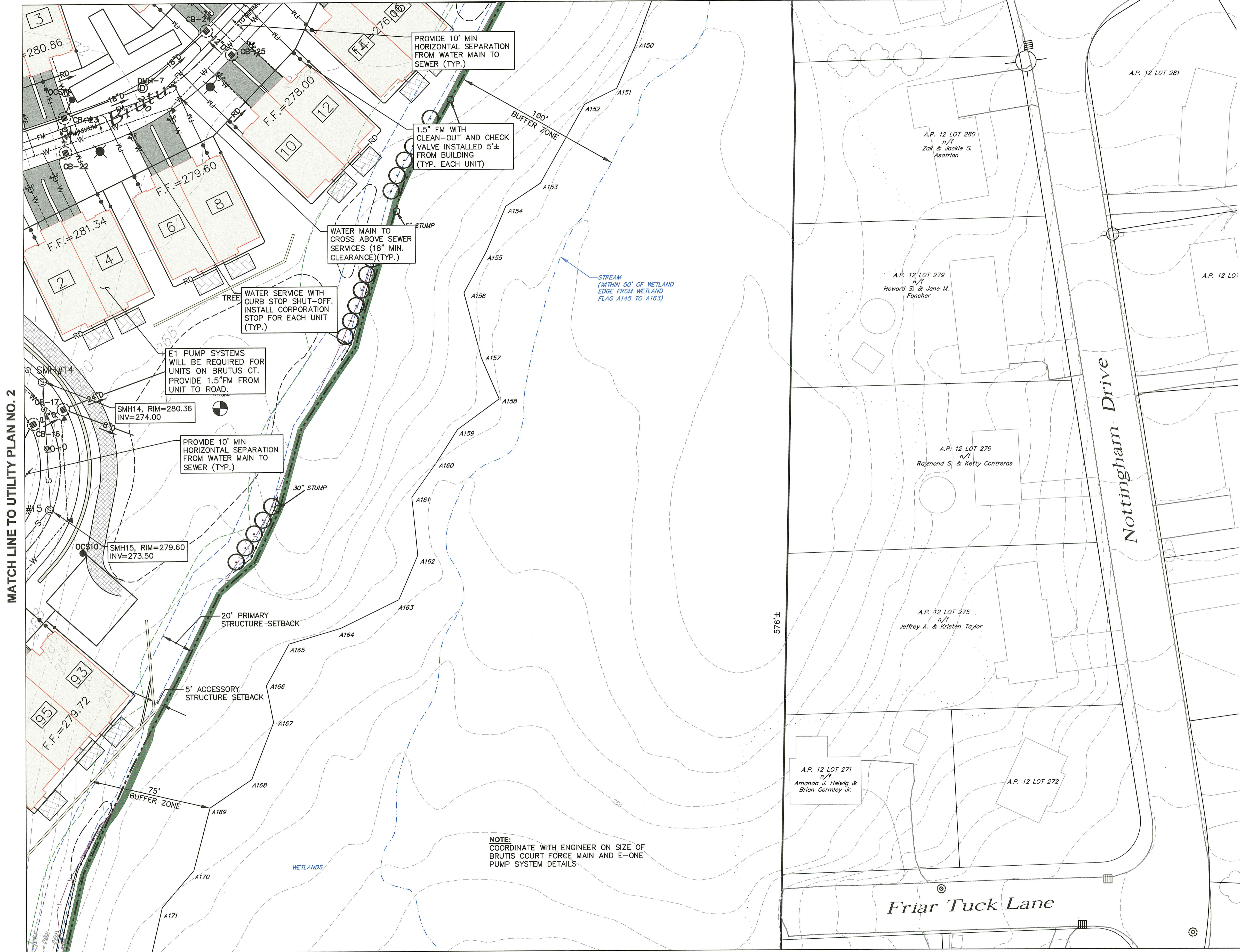
MATCH LINE TO GRADING PLAN NO. 3

MATCH LINE TO UTILITY PLAN NO. 5

GRAPHIC SCALE



MATCH LINE TO UTILITY PLAN NO. 4

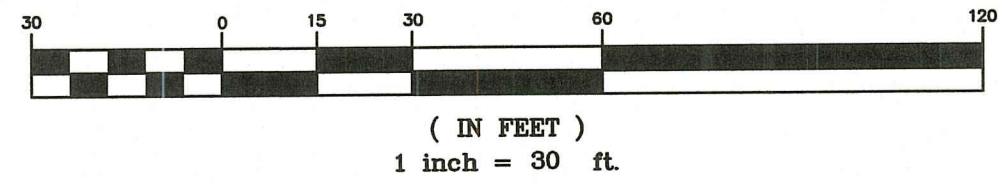


MATCH LINE TO UTILITY PLAN NO. 1

MATCH LINE TO UTILITY PLAN NO. 2

NOTE:  
COORDINATE WITH ENGINEER ON SIZE OF  
BRUTIS COURT FORCE MAIN AND E-ONE  
PUMP SYSTEM DETAILS.

GRAPHIC SCALE



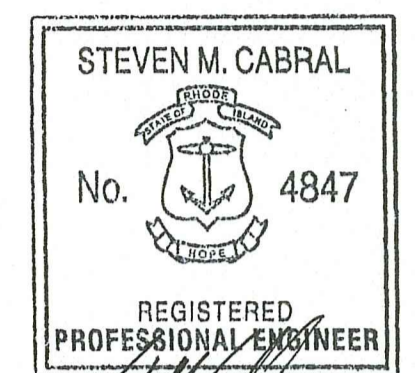
- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

**Crossman Engineering**

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Email: cel@crossmaneng.com

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATE: SEP - 1 2023 FILE #: 23-011  
 NO CHANGES WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONST. JURISDICTION

PROJECT TITLE: *Matteson Ridge*  
 MATTESON RIDGE CONDOS  
 (APPLIC. NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
 LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**UTILITY PLAN NO. 5**

DATE: APRIL 2023 SCALE: 1"=30'

DWG. NAME: 2213-11-14-UTILITY.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources

**C5.5**

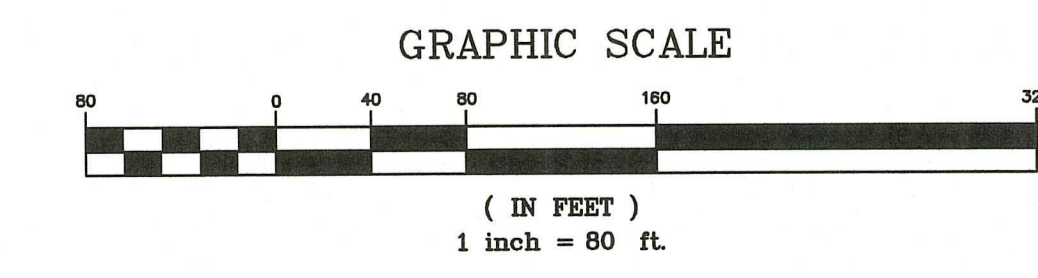
SHEET: 14 OF 29



**LEGEND**

- WETLAND FLAG
- WETLAND LINE
- STREAM LINE
- INSTALLED SILT FENCE
- PROPOSED STRAW WATTLES
- WETLAND BUFFER ZONE
- STRUCTURES SETBACK
- PROPOSED LIMIT OF DISTURBANCE
- TREELINE
- RESTORATION AREA

- NOTES:**
- CONSTRUCTION IS SEPARATED INTO FOUR PHASES. PHASE 1 IS CURRENTLY UNDER CONSTRUCTION. PHASE 2 THROUGH 4 IS CONSTRUCTION OF THE REMAINING UNITS, UTILITIES, AND STORMWATER MANAGEMENT SYSTEM. PHASE 2 IS SCHEDULED TO BEGIN JUNE 2024. THE DURATION OF EACH PHASE IS EXPECTED TO BE 12 MONTHS TO 24 MONTHS. PHASES MAY OCCUR CONCURRENTLY. EROSION CONTROLS ARE INSTALLED AND SHALL BE MAINTAINED ALONG THE PERIMETER OF THE SITE AT THE LIMIT OF DISTURBANCE. ADDITIONAL CONTROLS SHALL BE PLACED AS NEEDED.
  - REDUCTIONS IN INSPECTION FREQUENCY - IF EARTH DISTURBING ACTIVITIES ARE SUSPENDED DUE TO FROZEN CONDITIONS OR IN BETWEEN CONSTRUCTION PHASES, INSPECTIONS MAY BE REDUCED TO A FREQUENCY OF ONCE PER MONTH. THE OWNER AND OPERATOR MUST DOCUMENT THE BEGINNING AND ENDING DATES OF THESE PERIODS IN AN INSPECTION REPORT.
  - SEDIMENT TRAPS TO BE UTILIZED DURING EARTHWORK ACTIVITIES AND ROAD CONSTRUCTION, PRIOR TO HOUSE AND DRAINAGE SYSTEM INSTALLATION. ALL TRAPS WILL BE FUNCTIONAL AND INSTALLED PRIOR TO DISTURBANCE IN THE CONTRIBUTING DRAINAGE AREA. SEDIMENT TRAPS SHALL BE MAINTAINED IN ACCORDANCE WITH REQUIREMENTS PROVIDED IN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. REMOVED SEDIMENT WILL BE UTILIZED ONSITE OR DISPOSED OF PROPERLY OFF-SITE. IF INFILTRATION AREAS (AREAS FOR INFILTRATION BASINS OR UNDERGROUND INFILTRATION SYSTEMS) ARE COMPACTED OR RECEIVE SEDIMENT DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE AREA AND THE AREA SHALL BE RESTORED BY TILLING OR SCARIFYING THE SOILS AND AMENDING SOILS AS NECESSARY TO ENSURE DESIGN INFILTRATION CAPACITIES.



**Crossman Engineering**

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Warwick, RI 02886  
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STEVEN M. CABRAL  
No. 4847  
REGISTERED PROFESSIONAL ENGINEER  
8-8-77

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATE: SEP - 1 2023 FILE # 23-010  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
*Mateson Ridge Condos*

MATESON RIDGE CONDOS  
(APPLIC NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)

175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**SOIL EROSION AND  
SEDIMENT CONTROL PLAN**

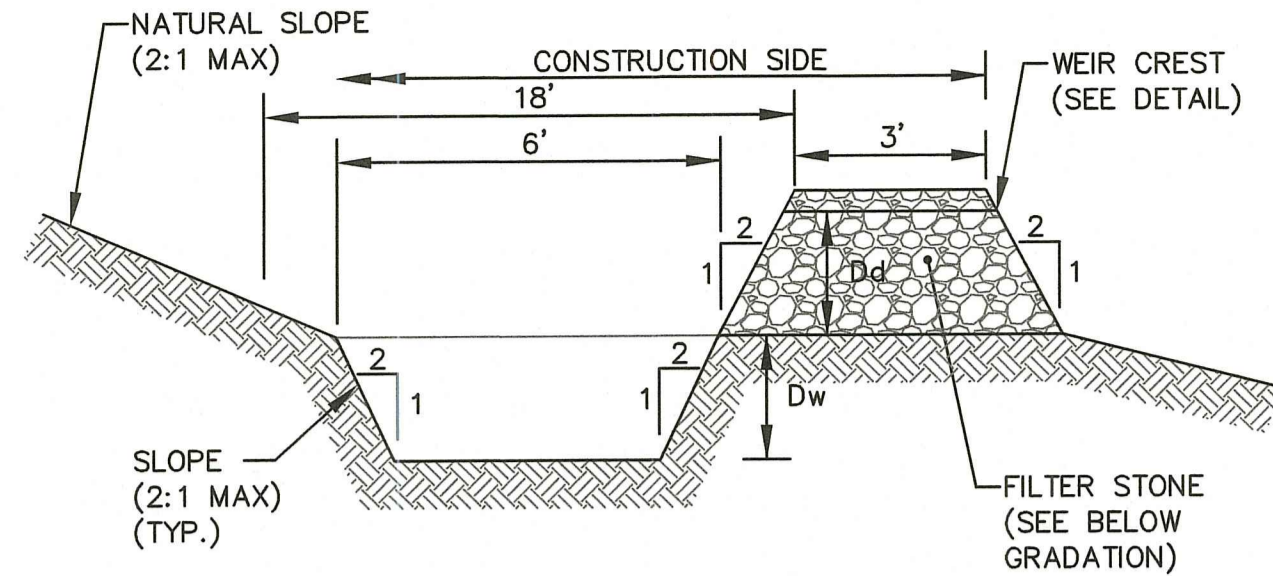
DATE: APRIL 2023 SCALE: 1"=80'

DWG. NAME: 2213-15-SOIL.dwg

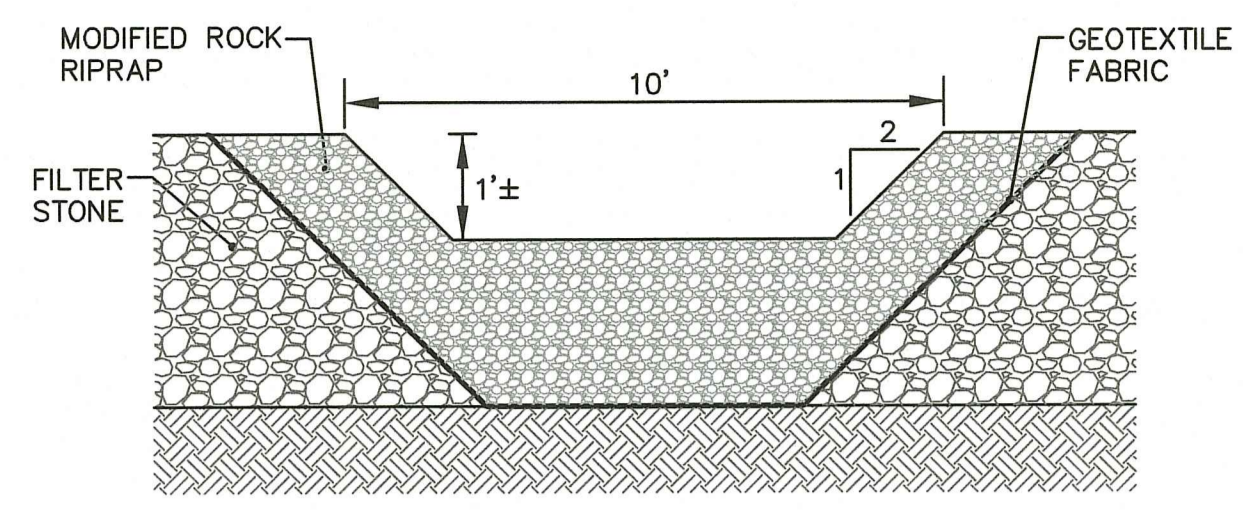
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER  
AU: 09 2023  
Office of Water Resources  
**C6.1**  
SHEET: 15 OF 29



**TEMPORARY SEDIMENT TRAP DETAIL**  
NOT TO SCALE



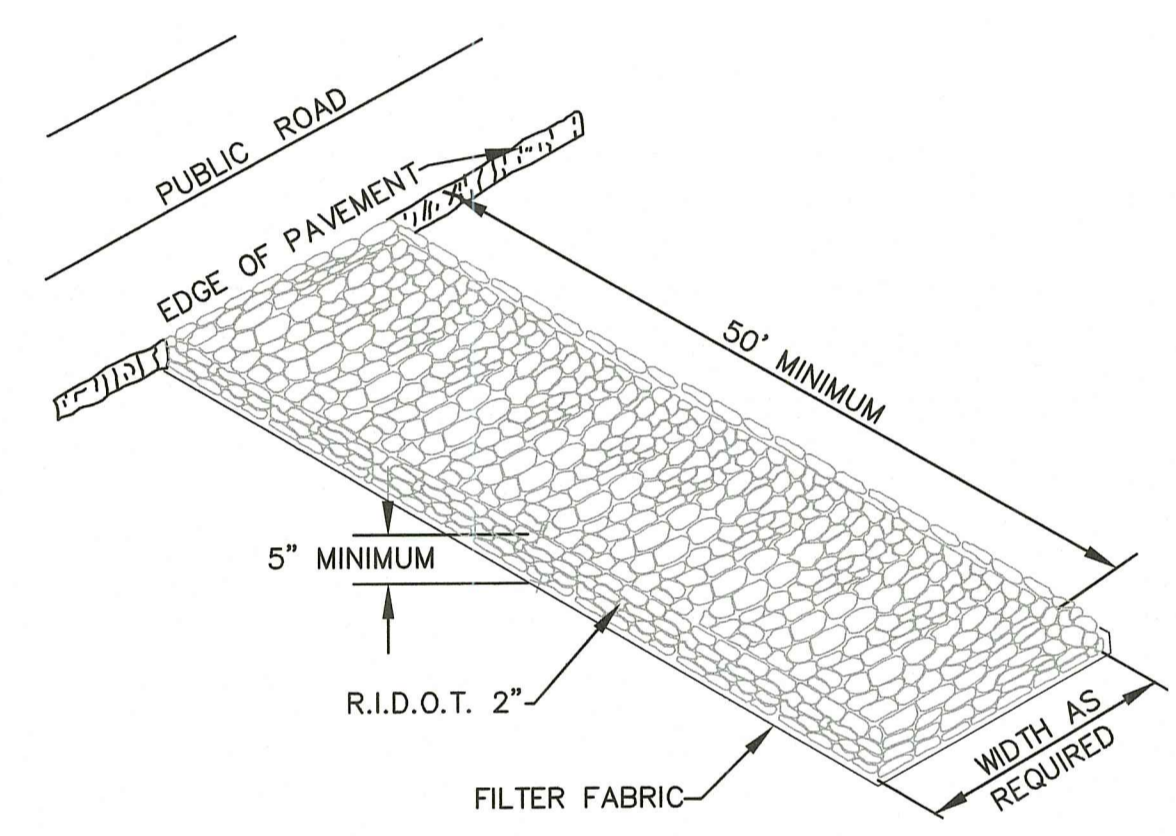
**TEMPORARY SEDIMENT TRAP OUTLET DETAIL**  
NOT TO SCALE

**NOTES:**  
1. FILTER STONE SHALL MEET THE REQUIREMENTS OF R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.09 TABLE 1, COLUMN V FILTER STONE.

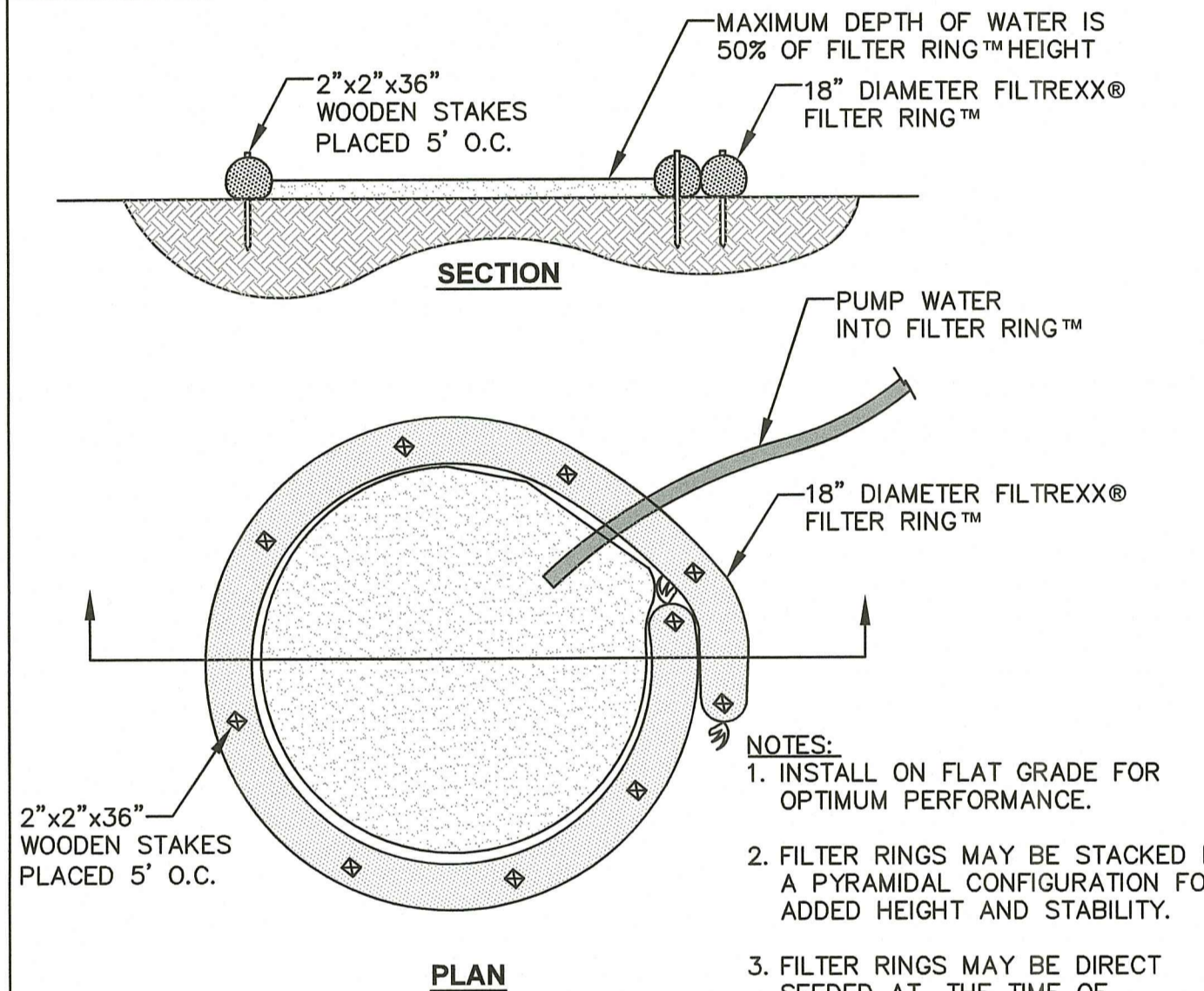
US STANDARD SIEVE SIZE (INCHES)	FILTER STONE
1	100
3/4	70-85
1/2	10-40
3/8	0-20
#4	0-5

SEDIMENT TRAP	Dw	Dd	L
1	2.0	2.0	247'
2	2.0	2.0	250'
3	1.5	1.5	200'
4	1.5	1.5	240'
5	2.0	2.0	100'
6	2.0	2.0	240'

**NOTES:**  
1. THE TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO UNDISTURBED, STABILIZED GROUND.  
2. CONTRACTOR SHALL INSTALL 1 OUTLET PER 100' LENGTH OF TEMPORARY SEDIMENT TRAP (1 OUTLET MIN. PER TEMPORARY SEDIMENT TRAP).  
3. THE MODIFIED ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF THE R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.0.3.2.  
4. CONTRACTOR MUST REFER TO THE INSTALLATION, INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS PROVIDED IN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, AS AMENDED.

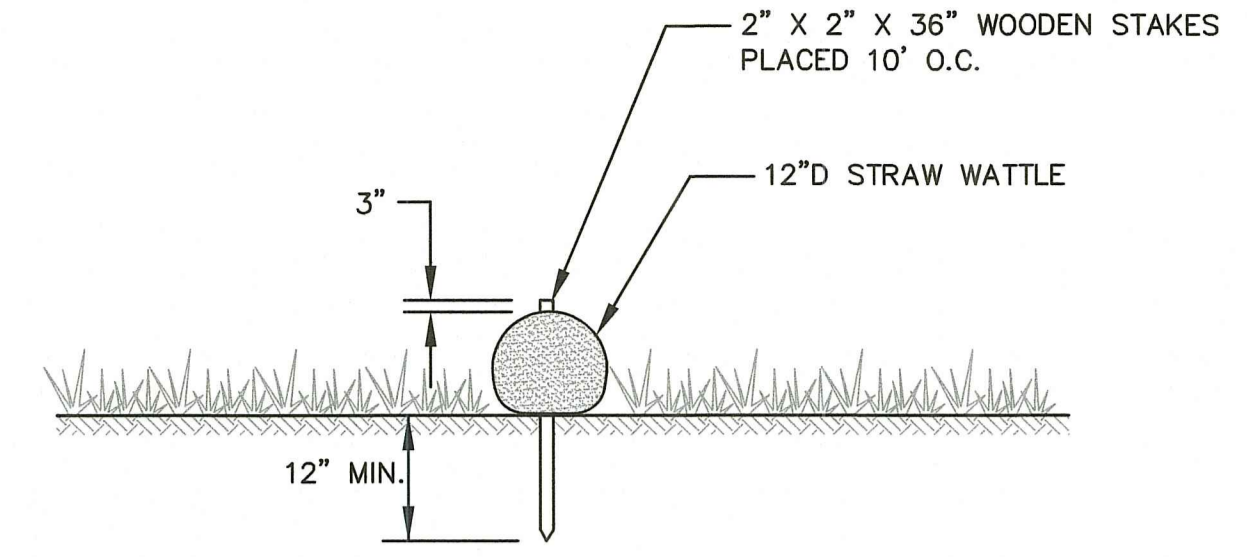


**CONSTRUCTION ENTRANCE DETAIL**  
NOT TO SCALE



**FILTREXX® FILTER RING™**  
NOT TO SCALE

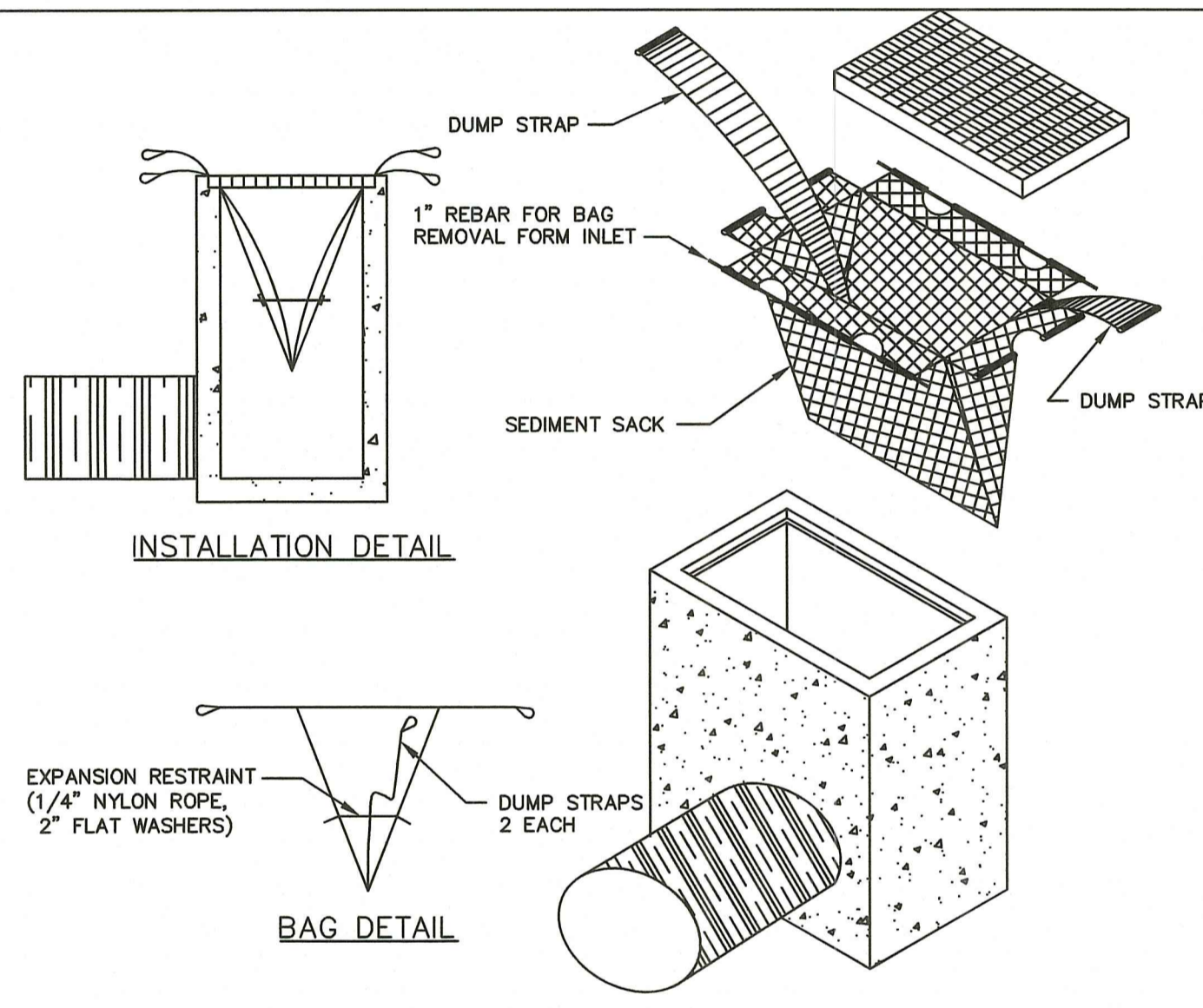
**NOTES:**  
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.  
2. FILTER RINGS MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.  
3. FILTER RINGS MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION.  
4. THIS TYPICAL INSTALLATION SHALL BE USED FOR DEWATERING OPERATIONS.



**NOTE:**

1. CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE STRAW WATTLE PRODUCT AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT.  
2. CONTRACTOR SHALL SUBMIT STRAW WATTLE, OR EQUAL, TO ENGINEER FOR APPROVAL.  
3. SILT FENCE MAY BE USED IN LIEU OF STRAW WADDLES.

**STRAW WATTLE SECTION**  
NOT TO SCALE



**TYPICAL SILT SACK DETAIL**  
NOT TO SCALE

**NOTES:**  
1. INSTALL SILT SACK AT CATCH BASINS IN VICINITY OF CONSTRUCTION AS DIRECTED BY ENGINEER.  
2. CONTRACTOR SHALL SUBMIT SILT SACK PRODUCT TO ENGINEER FOR APPROVAL.

**INSPECTION/MAINTENANCE NOTES**

- PRIOR TO COMMENCING GRUBBING OPERATIONS AND EARTHWORK, STRAW WATTLE OR SILT FENCE SHALL BE PLACED AT DOWNGRADIENT AREAS AROUND THE SITE PERIMETER TO PREVENT SEDIMENT FROM ENTERING EXISTING ROADWAY DRAINAGE SYSTEM, WETLANDS AND ADJUTING PROPERTIES.
- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM, ADJACENT PROPERTY, WETLANDS AND ROADWAYS.
- ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS RIP-RAP.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS. INSPECTION REPORTS SHALL BE COMPLETED AS REQUIRED IN THE SOIL EROSION AND SEDIMENT CONTROL (SESC) BOOK PREPARED FOR PERMITTING. CONTRACTOR SHALL OBTAIN COPIES OF THE SESC FROM ENGINEER PRIOR TO CONSTRUCTION.
- ADDITIONAL STRAW WATTLE OR SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE RHODE ISLAND STATE CONSERVATION COMMITTEE, 2014, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.
- STOCKPILE AREAS SHALL BE LOCATED WITHIN PERIMETER EROSION CONTROLS AND SHALL BE SURROUNDED BY STRAW WATTLE OR SILT FENCE.
- WASH DOWN AREAS SHALL BE LOCATED WITHIN PERIMETER EROSION CONTROLS, ON GRAVEL SURFACES, AND ON 10 MIL PLASTIC LINING. NO DETERGENTS ARE ALLOWED.
- EQUIPMENT/VEHICLE FUELING SHALL BE WITHIN THE PERIMETER EROSION CONTROLS UP-GRADE FROM THE TEMPORARY SEDIMENT TRAP. IF NECESSARY TO REPAIR OR MAINTAIN EQUIPMENT THAT HAS BROKEN-DOWN DURING CONSTRUCTION THEY SHALL ALSO BE WITHIN THE PERIMETER EROSION CONTROLS UP-GRADE FROM THE TEMPORARY SEDIMENT TRAP. LONG TERM MAINTENANCE PRACTICES ARE NOT ALLOWED ON THE SITE.

**EROSION CONTROL AND SOIL STABILIZATION PROGRAM**

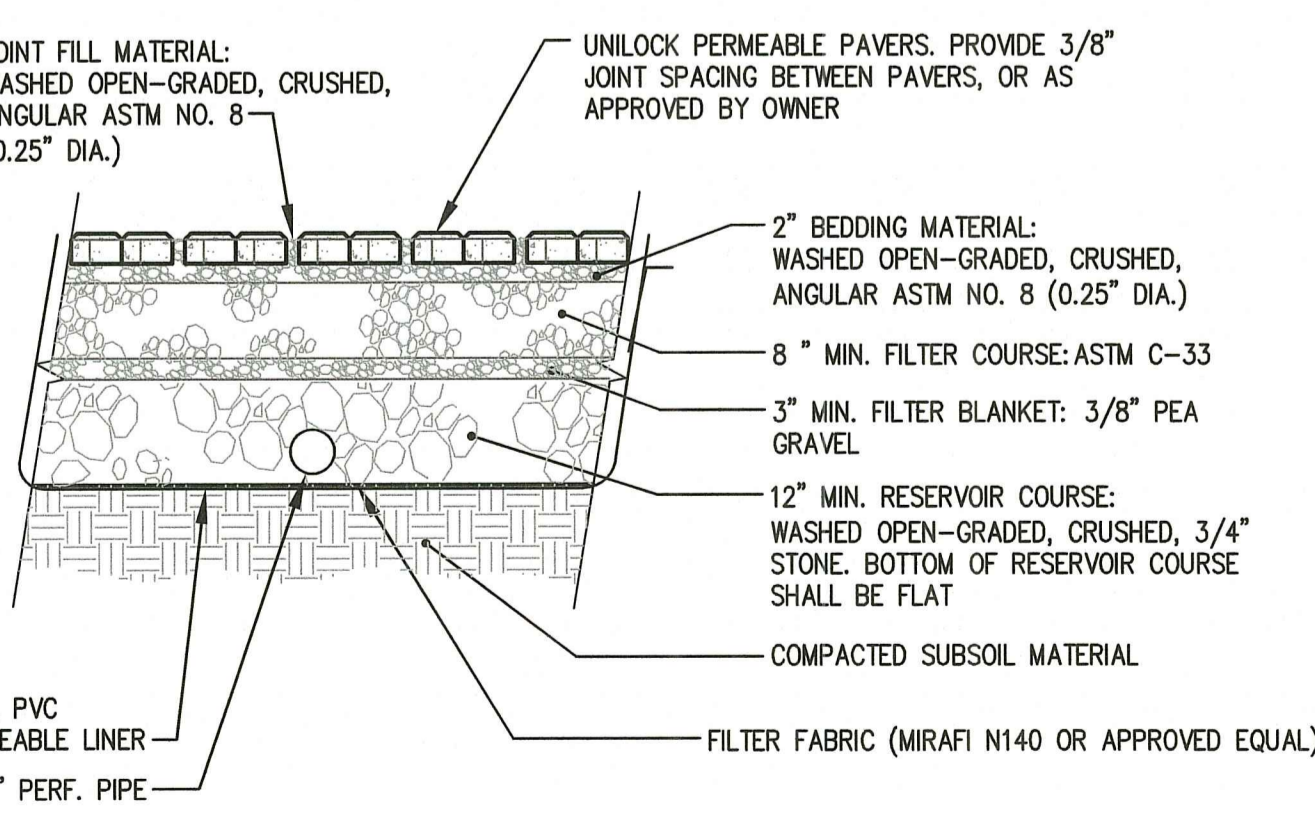
- TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR FIBER MULCH PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
- HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
- STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STRAW WATTLE.
- STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW OR FIBER MATTING.
- THE CATCH BASINS ONSITE AND ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED BY SILT SACKS.
- STRAW WATTLES MAY BE UTILIZED ON THE EXISTING PAVEMENT/IMPERVIOUS AREAS WITH OUT STAKES. CONTRACTOR SHALL INSPECT DAILY, IF SOIL EROSION OR SEDIMENT IS OBSERVED IN THESE AREAS, THE CONTRACTOR SHALL RELOCATE OR INSTALL ADDITIONAL STRAW WATTLES IN LOCATIONS THAT CAN BE STAKED. THIS WORK IS INCLUDED IN THE PROJECT SCOPE.

