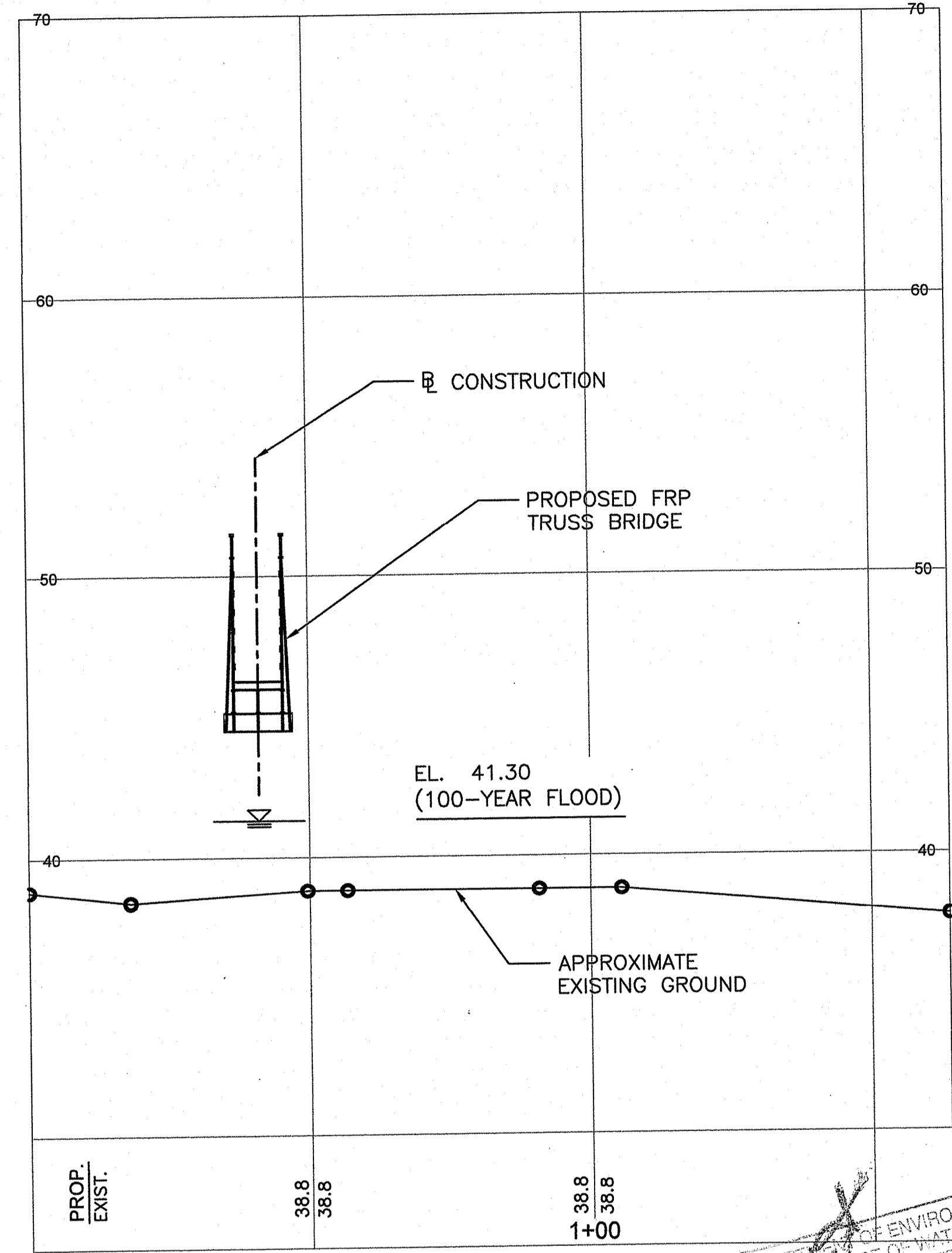
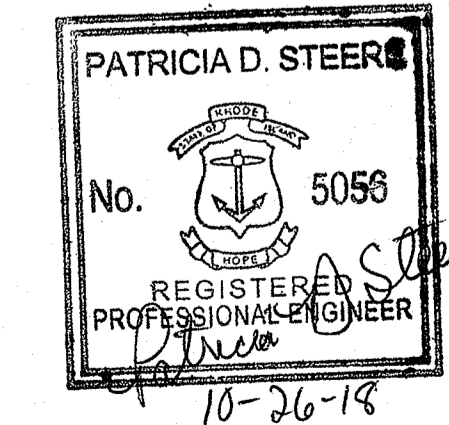
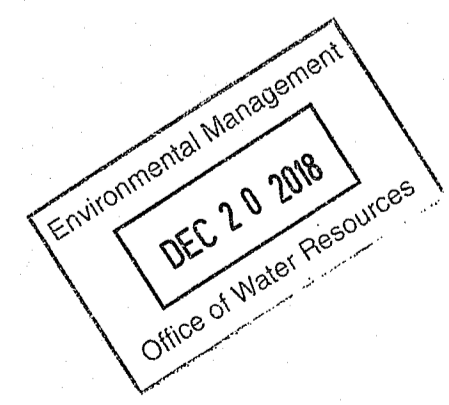
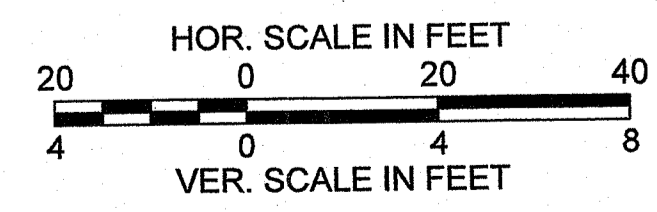


PROFILE: PEDESTRIAN PATH



PROFILE: CROOKED BROOK



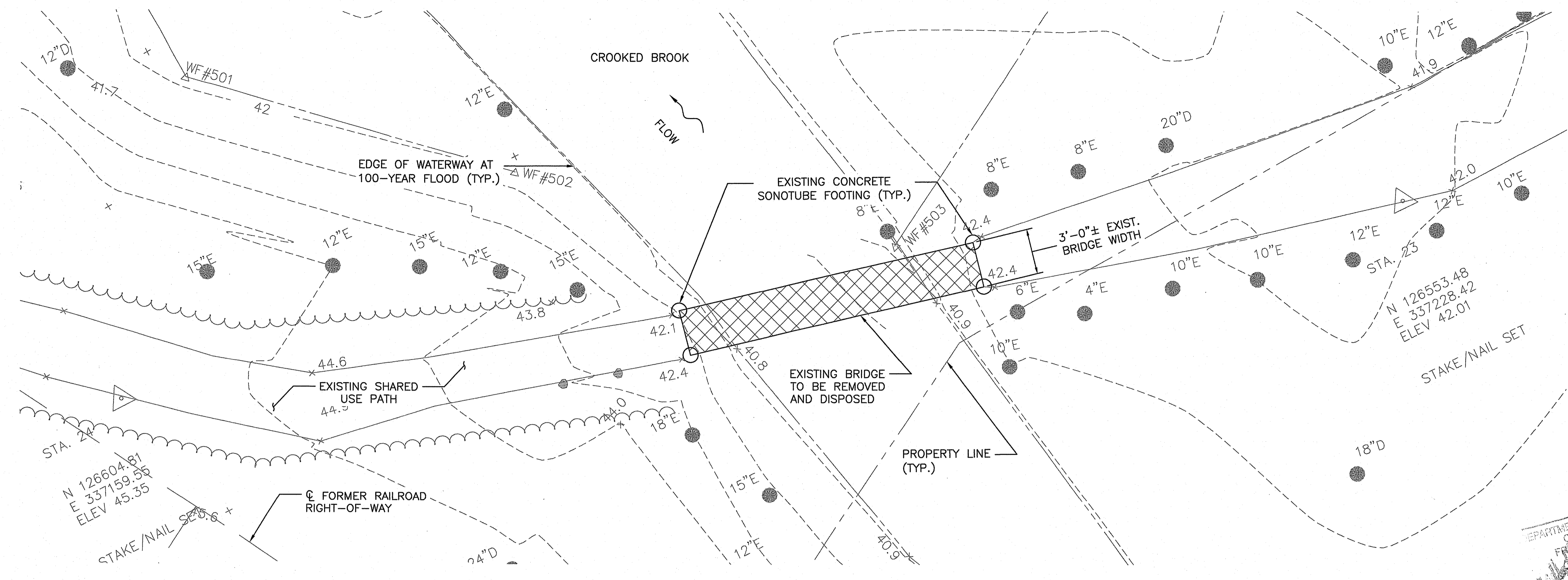
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-017  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RIDEM SUBMISSION  
 OCTOBER 2018

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

BRIDGE PROFILES

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE AS NOTED



**GENERAL PLAN**  
SCALE: 1/4"=1'-0"

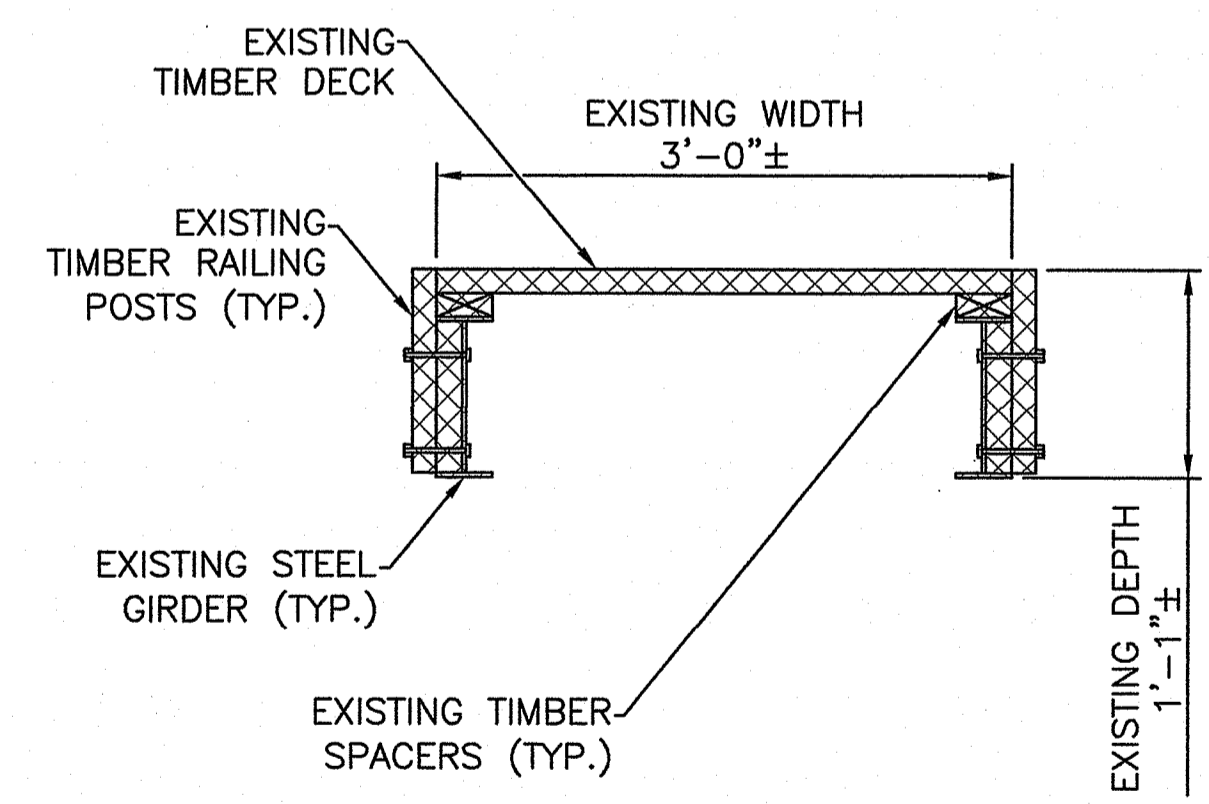
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
SPECIFIED IN THE LETTER OF APPROVAL  
APR 5 2019 FILE # 18-014  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**NOTES:**

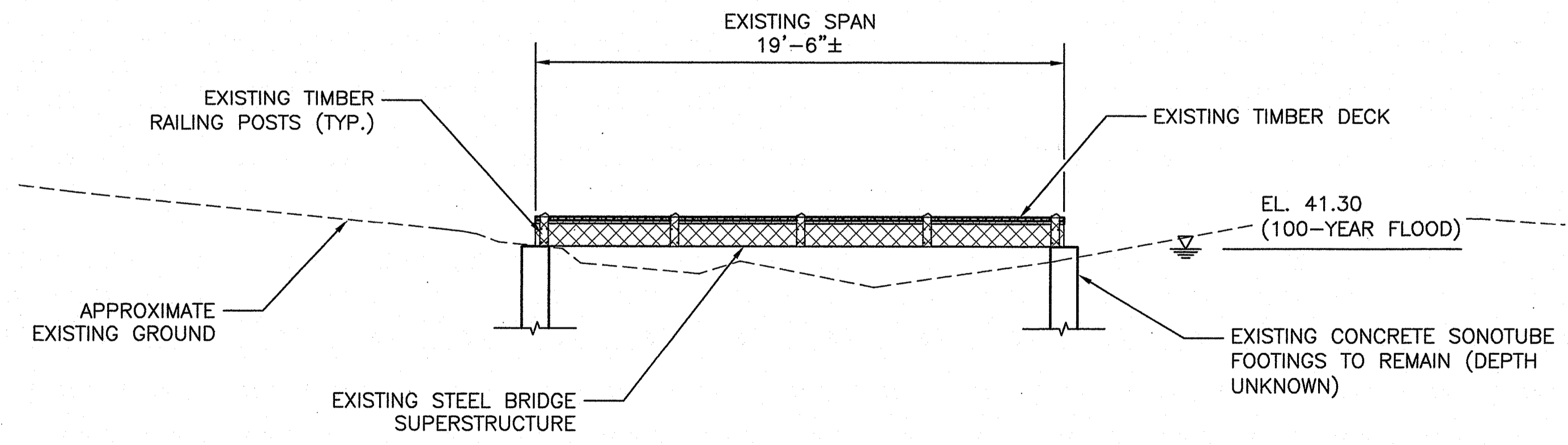
1. WHEN REMOVING THE EXISTING BRIDGE, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DEBRIS FROM DROPPING INTO THE RIVER.
2. THE CONTRACTOR'S ATTENTION IS DRAWN TO THE ENVIRONMENTAL SENSITIVITY OF THE STREAM AND SURROUNDING WETLANDS. THESE AREAS ARE DESIGNATED AS NO-DROP ZONES. THE CONTRACTOR SHALL TAKE FULL PRECAUTION TO PREVENT DEBRIS, TOOLS, MACHINERY AND/OR OTHER MATERIALS FROM ENTERING OR DROPPING INTO THE RIVER. ALL DEBRIS SHALL BE PROMPTLY CLEANED UP, REMOVED AND DISPOSED OF FROM THE SITE.

**LEGEND:**

☒ PROPOSED DEMOLITION



**TYPICAL SECTION**  
SCALE: 1"=1'-0"



**ELEVATION**  
SCALE: 1/4"=1'-0"

Environmental Management  
DEC 20 2018  
Office of Water Resources

PATRICIA D. STEERE  
No. 5056  
REGISTERED PROFESSIONAL ENGINEER  
10-26-19

REVISIONS		
NO.	DATE	BY

**RIDEM SUBMISSION**  
OCTOBER 2018

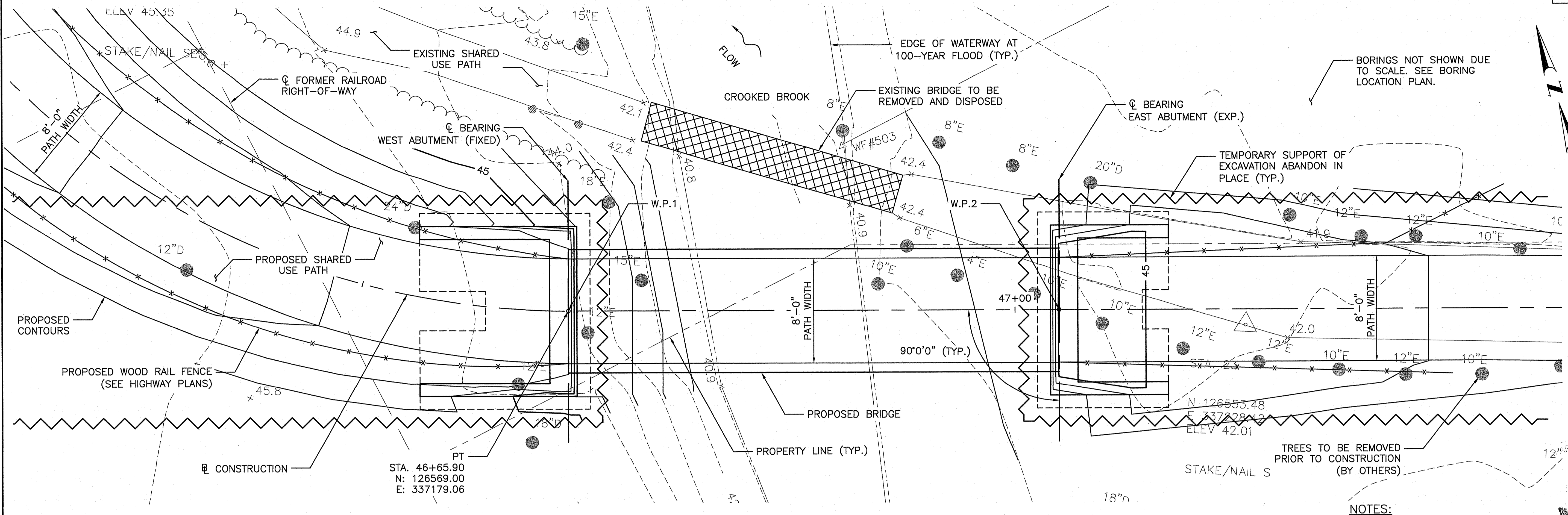
**RHODE ISLAND**  
DEPARTMENT OF TRANSPORTATION

**SAFE ROUTES TO SCHOOL**  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

**DEMOLITION PLAN,**  
**ELEVATION AND SECTION**

**Steere**  
ENGINEERING INC.

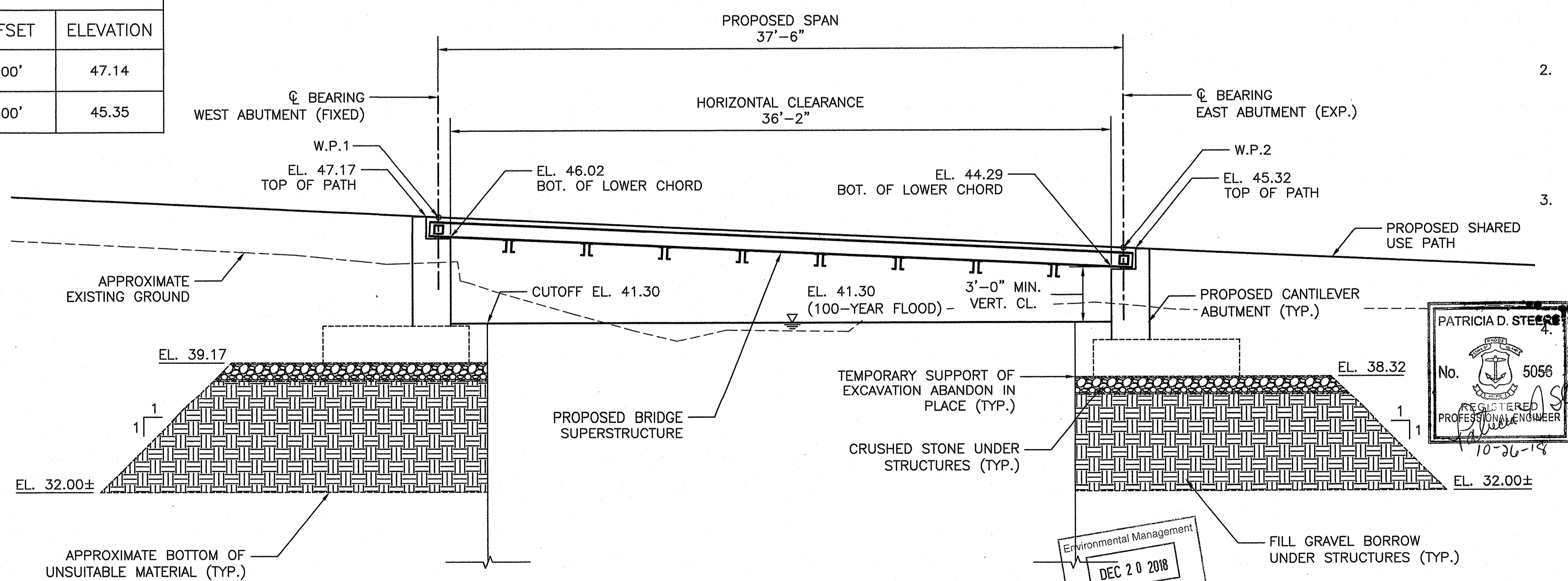
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE AS NOTED



**GENERAL PLAN**  
SCALE: 1/4"=1'-0"

WORKING POINT COORDINATES AND STATIONS				
W.P.	COORDINATES	STATION	OFFSET	ELEVATION
W.P. 1	N 126569.00 E 337179.06	46+65.90	0.00'	47.14
W.P. 2	N 126558.60 E 337215.09	47+03.40	0.00'	45.35

**PLAN LEGEND:**  
 PROPOSED DEMOLITION



**LONGITUDINAL SECTION**  
SCALE: 1/4"=1'-0"

- NOTES:**
- THE CONTRACTOR'S ATTENTION IS DRAWN TO THE ENVIRONMENTAL SENSITIVITY OF THE STREAM AND SURROUNDING WETLANDS. THESE AREAS ARE DESIGNATED AS NO-DROP ZONES. THE CONTRACTOR SHALL TAKE FULL PRECAUTION TO PREVENT DEBRIS, TOOLS, MACHINERY AND/OR OTHER MATERIALS FROM ENTERING OR DROPPING INTO THE RIVER. ALL DEBRIS SHALL BE PROMPTLY CLEANED UP, REMOVED AND DISPOSED OF FROM THE SITE.
  - PRIOR TO INITIATING THE WORK, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, PLANS AND WRITTEN DOCUMENTATION DESCRIBING HIS OR HER METHODS OF REMOVAL OF WATER FROM THE ENCLOSED AREA AND FALSEWORK AND SHIELDING REQUIRED FOR THE ENVIRONMENTALLY SENSITIVE AREAS. APPROVAL OF THE CONTRACTOR'S PLANS SHALL NOT BE CONSIDERED AS RELIEVING THE CONTRACTOR OF ANY OF HIS/HER RESPONSIBILITY.
  - ALL ACTIVITY FOR SUBSTRUCTURE CONSTRUCTION SHALL BE PERFORMED IN THE DRY CONDITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REMOVE THE WATER FROM THE ENCLOSED AREA BY PUMPING, DRAINING, BAILING OR OTHER APPROVED METHOD. REMOVAL AND CLEANING OF WATER AND DEBRIS FROM THE ENCLOSED AREA AND DISPOSAL OF REMOVED ITEMS SHALL BE INCLUDED IN THE LUMP SUM COST OF "TEMPORARY SUPPORT OF EXCAVATION". REFER TO HIGHWAY PLANS FOR ADDITIONAL INFORMATION.

12 MONTHS ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 APPROVED WITH CONDITIONS  
 APR 5 2018  
 FILE # 18-0191  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PATRICIA D. STEERE  
 No. 5056  
 REGISTERED PROFESSIONAL ENGINEER  
 10-26-18

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

**Steere**  
ENGINEERING INC.

**RIDEM SUBMISSION**  
OCTOBER 2018

**RHODE ISLAND**  
DEPARTMENT OF TRANSPORTATION

**SAFE ROUTES TO SCHOOL**  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

REVISIONS		
NO.	DATE	BY

**BRIDGE GENERAL PLAN AND LONGITUDINAL SECTION**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1/4"=1'-0"

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	405-421-886	2018	51	54

**CONCRETE NOTES (CONT.)**

6. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL MAIN REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVER:
- |  |    |
|--|----|
| CONCRETE CAST AGAINST OR PERMANENTLY EXPOSED TO EARTH (FOOTINGS, ABUTMENT AND WALL FACES, BACKWALLS) | 3" |
| ALL OTHER BARS   | 2" |
- COVER TO TIES AND STIRRUPS MAY BE 0.5 INCH LESS THAN THE ABOVE VALUES SPECIFIED FOR MAIN REINFORCING, BUT IN NO CASE LESS THAN 1.5 INCHES.
7. ALL ANCHOR BOLTS SHALL BE ASTM DESIGNATION A 307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO DESIGNATION M 232 OR METALIZED IN ACCORDANCE WITH SECTION M.05. SWEDGED RODS SHALL BE AASHTO DESIGNATION M 270 GRADE 36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO DESIGNATION M 232.
8. ALL ANCHOR BOLTS SHALL BE SET PRIOR TO PLACEMENT OF CONCRETE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
9. HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON PLANS WILL NOT BE PERMITTED WITHOUT A WRITTEN REQUEST BY THE CONTRACTOR AND PRIOR AUTHORIZATION BY THE ENGINEER.
10. UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CONCRETE SURFACES VISIBLE IN ELEVATION TO ONE FOOT BELOW FINAL GROUND LINE (AND THE UNDERSIDE OF ALL CONCRETE DECK SLABS OUTSIDE OF THE FASCIA BEAMS), SHALL RECEIVE A CONCRETE SURFACE RUBBED FINISH IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
11. THE ENTIRE TOPSIDE SURFACES OF ABUTMENT BEAM SEATS, AS WELL AS VERTICAL FACES OF BACKWALLS, AND PARAPETS/BARRIERS SHALL BE PROVIDED WITH A FILM-FORMING SEALER (M12.03.1) CONCRETE SURFACE TREATMENT-PROTECTIVE COATING IN ACCORDANCE WITH SECTION 820 OF THE RI STANDARD SPECIFICATIONS.
12. ALL EXPOSED EDGES AND REENTRANT CORNERS NOT OTHERWISE DETAILED ON THE PLANS SHALL HAVE A MINIMUM 3/4" CHAMFER.
13. ALL JOINT SEALANT SHALL BE POLYURETHANE, POLYURETHANE ELASTOMERIC, OR SILICONE SEALANT AS DESIGNATED ON THE PLANS. THE COLOR OF THE JOINT SEALANT, WHERE EXPOSED, SHALL BE NEUTRAL (LIGHT GRAY OR TAN). THE COLOR OF THE SEALANT, WHERE NOT EXPOSED, WILL BE AT THE DISCRETION OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING CONCRETE STAINS OR DISCOLORATIONS DURING CONSTRUCTION UNTIL SUCH TIME WHEN THE SURFACES ARE APPROVED AND ACCEPTED. ANY CONCRETE STAINS OR DISCOLORATIONS OCCURRING PRIOR TO ACCEPTANCE OF THE SURFACES SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
15. UNLESS OTHERWISE NOTED ON THE PLANS, JOINT FILLER IS TO BE A PREFORMED, NON-EXPANSIVE, NON-EXTRUDING TYPE IN ACCORDANCE WITH SECTION M.02.11.1 OF THE RI STANDARD SPECIFICATIONS.
16. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL FORMS SHALL BE OF THE REMOVABLE TYPE THAT WILL PRODUCE THE DIMENSIONS SHOWN ON THE PLANS.
17. EMBEDMENT LENGTHS FOR DRILLED AND GROUTED DOWELS SHALL BE IN ACCORDANCE WITH SECTION 819 OF THE RI STANDARD SPECIFICATIONS.
18. IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS, ALL METAL TIES, NON-METALLIC TIES OR ANCHORAGES WHICH ARE REQUIRED FOR CONCRETE FORMWORK SHALL BE SO CONSTRUCTED THAT THEY CAN BE REMOVED TO AT LEAST ONE INCH BELOW THE EXPOSED SURFACE OF THE CONCRETE WITHOUT CAUSING DAMAGE TO THE CONCRETE SURFACE. SNAP TIES MAY BE USED ONLY IF APPROVED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO USE THEM, A CATALOG CUT AND OTHER NECESSARY INFORMATION MUST BE SUBMITTED TO THE ENGINEER TO DEMONSTRATE THAT THE TIES WILL SNAP-OFF FAR ENOUGH INTO THE CONCRETE TO ALLOW FOR PROPER PATCHING. SNAP TIES MUST PROVIDE ADEQUATE STRENGTH TO SUPPORT THE FORMS. ALL CAVITIES SHALL BE FILLED WITH AN APPROVED CEMENT MORTAR MEETING THE REQUIREMENTS OF ASTM C 928.
19. WATER STOPS ARE REQUIRED FOR HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ABUTMENTS AND WALLS WHEN EXPOSED TO BACKFILL EARTH MATERIAL. WATER STOPS SHALL BE INSTALLED AT THE LOCATIONS DETAILED ON THE PLANS, AT THE LOCATIONS AS SPECIFIED ABOVE AND AT ALL LOCATIONS AS DIRECTED BY THE ENGINEER, ALL IN ACCORDANCE WITH SECTION 812 OF THE RI STANDARD SPECIFICATIONS.

**FIBERGLASS REINFORCED POLYMER (FRP) NOTES**

1. FRAMING DIMENSIONS ARE GIVEN ALONG CENTERLINE OF MEMBERS AND ALONG CENTERLINES OF BEARINGS ON ABUTMENTS. THE FABRICATOR IS RESPONSIBLE FOR INCORPORATING THE CAMBER, CROSS SLOPE, AND OTHER EFFECTS THAT MAY IMPACT THE OVERALL MEMBER LENGTHS, DIMENSIONS AND/OR THE DETAILING.
2. INSTABILITY DURING CONSTRUCTION OF THE FRP MEMBERS (INCLUDING DURING LIFTING, TRANSPORTING AND ERECTION) MAY PRESENT A HAZARDOUS SITUATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND MEASURES TO ENSURE STABILITY AND THEREBY SAFETY DURING THE FRP ERECTION AND CONSTRUCTION.

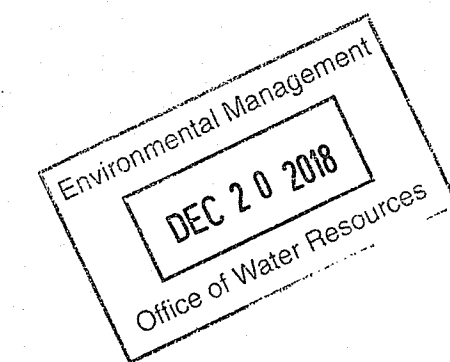
**FIBERGLASS REINFORCED POLYMER (FRP) NOTES (CONT.)**

3. THE FRP SUPPLIER SHALL BE CERTIFIED FOR ISO-9001:2008.
- THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
4. SHOP DRAWINGS FOR ALL FABRICATED FRP INCLUDING BEARINGS, EXPANSION JOINTS, RAILING AND FALSEWORK SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING PRIOR TO FABRICATION.
5. STRUCTURAL FRP SHAPES AND PLATES SHALL CONFORM TO THE SPECIAL PROVISIONS AND MATERIALS AS DESIGNATED ON THE PLANS.
6. ALL CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR.
7. ALL CONNECTION HARDWARE, INCLUDING BOLTS, SCREWS, NUTS AND WASHERS, SHALL BE STAINLESS STEEL AND CONFORMING TO ASTM A316.
8. LOCK WASHERS SHALL BE USED AGAINST ALL NUTS.
9. FRP SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
10. ALL CUT EDGES, DRILLED EDGES, HOLES OR ABRASIONS SHALL BE CLEANED AND SEALED WITH A CATALYZED RESIN COMPATIBLE WITH THE ORIGINAL RESIN.
11. CONNECTION OF ATTACHMENTS TO FRP MEMBERS FOR CONSTRUCTION PURPOSES IS NOT PERMITTED EXCEPT WHEN APPROVED BY THE ENGINEER.
12. THE ENDS OF THE CHORDS AND STRINGERS SHALL BE VERTICAL AFTER ALL DEAD LOADS HAVE BEEN PLACED.
13. THE MEMBERS SHALL BE CAMBERED TO THE AMOUNTS SHOWN ON THE PLANS, THE FABRICATOR'S SHOP DRAWINGS SHALL INCLUDE, IN ADDITION TO ANY CUTTING OR CAMBER DIAGRAMS NECESSARY FOR THEIR PURPOSES, A SHOP ASSEMBLY DIAGRAM WHICH PROVIDES CAMBER OFFSETS CALCULATED BY THE FABRICATOR AT THE REFERENCE POINTS PROVIDED BY THE ENGINEER. THE INFORMATION PROVIDED SHALL BE SUFFICIENT ENOUGH FOR THE ENGINEER TO EVALUATE WHETHER THE CAMBER HAS BEEN CORRECTLY INTERPRETED.
14. ALL SHOP CONNECTIONS AND SPLICES SHALL BE BONDED AND BOLTED. CONNECTION PROCEDURES AND TECHNIQUES TO BE USED IN FABRICATION AND ERECTION OF THE MEMBERS SHALL BE AS SHOWN ON THE SHOP DRAWINGS AND SHALL INCORPORATE THE FOLLOWING:
- ALL WEB AND FLANGE SPLICES OTHER THAN THOSE SHOWN ON THE PLANS MUST BE APPROVED BY THE ENGINEER. ALTERNATE OR ADDITIONAL SPLICES ARE TO BE LOCATED AND DESIGNED BY THE FABRICATOR AND SHOWN ON THE SHOP DRAWINGS. THESE SPLICES ARE TO FULLY DEVELOP THE STRENGTH OF THE WEB AND FLANGE PLATES.
15. FOR SIZE AND LOCATION OF ANCHOR BOLTS, SEE ABUTMENT AND BEARING DRAWINGS.
16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXPANSION JOINT SYSTEM PROVIDED WILL BE COMPATIBLE WITH BOTH THE END OF DECK AND/OR THE STRUCTURAL FRP FRAMING CONFIGURATION. THAT IS, THE EXPANSION JOINT SYSTEM AND ALL ITS INHERENT COMPONENTS AND ATTACHMENT DEVICES SHALL BE SIZED OR ARRANGED TO BE COMPATIBLE WITH THE MEMBER FLANGES, CONNECTION PLATES, BOLTS AND DECK PANELS AT THE END OF THE DECK.

**GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:**

1. DESIGN WIND PRESSURES FOR CONSTRUCTION:
- MINIMUM WIND PRESSURES TO BE USED BY THE CONTRACTOR FOR DESIGN DURING THE CONSTRUCTION CONTRACT (WITH THE EXCEPTION OF SIGNS) SHALL BE FROM THE FOLLOWING TABLE:

HEIGHT ABOVE GROUND	WIND PRESSURE (PSF) (EXP. B)
UP TO 17'	23
OVER 17' AND UP TO 33'	27
OVER 33' AND UP TO 50'	30
OVER 50' AND UP TO 75'	34
OVER 75' AND UP TO 100'	37



**TABLE NOTES:**

- A. APPLICATION OF THE TABULAR PRESSURE:
- BRIDGE COMPONENTS DURING CONSTRUCTION, PRIOR TO THE INSTALLATION OF THE PERMANENT BRACING SYSTEMS, NOT INCLUDING CRANE LIFTING.
  - FALSE WORK, SHORING, AND SCAFFOLDING AS DEFINED IN FHWA "GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS", EXCLUDING 3-DIMENSIONAL LATTICED OR TRUSSED FRAMES OR TOWERS;
  - TEMPORARY SHIELDING.

WIND PRESSURES FOR ALL OTHER STRUCTURES SHALL BE CALCULATED BASED ON ASCE "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION", SEI/ASCE 37-02 (ALL REFERENCES TO THE ASCE 7 IN THE SEI/ASCE 37-02 PUBLICATION, SHALL BE THE LATEST REVISION OF ASCE 7). THE EXPOSURE CATEGORY SHALL BE B.

**GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS (CONT.):**

2. ERECTION OF BRIDGE COMPONENTS:
- FOR THE ERECTION OF STRUCTURES, THE FOLLOWING SHALL APPLY:
- THE CONTRACTOR SHALL SUBMIT AN ERECTION PLAN THAT PROVIDES COMPLETE DETAILS OF THE PROCESS INCLUDING, BUT NOT LIMITED TO, TEMPORARY SUPPORTS, SCHEDULING AND OPERATION SEQUENCING, CRANE PLACEMENT, AND ASSUMED LOADS AND CALCULATED STRESSES DURING VARYING STAGES OF LIFTING. THIS APPLIES TO STRUCTURES OF ANY KIND. THE CAPACITY OF THE CRANE AND ALL LIFTING AND CONNECTING DEVICES SHALL BE ADEQUATE FOR 125 PERCENT (150 PERCENT OVER AMTRAK) OF THE TOTAL PICK LOAD INCLUDING SPREADERS, RIGGING, HOOKS, AND ALL OTHER MATERIALS. THIS FACTOR OF SAFETY SHALL BE IN ADDITION TO ALL MANUFACTURERS' PUBLISHED FACTORS OF SAFETY.
  - A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF RHODE ISLAND, WILL BE REQUIRED TO STAMP THE CONTRACTOR'S ERECTION PLAN.
  - THE CONTRACTOR'S PROFESSIONAL ENGINEER WILL BE REQUIRED TO INSPECT AND PROVIDE WRITTEN APPROVAL OF INSTALLATION, PRIOR TO ALLOWING VEHICLES OR PEDESTRIANS ON OR BELOW THE STRUCTURE. THE PROFESSIONAL ENGINEER MUST ALSO STAMP ALL CHANGES TO THE CONTRACTOR'S ERECTION PLAN. ADDITIONALLY, ALL PROPOSED CHANGES MUST BE SUBMITTED TO RIDOT FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
  - A MANDATORY PRE-ERECTION CONFERENCE WILL BE HELD AT LEAST TWO WEEKS PRIOR TO THE START OF THE TRUSS INSTALLATION TO DISCUSS THE PLAN AND PROCEDURES, WORK SCHEDULES, CONTINGENCY PLANS, SAFETY REQUIREMENTS AND TRAFFIC CONTROL. THE CONTRACTOR'S PROFESSIONAL ENGINEER AND ERECTION SUBCONTRACTOR WILL BE REQUIRED TO ATTEND THIS MEETING, AS WILL THE RIDOT RESIDENT ENGINEER, THE DESIGN PROJECT ENGINEER AND THE DESIGN CONSULTANT. BASED UPON DISCUSSIONS AT THIS MEETING AND A REVIEW OF THE CONTRACTOR'S ERECTION PLAN, RIDOT MAY ORDER THE CONTRACTOR TO MODIFY AND RESUBMIT THE ERECTION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.
  - THE COST OF PREPARING AND STAMPING THE ERECTION PLAN, COMPUTATIONS, AND REPORTS, RESPONDING TO RIDOT'S COMMENTS AND MAKING THE NECESSARY REVISIONS, AND ATTENDANCE AT MEETINGS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE SUPERSTRUCTURE PAY ITEM, BE IT CONCRETE, STEEL, TIMBER OR FIBER REINFORCED POLYMER (FRP).

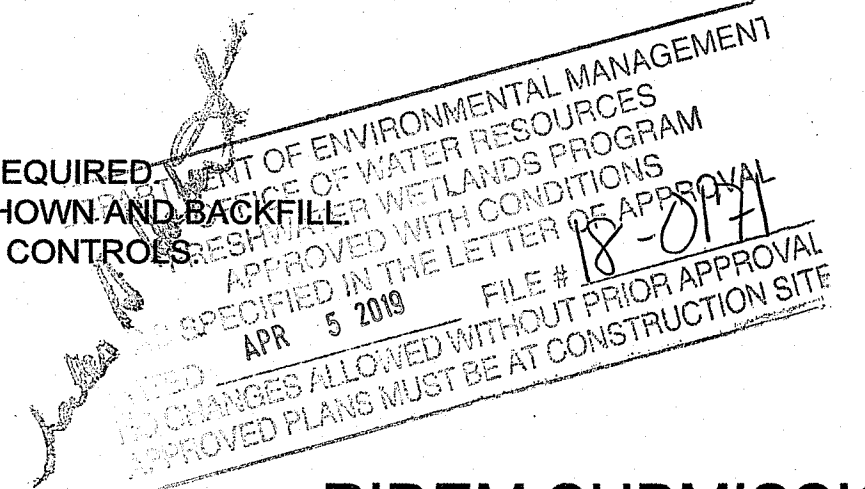
**BRIDGE WORK ITEMS FOR WHICH SHOP DRAWINGS AND/OR SUBMITTALS ARE REQUIRED\***

- CONCRETE FORMS ie.; STAY-IN PLACE FORMS.
- GALVANIZED BAR REINFORCEMENT, SPLICES AND INSERTS.
- FIBERGLASS REINFORCED POLYMER (FRP) TRUSS BRIDGE (SEE SPECIAL PROVISION 800.9901).
- ERECTION PROCEDURES ie.; EQUIPMENT (TYPE/SIZE AND PLACEMENT) AND DETAILED SEQUENCE OF WORK.
- ELASTOMERIC BEARINGS.
- TEMPORARY SUPPORT OF EXCAVATION.
- DEWATERING.
- EXCAVATION AND BACKFILL.
- CONCRETE MIX DESIGNS, MATERIALS & TEST DATA.
- JOINT SEALERS.
- DEMOLITION PLAN.
- SURFACE TREATMENTS AND COATINGS.

\*THIS LIST MAY NOT COVER ALL THE SHOP DRAWINGS REQUIRED FOR SUBMISSION. PLEASE REFER TO THE JOB SPECIFICATIONS.

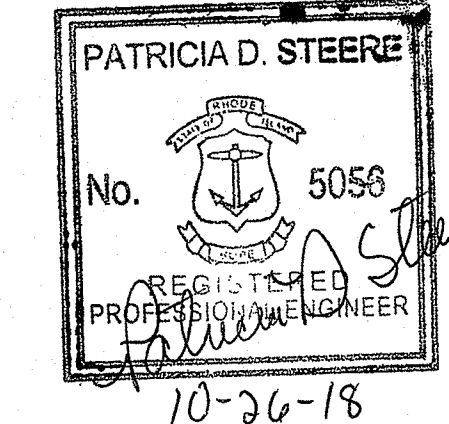
**SUGGESTED CONSTRUCTION SEQUENCE:**

- INSTALL ENVIRONMENTAL CONTROLS.
- INSTALL SOE AND ANY WATER CONTROLS AS REQUIRED.
- INSTALL CANTILEVER ABUTMENTS TO LIMITS SHOWN AND BACKFILL.
- REMOVE / ABANDON SOE AND REMOVE WATER CONTROLS.
- DEMOLISH EXISTING BRIDGE.
- ERECT SUPERSTRUCTURE AND INSTALL DECK.
- INSTALL BACKWALLS.
- OPEN TO PEDESTRIANS.



**RIDEM SUBMISSION**  
OCTOBER 2018

<p>NO. DATE BY</p>	<p>REVISIONS</p>
<p><b>RHODE ISLAND</b> <b>DEPARTMENT OF TRANSPORTATION</b></p> <p><b>SAFE ROUTES TO SCHOOL</b> <b>INFRASTRUCTURE IMPROVEMENTS</b> NARRAGANSETT PIER MIDDLE SCHOOL NARRAGANSETT, RHODE ISLAND</p> <p><b>BRIDGE GENERAL</b> <b>NOTES 2</b></p>	
CHECKED BY _____ DATE _____ SCALE N/A	



**GENERAL NOTES**

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH:
  - THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS), AMENDED 2013 WITH ALL REVISIONS.
  - THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 7th EDITION, 2014, INCLUDING THE LATEST INTERIM REVISIONS.
  - THE SPECIFICATIONS ACCOMPANYING THESE PLANS.
- DIMENSIONS, STATIONS, AND ELEVATIONS ARE SHOWN TO THE NEAREST ONE-HUNDREDTH OF A FOOT OR ONE-EIGHTH OF AN INCH, EXCEPT STRUCTURAL STEEL DIMENSIONS WHICH ARE TO THE NEAREST ONE-SIXTEENTH OF AN INCH.
- ALL ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF NGVD 29.
- COORDINATES USED ON THESE PLANS ARE BASED ON THE STATEWIDE COORDINATE SYSTEM, THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- TOPOGRAPHIC CONDITIONS WERE OBTAINED FROM GROUND SURVEY.
- FOR BENCH MARKS AND TIES SEE HIGHWAY LOCATION PLANS.
- ANGLES ARE SHOWN TO THE NEAREST SECOND.
- ALL FOOTINGS SHALL BE APPROVED BY THE ENGINEER AS TO DIMENSIONS, ELEVATIONS, AND SUITABILITY OF FOUNDATION MATERIAL BEFORE THE PLACING OF CONCRETE.
- ALL WORKING POINTS ARE SHOWN AT THE CENTERLINES OF BEARINGS OF ABUTMENTS, UNLESS OTHERWISE NOTED.
- ALL ABUTMENTS AND WALLS ARE DRAWN LOOKING AT THE EXPOSED FACES, UNLESS OTHERWISE NOTED.
- BOTH FEDERAL AND STATE LAW (RI. GENERAL LAW 39-1.2) REQUIRE NOTIFICATION OF APPROPRIATE UTILITY COMPANIES BEFORE DIGGING, TRENCHING, BLASTING, DEMOLISHING, BORING, BACK FILLING, GRADING, LANDSCAPING, OR OTHER EARTH MOVING OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES (INCLUDING THROUGH THE "DIG SAFE" PROGRAM) TO ENSURE THAT ALL UTILITIES, BOTH UNDERGROUND AND OVERHEAD, HAVE BEEN MARKED BEFORE COMMENCEMENT OF SUCH WORK. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE "DIG SAFE" PROGRAM. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANIES, SHALL BE REPAIRED OR REPLACED (AS DEEMED APPROPRIATE BY THE STATE AND/OR THE IMPACTED UTILITY COMPANY) AT NO ADDITIONAL COST TO THE STATE.

**DESIGN DATA**

**1. DESIGN SPECIFICATIONS**

**SUBSTRUCTURE:**

- THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7th EDITION, 2014, INCLUDING ALL INTERIM REVISIONS TO DATE.
- THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2009, INCLUDING ALL INTERIM REVISIONS TO DATE.

**SUPERSTRUCTURE:**

- THE AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF FRP PEDESTRIAN BRIDGES, 1st EDITION, 2008.
- THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th EDITION, 2002, INCLUDING ALL INTERIM REVISIONS TO DATE.