**INSPECTION FREQUENCY**

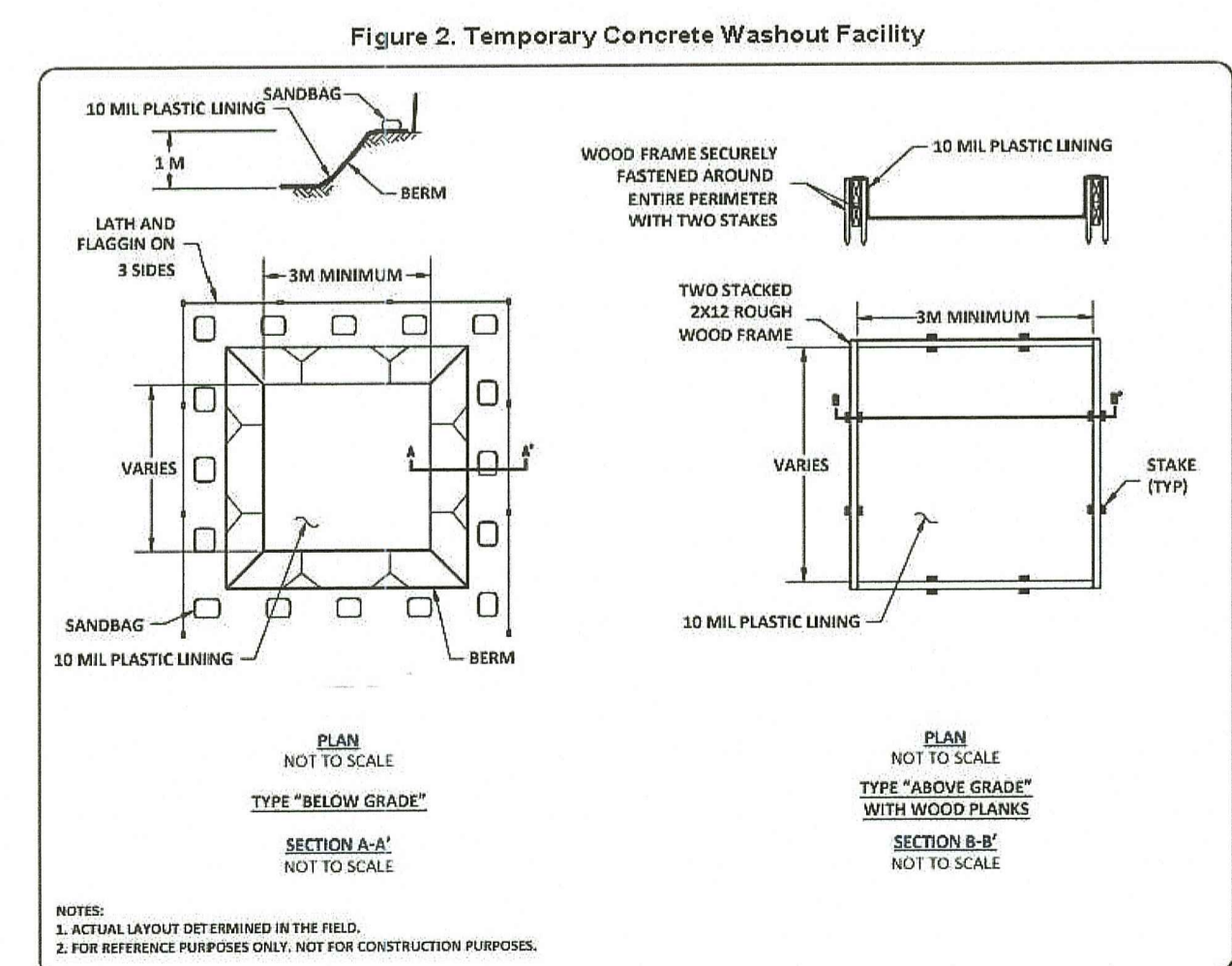
- THE SITE MUST BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER ANY STORM EVENT, WHICH GENERATES AT LEAST 0.25 INCHES OF RAINFALL PER TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF OR SNOWMELT.
- REDUCTIONS IN INSPECTION FREQUENCY - IF EARTH DISTURBING ACTIVITIES ARE SUSPENDED DUE TO FROZEN CONDITIONS OR IN BETWEEN CONSTRUCTION PHASES, INSPECTIONS MAY BE REDUCED TO A FREQUENCY OF ONCE PER MONTH. THE OWNER AND OPERATOR MUST DOCUMENT THE BEGINNING AND ENDING DATES OF THESE PERIODS IN AN INSPECTION REPORT.

**PERMEABLE PAVER BLOCK NOTES:**

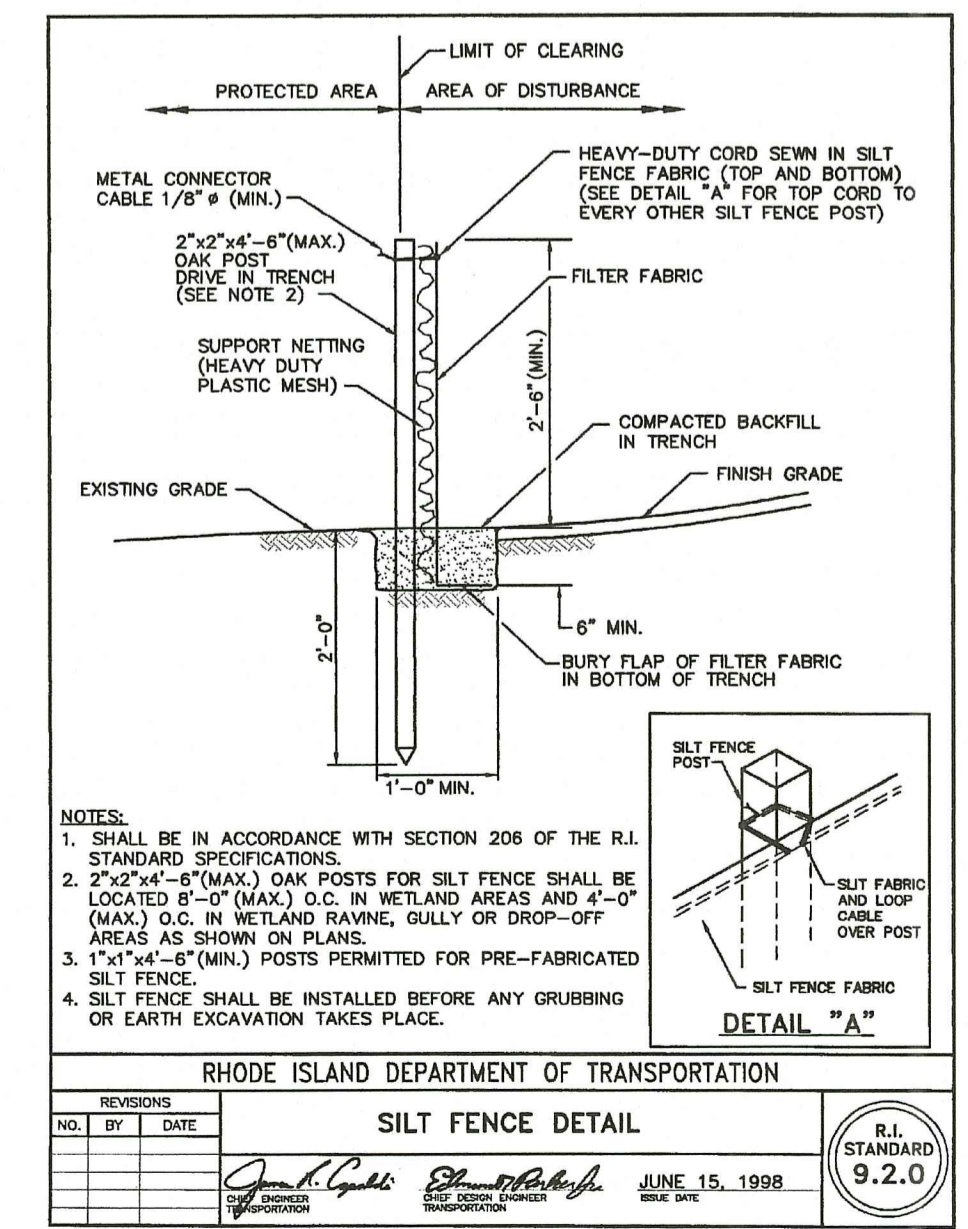
- PRODUCT STYLE AND COLOR SHALL BE COORDINATED WITH OWNER. ALL INSTALLATION SHALL MEET MANUFACTURER'S RECOMMENDATIONS/STANDARDS. MANUFACTURER TO VERIFY OPEN CELL JOINT SPACE IS >15% OF SURFACE AREA.
- ALL AGGREGATE MATERIAL SHALL BE WASHED, CRUSHED, ANGULAR STONE AND FREE OF FINES.
- REMOVE ALL FILL AND ORGANIC MATERIAL TO NATIVE SOILS, REPLACE WITH GRAVEL BORROW (GRAVEL BORROW: <0% PASSING 200 SIEVE).
- THE PROVIDED AGGREGATE THICKNESSES ARE AFTER COMPACTION.
- CONTRACTOR SHALL COORDINATE WITH MANUFACTURER TO HAVE A REPRESENTATIVE ONSITE FOR THE FIRST WEEK OF PAVER INSTALLATION.
- CONTRACTOR SHALL TOP DRESS STONE IN VOIDS AFTER BLOCKS ARE COMPACTIONED AND 3-6 MONTHS AFTER INITIAL INSTALLATION.
- RECOMMENDATION - PERMEABLE PAVER BLOCK SURFACE SHALL BE SWEEP FREQUENTLY. REFER TO MANUFACTURER'S MAINTENANCE GUIDE FOR ADDITIONAL MAINTENANCE RECOMMENDATIONS.



**PERMEABLE PAVER BLOCK DETAIL**  
NOT TO SCALE



**CONCRETE WASHOUT DETAIL**  
NOT TO SCALE



**NOTE:** STRAW WADDLES MAY BE USED IN LIEU OF SILT FENCE.

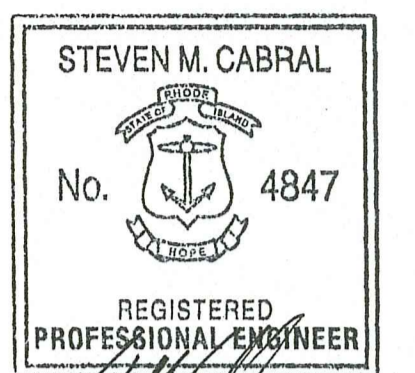


**Crossman Engineering**

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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE #: 23-1101  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:

MATTESON RIDGE CONDOS  
(APPLIC. NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)  
175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**SOIL EROSION and SEDIMENT CONTROL DETAILS**

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-16-SOIL\_DET.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	7/10/23
2	2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER: C6.2  
AUG 9 2023  
Office of Water Resources  
SHEET: 16 OF 29

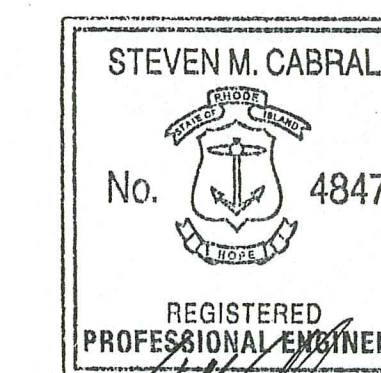


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MATTESON RIDGE CONDOS  
 (APPLIC. NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:

**PROPOSED ROADWAY  
 PROFILE No. 1**

DATE:

APRIL 2023

SCALE:

AS NOTED

DWG. NAME:

2213-17-20-PROFILE.dwg

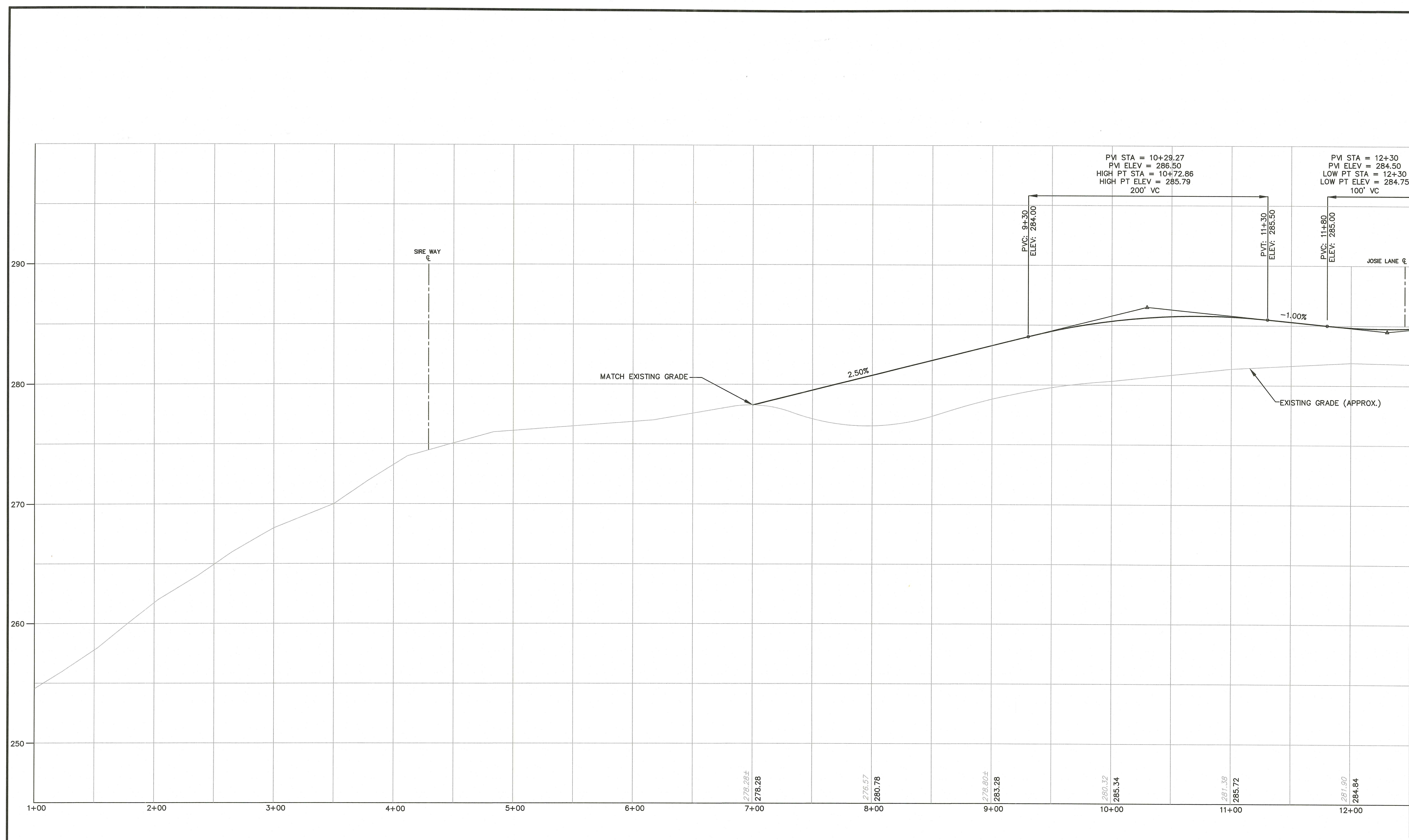
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NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER

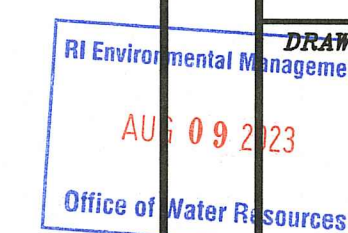
**C7.1**

SHEET: 17 OF 29



**SIRE WAY  
 PROPOSED ROADWAY PROFILE**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=4'

MATCH LINE TO PROFILE No. 2





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*Steven M. Cabral*  
8-8-23

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 OFFICE OF WATER RESOURCES  
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*Andy Clayton*

PROJECT TITLE:

MATTESON RIDGE CONDOS  
 (APPLIC NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:

**PROPOSED ROADWAY  
 PROFILE No. 2**

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-17-20-PROFILE.dwg

REVISIONS

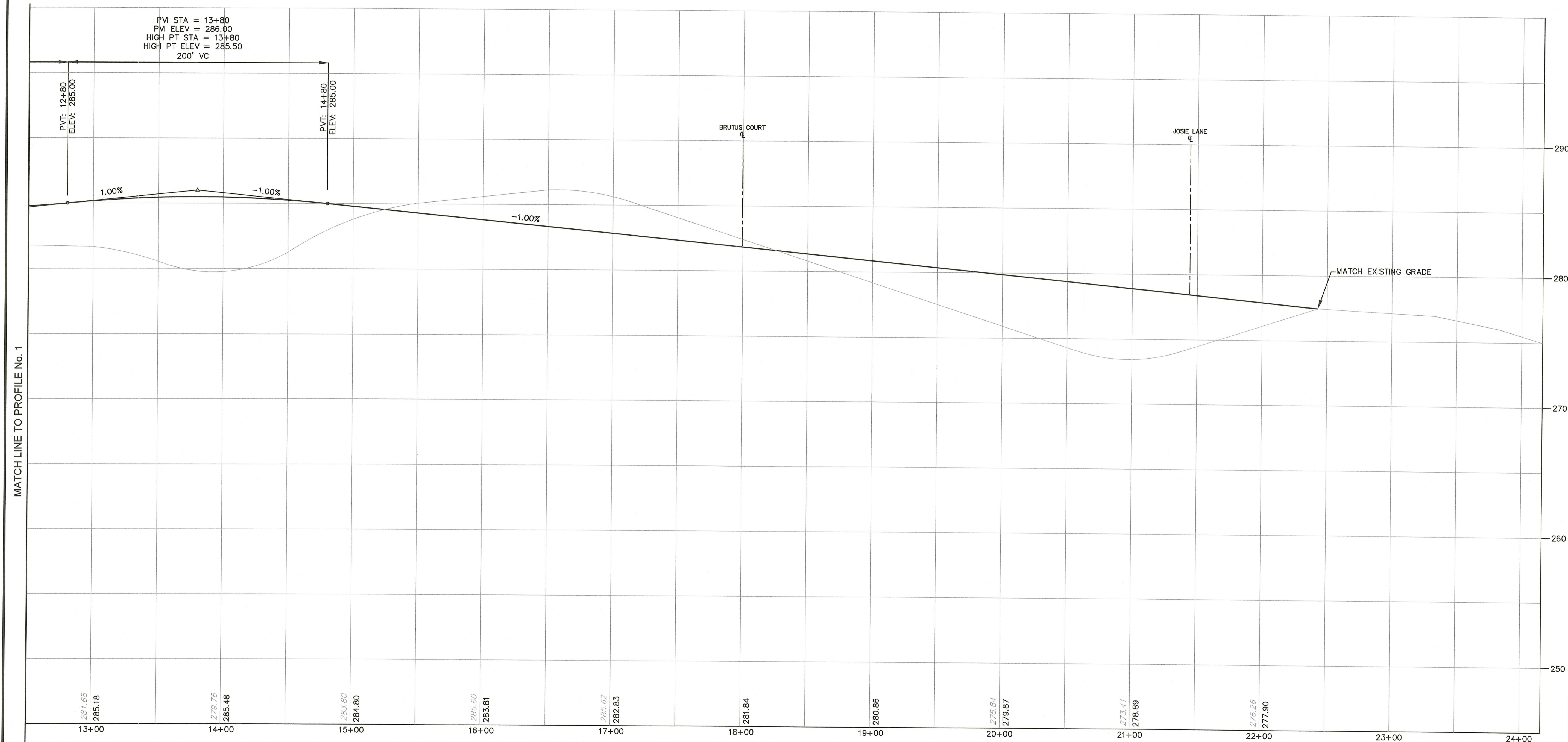
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources

**C7.2**

SHEET: 18 OF 29



MATCH LINE TO PROFILE No. 1

**SIRE WAY  
 PROPOSED ROADWAY PROFILE**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=4'



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*Handwritten signature and date: 8-8-23*

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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 (APPLIC. NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
 LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

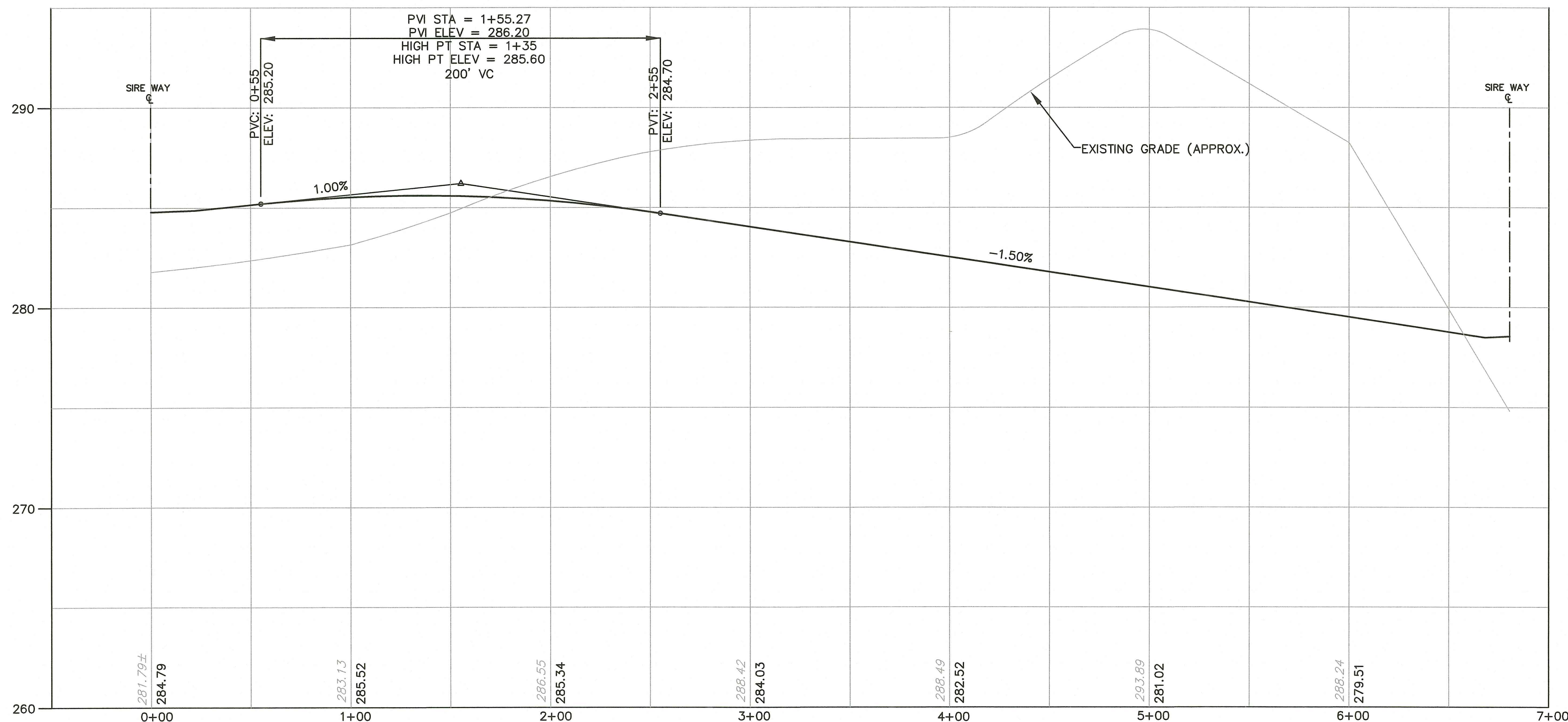
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**PROPOSED ROADWAY  
 PROFILE No. 3**

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME:  
 2213-17-20-PROFILE.dwg

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources  
**C7.3**  
 SHEET: 19 OF 29



**JOSIE LANE  
 PROPOSED ROADWAY PROFILE**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=4'

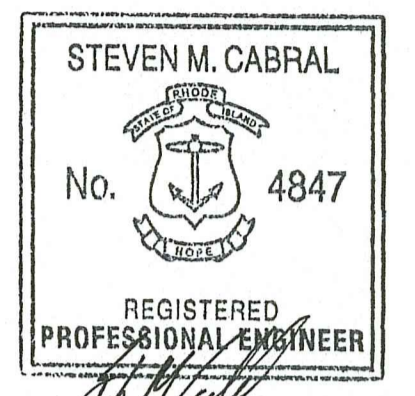


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PREPARED FOR:  
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 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**PROPOSED ROADWAY  
 PROFILE No. 4**

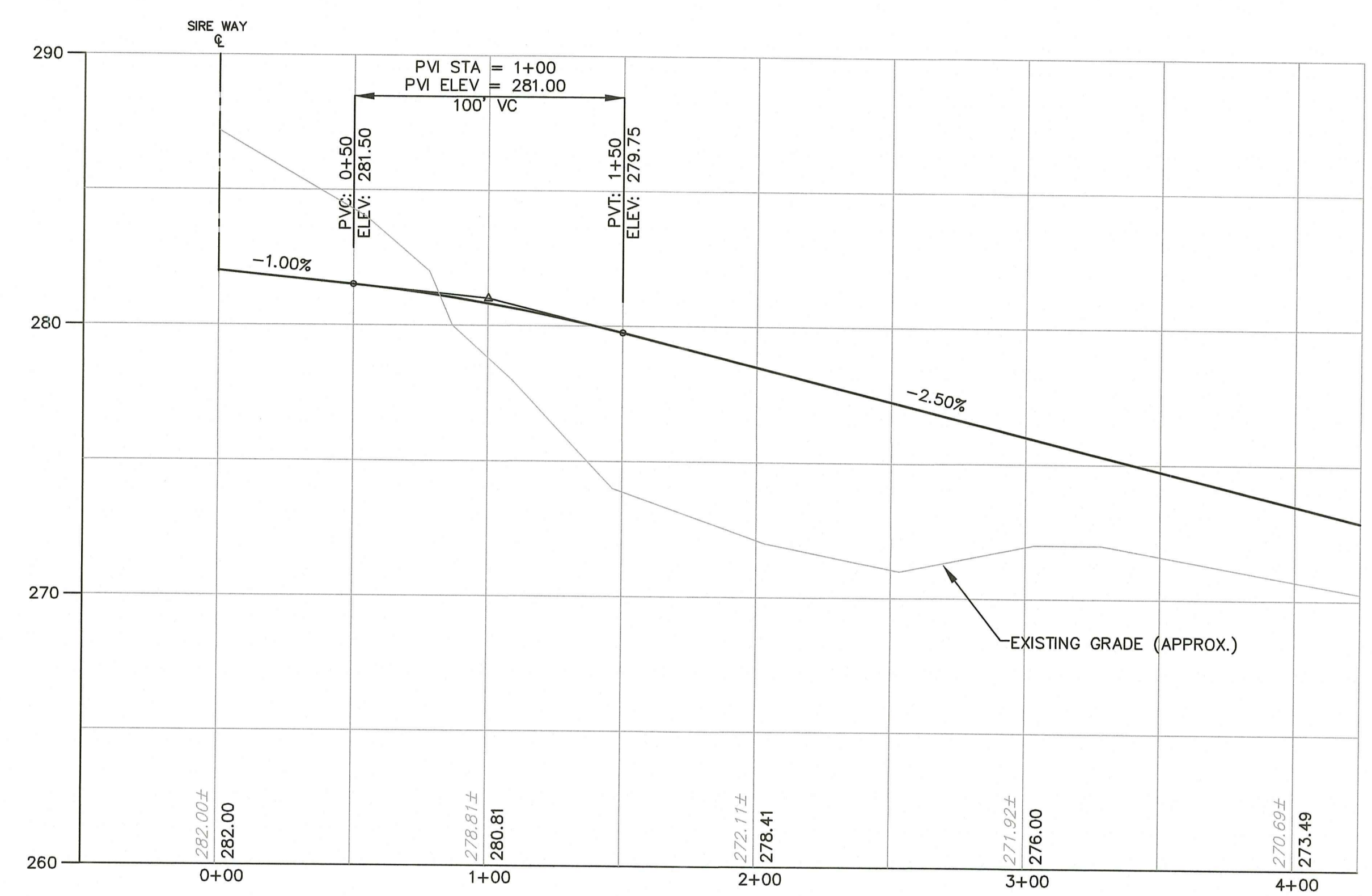
DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-17-20-PROFILE.dwg

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

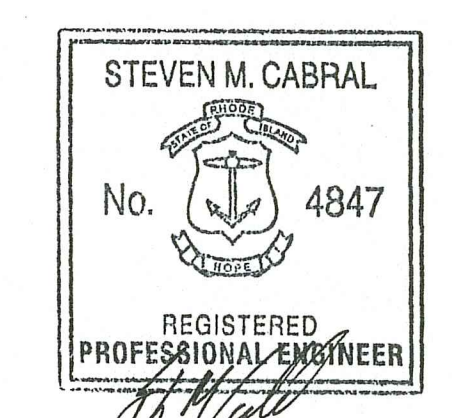
RI Environmental Management  
 AUG 08 2023  
 Office of Water Resources

DRAWING NUMBER  
**C7.4**  
 SHEET: 20 OF 29



**BRUTUS COURT  
 PROPOSED ROADWAY PROFILE**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=4'

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: SEP - 1 2023 FILE # 23-0101  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
**MATTESON RIDGE CONDOS**  
 (APPLIC. NO. 17-0080, RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**MISCELLANEOUS DETAILS  
 PLAN NO. 1**

DATE: APRIL 2023 SCALE: AS NOTED  
 DWG. NAME: 2213-21-DET01.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	7/10/23
2	2	RIDEM COMMENTS	8/7/23

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources  
**C8.1**  
 SHEET: 21 OF 29

**EMBANKMENT NOTES:**

1. THE SAND FILTER AND INFILTRATION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 2" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 lb./cf. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET SPECIFICATION SECTION 202.20 IN THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MARCH 2018.
2. UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
3. THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHOULD BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD ASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
4. BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND MAY REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
5. EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OUTFALL SHALL HAVE AN ANTI-SEEP COLLAR.

**DRAINAGE NOTES**

1. CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRADE.
2. CONTRACTOR IS RESPONSIBLE TO OBTAIN SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
3. ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
4. ALL CATCH BASINS SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES. (NO WEEP HOLES)
5. UNLESS OTHERWISE NOTED, ALL SOLID DRAINAGE PIPE SHALL BE ADS N-12 HDPE OR APPROVED EQUAL. PIPE BEDDING SHALL BE IN CRUSHED STONE OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD). ADS PIPE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
6. ALL ROOF DRAINS SHALL BE INSTALLED AT A 1.0% MINIMUM SLOPE.
7. A FIXED VERTICAL SEDIMENT DEPTH MARKER SHOULD BE INSTALLED IN EACH SEDIMENT FOREBAY TO MEASURE SEDIMENT DEPOSITS AND INDICATE WHEN MAINTENANCE IS REQUIRED. PROVIDED BELOW ARE THE DESIGN DEPTH AND HALF OF DESIGN DEPTH ELEVATIONS. SEDIMENT REMOVAL AND MAINTENANCE IS REQUIRED WHEN SEDIMENT ACCUMULATES TO HALF THE DESIGN DEPTH.

**SAND FILTER NOTES**

1. SAND FILTER BASIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, APPENDIX F.5, CONSTRUCTION STANDARDS/SPECIFICATIONS FOR FILTER BMP'S.
2. MATERIAL USED SHALL MEET THE REQUIREMENTS OF TABLE F-16 IN APPENDIX F.5.
3. THE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE ABOVE REFERENCED MANUAL. THE MANUAL CAN BE FOUND AT <http://www.dem.ri.gov/pubs/regs/water/swmanual.pdf>.
4. CONTRACTOR IS RESPONSIBLE TO SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR SAND FILTER MATERIAL PRIOR TO START OF CONSTRUCTION.
5. FILTER FABRIC SHALL BE MARIFI 160 N OR APPROVED EQUAL.
6. AS NOTED, BASIN SHALL HAVE 2 PLY FILTER FABRIC; 1 FOR UPPER MEMBRANE PROTECTION AND 1 FOR WRAPPING BASIN UNDERDRAIN SYSTEM.

**TOPSOIL MIX FOR BASINS**

PLANTING SOIL SHALL MEET THE BELOW COMPOSITION;  
 SAND: 85-88%  
 SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)  
 ORGANIC MATTER: 3-5%

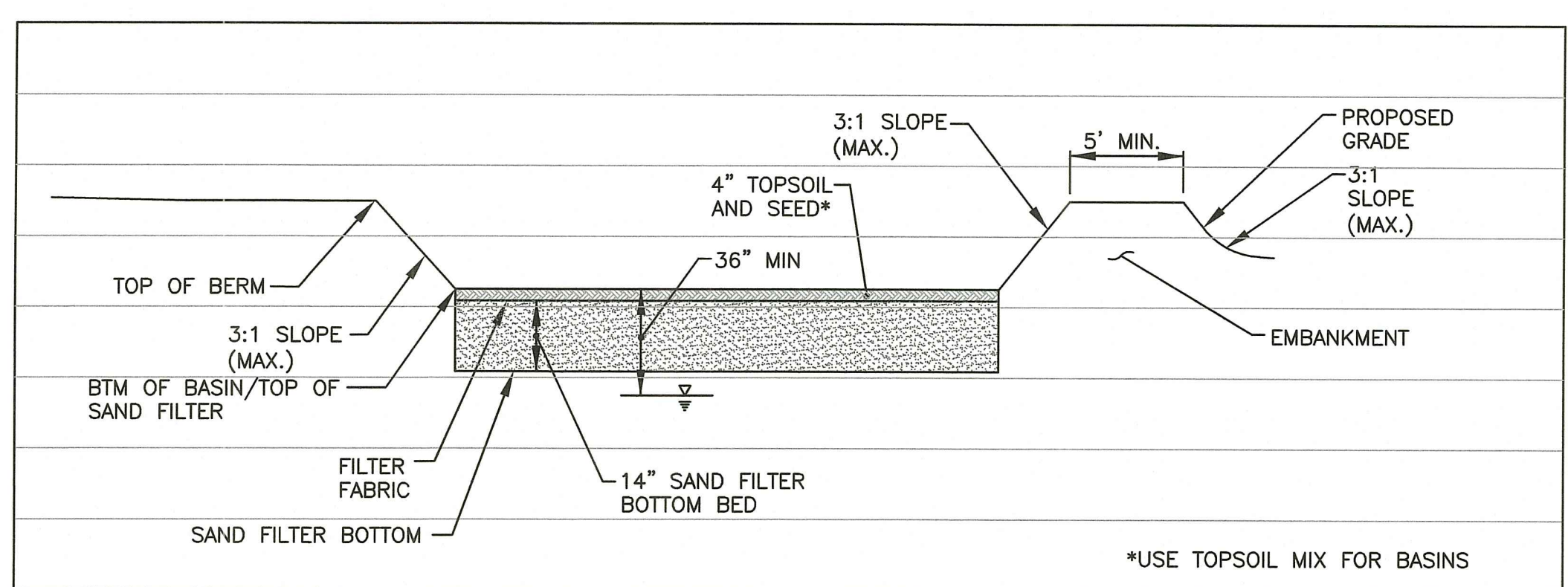
**SAND FILTER BOTTOM BED NOTE**

THE SAND FILTER BOTTOM BED SHALL BE AASHTO M6 OR ASTM 33 CONCRETE SAND.