**SUPERSTRUCTURE & SUBSTRUCTURE:**

- THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL 2007 EDITION INCLUDING ALL REVISIONS TO DATE.
- ALL OTHER APPLICABLE DESIGN SPECIFICATIONS ARE REFERENCED IN SECTION 1 OF THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL DATED 2007.
- THE 2013 REVISION OF AND SUPPLEMENTS TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS), AMENDED 2013 WITH ALL REVISIONS.
- IN CASE OF CONFLICT, THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL SHALL GOVERN.

**2. LOAD MODIFIERS**

THE LOAD MODIFIERS FOR THIS PROJECT ARE AS FOLLOWS:

- THE LOAD MODIFIER FOR DUCTILITY SHALL BE TAKEN AS 1.0 FOR ALL LIMIT STATES.
- THE LOAD MODIFIER FOR REDUNDANCY SHALL BE TAKEN AS 1.05 FOR ALL LIMITS STATES.
- THE LOAD MODIFIER FOR OPERATIONAL IMPORTANCE SHALL BE TAKEN AS 0.95 FOR ALL LIMIT STATES.

**3. LOAD FACTORS**

ALL LOAD FACTORS SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EXCEPT AS MODIFIED IN THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL (SPECIFIED BELOW).

- THE LOAD FACTOR FOR LIVE LOAD FOR THE EXTREME EVENT I SHALL BE TAKEN AS ZERO.
- THE LOAD FACTOR FOR DEAD LOAD FOR THE EXTREME EVENT I AND EXTREME EVENT II SHALL BE TAKEN AS 1.0
- THE LOAD FACTOR FOR SETTLEMENT FOR ALL LIMIT STATES SHALL BE TAKEN AS 1.0

**4. LIVE LOADS**

- THE DESIGN VEHICULAR LIVE LOAD SHALL BE THE TOOLCAT 5600 UTILITY WORK MACHINE (TOTAL OPERATING WEIGHT = 7.89 KIP).
- THE DESIGN PEDESTRIAN LIVE LOAD SHALL BE 90 PSF FOR THE SUBSTRUCTURE AND 85 PSF FOR THE SUPERSTRUCTURE.

**5. FOUNDATION DESIGN DATA**

**SPREAD FOOTINGS:**

THE FACTORED BEARING RESISTANCE FOR THE VARIOUS TYPES OF BEARING MATERIAL ARE AS FOLLOWS:

LOCATION	TYPE OF BEARING MATERIAL	FACTORED BEARING RESISTANCE (KSF)
		STRENGTH LIMIT STATES
WEST ABUT.	CRUSHED STONE	6.0
EAST ABUT.	CRUSHED STONE	6.0

**6. WIND LOADING DESIGN DATA**

THE WIND LOADING DESIGN SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, THE AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF FRP PEDESTRIAN BRIDGES, THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL, AND AS MODIFIED HEREIN.

- EXCEPT DURING CONSTRUCTION, THE DESIGN WIND PRESSURE IS BASED ON A DESIGN WIND SPEED OF 120 MPH.
- THE DESIGN WIND PRESSURES DURING CONSTRUCTION SHALL BE AS SPECIFIED UNDER THE NOTES TITLED "GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS".

**7. TRAFFIC DATA**

SEE COVER SHEET.

**8. HYDRAULIC AND SCOUR DATA**

SEE JOB SPECIFIC PLAN SHEET.

**9. THERMAL DESIGN FORCE DATA**

UNIFORM TEMPERATURE EFFECTS HAVE BEEN TAKEN INTO CONSIDERATION IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. THE MINIMUM DESIGN TEMPERATURE SHALL BE -30 DEGREES F AND THE MAXIMUM TEMPERATURE SHALL BE 120 DEGREES F.

**10. DEFLECTIONS**

- PEDESTRIAN LOAD .... SPAN/500

**11. RAILINGS**

- DESIGN PEDESTRIAN RAILINGS IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

**MATERIALS**

**STRUCTURAL STEEL:**

- AASHTO DESIGNATION M 270, GRADE 36, GALVANIZED

**REINFORCING STEEL:**

- AASHTO DESIGNATION M 31, GRADE 60, GALVANIZED

**CONCRETE STRENGTHS:**

- CLASS HP  $\frac{3}{4}$ "  $f_c=5,000$  PSI

CAST-IN-PLACE CONCRETE ABUTMENT STEMS, RETURN WALLS AND BACKWALLS

- CLASS XX  $\frac{3}{4}$ "  $f_c=4,000$  PSI

CAST-IN-PLACE CONCRETE FOOTINGS

**MATERIALS (CONT.)**

**FIBERGLASS REINFORCED POLYMER (FRP):**

- REFER TO TABLES BELOW

**FRP STRUCTURAL SHAPES AND PLATES - ISOPHTHALIC POLYESTER RESIN**

PROPERTY	MATERIAL DIRECTION		ASTM TEST
	LENGTHWISE	CROSSWISE	
TENSILE STRESS	40 KSI	7 KSI	D638
TENSILE MODULUS	2,500 KSI	800 KSI	D638
COMPRESSIVE STRESS	40 KSI	15 KSI	D638
COMPRESSIVE MODULUS	2,500 KSI	800 KSI	D695
FLEXURAL STRESS	40 KSI	10 KSI	D790
FLEXURAL MODULUS	1,600 KSI	800 KSI	D790
MODULUS OF ELASTICITY	4,000 KSI	800 KSI	D6641 & D638 (MEAN OF THE LESSER OF THE TWO)
SHEAR MODULUS	425 KSI	425 KSI	
SHORT BEAM SHEAR	4.5 KSI	N/A	D2344
ULTIMATE BEARING STRESS	30 KSI	18 KSI	D953
POISSON'S RATIO	0.33 IN/IN	0.15 IN/IN	D3039
NOTCHED IZOD IMPACT	25 FT-LB/IN	4 FT-LB/IN	D256

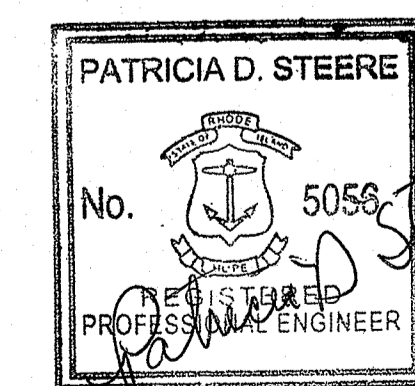
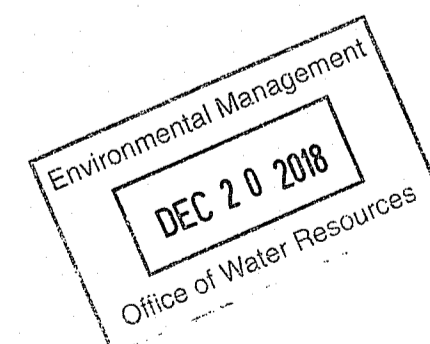
**FRP DECK PANELS - ISOPHTHALIC POLYESTER RESIN**

PROPERTY	MATERIAL DIRECTION		ASTM TEST
	LENGTHWISE	CROSSWISE	
TENSILE STRESS	31.1 KSI	N/A	D638
TENSILE MODULUS	2,486 KSI	N/A	D638
FLEXURAL STRESS	24.5 KSI	8.2 KSI	D790
FLEXURAL MODULUS	885 KSI	646 KSI	D790
SHORT BEAM SHEAR	3.19 KSI	N/A	D2344

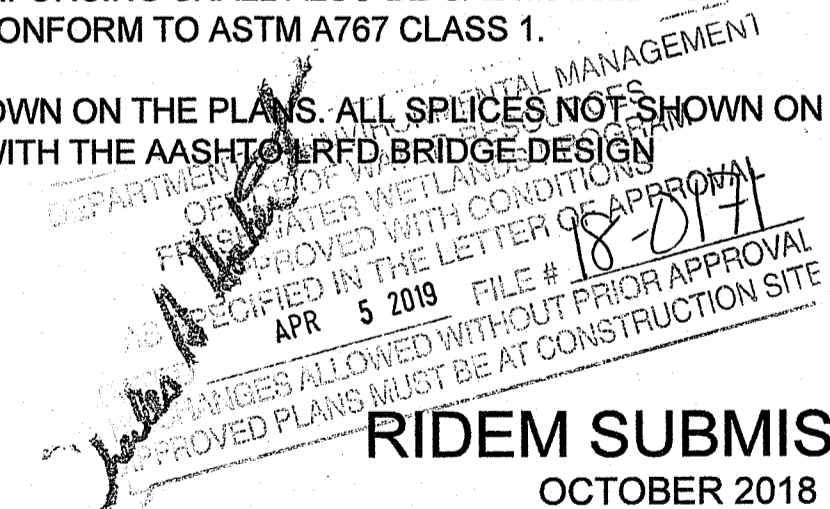
**CONCRETE NOTES**

- CLASSES OF CONCRETE SHALL BE HIGH PERFORMANCE CLASS HP, CLASS XX AND CLASS A, AS DESCRIBED IN THE RI STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS. REFER TO THE "MATERIAL" NOTES FOR CLASSES OF CONCRETE SPECIFIED FOR VARIOUS COMPONENTS.
- THE CONTRACTOR MAY, AT THE APPROVAL OF THE ENGINEER, PROPOSE THE USE OF SELF-CONSOLIDATING CONCRETE FOR ANY CLASS OF CONCRETE ON THIS PROJECT. SECTION 606 "SELF CONSOLIDATING CONCRETE (SCC)", CONTAINS THE REQUIREMENTS FOR MODIFYING ALL CLASSES OF CONCRETE MIX DESIGN FOR SELF-CONSOLIDATING APPLICATIONS.
- ALL PORTLAND CEMENT CONCRETE SHALL BE AIR-ENTRAINED.
- ALL REINFORCING STEEL SHALL BE GALVANIZED. ALL WIRE TIES AND MISCELLANEOUS HARDWARE USED FOR PLACEMENT OF GALVANIZED REINFORCING SHALL ALSO BE GALVANIZED. GALVANIZED COATING FOR REINFORCING STEEL SHALL CONFORM TO ASTM A767 CLASS 1.
- ALL CRITICAL LAP SPLICES SHALL BE AS SHOWN ON THE PLANS. ALL SPLICES NOT SHOWN ON THE PLANS SHALL BE LAPPED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR CLASS B LAP SPLICES.

(CONT. ON SHEET NO. 51)



10-26-18



REVISIONS		
NO.	DATE	BY

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS**  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

**BRIDGE GENERAL NOTES 1**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE N/A

### LIST OF ABBREVIATIONS

**A**  
 ABUTMENT = ABUT.  
 ALTERNATE = ALT.  
 ANCHOR BOLT = A.B.  
 APPROVED = APPD.  
 APPROXIMATE = APPROX.  
 AVERAGE = AVG.

**B**  
 BEAM = BM.  
 BACK TO BACK = B TO B  
 BETWEEN = BTWN  
 BEARING = BRG.  
 BITUMINOUS = BIT.  
 BUILDING = BLDG.  
 BUILDING LINE = B.L.  
 BOLT CIRCLE = B.C.  
 BOTTOM = BOT.

**C**  
 CENTER TO CENTER = C TO C  
 CENTERLINE = C  
 CIRCLE = CIR.  
 CLEARANCE = CL.  
 COLUMN = COL.  
 CONCRETE = CONC.  
 CONDUIT = COND.  
 CONNECTION = CONN.  
 CONSTRUCTION = CONST.  
 CONTRACTION = CONTR.  
 COUNTERSINK = CSK.  
 COUPLING = CPLG.  
 CLASS I CONTROLLED LOW STRENGTH MATERIAL = CLSM

**D**  
 DETAIL = DET.  
 DIAGONAL = DIAG.  
 DIAPHRAGM = DIAPHM.  
 DIAMETER = DIA.  
 DIMENSION = DIM.  
 DRAWING = DWG.  
 DRAIN = DR.

**E**  
 EACH = EA.  
 EACH FACE = E.F.  
 ELEVATION = EL.  
 EXISTING = EXIST.  
 EXPANSION = EXP.

**F**  
 FAR FACE = F.F.  
 FAR SIDE = F.S.  
 FABRICATE = FAB.  
 FACE TO FACE = F TO F  
 FLANGE = FLG.  
 FLAT HEAD = F.H.  
 FOOTING = FTC.  
 FOUNDATION = FDN.  
 FURNISH, FABRICATE & ERECT = F.F. & E.

**G**  
 GAGE = GA.  
 GALVANIZE = GALV.  
 GRADE = GR.  
 GRATING = GRTG.  
 GROUND = GND.

**H**  
 HEIGHT = HGT.  
 HEXAGON = HEX.  
 HOT MIX ASPHALT = HMA  
 HORIZONTAL = HORIZ.

**I**  
 INCH = IN.  
 INFORMATION = INFO.  
 INSIDE DIAMETER = I.D.  
 INVERT = INV.

**J**  
 JOINT = JT.

**L**  
 LENGTH = LGTH.  
 LIGHTING = LTG.  
 LONG = LG.  
 LOAD & RESISTANCE FACTOR DESIGN = LRFD

**M**  
 MATERIAL = MATL.  
 MAXIMUM = MAX.  
 MEAN HIGH WATER = M.H.W.  
 MEAN SEA LEVEL = M.S.L.  
 MINIMUM = MIN.  
 MISCELLANEOUS = MISC.

**N**  
 NEAR FACE = N.F.  
 NEAR SIDE = N.S.  
 NOT TO SCALE = N.T.S.  
 NUMBER = NO.

**O**  
 ON CENTER = O.C.  
 OPENING = OPNG.  
 OUTSIDE DIAMETER = O.D.  
 OPTIONAL = OPT.

**P**  
 PLATE = P.  
 POINT OF VERTICAL CURVATURE = P.V.C.  
 POINT OF VERTICAL TANGENCY = P.V.T.  
 POLYVINYL CHLORIDE = PVC  
 POINT OF TANGENCY = P.T.  
 POUNDS PER SQUARE INCH = P.S.I.  
 POUNDS PER SQUARE FOOT = P.S.F.

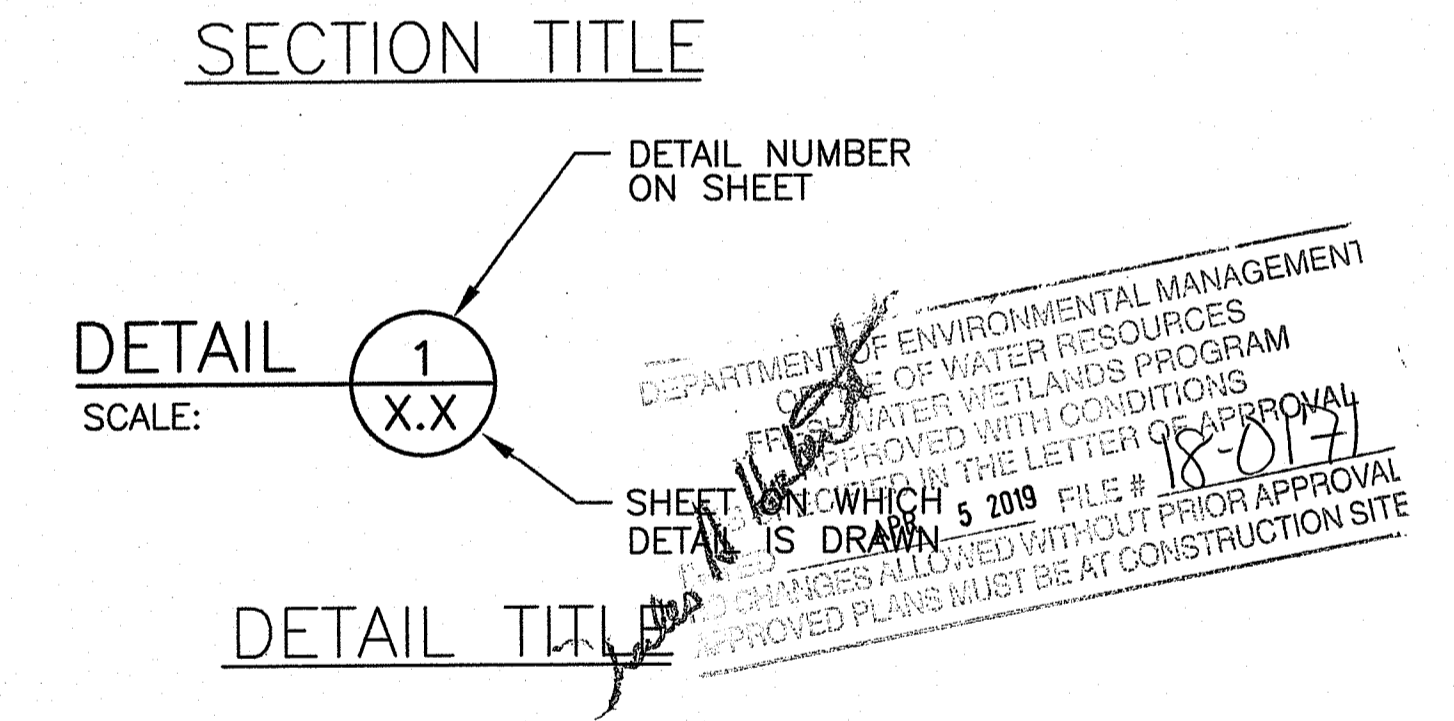
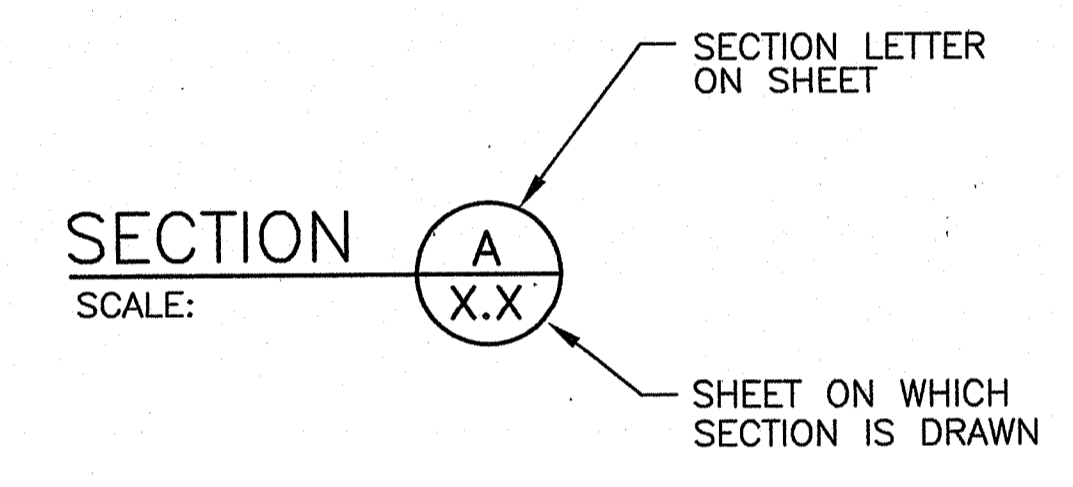
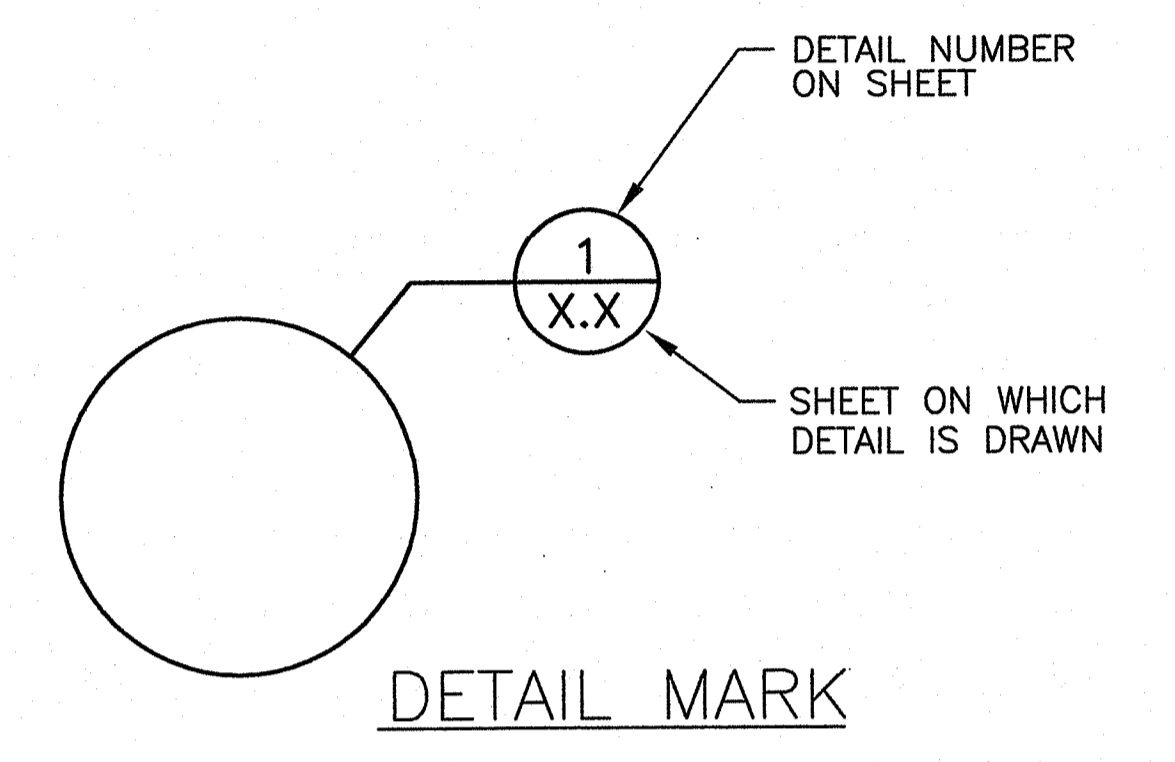
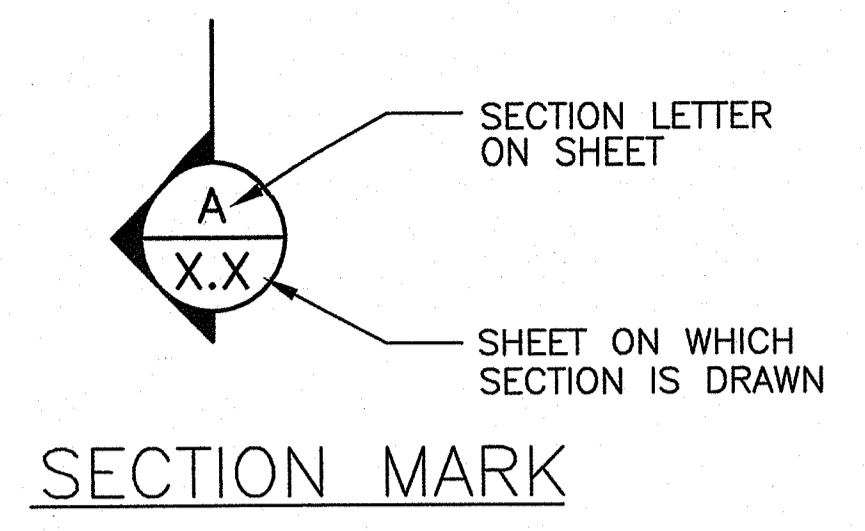
**R**  
 RADIUS = RAD.  
 RAILROAD = RR  
 REQUIRED = REQD.  
 REINFORCING = REINF.  
 REHABILITATION = REHAB.  
 REMOVE & DISPOSE = R & D

**S**  
 SECTION = SECT.  
 SCHEDULE = SCH.  
 SCHEMATIC = SCHEM.  
 SHEET = SH.  
 SPACES = SP.  
 STATION = STA.  
 SYMMETRICAL = SYM.  
 STAY IN PLACE = S.I.P.

**T**  
 TOP = T  
 TYPICAL = TYP.

**V**  
 VARIES = VAR.  
 VERTICAL CURVE = V.C.  
 VERTICAL = VERT.

**W**  
 WELDED WIRE FABRIC WITH = W.W.F.  
 WIDE FLANGE = W  
 WORKING POINT = W.P.



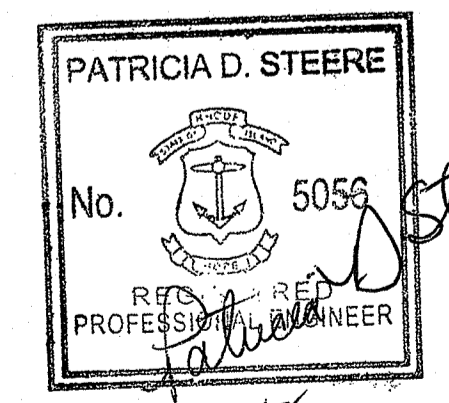
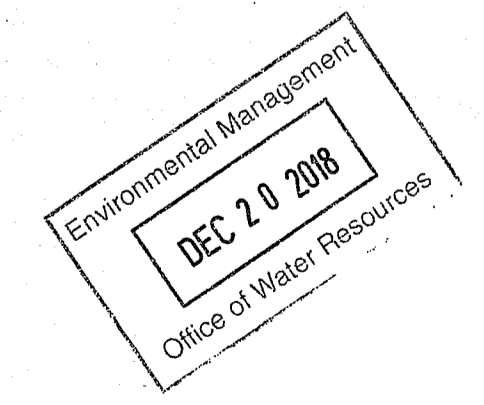
### SECTION & DETAIL DESIGNATIONS

**RIDEM SUBMISSION**  
 OCTOBER 2018

**RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

### LIST OF ABBREVIATIONS

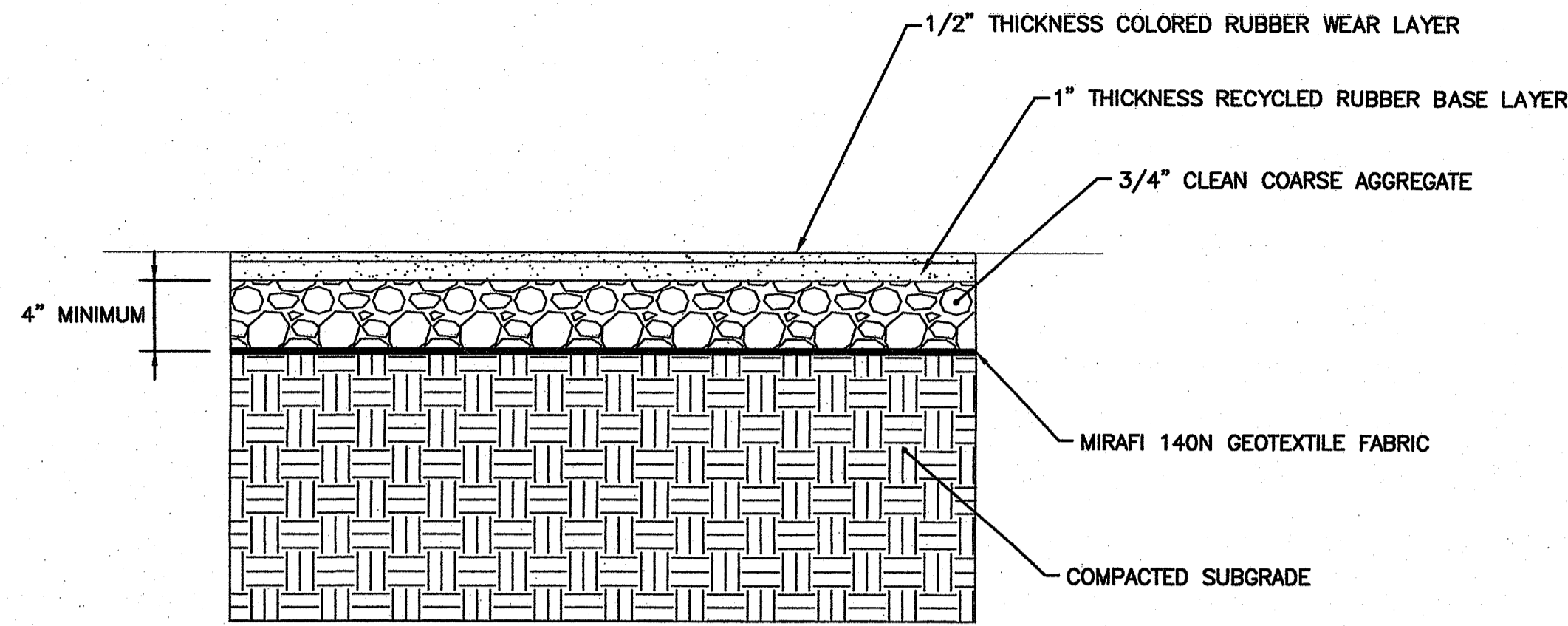
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REVISIONS		
NO.	DATE	BY



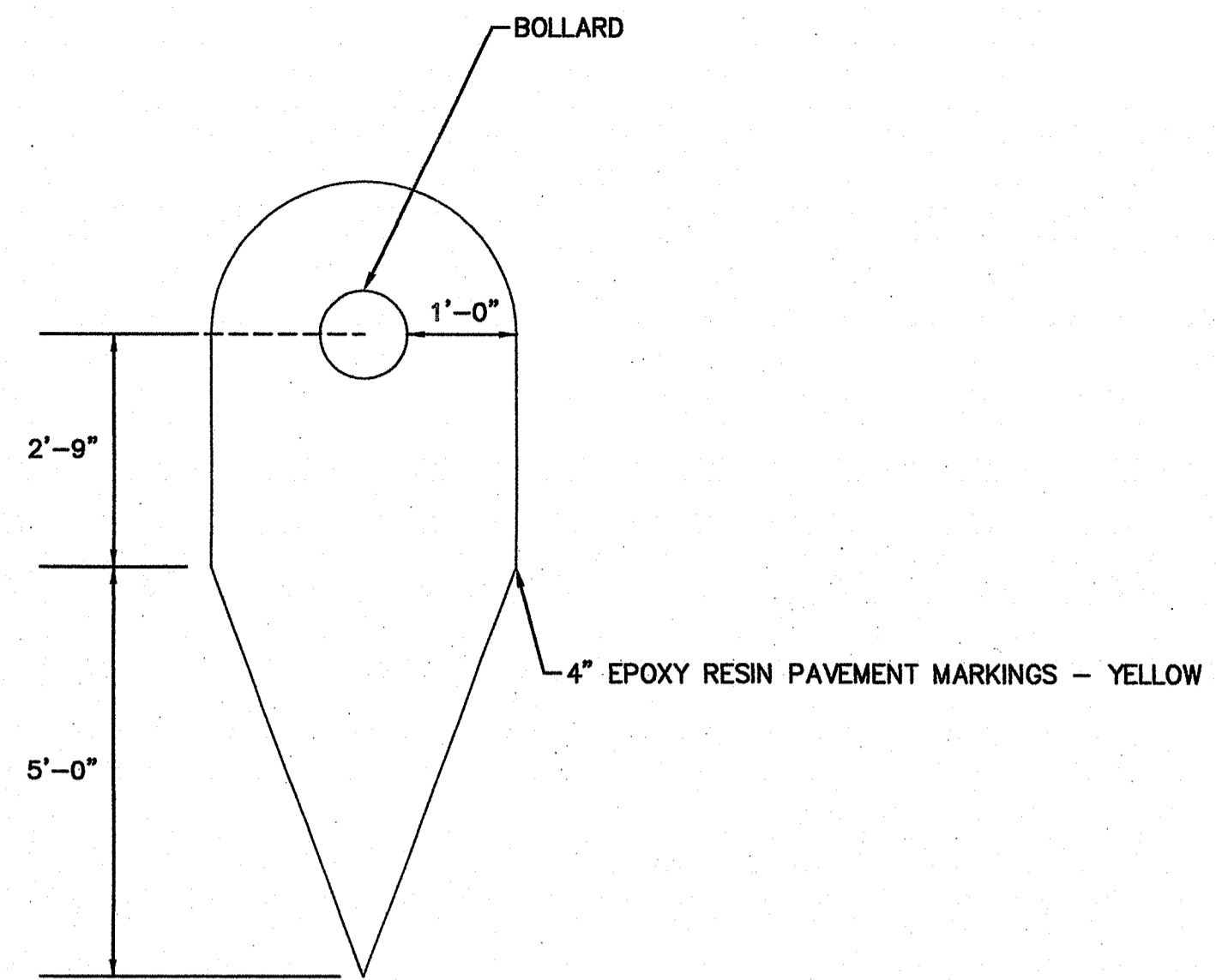




NOTES:  
 1. INSTALLATION SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS.  
 2. THE CLEAN COARSE AGGREGATE LAYER SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY DETERMINED USING AASHTO T-180.

**POROUS RUBBER SHARED USE PATH**  
(NOT TO SCALE)

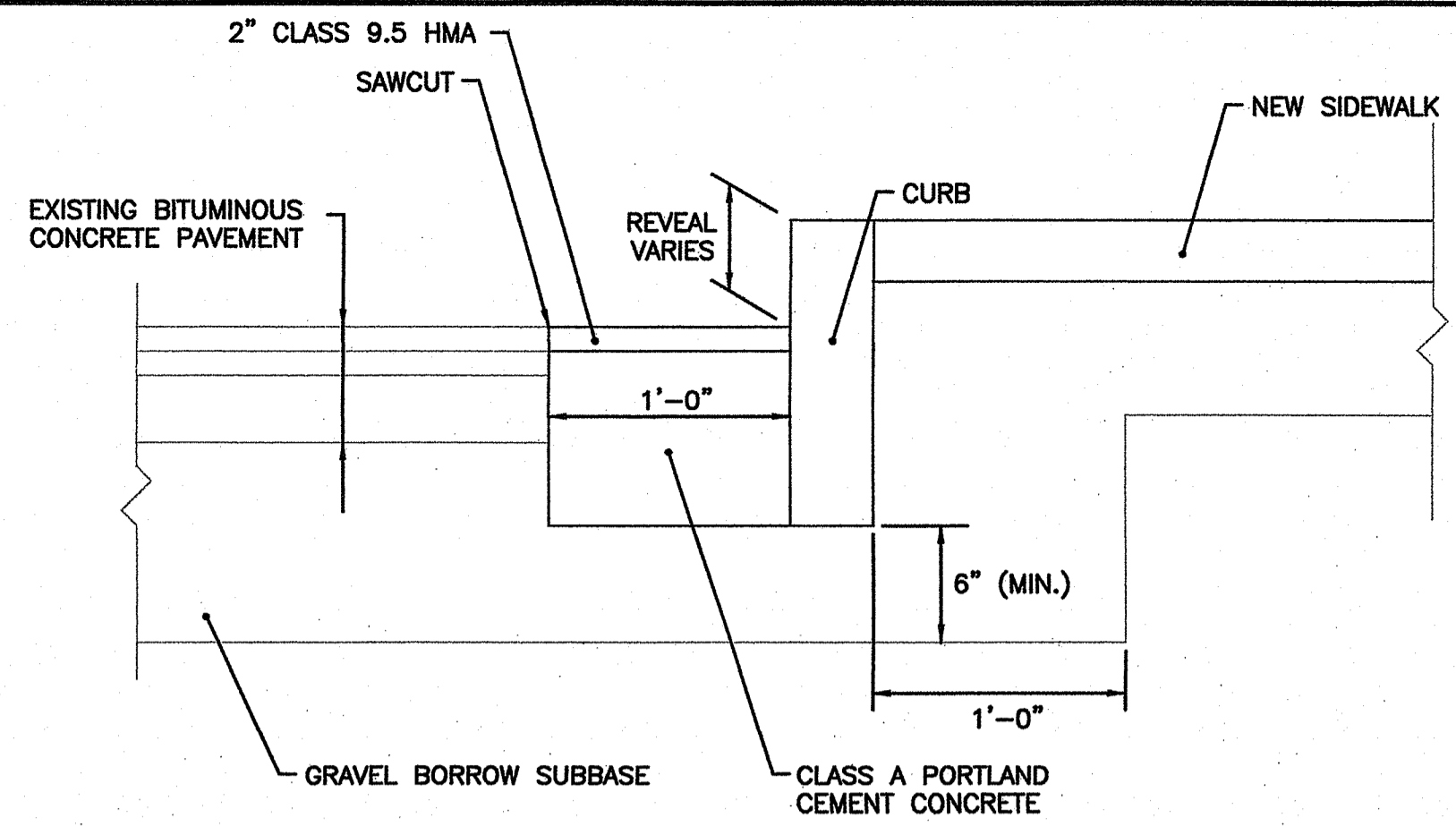
(SUP2)  
(SUP3)



NOTES:  
 1. SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

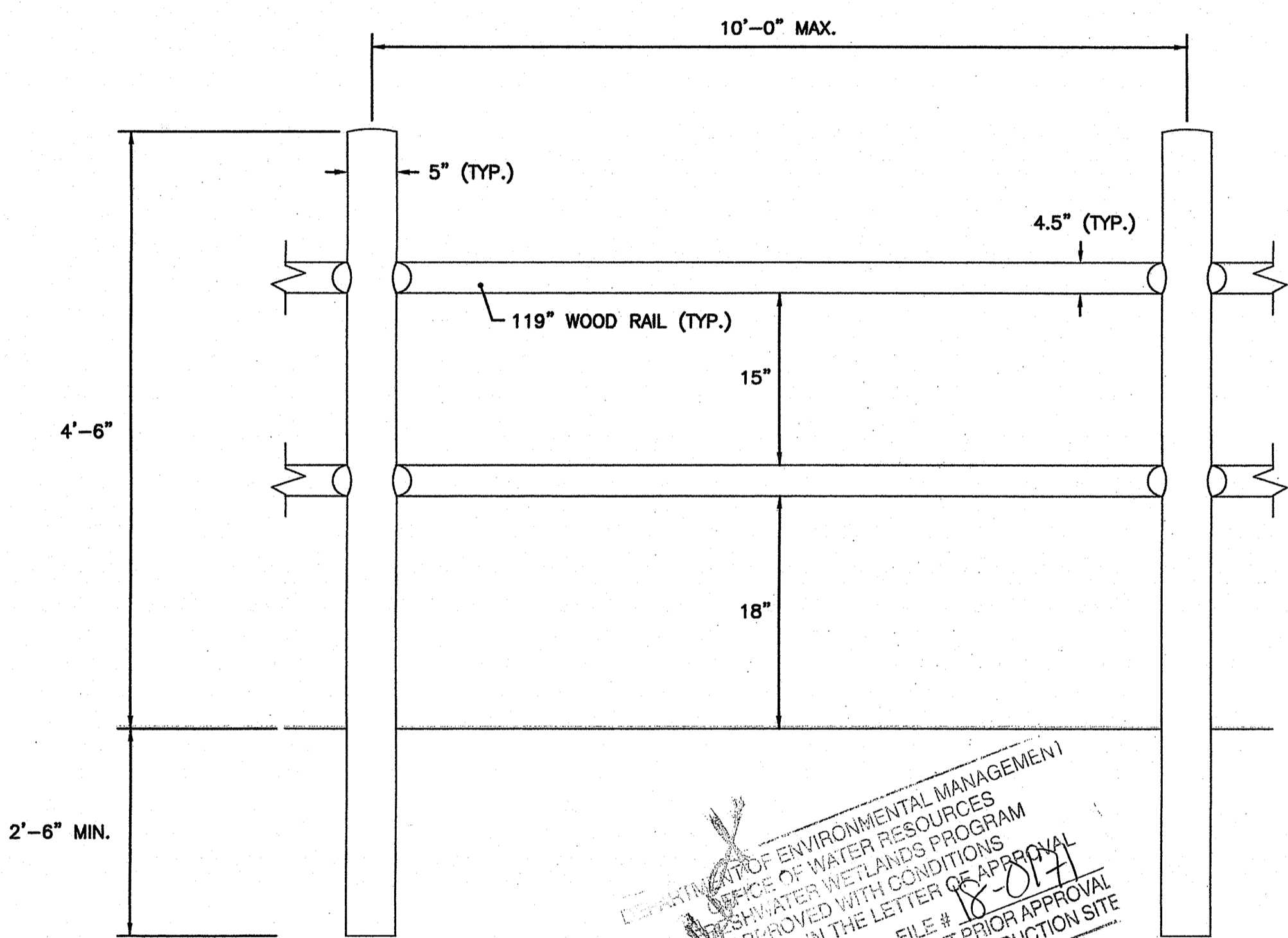
**BOLLARD STRIPING DETAIL**  
(NOT TO SCALE)

(BOLLS)



NOTES:  
 1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.

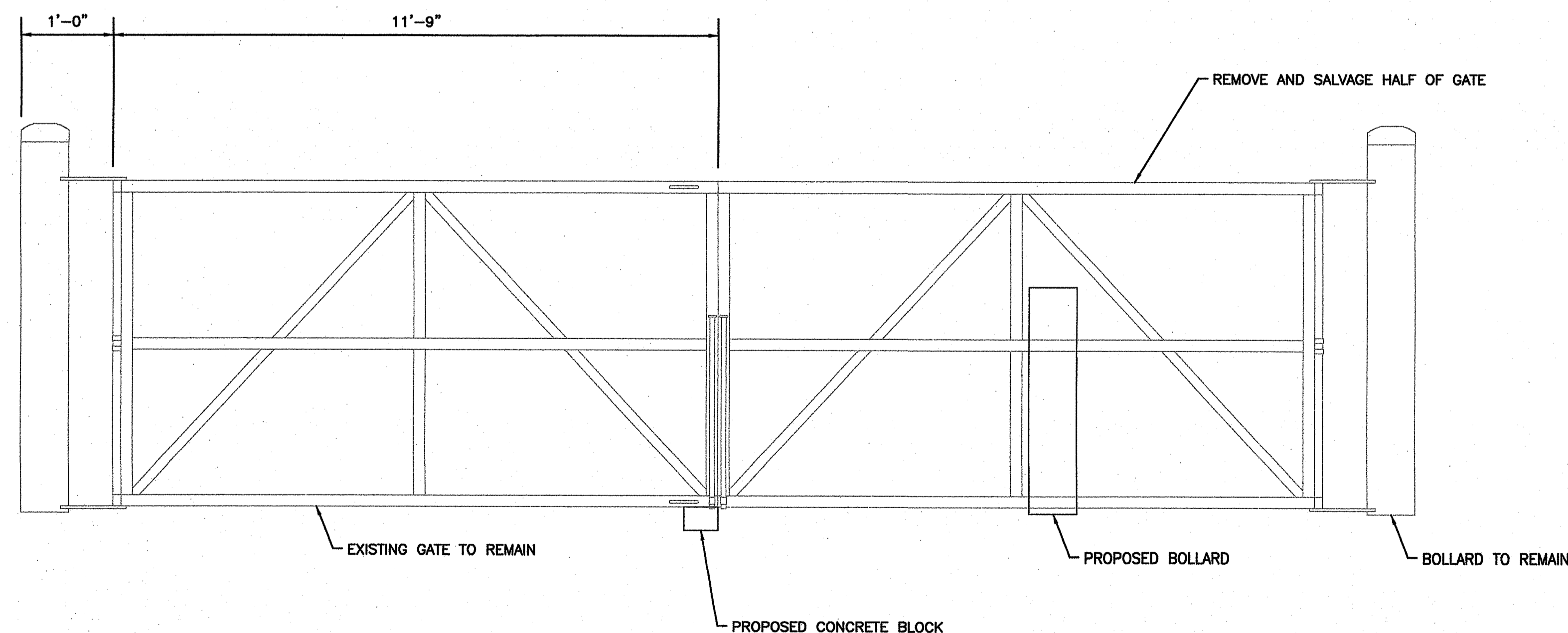
**CURB SETTING DETAIL**  
(NOT TO SCALE)



NOTES:  
 1. WHERE ROCK IS ENCOUNTERED WITHIN THE REQUIRED DEPTH TO WHICH THE POST IS TO BE ERECTED, A HOLE OF A DIAMETER SLIGHTLY LARGER THAN THE LARGEST DIMENSION OF THE POST SHALL BE DRILLED INTO THE ROCK AND THE POST GROUTED IN.

**WOOD RAIL FENCE**  
(NOT TO SCALE)

(WRF)



**REMOVE AND SALVAGE GATE DETAIL**  
(NOT TO SCALE)

(RG)

Environmental Management  
 DEC 2 0 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

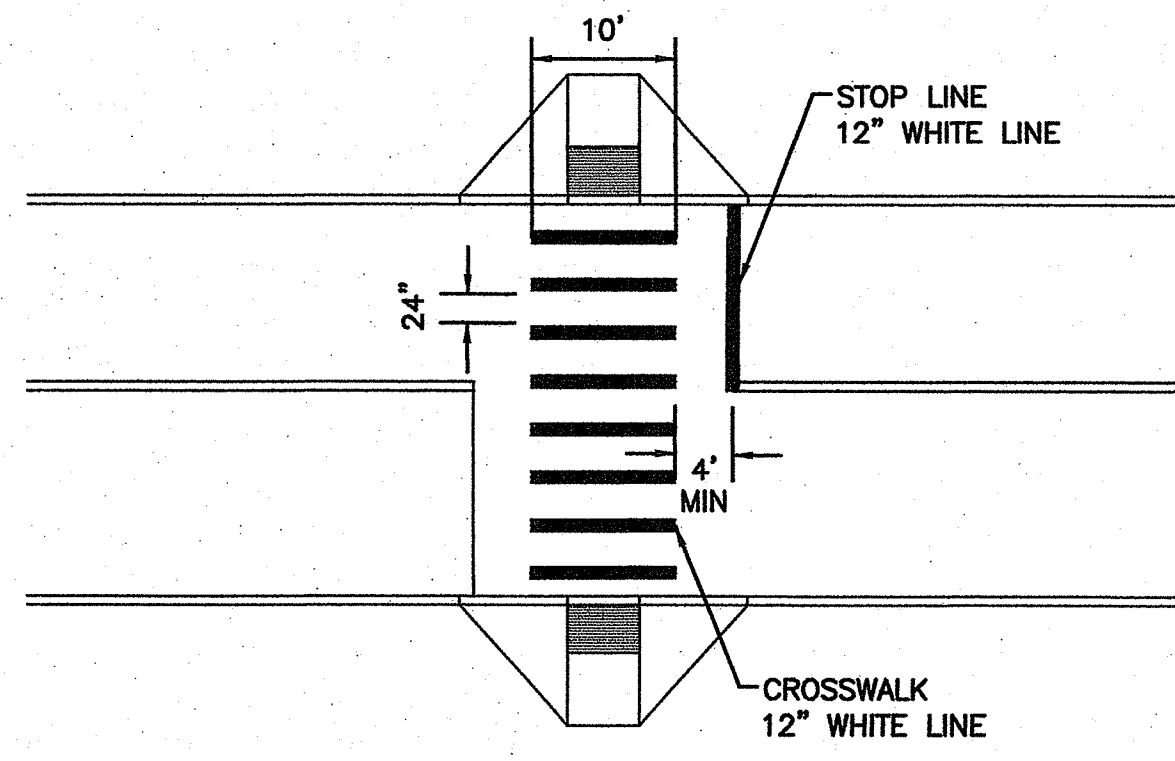
**MCMAHON**  
 CIVIL ENGINEERS & SURVEYORS

REVISIONS		
NO.	DATE	BY

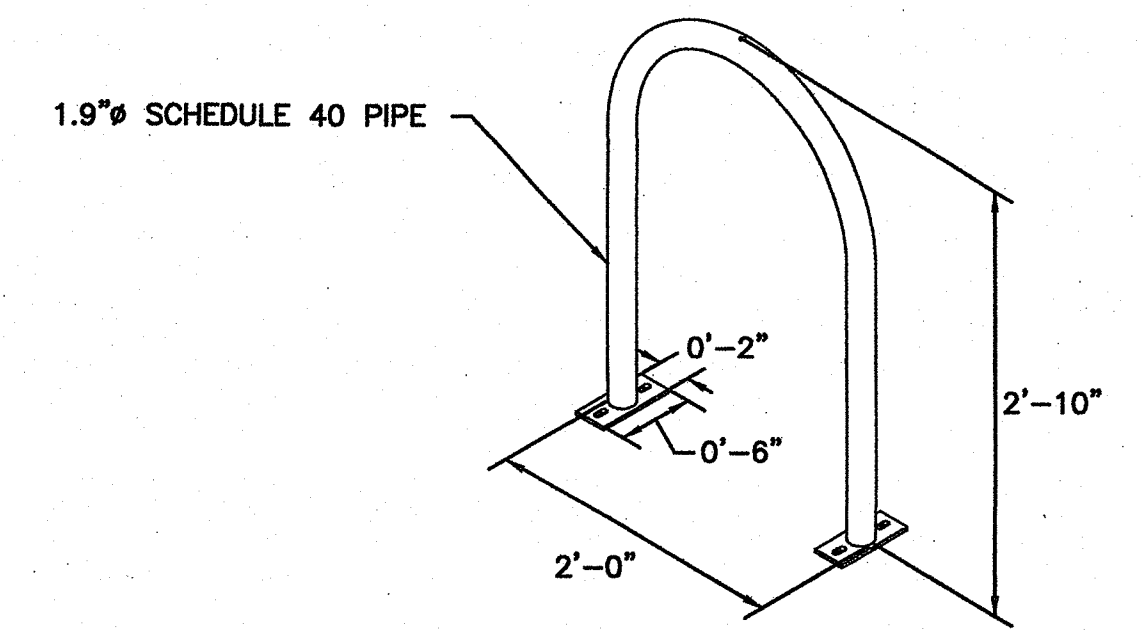
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

DETAILS SHEET NO. 2

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE NO SCALE

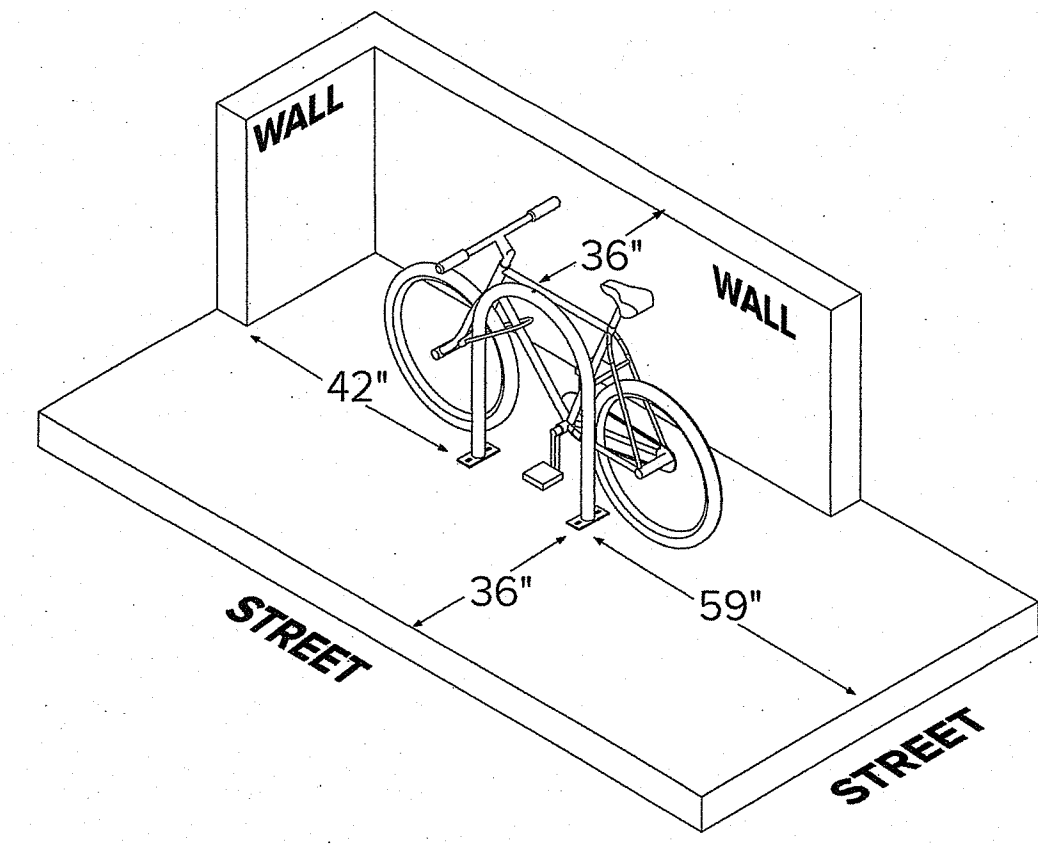


**CROSSWALK DETAIL** (CW)  
(NOT TO SCALE)

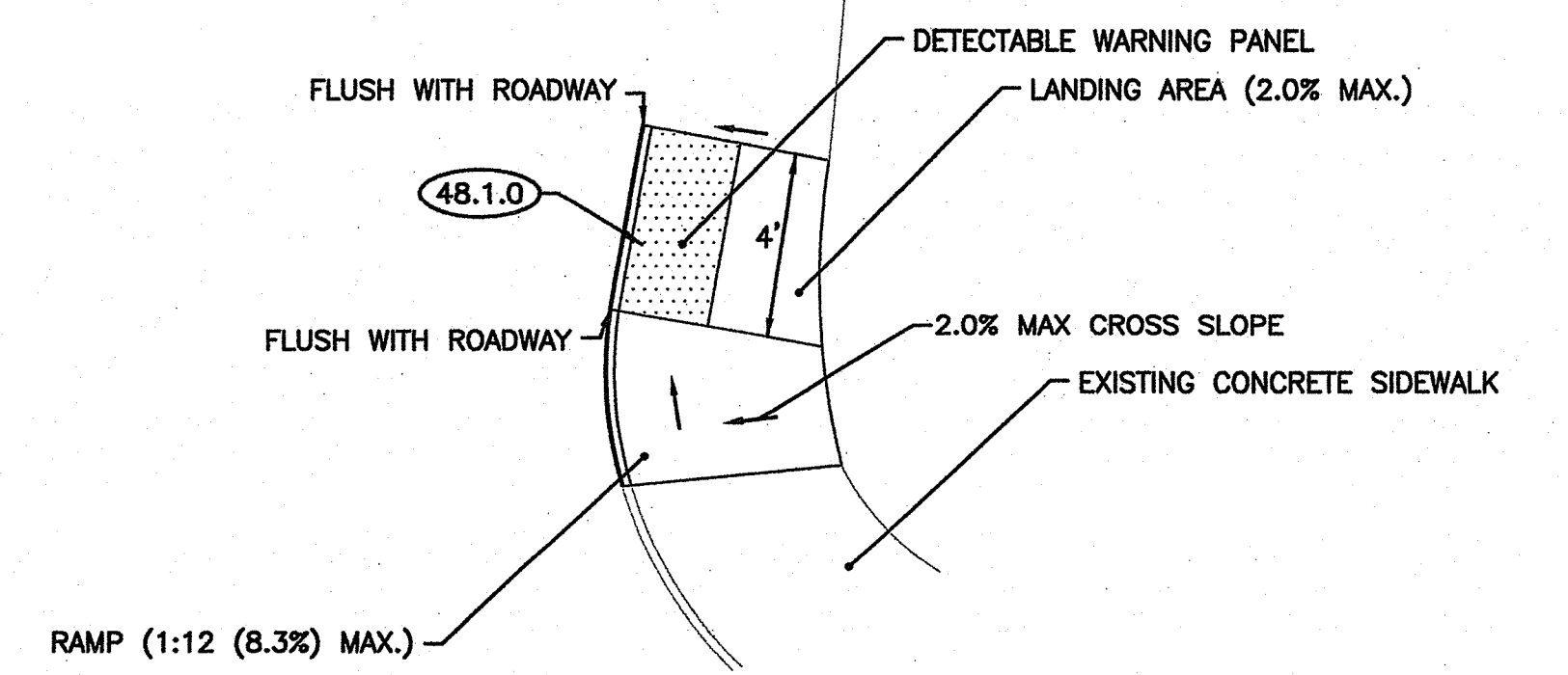


- NOTES:**
- REFER TO BIKE RACK SETBACK DETAIL FOR RECOMMENDED DISTANCES.
  - BIKE RACKS SHALL BE SPACED AT 48" O.C.
  - FOR INSTALLATION, 3/8" DIAMETER HOLES SHALL BE DRILLED INTO THE EXISTING CONCRETE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND 3/8" STEEL ANCHORS SHALL BE USED TO SECURE THE RACKS.
  - IN AREAS WHERE THE SIDEWALK IS NOT LEVEL, WASHERS SHALL BE PLACED UNDERNEATH THE FLANGES TO LEVEL THE RACKS.

**BIKE RACK-FLANGE MOUNTED INVERTED U-SHAPE** (BRU)  
(NOT TO SCALE)

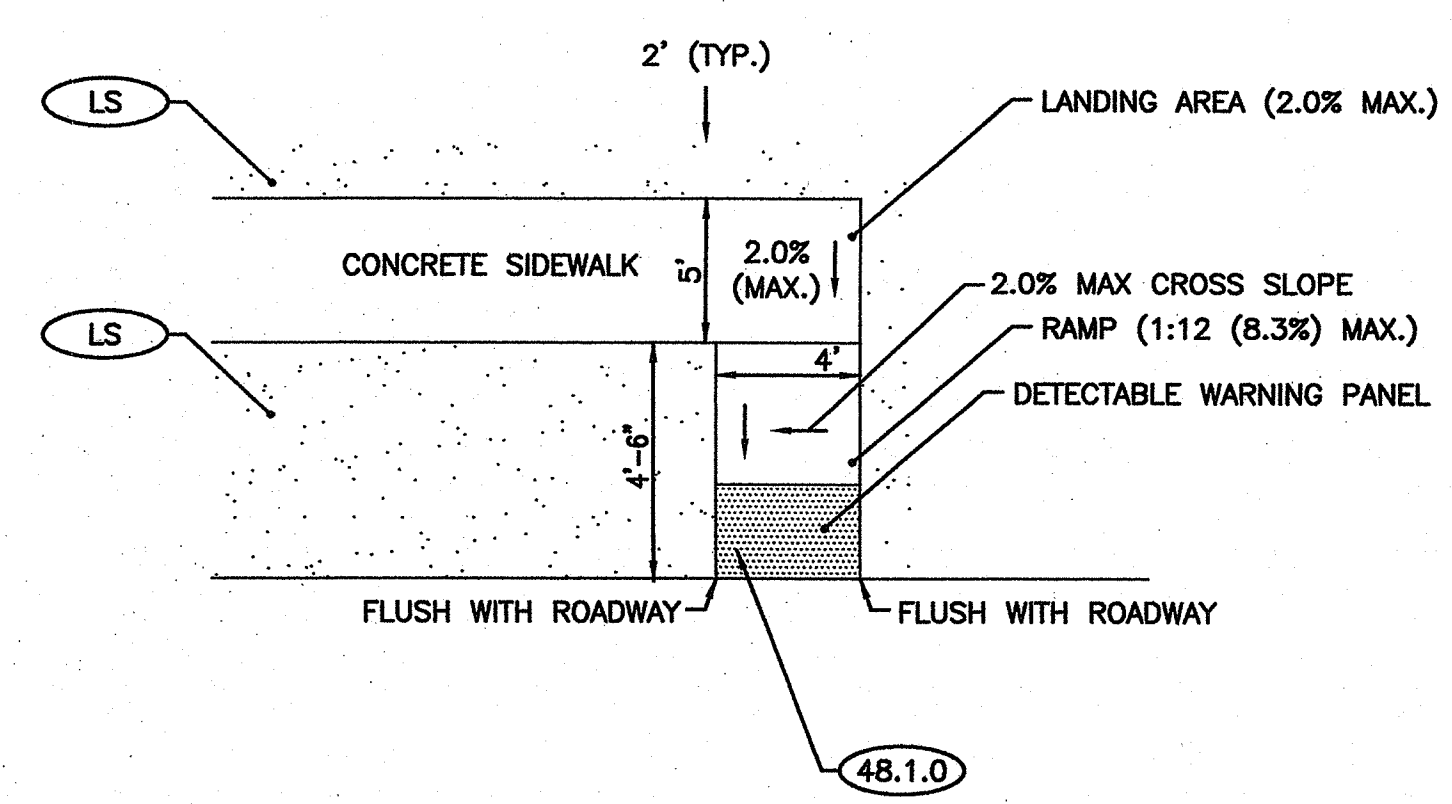


**BIKE RACK SETBACK DETAIL**  
(NOT TO SCALE)



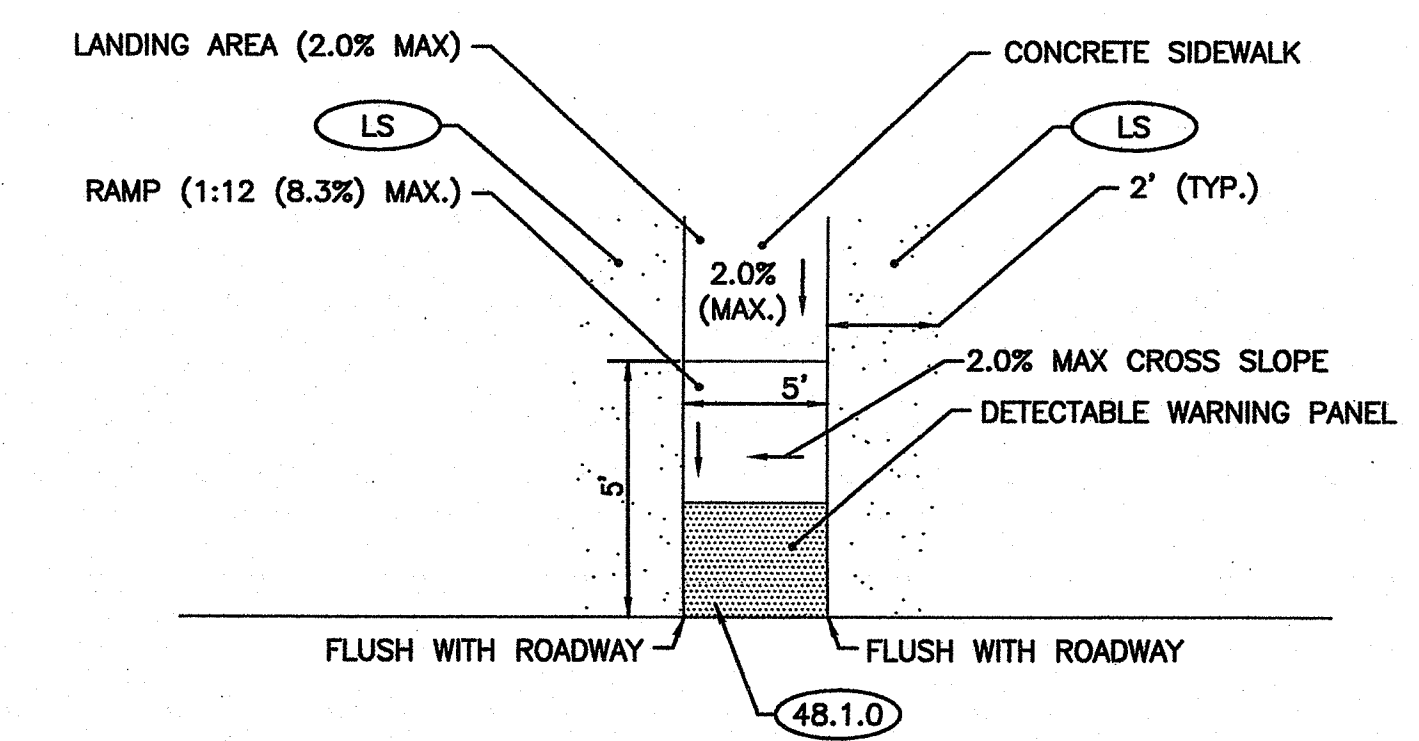
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
  - WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE CURB RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
  - AT NO TIME IS ANY PART OF THE CURB RAMP TO BE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

**SPECIAL CURB RAMP, TYPE 4** (SCR4)  
(NOT TO SCALE)



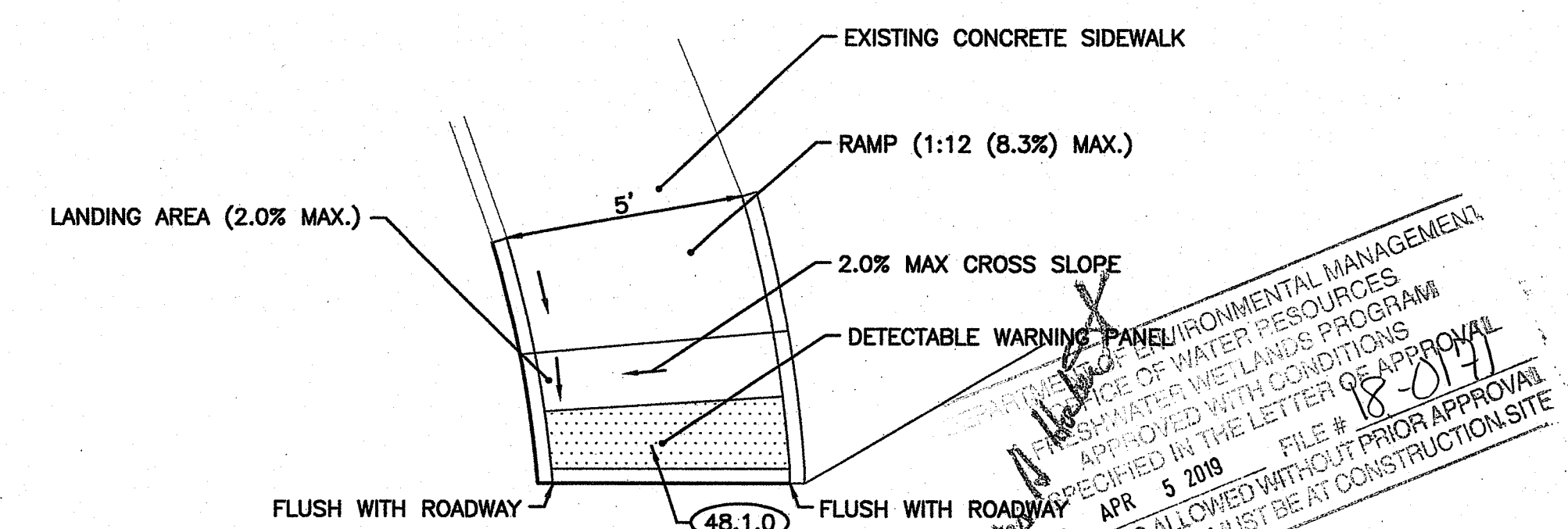
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
  - WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE CURB RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
  - AT NO TIME IS ANY PART OF THE CURB RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
  - DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL CURB RAMPS.
  - LOCATION OF CURB RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
  - IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
  - AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
  - THE CURB RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
  - IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
  - THE ENTRANCE OF THE CURB RAMP SHALL BE FLUSH WITH THE ROADWAY.
  - DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATION.
  - 8" CONCRETE DEPTH FOR RADIUS CURB RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

**SPECIAL CURB RAMP, TYPE 1** (SCR1)  
(NOT TO SCALE)



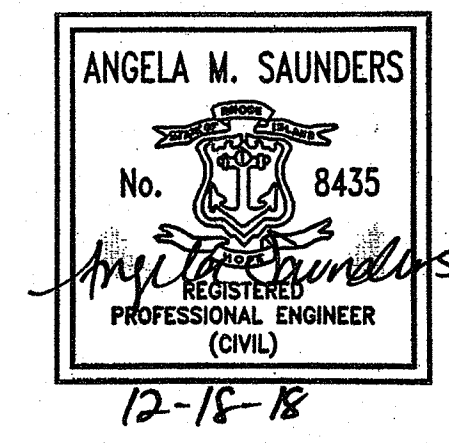
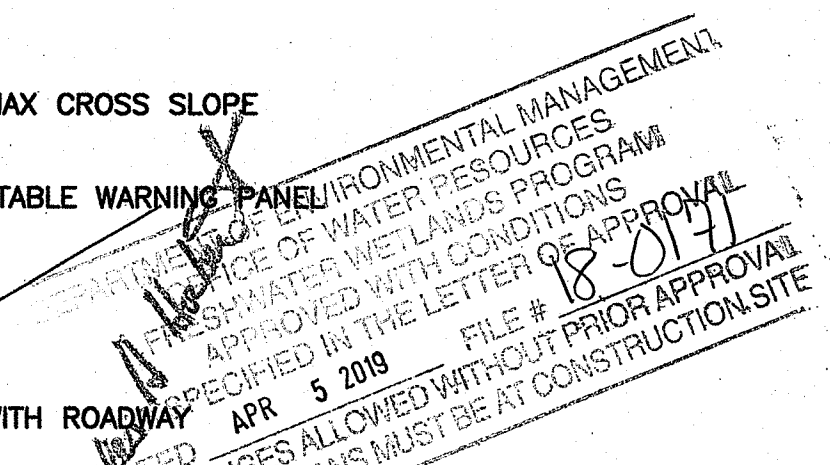
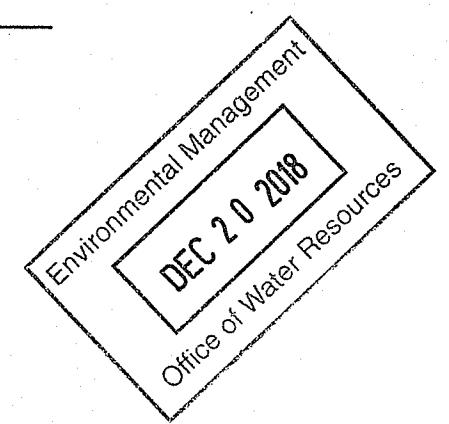
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
  - WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE CURB RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
  - AT NO TIME IS ANY PART OF THE CURB RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
  - DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL CURB RAMPS.
  - LOCATION OF CURB RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
  - IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
  - AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
  - THE CURB RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
  - IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
  - THE ENTRANCE OF THE CURB RAMP SHALL BE FLUSH WITH THE ROADWAY.
  - DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATION.
  - 8" CONCRETE DEPTH FOR RADIUS CURB RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

**SPECIAL CURB RAMP, TYPE 2** (SCR2)  
(NOT TO SCALE)



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

**SPECIAL CURB RAMP, TYPE 3** (SCR3)  
(NOT TO SCALE)



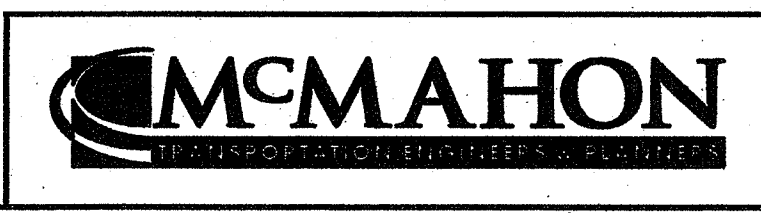
REVISIONS		
NO.	DATE	BY

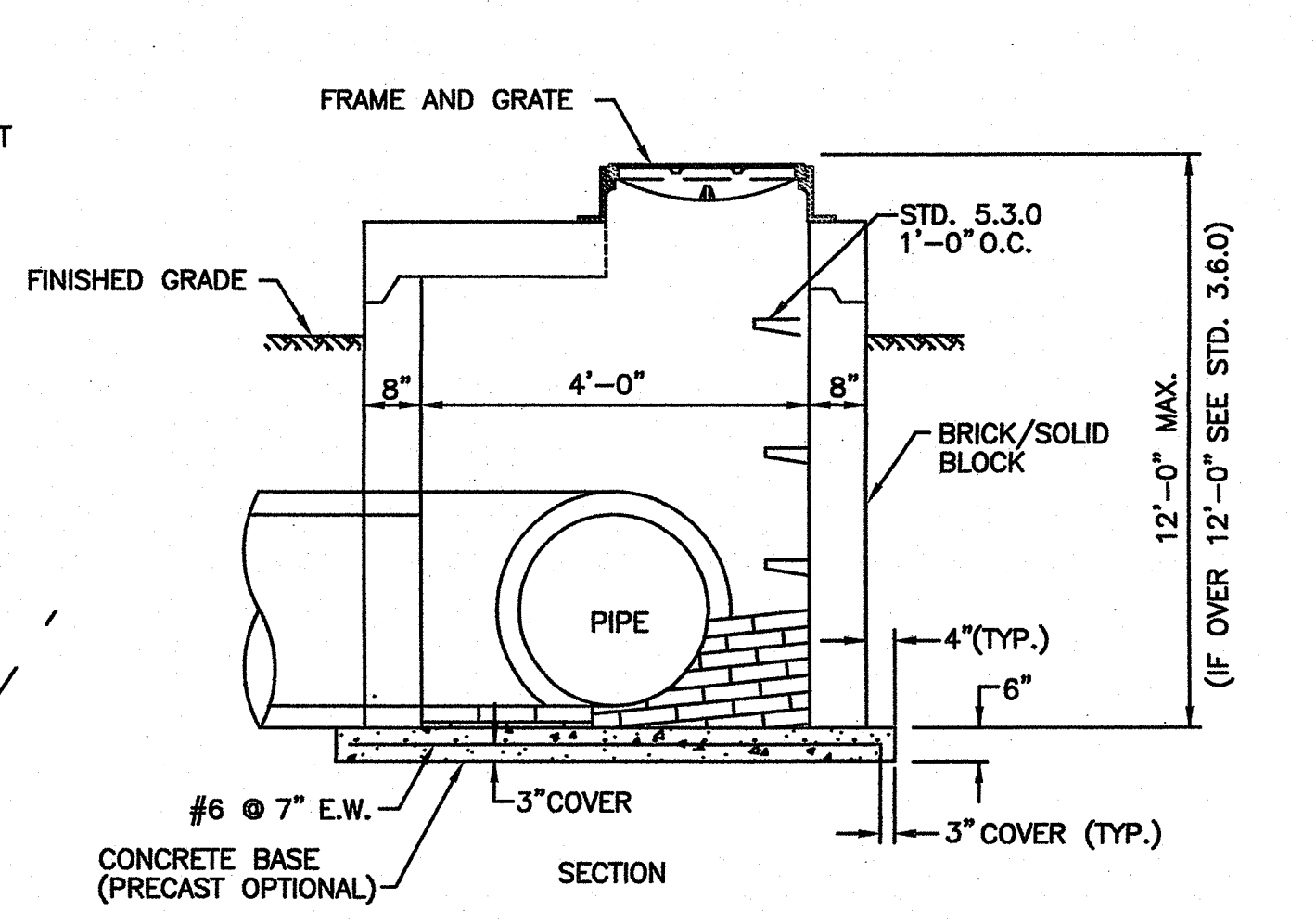
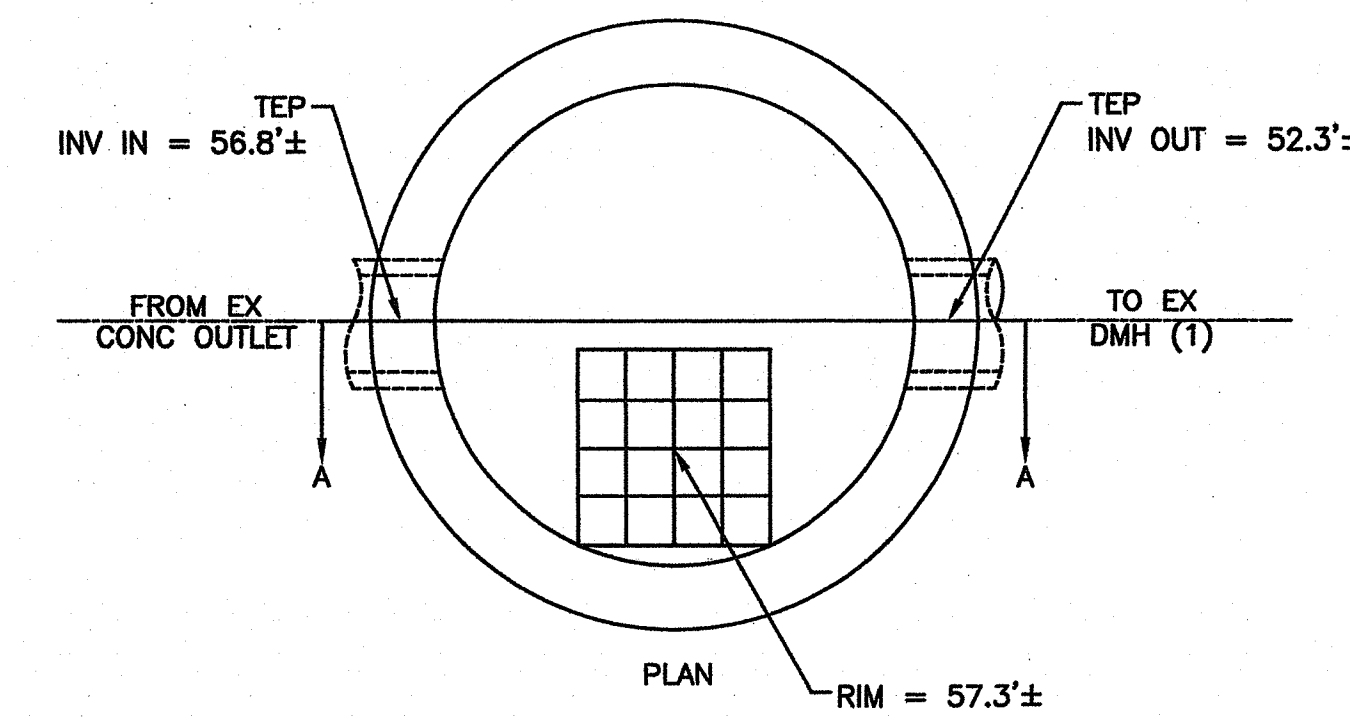
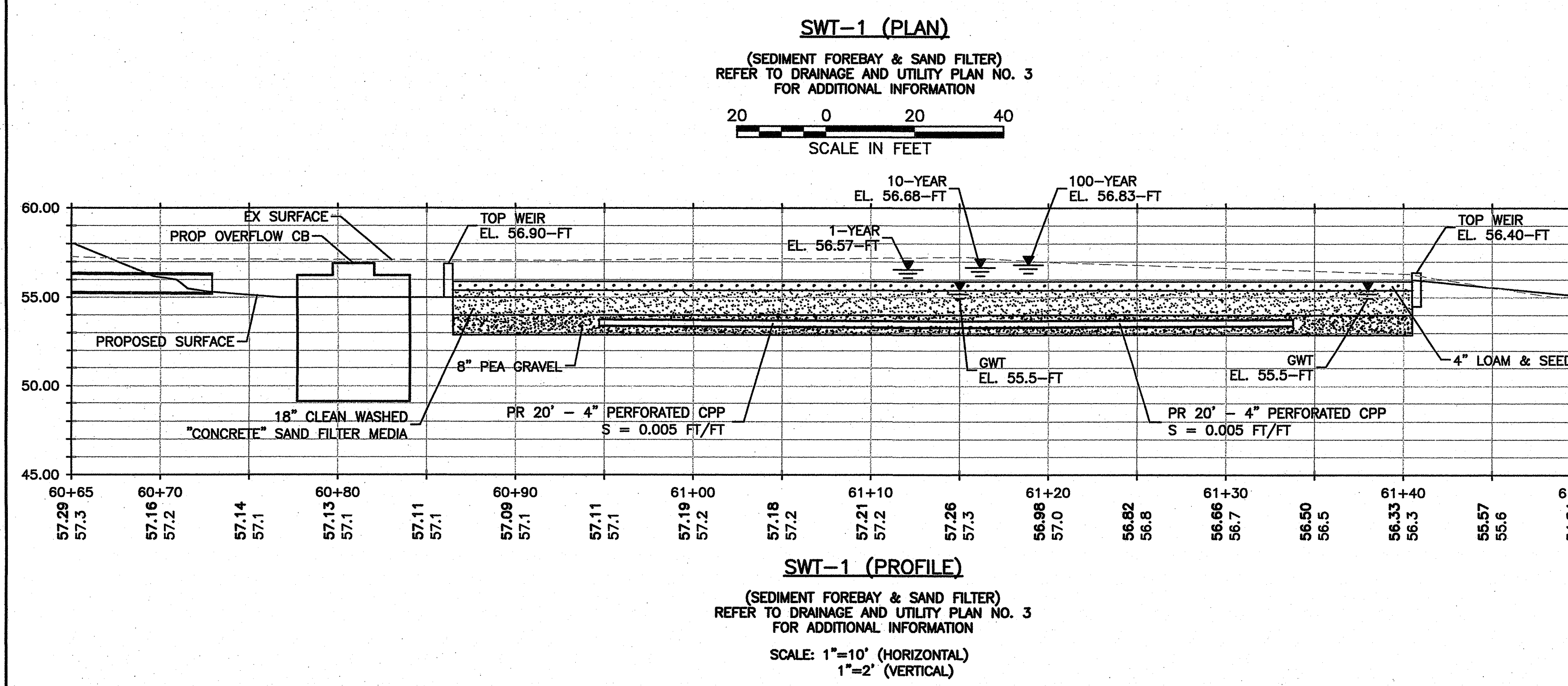
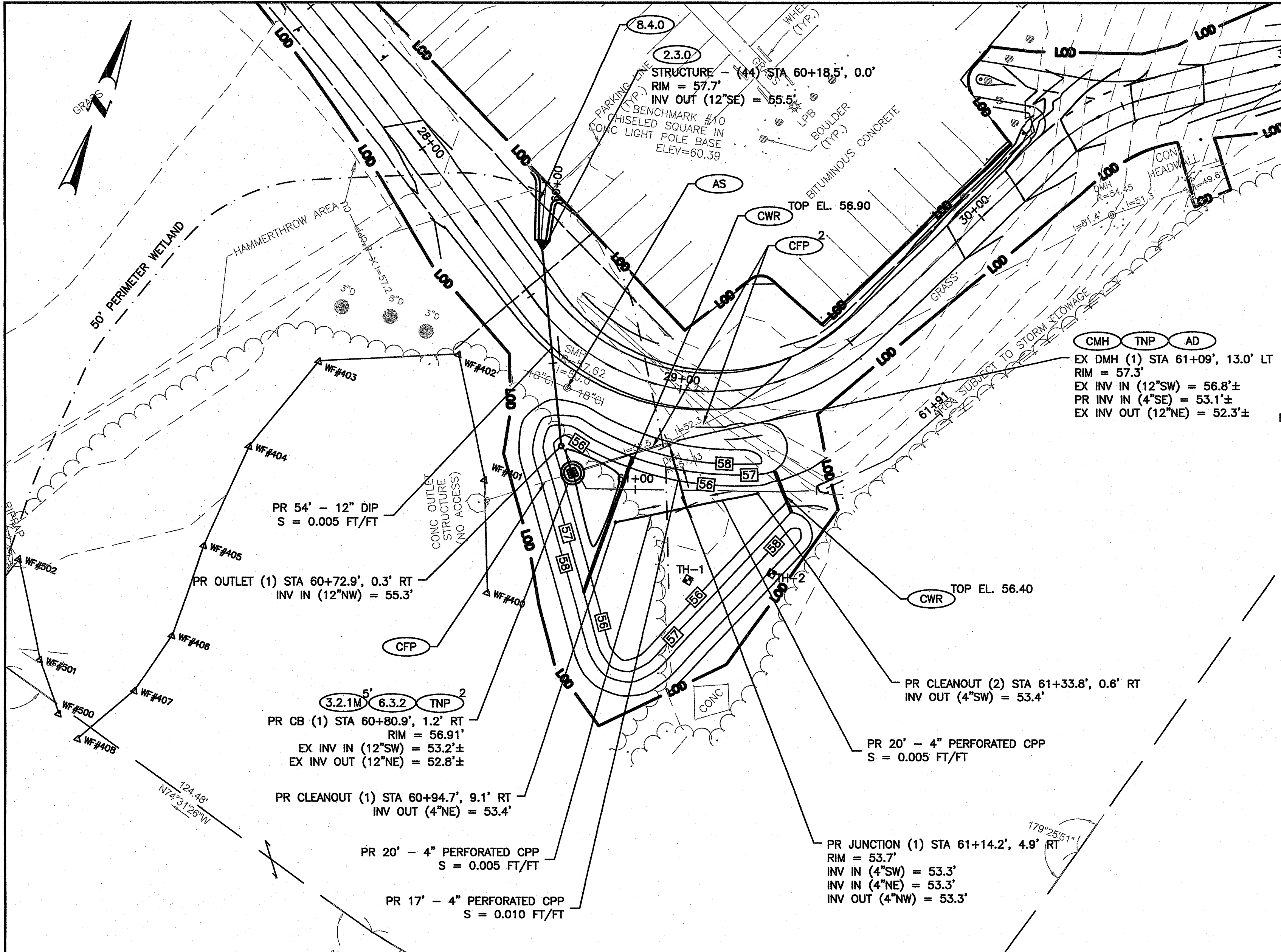
**RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**

**SAFE ROUTES TO SCHOOL**  
**INFRASTRUCTURE IMPROVEMENTS**  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

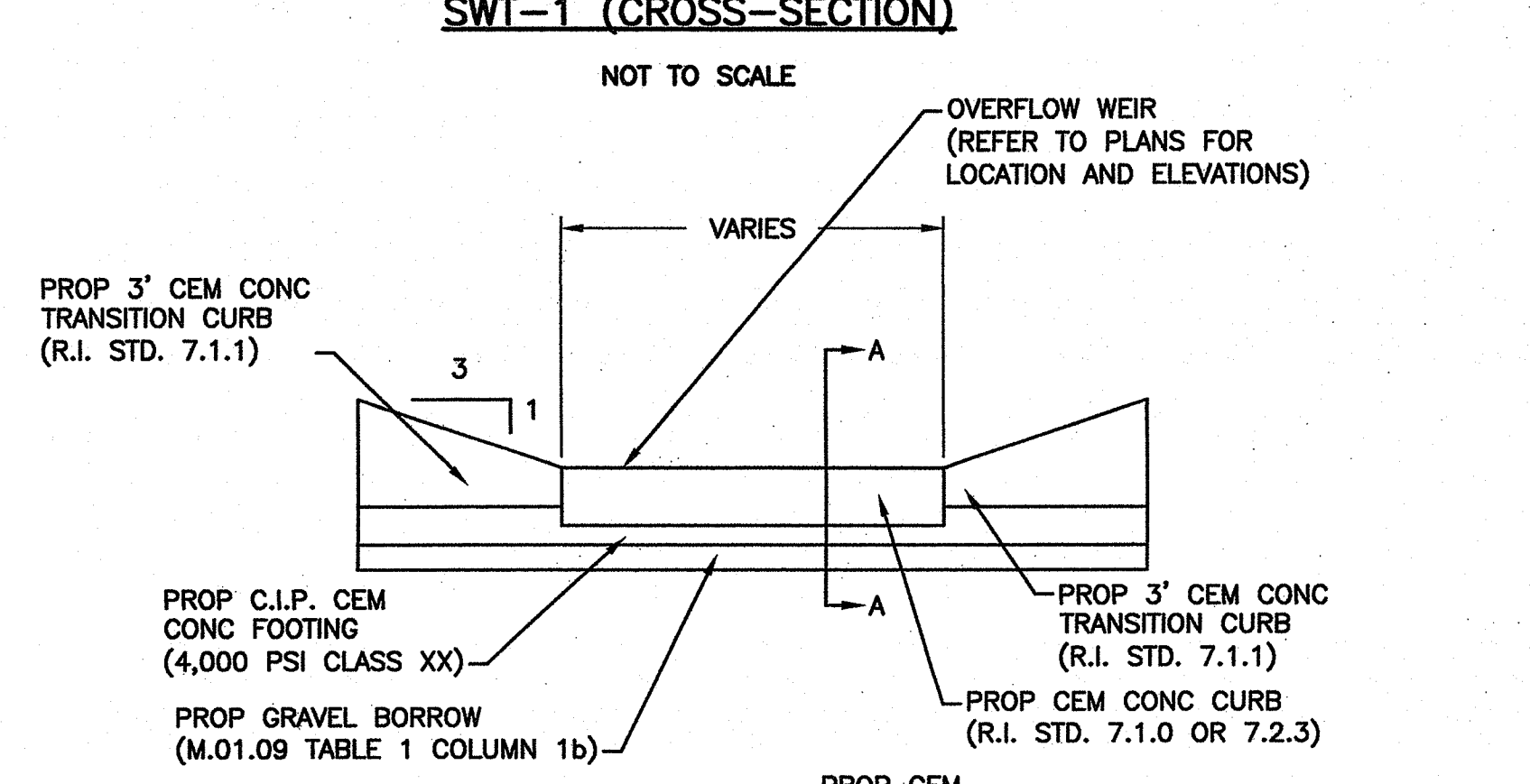
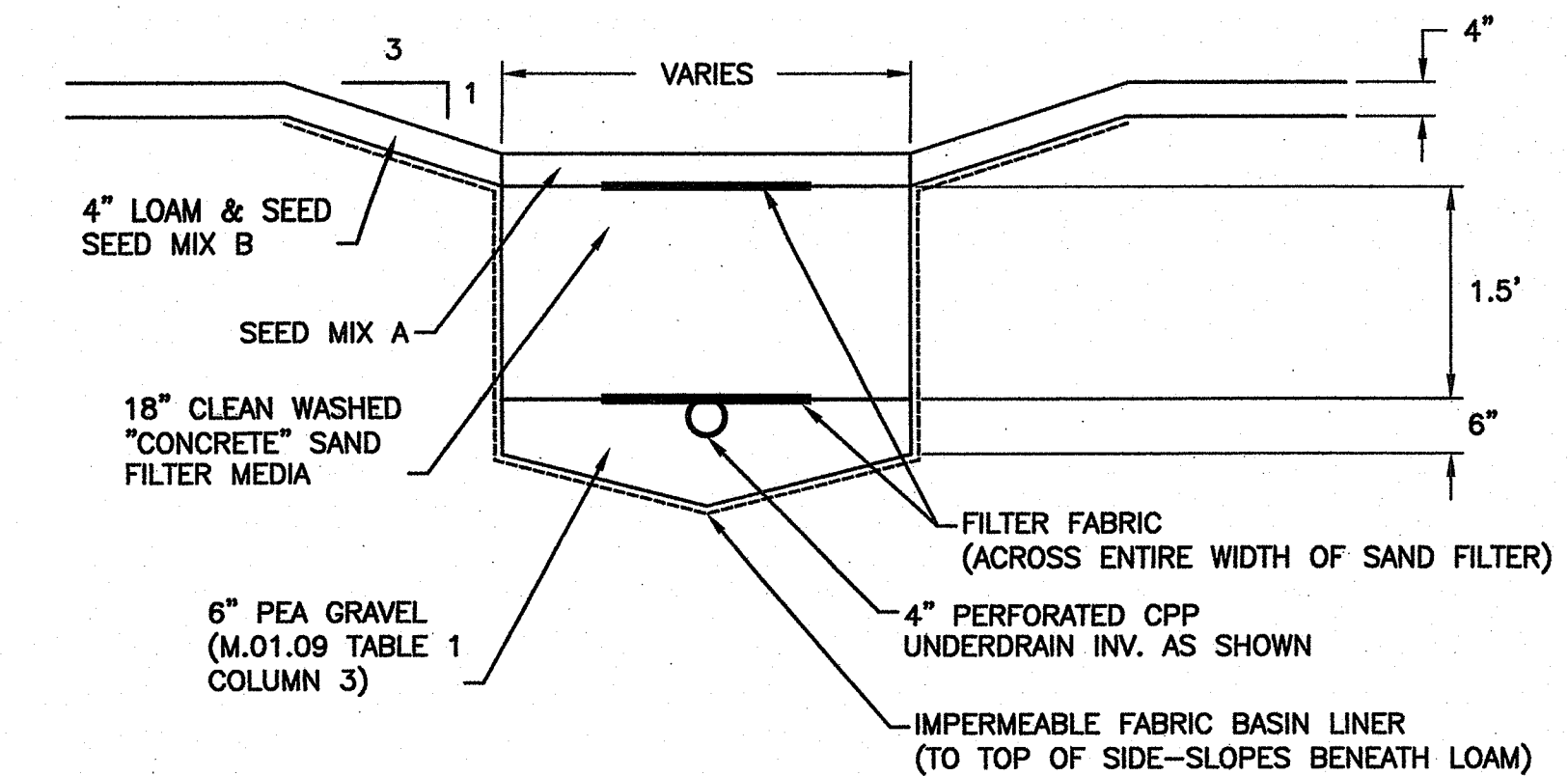
**DETAILS SHEET NO. 1**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE NO SCALE

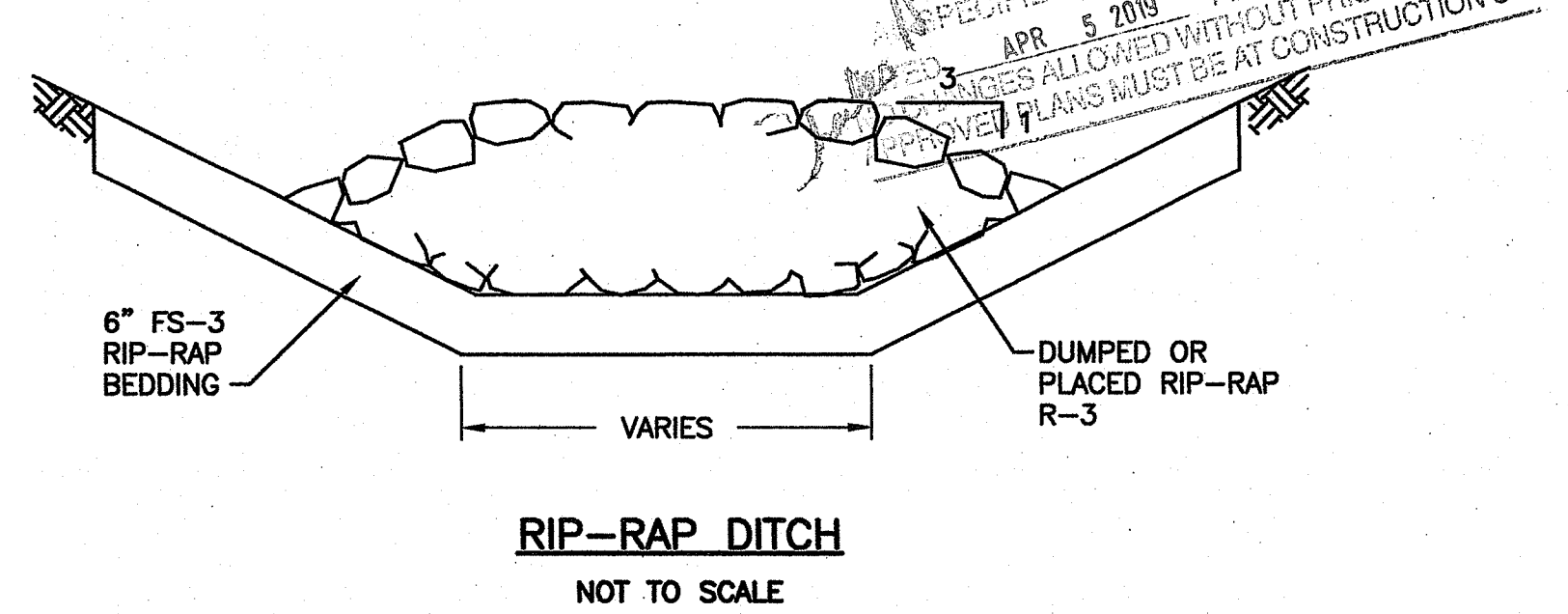
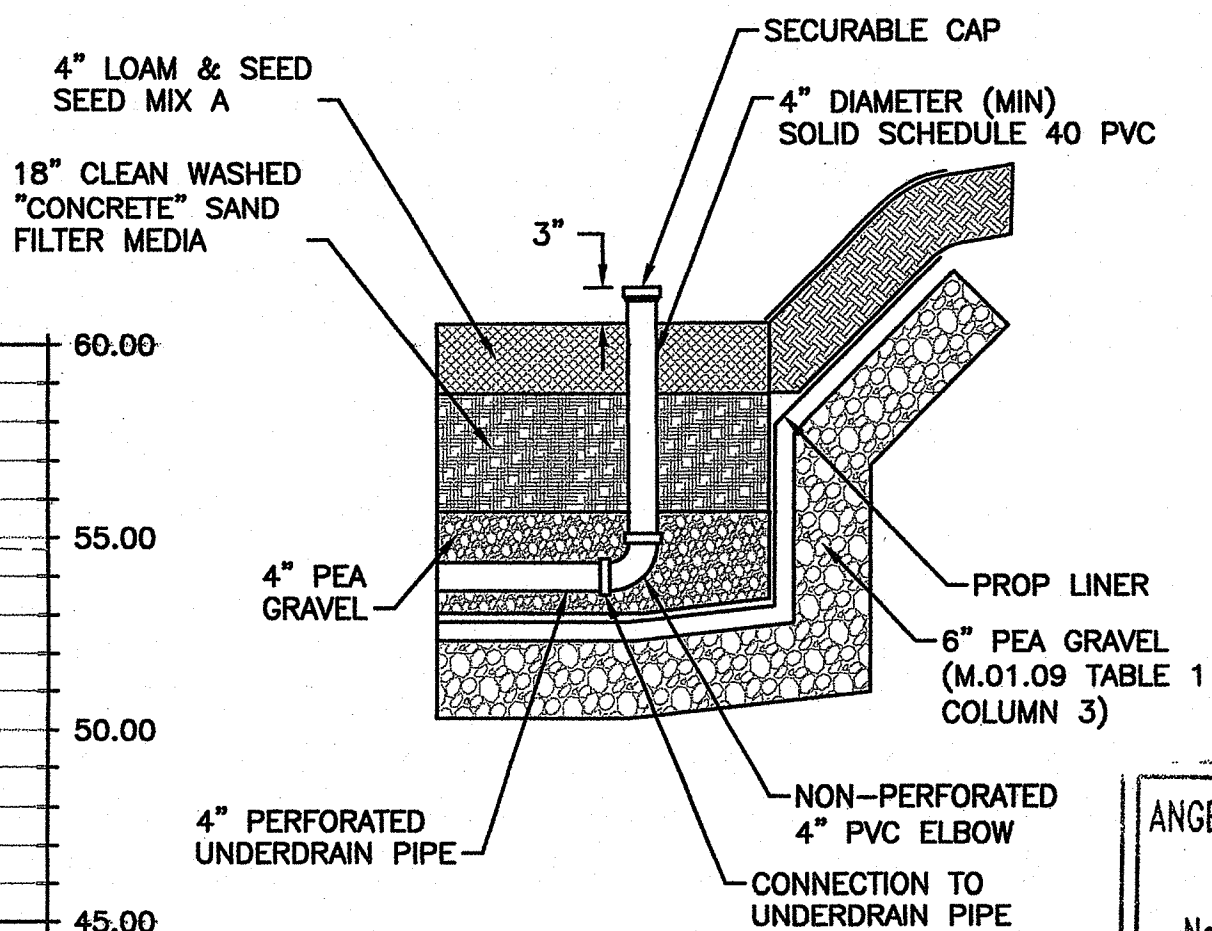




- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
  3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
  4. ONE POUR MONOLITHIC BASE SECTION
  5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
  6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
  7. TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).