FILTER FABRIC SHALL BE BETWEEN SAND FILTER BOTTOM BED AND TOPSOIL LAYERS SHALL BE MIRAFI 180-N OR APPROVED EQUAL.

**SAND FILTER/GRASS SWALE AND INFILTRATION BASIN SEED MIX (SEED MIX NO. 3)**

- APPLICATION RATE = 15-25 LBS. / ACRE (SEASONALLY FLOODED MIX) (SAND FILTER BOTTOM AREA)
- 20% FOX SEDGE, PA ECOTYPE (CAREX VULPINOIDEA, PA ECOTYPE)
  - 16% VIRGINIA WILD RYE, PA ECOTYPE (ELYMUS VIRGINICUS, PA ECOTYPE)
  - 15% RIVERBANK WILD RYE, PA ECOTYPE (ELYMUS RIPARIUS, PA ECOTYPE)
  - 15% JAPANESE MILLET (ECHINOCHLOA CRUSGALLI VAR. FRUMENTACEA C.), TIIGA)
  - 15% DEER TONGUE, TIIGA)
  - 9% BLUNT BROOM SEDGE, PA ECOTYPE (CAREX SCOPARIA, PA ECOTYPE)
  - 5% SWITCHGRASS, 'CAVE-IN-ROCK' (PANICUM VIRGATUM, 'CAVE-IN-ROCK')
  - 2% GREEN BULRUSH, PA ECOTYPE (SCIRPUS ATROVIRENS, PA ECOTYPE)
  - 2% AWL SEDGE, PA ECOTYPE (CAREX STIPATA, PA ECOTYPE)
  - 1% AUTUMN BENTGRASS, APB (AGROSTIS PERENNANS, APB)



**SAND FILTER TYPICAL SECTION**  
NOT TO SCALE

**SAND FILTER SUMMARY**

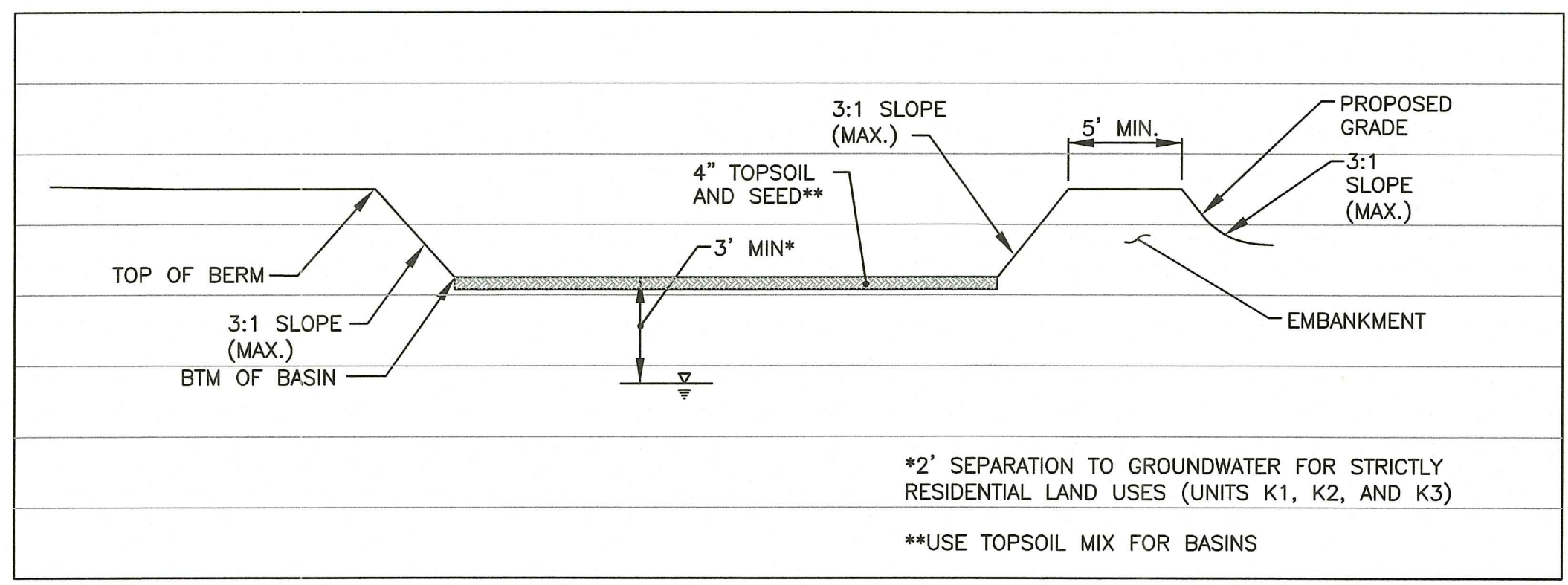
BMP NO.	TOP OF BERM	BOTTOM OF BASIN/TOP OF SAND FILTER	SAND BOTTOM	OVERFLOW WEIR CREST ELEVATION	GROUNDWATER ELEVATION	SEPARATION TO GROUNDWATER
2a	269.00	264.00	262.50	267.50	260.00	4.00'

**INFILTRATION BASIN SUMMARY**

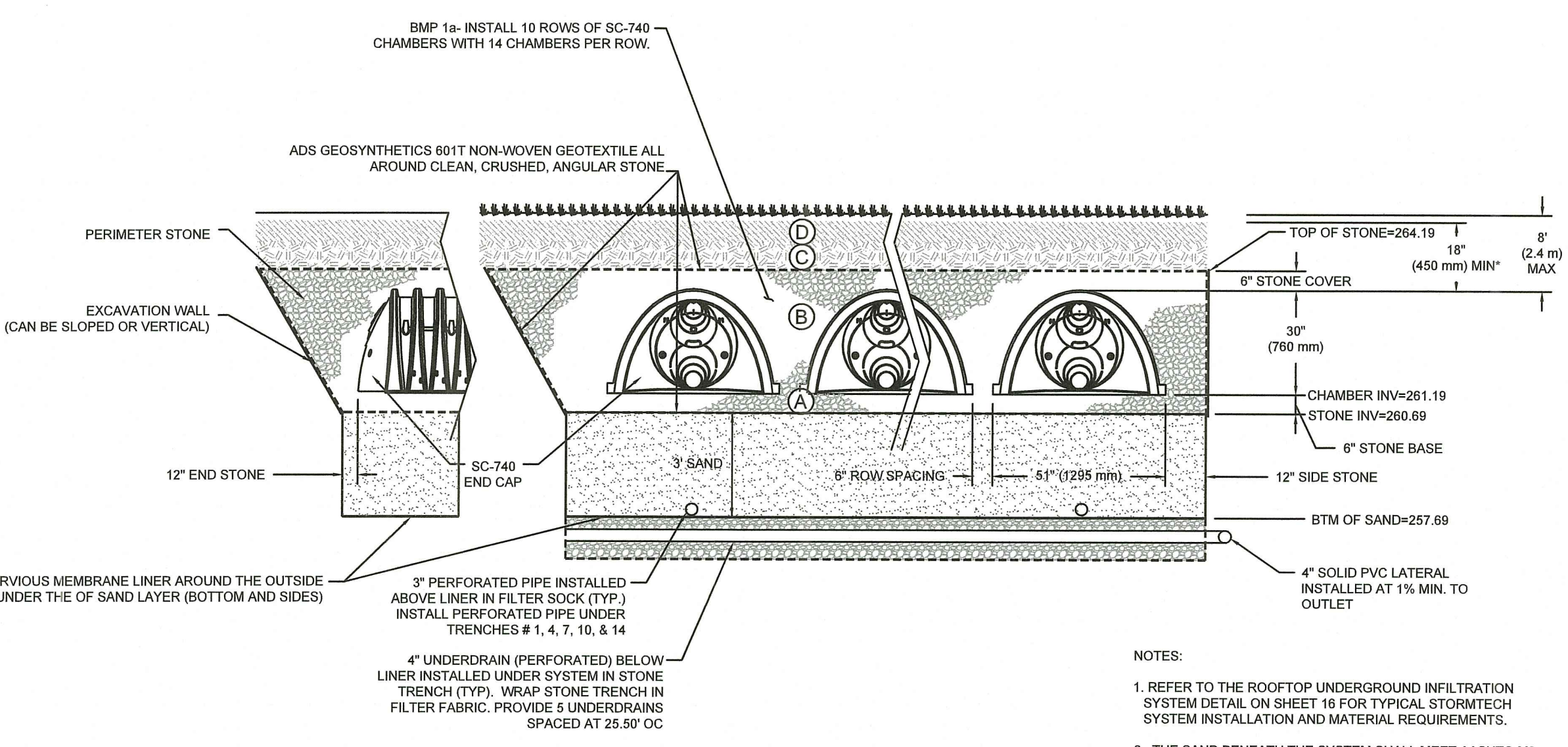
BMP NO.	TOP OF BERM	BOTTOM OF BASIN	OVERFLOW WEIR CREST ELEVATION	GROUNDWATER ELEVATION	SEPARATION TO GROUNDWATER
2b	269.00	264.00	267.70	260.00	4.00
3a	272.00	268.00	271.00	263.80	4.20
3b	272.00	268.00	271.00	263.80	4.20
4a	276.50	274.00	275.50	270.00	4.00
4b	283.60	281.00	282.50	277.00	4.00
5a	233.00	231.00	231.20	229.00	2.00
5b	240.00	239.00	239.50	237.00	2.00
5c	240.00	239.00	239.50	237.00	2.00

NOTE: BMP NO. 5a, 5b, AND 5c HAVE BEEN APPROVED AND INSTALLED UNDER APPLICATION NO. 17-0080, RIPDES. RIR 101570 & UIC 001771

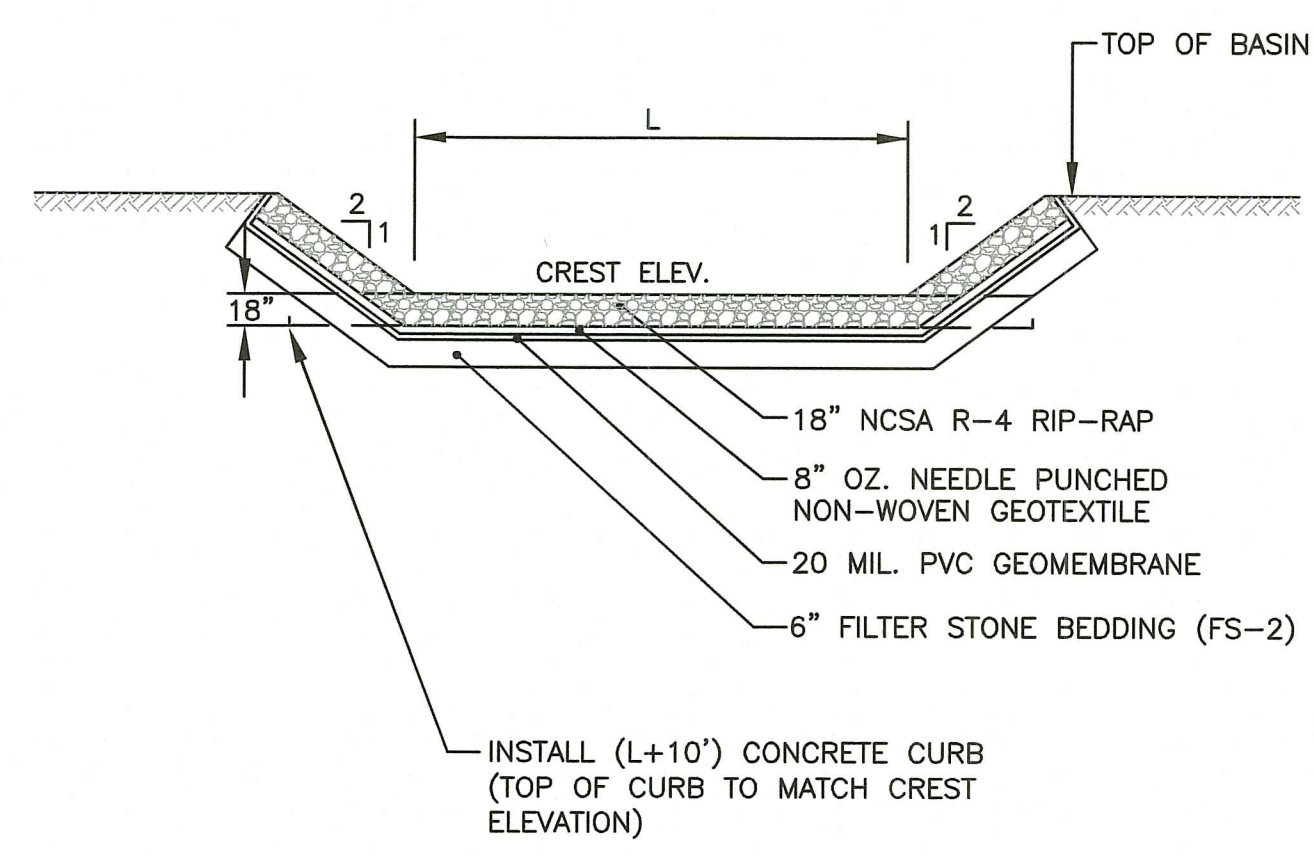
BMP NO.	BOTTOM OF BASIN ELEVATION	1/2 OF DESIGN DEPTH ELEVATION	DESIGN DEPTH ELEVATION
2a (SEDIMENT FOREBAY)	264.00	265.50	267.00
3a (SEDIMENT FOREBAY)	268.00	269.25	270.50
4a (SEDIMENT FOREBAY)	274.00	274.75	275.50



**INFILTRATION BASIN TYPICAL SECTION**  
NOT TO SCALE

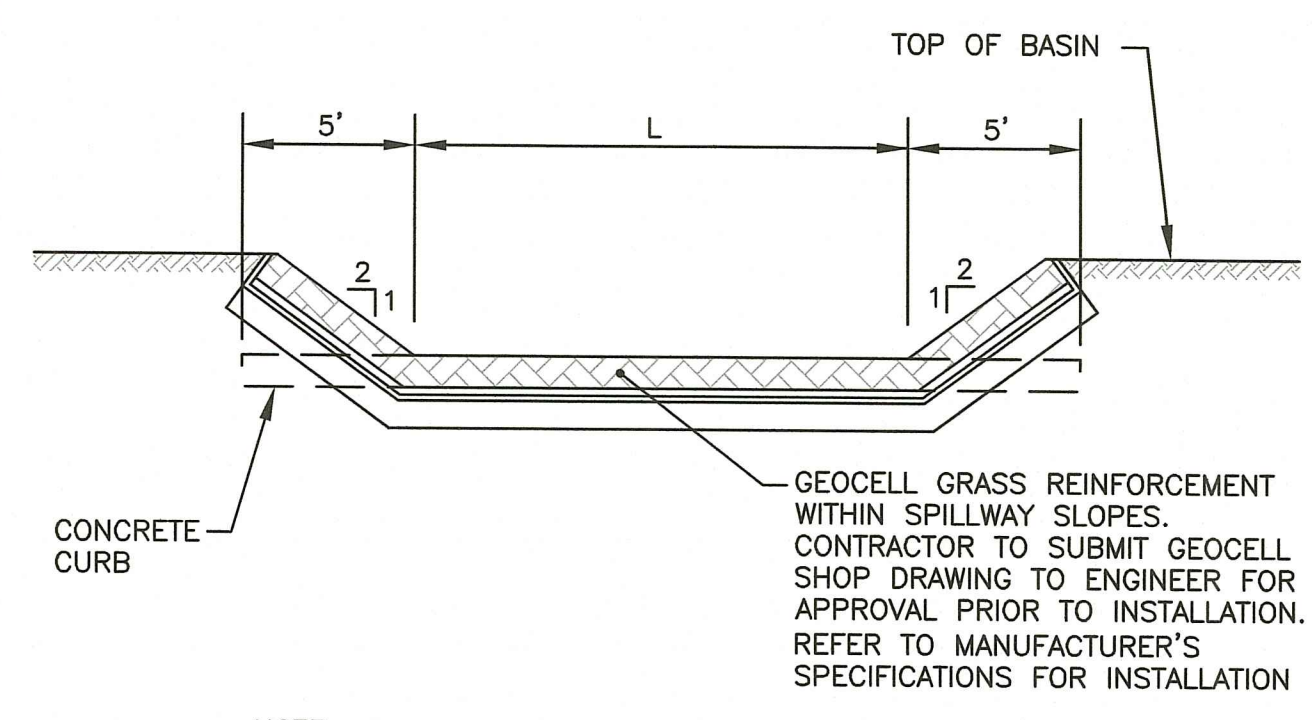


**BMP 1a -UNDERGROUND DETENTION SYSTEM DETAIL (INSTALLED UNDER PHASE 1)**  
NOT TO SCALE



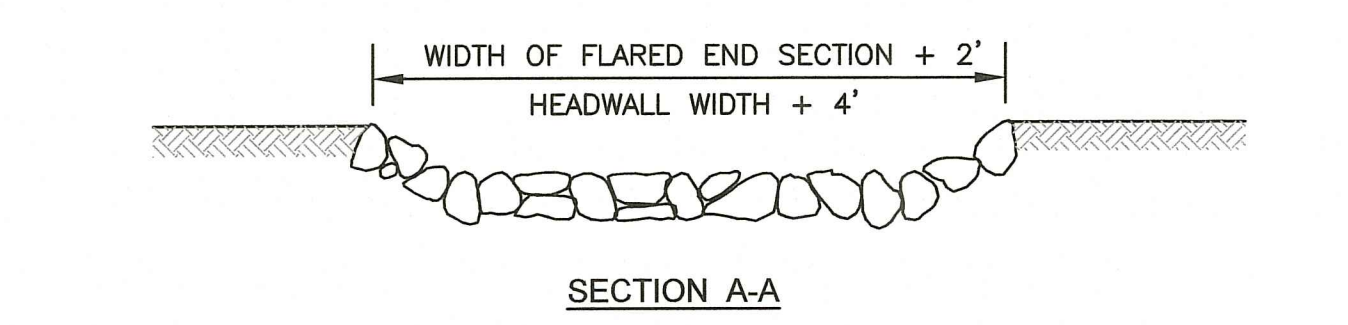
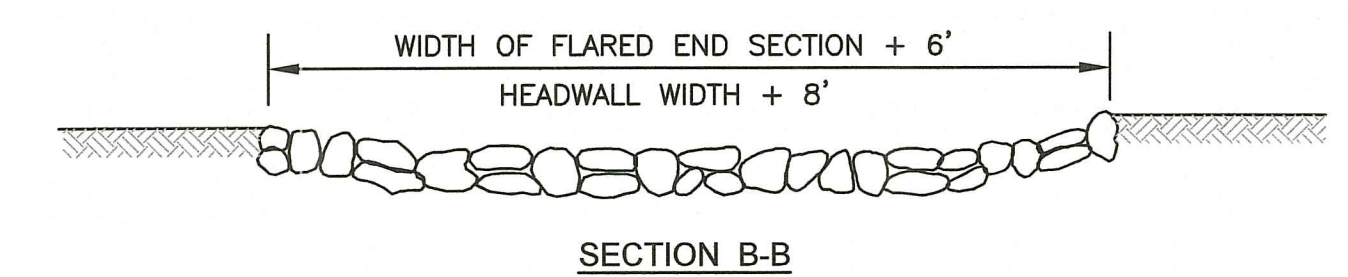
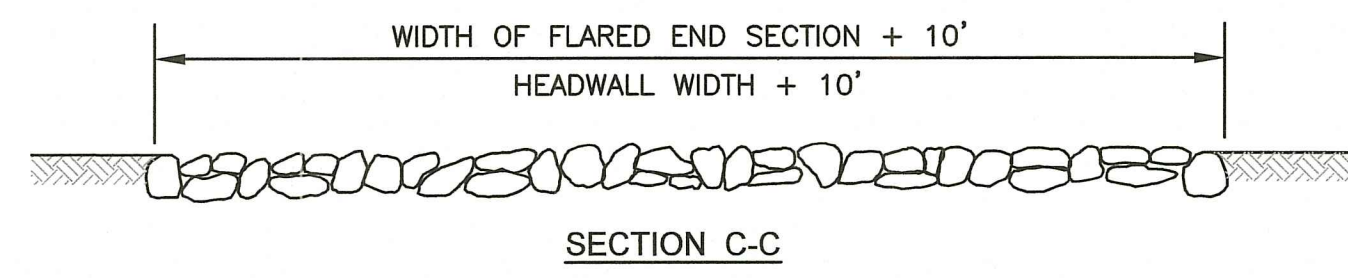
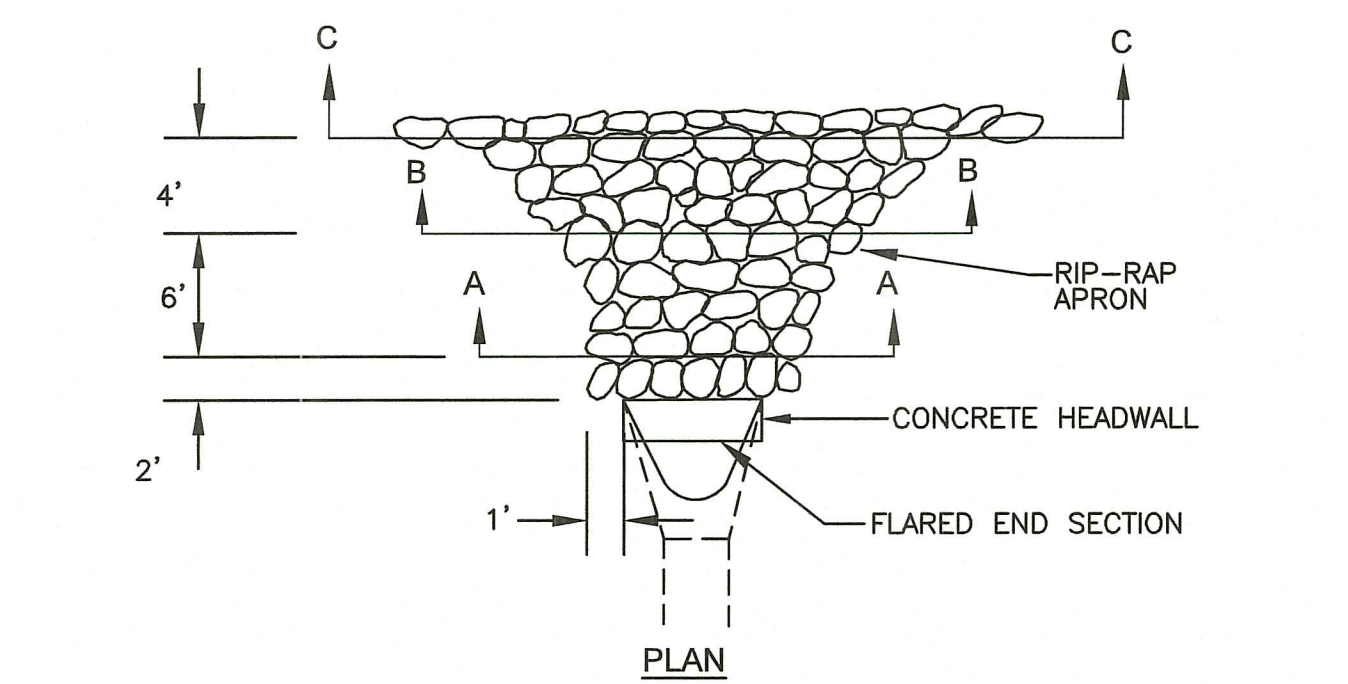
NOTE: RIP RAP SHALL CONTINUE ON INSIDE AND OUTSIDE OF BASIN SLOPE AT OVERFLOW WEIR LOCATION.

**TYPICAL BASIN OVERFLOW WEIR DETAIL (AT BMPS 2, 3, AND 4)**  
NOT TO SCALE



NOTE: GEOCELL SLOPE STABILIZATION SHALL CONTINUE ON INSIDE AND OUTSIDE OF BASIN SLOPE AT OVERFLOW WEIR LOCATION.

**TYPICAL BASIN OVERFLOW WEIR DETAIL (AT BMPS 17 & 18 AND GRADED DEPRESSIONS)**  
NOT TO SCALE

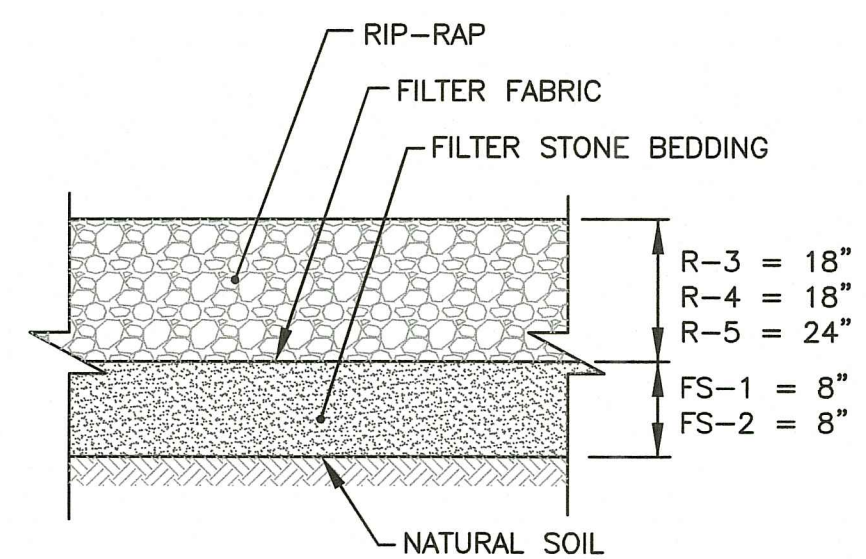


- NOTES:**
- UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.
  - DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.
  - SEE "TYPICAL SECTION RIP RAP OUTLET PROTECTION AT FLARED END SECTIONS AND CONCRETE HEADWALLS" DETAIL FOR CONSTRUCTION MATERIAL SPECIFICATIONS.

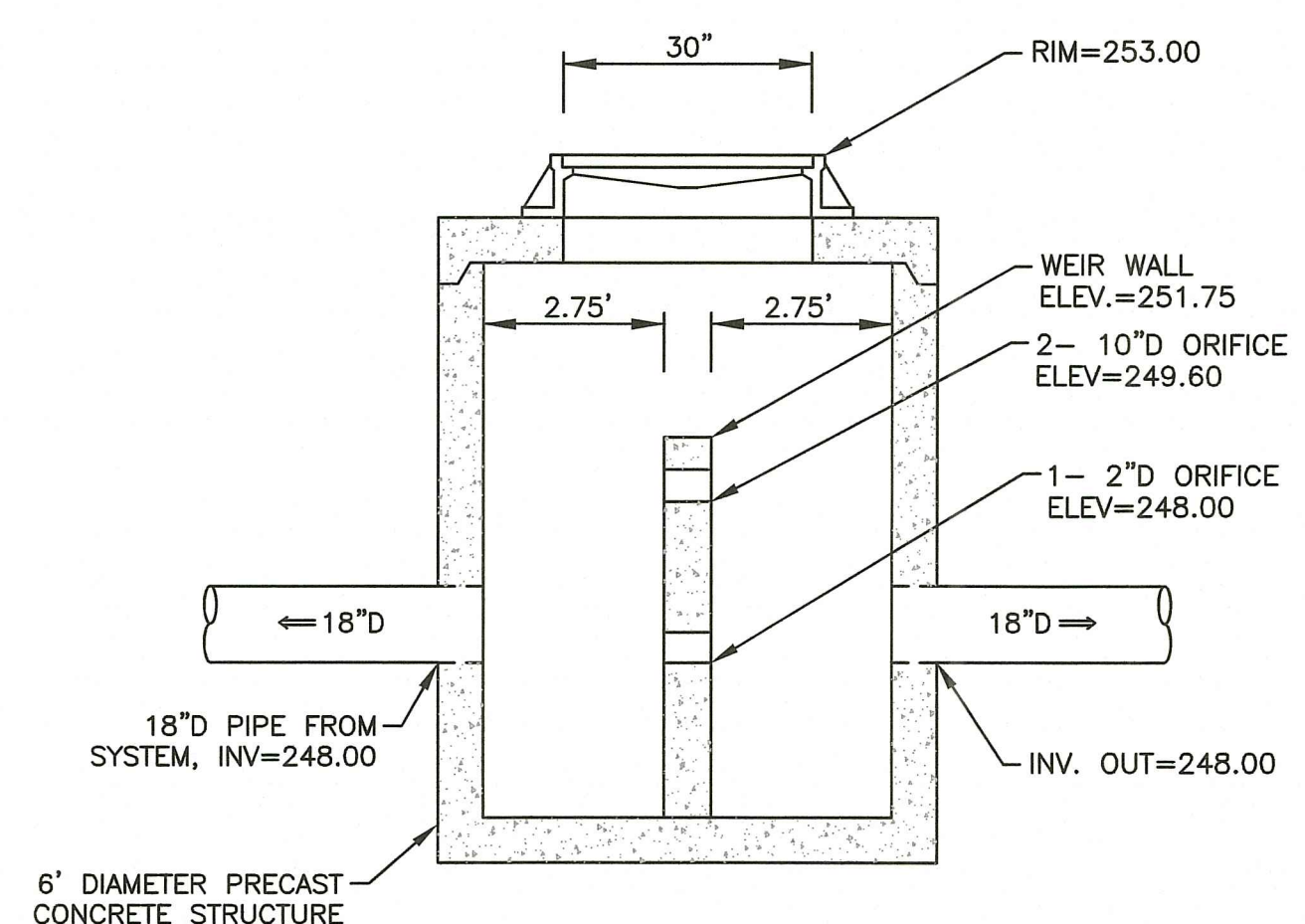
**TYPICAL LAYOUT OF RIP RAP OUTLET PROTECTION AT FLARED END SECTIONS and CONCRETE HEADWALLS**  
NOT TO SCALE

**PERMEABLE PAVEMENT NOTES**

- PERMEABLE PAVEMENT (POROUS ASPHALT) MATERIALS SHALL CONFORM TO RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015, APPENDIX F.4, CONSTRUCTION STANDARDS/SPECIFICATIONS FOR ALTERNATIVE PAVING SURFACES.
- THE CONTRACTOR IS REQUIRED TO SUBMIT THE LIST OF MATERIALS, GRADATIONS AND THE NAME AND ADDRESS OF THE SUPPLIERS TO THE ENGINEER FOR APPROVAL PRIOR TO BRINGING MATERIAL ON SITE. MATERIAL CERTIFICATIONS WILL ALSO BE REQUIRED AS REFERENCED IN THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015, APPENDIX F.4.
- THE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE ABOVE REFERENCED MANUAL. THE MANUAL CAN BE FOUND AT:  
<http://www.dem.ri.gov/pubs/regs/regs/water/swmanual15.pdf>
- THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER AND ENGINEER DURING CONSTRUCTION TO CONDUCT THE FOLLOWING INSPECTIONS:
  - SOIL REMOVAL WITHIN POROUS PAVEMENT AREA WHEN COMPLETED AND PRIOR TO STONE PLACEMENT.
  - STONE RESERVOIR AND CHOKER COURSE INSTALLATION. CONTRACTOR TO COORDINATE SCHEDULE WITH OWNER AND ENGINEER FOR INSPECTIONS DURING PLACEMENT.
  - POROUS PAVEMENT INSTALLATION - VOID CONTENT 15-20%.
- THE CONTRACTOR IS REQUIRED TO PROVIDE THE FOLLOWING SUBMITTALS TO THE OWNER AND ENGINEER:
  - SIEVES ANALYSIS
  - GRAVEL BORROW
  - CHOKER STONE (DOUBLE WASHED)
  - RESERVOIR STONE (DOUBLE WASHED)
  - POROUS ASPHALT MIX
  - ROLLER TO BE USED FOR PAVEMENT INSTALLATION (8 TON MIN./10 TON MAX.)
  - COMPACTION TEST COMPANY
  - PAVEMENT INSTALLATION COMPANY
- CONTRACTOR SHALL PROVIDE PAVEMENT MIX RESULTS (INCLUDING VOID CONTENT) FOR MIX ON DAY OF PAVING.
- OPEN GRADED FRICTION COURSES WILL NOT BE ACCEPTED AS AN ALTERNATIVE SPECIFICATION.



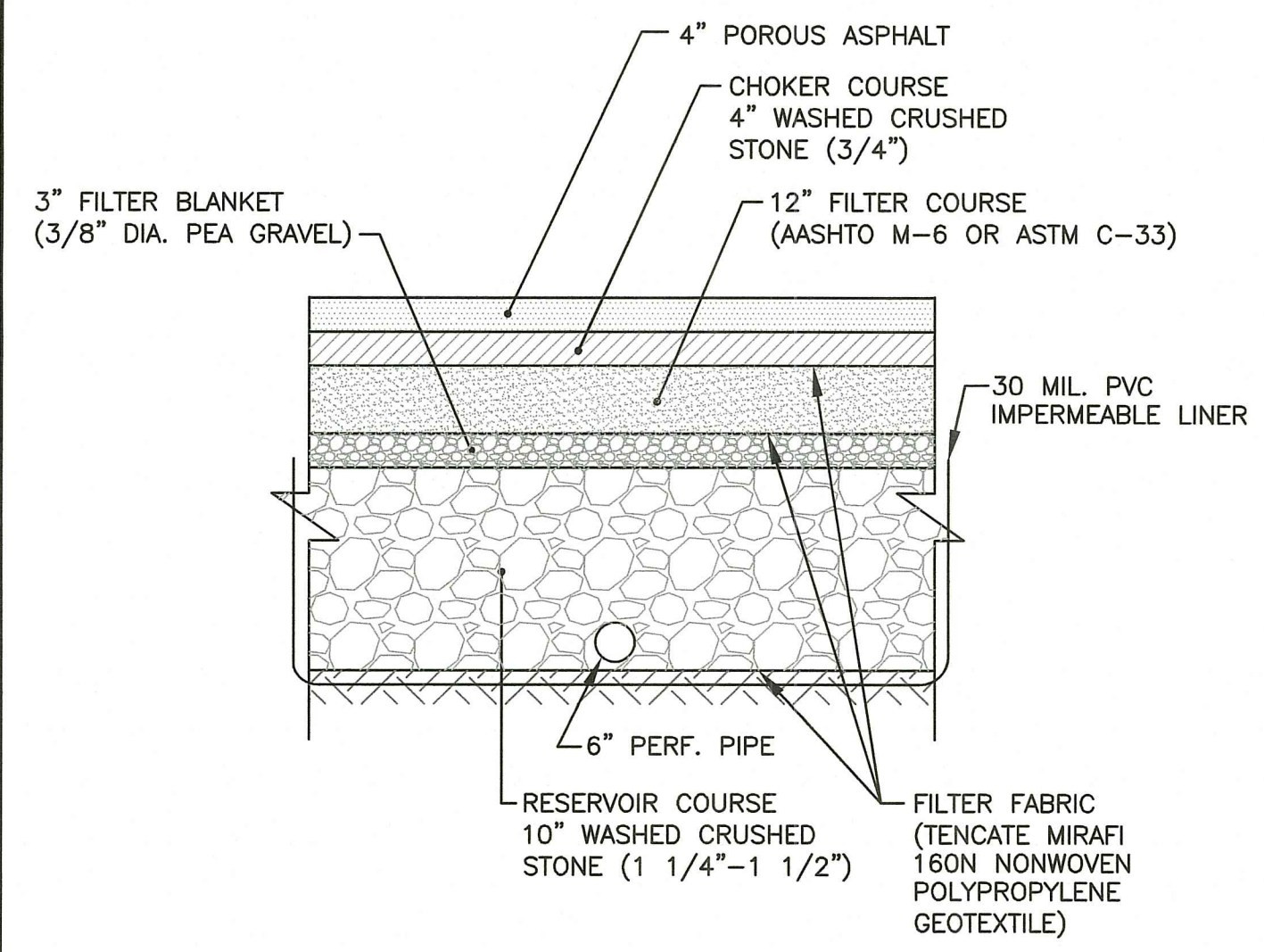
**TYPICAL RIP-RAP OUTLET PROTECTION DETAIL**  
NOT TO SCALE



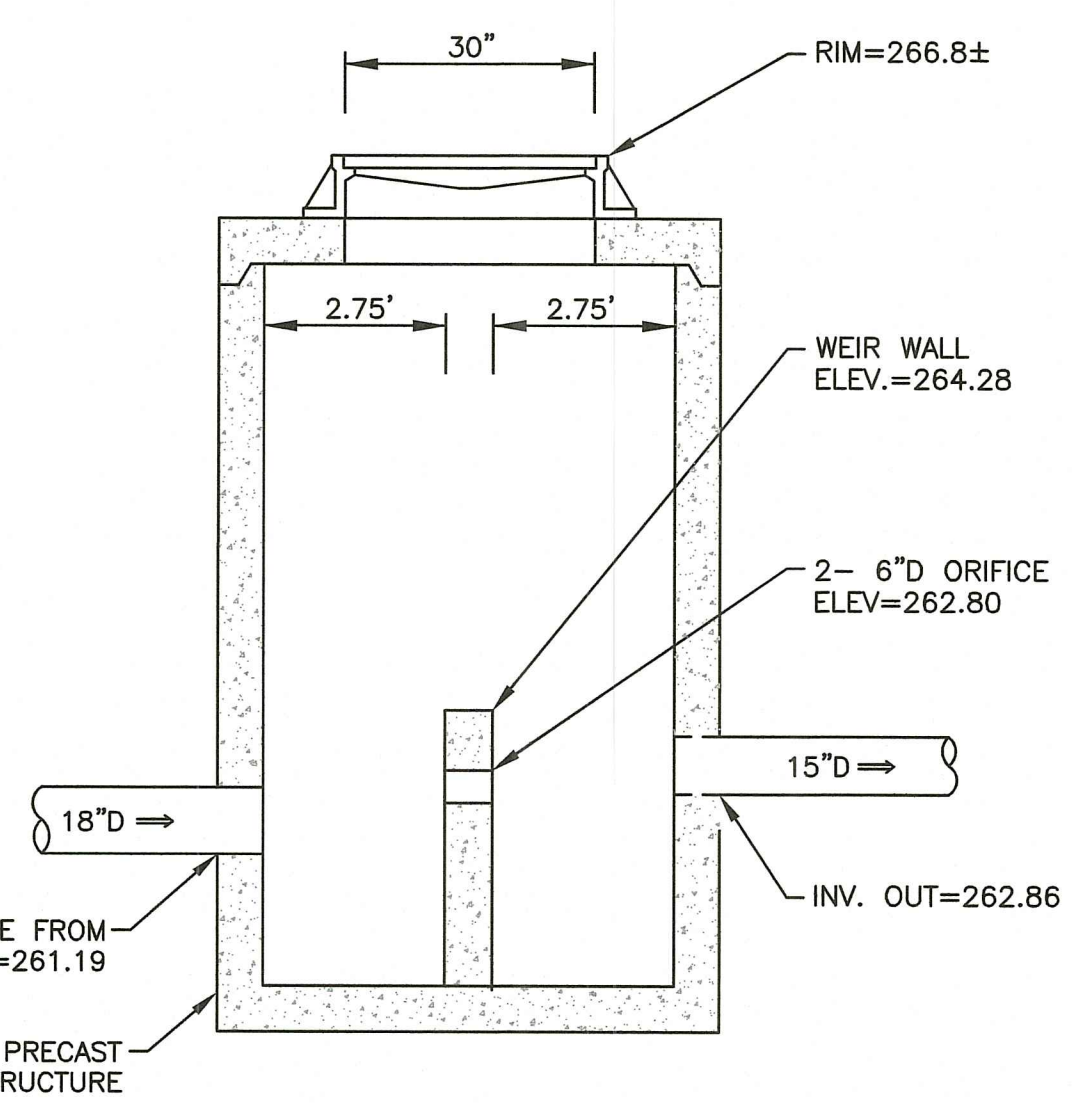
**BMP 1c OUTLET STRUCTURE NO. (OS-3) DETAIL**  
NOT TO SCALE

**PERMEABLE PAVEMENT MAINTENANCE SCHEDULE**

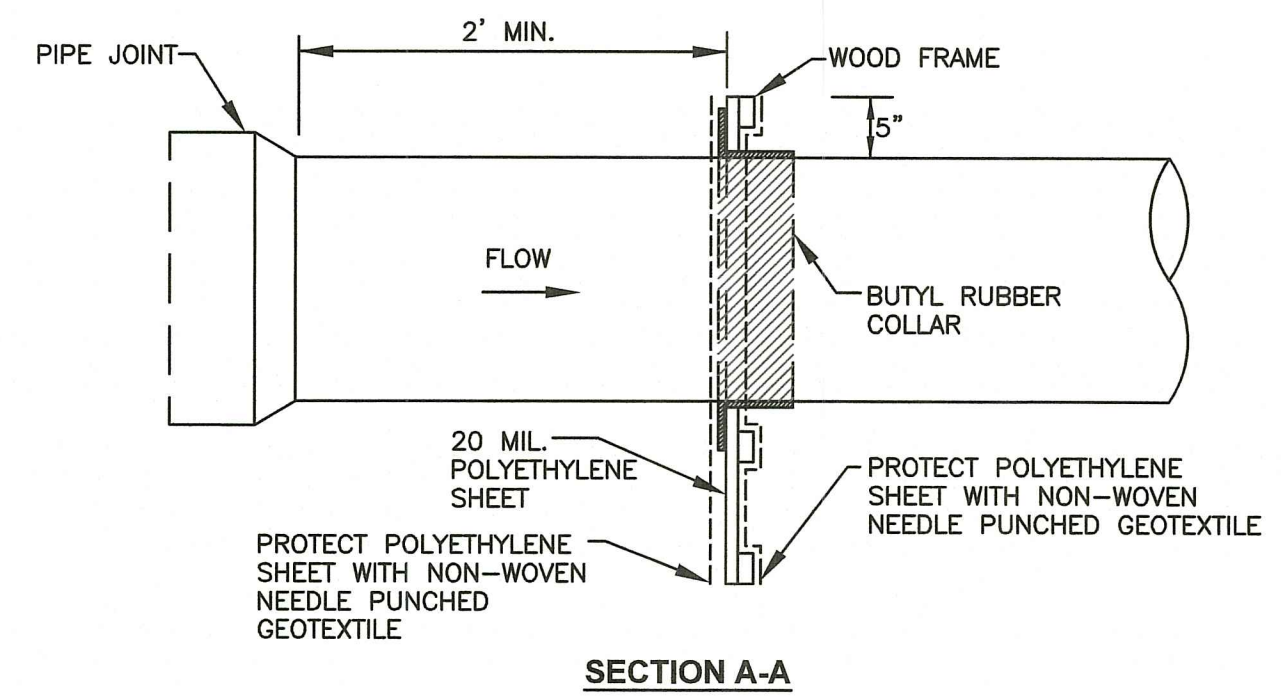
- THE BELOW RECOMMENDATIONS FOR MAINTENANCE OF THE PERMEABLE PAVEMENT ARE IN ACCORDANCE WITH THE RHODE ISLAND STORMWATER MANAGEMENT STANDARDS.
- FOLLOWING CONSTRUCTION THE OWNER SHALL INSPECT THE PERMEABLE PAVEMENT AND THE CONTRACTOR WILL BE REQUIRED TO CLEAN ALL CONSTRUCTION SEDIMENT.
  - AFTER CONSTRUCTION IS COMPLETED AND THE PARKING LOT IS ACCEPTED BY THE OWNER, IT IS RECOMMENDED THAT INSPECTIONS OCCUR AT A MINIMUM OF ONCE EVERY THREE MONTHS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD CONCENTRATE ON THE FOLLOWING:
    - SEDIMENT AND DEBRIS ACCUMULATION WITHIN PERMEABLE PAVEMENT AREA AND CONTRIBUTING AREA
    - CONTRIBUTING AREA STABILIZATION
    - SIGNS OF CLOGGING
    - VACUUM SWEEPING (TYPICALLY CONDUCTED 4 TIMES PER YEAR UNLESS OTHERWISE DETERMINED)
    - PERMEABLE PAVEMENT DEWATERS BETWEEN STORM EVENTS
- NOTE:**  
AN INSPECTION AND MAINTENANCE LOG SHALL BE USED TO RECORD DATA OBTAINED DURING EACH INSPECTION. COPIES OF THE LOG ARE PROVIDED WITHIN THE DRAINAGE ASSESSMENT.



**TYPICAL PERMEABLE PAVEMENT (POROUS PAVEMENT) STRUCTURE DETAIL**  
NOT TO SCALE

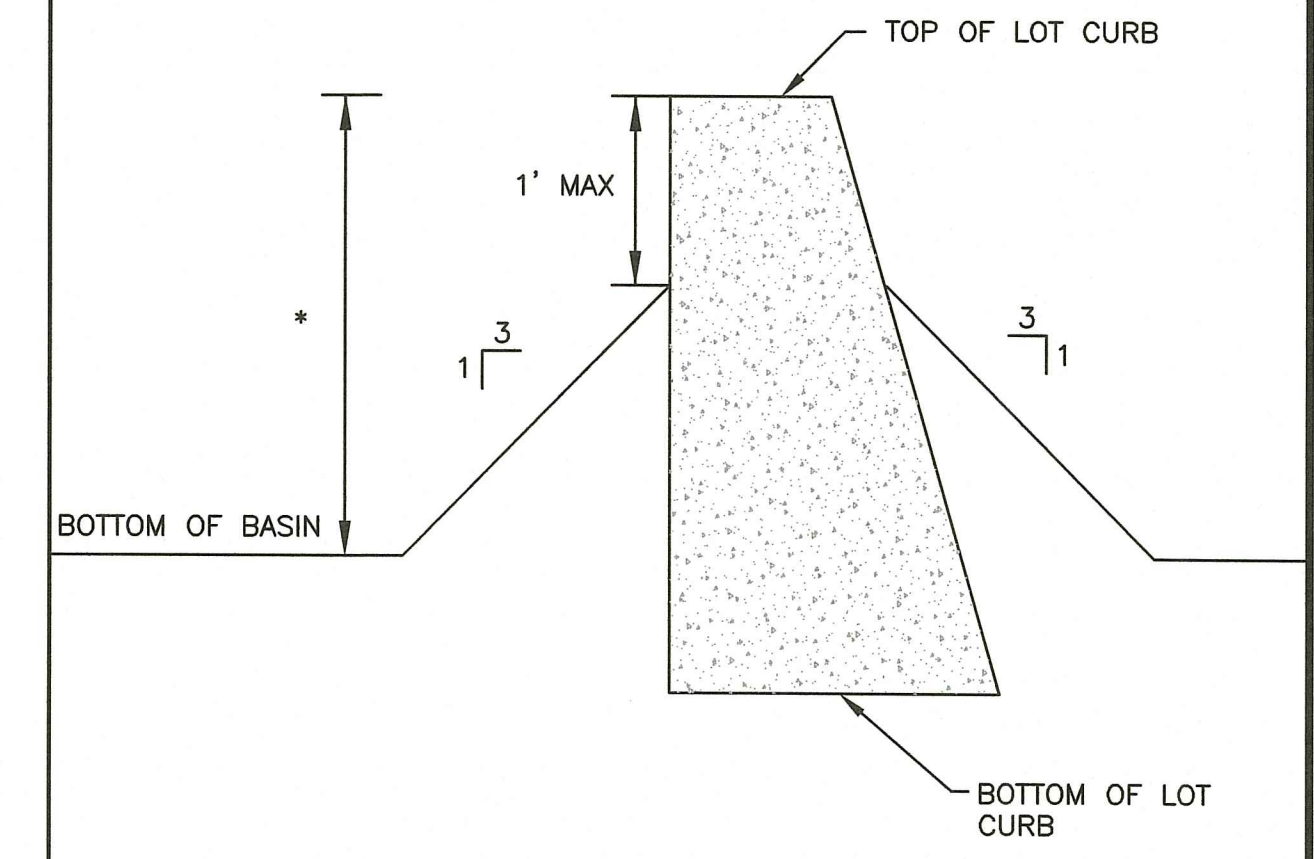


**BMP 1a OUTLET STRUCTURE NO. (OS-1) DETAIL**  
(INSTALLED UNDER PHASE 1)  
NOT TO SCALE

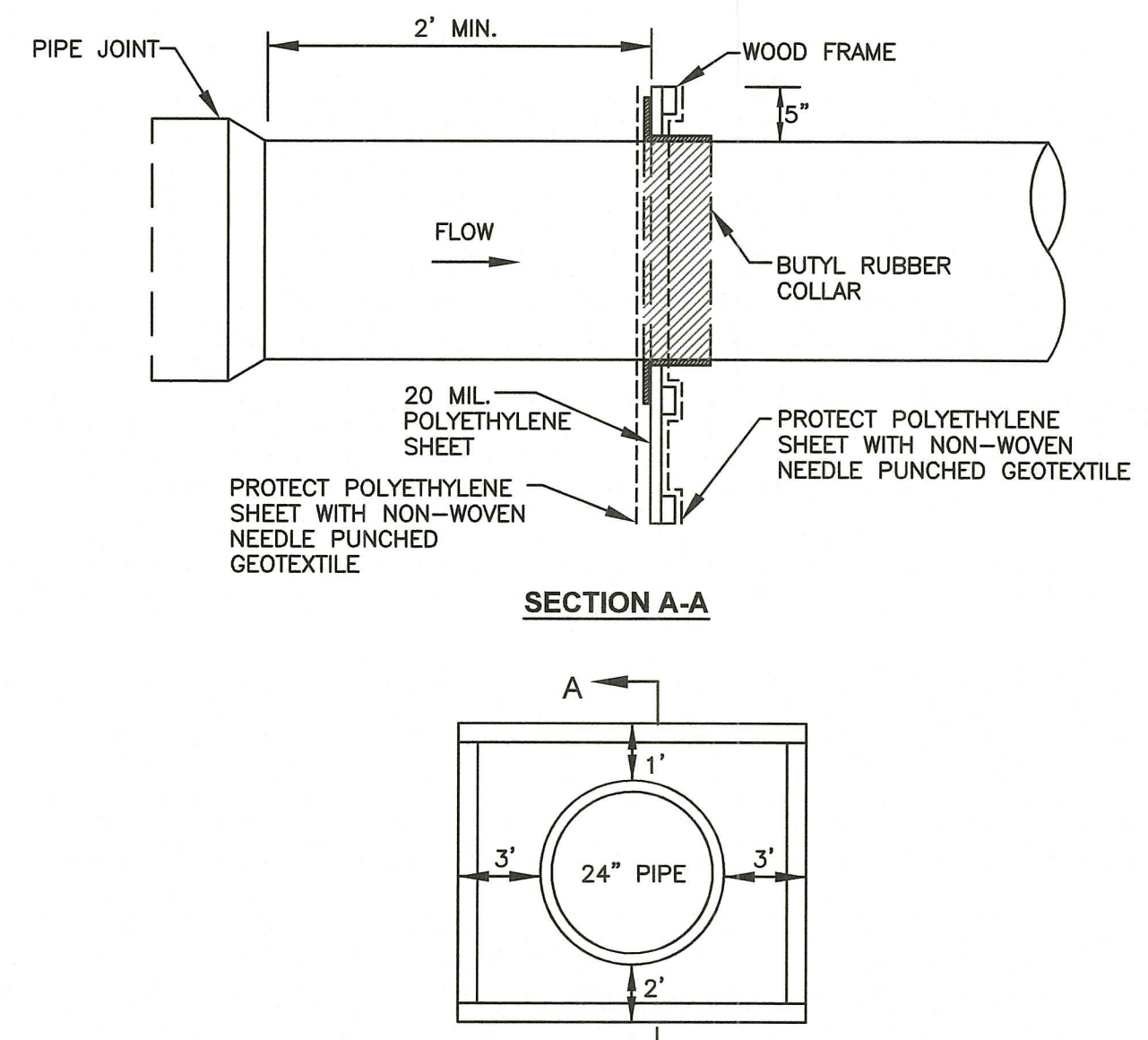


**ANTI-SEEP COLLAR DETAIL**  
NOT TO SCALE

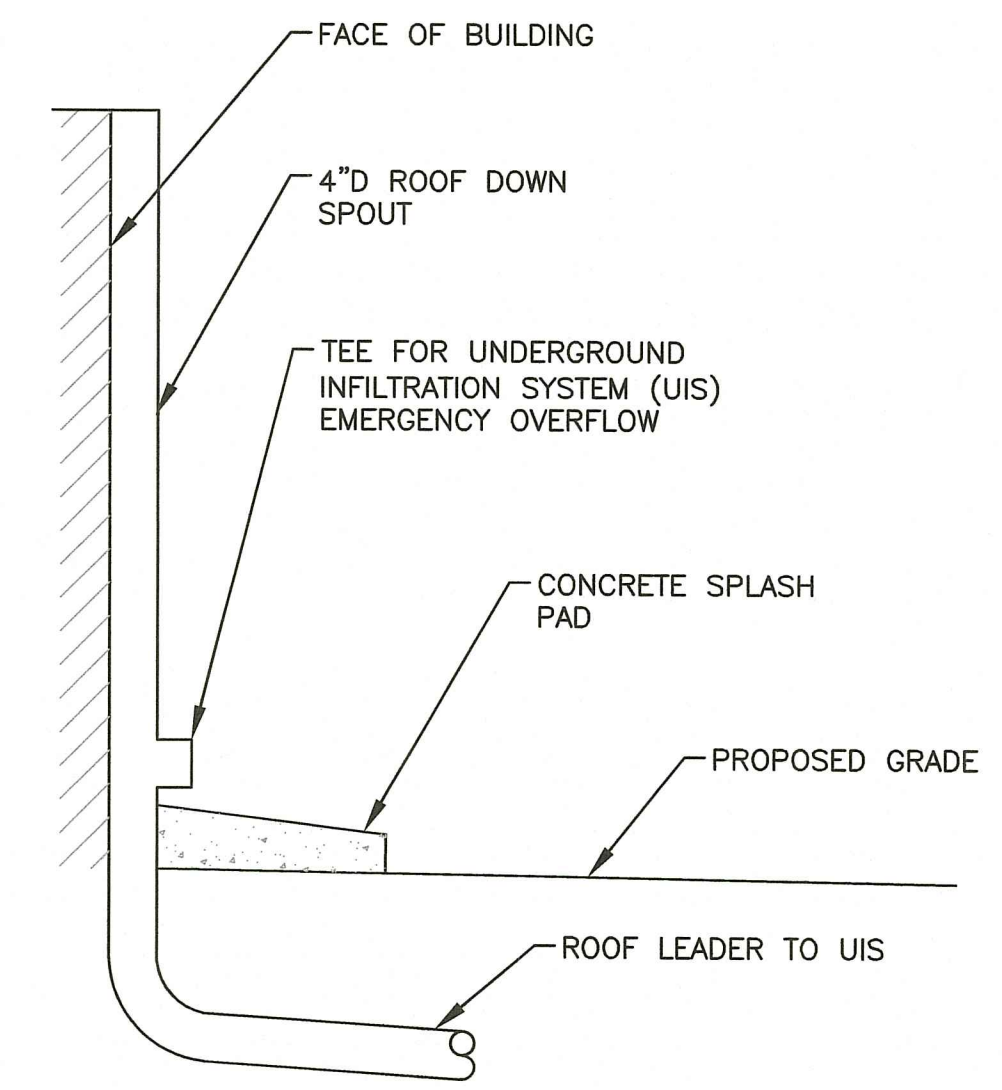
*BMP NO.	BOTTOM OF BASIN	TOP OF LOT CURB
2a (SEDIMENT FOREBAY)	264.00	267.00
3a (SEDIMENT FOREBAY)	268.00	270.50
3a (TO BMP 3b)	268.00	271.00
4a (SEDIMENT FOREBAY)	274.00	275.50



**LOT CURB INSTALLATION IN BASIN**  
NOT TO SCALE



**ELEVATION**  
**ANTI-SEEP COLLAR DETAIL**  
NOT TO SCALE



**ROOF DOWN SPOUT DETAIL**  
NOT TO SCALE

**GRADATIONS AND COMPACTION OF CHOKER AND RESERVOIR COURSE MATERIAL**

US STANDARD SIEVE SIZE (INCHES)	PERCENT PASSING	
	CHOKER COURSE (AASHTO No. 57)	RESERVOIR COURSE (AASHTO No. 3)
6	-	-
2 1/2	-	100
2	-	90-100
1 1/2	100	35-70
1	95-100	0-15
3/4	-	-
1/2	25-60	0-5
3/8	-	-
#4	0-10	-
#8	0-5	-
#200	-	-
% COMPACTION ASTM D698 / AASHTO T99	95	95

SOURCE:  
RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, MARCH 2015

**Crossman Engineering**  
Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-6660  
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700  
Email: [cei@crossmaneng.com](mailto:cei@crossmaneng.com)

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STEVEN M. CABRAL  
No. 4847  
REGISTERED PROFESSIONAL ENGINEER  
8-8-77

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP - 1 2023 FILE # 23-010  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**PROJECT TITLE:**  
MATTESON RIDGE CONDOS  
(APPLIC NO. 17-0080,  
RIPDES. RIR 101570 & UIC 001771)  
175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

**PREPARED FOR:**  
LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

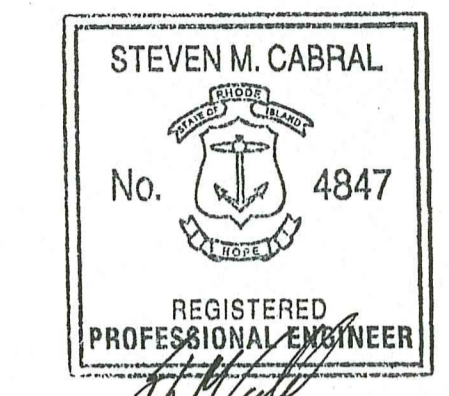
**DRAWING TITLE:**  
MISCELLANEOUS DETAILS  
PLAN NO. 2

DATE:	SCALE:	
APRIL 2023	AS NOTED	
<b>DWG. NAME:</b> 2213-22-DET02.dwg		
<b>REVISIONS</b>		
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

**DRAWING NUMBER**  
C8.2  
SHEET 22 OF 29

RI Environmental Management  
AUG 9 2023  
Office of Water Resources

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8-8-23

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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PROJECT TITLE: *Handwritten Signature*

MATTESON RIDGE CONDOS  
 (APPLIC NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**MISCELLANEOUS DETAILS  
 PLAN NO. 3**

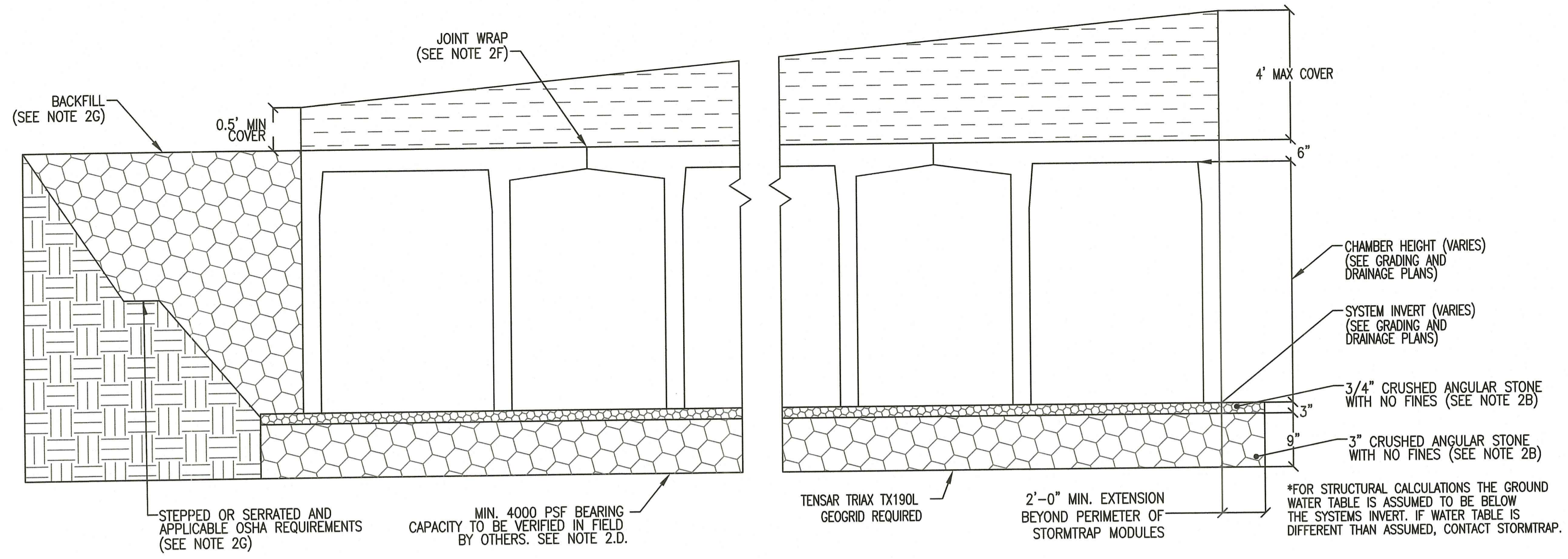
DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-23-DET03.dwg

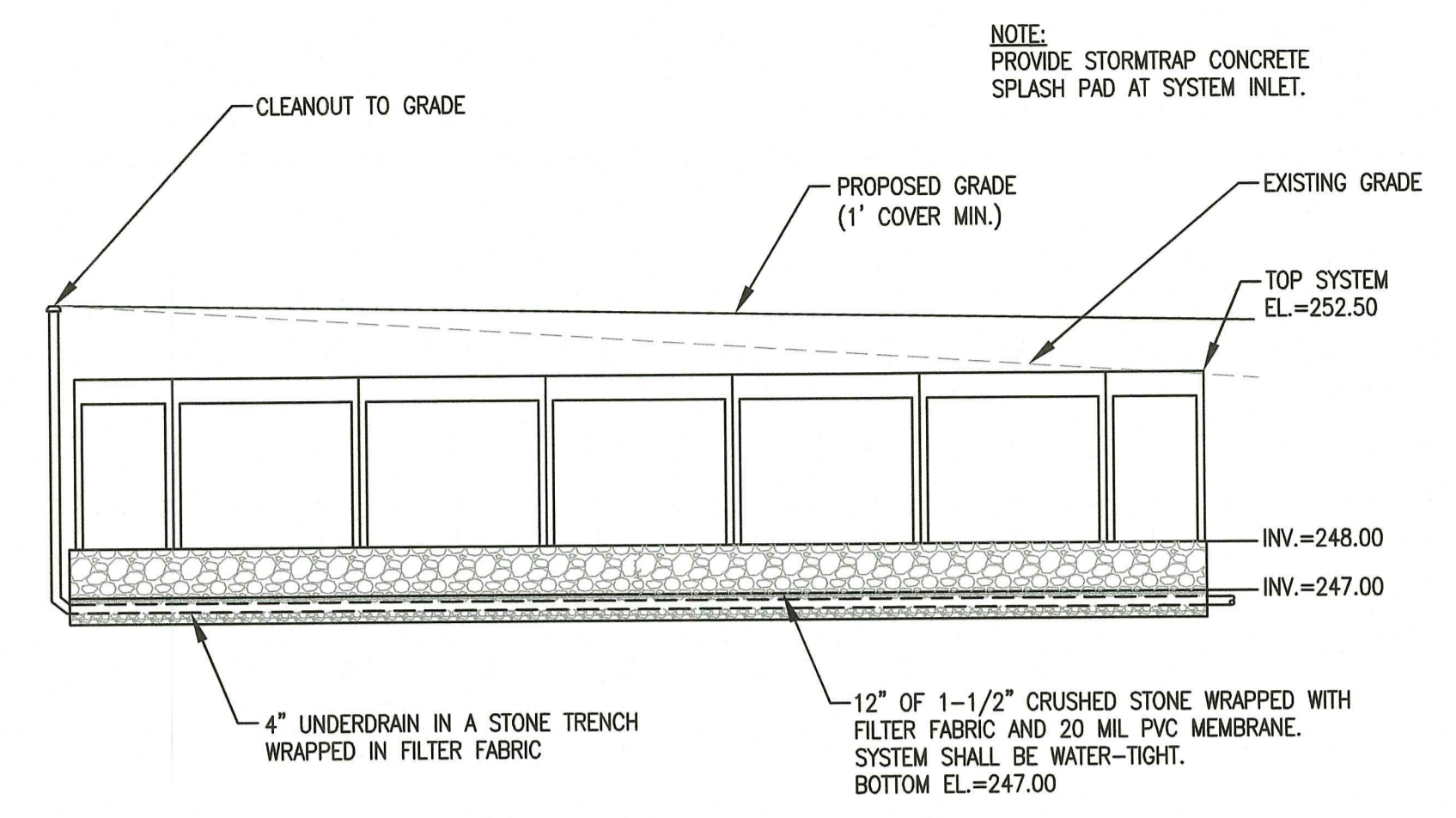
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△	1	RIDEM COMMENTS	7/10/23
	2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER
<b>C8.3</b>

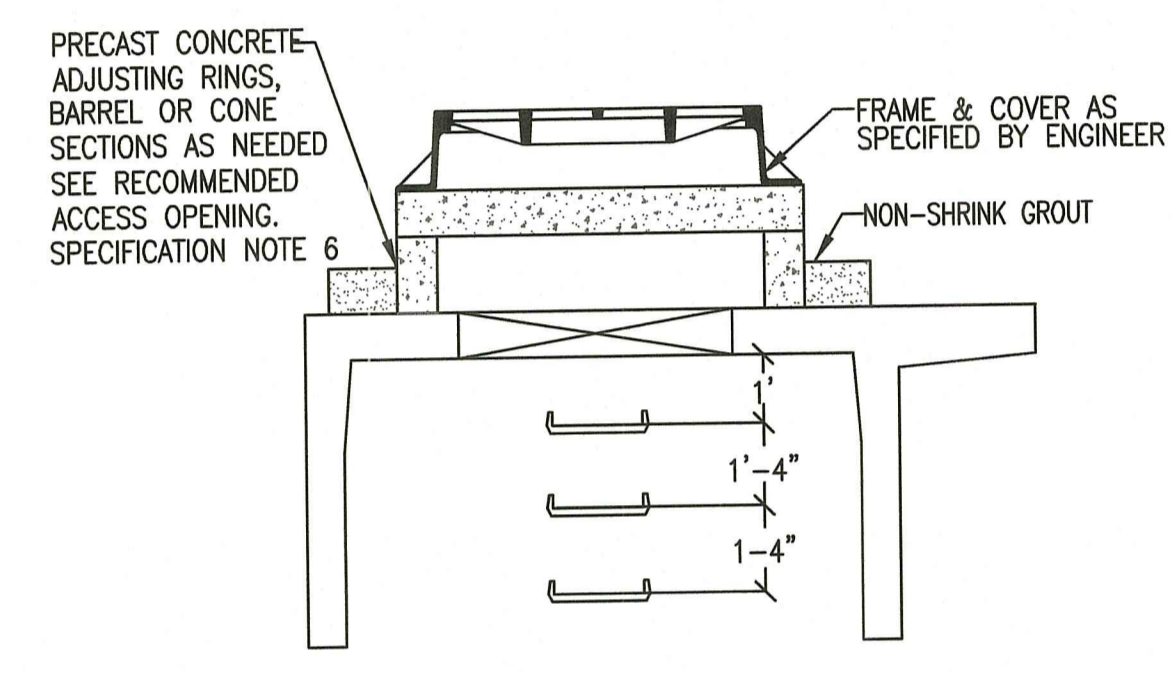
SHEET: 23 OF 29  
 Office of Water Resources  
 AUG 09 2023