**BRICK/SOLID BLOCK 4'-0" ROUND CATCH BASIN (3.2.1M)**  
NOT TO SCALE



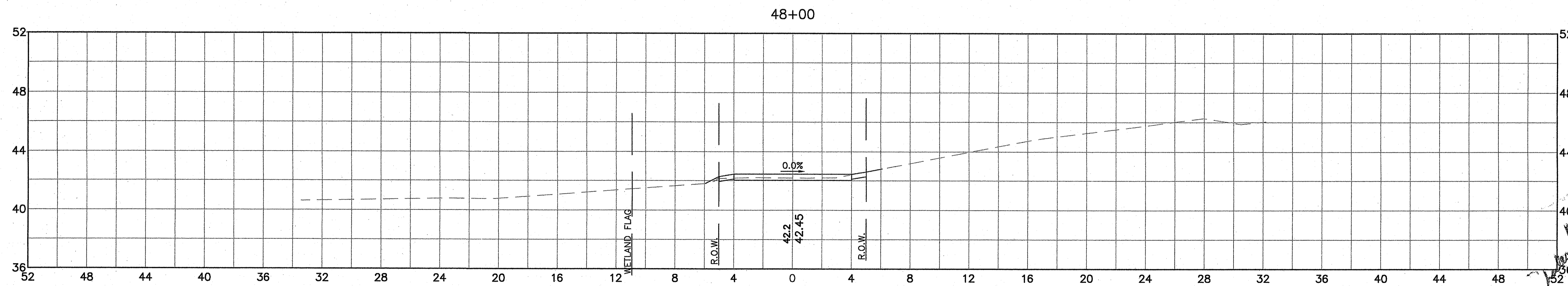
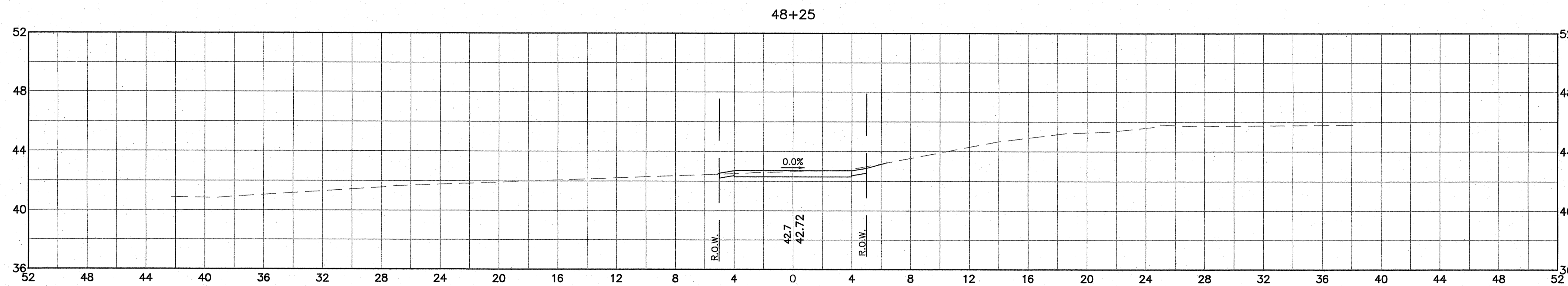
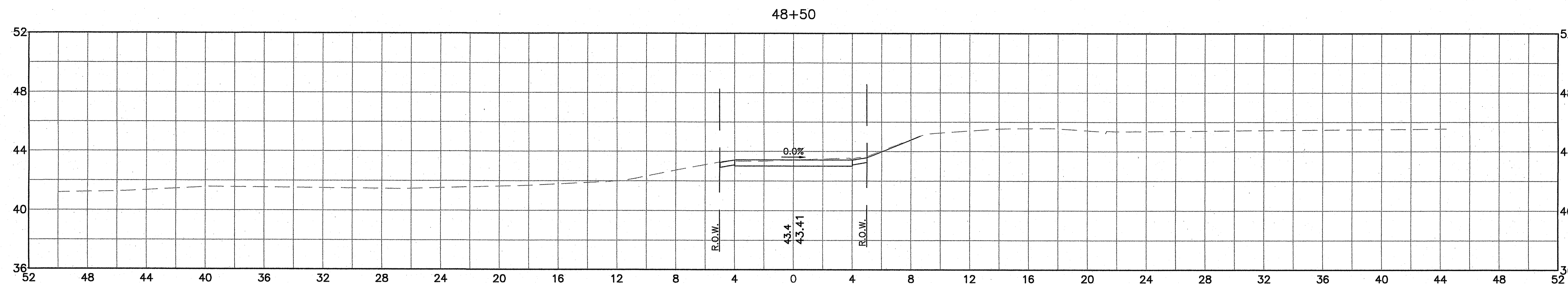
REVISIONS		
NO.	DATE	BY

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS**  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

**BASIN PLAN NO. 1**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE AS NOTED



APPROVED FOR ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 APPROVED WITH CONDITIONS  
 APPROVED IN THE LETTER OF APPROVAL  
 APR 5 2018 FILE # 18-0171  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

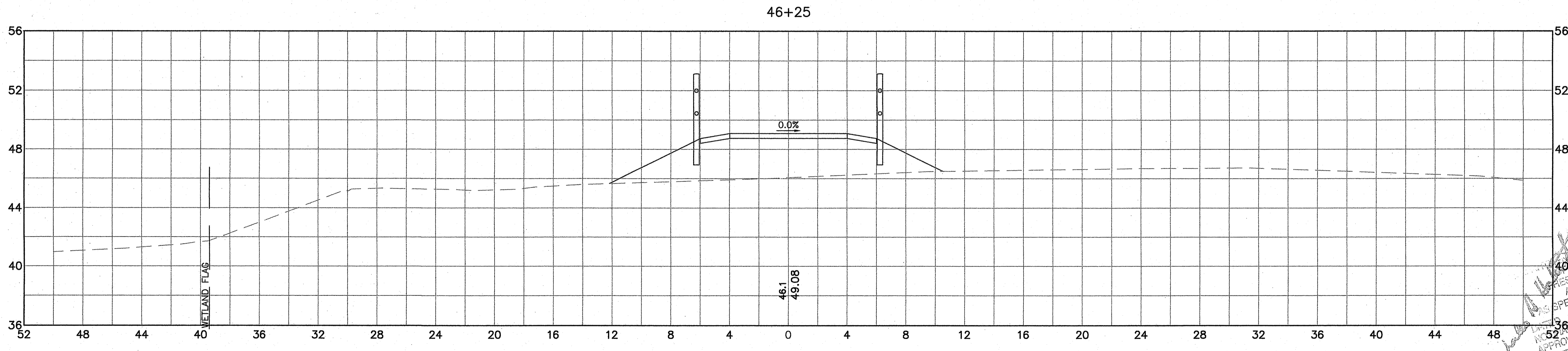
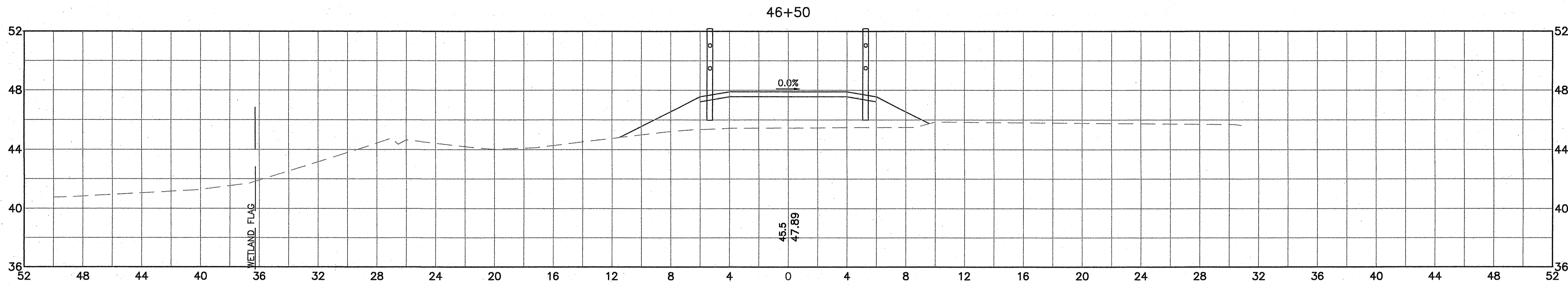
MCMAHON  
 PROFESSIONAL ENGINEERS & ARCHITECTS

REVISIONS		
NO.	DATE	BY

**RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
  
**SAFE ROUTES TO SCHOOL**  
**INFRASTRUCTURE IMPROVEMENTS**  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
  
**CROSS SECTIONS**  
**NO. 27**  
  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=4'



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	42	54



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-0197  
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

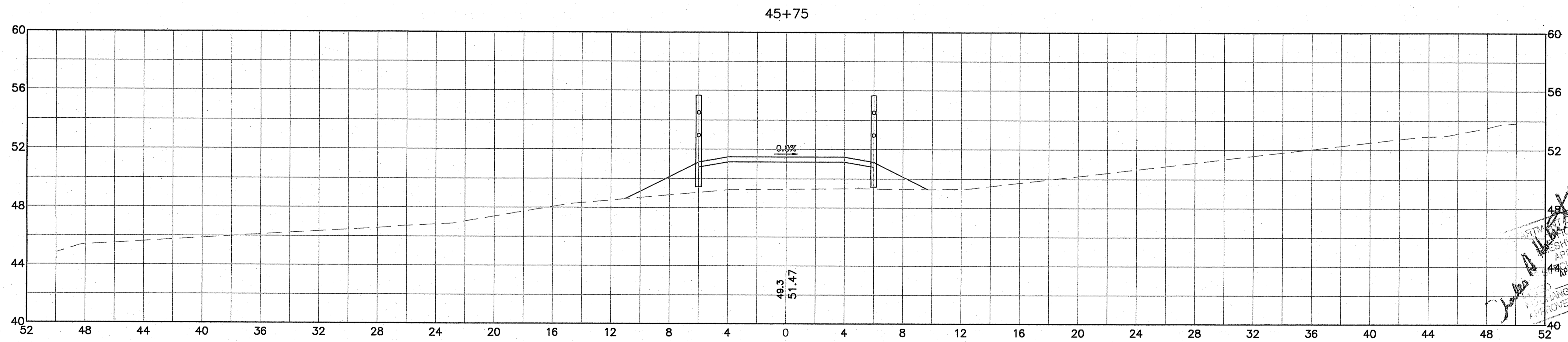
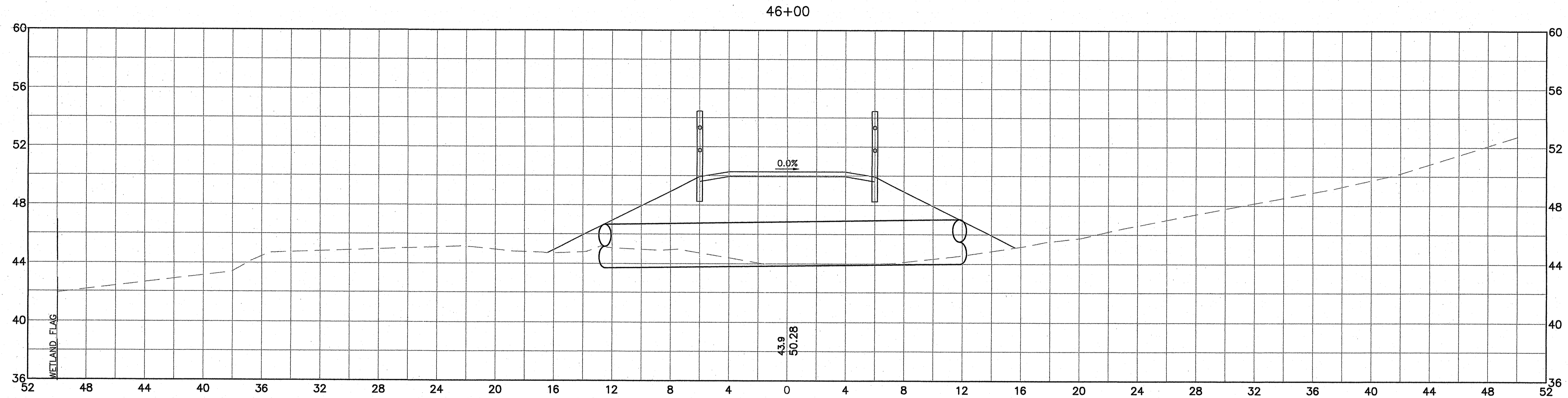
Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18



REVISIONS		
NO.	DATE	BY

**RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
  
**SAFE ROUTES TO SCHOOL**  
**INFRASTRUCTURE IMPROVEMENTS**  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
  
**CROSS SECTIONS**  
**NO. 25**  
  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=4'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 RISHWAUER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 APPROVED IN THE LETTER OF APPROVAL  
 FILE # 18-071  
 APR 5 2019  
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

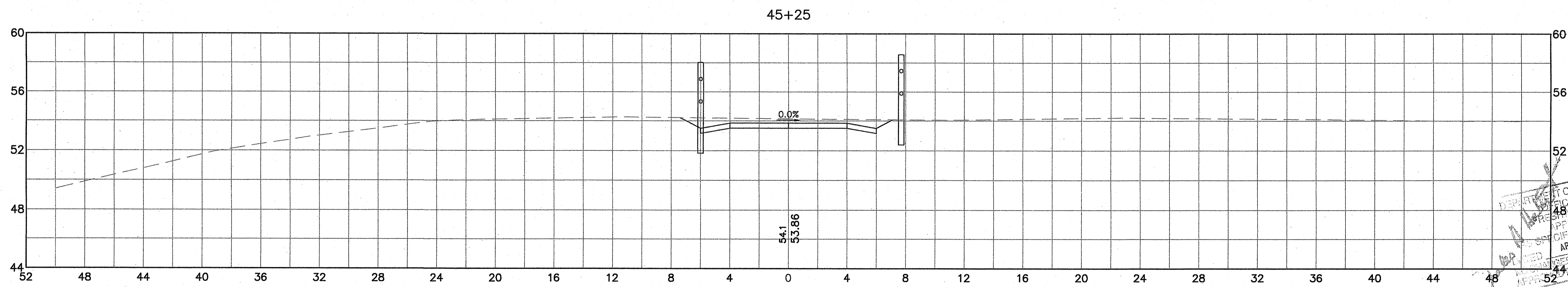
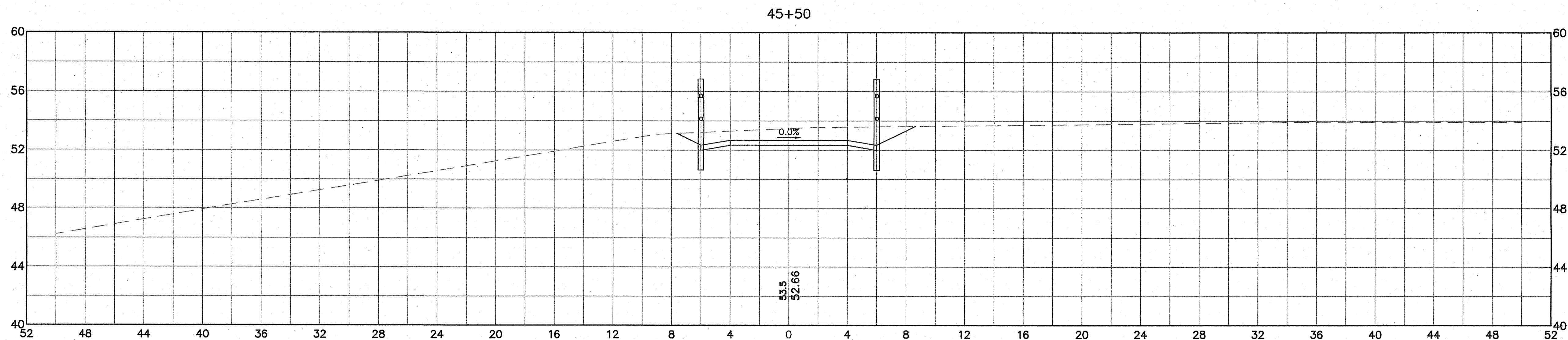
Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18



REVISIONS		
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RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 CROSS SECTIONS  
 NO. 24  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=4'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 RIVERS AND WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 APPROVED IN THE LETTER OF APPROVAL  
 APR 9 2019 FILE # 18-0171  
 ALL CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 ALL PLANS MUST BE AT CONSTRUCTION SITE

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18



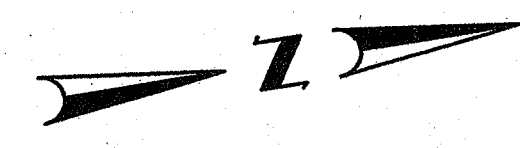
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 CROSS SECTIONS  
 NO. 23  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=4'









DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 APR 5 2018 FILE # 18-014  
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
 No. 8435  
  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

12-18-18

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

**LEGEND**  
 BOC - BOTTOM OF CURB  
 CR - CURB RAMP  
 FSW - FRONT EDGE OF SIDEWALK  
 ME - MATCH EXISTING  
 SW - EDGE OF SIDEWALK  
 TOC - TOP OF CURB

20 0 20 40  
 SCALE IN FEET



REVISIONS		
NO.	DATE	BY

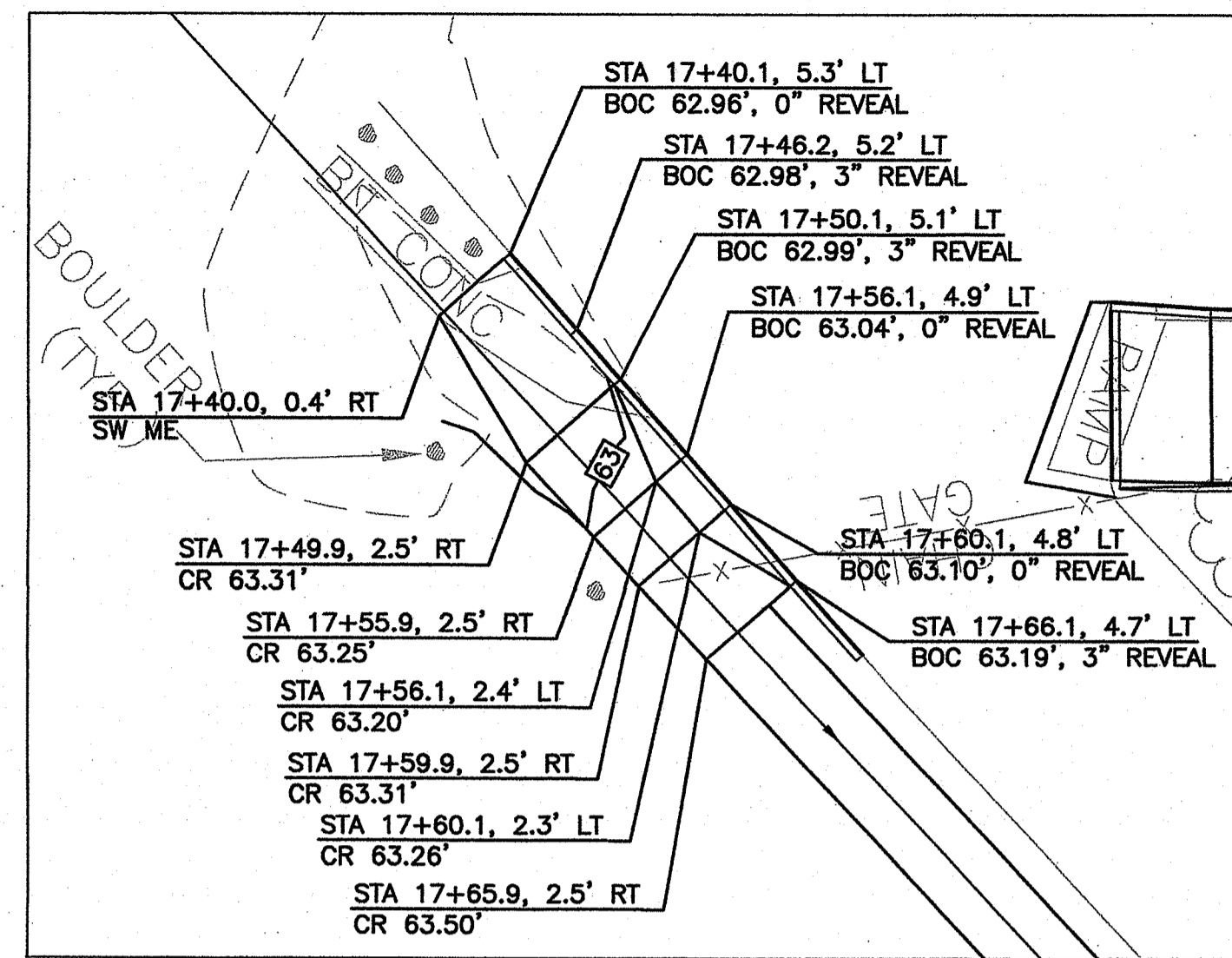
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

**SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS**  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

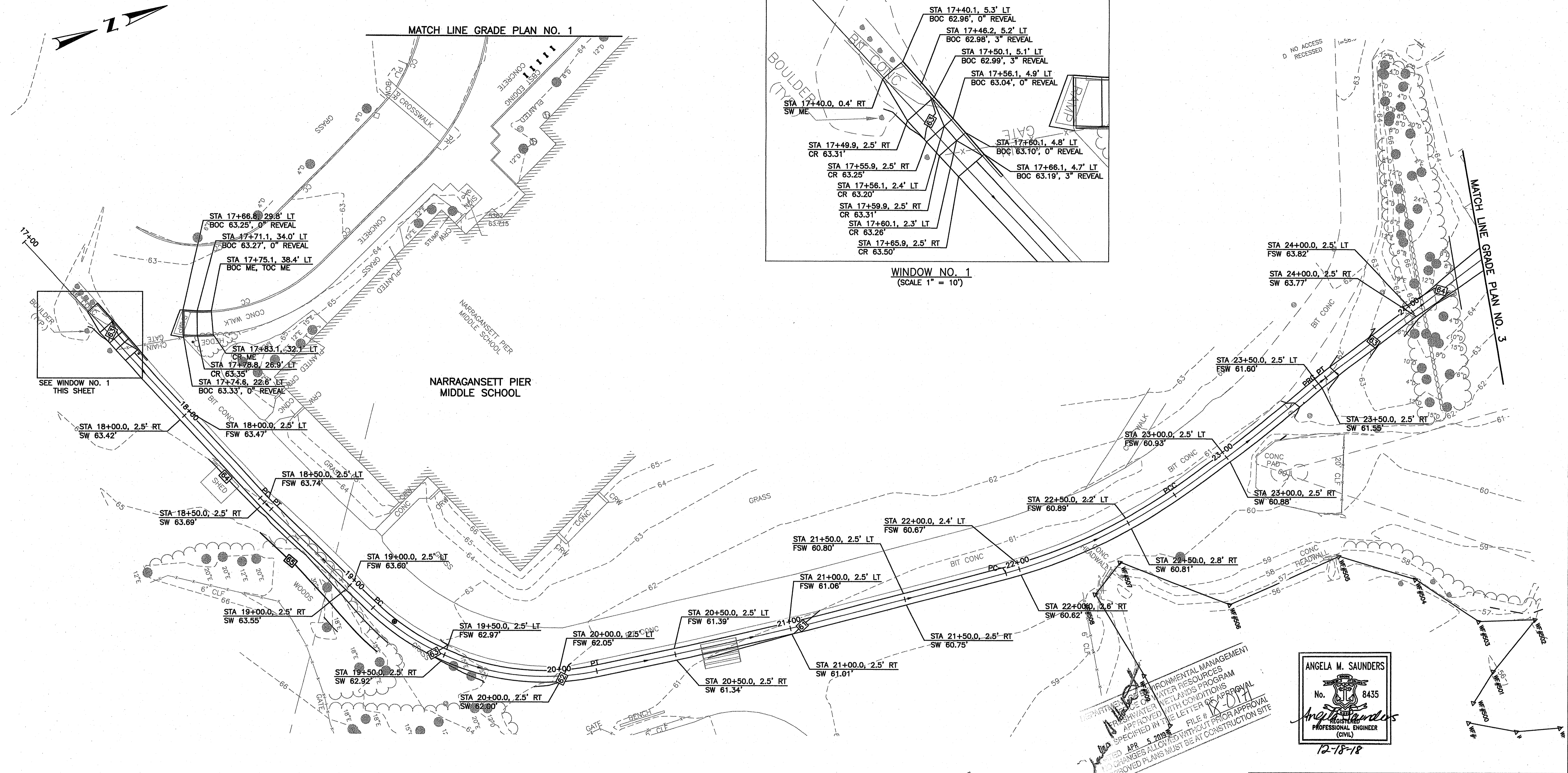
**GRADE PLAN  
 NO. 4**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'





WINDOW NO. 1  
(SCALE 1" = 10')

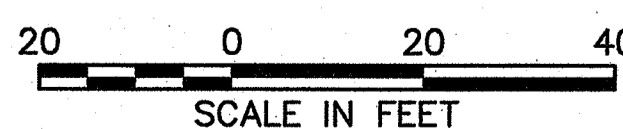


ENVIRONMENTAL MANAGEMENT  
 DEPARTMENT OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 FILE # 18-014  
 DATED APR 5 2018  
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER  
 (CIVIL)  
 12-18-18

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

- LEGEND**
- BOC - BOTTOM OF CURB
  - CR - CURB RAMP
  - FSW - FRONT EDGE OF SIDEWALK
  - ME - MATCH EXISTING
  - SW - EDGE OF SIDEWALK
  - TOC - TOP OF CURB

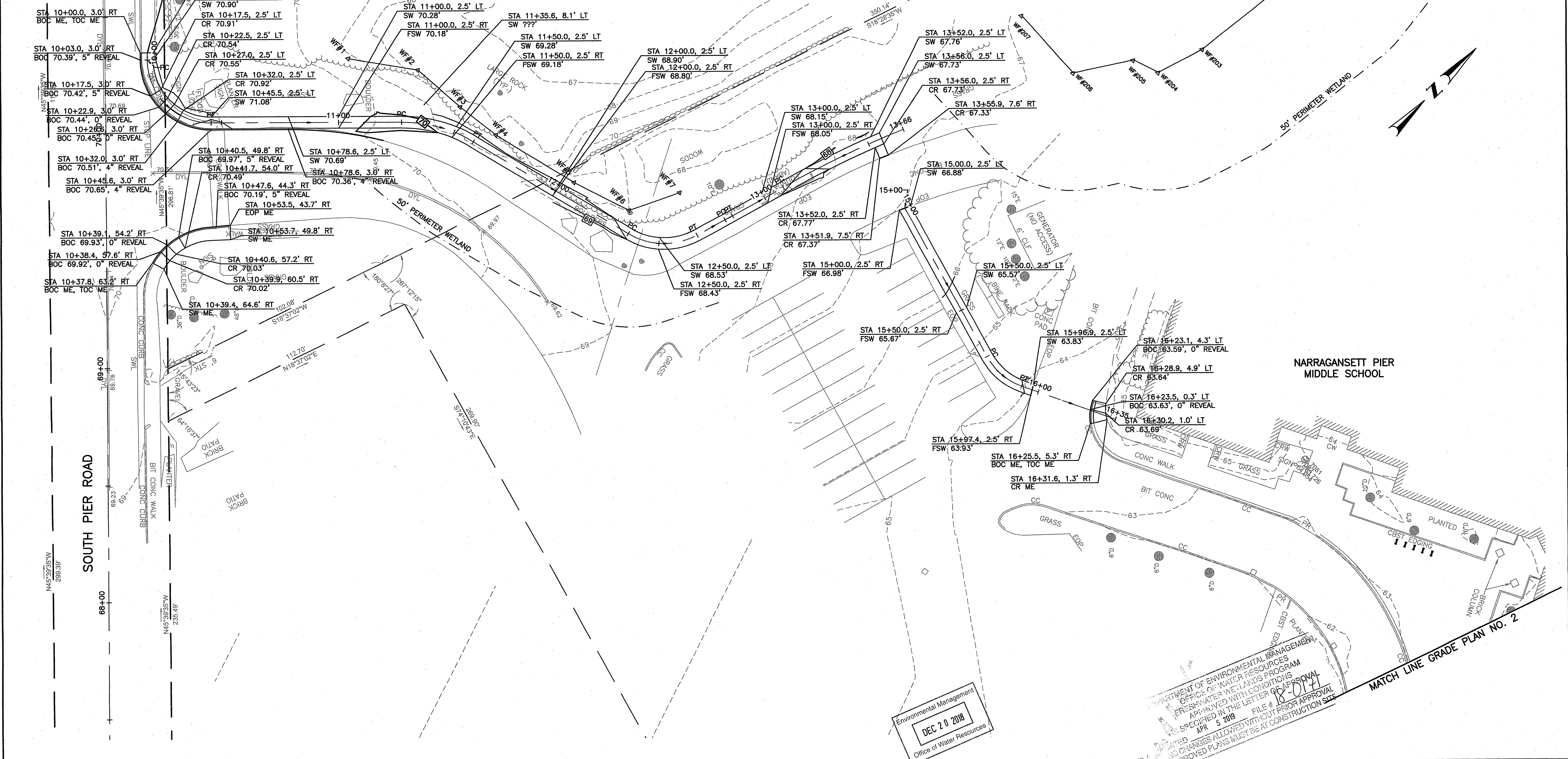


REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 GRADE PLAN  
 NO. 2  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	33	54

BEGIN PROJECT  
R.I. CONTRACT NO. 2018-CF-054  
10+00±



NARRAGANSETT PIER MIDDLE SCHOOL

MATCH LINE GRADE PLAN NO. 2

Environmental Management  
DEC 20 2018  
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
SPECIFIED IN THE LETTER OF APPROVAL  
APR 5 2018 FILE # 18-0171  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
No. 8435  
Professional Engineer  
(CIVIL)  
12-18-18

**LEGEND**  
BOC - BOTTOM OF CURB  
CR - CURB RAMP  
FSW - FRONT EDGE OF SIDEWALK  
ME - MATCH EXISTING  
SW - EDGE OF SIDEWALK  
TOC - TOP OF CURB

20 0 20 40  
SCALE IN FEET



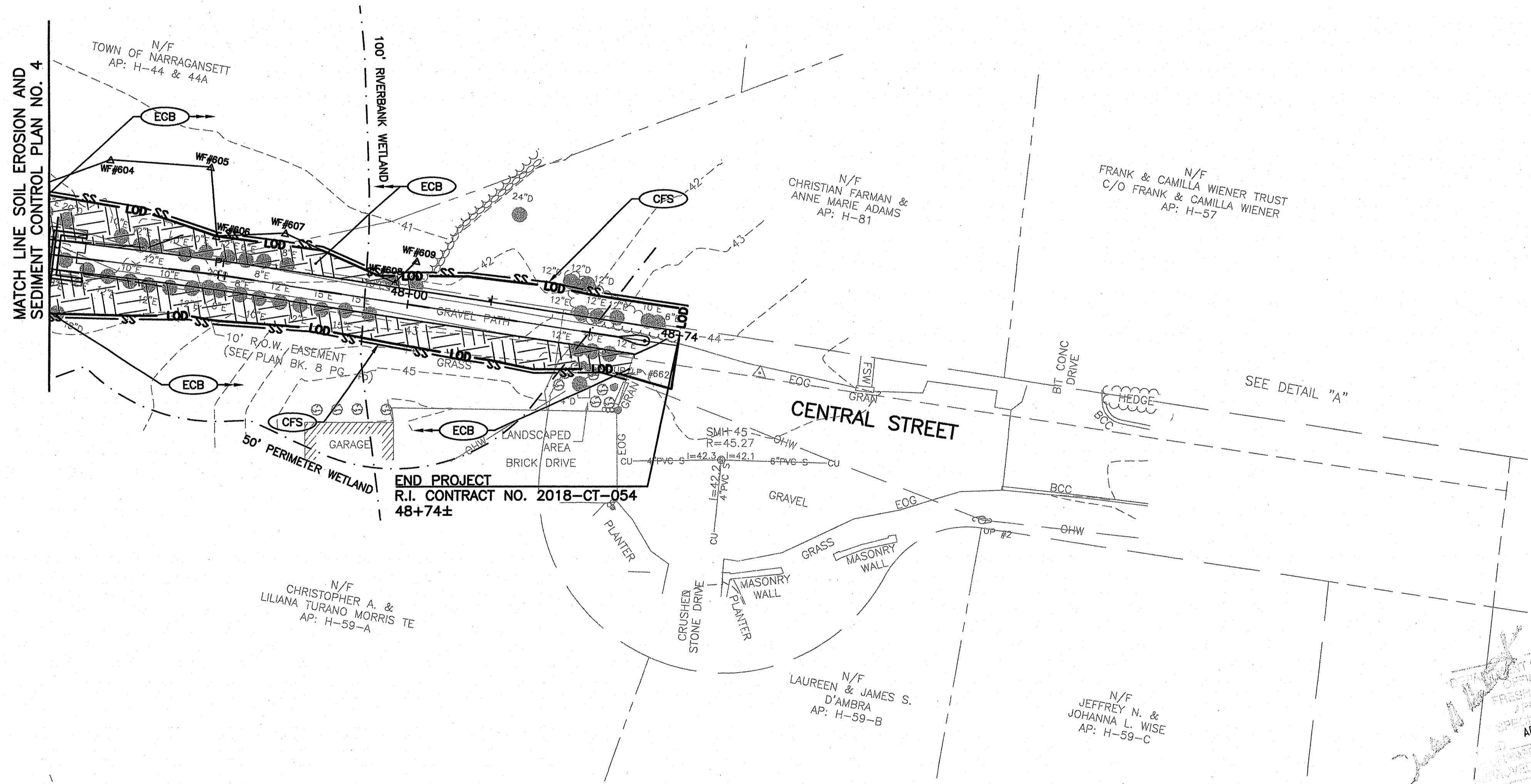
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

GRADE PLAN  
NO. 1

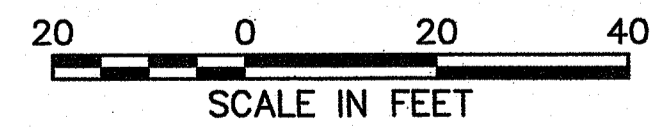
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 PERMITTED UNDER THE CLEAN WATER ACT  
 APPROVED WITH CONDITIONS  
 APR 5 2018  
 18-0171  
 PERMITS ALLOWED WITHOUT PRIOR APPROVAL  
 PROPOSED PLANS MUST BE AT CONSTRUCTION SITE

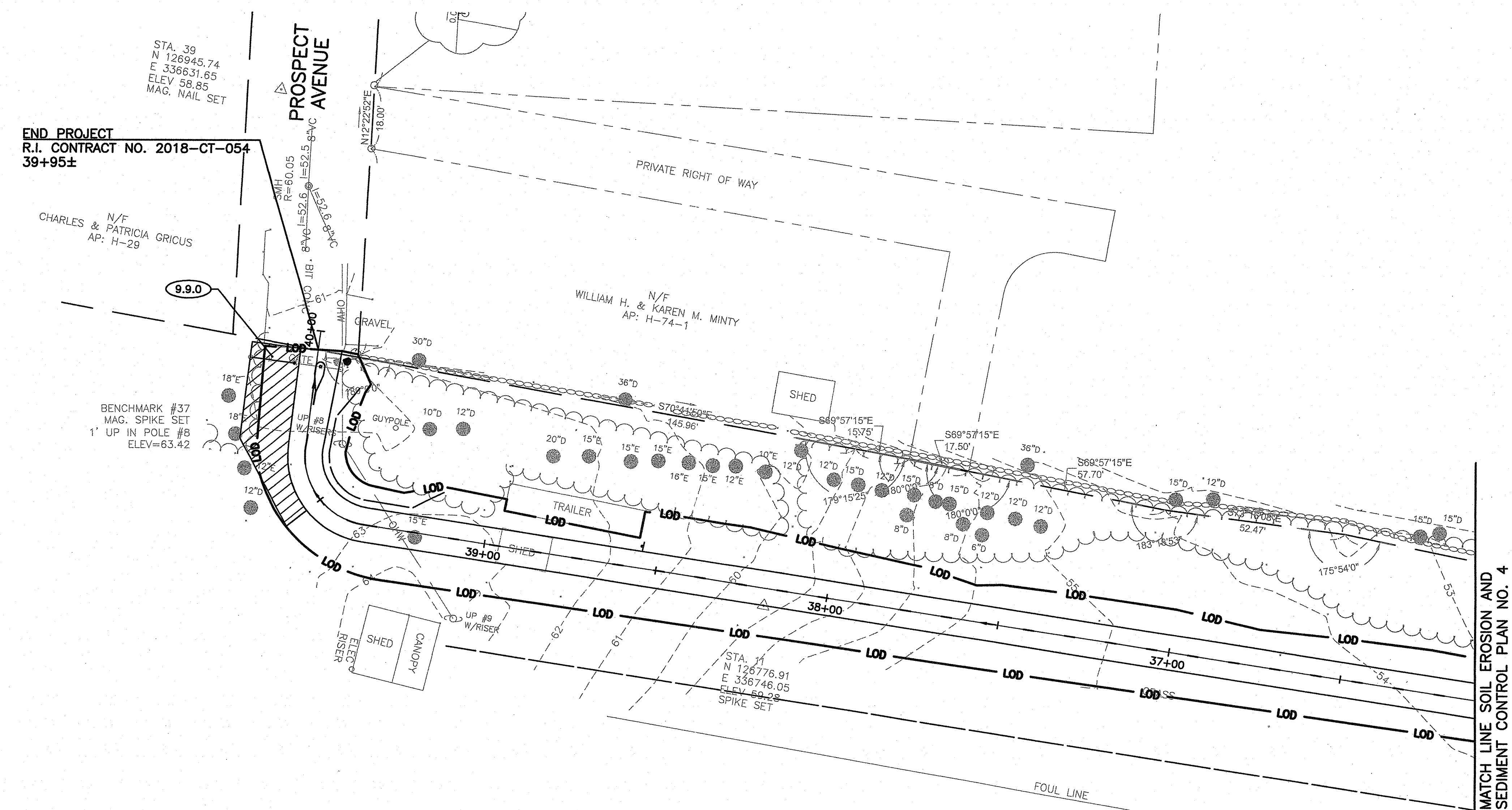


Environmental Management  
 DEC 20 2018  
 Office of Water Resources



REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 SOIL EROSION AND  
 SEDIMENT CONTROL PLAN  
 NO. 6  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

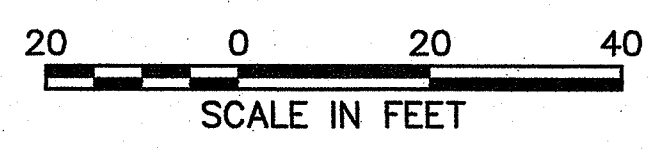


MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 4

Environmental Management  
DEC 20 2018  
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
OFFICE OF WATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATE: 6 2018 FILE # 18-014  
CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER  
(CIVIL)  
12-18-18