**STORMTRAP SINGLE TRAP  
BMP 1C (PHASE 1 INSTALLED)**  
NOT TO SCALE



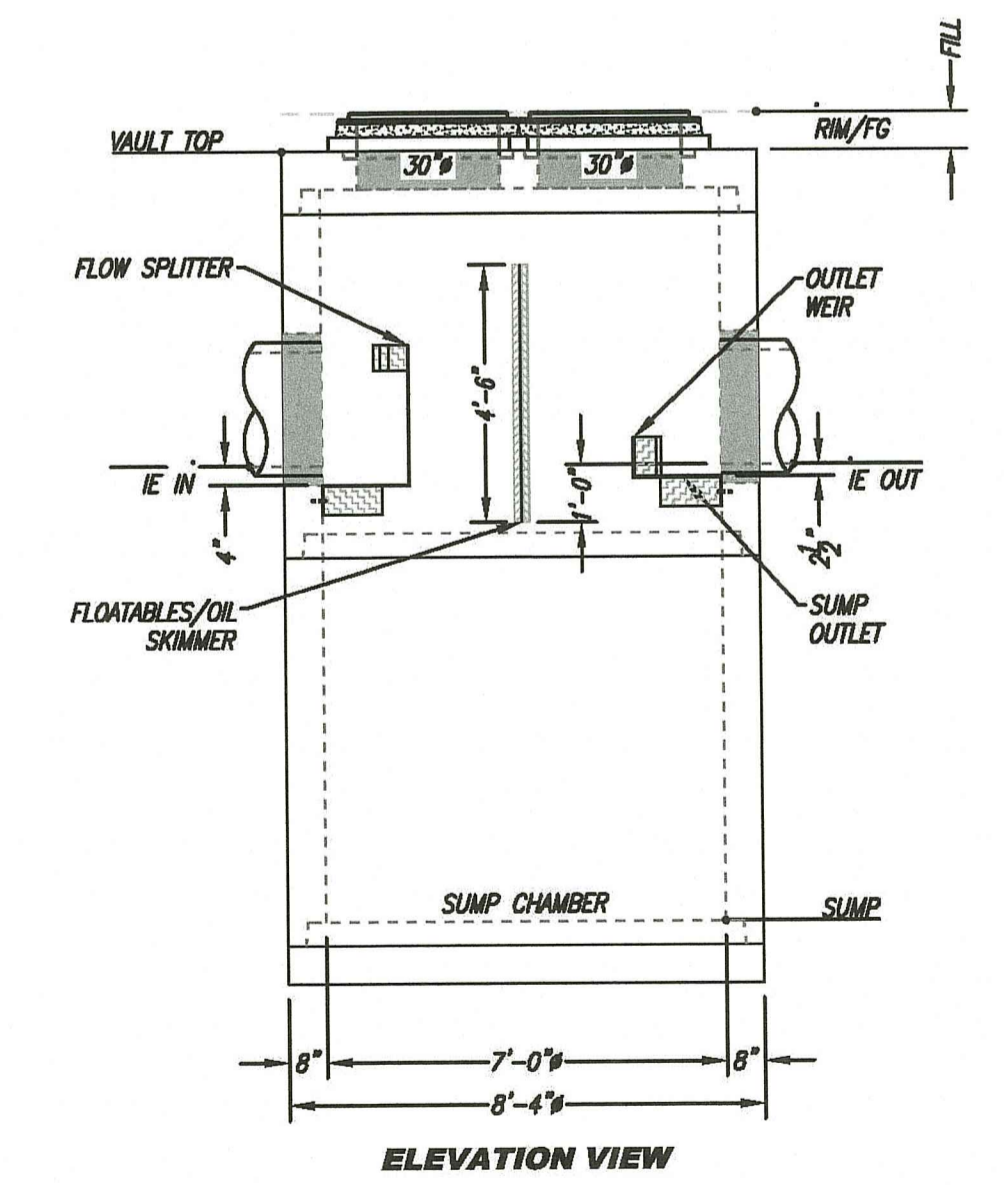
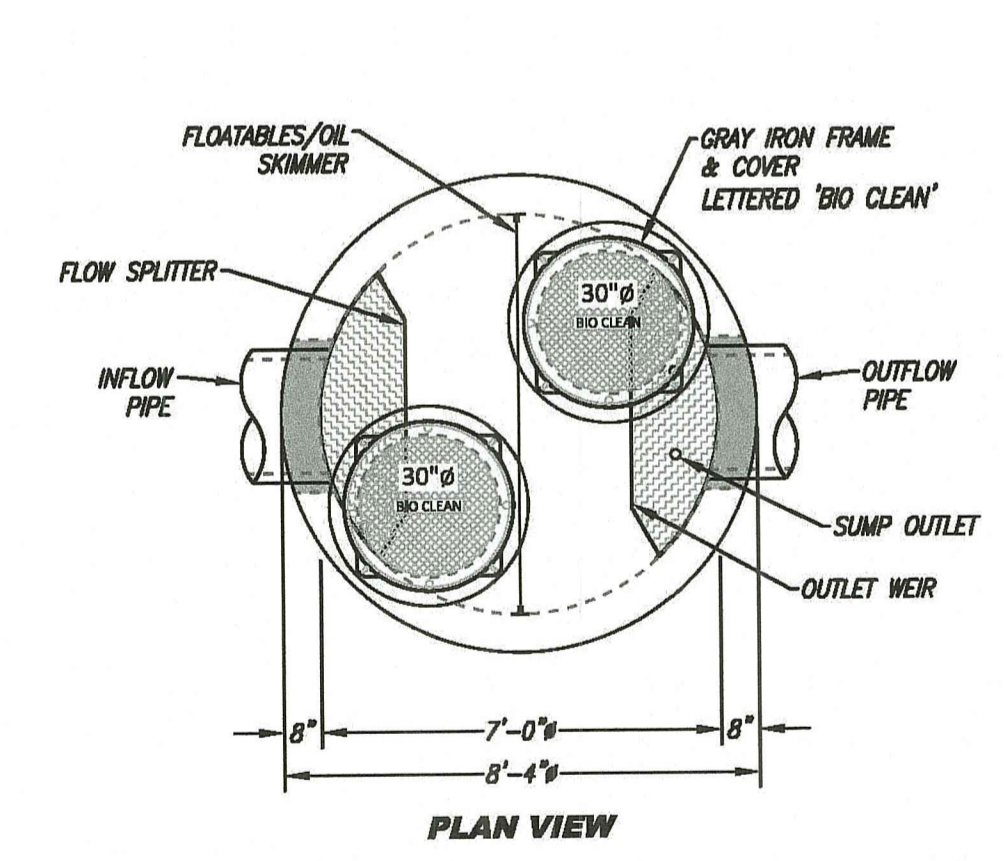
**UNDERGROUND DETENTION SYSTEM  
CROSS SECTION A-A  
BMP 1C (PHASE 1 INSTALLED)**  
NOT TO SCALE



**RISER / STAIR DETAIL  
BMP 1C (PHASE 1 CONSTRUCTION ON-GOING)**  
NOT TO SCALE

SITE SPECIFIC DATA*			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID	SC-7		
WATER QUALITY FLOW RATE (CFS)			
PEAK FLOW RATE (CFS)			
PEAK STORM DURATION (YEARS)			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INFLOW PIPE 1			
OUTFLOW PIPE 1			
RIM ELEVATION			
SUMP ELEVATION			
SURFACE LOADING REQUIREMENT	HS20		
FRAME AND COVER	(2) #30"		
SKIMMER WALL HEIGHT		STANDARD	
KNOWN GROUNDWATER ELEVATION	NA		
NOTES: CONCEPT ONLY. NOT FOR CONSTRUCTION. TREATMENT FLOW RATES PER LOCAL REGULATIONS.			
*PER ENGINEER OF RECORD			
PERFORMANCE DATA			
TREATMENT FLOW RATE (CFS)			
TSS REMOVAL EFFICIENCY	80%		
HYDRAULIC GRADE LINE			
SUMP CHAMBER CAPACITY			
DIAMETER (FT)	AREA (SF)	HEIGHT (FT)	TOTAL (CF)
7	38.47		

- INSTALLATION NOTES**
- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SOCLONE UNIT AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
  - MANUFACTURER RECOMMENDS A 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
  - ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH).
  - ALL GAPS AROUND PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT PER MANUFACTURER'S STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
  - CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS AND MANHOLES. ALL COVERS SHALL BE SHIPPED LOOSE. CONTRACTOR TO GROUT ALL MANHOLES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
- 1:40 SCALE



**GENERAL NOTES**

- BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS: 10,702,140; 10,344,468; 9-00020. RELATED FOREIGN PATENTS OR OTHER PENDING PENDING.

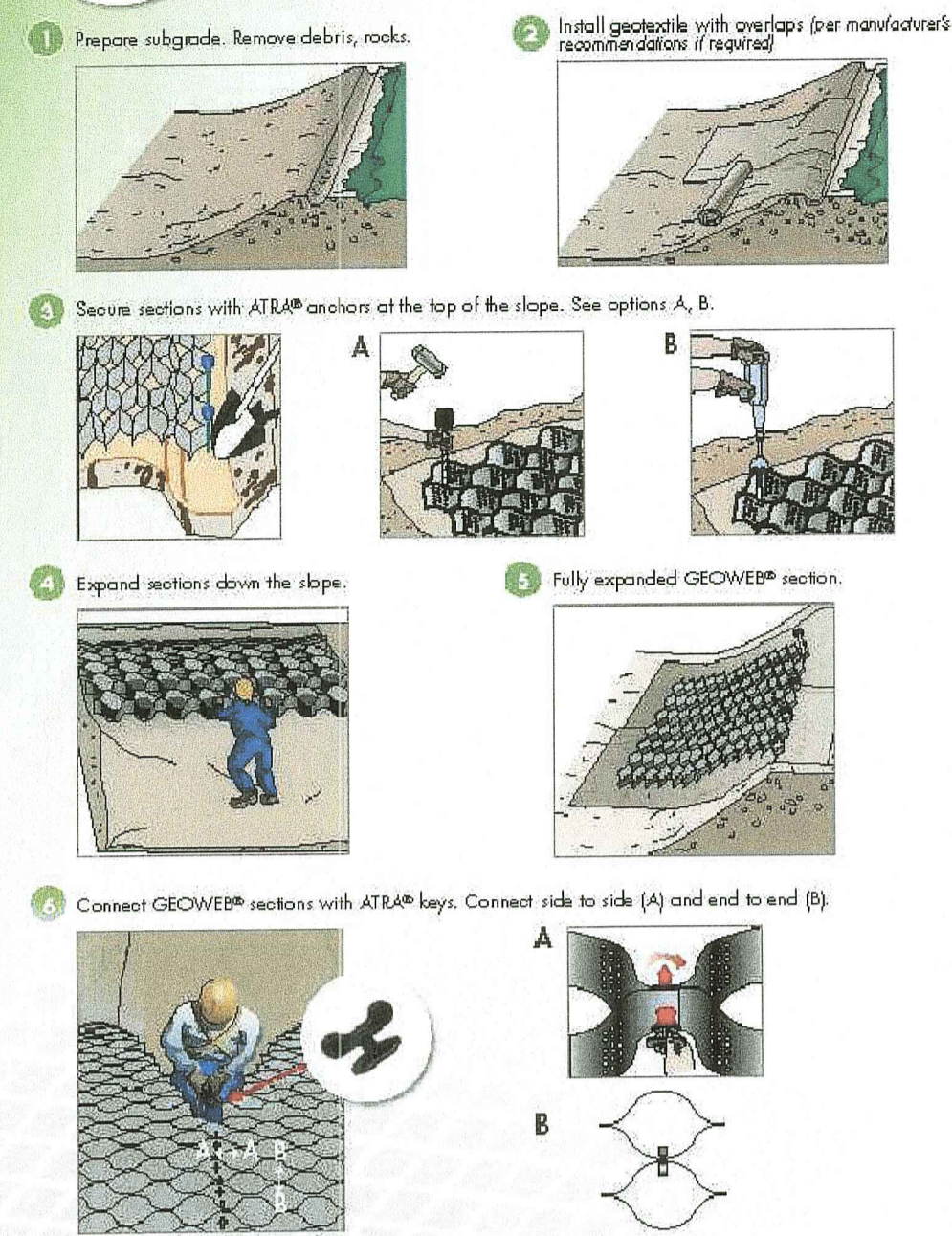


**SOCLONE SC-7  
 HYDRODYNAMIC SEPARATOR  
 STANDARD DETAIL**

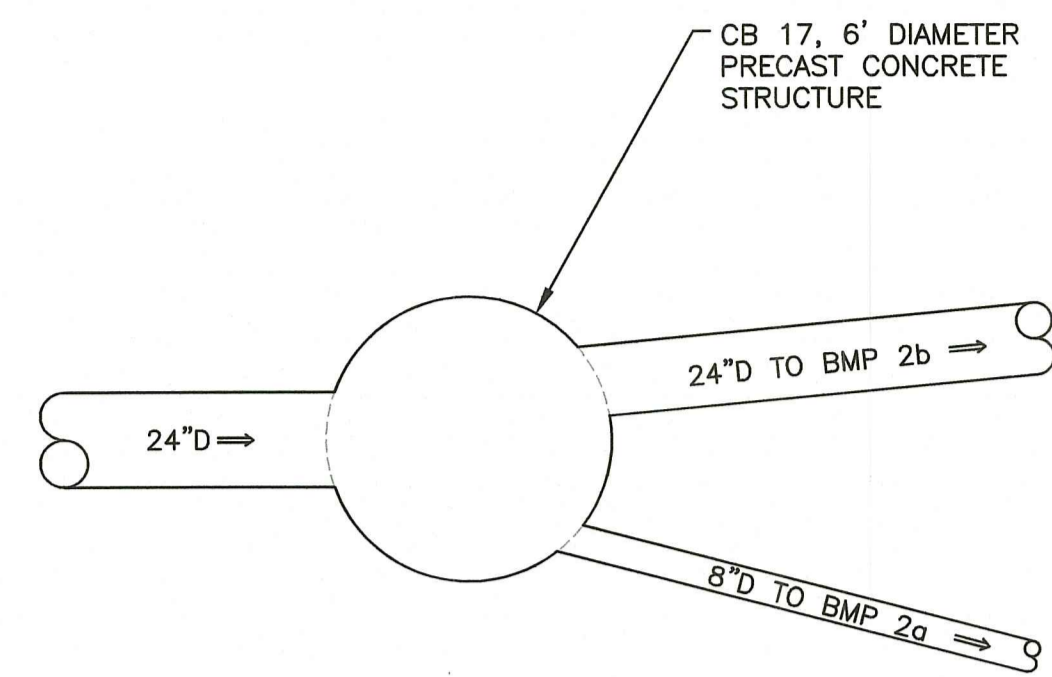
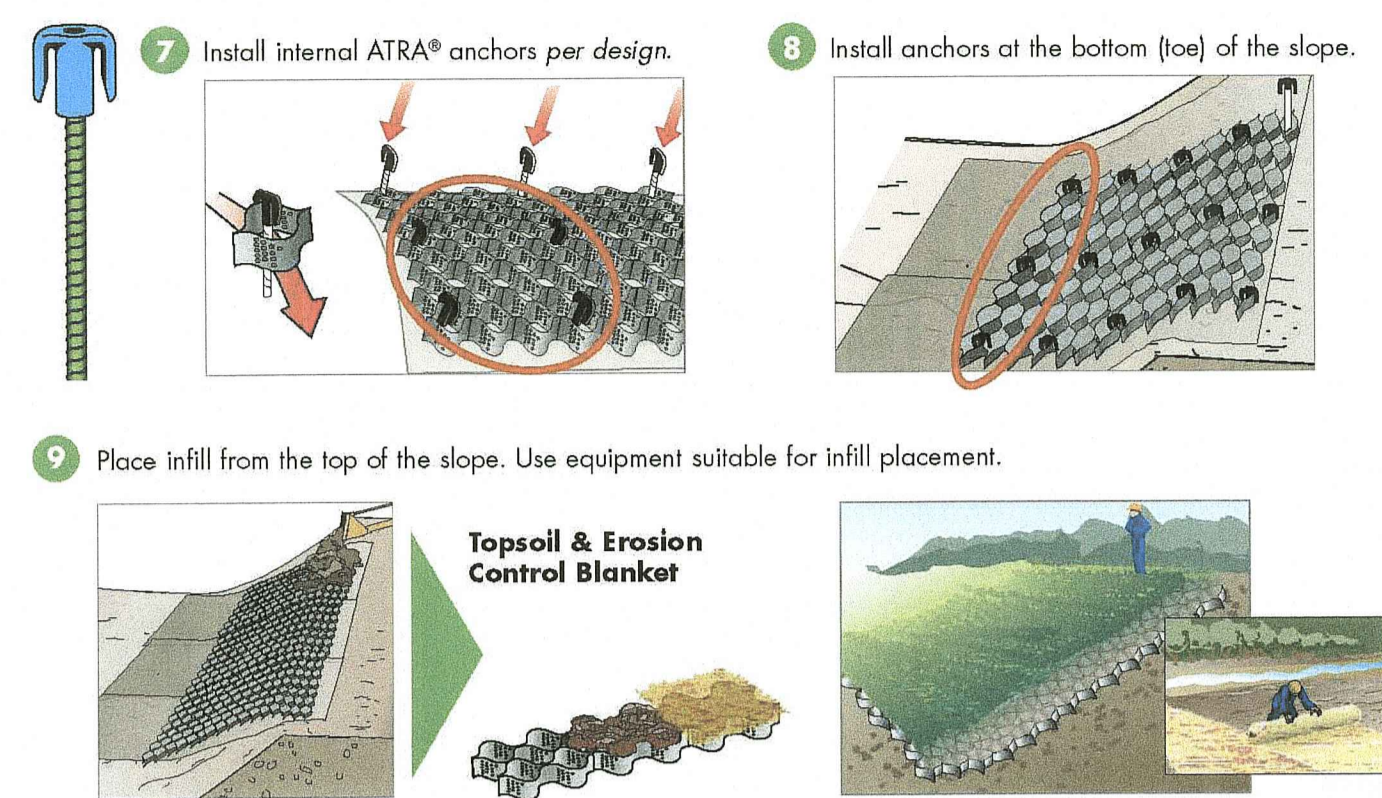
RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources



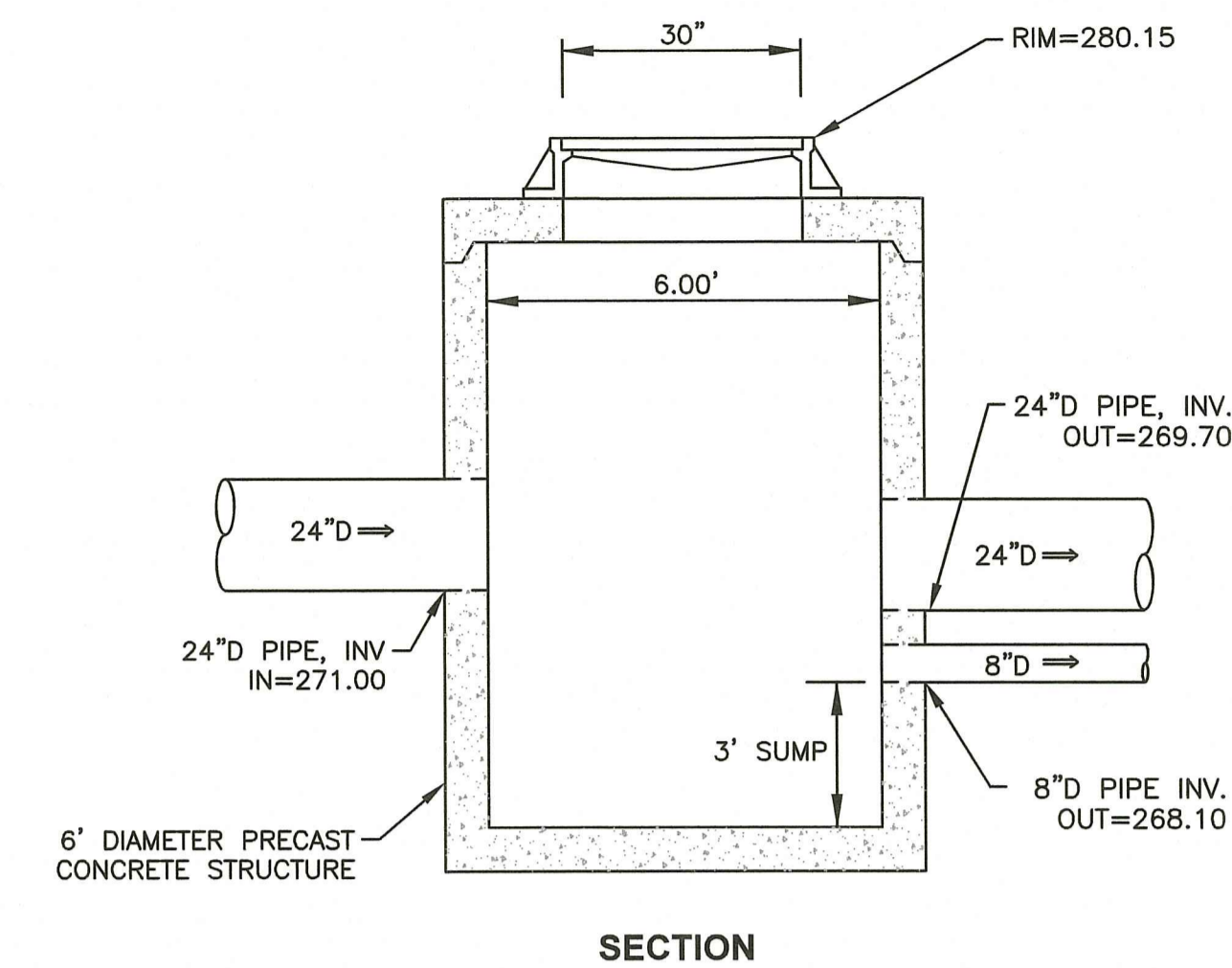
**GEOWEB® Slope Protection System**  
**■ ATRA® Anchor Connection**



**IMPORTANT NOTE:**  
 The simplified installation guide provided by Presto GEOSYSTEMS® is intended as a general guideline only. The contractor should follow contract plans and specifications and refer to detailed installation guidelines for more information: See [www.prestogeo.com/installation](http://www.prestogeo.com/installation)