REVISIONS		
NO.	DATE	BY

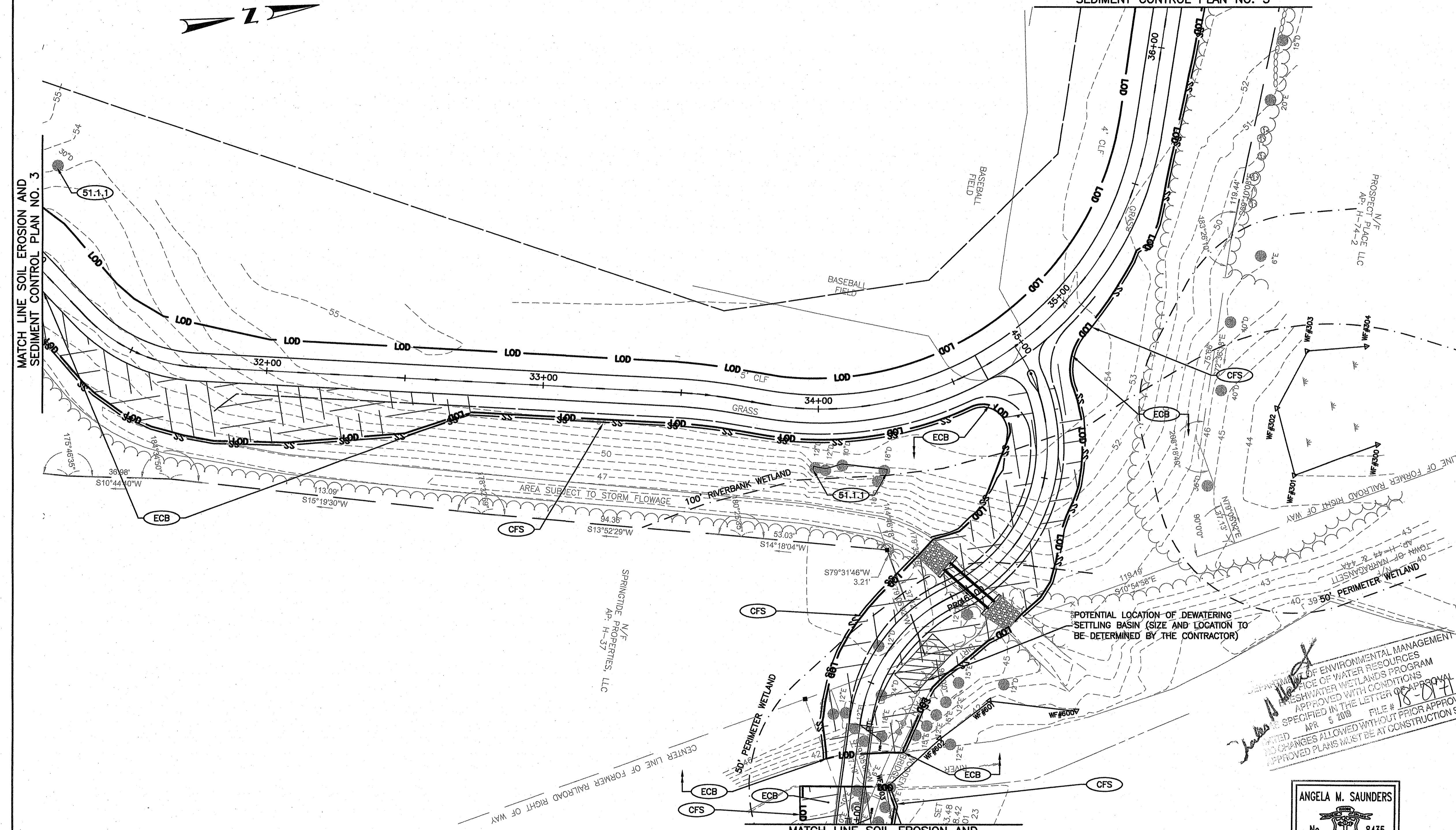
RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

SOIL EROSION AND  
SEDIMENT CONTROL PLAN  
NO. 5

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 5



GENERAL NOTES:

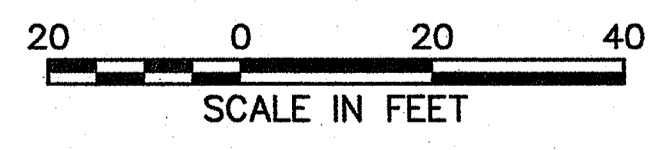
- WHEN REMOVING THE EXISTING BRIDGE, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DEBRIS FROM DROPPING INTO THE STREAM.
- THE CONTRACTOR'S ATTENTION IS DRAWN TO THE ENVIRONMENTAL SENSITIVITY OF THE STREAM AND SURROUNDING WETLANDS. THESE ARE DESIGNATED AS NO-DROP ZONES. THE CONTRACTOR SHALL TAKE FULL PRECAUTION TO PREVENT DEBRIS, TOOLS, MACHINERY AND/OR OTHER MATERIALS FROM ENTERING OR DROPPING INTO THE STREAM OUTSIDE THE ENCLOSED AREA. ALL DEBRIS SHALL BE PROMPTLY CLEANED UP, REMOVED AND DISPOSED OF FROM THE SITE.
- PRIOR TO INITIATING THE WORK, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, PLANS AND WRITTEN DOCUMENTATION DESCRIBING HIS OR HER METHODS OF REMOVAL OF WATER FROM THE ENCLOSED AREA AND FALSEWORK AND SHIELDING REQUIRED FOR THE ENVIRONMENTALLY SENSITIVE AREAS. APPROVAL OF THE CONTRACTOR'S PLAN SHALL NOT BE CONSIDERED AS RELIEVING THE CONTRACTOR OF ANY OF HIS/HER RESPONSIBILITY.
- ALL ACTIVITY FOR SUBSTRUCTURE CONSTRUCTION SHALL BE PERFORMED IN THE DRY CONDITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REMOVE THE WATER FROM THE ENCLOSED AREA BY PUMPING, DRAINING, BAILING, OR OTHER APPROVED METHOD. REMOVAL AND CLEANING OF WATER AND DEBRIS FROM THE ENCLOSED AREA AND DISPOSAL OF REMOVED ITEMS SHALL BE INCLUDED IN THE LUMP SUM COST OF "TEMPORARY SUPPORT OF EXCAVATION".
- THE LOCATION OF THE DEWATERING SETTLING BASIN SHOWN ON THE PLANS IS FOR ILLUSTRATION PURPOSES ONLY AND DOES NOT REPRESENT THE ACTUAL SIZE REQUIRED.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 DATED APR 5 2018 FILE # 18-074  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 6

Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 Professional Engineer (Civil)  
 12-18-18



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NO.	DATE	BY

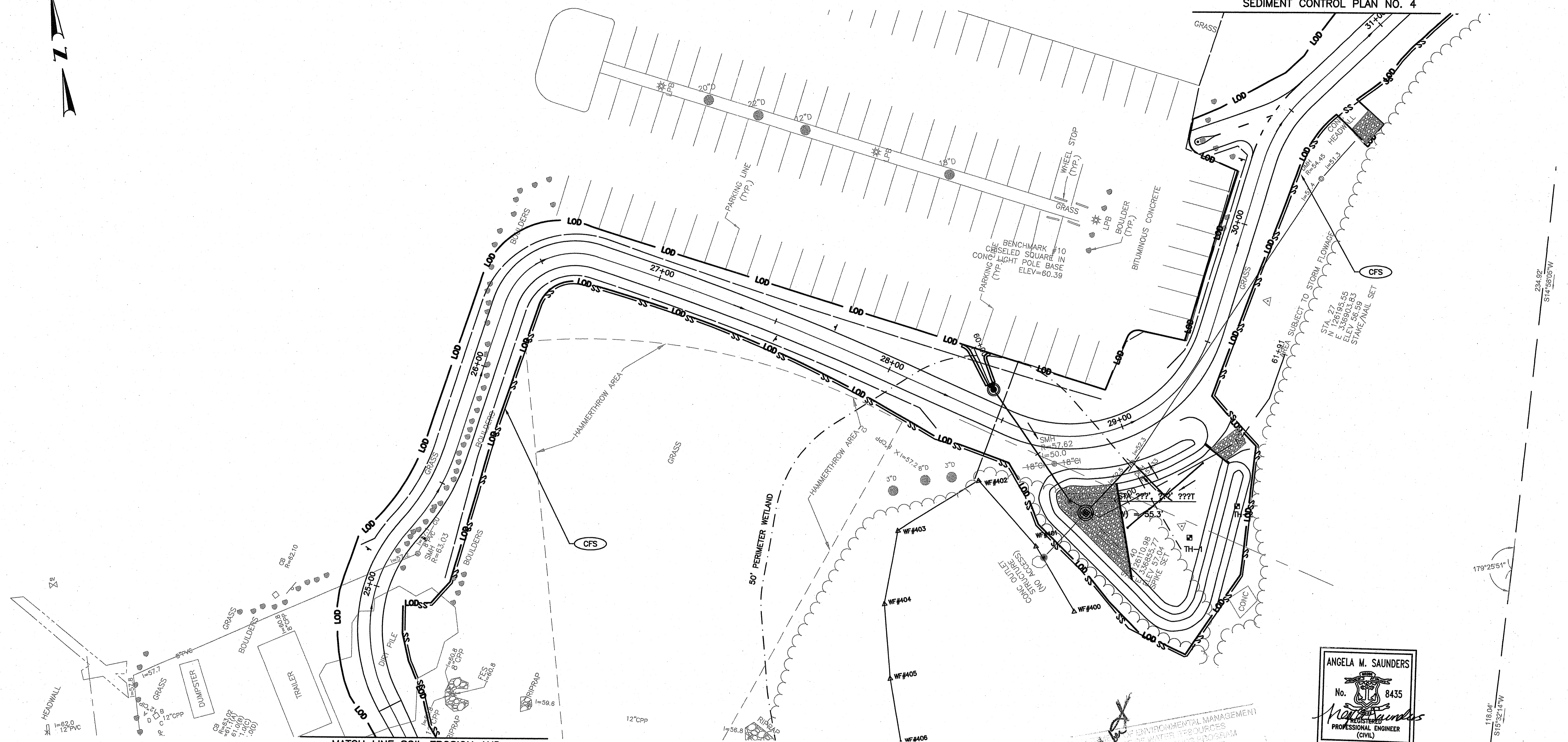
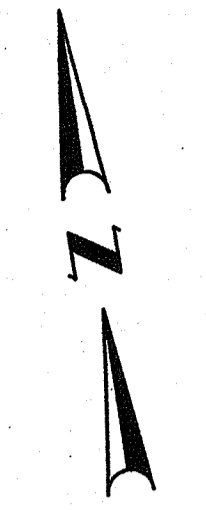
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

SOIL EROSION AND  
 SEDIMENT CONTROL PLAN  
 NO. 4

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

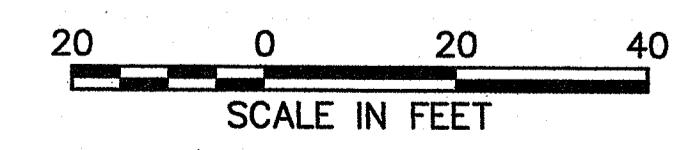
MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 4



MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 2

ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
12-18-18

ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
NARRAGANSETT PIER MIDDLE SCHOOL  
APR 5 2019  
18-0171



Environmental Management  
DEC 2 0 2018  
Office of Water Resources

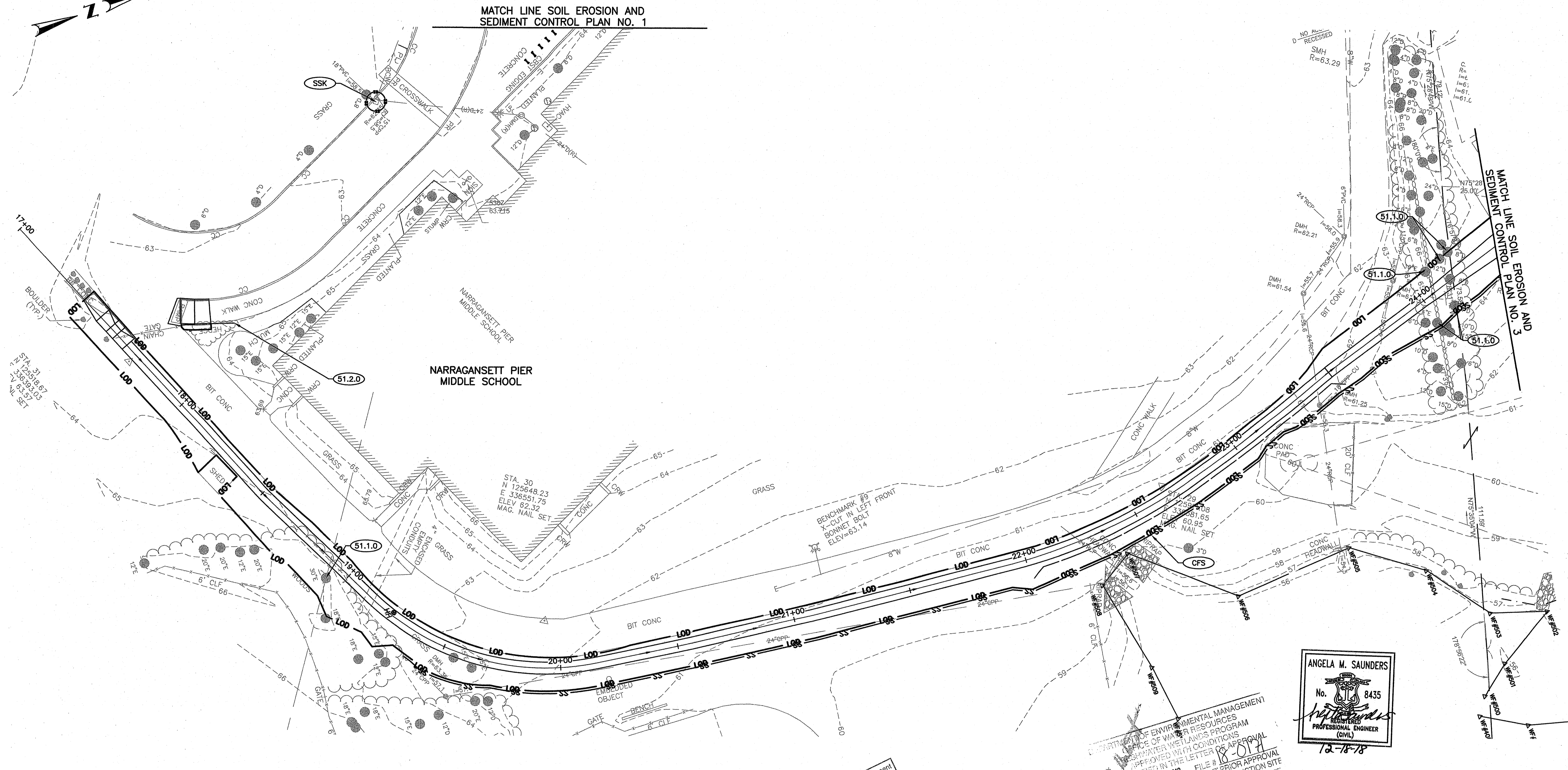


REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION  
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND  
SOIL EROSION AND  
SEDIMENT CONTROL PLAN  
NO. 3  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 1

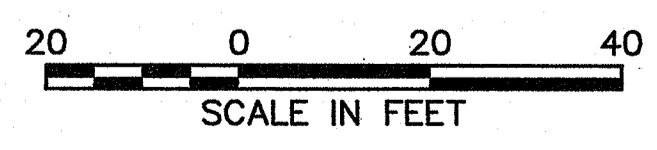
MATCH LINE SOIL EROSION AND SEDIMENT CONTROL PLAN NO. 3



ANGELA M. SAUNDERS  
 No. 8435  
 PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 WETLANDS PERMITTING PROGRAM  
 APPROVED WITH CONDITIONS  
 REQUIRED IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-014  
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Environmental Management  
 DEC 20 2018  
 Office of Water Resources



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NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

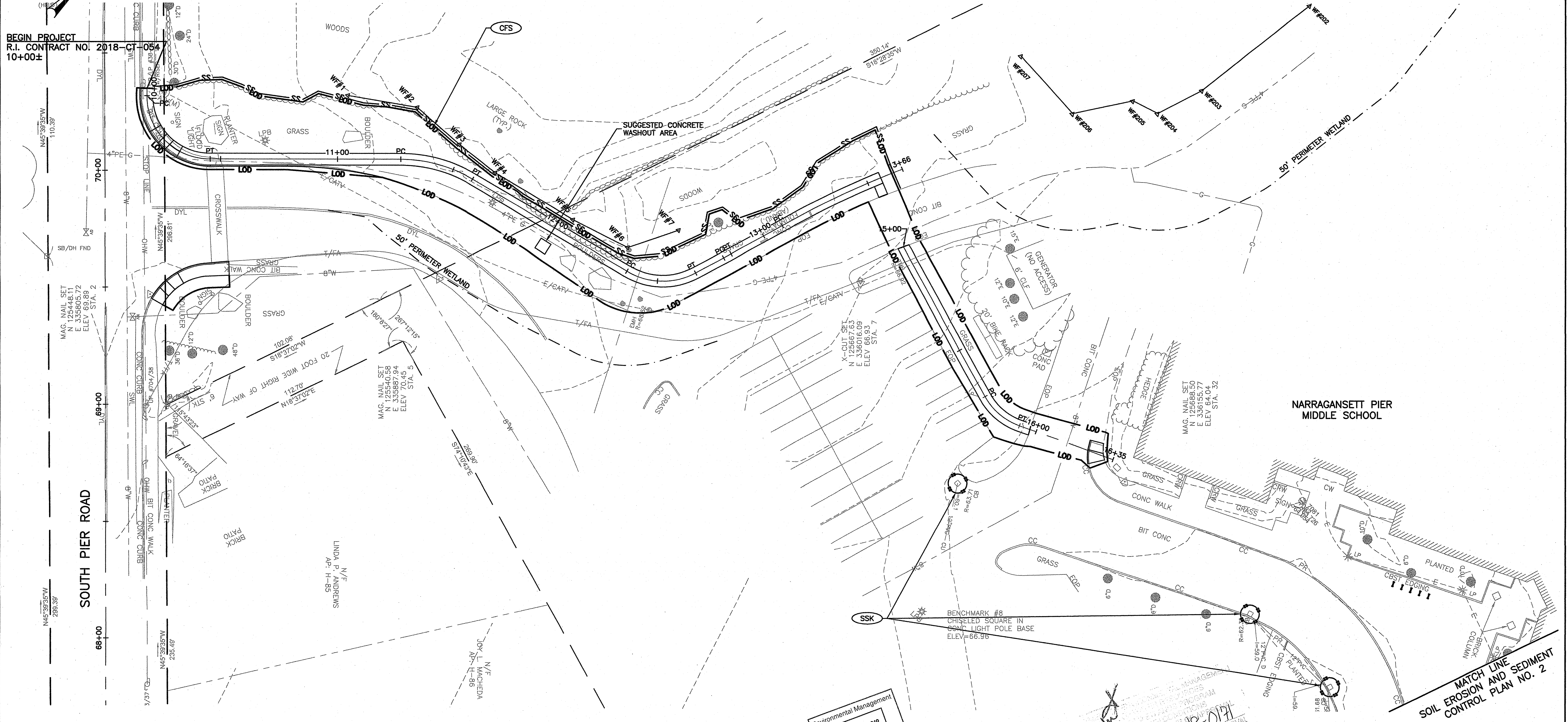
SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

SOIL EROSION AND  
 SEDIMENT CONTROL PLAN  
 NO. 2



CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

BEGIN PROJECT  
R.I. CONTRACT NO. 2018-CT-054  
10+00±



Environmental Management  
DEC 20 2018  
Office of Water Resources

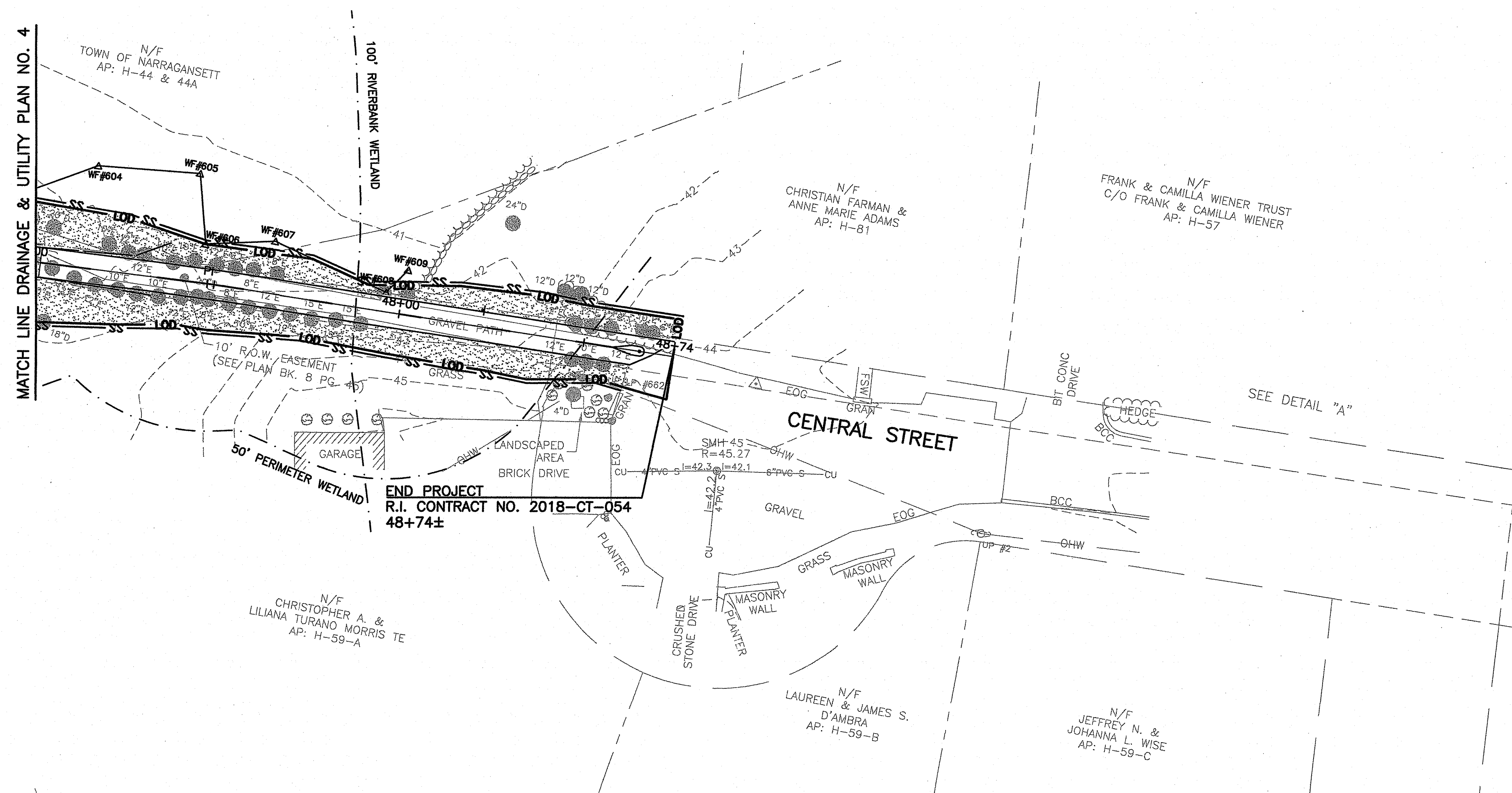
ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
12-18-18

20 0 20 40  
SCALE IN FEET

**MCMAHON**  
CONSTRUCTION ENGINEERING CONSULTANTS

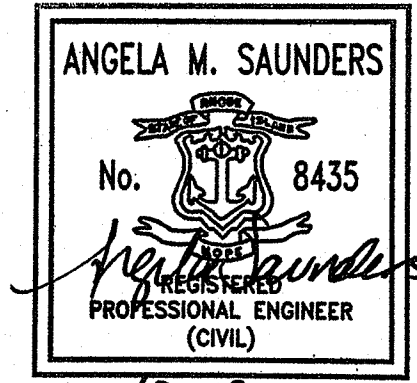
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION  
  
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND  
  
SOIL EROSION AND  
SEDIMENT CONTROL PLAN  
NO. 1  
  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



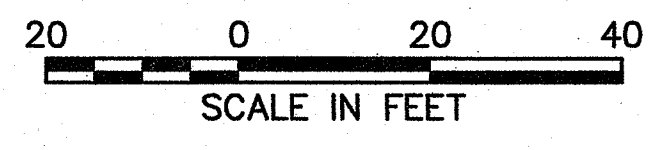
END PROJECT  
R.I. CONTRACT NO. 2018-CT-054  
48+74±

APPROVED FOR CONSTRUCTION  
R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
APPROVED WITH CONDITIONS  
SPECIFIED IN THE LETTER OF APPROVAL  
APR 5 2019 FILE # 18-014  
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE



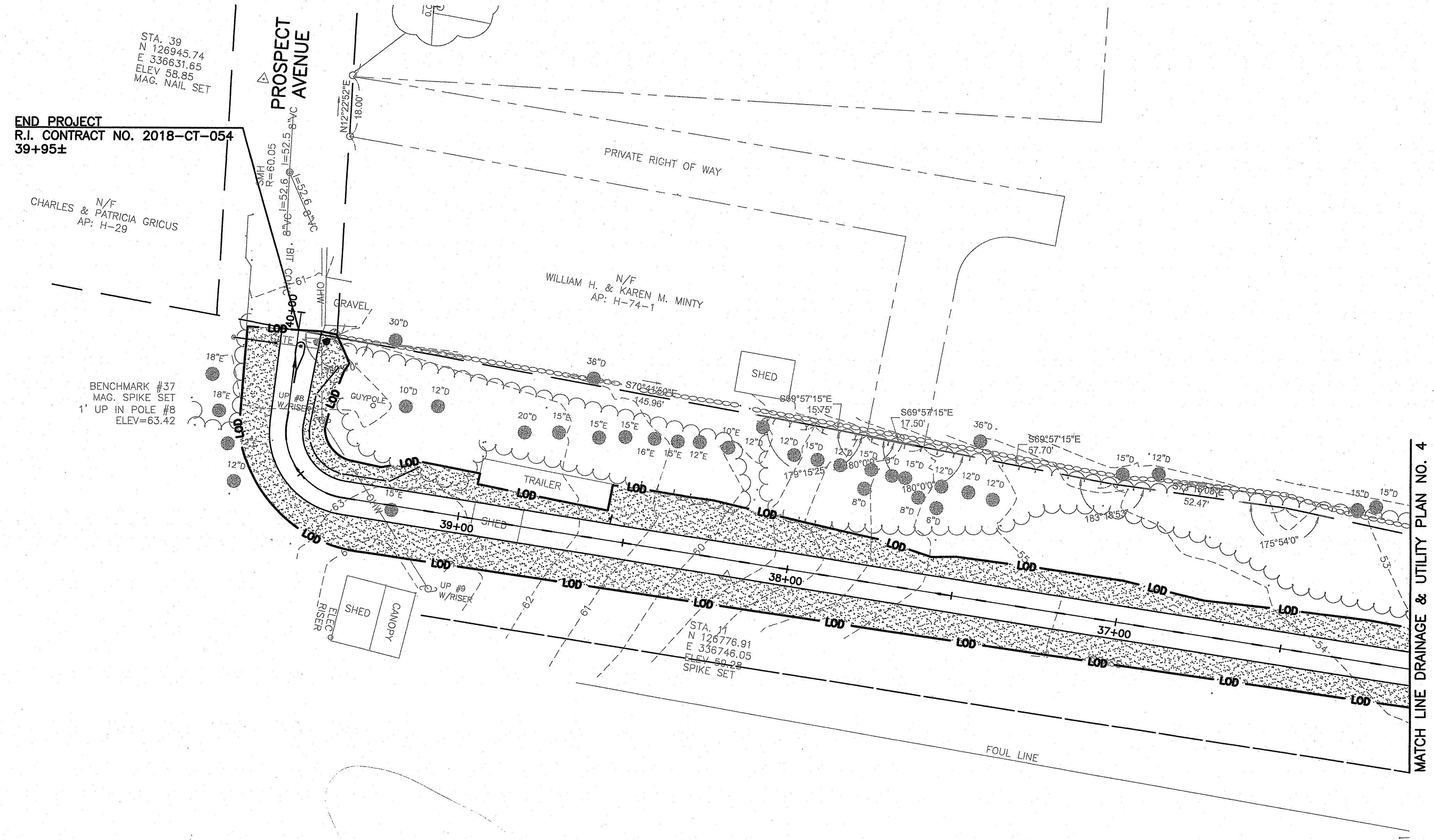
12-18-18

Environmental Management  
DEC 20 2018  
Office of Water Resources



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RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION  
  
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND  
  
DRAINAGE & UTILITY PLAN  
NO. 6  
  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



MATCH LINE DRAINAGE & UTILITY PLAN NO. 4

END PROJECT  
R.I. CONTRACT NO. 2018-CT-054  
39+95±

N/F  
CHARLES & PATRICIA GRICUS  
AP: H-29

N/F  
WILLIAM H. & KAREN M. MINTY  
AP: H-74-1

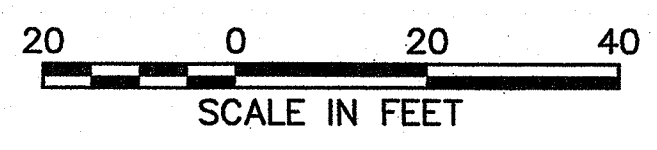
BENCHMARK #37  
MAG. SPIKE SET  
1' UP IN POLE #8  
ELEV=63.42

STA. 11  
N 126776.91  
E 336746.05  
ELEV 50.08  
SPIKE SET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
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DATED APR 5 2018 FILE # 18-014  
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ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
10-15-18

Environmental Management  
DEC 20 2018  
Office of Water Resources



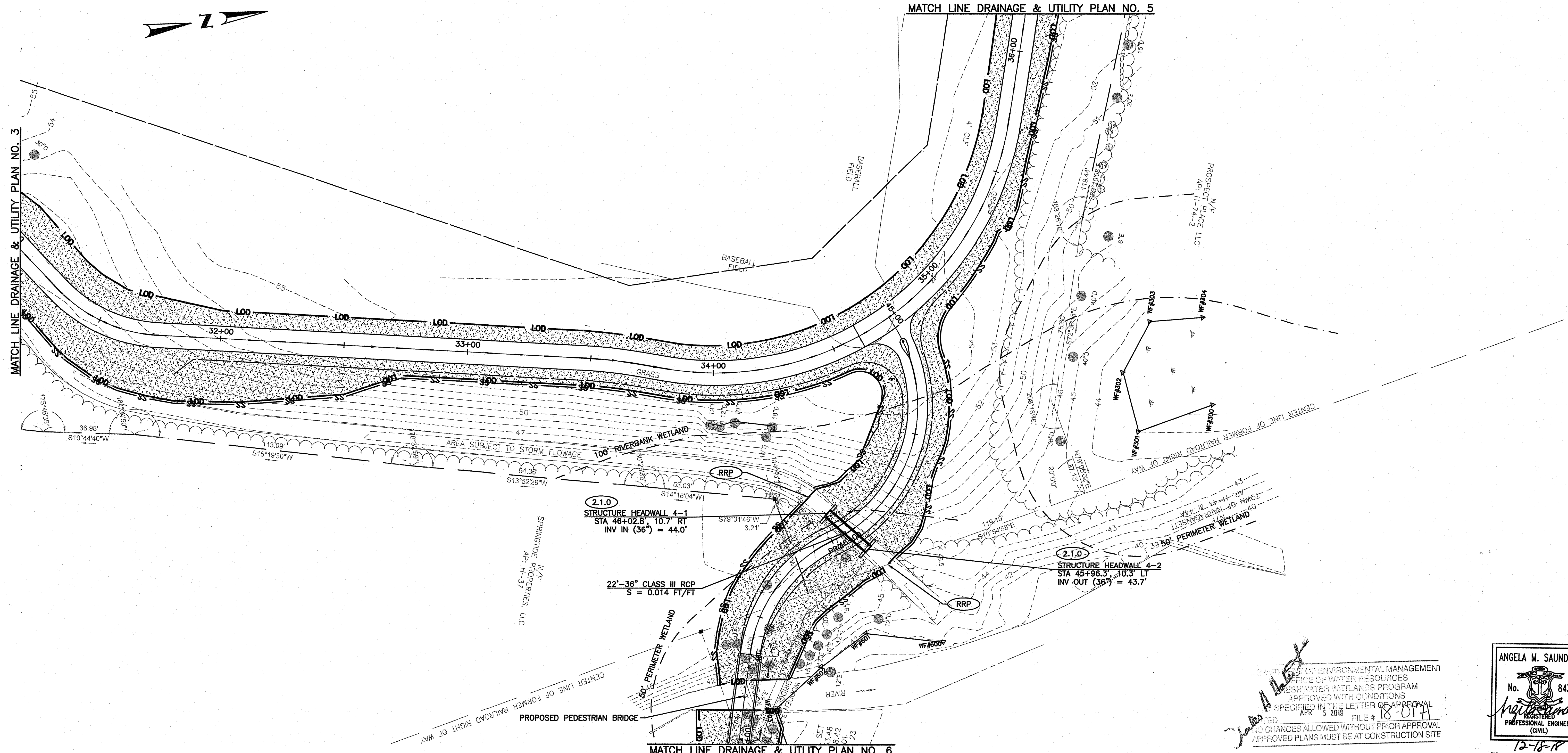
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

DRAINAGE & UTILITY PLAN  
NO. 5

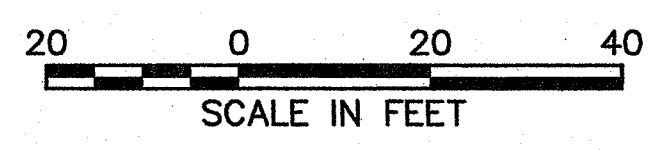
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
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 APR 5 2019 FILE # 18-014  
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ANGELA M. SAUNDERS  
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 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

Environmental Management  
 DEC 20 2018  
 Office of Water Resources



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NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
**DRAINAGE & UTILITY PLAN  
 NO. 4**  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	23	54



MATCH LINE DRAINAGE & UTILITY PLAN NO. 4

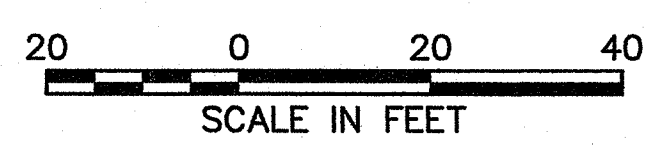
MATCH LINE DRAINAGE & UTILITY PLAN NO. 2



234.92' S14°56'05"W  
 179°25'51"  
 118.04' S15°32'14"W

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

*John A. [Signature]*  
 COMMERCIAL MANAGEMENT  
 STATE OF RHODE ISLAND  
 DEPARTMENT OF WATER RESOURCES  
 PERMITTER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 SPECIFIC IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-0174  
 ANY CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



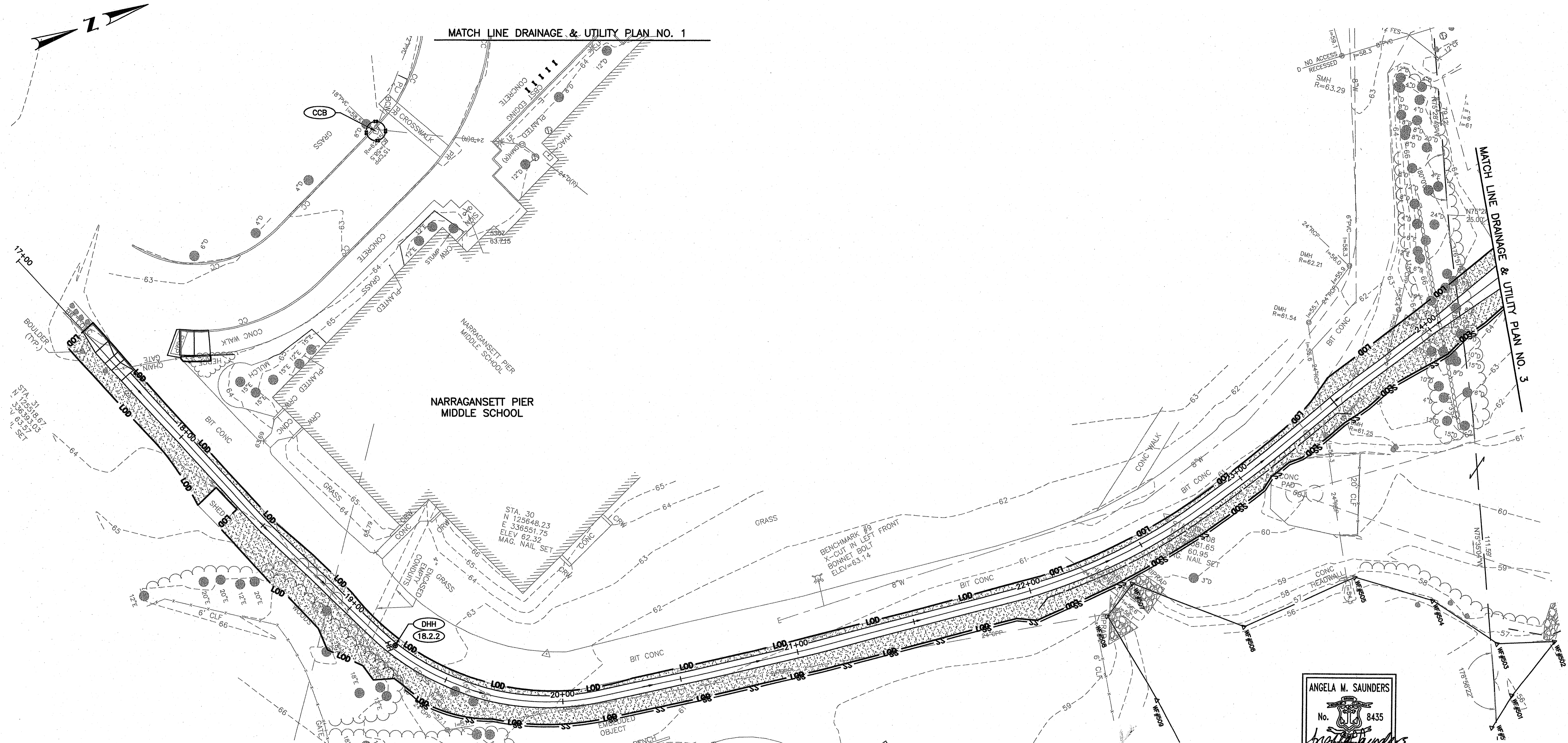
Environmental Management  
 DEC 2 0 2018  
 Office of Water Resources



REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 DRAINAGE & UTILITY PLAN  
 NO. 3  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
RI	CCC-BBB(AAA)	2018	22	54	



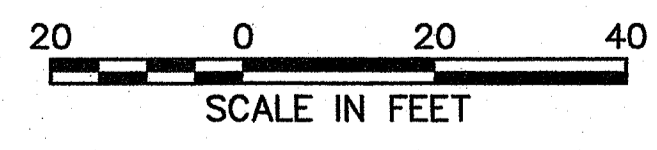
MATCH LINE DRAINAGE & UTILITY PLAN NO. 1

MATCH LINE DRAINAGE & UTILITY PLAN NO. 3

NARRAGANSETT PIER MIDDLE SCHOOL

Environmental Management  
DEC 2 0 2018  
Office of Water Resources

APR 5 2019  
18-0171



ANGELA M. SAUNDERS  
No. 8435  
PROFESSIONAL ENGINEER (CIVIL)  
12-18-18

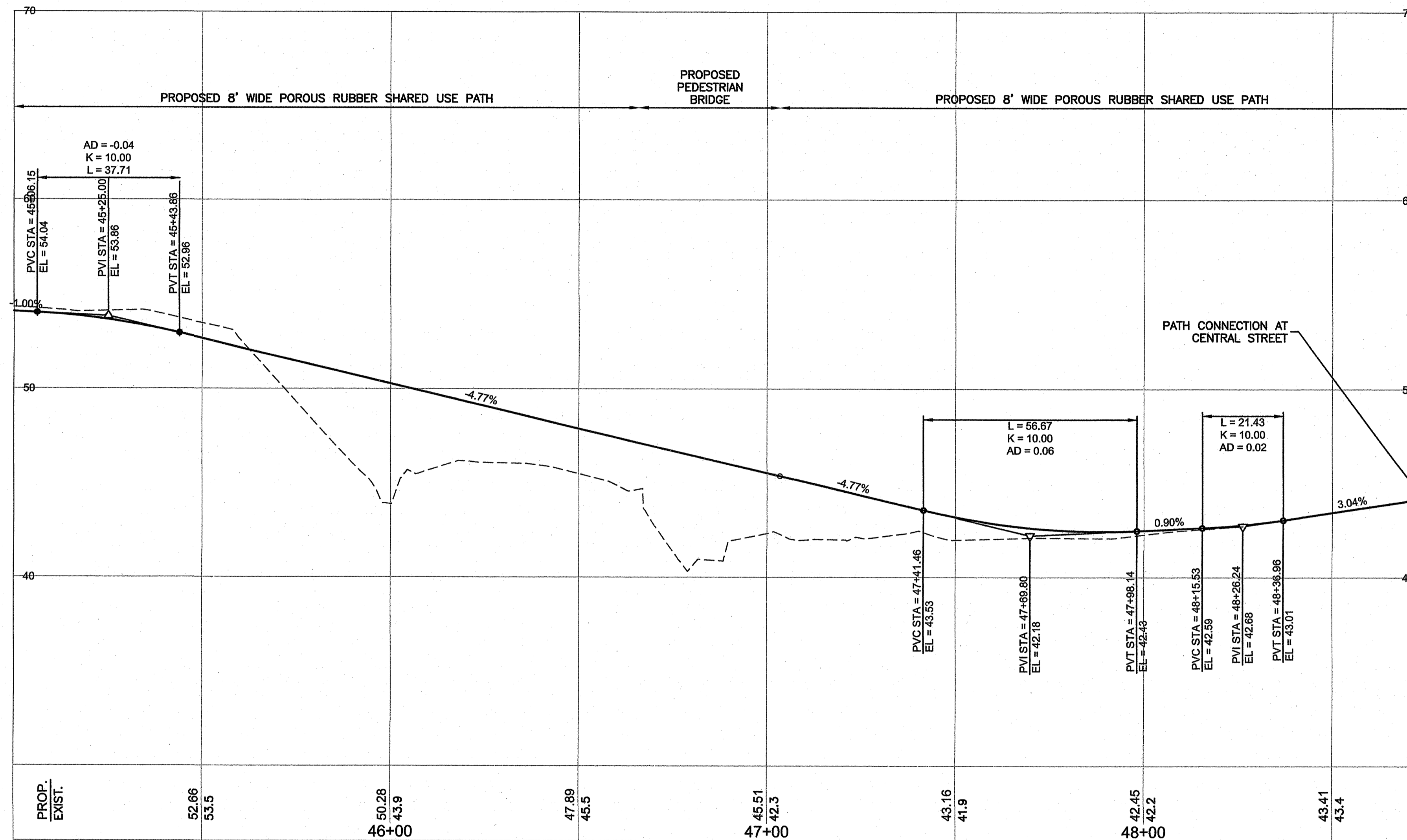
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION  
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND  
DRAINAGE & UTILITY PLAN  
NO. 2

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'







SHARED USE PATH PROFILE - CENTRAL STREET BRANCH

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED APR 5 2019 FILE # 18-017  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
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Environmental Management  
 DEC 20 2018  
 Office of Water Resources

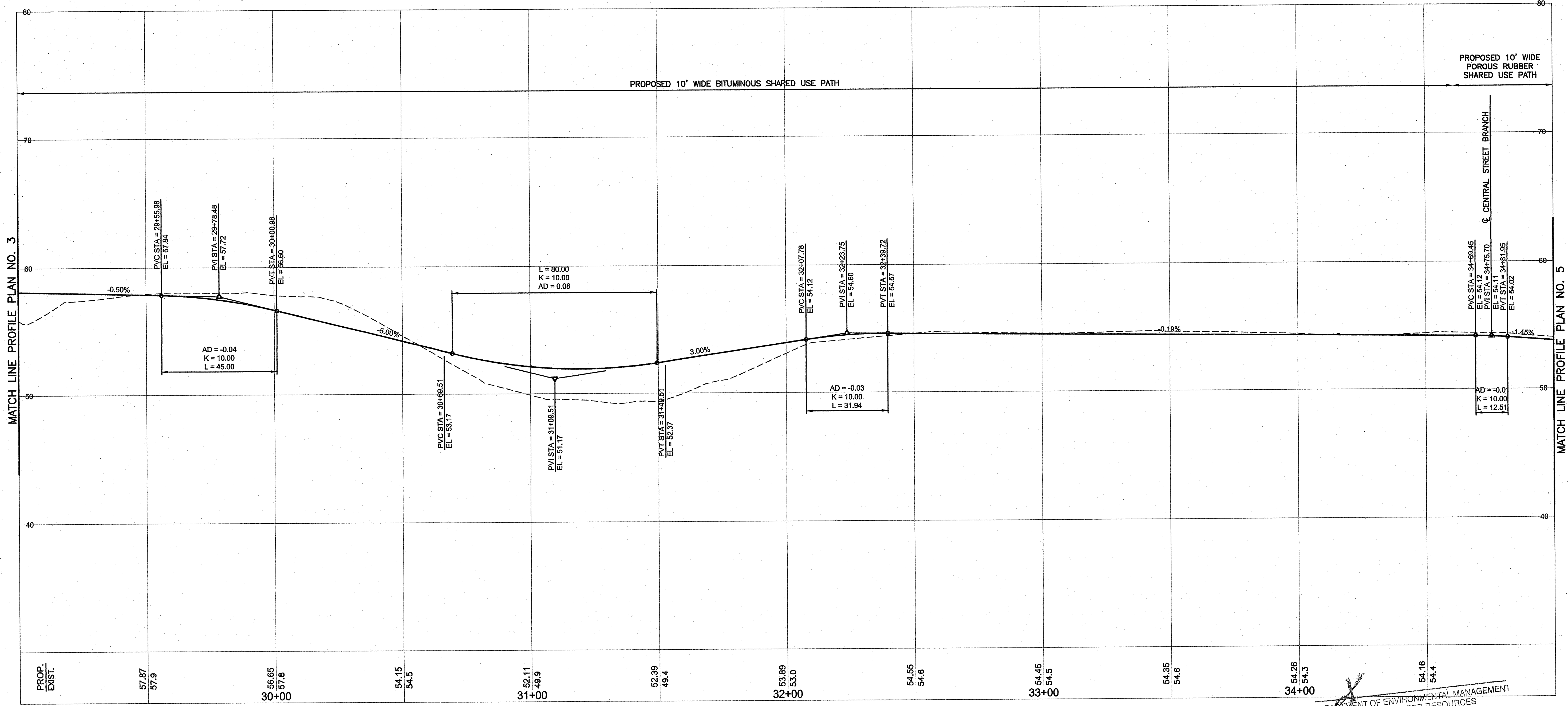
ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER  
 (CIVIL)  
 12-18-18



REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS NARRAGANSETT PIER MIDDLE SCHOOL NARRAGANSETT, RHODE ISLAND	
PROFILE PLAN NO. 6	
CHECKED BY	DATE





SHARED USE PATH PROFILE - MAIN BRANCH

Environmental Management  
DEC 2 0 2018  
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED APR 5 2019 FILE # 18-0171  
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ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
12-18-18



REVISIONS		
NO.	DATE	BY

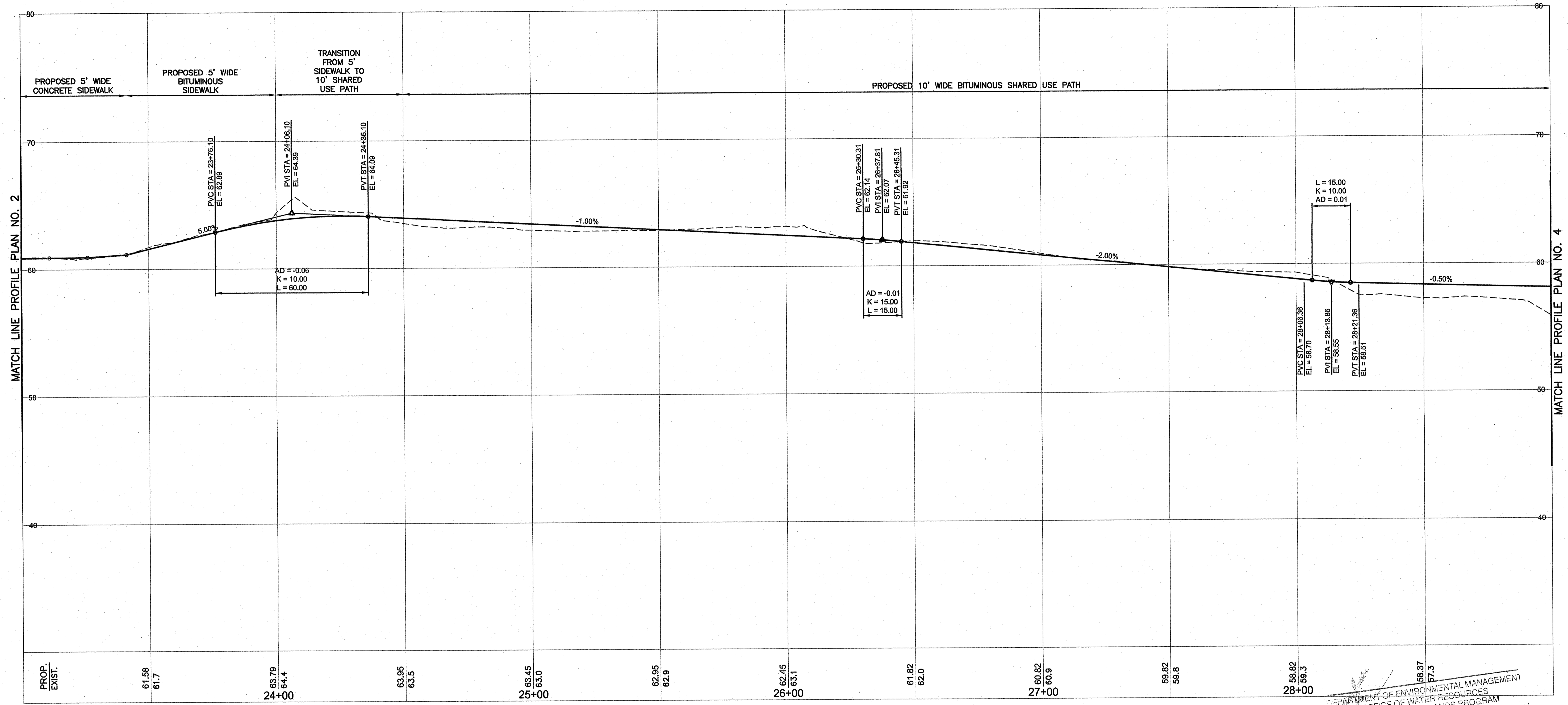
RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

PROFILE PLAN  
NO. 4

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE H:1"=20'  
V:1"=4'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	17	54



Environmental Management  
**DEC 20 2018**  
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
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APR 5 2019  
FILE # 18-014  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
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SHARED USE PATH PROFILE — MAIN BRANCH

ANGELA M. SAUNDERS  
No. 8435  
PROFESSIONAL ENGINEER  
(CIVIL)  
12-18-18



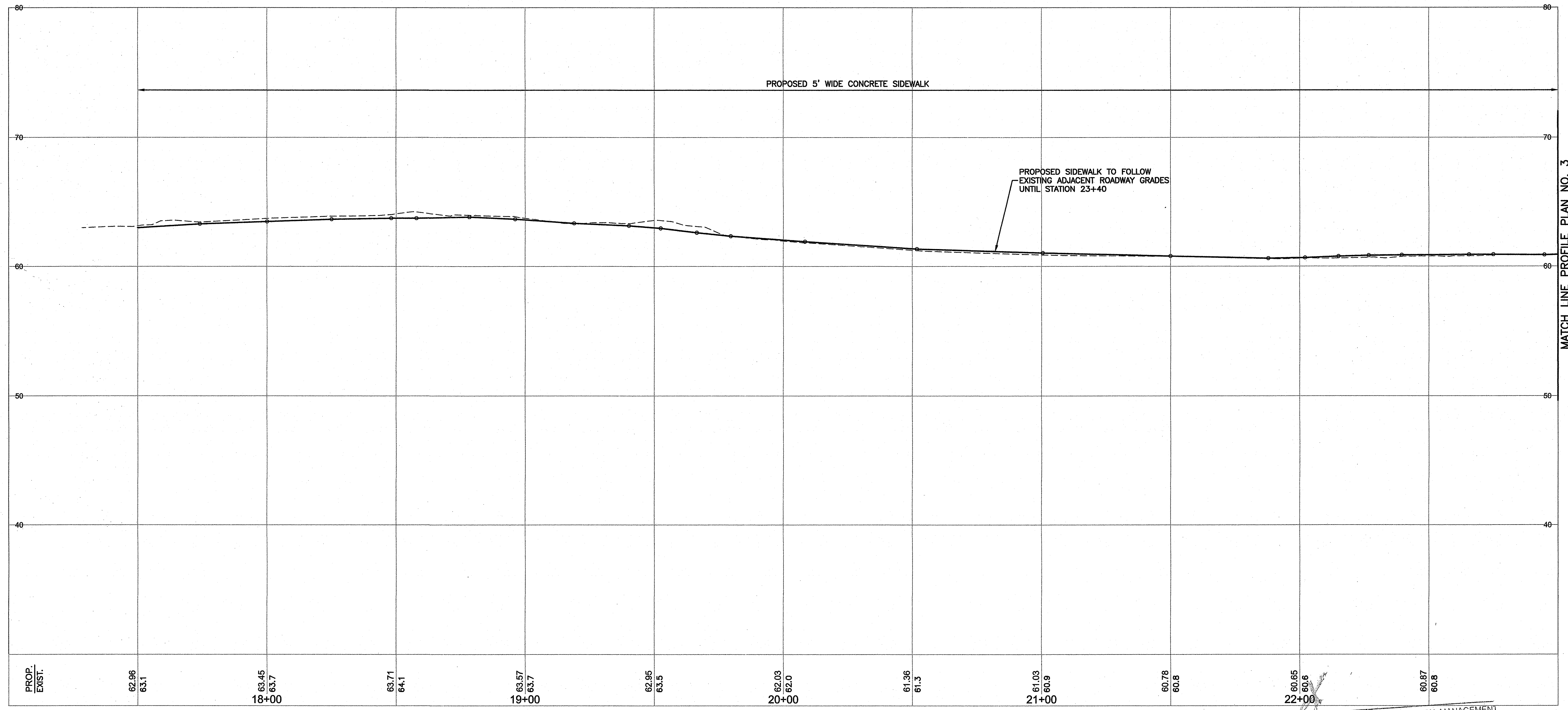
REVISIONS		
NO.	DATE	BY

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS**  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

**PROFILE PLAN NO. 3**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE \_\_\_\_\_



SHARED USE PATH PROFILE - MAIN BRANCH

Environmental Management  
Office of Water Resources  
DEC 20 2018

ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
12-18-18

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
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DATED APR 5 2019 FILE # 18-0171  
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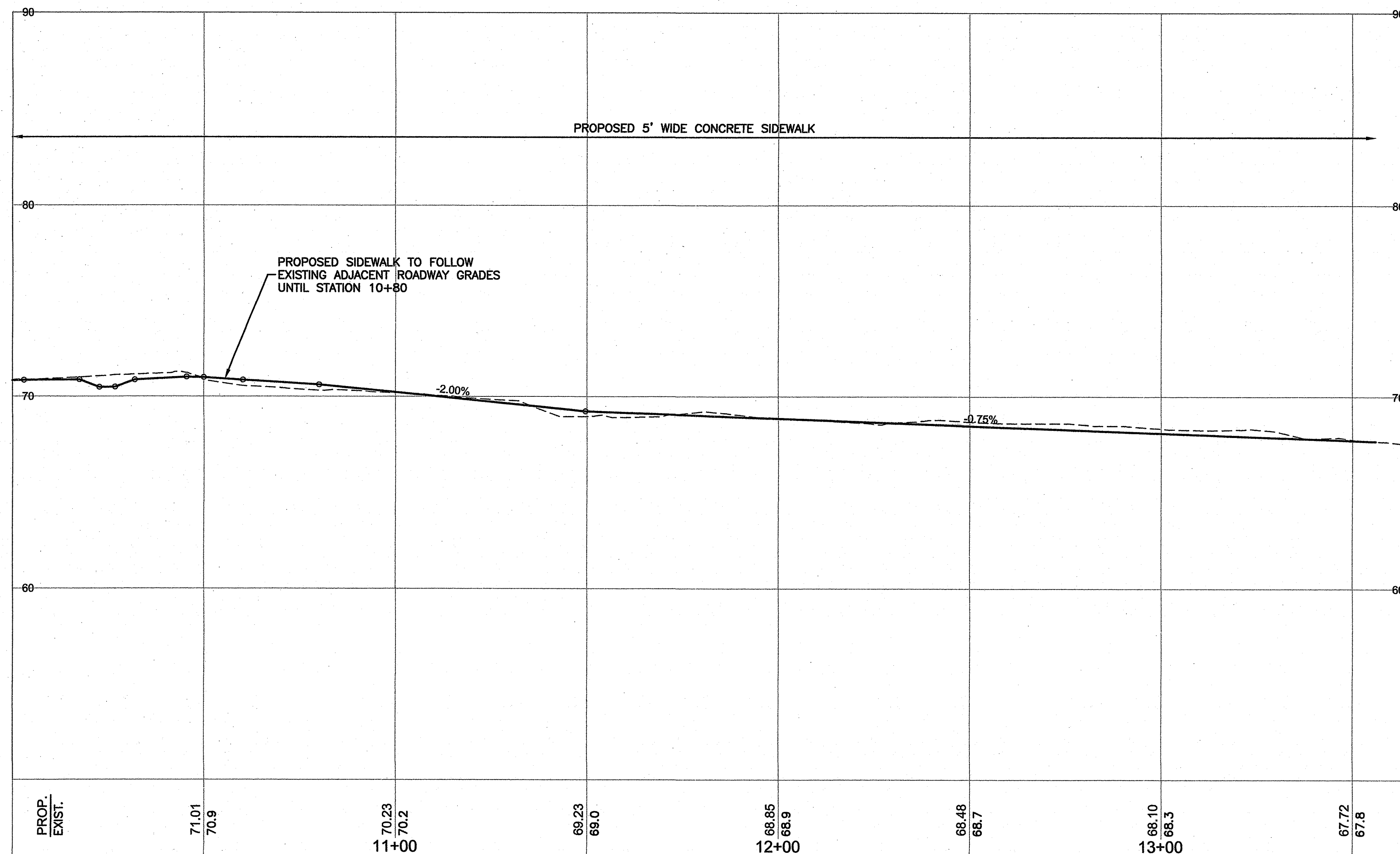
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

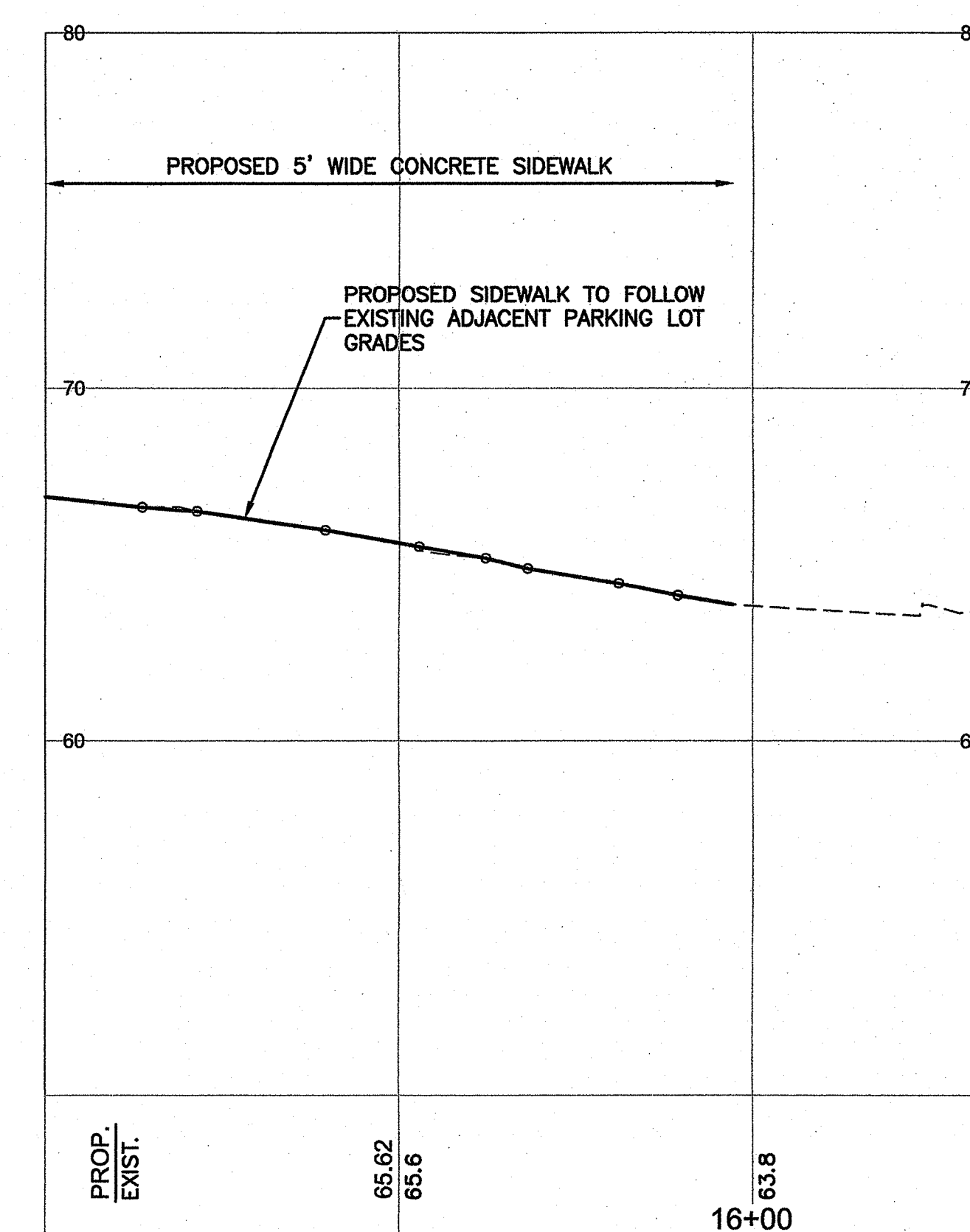
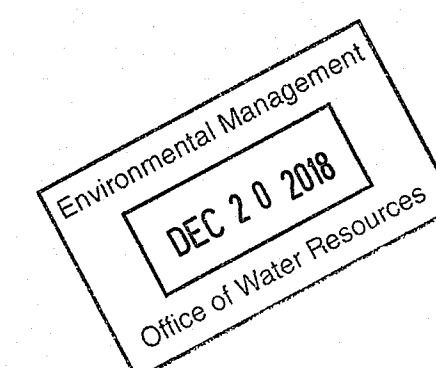
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

PROFILE PLAN  
NO. 2

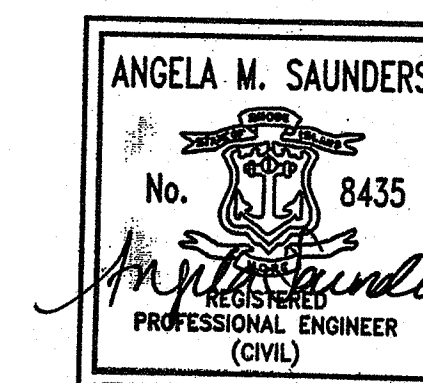
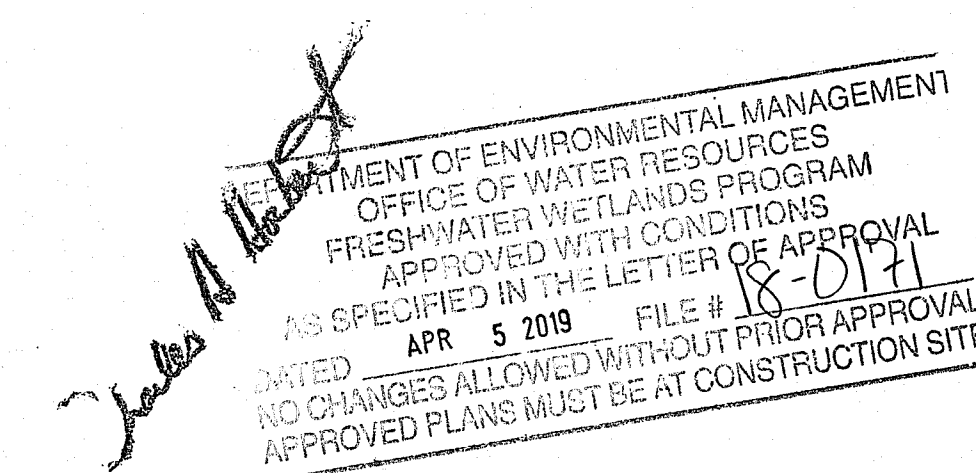
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE H:1"=20'  
V:1"=4'



**SIDEWALK PROFILE –  
NARRAGANSETT PIER MIDDLE SCHOOL ENTRANCE**



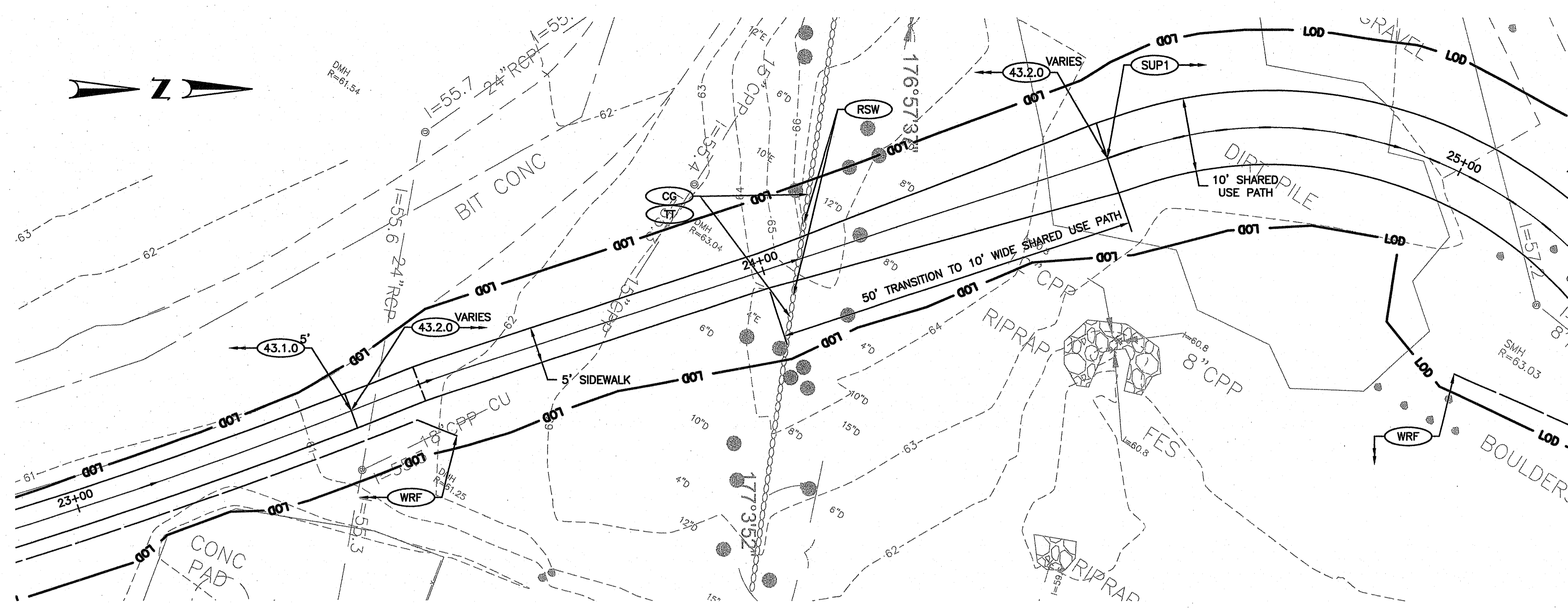
**SIDEWALK PROFILE –  
NARRAGANSETT PIER MIDDLE SCHOOL INTERIOR**



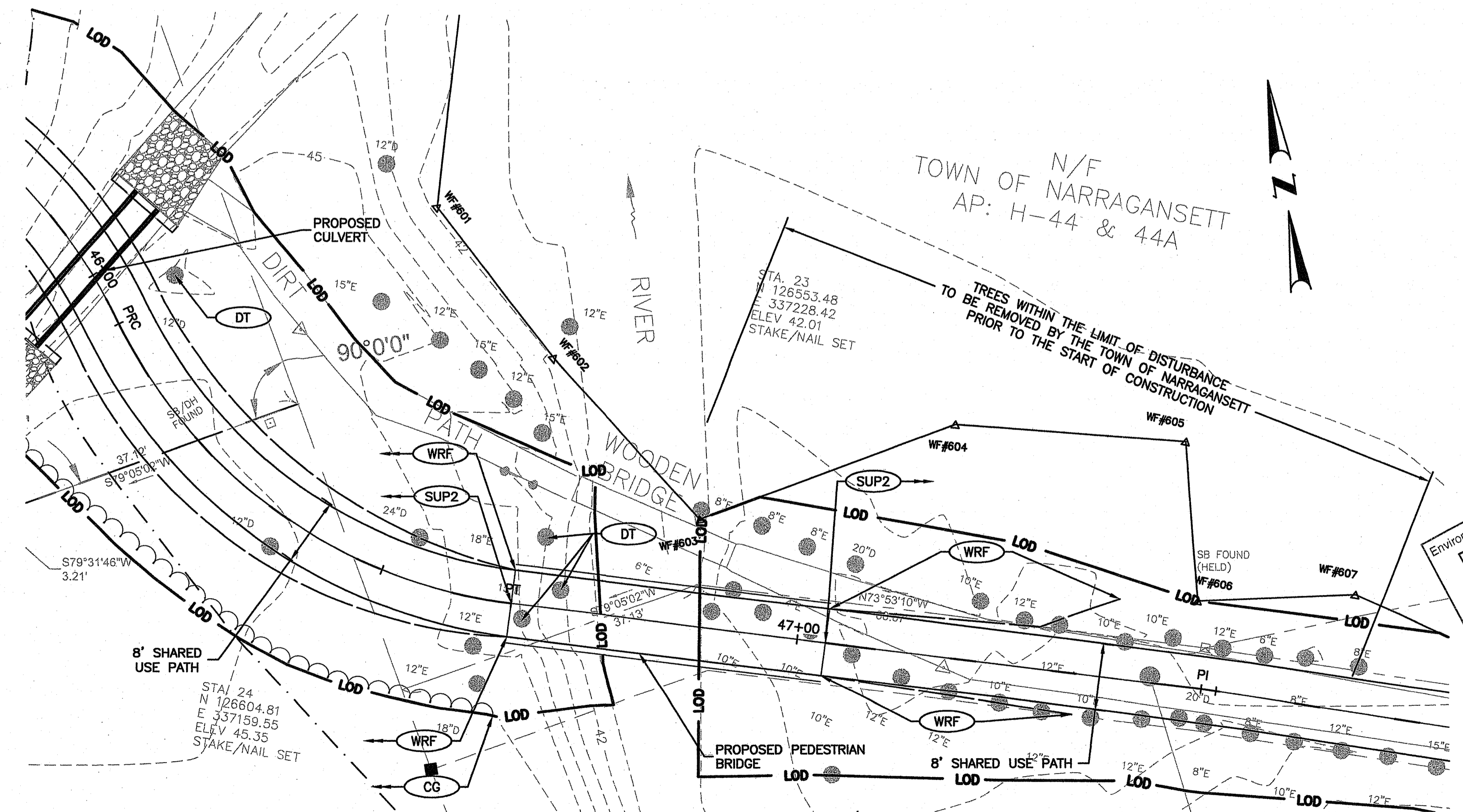
12-18-18

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
			SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS NARRAGANSETT PIER MIDDLE SCHOOL NARRAGANSETT, RHODE ISLAND
			PROFILE PLAN NO. 1
			CHECKED BY _____ DATE _____ SCALE $\frac{H:1}{V:1} = \frac{20'}{4'}$





**MAIN PATH TRANSITION DETAIL**  
 CONCRETE SIDEWALK TO BITUMINOUS SIDEWALK - STA. 23+40  
 BITUMINOUS SIDEWALK TO BITUMINOUS SHARED USE PATH - STA. 24+50

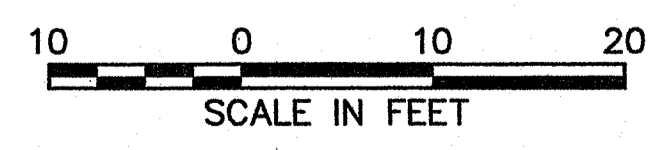


**CENTRAL STREET BRANCH TRANSITION DETAIL**  
 POROUS RUBBER SHARED USE PATH TO PEDESTRIAN BRIDGE - STA. 46+66  
 PEDESTRIAN BRIDGE TO POROUS RUBBER SHARED USE PATH - STA. 47+03

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

Environmental Management  
 DEC 20 2018  
 Office of Water Resources



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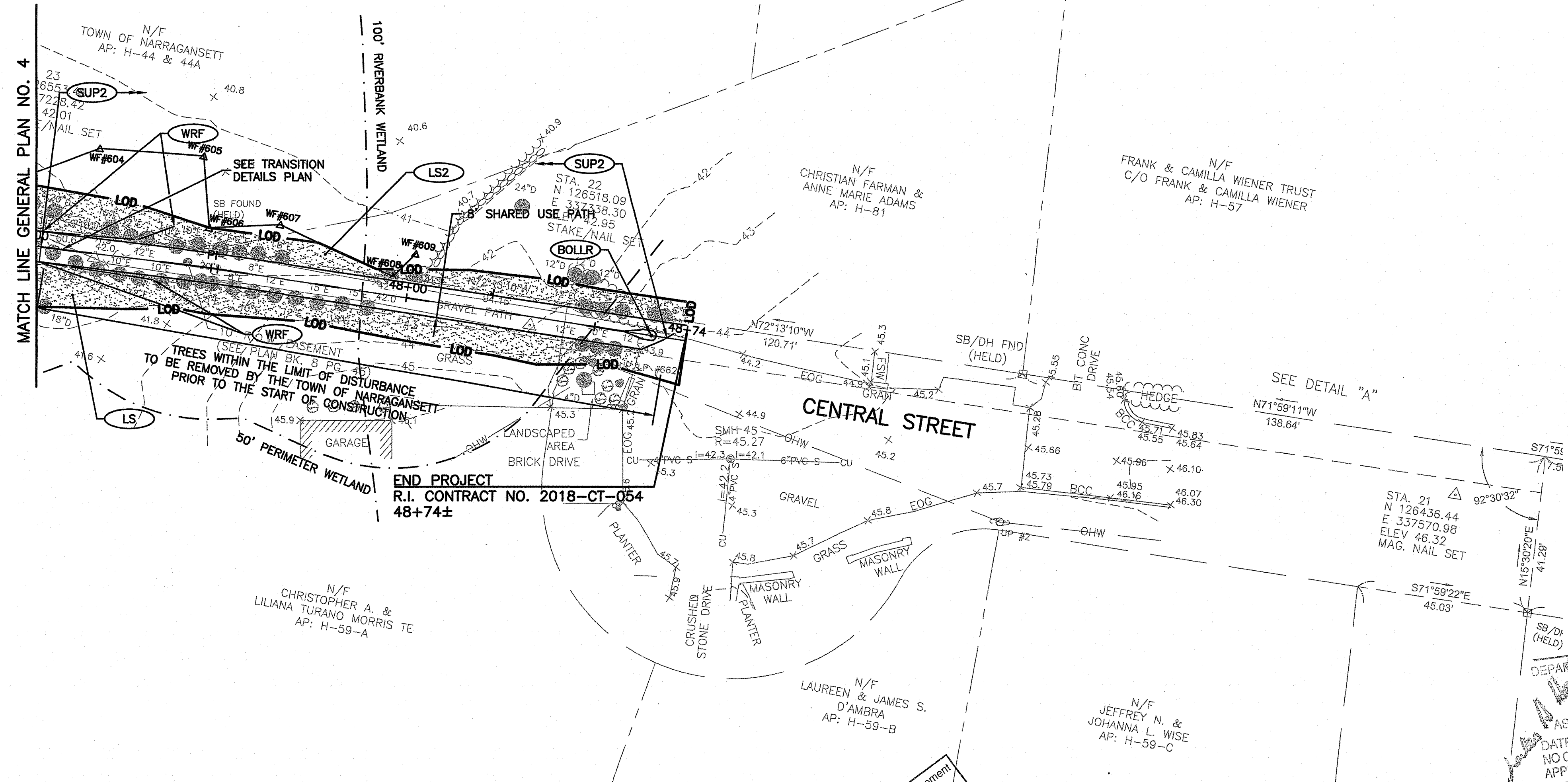
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

**SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS**  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

**TRANSITION DETAILS  
 PLAN**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=10'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	13	54

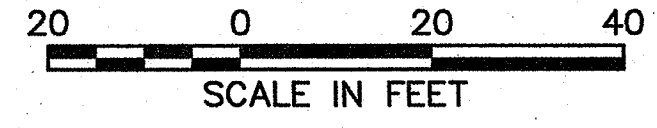


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
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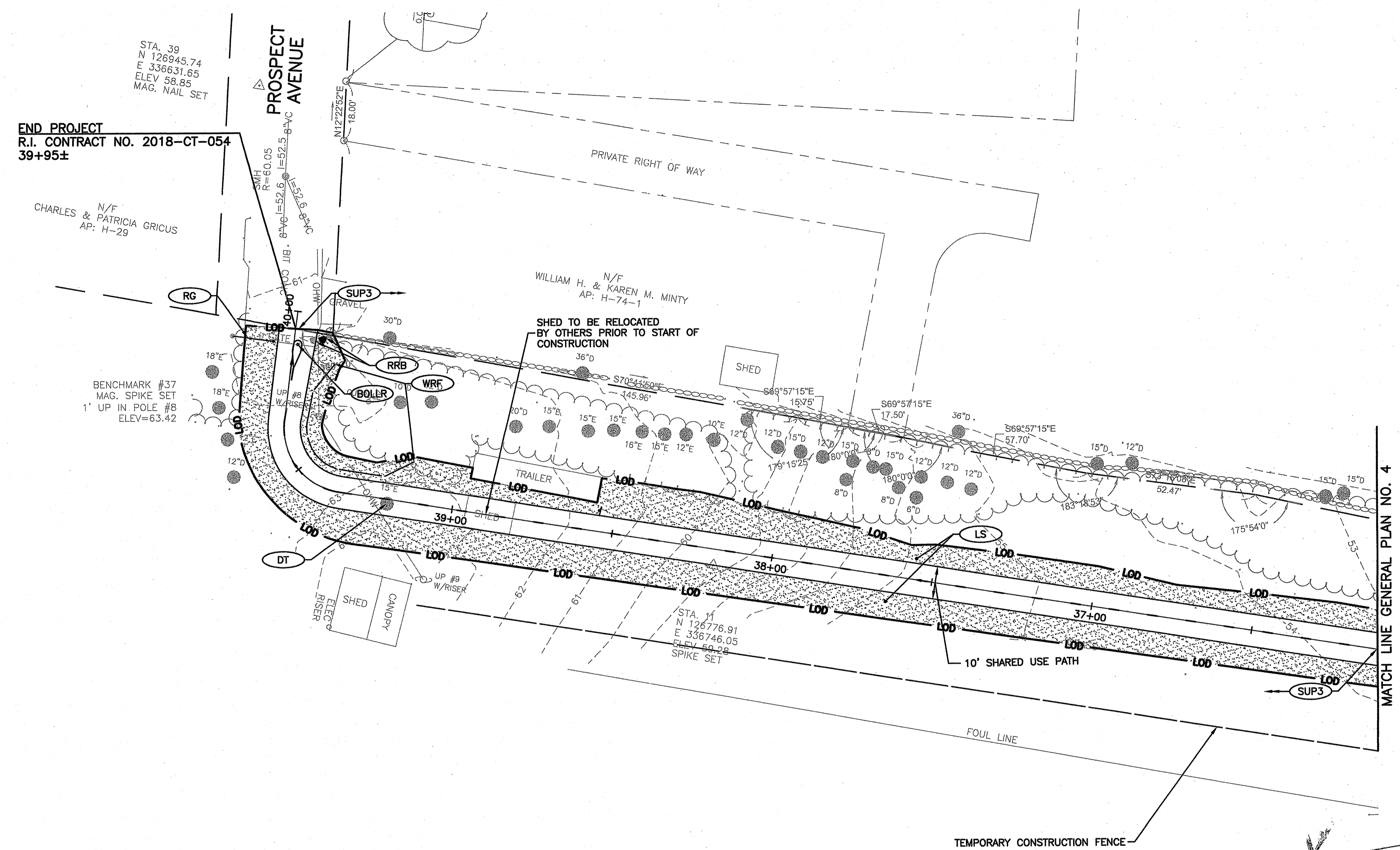
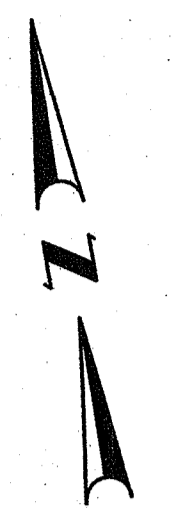
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

GENERAL PLAN  
 NO. 6

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



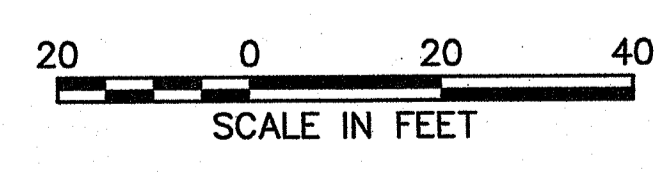


MATCH LINE GENERAL PLAN NO. 4

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
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12-18-18

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DEC 20 2018  
Office of Water Resources



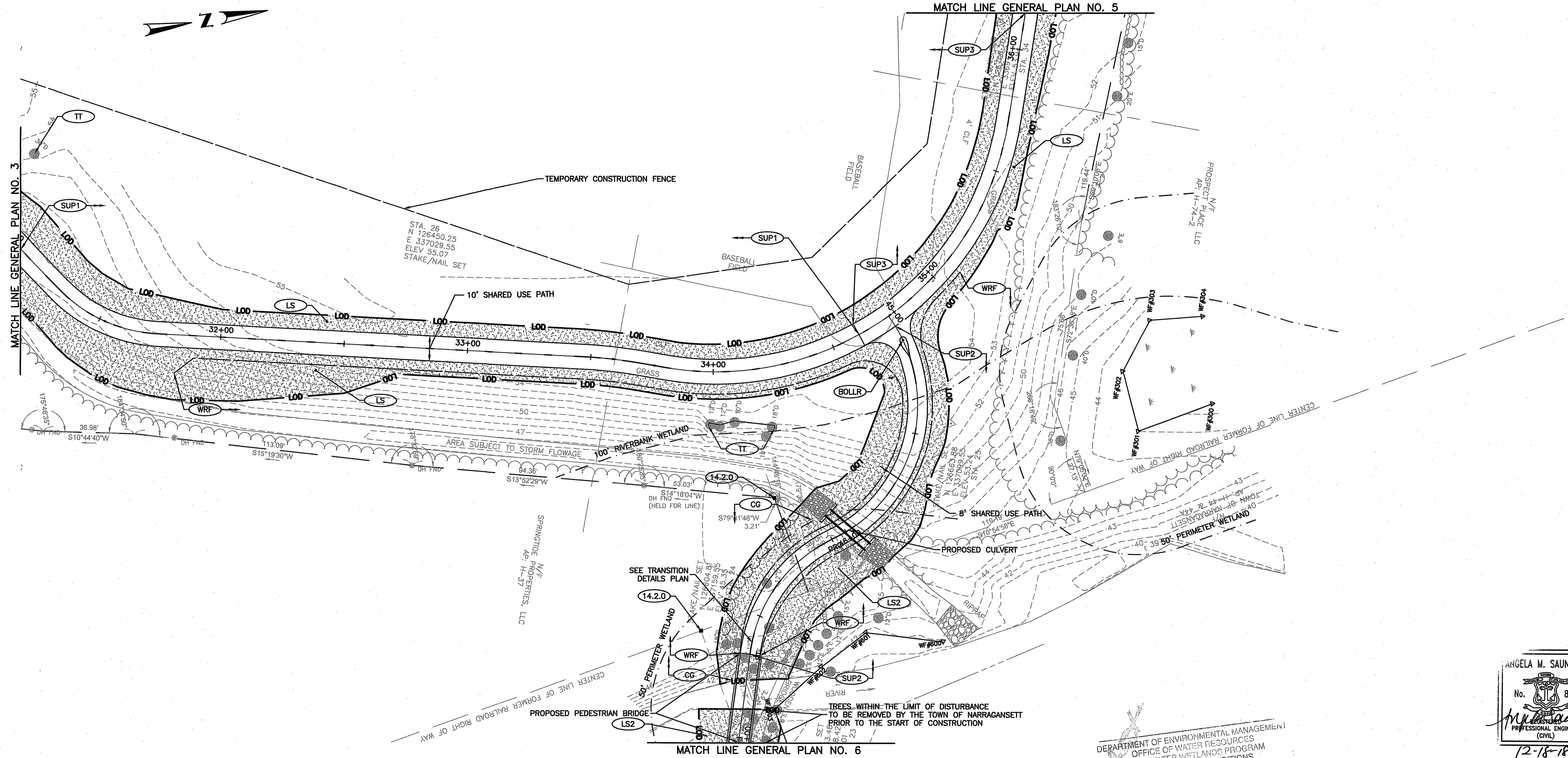
REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

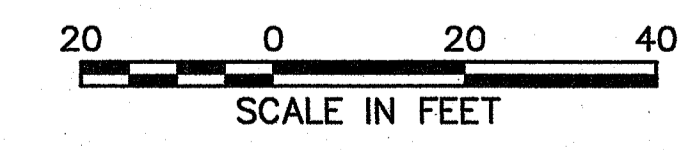
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

GENERAL PLAN  
NO. 5

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
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 DATED APR 5 2019 FILE # 18-0191  
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



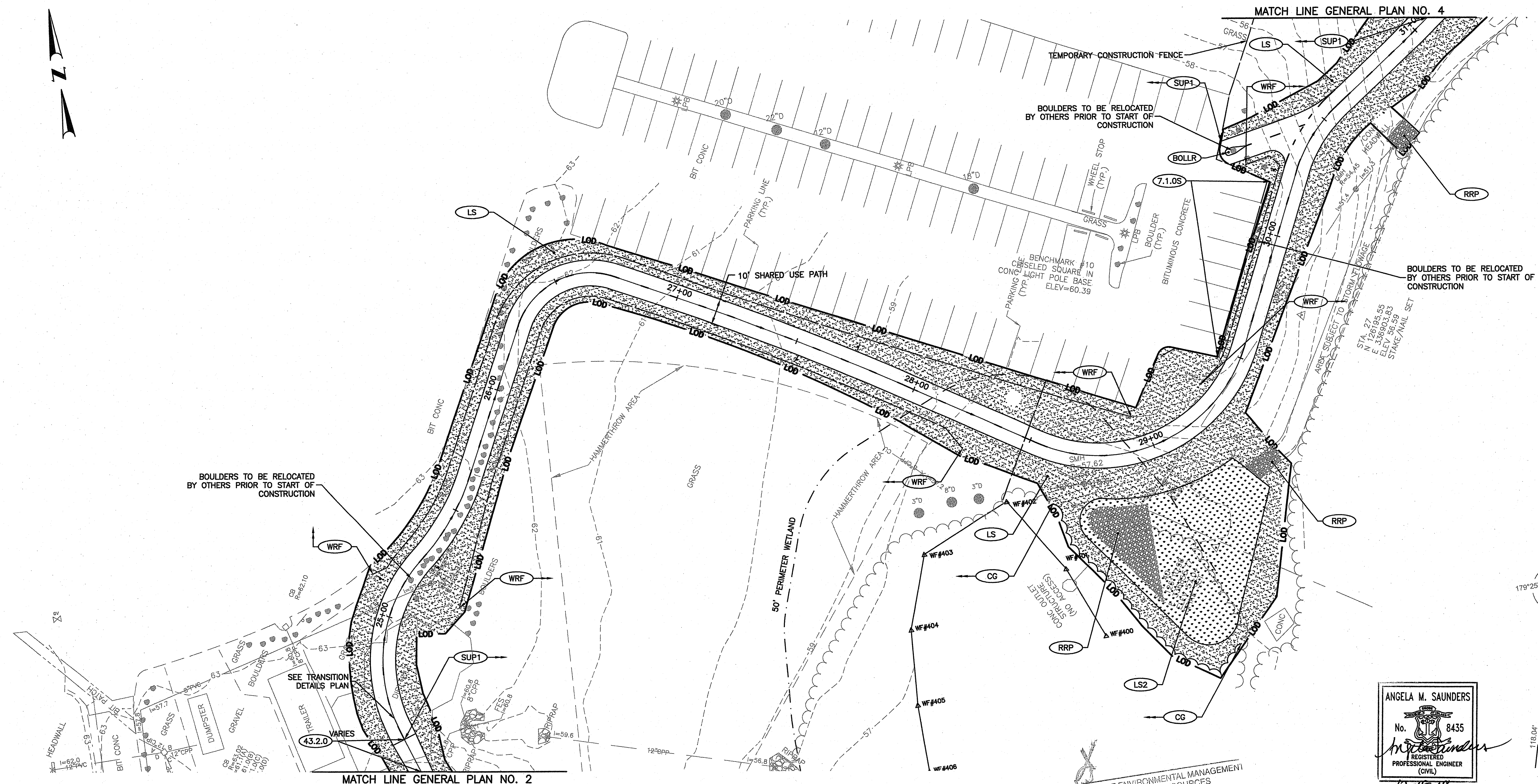
Environmental Management  
 DEC 20 2018  
 Office of Water Resources

ANGELA M. SAUNDERS  
 No. 8435  
 PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 GENERAL PLAN  
 NO. 4  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'





BOULDERS TO BE RELOCATED BY OTHERS PRIOR TO START OF CONSTRUCTION

TEMPORARY CONSTRUCTION FENCE  
BOULDERS TO BE RELOCATED BY OTHERS PRIOR TO START OF CONSTRUCTION

BOULDERS TO BE RELOCATED BY OTHERS PRIOR TO START OF CONSTRUCTION

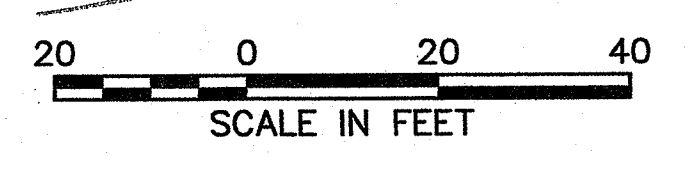
SEE TRANSITION DETAILS PLAN  
VARIES

MATCH LINE GENERAL PLAN NO. 2

MATCH LINE GENERAL PLAN NO. 4

ANGELA M. SAUNDERS  
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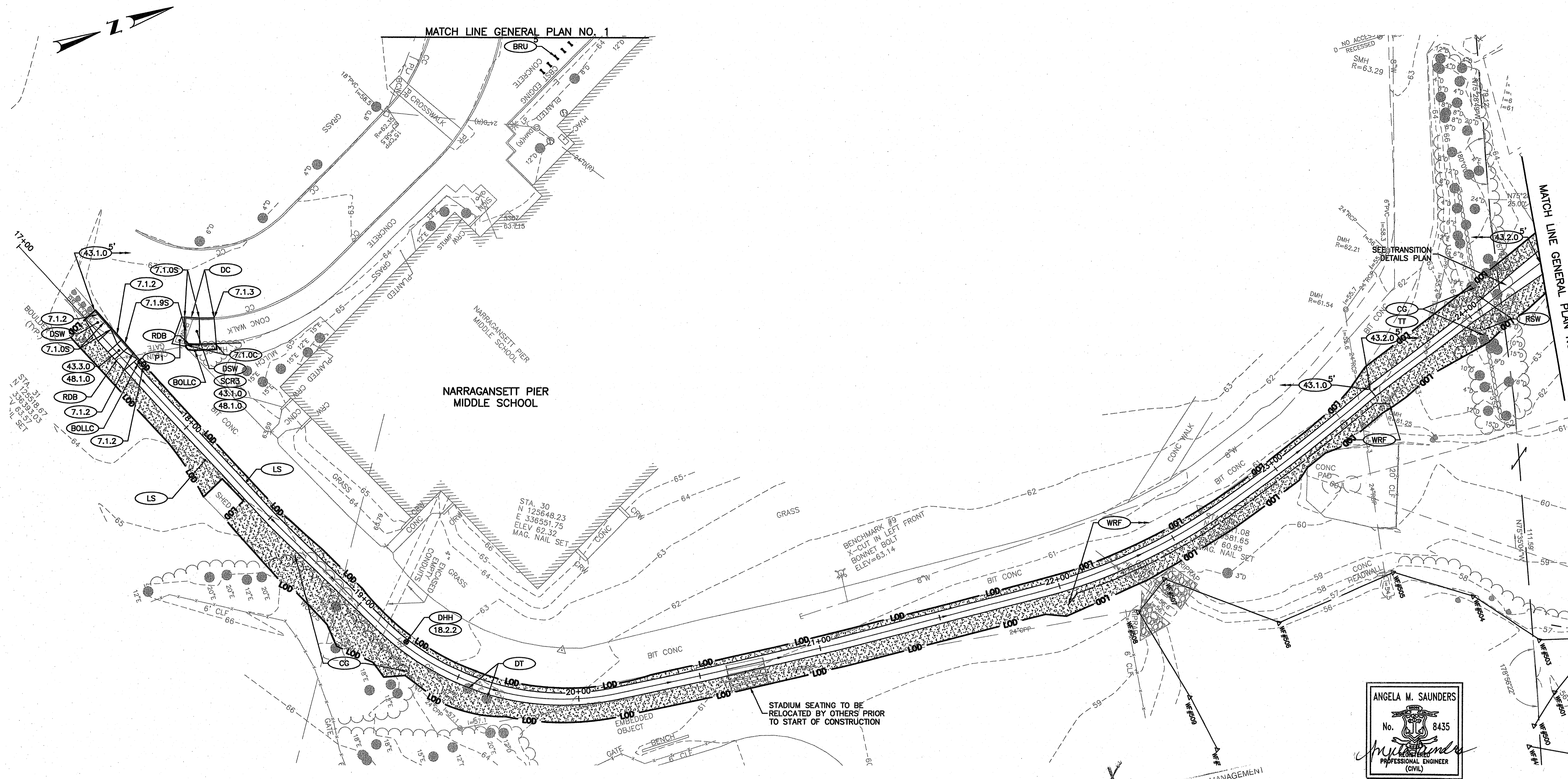
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
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NO.	DATE	BY		
			SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS NARRAGANSETT PIER MIDDLE SCHOOL NARRAGANSETT, RHODE ISLAND	
			GENERAL PLAN NO. 3	
			CHECKED BY	DATE
			SCALE 1"=20'	