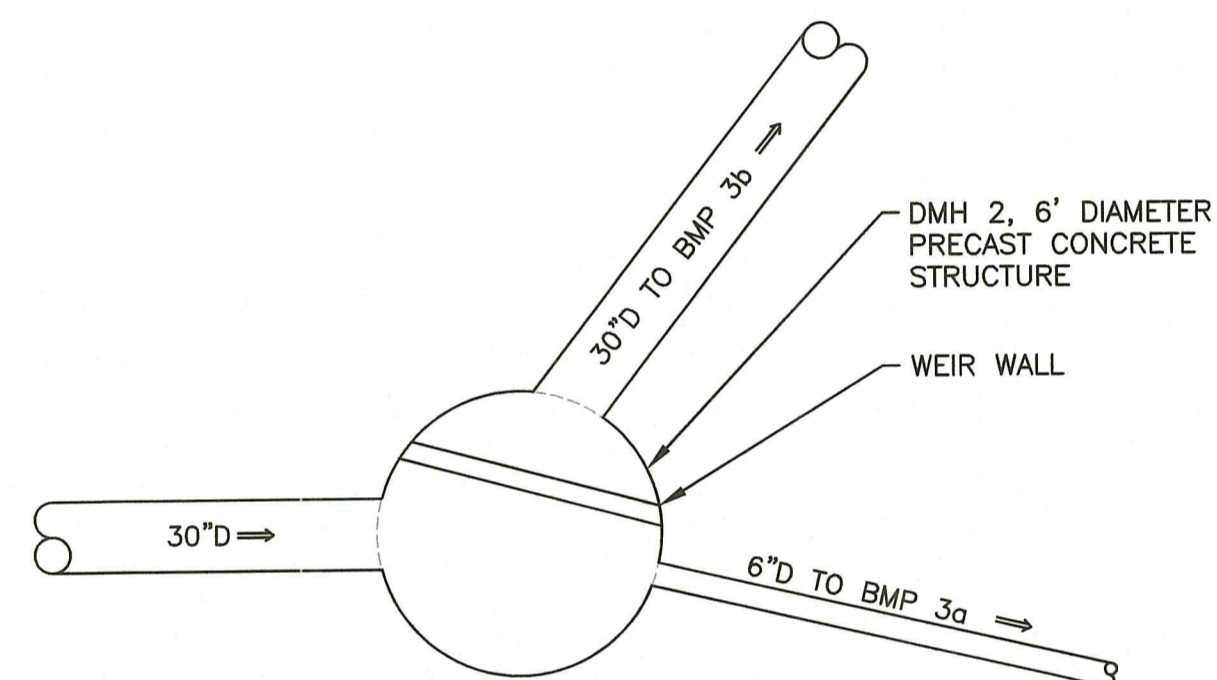


PLAN VIEW

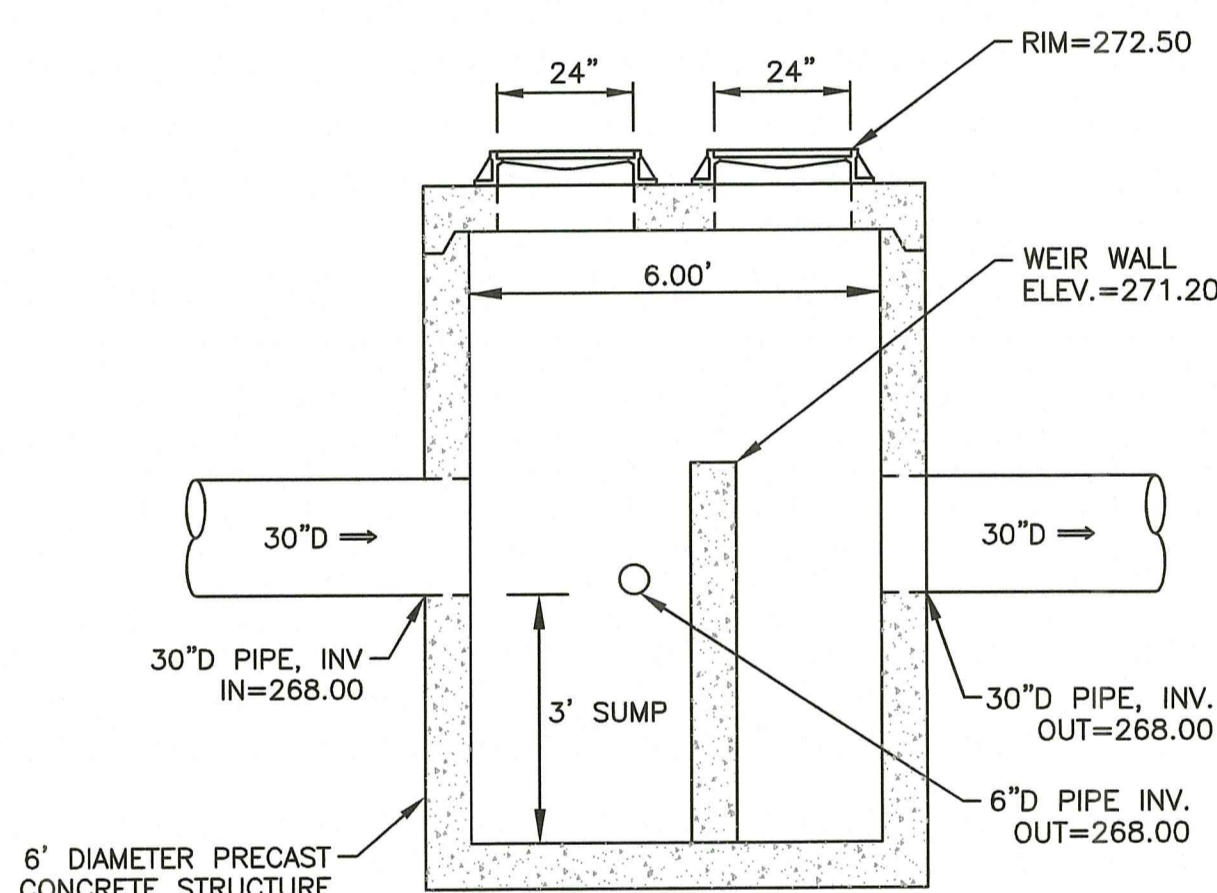


SECTION

**CATCH BASIN 17- DIVERSION STRUCTURE DETAIL**  
 NOT TO SCALE

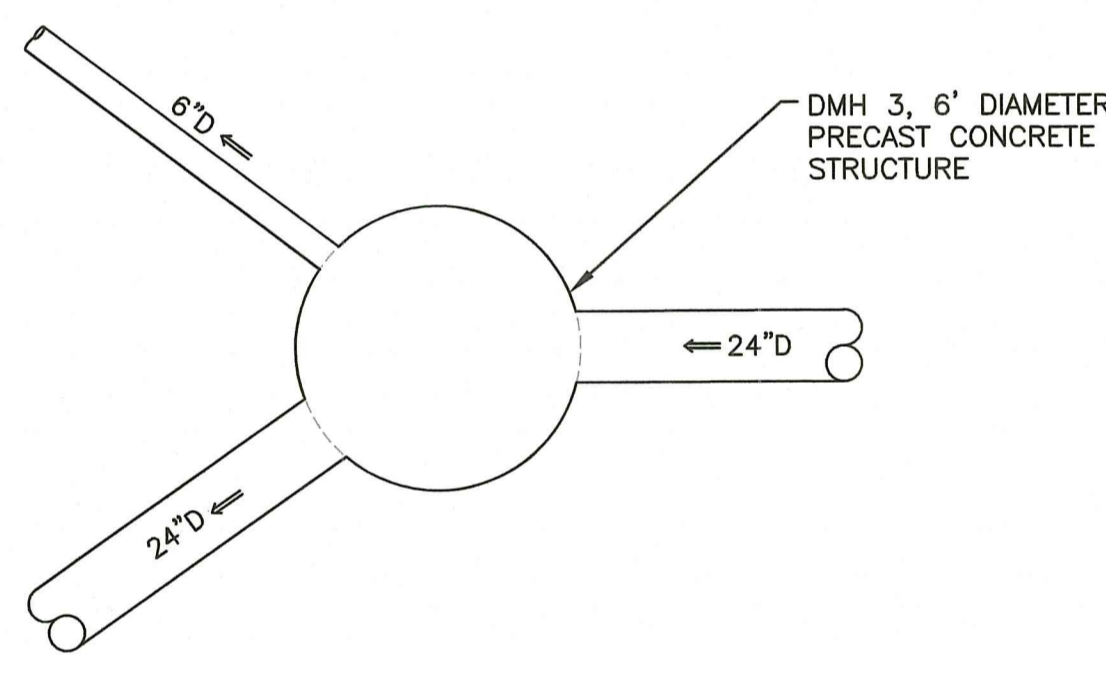


PLAN VIEW

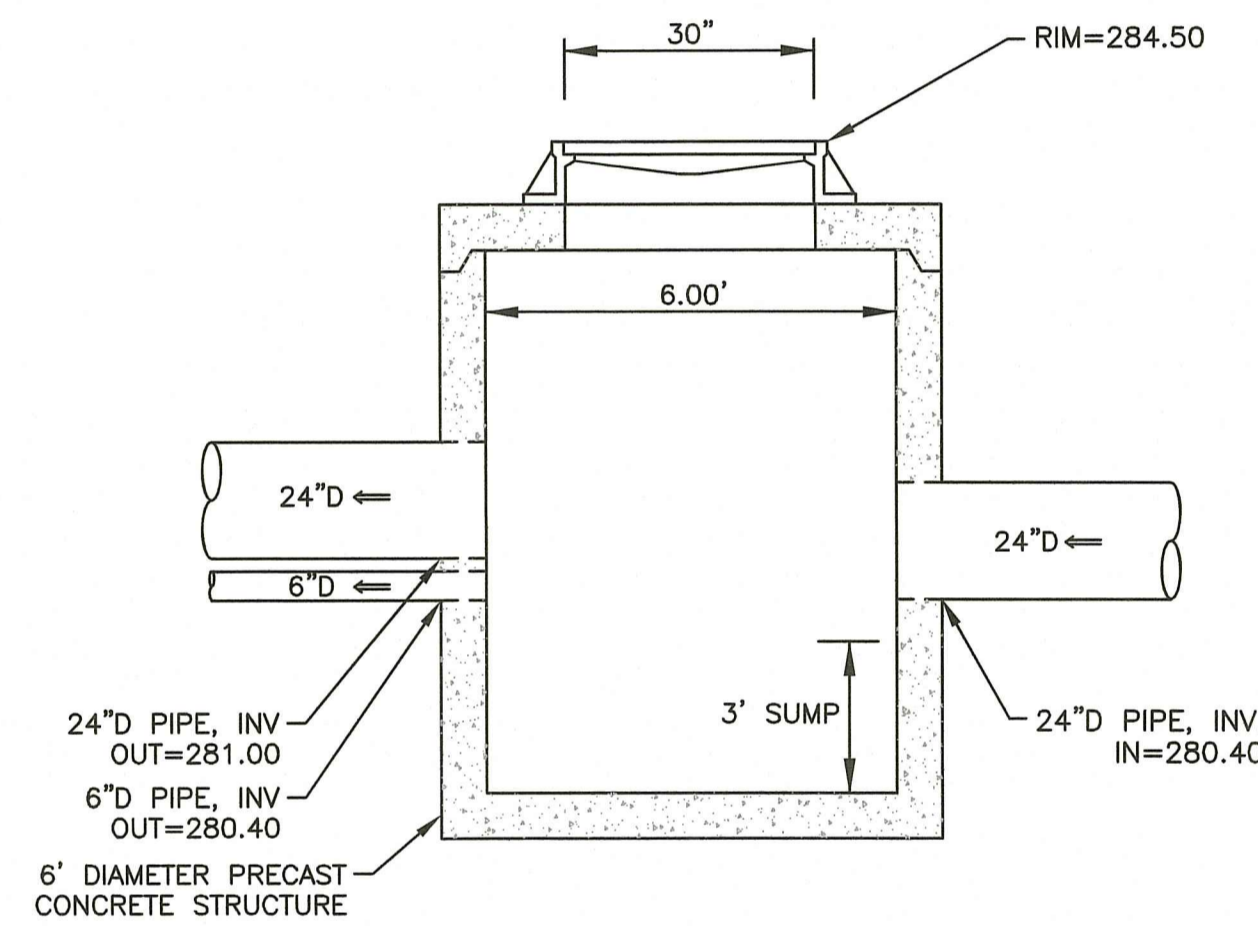


SECTION

**DMH 2 - DIVERSION STRUCTURE DETAIL**  
 NOT TO SCALE

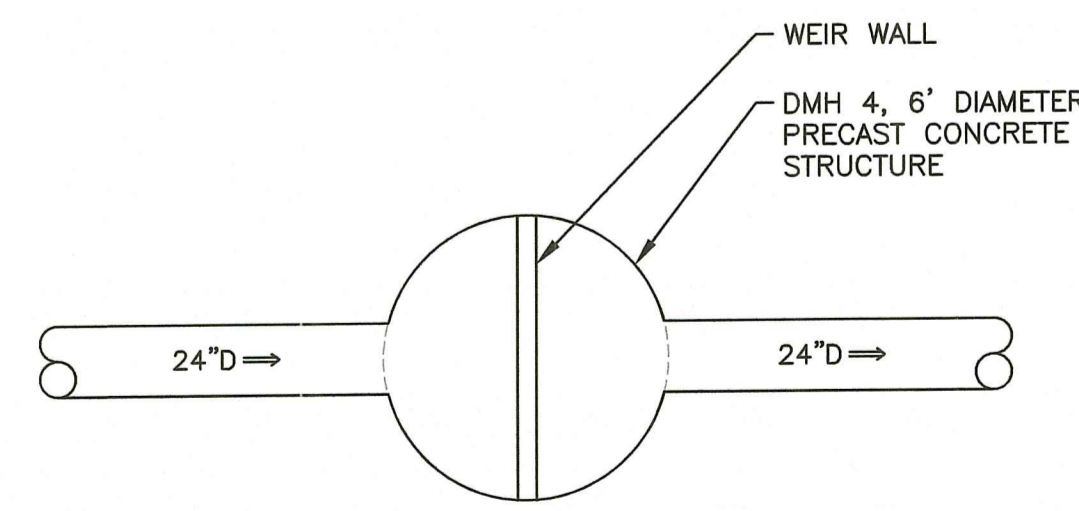


PLAN VIEW

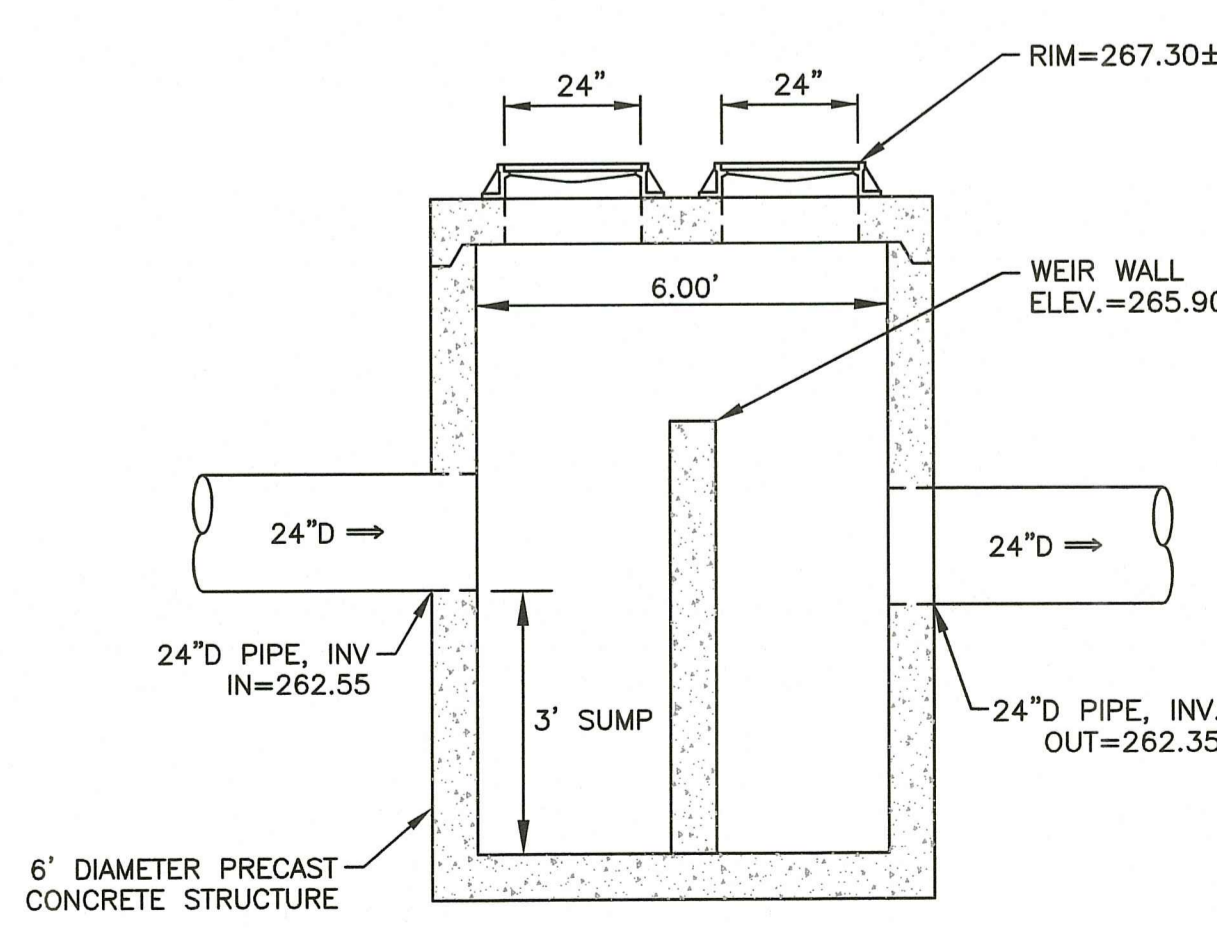


SECTION

**DMH 3 - DIVERSION STRUCTURE DETAIL**  
 NOT TO SCALE

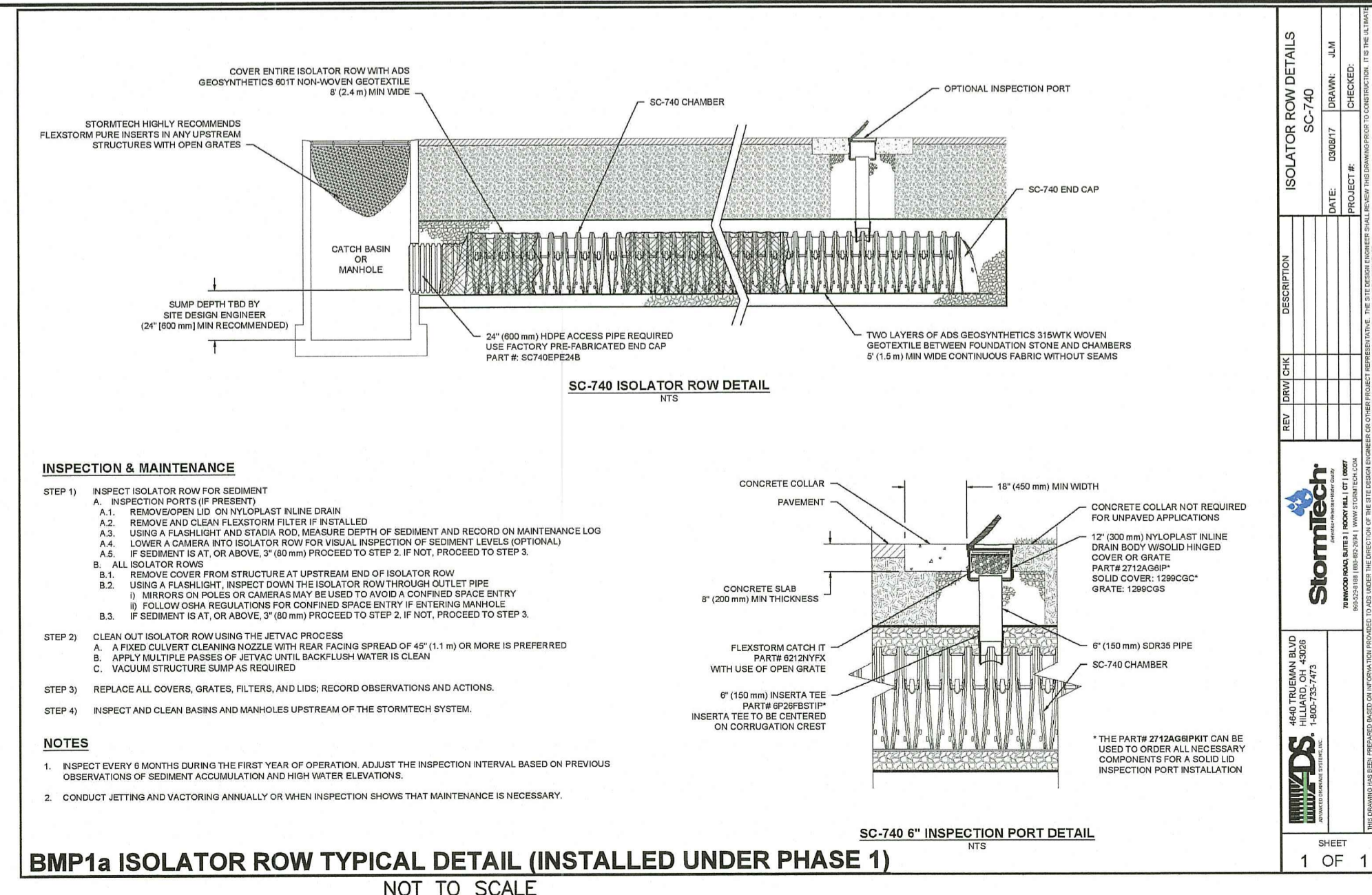


PLAN VIEW



SECTION

**DMH 4 - DIVERSION STRUCTURE DETAIL**  
 NOT TO SCALE



**BMP1a ISOLATOR ROW TYPICAL DETAIL (INSTALLED UNDER PHASE 1)**  
 NOT TO SCALE

NOTE: EACH SYSTEM SHALL HAVE AN ISOLATOR ROW, AND SIZED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUBMITTALS TO THE ENGINEER SHALL BE PROVIDED PRIOR TO INSTALLATION.

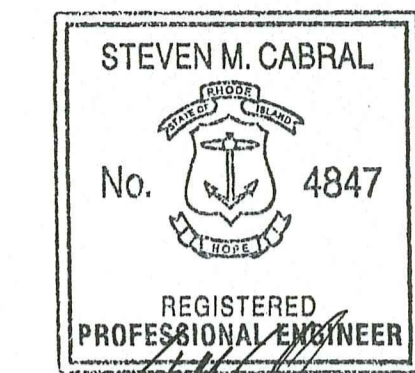
NO.	DATE	DESCRIPTION

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

**Crossman Engineering**

Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-5660  
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATE: SEP - 1 2023 FILE #: 23-0101  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
 MATTESON RIDGE CONDOS  
 (APPLIC NO. 17-0080, RIPDES, RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
 LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

**DRAWING TITLE:**  
**MISCELLANEOUS DETAILS**  
**PLAN NO. 5**

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-25-DET05.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	7/10/23
2	2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER  
**C8.5**  
 SHEET: 25 OF 29

**SEEDING NOTES**

- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
- LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
- APPLICATION OF SEED:
  - RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
  - SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. AND ONLY DURING THE FOLLOWING DATES:  
 SPRING SEEDING: MARCH 15 TO MAY 31  
 FALL SEEDING: AUGUST 15 TO OCTOBER 15
  - THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
  - DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
  - OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
  - REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
  - SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

**SEED MIX No. 1**  
(SLOPES)

TYPE	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDFOOT TREFOIL	15
PERENNIAL RYE GRASS	10

APPLICATION RATE = 200 lbs. / ACRE

**SEED MIX No. 2**  
(MOWED/LAWN AREAS)

TYPE	% BY WEIGHT
NASSAU KENT BLUE	60
JAMESTOWN CHEWINGS FESCUE	20
PALMER PERENNIAL RYE GRASS	20

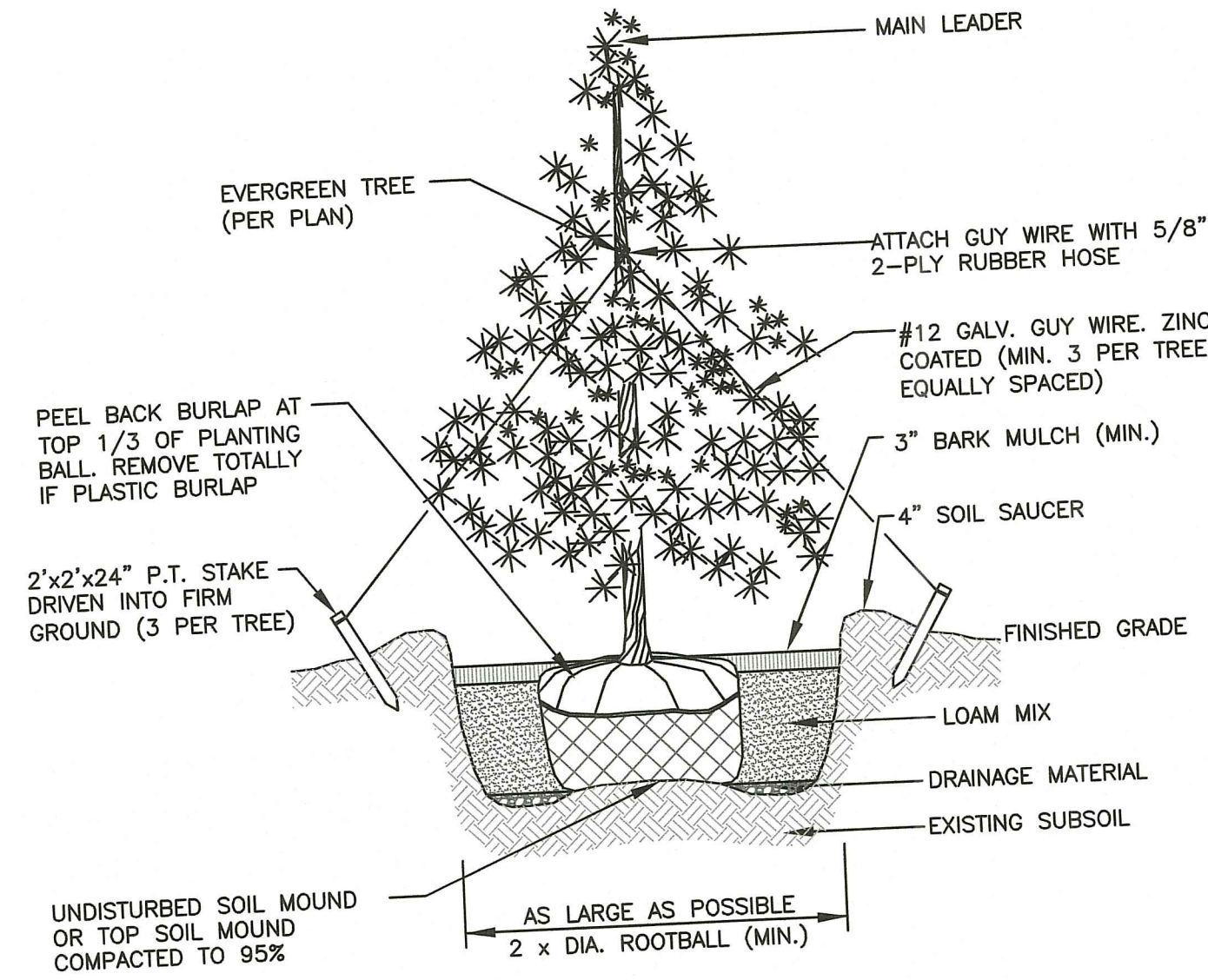
APPLICATION RATE = 200 lbs. / ACRE

**SEED MIX No. 3**  
(SAND FILTER/GRASS SWALE AND INFILTRATION BASIN AREAS)

REFER TO SAND FILTER DETAIL (SHEET 15) FOR SEED MIX

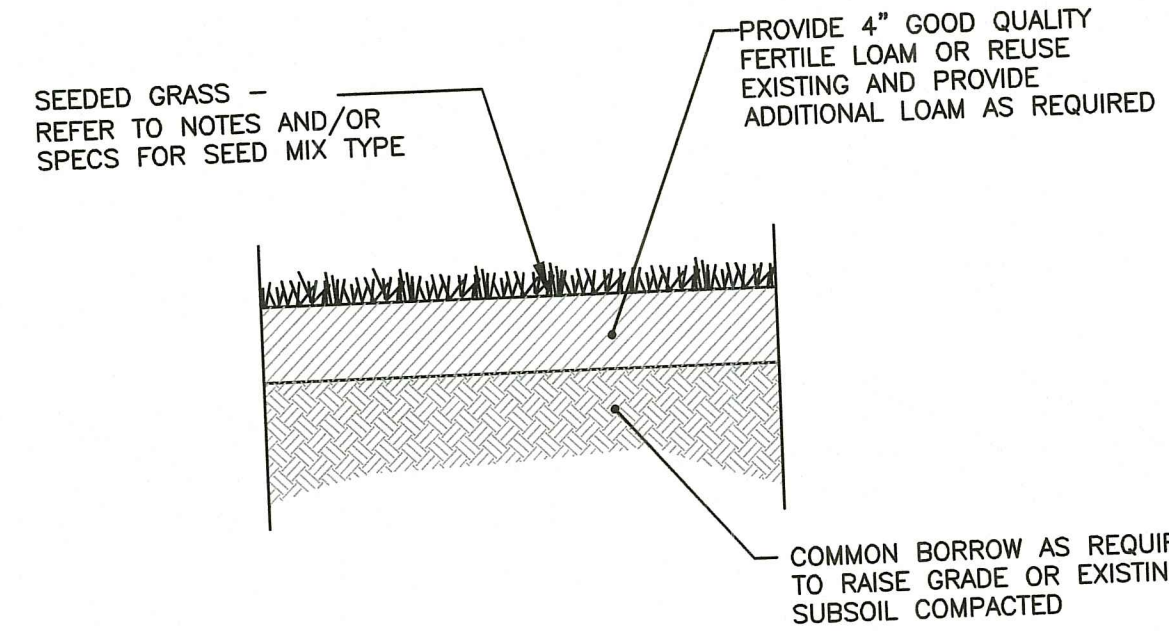
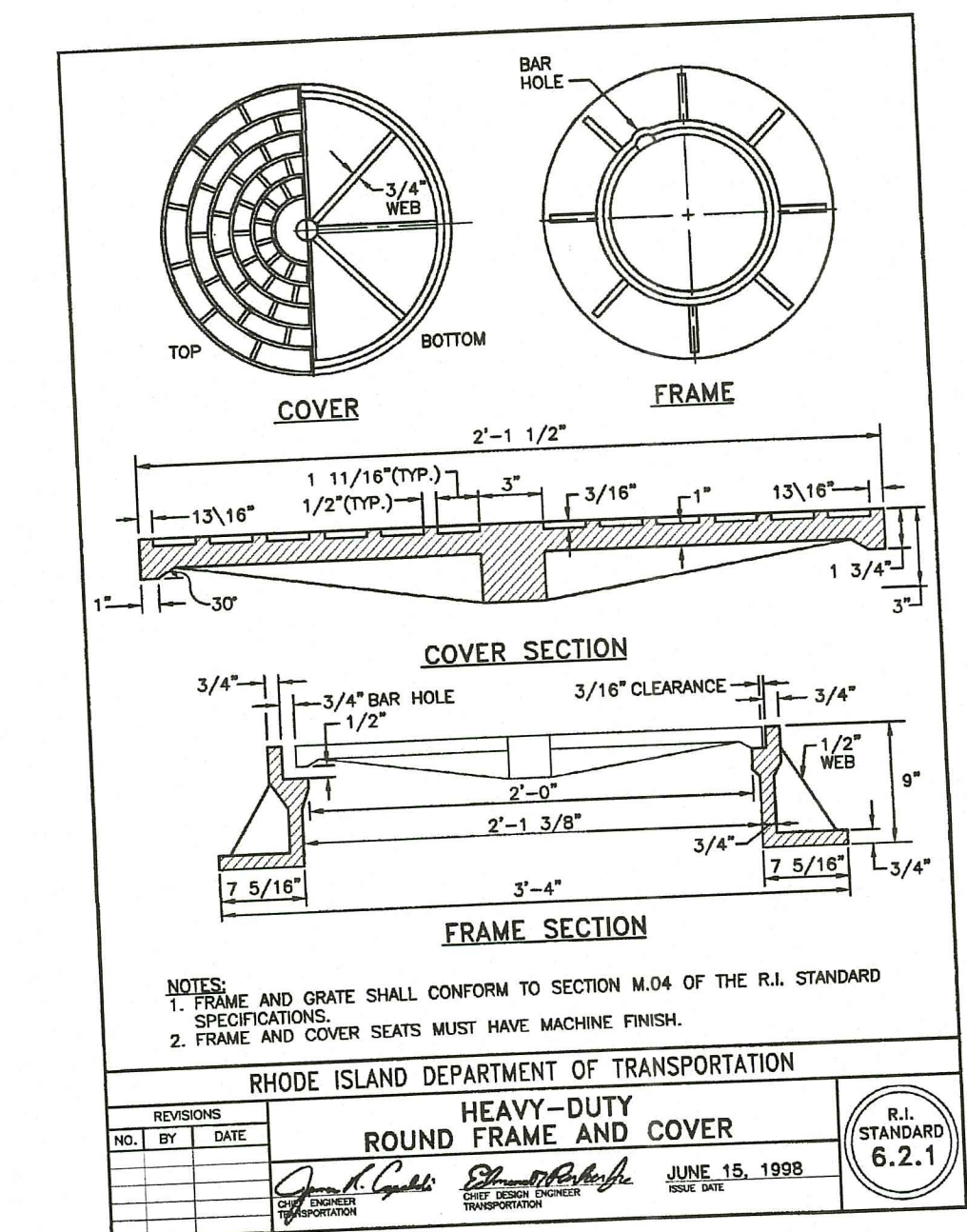
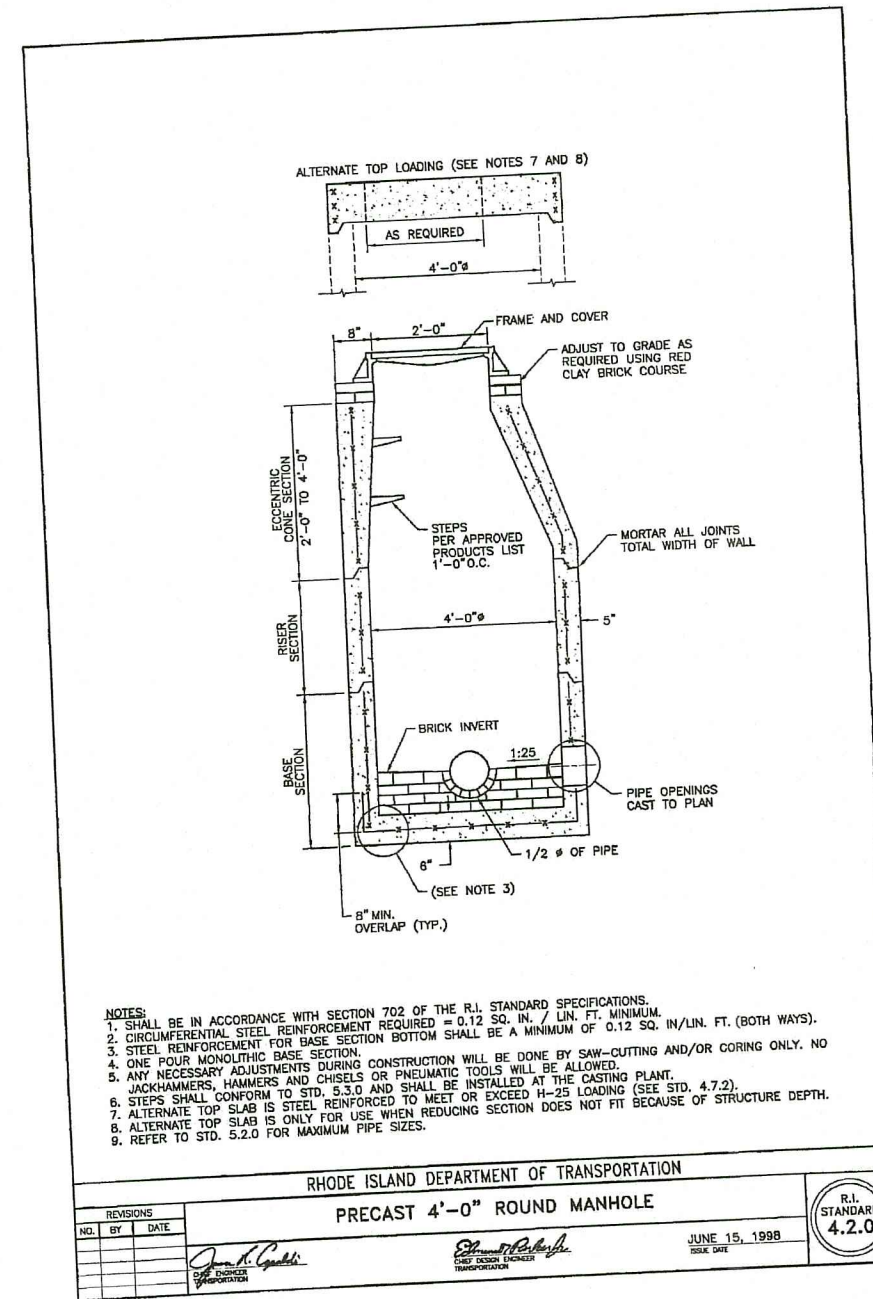
**LANDSCAPE CONSTRUCTION NOTES**

- FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
- LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 4" OVER ALL PLANTED AREAS.
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
- SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
- WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING. IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
- PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH. LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT A RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER. FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS. APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
- LIMING: ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
- MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" DARK HEMLOCK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
- GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, FREE OF CHARGE.



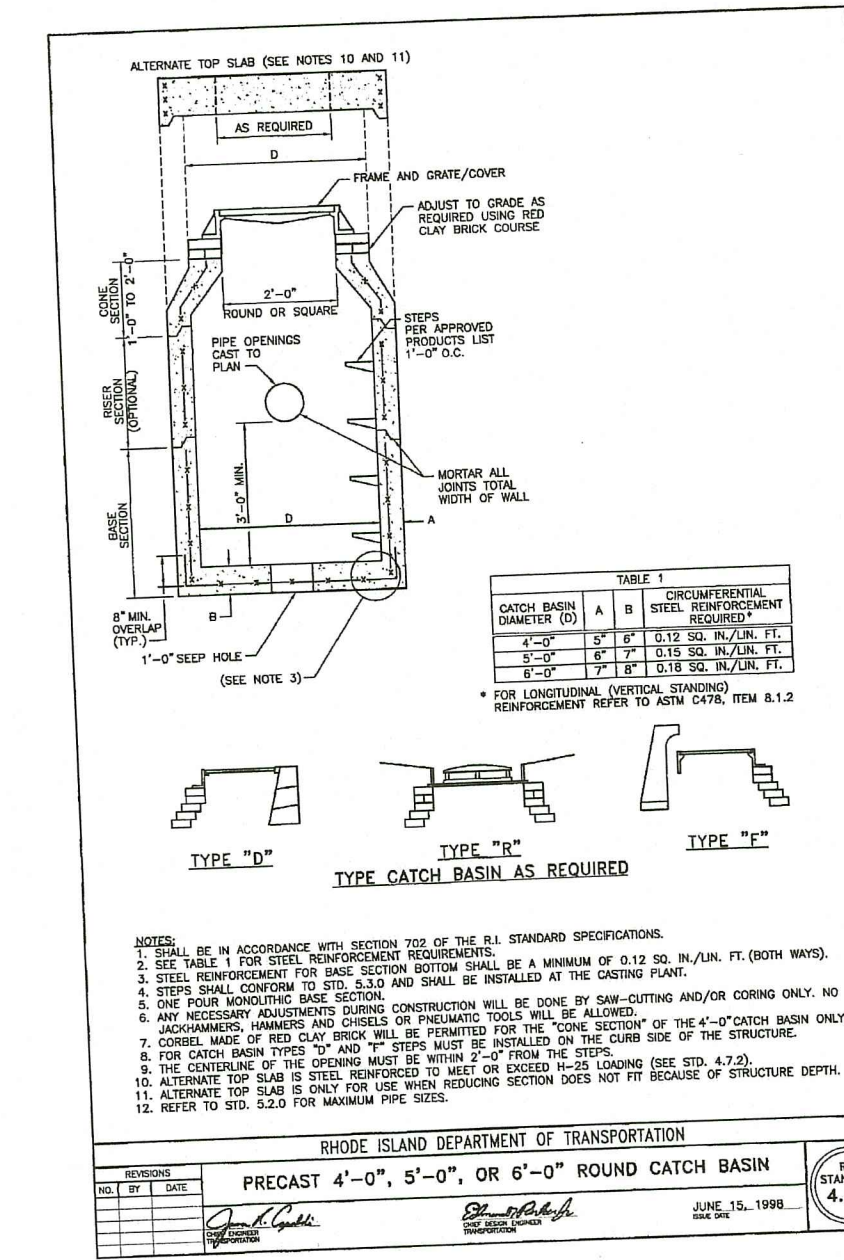
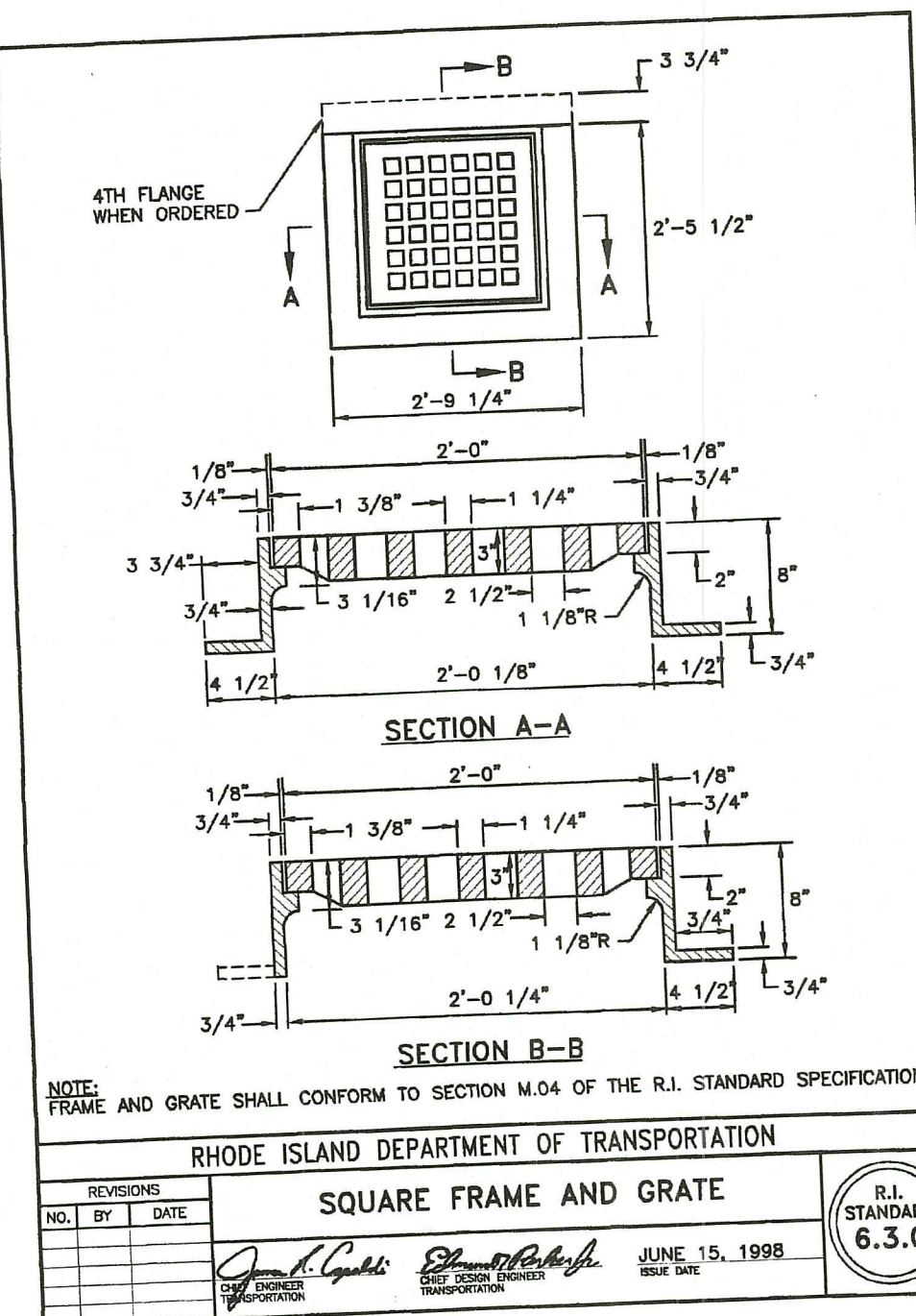
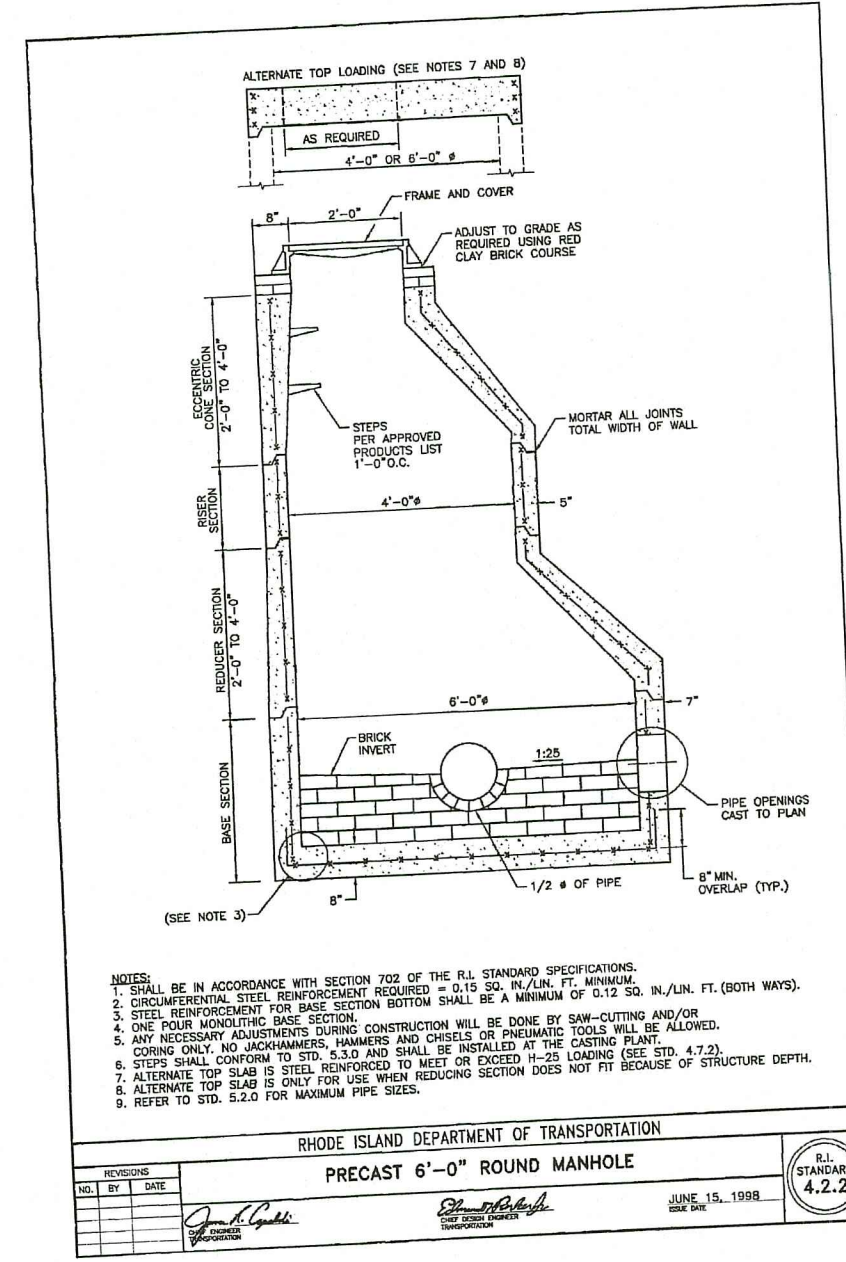
NOTE: TREE STAKING OR SUPPORT NECESSARY ONLY WHERE WIND IS A PROBLEM, REMOVE AFTER SIX (6) MONTHS.

**EVERGREEN TREE PLANTING**  
NOT TO SCALE



NOTE: THE CONTRACTOR WILL BE RESPONSIBLE FOR WATERING LAWN DURING THE COURSE OF THE GROWING SEASON FOR A PERIOD OF ONE (1) YEAR.