ANGELA M. SAUNDERS  
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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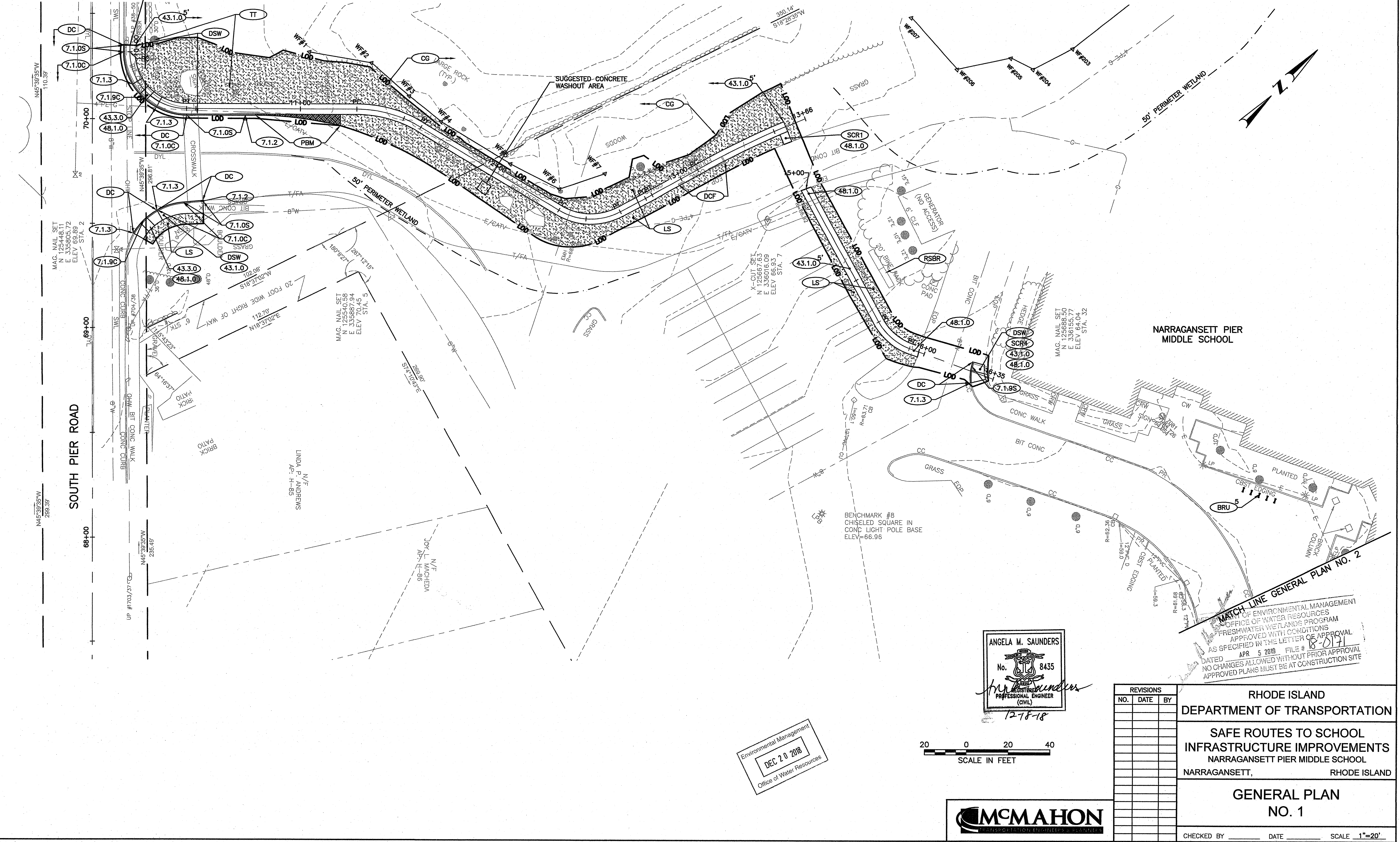
RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

GENERAL PLAN  
 NO. 2

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



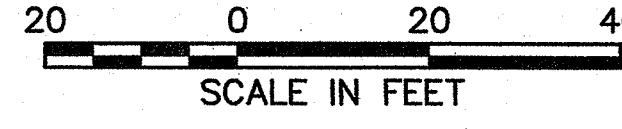


NARRAGANSETT PIER MIDDLE SCHOOL

MATCH LINE GENERAL PLAN NO. 2

OFFICE OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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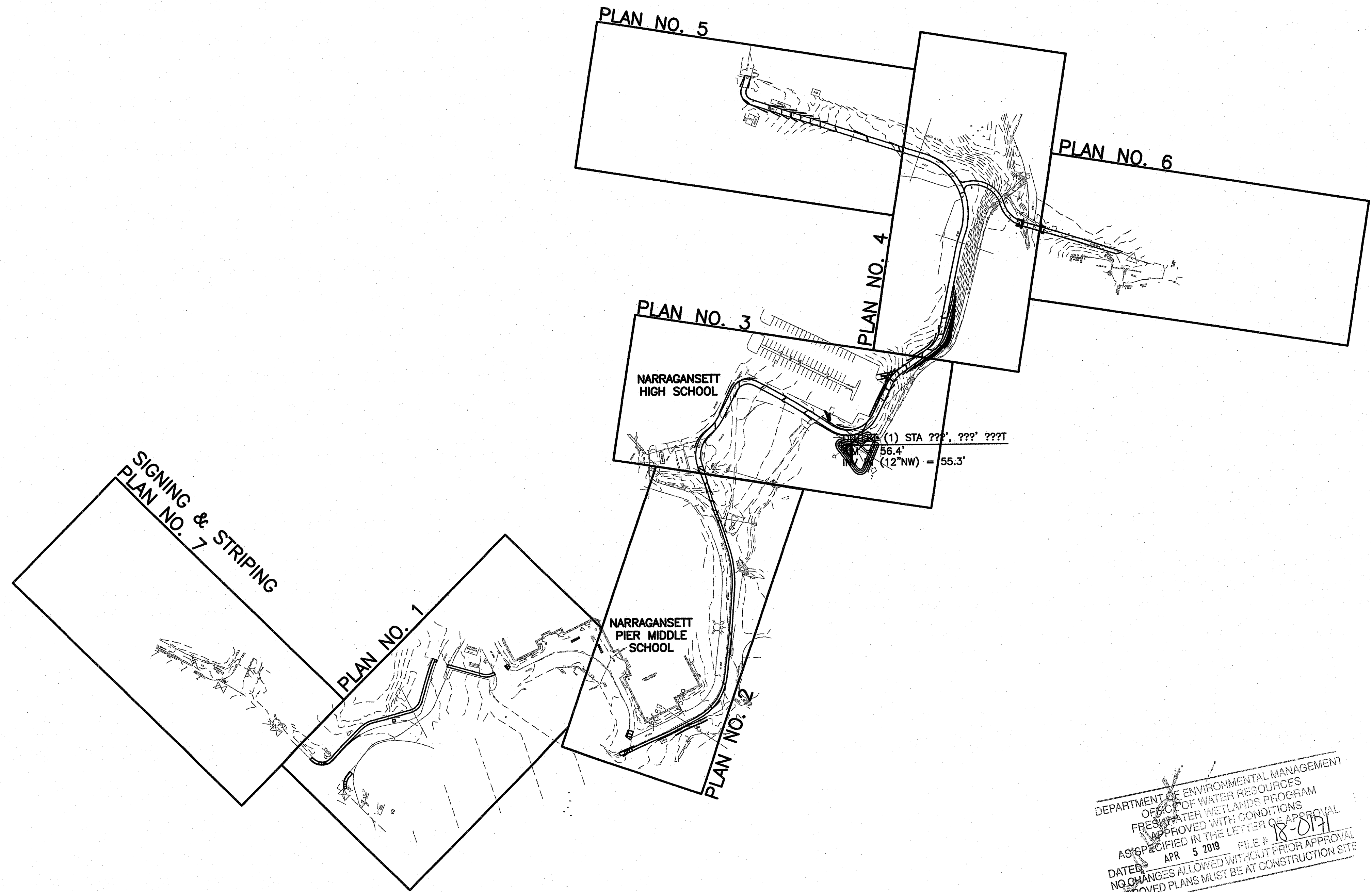


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NO.	DATE	BY

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION  
 SAFE ROUTES TO SCHOOL  
 INFRASTRUCTURE IMPROVEMENTS  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND  
 GENERAL PLAN  
 NO. 1  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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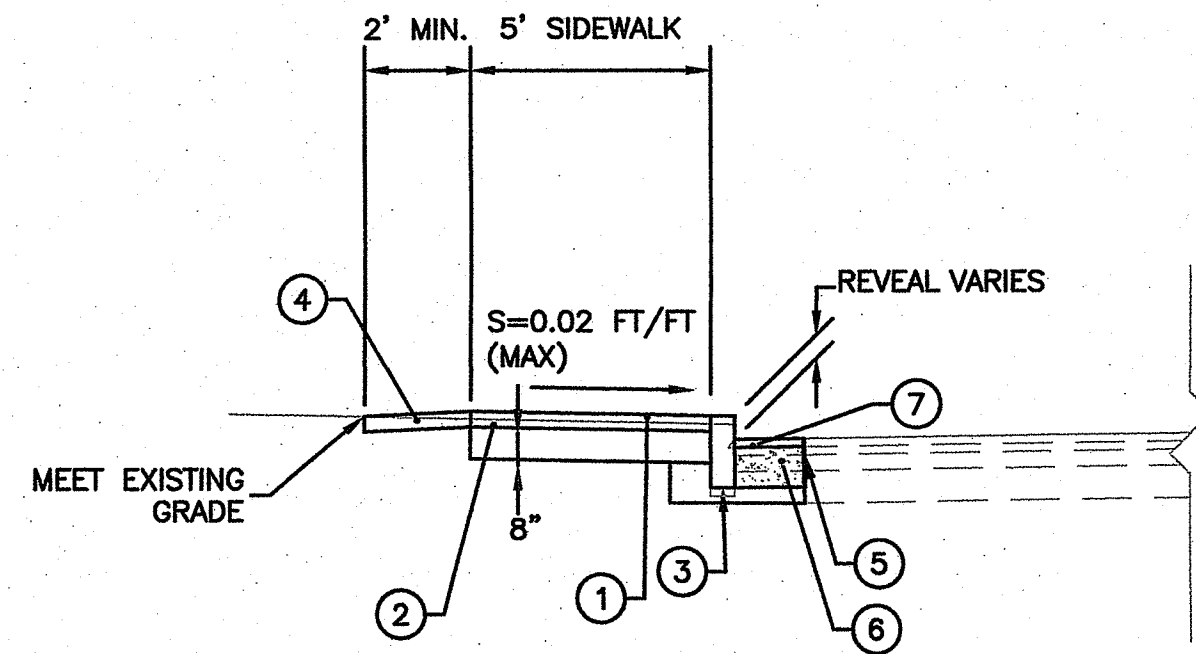
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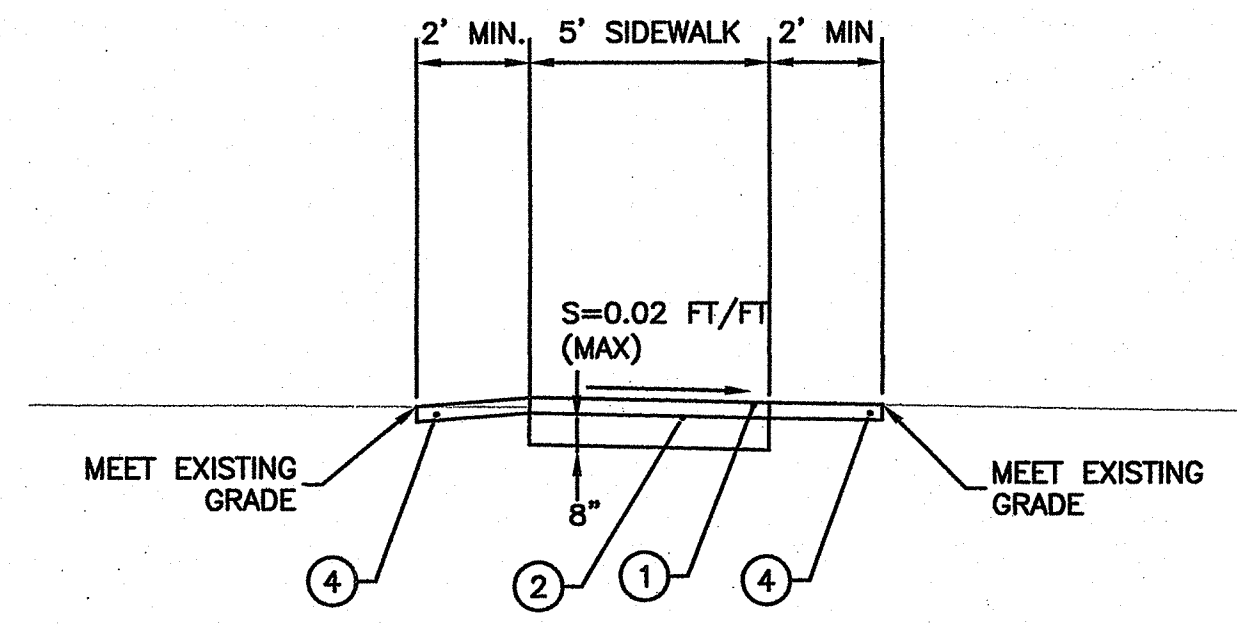
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
			SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS NARRAGANSETT PIER MIDDLE SCHOOL NARRAGANSETT, RHODE ISLAND

**KEY PLAN**

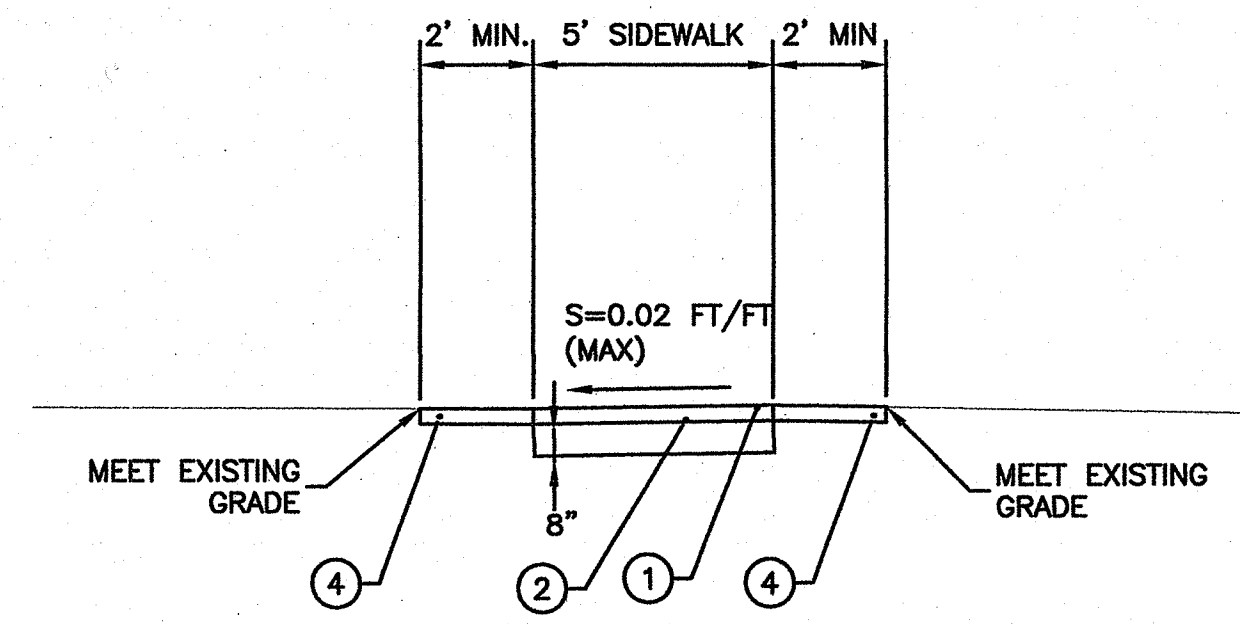
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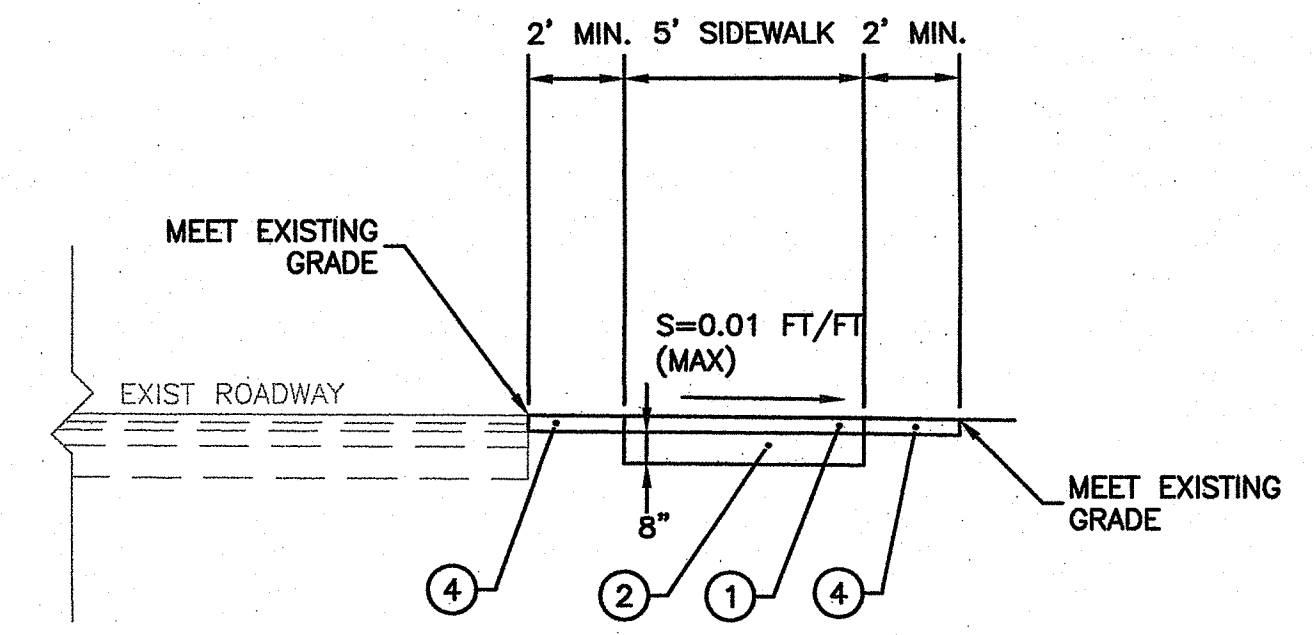
**5' CONCRETE SIDEWALK WITH CURB**  
STA 10+00 TO STA 10+88



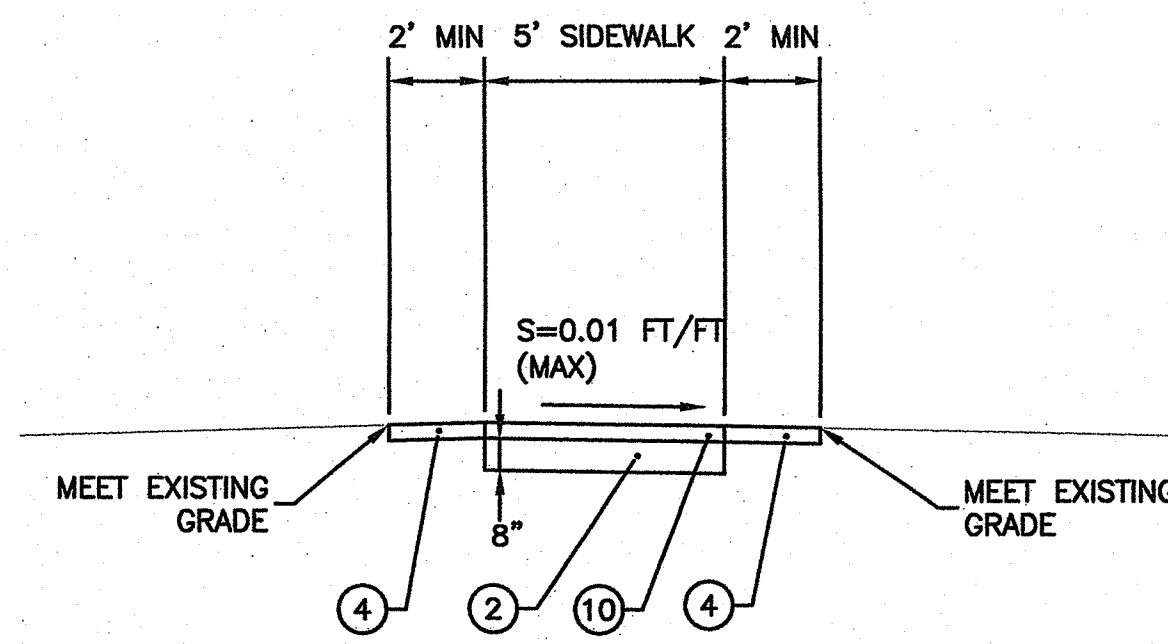
**5' CONCRETE SIDEWALK**  
STA 10+88 TO STA 13+56



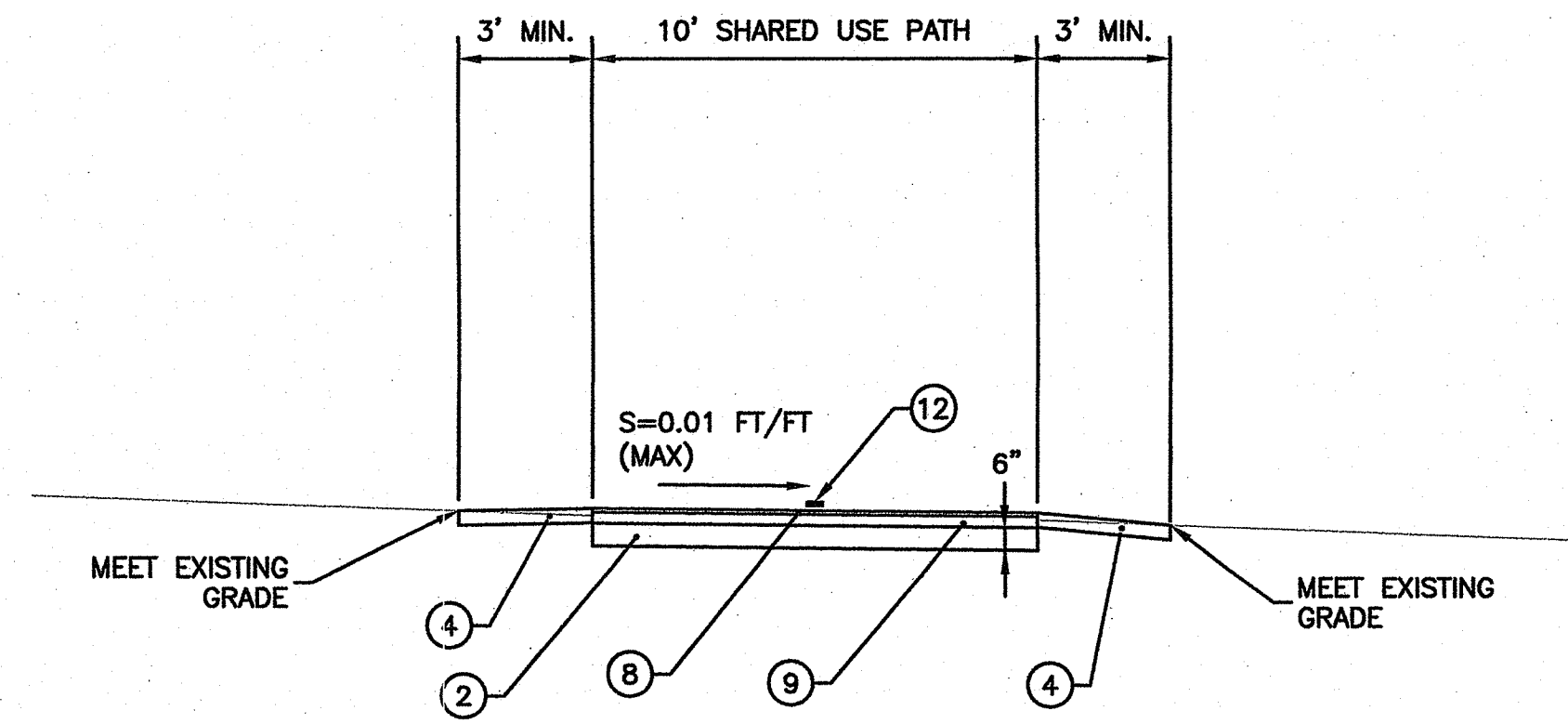
**5' CONCRETE SIDEWALK**  
STA 15+00 TO STA 15+97



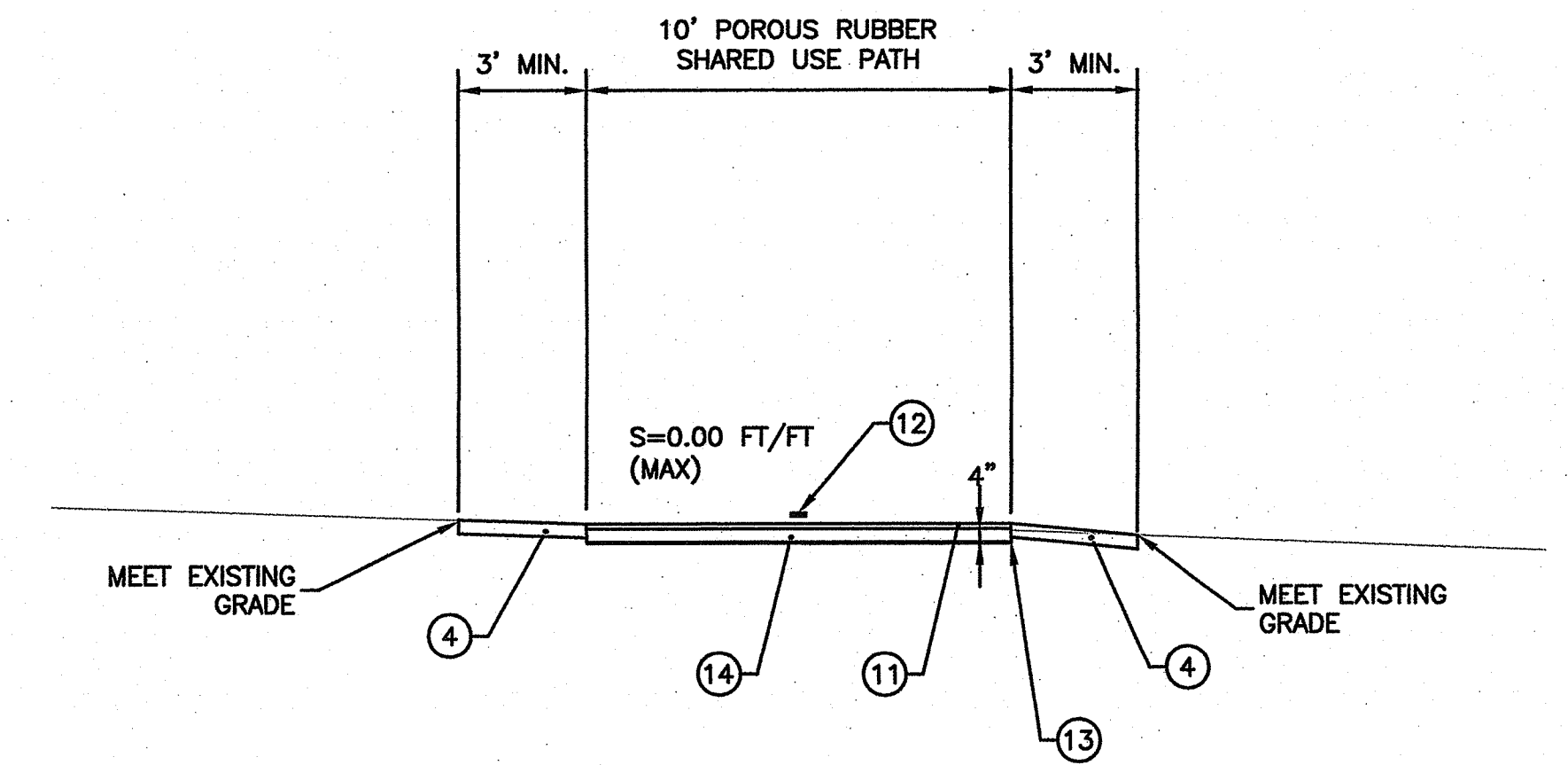
**5' CONCRETE SIDEWALK**  
STA 17+50 TO STA 23+50



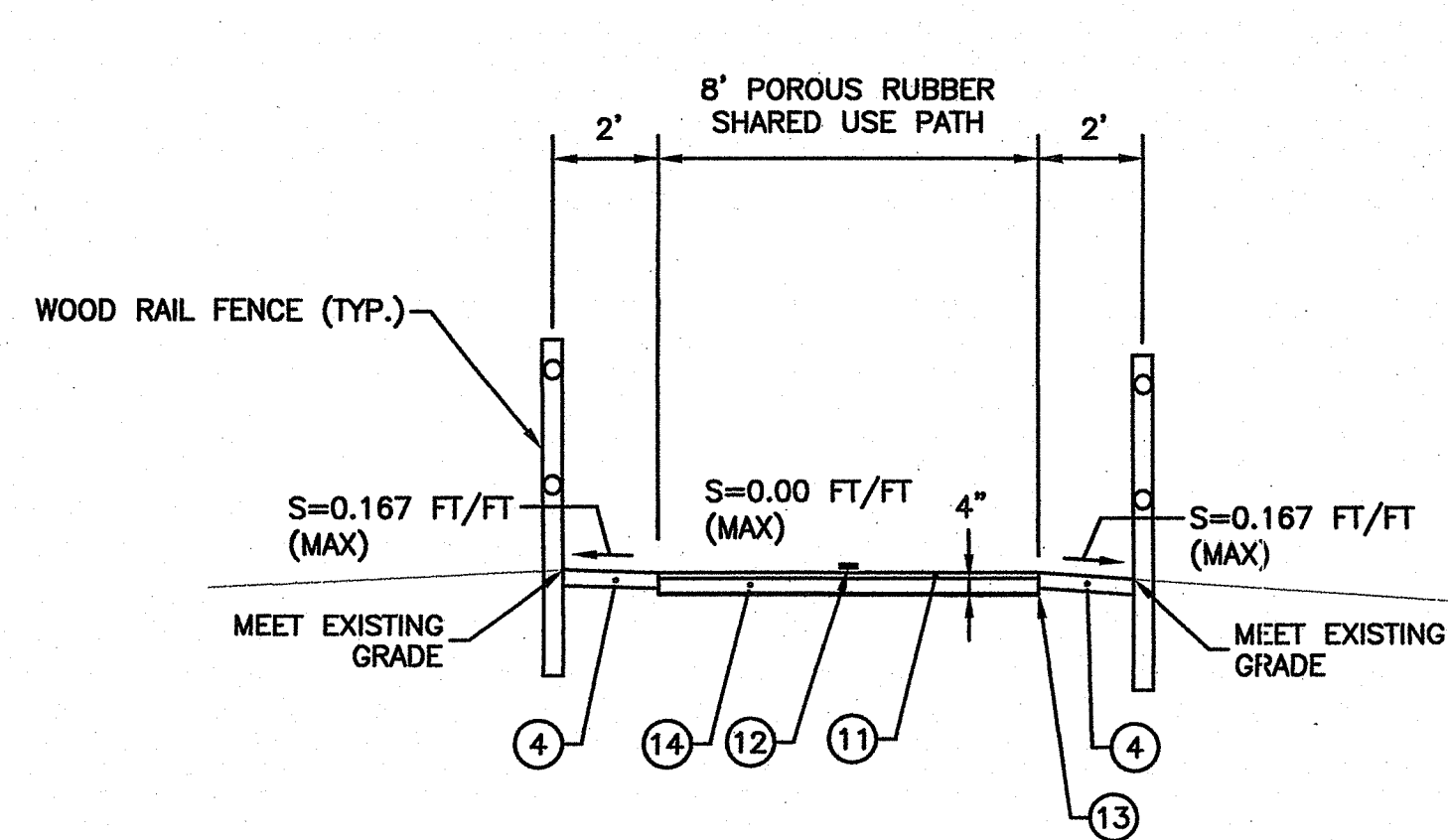
**5' BITUMINOUS SIDEWALK**  
STA 23+50 TO STA 24+50



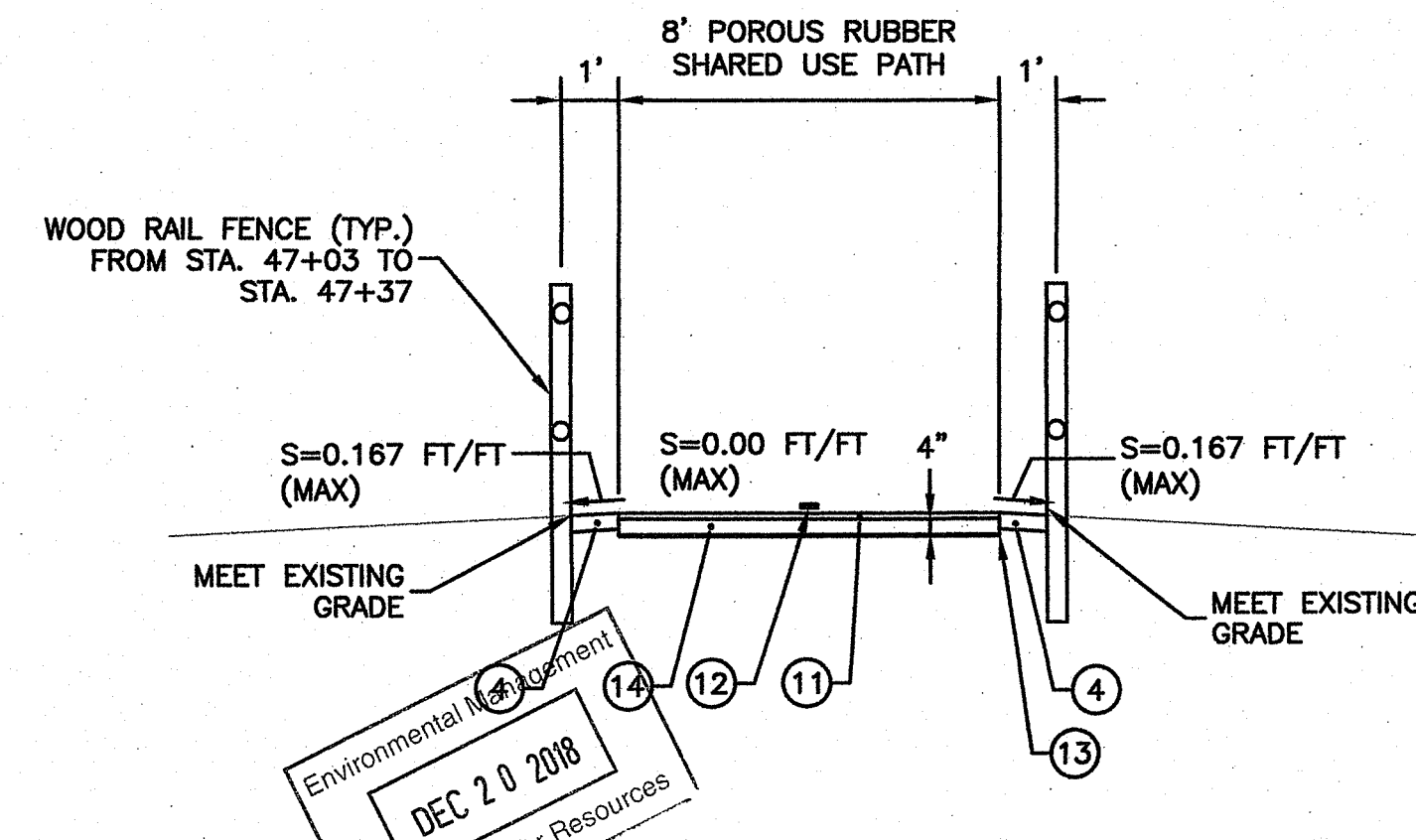
**10' BITUMINOUS SHARED USE PATH** (SUP1)  
STA 24+50 TO STA 34+62



**10' POROUS RUBBER SHARED USE PATH** (SUP3)  
STA 34+62 TO STA 39+95



**8' POROUS RUBBER SHARED USE PATH WITH 2' SHOULDERS** (SUP2)  
STA 45+00 TO STA 46+66



**8' POROUS RUBBER SHARED USE PATH WITH 1' SHOULDERS** (SUP2)  
STA 47+03 TO STA 48+74

**LEGEND**

- ① PORTLAND CEMENT SIDEWALK MONOLITHIC, R.I. STD. 43.1.0
- ② GRAVEL BORROW SUBBASE COURSE
- ③ REMOVE AND DISPOSE/NEW CONCRETE CURB, R.I. STD. 7.1.0
- ④ LOAM AND SEED
- ⑤ FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT AND RIGID BASE
- ⑥ CLASS A PORTLAND CEMENT CONCRETE
- ⑦ 2" CLASS 9.5 HMA SURFACE COURSE
- ⑧ 1" CLASS 4.75 HMA SURFACE COURSE
- ⑨ 3" CLASS 19.0 HMA BASE COURSE
- ⑩ BITUMINOUS CONCRETE SIDEWALK, R.I. STD. 43.2.0
- ⑪ 1.5" POROUS RUBBER LAYER
- ⑫ 4" EPOXY RESIN PAVEMENT MARKINGS - 3' LINE WITH 9' SPACING - YELLOW
- ⑬ FILTER FABRIC
- ⑭ COARSE AGGREGATE SUBBASE COURSE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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ANGELA M. SAUNDERS  
No. 8435  
PROFESSIONAL ENGINEER  
(CIVIL)  
12-18-18

REVISIONS		
NO.	DATE	BY

**RHODE ISLAND**  
DEPARTMENT OF TRANSPORTATION  
**SAFE ROUTES TO SCHOOL**  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND



**TYPICAL SECTIONS**  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=4'

**JOB SPECIFIC PLAN SYMBOLS**

**EXISTING**

- BOLLARD
- BOULDER
- TREE/ SHRUB
- RESIDENTIAL SEED MIX
- WETLAND SEED MIX
- ▭ EROSION CONTROL BLANKET
- SS— SS — SS— COMPOST FILTER SOCK (SILT SOCK)
- TEST HOLE

**NEW**

- 
- 
- ⊕
- ▨
- ▨
- ▭
- SS— SS — SS—
- 

**JOB SPECIFIC LEGEND**

- (2.1.0M) CONCRETE HEADWALLS FOR PIPE CULVERTS MODIFIED (SEE DETAILS SHEET NO. 2)
- (3.4.5M) BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN MODIFIED
- (7.1.3) PRECAST CONCRETE TRANSITION CURB
- (7.1.9C) CIRCULAR CONCRETE RAMP STONE
- (7.1.9S) STRAIGHT CONCRETE RAMP STONE
- (14.2.0) GRANITE HIGHWAY BOUND
- (BOLL) BOLLARD WITH CHAIN
- (BOLLR) REMOVABLE BOLLARD (SEE DETAILS SHEET NO. 3)
- (BRU) BIKE RACK - INVERTED "U" SHAPE (SEE DETAILS SHEET NO. 1)
- (CFS) COMPOST FILTER SOCK
- (CWR) CONCRETE WEIR
- (DCF) REMOVE AND DISPOSE CONCRETE FOUNDATION
- (DT) REMOVE AND DISPOSE TREE
- (ECB) EROSION CONTROL BLANKET
- (LS) LOAM BORROW 4" DEEP AND RESIDENTIAL SEEDING TYPE 2
- (LS2) LOAM BORROW 4" DEEP AND WETLAND SEEDING MIX TYPE 5
- (P1) HMA PAVEMENT RECONSTRUCTION  
2" CLASS 9.5 HMA SURFACE COURSE  
10" CLASS A PORTLAND CEMENT CONCRETE  
6" GRAVEL BORROW SUBBASE
- (PBM) PINE BARK MULCH FURNISH AND SPREAD 3" DEPTH
- (RDB) REMOVE AND DISPOSE BOLLARD
- (RG) REMOVE AND SALVAGE GATE (SEE DETAILS SHEET NO. 2)
- (RRB) REMOVE AND RELOCATE BOULDER
- (RSBR) REMOVE AND SALVAGE BIKE RACK
- (RSS) REMOVE AND SALVAGE SIGN
- (RSW) REMOVE AND SALVAGE STONE WALL
- (SCR1) SPECIAL CURB RAMP, TYPE 1 (SEE DETAILS SHEET NO. 1)
- (SCR2) SPECIAL CURB RAMP, TYPE 2 (SEE DETAILS SHEET NO. 1)
- (SCR3) SPECIAL CURB RAMP, TYPE 3 (SEE DETAILS SHEET NO. 1)
- (SCR4) SPECIAL CURB RAMP, TYPE 4 (SEE DETAILS SHEET NO. 1)
- (SSK) SILT SACK
- (SUP1) SHARED USE PATH, TYPE 1 - 10' WIDTH  
1.5" CLASS 4.75 HMA SURFACE COURSE  
3" CLASS 19.0 HMA BASE COURSE  
6" GRAVEL BORROW SUBBASE
- (SUP2) SHARED USE PATH, TYPE 2 - 8' WIDTH  
1.5" POROUS RUBBER WEAR LAYER  
4" CLEAN COARSE AGGREGATE  
(SEE DETAILS SHEET NO. 2)
- (SUP3) SHARED USE PATH, TYPE 3 - 10' WIDTH  
1.5" POROUS RUBBER WEAR LAYER  
4" CLEAN COARSE AGGREGATE  
(SEE DETAILS SHEET NO. 2)
- (SWT1) STORMWATER TREATMENT LOCATION #1
- (WRF) WOOD RAIL FENCE (SEE DETAILS SHEET NO. 2)

**JOB SPECIFIC GENERAL NOTES**

- ALL ITEMS NOT REFERENCED FOR MODIFICATION ON THE PLANS OR IN THE CONTRACT DOCUMENTS WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL REMOVE MATERIAL BELOW THE EXISTING SIDEWALKS AND PLACE NEW GRAVEL BORROW TO THE DEPTHS SHOWN ON R.I. STD. 43.1.0.
- ALL EQUIPMENT AND MATERIALS SHALL BE PLACED AN ADEQUATE DISTANCE (AS DETERMINED BY THE ENGINEER) FROM THE ROADWAY TO AVOID INTERFERENCE WITH VEHICULAR OR PEDESTRIAN TRAFFIC.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO BUILDINGS, WALLS, FENCES, AND WALKS THAT ARE ABUTTING SIDEWALKS DESIGNATED FOR CONSTRUCTION OR REPLACEMENT. WHERE INDICATED OR DIRECTED, NEW SIDEWALKS SHALL MEET SAID BUILDINGS, WALLS, AND FENCES UNLESS OTHERWISE SPECIFIED.
- THE FINAL LOCATION OF ALL CURB RAMPS SHALL BE COORDINATED IN THE FIELD WITH PROPOSED AND/OR EXISTING LOCATIONS OF DRAINAGE STRUCTURES, UTILITY POLES, LIGHT POLES, AND OTHER APPURTENANCES TO ENSURE A MINIMUM 36" CLEAR PEDESTRIAN PATH.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO DAMAGE ANY EXISTING VEGETATION WHICH OVERHANGS OR IS ADJACENT TO THE CONSTRUCTION ZONE. ANY DAMAGE THAT IS CAUSED BY THE CONTRACTOR'S NEGLIGENCE WILL BE FIXED AT HIS OWN EXPENSE.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTING FRESHLY PLACED CONCRETE SIDEWALKS FROM DAMAGE UNTIL THE CONCRETE HAS CURED SUFFICIENTLY. COSTS TO REPLACE DAMAGE TO FRESHLY PLACED CONCRETE WILL BE THE CONTRACTORS RESPONSIBILITY.
- THE COST OF ANY CURB CUTTING REQUIRED TO INSTALL NEW CURB WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE NEW CURB.
- DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE.
- THE CONTRACTOR SHALL NOTIFY IN WRITING ALL PROPERTY OWNERS ABUTTING THE PATH WORK ON CENTRAL STREET AND PROSPECT AVENUE 48 HOURS PRIOR TO COMMENCING WORK.