**LOAM-SEED DETAIL**  
NOT TO SCALE



**Crossman Engineering**  
Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-5660  
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700  
Email: cel@crossmaneng.com

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STEVEN M. CABRAL  
No. 4847  
REGISTERED PROFESSIONAL ENGINEER  
8-8-77

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATE: SEP - 1 2023 FILE # 23-010  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE: *Andy Cloutier*  
MATTESON RIDGE CONDOS  
(APPLIC NO. 17-0080,  
RIPDES, RIR 101570 & UIC 001771)  
175 GREENBUSH ROAD  
WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
LeCESSE DEVELOPMENT CORP.  
650 S NORTHLAKE BLVD,  
SUITE 650  
ATTAMONTE SPRINGS, FL 32701

**MISCELLANEOUS DETAILS**  
PLAN NO. 6

DATE: SEPTEMBER 2022 SCALE: AS NOTED  
DWG. NAME: 2213-26-DET06.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER  
**C8.6**  
SHEET: 26 OF 29

RI Environmental Management  
AUG 09 2023  
Office of Water Resources

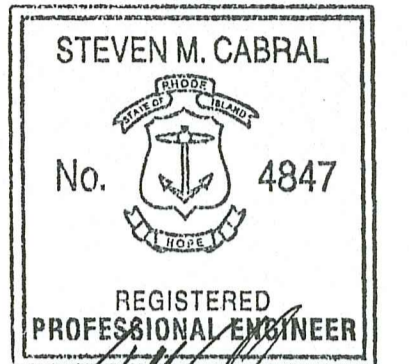


### Crossman Engineering

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 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700

Email: [cei@crossmaneng.com](mailto:cei@crossmaneng.com)

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REGISTERED PROFESSIONAL ENGINEER  
*Steven M. Cabral*  
 8-8-73

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: SEP - 1 2023. FILE #: 25-010  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Andy Chappard*

#### PROJECT TITLE:

MATTESON RIDGE CONDOS  
 (APPLIC NO. 17-0080, RIPDES, RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

#### PREPARED FOR:

LeCESSE DEVELOPMENT CORP.  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

#### DRAWING TITLE: MISCELLANEOUS DETAILS PLAN NO. 7

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-27-DET07.dwg

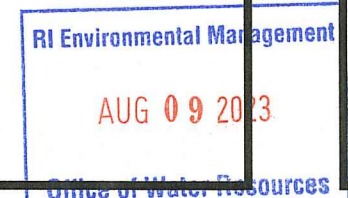
#### REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

#### DRAWING NUMBER

**C8.7**

SHEET: 27 OF: 29



AUG 09 2023

Office of Water Resources

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 4 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12/2/21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 7 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
Oe	0-2										
A	2-7	c	w	10YR 3/3				sl	gr	fr	
Bw1	7-14	c	w	10YR 4/6				sl	gr	fr	
Bw2	14-22	c	w	10YR 5/6				sl	shk	fr	
C1	22-62	c	w	2.5Y 6/2				st gls	gr	fr	
C2	62-90	c	w	2.5Y 6/3				bd gls	gr	fr	

TH 7 Soil Class: Ablation T3H Total Depth 90 Impervious/Limiting Layer Depth 90 (og) GW Seepage Depth NA SHWT 62 (og)  
 TH 8 Soil Class: Ablation T3H Total Depth 118 Impervious/Limiting Layer Depth 118 (og) GW Seepage Depth 112 SHWT 72 (og)  
 Comments: \_\_\_\_\_  
 Revised 1/31/14

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 3 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

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TH 5 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
Oe	0-3										
A	3-10			10YR 3/4				sl	gr	fr	
Bw1	10-18			10YR 4/6				sl	gr	fr	
Bw2	18-27			2.5Y 5/4				sl	shk	fr	
C1	27-47			5/1 6/1	7.5YR 5/8	c m p		lfs	Om	fr	
2C1	57-100			2.5Y 6/2				gls	gr	fr	
2C2	100-134			2.5Y 6/3				gls	gr	fr	

TH 5 Soil Class: Ablation T3H Total Depth 134 Impervious/Limiting Layer Depth NA (og) GW Seepage Depth 128 SHWT 100 (og)  
 TH 6 Soil Class: Ablation T3H Total Depth 106 Impervious/Limiting Layer Depth 106 (og) GW Seepage Depth NA SHWT 78 (og)  
 Comments: \_\_\_\_\_  
 Revised 1/31/14

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 2 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12-2-21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 1 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
FL A	0-2 2-8			10YR 3/3				sl	gr	fr	
Bw1	8-18	c	w	10YR 4/6				sl	gr	fr	
Bw2	18-28	c	w	10YR 5/4				sl	shk	fr	
C1	28-40/70	d	b	5Y 6/1	7.5YR 5/8	m m p		vfs	Om	fr	
2C1	40/70-80	c	w	2.5Y 6/2				gls	gr	fr	
2C2	80-115	c	w	2.5Y 6/3				vhdgls	gr	fr	

TH 1 Soil Class: Ablation T3H Total Depth 115 Impervious/Limiting Layer Depth 115 (og) GW Seepage Depth NA SHWT 80 (og)  
 TH 4 Soil Class: Ablation T3H Total Depth 108 Impervious/Limiting Layer Depth NA (og) GW Seepage Depth 60 SHWT 80 (og)  
 Comments: TP 4: Design SHWT at 20" is due to depth of firm consistence horizon, with significant re-Dox.  
 The horizon below was wet.  
 Revised 1/31/14

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 1 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12-2-21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 1 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
FL A	0-2 2-8			10YR 3/3				sl	gr	fr	
C1	0-66			2.5Y				st gls	gr	fr	

Estimated BTM of TP from orig. (removed) grade = 74"  
 TH 2 Soil Class: Ablation T3H Total Depth 66 Impervious/Limiting Layer Depth 66 (og) GW Seepage Depth NA SHWT 74 (og)  
 TH 2 Soil Class: Ablation T3H Total Depth 102 Impervious/Limiting Layer Depth 102 (og) GW Seepage Depth NA SHWT 80 (og)  
 Comments: \*TP 2 The Cd1 horizon is only present on easterly sidewalk.  
 Revised 1/31/14

#### TEST PIT NOTES

1. THE TEST PIT DATA SHOWN ON THIS PLAN IS ADDITIONAL TESTING FOR THE PHASE 2, 3, AND 4 AREAS.
2. THE ORIGINAL RIDEM PERMITS: APPLICATION NO. 17-0080, RIPDES RIR 101570 AND UIC 001771 WAS DESIGNED USING TEST PIT DATA RECORDED BY GEORGE B. DUPONT, PE, PLS. REFER TO REVISED DRAINAGE NARRATIVE AND ASSESSMENT.

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 7 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12-2-21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 13 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
Oe	0-1			10YR 3/3					gr	fr	
A	1-3			10YR 4/6					gr	fr	
Bw1	3-12	c	w	10YR 4/6					gr	fr	
Bw2	12-38	c	w	10YR 5/4					shk	fr	
C1	38-74	c	w	2.5Y 5/3				gcs	Ogg	l (stable in place)	
2C1	74-96	c	w	2.5Y 7/2				fs	gr	fr (stable in place)	
2C2	96-116	c	w	2.5Y 6/2				fs	gr	fr (stable in place)	

TH 13 Soil Class: Ice Contact Total Depth 116 Impervious/Limiting Layer Depth 116 (og) GW Seepage Depth 112 SHWT 95 (og)  
 TH 14 Soil Class: Ice Contact Total Depth 126 Impervious/Limiting Layer Depth NA (og) GW Seepage Depth 120 SHWT 74 (og)  
 Comments: \_\_\_\_\_  
 Revised 1/31/14

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 6 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12/2/21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 11 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
Oe	0-3										
A	3-6	c	w	10YR 3/3				sl	gr	fr	
Bw1	7-17	c	w	10YR 4/6				sl	gr	fr	
Bw2	17-29	c	w	10YR 5/6				sl	shk	fr	
C1	29-96	c	w	2.5Y 6/2				st gls	gr	fr	
C2	96-127	c	w	2.5Y 6/3				st gls	gr	fr	

TH 11 Soil Class: Ablation T3H Total Depth 127 Impervious/Limiting Layer Depth NA (og) GW Seepage Depth NA SHWT 96 (og)  
 TH 12 Soil Class: Ablation T3H Total Depth 50 Impervious/Limiting Layer Depth 50 (og) GW Seepage Depth NA SHWT 88 (og)  
 Comments: TP 12 - A&B horizons removed, estimated depth from original grade is 88" +/-  
 Revised 1/31/14

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment System Program Page 5 of 7

Site Evaluation Form  
 Part A - Soil Profile Description Application Number \_\_\_\_\_

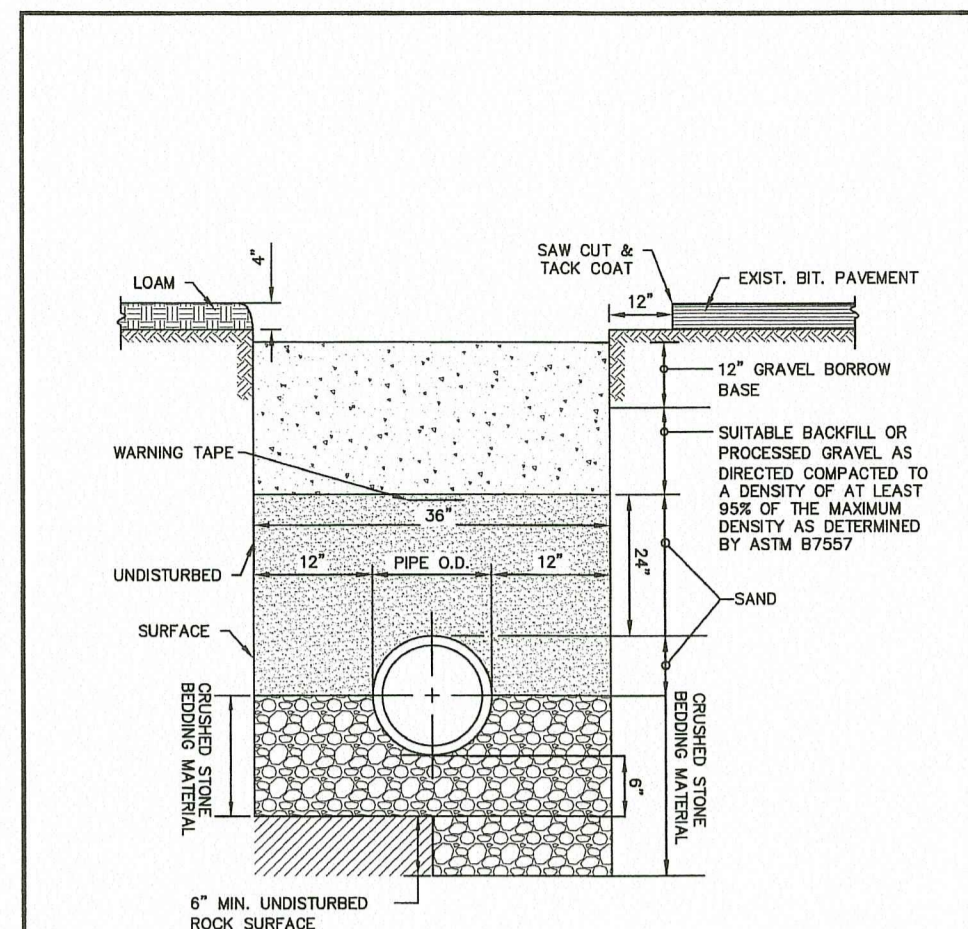
Property Owner: Matteson Ridge  
 Property Location: Greenbush Road, West Warwick  
 Date of Test Hole: 12/2/21  
 Soil Evaluator: Brian King License Number: D4010  
 Shaded: Yes  No  Time: 9:00-12:00  
 Weather: Cloudy

TH 9 Horizon	Depth Inches	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrk	Re-Dox Features	Ab. S. Contr.	Re-Dox				
Oe	0-3										
A	3-8	c	w	10YR 3/3				sl	gr	fr	
Bw1	8-15	c	w	10YR 4/6				sl	gr	fr	
Bw2	15-30	c	w	10YR 5/6				sl	shk	fr	
C1	30-44/58	c	w	2.5Y 6/2				st gls	gr	fr	

TH 9 Soil Class: Ablation T3H Total Depth 58 Impervious/Limiting Layer Depth 44 (og) GW Seepage Depth NA SHWT 44 (og)  
 TH 10 Soil Class: Ablation T3H Total Depth 129 Impervious/Limiting Layer Depth 129 (og) GW Seepage Depth 111 SHWT 100 (og)  
 Comments: \_\_\_\_\_  
 Revised 1/31/14

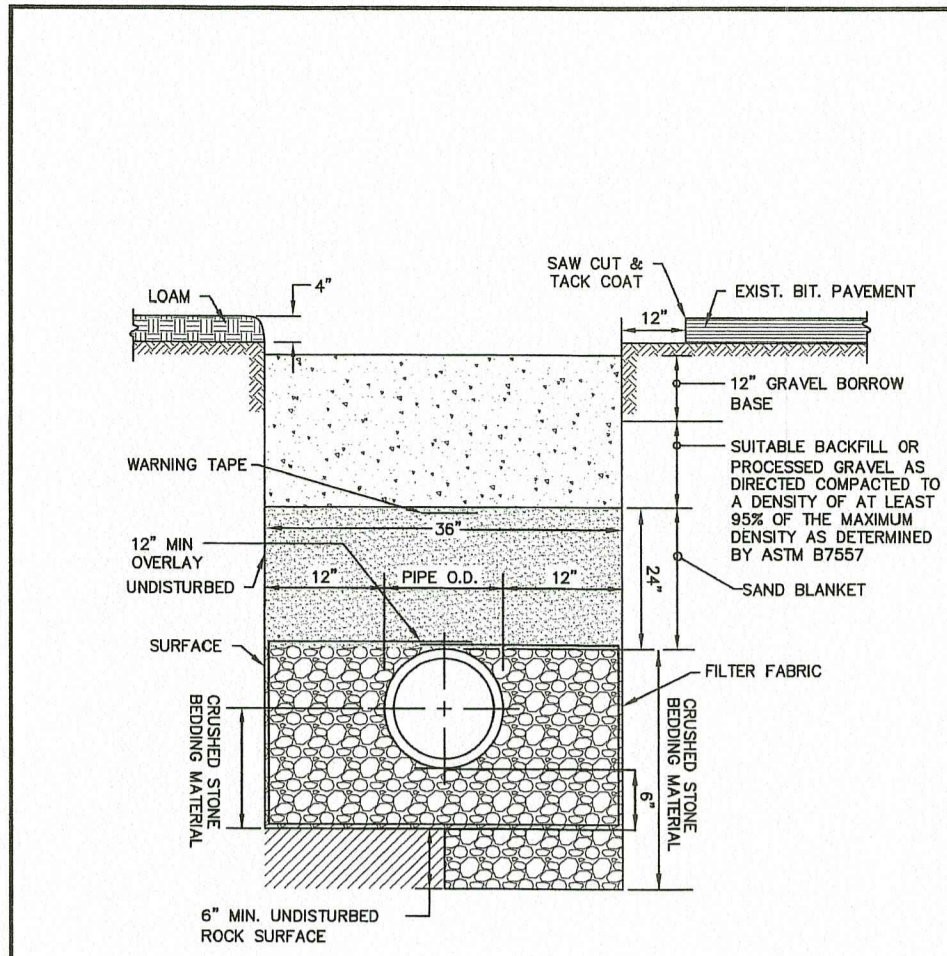
**SEWER NOTES**

- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH THE "DIG SAFE LAW" ENACTED BY R.I. LEGISLATURE, AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY APPLICABLE TOWN, STATE OR FEDERAL AGENCY. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE DIG SAFE PROGRAM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND ENSURE THAT ALL UTILITIES HAVE BEEN MARKED PRIOR TO COMMENCING THEIR WORK. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANY, SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL CONDUCT A TEST PIT AT THE CONNECTION POINT PRIOR TO CONSTRUCTION TO VERIFY PIPE DEPTH, SIZE, AND MATERIAL— COORDINATE WITH ENGINEER AND THE WEST WARWICK SEWER AUTHORITY BEFORE ANY CONNECTION CAN TAKE PLACE.
- THE CONNECTION SHALL BE INSPECTED BY THE WEST WARWICK SEWER AUTHORITY. CONTRACTOR SHALL COORDINATE INSPECTION. FAILURE TO ARRANGE FOR AN ON-SITE SEWER CONNECTION INSPECTION WILL RESULT IN THE CONNECTION TO BE UNCOVERED AT THE PERMITTEE'S EXPENSE TO ALLOW FOR AN INSPECTION.
- ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE WEST WARWICK SEWER AUTHORITY STANDARD SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF SEWER LINE AND CONNECTION.
- PRIOR TO RECEIVING AUTHORIZATION TO CONSTRUCT, ALL MATERIALS SHALL MEET THE STANDARDS AND RECEIVE THE WRITTEN APPROVAL, BASED ON MANUFACTURER'S DRAWINGS AND REQUIREMENTS FROM THE ENGINEER.
- ALL SEWERAGE FACILITIES SHALL MEET TESTING AND CLEANING REQUIREMENTS PRIOR TO ACCEPTANCE.
- THE CONTRACTOR IS RESPONSIBLE TO COORDINATE AS-BUILT LOCATIONS PRIOR TO PIPE BACKFILL. AS-BUILT DRAWINGS SHALL BE FURNISHED AS A CONDITION FOR ACCEPTANCE OF THE NEW SEWERAGE FACILITIES. PLANS SHALL INCLUDE LOCATION OF WYES.
- NO FLOW WILL BE ACCEPTED UNTIL ALL ABOVE STEPS ARE COMPLETED AND COMPLETION CERTIFICATE IS ISSUED.
- AFTER THE CONTRACTOR HAS "STAKED OUT" THE FACILITIES TO BE CONSTRUCTED AND HAS THE APPROVED MATERIAL ON THE JOB, THE ENGINEER AND THE WEST WARWICK SEWER AUTHORITY SHALL BE NOTIFIED IN ADVANCE OF CONSTRUCTION IN ORDER FOR THEM TO ARRANGE FOR THEIR INSPECTOR. THE NOTIFICATION MUST MEET THE WEST WARWICK SEWER AUTHORITY REQUIREMENTS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS AND MATERIALS, STANDARDS AND SPECIAL DETAILS, AND STANDARD SPECIFICATIONS. ANY WORK NOT MEETING THE APPROVED STANDARDS SHALL BE IMMEDIATELY REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION WITHIN THE LIMITS OF WORK AS SHOWN ON THE DRAWINGS.
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER.
- LOCATION AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY AUTHORITIES INCLUDING "DIG-SAFE" PRIOR TO STARTING WORK. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COST OF REPAIRS SHALL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- RELATION TO WATER LINES:
  - HORIZONTAL SEPARATION: WHENEVER POSSIBLE, SEWERS SHOULD BE LAID AT A MINIMUM OF 10 FEET (3.0 m), HORIZONTALLY, FROM AN EXISTING OR PROPOSED WATER LINE. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, A SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER LINE IF:
    - IT IS LAID IN A SEPARATE TRENCH, OR IF
    - IT IS LAID IN THE SAME TRENCH WITH THE WATER LINE LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND IF
    - IN EITHER CASE THE ELEVATION OF THE TOP (CROWN) OF THE SEWER IS AT LEAST 18 INCHES (46 cm) BELOW THE BOTTOM (INVERT) OF THE WATER LINE.
  - VERTICAL SEPARATION: WHENEVER A SEWER MUST CROSS UNDER WATER LINES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES (46 cm) BELOW THE BOTTOM OF THE WATER LINE. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER LINE SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET (3.0 m) ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER LINE SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
  - WHEN IT IS IMPOSSIBLE TO OBTAIN HORIZONTAL AND/OR VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER LINE AND SEWER SHALL BE SLEEVED WITH DUCTILE IRON OR ENCASED WITH CONCRETE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING REQUIRED IN THE SEWER INSTALLATION.
- THE PROPOSED GRAVITY SANITARY SEWER PIPE SHALL BE PVC ASTM 3034 SDR 35, UNLESS OTHERWISE SHOWN ON PLANS. PIPE SIZE TO MATCH UTILITY PLAN.
- THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE ELEVATION OF EXISTING SEWER LINE PRIOR TO INSTALLATION.
- NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.
- ALL CONSTRUCTION MATERIAL, AS WELL AS MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHEETS SHALL BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER, THE SEWER AUTHORITY, OR ITS REPRESENTATIVE PRIOR TO FABRICATION AND INSTALLATION.
- ALL BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN 12 INCH LIFTS.



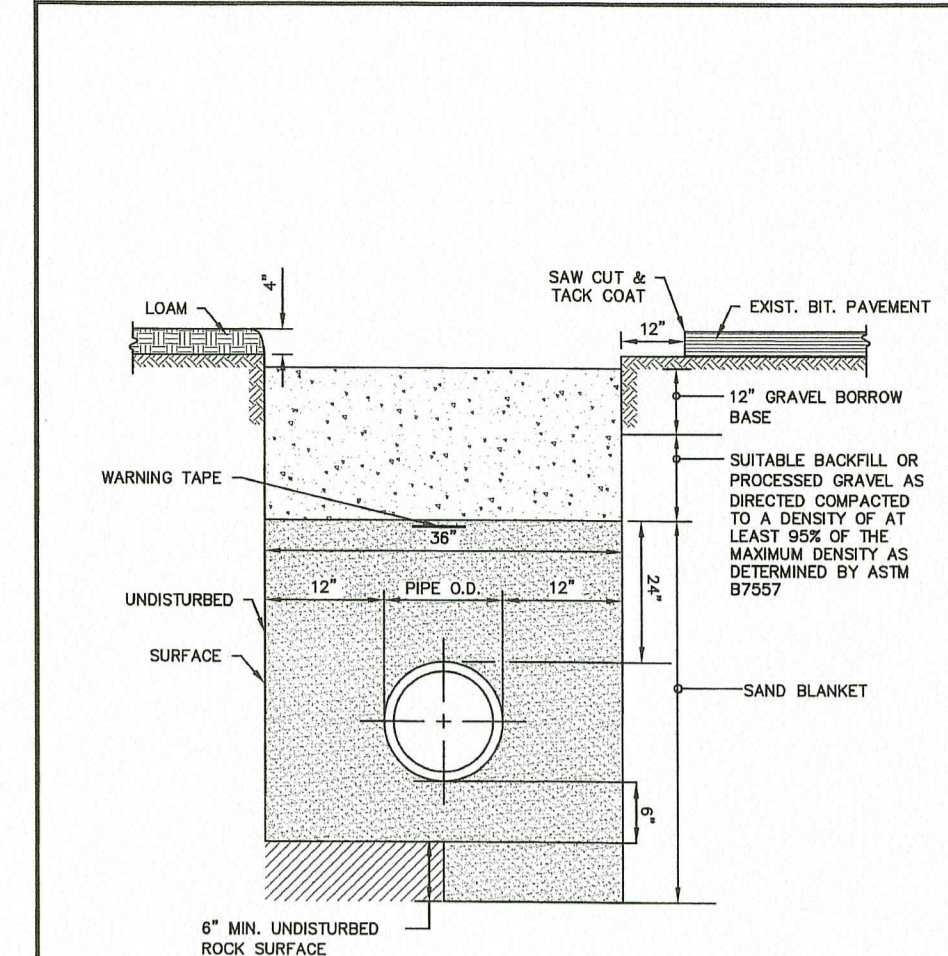
NOTES:  
 1. MINIMUM DEPTH OF COVER SHALL BE 4'-0"  
 2. PAVEMENT RESTORATION SHALL CONFORM TO THE DEPARTMENT OF PUBLIC WORKS REQUIREMENTS

Figure WW-1  
**TRENCH DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale



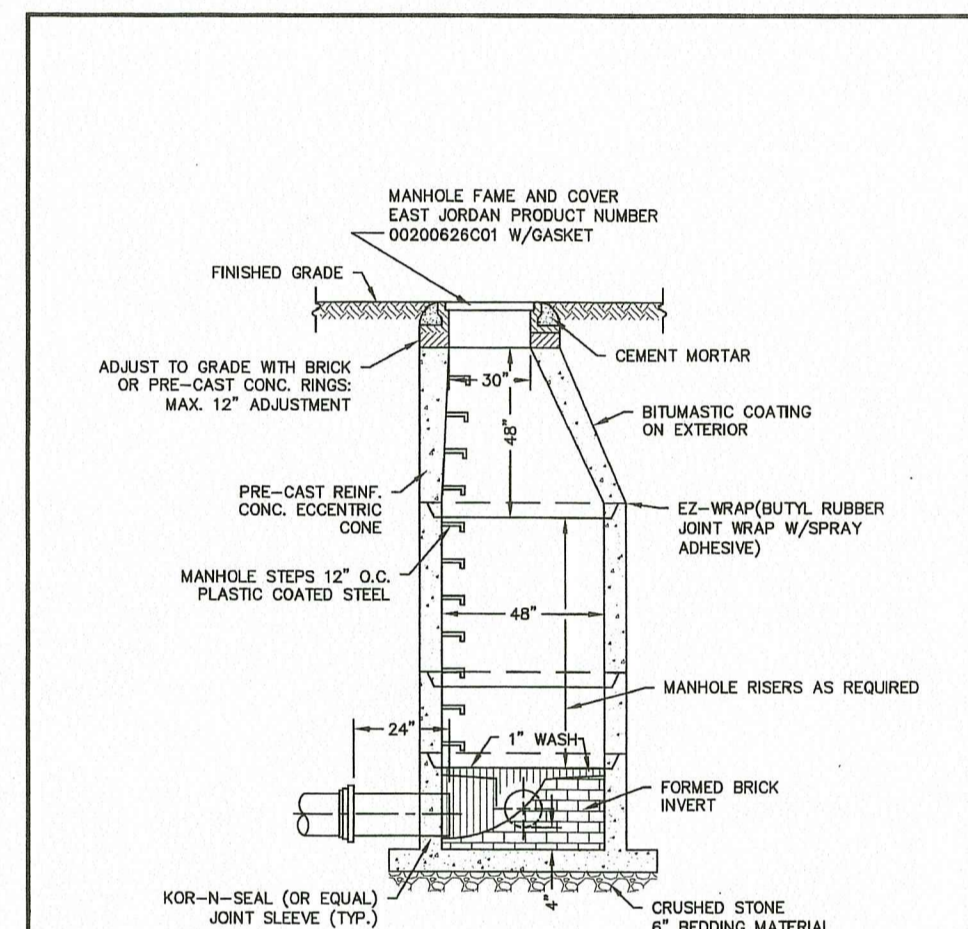
NOTES:  
 1. MINIMUM DEPTH OF COVER SHALL BE 4'-0"  
 2. PAVEMENT RESTORATION SHALL CONFORM TO THE DEPARTMENT OF PUBLIC WORKS REQUIREMENTS

Figure WW-2  
**TRENCH DETAIL WET CONDITION DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale



NOTES:  
 1. MINIMUM DEPTH OF COVER SHALL BE 4'-0"  
 2. WHEN IN GROUND WATER SEE DETAIL WW-2  
 3. PAVEMENT RESTORATION SHALL CONFORM TO THE DEPARTMENT OF PUBLIC WORKS REC.

Figure WW-3  
**LOW PRESSURE SEWER TRENCH DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale



NOTES:  
 1. ALL LIFTING HOLES TO BE PLUGGED IN AND OUT WITH HYDRAULIC CONCRETE

Figure WW-4  
**SEWER MANHOLE DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale

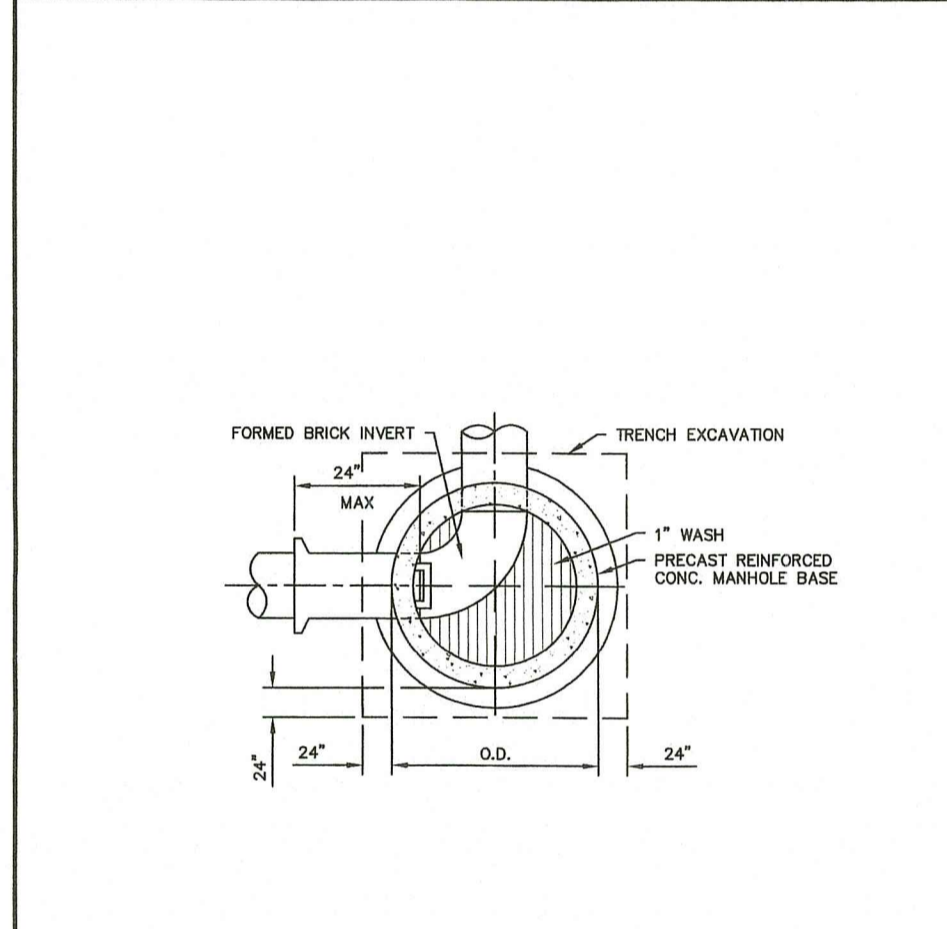
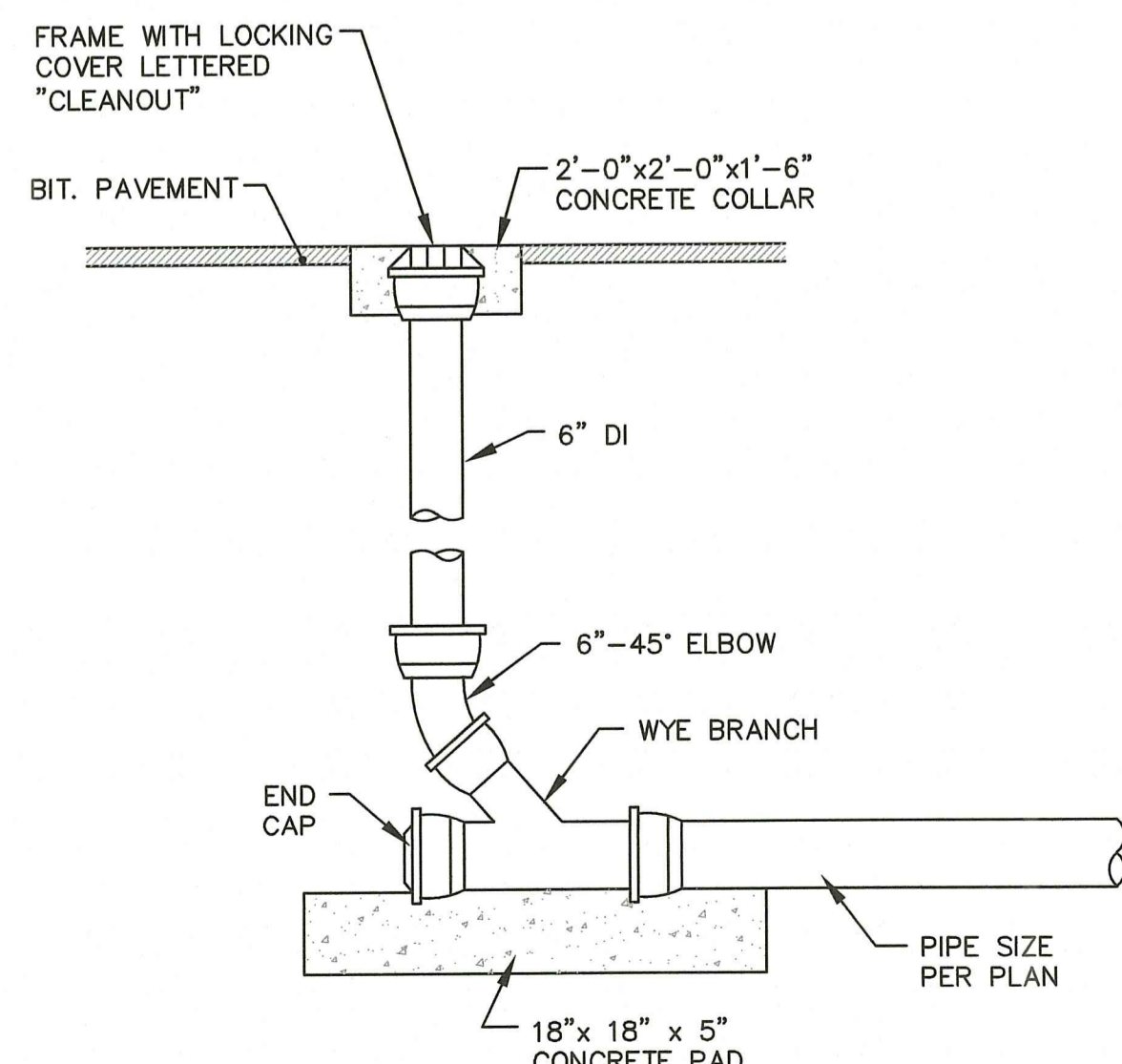


Figure WW-5  
**PRECAST MANHOLE DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale



**SEWER/RAIN CLEANOUT DETAIL  
 IN SIDEWALK/PAVEMENT  
 NOT TO SCALE**

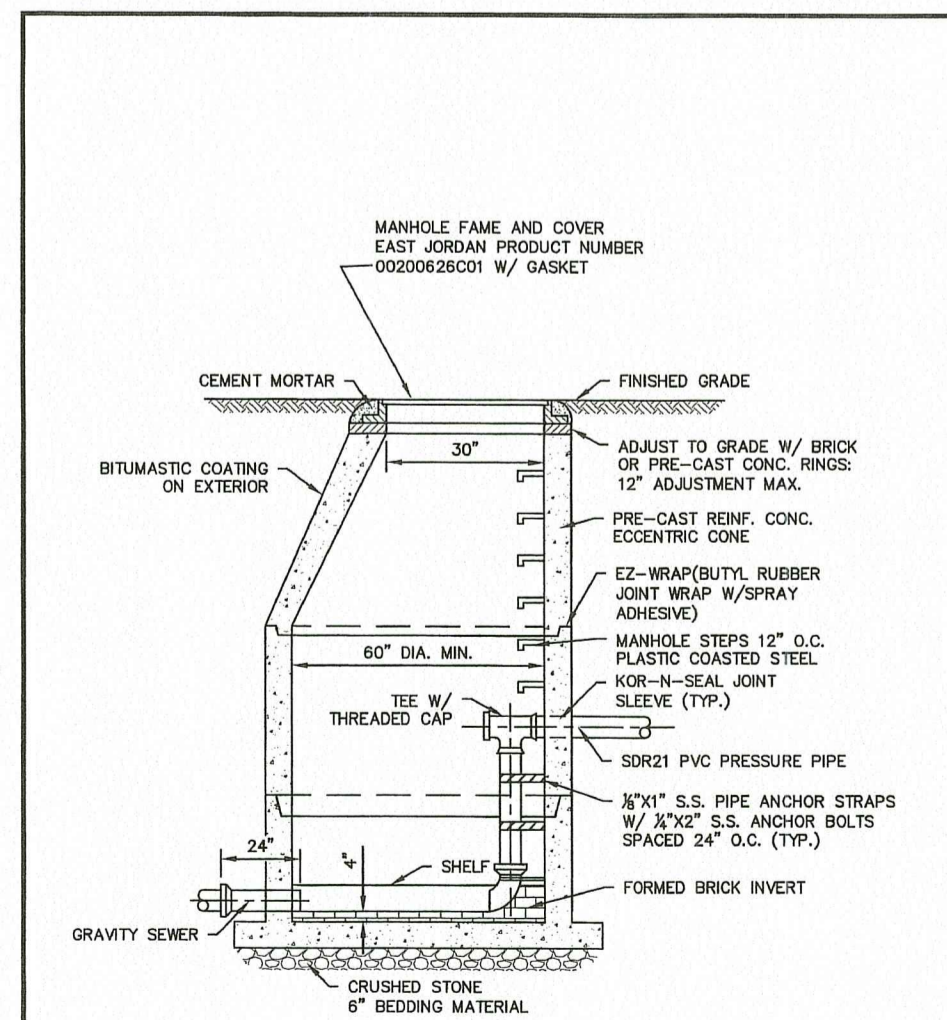
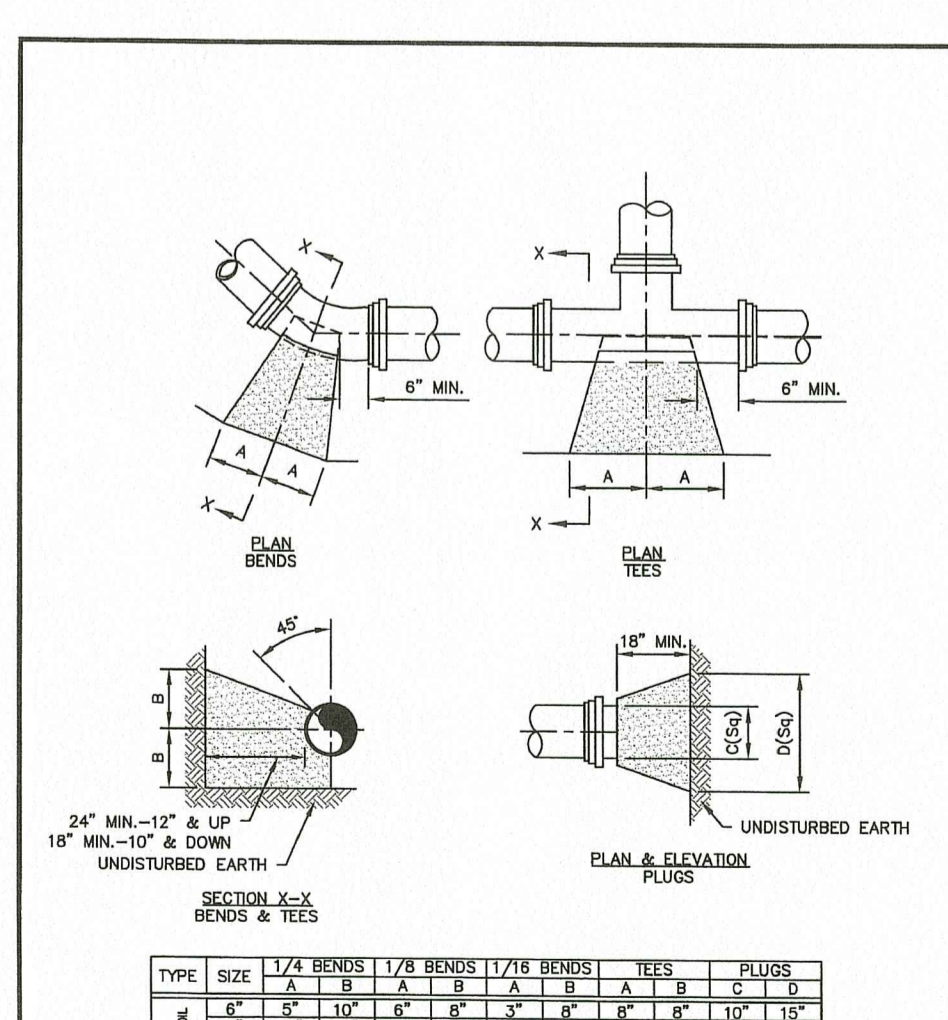


Figure WW-8  
**LOW PRESSURE SEWER INSIDE DROP MANHOLE**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale

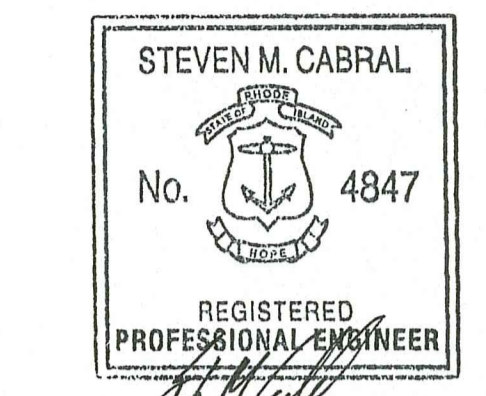


TYPE	SIZE	1/2 BENDS	1/8 BENDS	1/4 BENDS	TEES	PLUGS																																											
TYPE 1 12\"/> <tr> <td>6"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>8"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>10"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>12"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td rowspan="4">TYPE 2 18\"/&gt; <tr> <td>6"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>8"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>10"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>12"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> </td></tr>	6"	10	10	10	10	10	8"	10	10	10	10	10	10"	10	10	10	10	10	12"	10	10	10	10	10	TYPE 2 18\"/> <tr> <td>6"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>8"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>10"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>12"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr>	6"	10	10	10	10	10	8"	10	10	10	10	10	10"	10	10	10	10	10	12"	10	10	10	10	10
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	8"	10	10	10	10	10																																											
	10"	10	10	10	10	10																																											
12"	10	10	10	10	10																																												
TYPE 2 18\"/> <tr> <td>6"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>8"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>10"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>12"</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr>	6"	10	10	10	10	10	8"	10	10	10	10	10	10"	10	10	10	10	10	12"	10	10	10	10	10																									
	6"	10	10	10	10	10																																											
	8"	10	10	10	10	10																																											
	10"	10	10	10	10	10																																											
12"	10	10	10	10	10																																												

Figure WW-18  
**THRUST BLOCKS DETAILS**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale

**Crossman Engineering**  
 Rhode Island: 151 CenterVile Road, Warwick, RI 02886, Phone (401) 738-6660  
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02283, Phone (508) 695-1700  
 Email: ce@crosmaneng.com

THESE DRAWINGS ARE THE PROPERTY OF CROSSMAN ENGINEERING AND HAVE BEEN PREPARED FOR THEIR CLIENT FOR A SPECIFIC SITE AND PROJECT. THESE DRAWINGS ARE NOT TO BE COPIED OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF CROSSMAN ENGINEERING.



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: SEP - 1 2023 FILE #: 23-014  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
**MATTESSON RIDGE CONDOS**  
 (APPLIC NO. 17-0080,  
 RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
 650 S NORTHLAKE BLVD,  
 SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

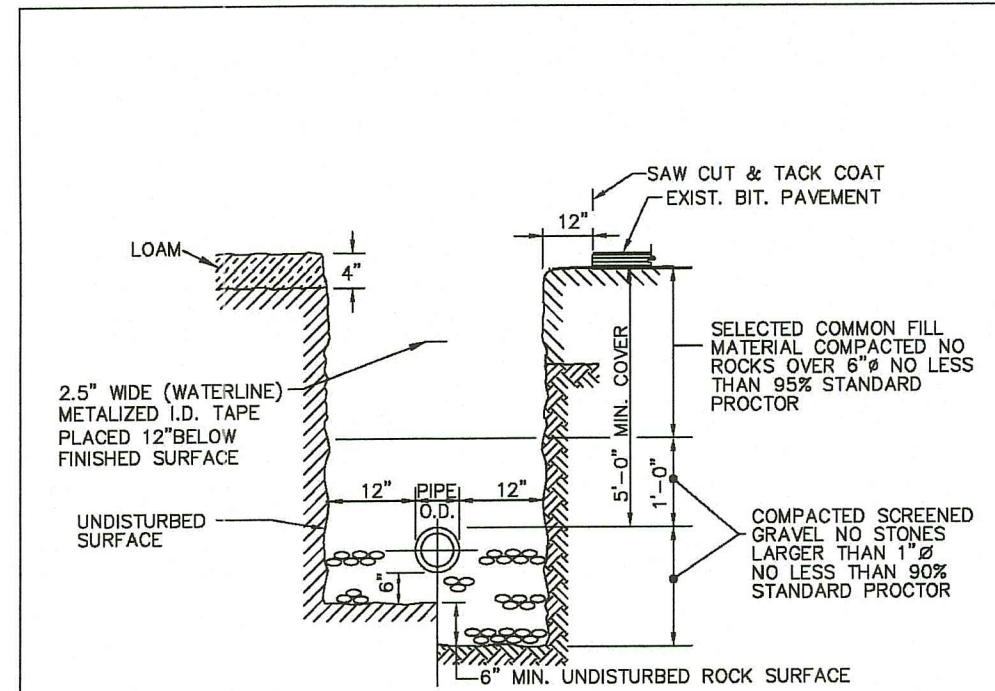
DRAWING TITLE:  
**MISCELLANEOUS DETAILS  
 PLAN NO. 8**

DATE: APRIL 2023 SCALE: AS NOTED  
 DWG. NAME: 2213-28-DET08.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	7/10/23
2	2	RIDEM COMMENTS	8/7/23

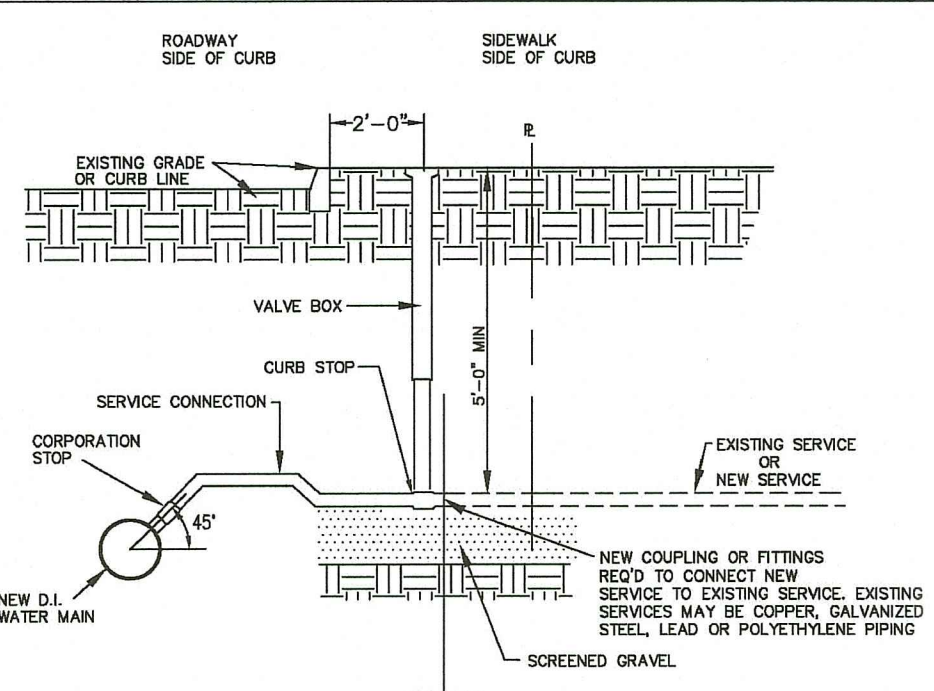
DRAWING NUMBER  
**C8.8**  
 SHEET: 28 OF 29

RI Environment Management  
 AUG 09 2023  
 Office of Water Resources



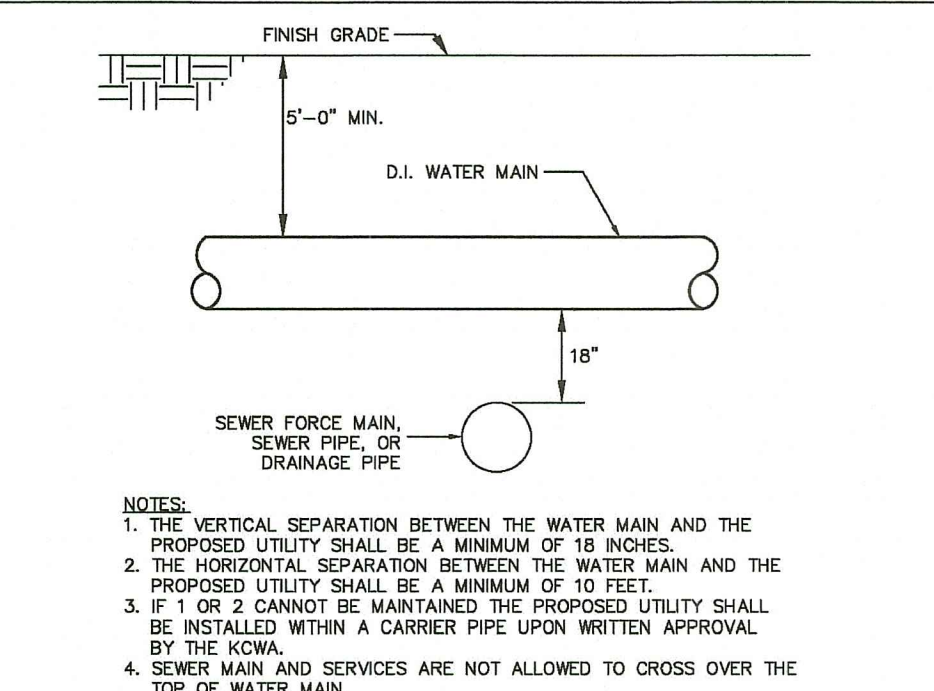
- NOTES:
1. ROADWAY RESTORATION IN ACCORDANCE WITH COMMUNITY DR RIGHT.

KENT COUNTY WATER AUTHORITY  
**KCWA TRENCH INSTALLATION IN ROCK AND SOIL**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 TRENCH.DWG



- NOTE:
- 1.) SERVICE MATERIALS PER KCWA SPECIFICATION UNLESS CITY OR TOWN CODES REQUIRE SPECIFIC MATERIALS THAT HAVE BEEN APPROVED BY KCWA.
  - 2.) SERVICE LINE FROM CURB BOX TO BUILDING SHALL BE INSPECTED, TESTED AND APPROVED BY THE LOCAL PLUMBING INSPECTOR.

KENT COUNTY WATER AUTHORITY  
**KCWA SERVICE CONNECTION**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 SERVICECON.DWG

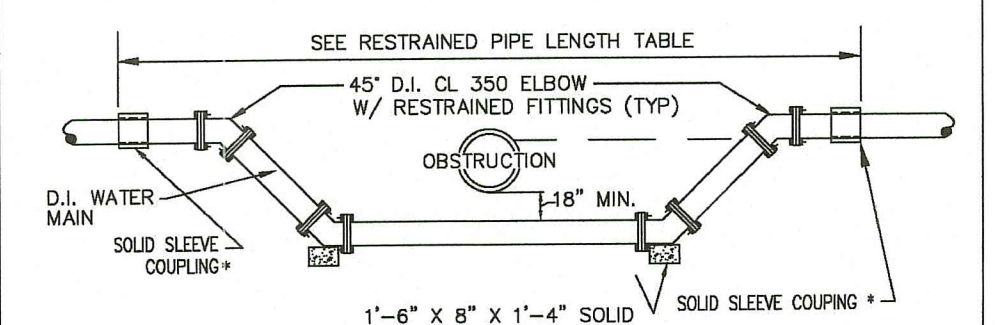
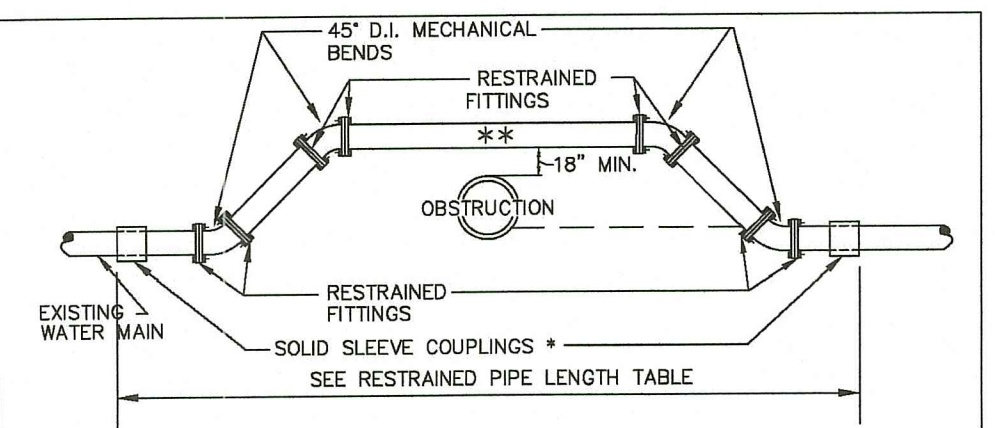


- NOTES:
1. THE VERTICAL SEPARATION BETWEEN THE WATER MAIN AND THE PROPOSED UTILITY SHALL BE A MINIMUM OF 18 INCHES.
  2. THE HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND THE PROPOSED UTILITY SHALL BE A MINIMUM OF 10 FEET.
  3. IF 1' OR 2' CANNOT BE MAINTAINED THE PROPOSED UTILITY SHALL BE INSTALLED WITHIN A CARRIER PIPE UPON WRITTEN APPROVAL BY THE KCWA.
  4. SEWER MAIN AND SERVICES ARE NOT ALLOWED TO CROSS OVER THE TOP OF WATER MAIN.
  5. CONCRETE ENCASUREMENT IS NOT ALLOWED.

KENT COUNTY WATER AUTHORITY  
**KCWA UTILITY SEPARATION**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 UTILITYSEP.DWG

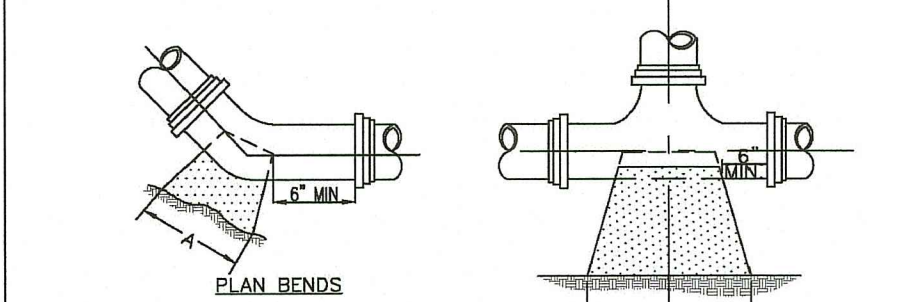
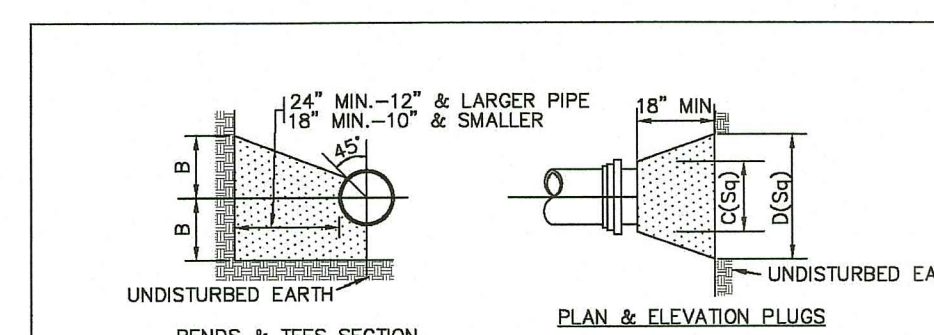
**WATER NOTES**

1. ALL INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO KENT COUNTY WATER AUTHORITY REQUIREMENTS, AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
2. PROPOSED PIPE SHALL BE HDPE PIPE APPROVED BY KENT COUNTY WATER (BY AMERICAN MANUFACTURER ONLY). FITTINGS SHALL MEET THE KCWA REQUIREMENTS.
3. CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, BENDS, TEES, FITTINGS, JOINTS, SERVICE CONNECTIONS AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
4. PRESSURE AND LEAKAGE TESTS AND DISINFECTING PIPES SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, KENT COUNTY WATER AUTHORITY REQUIREMENTS, AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
5. ALL FITTINGS, PIPE, JOINTS, ETC. SHALL BE DESIGNED FOR 1.5 TIMES WORKING PRESSURE BUT NOT LESS THAN 150 PSI.
6. WATER PIPE SHALL TYPICALLY BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM SEWER PIPE, AND AT A MINIMUM DEPTH OF COVER EQUAL TO 5'. WHERE A NEW WATER MAIN IS LESS THAN 18 INCHES CLEAR DISTANCE ABOVE A SEWER OR WHERE A WATER MAIN PASSES BENEATH A SEWER, ENCASE THE SEWER IN 6" OF CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING WATER MAIN. THE USE OF DUCTILE IRON TIGHT JOINT SEWER PIPE IN LIEU OF CONCRETE ENCASUREMENT WILL BE CONSIDERED UPON CONTRACTORS SUBMITTAL OF SPECIFICATIONS TO ENGINEERS FOR APPROVAL.
7. ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS PIPE, JOINTS, FITTINGS, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
8. WATER LINE TRENCH TO BE AWWA TYPE 5. A METALIZED DETECTABLE IDENTIFICATION TAPE 2" IN WIDTH, BLUE IN COLOR AND PRINTED WITH "CAUTION WATERLINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. TAPE SHALL BE SET AT APPROXIMATELY 1'-0" BELOW FINISHED GRADE.
9. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE" FOR UNDERGROUND PIPING TO THE KENT COUNTY WATER AUTHORITY AND ENGINEER. IN ADDITION, THE CONTRACTOR IS REQUIRED TO SUBMIT THE FOLLOWING ITEMS TO THE ENGINEER FOR THEIR REVIEW AND APPROVAL:
  - TYPE AND MANUFACTURER OF CORPORATIONS AND CURB STOPS
  - TYPE AND MANUFACTURER OF VALVE BOXES
  - TYPE AND MANUFACTURER OF PIPING
  - TYPE AND MANUFACTURER OF VALVES (OPEN LEFT)
  - TYPE AND MANUFACTURER OF HDPE SERVICE LINE
10. WHEN THIS PROJECT IS COMPLETE, THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE WATER DEPARTMENT AND ENGINEER TWO SETS OF AS BUILT PLANS CERTIFIED BY A RHODE ISLAND LICENSED PROFESSIONAL ENGINEER (ONE BLUE LINE, ONE REPRODUCIBLE COPY-MYLAR OR SEPIA) WHICH INDICATES:
  - a. ALL CURB STOPS WITH APPROPRIATE LOCATING MEASUREMENTS - MAIN-TO-CURB AND MEASUREMENTS FROM PERMANENT STRUCTURES.
  - b. A SCHEDULE OF MATERIALS WHICH INDICATES: AND MEASUREMENTS FROM PERMANENT STRUCTURES.
    1. ITEM QUANTITY
    2. MANUFACTURER
    3. DESCRIPTION
      - a. INCLUDE SERIAL #'S AS APPLICABLE
      - b. MATERIAL
      - c. OPERATION CHARACTERISTICS
  - c. PIPE DEPTHS AT 50' INTERVALS
  - d. PIPE CROSSING LOCATIONS AND SEPARATION DISTANCES



- TRANSITION COUPLING, DRESSER STYLE, TO BE USED ONLY WHEN EXISTING WATER MAIN IS OF DIFFERENT MATERIAL OTHER THAN DUCTILE IRON.
- SOLID SLEEVE TO BE RESTRAINED WITH APPROVED RESTRAINT FITTINGS
- ONLY TO BE USED WHEN CALCULATED FRICTION LOSS WILL NOT ADVERSELY EFFECT DISTRIBUTION PRESSURE AND FLOW
- MINIMUM DEPTH OF COVER SHALL BE 2'-0". THE WATER PIPE SHALL BE CLASS 54 AND INSULATED WITH 2" FOAMGLASS INSULATION W/ PITT WRAP OR EQUAL WHERE THE WATER PIPE HAS LESS THAN 5' OF COVER

KENT COUNTY WATER AUTHORITY  
**KCWA WATER MAIN HORIZONTAL OR VERTICAL RELOCATION**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 WMCROSSV.DWG



- NOTES:
1. ALL CONCRETE SHALL BE 4000 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 R.I. SHALL VERIFY ALL CALCULATIONS DURING DESIGN TO MEET CONDITIONS OF PROJECT AND KCWA REQUIREMENTS.

SIZE	TEES	PLUGS	90° BEND	45° BEND	22½° BEND	1/2" W/B	
A B	A B	A B	A B	A B	A B	A B	
8"	20"	10"	21"	24"	18"	9"	12"
8"	20"	13"	26"	32"	16"	24"	12"
8"	20"	17"	34"	40"	20"	30"	18"
12"	41"	20"	41"	48"	30"	18"	20"
18"	54"	27"	54"	64"	42"	24"	24"

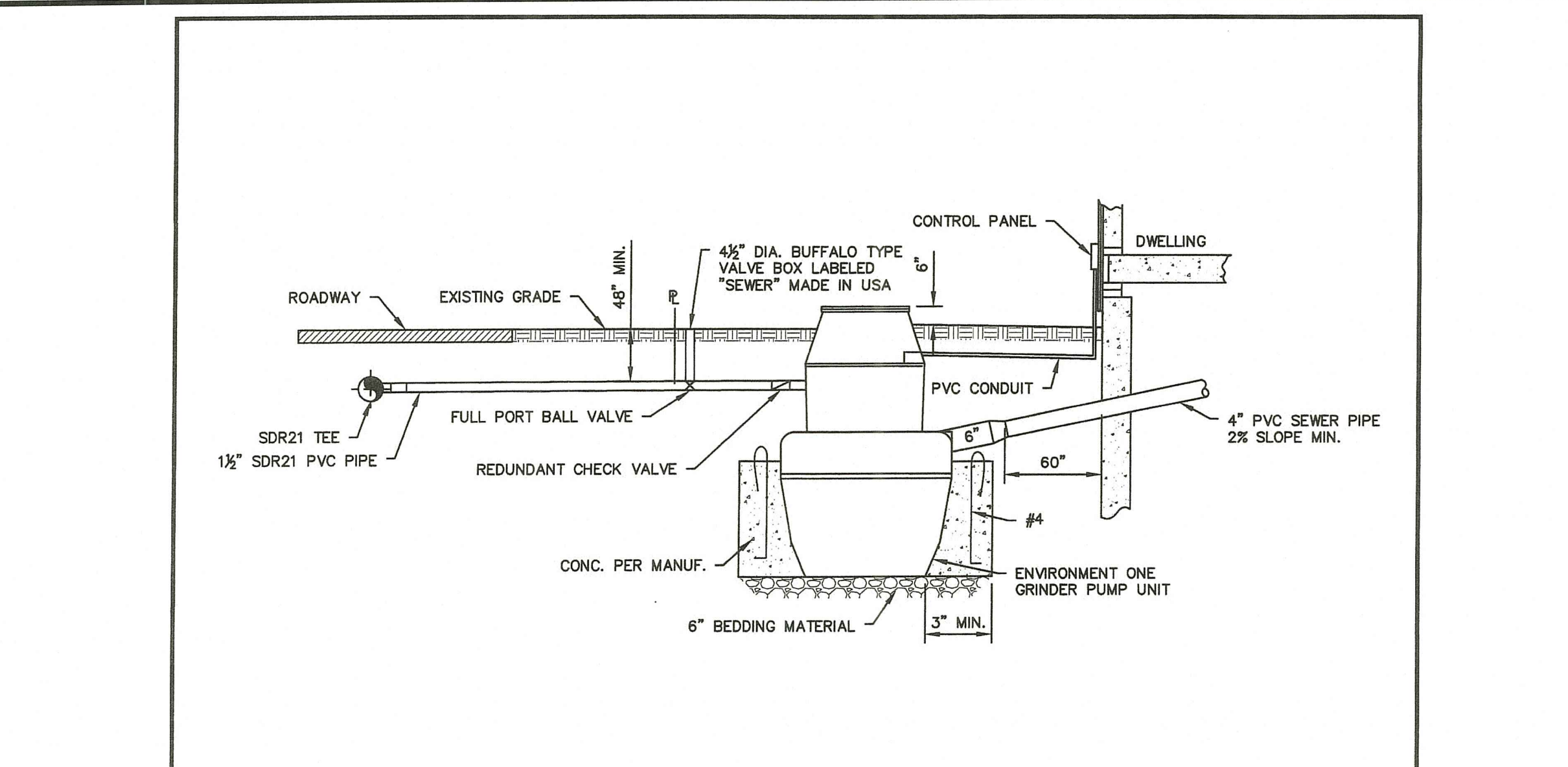
KENT COUNTY WATER AUTHORITY  
**KCWA THRUST BLOCK**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 TBLOCK.DWG

RESTRAINED PIPE LENGTHS FOR RESTRAINED FITTINGS

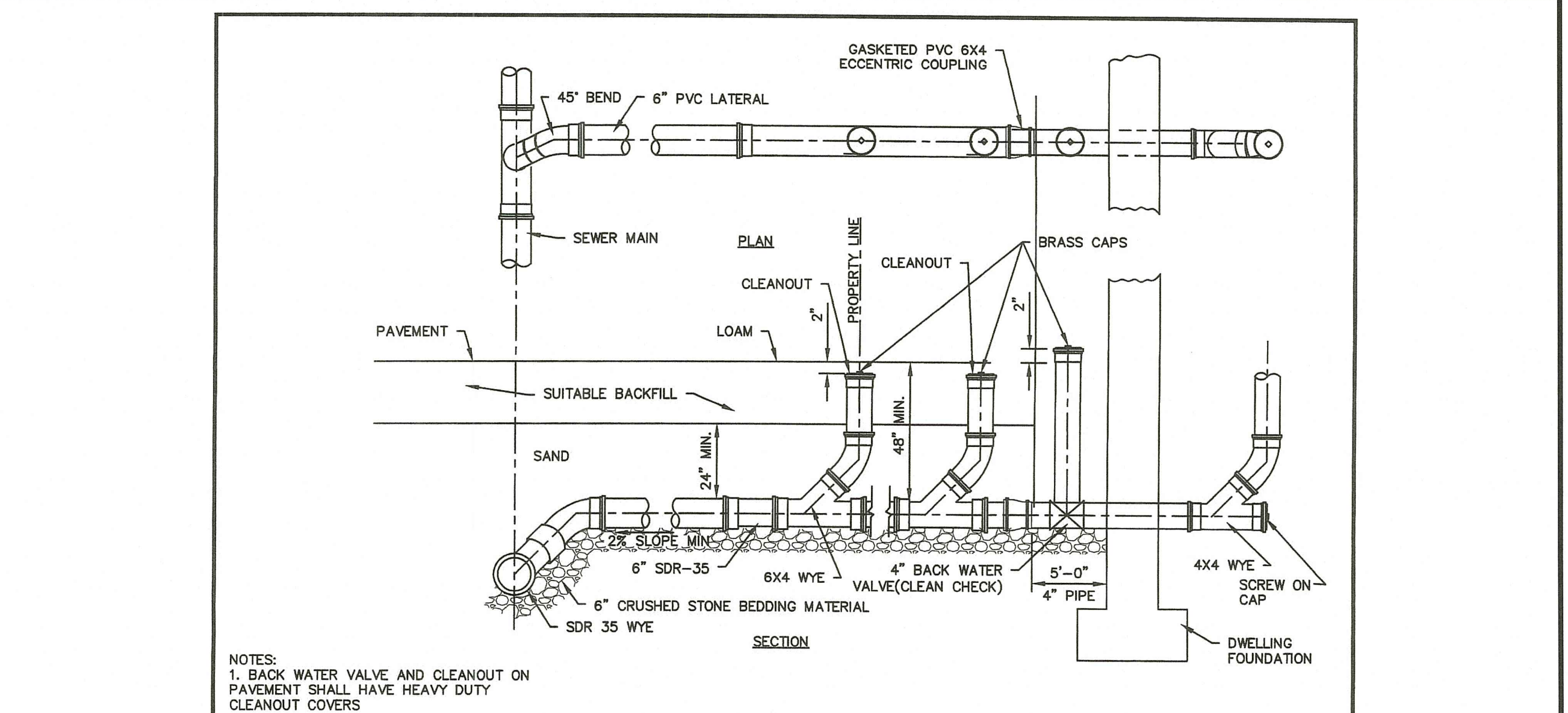
FITTING	RESTRAINED LENGTH
1 1/2" PLUG	84"
1 1/2" TEE	44"
1 1/2" 90°	58"
1 1/2" 45°	44"
1 1/2" 22 1/2°	22"
1 1/2" 11 1/4°	22"
8" PLUG	58"
8" TEE	44"
8" 90°	44"
8" 45°	22"
8" 22 1/2°	22"
8" 11 1/4°	22"
8" x 8"	44"
8" PLUG	44"
8" TEE	22"
8" 90°	22"
8" 45°	22"
8" 22 1/2°	22"
8" 11 1/4°	22"

- NOTE:
1. ALL JOINTS, INCLUDING PIPE JOINTS, VALVE JOINTS, AND FITTING JOINTS, SHALL BE RESTRAINED WITHIN THE LIMITS OF RESTRAINED LENGTHS LISTED IN THIS TABLE.
  2. THE TABLE SHOWS LENGTHS OF PIPES WHICH MUST BE RESTRAINED ON BOTH SIDES OF THE FITTING.
  3. ALL DEAD END PIPE SHALL BE PROPERLY RESTRAINED PRIOR TO PRESSURE TESTING.
  4. REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF R.I. SHALL VERIFY ALL RESTRAINED CALCULATIONS DURING DESIGN, MEETING ALL REQUIREMENTS OF THE KCWA.

KENT COUNTY WATER AUTHORITY  
**KCWA RESTRAINED PIPE LENGTHS**  
"proudly serving" NOT TO SCALE DATE: 09/2006  
 ASBDDT.DWG



Town of West Warwick Rhode Island  
**Figure WW-16 LOW PRESSURE SEWER SERVICE CONNECTION**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale



- NOTES:
1. BACK WATER VALVE AND CLEANOUT ON PAVEMENT SHALL HAVE HEAVY DUTY CLEANOUT COVERS

Town of West Warwick Rhode Island  
**Figure WW-14 STANDARD HOUSE CONNECTION DETAIL**  
 Standard Sanitary Sewer Requirements  
 Date: 2018 Scale: No Scale

**Crossman Engineering**  
 Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-5660  
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700  
 Email: ce@crossmaneng.com

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STEVEN M. CABRAL  
 No. 4847  
 REGISTERED PROFESSIONAL ENGINEER  
 8-8-77

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATE: SEP - 1 2023 FILE #: 23-0101  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT TITLE:  
**MATTESON RIDGE CONDOS**  
 (APPLIC. NO. 17-0080, RIPDES. RIR 101570 & UIC 001771)  
 175 GREENBUSH ROAD  
 WEST WARWICK, RHODE ISLAND

PREPARED FOR:  
**LeCESSE DEVELOPMENT CORP.**  
 650 S NORTHLAKE BLVD, SUITE 650  
 ATTAMONTE SPRINGS, FL 32701

DRAWING TITLE:  
**MISCELLANEOUS DETAILS PLAN NO. 9**

DATE: APRIL 2023 SCALE: AS NOTED

DWG. NAME: 2213-29-DET09.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/10/23
2	RIDEM COMMENTS	8/7/23

DRAWING NUMBER  
**C8.9**  
 SHEET: 29 OF: 29

RI Environmental Management  
 AUG 09 2023  
 Office of Water Resources