**JOB SPECIFIC MAINTENANCE AND PROTECTION OF TRAFFIC NOTES**

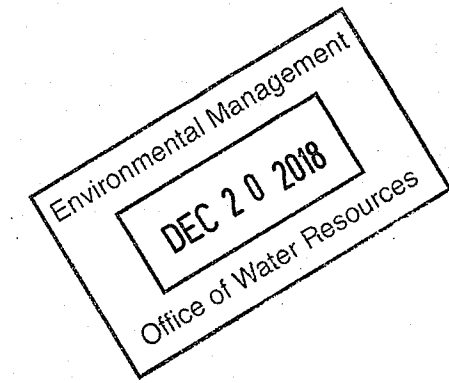
- ALL EXISTING TRAVEL LANES SHALL BE OPEN TO TRAFFIC WHENEVER CONSTRUCTION IS NOT TAKING PLACE. SAFE ACCESS AND EGRESS TO DRIVEWAYS AND SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS PREVIOUSLY APPROVED BY THE ENGINEER.
- AT NO TIME WILL THE CONES, BARRICADES OR DRUMS BE ALLOWED TO COVER OR EXTEND INTO A LANE(S) OPEN TO TRAFFIC.
- END ROAD WORK SIGNS (G20-2A) SHALL BE MOUNTED ON THE RIGHT SIDE OF THE ROADWAY 500 FEET BEYOND THE PROJECT LIMITS. THESE SHALL REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETE.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 10' TRAVEL LANE(S) AT ALL TIMES.
- PEDESTRIANS SHALL BE CONSIDERED IN ALL MAINTENANCE AND PROTECTION OF TRAFFIC SETUP. THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS ROUTES/RAMPS THROUGH CONSTRUCTION AREAS TO ENSURE ACCESS. THE TEMPORARY PEDESTRIAN ACCESS SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE EXISTING REQUIREMENTS THROUGH WORK ZONES. THE CONTRACTOR MUST PROVIDE FOR PEDESTRIANS TO SAFELY GUIDE THEM AWAY FROM BROKEN AND UNEVEN PAVEMENT, OPEN EXCAVATIONS, DROP-OFFS, CONSTRUCTION OPERATIONS, AND OTHER HAZARDS AT ALL TIMES. TEMPORARY CURB RAMPS SHALL BE PROVIDED FOR SIDEWALK DIVERSIONS WHERE NECESSARY. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE PROVISION OF PEDESTRIAN WAYS. ALL COSTS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

**JOB SPECIFIC PAVEMENT MARKING LEGEND**

- (CW) CROSSWALK DETAIL - 12 INCH EPOXY RESIN PAVEMENT MARKINGS WITH 24 INCH SPACES - WHITE (SEE DETAILS SHEET NO. 1)
- (BOLLS) BOLLARD STRIPING (SEE DETAILS SHEET NO. 2)
- (SPM) SCHOOL PAVEMENT MARKINGS (SEE DETAILS SHEET NO. 3)
- (4BY) 4 INCH EPOXY RESIN PAVEMENT MARKINGS - 3' LINE WITH 9' SPACING - YELLOW
- (4DOW) 4 INCH EPOXY RESIN PAVEMENT MARKINGS - 2' LINE WITH 4' SPACING - WHITE
- (4Y) CURB 4 INCH EPOXY RESIN PAVEMENT MARKINGS - YELLOW

**JOB SPECIFIC PROPOSED SIGN**

- (X-X) SIGN LOCATION NO.
- (XX-X) MUTCD/SIGN ID NO.
- (XX'XXX)' SIGN SIZE
- (X.X.X) SIGN MOUNTING NO.



**JOB SPECIFIC SIGN & PAVEMENT MARKING NOTES**

- ALL NEW REGULATORY, WARNING, AND GUIDE SIGNS SHALL HAVE NEW SIGN SUPPORTS. UNLESS OTHERWISE INDICATED, SIGN MOUNTINGS SHALL BE R.I. STD. 24.2.0.
- PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS, AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE ENGINEER.
- SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 7' OVER THE SIDEWALK.
- ALL SIGN RADII, BORDERS, AND ARROWS SHALL BE AS SPECIFIED IN THE LATEST EDITION OF THE **MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)**, WITH ALL REVISIONS.
- THE LOCATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE **MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)**, WITH ALL REVISIONS.
- PROPOSED SIGN LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF THE SIGNS SHALL BE COORDINATED IN THE FIELD SO THAT THE SIGN IS NOT OBSTRUCTED BY THE TREE LINE, UTILITY POLES, AND OTHER APPURTENANCES. IN ADDITION, SIGN POSTS SHALL NOT BE INSTALLED DIRECTLY ABOVE UNDERGROUND UTILITIES. EXISTING SIGNS/POSTS DESIGNATED TO BE REMOVED AND DISPOSED SHALL BE DISPOSED PRIOR TO PLACING NEW SIDEWALKS. CUTTING THE EXISTING SIGN POST AFTER SIDEWALKS ARE PLACED IS NOT ACCEPTABLE.

**JOB SPECIFIC UTILITY NOTES**

- SOME EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. BUILDING SERVICE CONNECTIONS (ELECTRIC, GAS, TELEPHONE, WATER, SANITARY, CABLE TELEVISION, ETC.) ARE SHOWN. CONTRACTOR IS TO ASSUME THAT OTHER SERVICES ARE PRESENT TO ALL BUILDINGS. LOCATIONS OF THE SERVICES WILL BE CHECKED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANIES.
- ALL EXISTING MANHOLES, CATCH BASINS, ROADWAY BOXES, AND SIDEWALK CURB STOPS FOR ALL UTILITIES WITHIN THE PROJECT WORK LIMITS SHALL BE ADJUSTED TO GRADE AS REQUIRED EXCEPT WHERE REPLACEMENT OR RECONSTRUCTION IS CALLED FOR ON THE PLANS, IN THE CONTRACT DOCUMENTS, OR DIRECTED BY THE ENGINEER.
- ONLY NON-MECHANICAL MEANS OF EXCAVATION SHALL BE USED IN AREAS ADJACENT TO UNDERGROUND UTILITIES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

**JOB SPECIFIC DRAINAGE AND EROSION CONTROL NOTES**

- SILT SACKS OR ANY OTHER RIDEM APPROVED INLET PROTECTION SHALL BE INSTALLED AT ALL CATCH BASINS AND INLETS WHENEVER SUBBASE IS EXPOSED AND SHALL REMAIN IN PLACE UNTIL THE ADJUTING GROUND SURFACES ARE STABILIZED
- IN ORDER TO PREVENT CLOGGING IN THE ROADWAY AND SEDIMENT INTRUSION INTO THE DRAINAGE SYSTEM, ALL INLET PROTECTION DEVICES SHALL BE CLEANED OR REPLACED REGULARLY UNTIL THE CONTRIBUTING ARE HAS BEEN STABILIZED. THE INLET PROTECTION DEVICES MAY BE REMOVED AT THE END OF THE PROJECT OR AS DIRECTED BY THE RESIDENT ENGINEER.
- CONCRETE WASHOUT DISCHARGED INTO DRAINAGE SYSTEMS IS PROHIBITED. THE CONTRACTOR MUST PROVIDE A CONCRETE WASHOUT AREA.

**HYDRAULIC AND SCOUR DATA**

- DESIGN FLOW DRAINAGE AREA = 283 ACRES  
50 YEAR DESIGN FLOW = 76 CFS  
50 YEAR ELEVATION = 40.65 FT

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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ANGELA M. SAUNDERS  
No. 8435  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
12-18-18

REVISIONS		
NO.	DATE	BY

RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS  
NARRAGANSETT PIER MIDDLE SCHOOL  
NARRAGANSETT, RHODE ISLAND

**JOB SPECIFIC**  
PLAN SYMBOLS, LEGEND, & NOTES

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE NO SCALE



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	4	54

**LANDSCAPE NOTES:**

- ALL PLANT MATERIAL MUST BE TAGGED AT THE NURSERY (A RECOGNIZED GROWER OF PLANT MATERIAL) IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION. ALL PLANT MATERIAL MUST BE NURSERY GROWN; NO PLANTATION GROWN PLANT MATERIAL WILL BE ACCEPTED.
- ALL PLANT SUBSTITUTIONS AND/OR CHANGES IN PLANT LOCATION MUST BE APPROVED IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL PLANT MATERIAL IS TO BE FIELD LOCATED BY A REPRESENTATIVE FROM THE R.I.D.O.T. LANDSCAPE ARCHITECTURE UNIT.
- A R.I.D.O.T. LANDSCAPE REPRESENTATIVE MUST BE ON SITE TO APPROVE ALL TRIMMING AND CLEARING NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS.
- ANY TOPSOIL USED AS PLANTABLE SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL CONFORM TO SECTION M.18 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND SHRUBS SHALL BE MULCHED WITH PINE BARK MULCH IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND/OR SHRUBS THAT ARE PLANTED AS A BED SHALL BE MULCHED AS A BED.
- PROVIDE A MINIMUM 6"-8" BRANCHING STANDARD ON ALL TREES INSTALLED ADJACENT TO SIDEWALKS AND/OR PEDESTRIAN ACCESS AREAS.

**STRUCTURAL NOTES FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS:**

**GENERAL**

- ALL SUPPORT DESIGNS AND ASSOCIATED SHOP DRAWING REVIEWS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION, OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (THE "SPECIFICATIONS"), INCLUDING THE LATEST INTERIM SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.

**CONSTRUCTION DRAWINGS AND DETAILS**

- THE FOLLOWING NOTES SHALL BE INCLUDED ON ALL PLANS AND/OR SHOP DRAWINGS IN REFERENCE TO ANCHOR BOLTS:
  - "PRETENSIONING OF ALL ANCHOR NUTS IS REQUIRED, AND SHALL BE ACCOMPLISHED BY TIGHTENING TO 1/6TH TURN BEYOND THE SNUG-TIGHT POSITION."
  - "THE MAXIMUM CLEARANCE BETWEEN THE BOTTOM OF THE LEVELING NUTS AND THE TOP OF THE CONCRETE IS CRITICAL AND SHALL NOT EXCEED THE AMOUNT SPECIFIED ON THIS DRAWING."
- THE USE OF GROUT UNDER BASE PLATES SHALL GENERALLY NOT BE PERMITTED. IF SPECIFIC CONDITIONS WARRANT ITS USE, THE GROUT SHALL NOT BE CONSIDERED LOAD CARRYING; LOADS SHALL BE DIRECTLY SUPPORTED BY THE ANCHOR BOLTS. ADEQUATE DRAINAGE SHALL BE PROVIDED.
- THE DAMPENING EFFECTS OF VIBRATION MITIGATION DEVICES SHALL NOT BE CONSIDERED IN THE DESIGN OF STRUCTURAL SUPPORTS FOR SIGNS AND TRAFFIC SIGNALS. IF THE CONTRACTOR CHOOSES TO USE THESE DEVICES FOR WARRANTY PURPOSES, THE TYPE OF DEVICES PROPOSED SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO FABRICATION OF SUPPORTS.

**TRAFFIC SIGNAL NOTES:**

- ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE R.I.D.O.T. MAINTENANCE HEADQUARTERS, 360 LINCOLN AVENUE, WARWICK, RHODE ISLAND, 02888.
- BACK PLATES SHALL BE INSTALLED ON ALL TRAFFIC SIGNAL HEADS.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ON THE UPPER LEFT HAND CORNER OF THE BACK OF THE CONTROLLER CABINET DOOR A LAMINATED INTERSECTION GRAPHIC AND TABLE DEPICTING THE TRAFFIC DETECTOR RELAY CHANNEL ASSIGNMENTS. THE DIAGRAM SHALL BE A GRAPHIC OF THE INDIVIDUAL INTERSECTION ORIENTED SIMILAR TO THE PLANS SHOWING THE LOCATIONS OF EACH OF THE LOOP DETECTORS. THE DIAGRAM SHALL, AT A MINIMUM, INCLUDE DETECTOR NUMBERS, STREET NAME LABELS, NORTH ARROW, AND CONTROLLER CABINET LOCATION. THE ASSIGNMENT INFORMATION SHALL BE INCLUDED IN A TABLE WHICH SHALL INCLUDE, AT A MINIMUM, THE APPROACH NAME, DETECTOR NUMBER, TERMINAL NUMBER, DETECTOR RACK SLOT NUMBER, RELAY NUMBER, RELAY CHANNEL NUMBER, AND PHASE ASSOCIATED WITH EACH DETECTOR.
- TRAFFIC CONTROLLER CABINETS, UNLESS OTHERWISE NOTED, SHALL BE NEMA TS2 TYPE 1 CABINET SIZE 6 ("P" TYPE) WITH NOMINAL DIMENSIONS OF 52"Hx44"Wx24"D.
- ALL DELAY AND EXTENSION TIMES, AS CALLED FOR ON THE PLANS, FOR PROPOSED LOOP DETECTORS SHALL BE PROGRAMMED IN THE TRAFFIC SIGNAL CONTROLLER AND NOT THE DETECTOR RELAY.
- A BARE GROUND WIRE SHALL BE PLACED IN ALL PVC CONDUITS AND SHALL BE BONDED TO GROUND RODS IN ACCORDANCE WITH SECTION T.03 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THE FINAL POSITION OF SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, DETECTORS, AND STOP LINE AND CROSSWALK PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD ACCORDING TO ACTUAL INTERSECTION CHARACTERISTICS.
- A 2' MINIMUM BUFFER SHALL BE PROVIDED BETWEEN THE CURB AND ALL LATERAL OBSTRUCTIONS (INCLUDING ALL SIGNAL POLES AND TRAFFIC/PEDESTRIAN SIGNAL HEADS) TO PROVIDE ADEQUATE CLEARANCE FOR TURNING VEHICLES.
- ALL FOUNDATIONS MUST HAVE CONES OR BARRELS BOLTED TO FOUNDATION BASES UNTIL ACTUAL POLE IS INSTALLED.
- WHEN PLACING TRAFFIC SIGNAL HANDHOLES OR CONDUIT IN EXISTING PORTLAND CEMENT CONCRETE SIDEWALKS, THE ENTIRE SIDEWALK SQUARE OF CONCRETE SHALL BE REPLACED IN ACCORDANCE WITH R.I. STD. 43.1.0. NO PATCHES WILL BE ALLOWED.
- ALL PEDESTRIAN PUSHBUTTONS SHALL BE COMPLIANT WITH "THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES" (ADAAG) AND SHALL INCLUDE A PRESSURE-ACTIVATED (NON-MOVING) BUTTON. SIGNS APPLICABLE TO PUSHBUTTON ACTUATION SHALL BE INSTALLED SUCH THAT THE CROSSING ASSIGNED TO EACH BUTTON IS CLEARLY INDICATED. IF SITE CONDITIONS DO NOT ALLOW PEDESTRIAN PUSHBUTTONS TO BE INSTALLED WHERE CALLED FOR ON THE PLANS, THE R.I.D.O.T. TRAFFIC ENGINEERING UNIT SHALL BE CONSULTED WITH THROUGH AN R.F.I. PRIOR TO INSTALLING THE PUSHBUTTONS. THE FINAL PLACEMENT OF ALL PEDESTRIAN PUSHBUTTONS SHALL BE IN ACCORDANCE WITH ADAAG AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- ALL LOOP DETECTORS SHALL BE CENTERED WITHIN EACH LANE AS DELINEATED, UNLESS OTHERWISE DIMENSIONED ON PLANS.
- ALL LOOP DETECTORS SHALL BE CUT INTO THE FINAL PAVEMENT SURFACE COURSE.
- TRAFFIC SIGNAL CONTROLLERS SHALL BE WIRED SO THAT ANY FIRE PRE-EMPTION SHALL OVERRIDE MANUAL (PUSH BUTTON) OPERATION.
- THE CONTRACTOR SHALL WORK CONTINUOUSLY TO RESTORE TRAFFIC SIGNAL OPERATION TO ITS INTENDED PURPOSE WHEN REPLACING THE TRAFFIC SIGNAL EQUIPMENT. A POLICE DETAIL IS REQUIRED TO DIRECT TRAFFIC AT THE INTERSECTION AT ALL TIMES WHEN THE TRAFFIC SIGNAL IS INOPERATIVE. AT NO TIME SHALL THE CONTRACTOR LEAVE THE SITE BEFORE RESTORING FULL TRAFFIC OPERATIONS.

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:**

- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELIZING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- ALL SIGN MOUNTINGS FOR TEMPORARY AND CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- THE CONTRACTOR SHALL COVER ALL EXISTING AND/OR TEMPORARY SIGNS THAT ARE NOT RELEVANT TO THE TRAFFIC CONTROL REQUIRED DURING ANY PARTICULAR STAGE OF THE CONTRACT.
- ADVANCE FLAGPERSON SIGNS (W20-7A) SHALL BE USED IN ADVANCE OF ANY POINT AT WHICH A FLAGPERSON OR A POLICE OFFICER HAS BEEN STATIONED TO CONTROL TRAFFIC. WHEN NEEDED, AN APPROPRIATE DISTANCE MESSAGE MAY BE DISPLAYED ON A SUPPLEMENTAL PLATE (24"x18") BELOW THE FLAGPERSON SYMBOL SIGN. THE SIGN SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE FLAGPERSON IS NOT AT THE STATION.
- POLICE OFFICERS (AND NOT FLAGPERSONS) SHALL BE UTILIZED WHEN WORK WILL IMPACT SIGNALIZED INTERSECTIONS AND LIMITED ACCESS HIGHWAYS.
- POLYETHYLENE DRUMS SHALL BE UTILIZED AS A CHANNELIZING DEVICE WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN BEYOND WORKING HOURS WHEN NO WORKERS ARE PRESENT. CONES SHALL BE UTILIZED WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN ONLY DURING WORKING HOURS AND IS SUBSEQUENTLY BROKEN DOWN AT THE END OF THE WORKDAY.
- ARROW PANELS SHALL BE SET IN THE FLASHING FOUR CORNERS CAUTION MODE UNLESS UTILIZED FOR A MERGING TAPER. ARROW PANELS SET IN THE FLASHING ARROW MODE SHALL NOT BE UTILIZED FOR LANE SHIFTS.
- TEMPORARY CONSTRUCTION SIGNS AND OTHER WORKZONE TRAFFIC CONTROL DEVICES THAT ARE DAMAGED OR REQUIRE RELOCATION SHALL BE REPLACED AND / OR RELOCATED UNDER THE PAY ITEM FOR "MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION."
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED ON THE TRAVEL LANES OR SHOULDERS. THEY MAY BE PARKED WITHIN THE STATE RIGHT-OF-WAY ONLY IN AREAS 30' BEYOND THE OUTSIDE EDGE OF THE TRAVEL LANES AND/OR IN AREAS APPROVED BY THE ENGINEER.
- TEMPORARY CONSTRUCTION SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC, AND SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER APPROPRIATE.
- THE INTENDED VEHICLE PATHS THROUGH EACH WORK ZONE SHALL BE CLEARLY MARKED AT ALL TIMES. WATERBORNE PAVEMENT MARKINGS SHALL BE INSTALLED BEFORE THE END OF THE WORK SHIFT ON ALL COLD-PLANNED AND NEW ROADWAY SURFACES THAT WILL BE OPENED TO TRAFFIC AT THE END OF THE SHIFT.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-014  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED  
 PROFESSIONAL ENGINEER  
 (CIVIL)

Environmental Management  
 DEC 20 2008  
 Office of Water Resources

**THIS PLAN SHALL NOT BE ALTERED**

REVISIONS		
NO.	DATE	BY

**RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION**

**SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE IMPROVEMENTS**  
 NARRAGANSETT PIER MIDDLE SCHOOL  
 NARRAGANSETT, RHODE ISLAND

**STANDARD NOTES - 2**

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE NO SCALE





**EXISTING**

**NEW**

- EDGE OF PAVEMENT
- BERM
- CURB
- GUARDRAIL
- MAILBOX
- UTILITY POLE
- POLE GUY
- LUMINARE
- SIGN
- SUBDRAIN
- STORMDRAIN
- SANITARY SEWER
- WATER MAIN
- GAS MAIN
- TELEPHONE DUCT
- ELECTRIC DUCT
- PLUG AND CAP PIPE
- ABANDONED UTILITY
- FLARED END SECTION
- HEADWALL
- WATER OR GAS GATE
- CATCH BASIN
- MANHOLE
- HYDRANT
- BASELINE OR CENTERLINE
- STATE HIGHWAY LINE
- STATE FREEWAY LINE
- PERMANENT EASEMENT LINE
- TEMPORARY EASEMENT LINE
- PROPERTY LINE
- CITY OR TOWN LINE
- PAVED WATERWAY
- CONTOUR LINE
- OPEN DITCH
- R.I. HIGHWAY BOUND
- STONE BOUND
- RETAINING WALL
- FIELD STONE WALL
- BORINGS
- FENCE
- WOOD OR BRUSH LINE
- TREES
- RIVER OR STREAM
- WETLAND AREA
- BUILDING
- FOUNDATION
- BUILDING TO BE REMOVED
- RAILROAD TRACKS
- CUT AND MATCH
- RIP-RAP
- CUT SLOPE
- FILL SLOPE
- ROCK CUT
- SPOT GRADE
- AREA GRADED TO DRAIN
- BALED HAY RI STD 9.1.0
- BALED HAY & SILT FENCE RI STD. 9.3.0
- EDGE OF WETLAND
- WETLAND PERIMETER
- AREA SUBJECT TO STORM FLOW
- 100-YEAR FLOOD PLAIN
- LIMIT OF DISTURBANCE
- LIMIT OF CLEARING

- N(SIZE)SD
- (Length --- Size)
- N(SIZE)W
- N(SIZE)G
- N-#(SIZE)T
- N-#(SIZE)E
- NEW S.H.L. PLAT NO. XX
- NEW S.F.L. PLAT NO. XX
- NEW P.E.B.
- NEW T.E.B.
- ELEV
- ELEV
- NO.
- ELEV. X
- TOP OF SLOPE
- TOP OF SLOPE
- ROCK SHELF
- ROCK CUT
- 00x00
- LIMIT OF DISTURBANCE
- LIMIT OF CLEARING

- 1.1.0 UNDERDRAIN
- 1.3.0 CONCRETE CONNECTING COLLAR
- 2.1.0 CONCRETE HEADWALLS FOR PIPE CULVERTS
- 2.2.0 STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS
- 2.3.0 (DIA.) PRECAST CONCRETE FLARED END SECTION
- 3.2.0 BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE
- 3.2.1 (DIA.) BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE
- 3.3.0 BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN
- 3.3.2 BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN
- 3.3.3 SOLID BLOCK FLUSH SQUARE CATCH BASIN
- 3.4.0 BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN
- 3.4.1 BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET
- 3.4.2 BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN
- 3.4.3 BRICK/SOLID BLOCK TYPE "R" CATCH BASIN
- 3.4.4 SOLID BLOCK FLUSH ROUND CATCH BASIN
- 3.4.5 (DIA.) BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN
- 3.5.0 SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN
- 3.5.1 (SIZE) SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN
- 3.6.0 BRICK/SOLID BLOCK DROP INLET
- 3.7.0 (DIA.) BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'-0"
- 4.2.0 PRECAST 4'-0" ROUND MANHOLE
- 4.2.1 PRECAST 5'-0" ROUND MANHOLE
- 4.2.2 PRECAST 6'-0" ROUND MANHOLE
- 4.3.0 (SIZE) PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN
- 4.4.0 (DIA.) PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN
- 4.5.0 PRECAST CONCRETE DROP INLET
- 4.5.1 PRECAST CONCRETE DROP INLET LATERAL OUTLET
- 4.5.2 PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET
- 5.3.0 CATCH BASIN AND MANHOLE STEP
- 5.4.0 CONCRETE COLLARS
- 6.1.0 LIGHT-DUTY SQUARE FRAME AND ROUND COVER
- 6.1.1 HEAVY DUTY SQUARE FRAME AND ROUND COVER
- 6.2.0 LIGHT-DUTY ROUND FRAME AND COVER
- 6.2.1 HEAVY-DUTY ROUND FRAME AND COVER
- 6.3.0 SQUARE FRAME AND GRATE
- 6.3.1 SQUARE FRAME AND GRATE
- 6.3.2 SQUARE FRAME AND GRATE (BICYCLE SAFE)
- 6.3.3 HIGH CAPACITY FRAME AND GRATE
- 6.3.4 HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)
- 6.4.0 ROUND FRAME AND GRATE
- 7.1.0S PRECAST CONCRETE CURB (STRAIGHT)
- 7.1.0C PRECAST CONCRETE CURB (CIRCULAR)
- 7.1.1 3'-0" PRECAST CONCRETE TRANSITION CURB
- 7.1.2 6'-0" PRECAST CONCRETE TRANSITION CURB
- 7.1.4 PRECAST 2'-0" RADIUS CORNER
- 7.1.5 PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)
- 7.1.6 PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)
- 7.1.7 PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)
- 7.1.8 PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)
- 7.2.0S PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT)
- 7.2.0C PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR)
- 7.2.1 PRECAST CONCRETE SLOPED FACE TRANSITION CURB
- 7.2.2 PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)
- 7.3.0S GRANITE CURB (STRAIGHT)
- 7.3.0C GRANITE CURB (CIRCULAR)
- 7.3.1 3'-0" GRANITE TRANSITION CURB
- 7.3.2 6'-0" GRANITE TRANSITION CURB
- 7.3.3 GRANITE WHEELCHAIR RAMP TRANSITION CURB
- 7.3.4 GRANITE 2'-0" RADIUS CORNER
- 7.3.5 GRANITE INLET STONE (FOR SQUARE CATCH BASIN)
- 7.3.6 GRANITE INLET STONE (FOR ROUND CATCH BASIN)
- 7.3.7 GRANITE APRON STONE (FOR SQUARE CATCH BASIN)
- 7.3.8 GRANITE APRON STONE (FOR ROUND CATCH BASIN)
- 7.4.0 GRANITE SLOPED FACE CURB
- 7.4.1 GRANITE SLOPED FACE TRANSITION CURB

- 7.4.2 GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPE FACE)
- 7.5.0 BITUMINOUS CONCRETE LIP CURB
- 7.5.1A BITUMINOUS BERM (CONSTRUCTION METHOD A)
- 7.5.1B BITUMINOUS BERM (CONSTRUCTION METHOD B)
- 7.6.0 CURB SETTING DETAIL
- 8.2.0 BITUMINOUS CONCRETE DITCH
- 8.3.0 RIP-RAP DITCH
- 8.4.0 PAVED WATERWAY
- 9.1.0 BALED HAY EROSION CHECK
- 9.2.0 SILT FENCE DETAIL
- 9.3.0 BALED HAY DITCH EROSION CHECK AND SILT FENCE COMBINED
- 9.4.0 BALED HAY DITCH AND SWALE EROSION CHECK
- 9.5.0 LOG AND HAY CHECK DAM
- 9.7.0 DEWATERING BASIN
- 9.8.0 BALED HAY CATCH BASIN INLET PROTECTION
- 9.9.0 CONSTRUCTION ACCESS
- 10.1.0 WET STONE MASONRY RETAINING WALL
- 10.2.0 RUBBLE MASONRY WALL
- 10.3.0 CONCRETE RETAINING WALL
- 10.4.0 STONE MASONRY STEPS
- 14.1.0 CONCRETE HIGHWAY BOUND
- 15.1.0 POST AND MOUNTINGS FOR RURAL MAILBOX
- 15.2.0 (NO.) POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES
- 18.2.0 PRECAST TYPE "A" HANDHOLE
- 18.2.2 HEAVY DUTY TYPE "H" HANDHOLE
- 18.3.0 ALUMINUM LIGHTING STANDARDS
- 20.2.0 BI-DIRECTIONAL CONTROL DEVICE
- 24.6.1 STREET SIGN MOUNTING DETAIL
- 26.2.0 POLYETHYLENE DRUM WITH MARKINGS
- 26.3.0 PVC PLASTIC PIPE TYPE III BARRICADE
- 31.1.0 CHAIN LINK FENCE 3'-0" TO 4'-0"
- 31.2.0 CHAIN LINK FENCE 5'-0" TO 6'-0"
- 31.2.1 CHAIN LINK FENCE 5'-0" TO 6'-0" INTERMEDIATE POST
- 31.3.0 WOVEN WIRE RIGHT-OF-WAY FENCE (STEEL POST)
- 34.1.0 TYPICAL GUARDRAIL INSTALLATION
- 34.2.0 STEEL BEAM GUARDRAIL
- 34.2.1 STEEL BEAM GUARDRAIL DETAILS
- 34.2.2 STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY
- 34.2.3 STEEL BEAM GUARDRAIL FIXTURES
- 34.2.5 STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR
- 34.3.1 GUARDRAIL END SECTION
- 34.3.2 TERMINAL END SECTION (SINGLE FACE)
- 34.3.3 ANCHORAGE DETAILS APPROACH END SECTION
- 34.3.4 ANCHORAGE DETAILS TRAILING END SECTION
- 34.4.0 STEEL BACKED TIMBER GUARDRAIL
- 34.4.1 STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION-TYPE 1
- 40.1.0 DOUBLE-FACED PRECAST MEDIAN BARRIER
- 40.2.0 SINGLE-FACED PRECAST MEDIAN BARRIER
- 40.2.1 SINGLE-FACED PRECAST MEDIAN BARRIER
- 40.3.0 PRECAST MEDIAN BARRIER TRANSITION UNIT
- 40.5.0 PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
- 43.1.0 CEMENT CONCRETE SIDEWALK
- 43.2.0 BITUMINOUS CONCRETE SIDEWALK
- 43.3.0 WHEELCHAIR RAMP
- 43.3.1 WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS
- 43.4.0 DRIVEWAY DEVELOPMENT FOR 3'-0" TRANSITION CURB
- 43.4.1 DRIVEWAY DEVELOPMENT FOR 6'-0" TRANSITION CURB
- 43.5.0 CEMENT CONCRETE DRIVEWAYS
- 48.1.0 DETECTABLE WARNING SYSTEM
- 51.1.0 TREE PROTECTION DEVICE
- 51.1.1 DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES
- 51.2.0 SHRUB PROTECTION DEVICE
- 51.3.0 TREE WELL
- 51.4.0 TREE WALL

- AB ADJUST CATCH BASIN TO GRADE
- ABM ADJUST CATCH BASIN TO MANHOLE
- AC ADJUST CURB STOP TO GRADE
- AD ADJUST DRAINAGE MANHOLE TO GRADE
- AE ADJUST ELECTRIC MANHOLE TO GRADE
- AFC ADJUST FRAME AND COVER TO GRADE
- AFG ADJUST FRAME AND GRATE TO GRADE
- AG ADJUST GAS GATE BOX TO GRADE
- AHH ADJUST HANDHOLE TO GRADE
- AS ADJUST SANITARY SEWER MANHOLE TO GRADE
- AT ADJUST TELEPHONE MANHOLE TO GRADE
- AW ADJUST WATER GATE BOX TO GRADE
- BCD BITUMINOUS CONCRETE DRIVEWAY
- BPS BUILD NEW STRUCTURE OVER EXISTING PIPE
- CCB CLEAN CATCH BASIN
- CCP CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES)
- CFP CLEAN AND FLUSH PIPE
- CG CLEARING AND GRUBBING
- CMH CLEAN MANHOLE
- CP (DEPTH) COLD PLANE
- CPP CUT AND PLUG PIPE (ALL TYPES, ALL SIZES)
- DB REMOVE AND DISPOSE BITUMINOUS CURB
- DC REMOVE AND DISPOSE CONCRETE CURB
- DCB REMOVE AND DISPOSE CATCH BASIN
- DDI REMOVE AND DISPOSE DROP INLET
- DF REMOVE AND DISPOSE FENCE
- DFC REMOVE AND DISPOSE FRAME AND COVER
- DFE REMOVE AND DISPOSE FLARED END SECTION
- DFG REMOVE AND DISPOSE FRAME AND GRATE
- DFH REMOVE AND DISPOSE FIRE HYDRANT
- DFP REMOVE AND DISPOSE FLEXIBLE PAVEMENT
- DG REMOVE AND DISPOSE GUARDRAIL
- DH REMOVE AND DISPOSE HEADWALL
- DHB REMOVE AND DISPOSE HIGHWAY BOUND
- DHH REMOVE AND DISPOSE HANDHOLE
- DL REMOVE AND DISPOSE LIGHT AND FOUNDATION
- DMB REMOVE AND DISPOSE MEDIAN BARRIER
- DMH REMOVE AND DISPOSE MANHOLE
- DMM REMOVE AND DISPOSE MEDIAN MARKER
- DOW REMOVE AND DISPOSE OBSERVATION WELL
- DP REMOVE AND DISPOSE PIPE
- DPB REMOVE AND DISPOSE PAVEMENT AND RIGID BASE
- DRB REMOVE AND DISPOSE RIGID BASE
- DS REMOVE AND DISPOSE SIGN
- DSS REMOVE AND DISPOSE TRAFFIC SIGNAL SYSTEM
- DSW REMOVE AND DISPOSE SIDEWALK
- DTD REMOVE AND DISPOSE TELEPHONE DUCT BANKS
- DUP REMOVE AND DISPOSE UTILITY POLE
- DWW REMOVE AND DISPOSE PAVED WATERWAY
- FF FILTER FABRIC RIPRAP FLARED END UNDERLAYMENT
- GET FLARED GUARDRAIL END TREATMENT
- IA IMPACT ATTENUATOR
- IDL IMPERVIOUS DITCH LINER
- LOD LIMIT OF DISTURBANCE
- LOR LIMIT OF REGRADING
- LS 4" LOAM AND SEED

- NFH NEW FIRE HYDRANT WITH GATE VALVE
- NIC NOT IN THIS CONSTRUCTION CONTRACT
- NWB FURNISH AND INSTALL NEW WATER GATE VALVE BOX
- NWVB FURNISH AND INSTALL NEW WATER GATE VALVE AND BOX
- NWCB FURNISH AND INSTALL NEW WATER CURB STOP BOX
- NWSB FURNISH AND INSTALL NEW WATER CURB STOP AND BOX
- PCD PERMANENT CHECK DAM
- PS 4" PLANTABLE SOIL AND SEED
- RCB RECONSTRUCT TYPE "D" CATCH BASIN, TO CATCH BASIN WITH GUTTER INLET
- RCM R.I.D.O.T. COMMUNICATIONS MANHOLE
- RHH REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR (ALL TYPES)
- RLP RELOCATE LAMP POST
- RMB RELOCATE MAILBOX (BY OTHERS)
- RPM REMOVE PAVEMENT MARKINGS
- RRP RIP-RAP PAD (SEE DETAIL)
- RRS REMOVE AND RELOCATE SIGN
- RUP RELOCATE UTILITY POLE (BY OTHERS)
- SB STONE BAFFLE
- SBAE STEEL BEAM BRIDGE CONNECTION APPROACH END (W/O NESTED RAIL)
- SBTE STEEL BEAM BRIDGE CONNECTION TRAILING END (W/NESTED RAIL)
- SD- STRUCTURAL DISPOSITION - SEE CS PAGES OF SPECIFICATION
- SF REMOVE AND STOCKPILE FENCE
- SGA SPECIAL GRADED AGGREGATE
- SGC REMOVE AND STOCKPILE GRANITE CURB
- SGR REMOVE AND STOCKPILE GUARDRAIL
- SH REMOVE AND STOCKPILE HYDRANT
- SS REMOVE AND STOCKPILE SIGN
- STS REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
- TB CONCRETE THRUST BLOCK
- TEP TIE EXISTING PIPE INTO NEW STRUCTURE
- TNP TIE NEW PIPE INTO EXISTING STRUCTURE
- TBT THRIE BEAM TRANSITION
- TBBC THRIE BEAM BRIDGE CONNECTION
- TT TREE TRIMMING
- WCM 4" WOOD CHIP MULCH
- 4DY 4" EPOXY RESIN PAVEMENT MARKINGS - DOUBLE YELLOW
- 6W 6" EPOXY RESIN PAVEMENT MARKINGS - WHITE
- 12W 12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
- 6WT 6" PREFORMED PATTERNED MARKING (HIGH PERFORMANCE TAPE)
- 4Y 4" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
- 6Y 6" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
- P.G.L. PROFILE GRADE LINE

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 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 APR 5 2019 FILE # 18-0191  
 DATED: \_\_\_\_\_  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ANGELA M. SAUNDERS  
 No. 8435  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
 12-18-18

Office of Water Resources  
 DEC 20 2018

**THIS PLAN SHALL NOT BE ALTERED**

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION		
NO.	DATE	BY			
			SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS		
			NARRAGANSETT PIER MIDDLE SCHOOL		
			NARRAGANSETT, RHODE ISLAND		
			STANDARD PLAN SYMBOLS & STANDARD LEGEND		
			CHECKED BY	DATE	SCALE NO SCALE

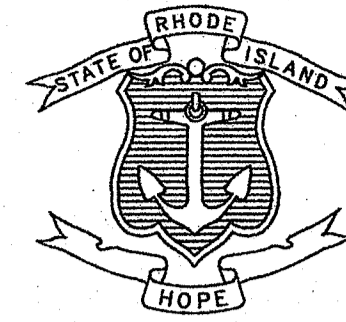


FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	CCC-BBB(AAA)	2018	1	54

# INDEX

SHEET NO.	DESCRIPTION
<b>HIGHWAY PLANS</b>	
1	COVER SHEET
2	STANDARD PLAN SYMBOLS & STANDARD LEGEND
3	STANDARD NOTES - 1
4	STANDARD NOTES - 2
5	JOB SPECIFIC PLAN SYMBOLS, LEGEND, & NOTES
6	TYPICAL SECTIONS
7	KEY PLAN
8-13	GENERAL PLAN NOS. 1-6
14	TRANSITION DETAILS SHEET
15-20	PROFILE PLAN NOS. 1-6
21-26	DRAINAGE AND UTILITY PLAN NOS. 1-6
27-32	SOIL EROSION & SEDIMENT CONTROL PLAN NOS. 1-6
33-38	GRADE PLAN NOS. 1-6
39	LANDSCAPE PLAN
40-44	CROSS SECTIONS NOS. 23-27
45	BASIN PLAN
46-48	DETAILS SHEET NOS. 1-3
<b>BRIDGE NO. 130501 PLANS</b>	
49	LIST OF ABBREVIATIONS
50	BRIDGE GENERAL NOTES 1
51	BRIDGE GENERAL NOTES 2
52	BRIDGE GENERAL PLAN AND LONGITUDINAL SECTION
53	DEMOLITION PLAN AND ELEVATION
54	BRIDGE PROFILES

# STATE OF RHODE ISLAND



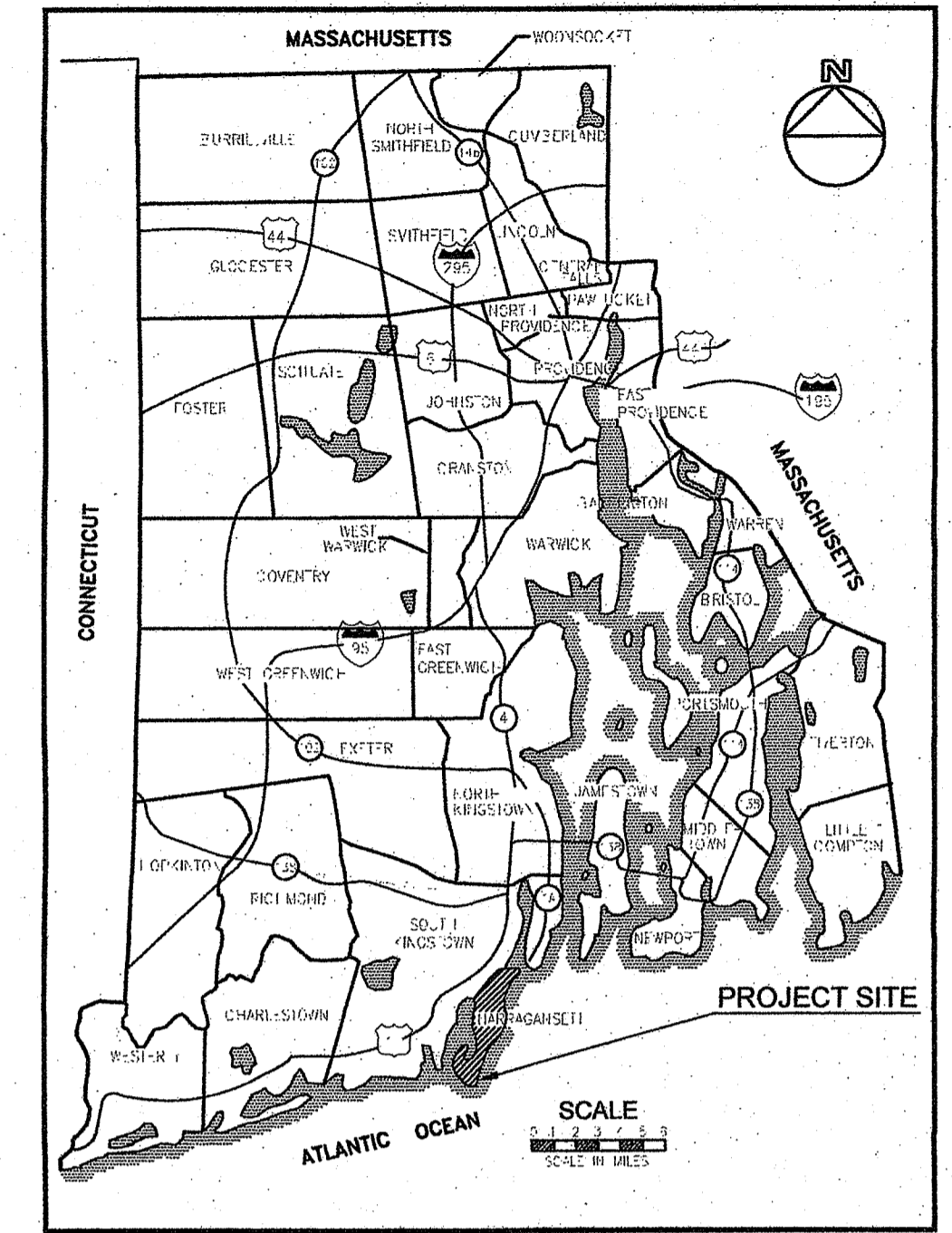
## DEPARTMENT OF TRANSPORTATION

### PLAN, PROFILE AND SECTIONS OF PROPOSED RHODE ISLAND SAFE ROUTES TO SCHOOL PROGRAM INFRASTRUCTURE IMPROVEMENTS

#### NARRAGANSETT PIER MIDDLE SCHOOL

TOWN OF NARRAGANSETT  
COUNTY OF WASHINGTON

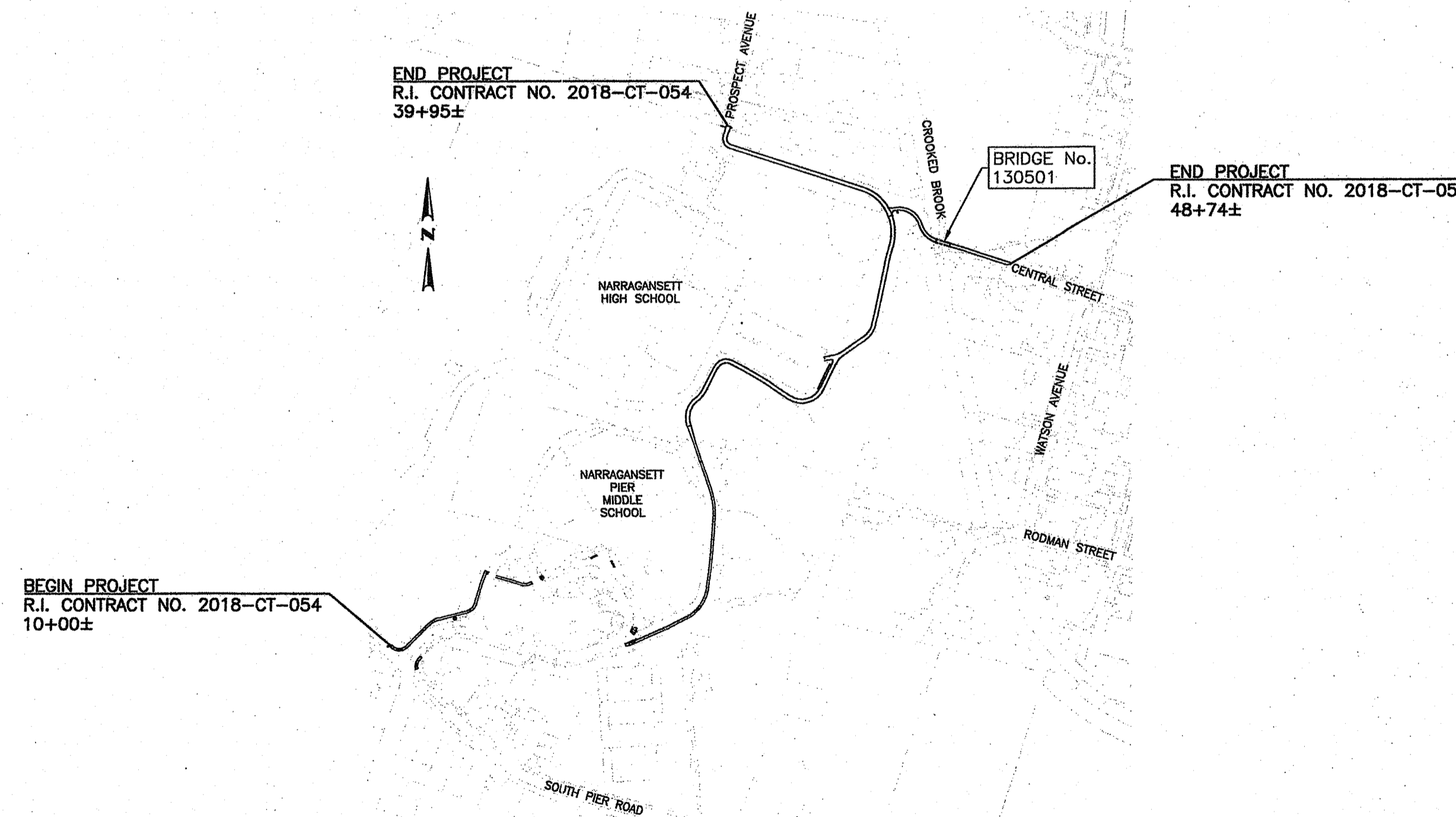
R.I. CONTRACT NO. 2018-CT-054 F.A. PROJECT NO. CCC-BBBB(AAA)



Environmental Management  
DEC 20 2018  
Office of Water Resources

LOCATION MAP

**R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS**  
SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED MARCH 2018, WITH ALL REVISIONS, AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.



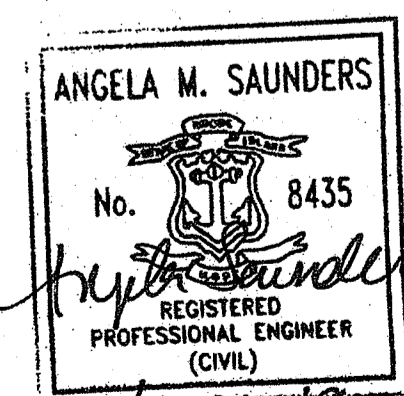
LAYOUT PLAN  
1" = 300'

**SCALES OF DRAWINGS**  
Plans 1 inch = 20 feet  
Profiles 1 inch = 20 feet Horizontal  
Profiles 1 inch = 4 feet Vertical  
Cross Sections 1 inch = 4 feet

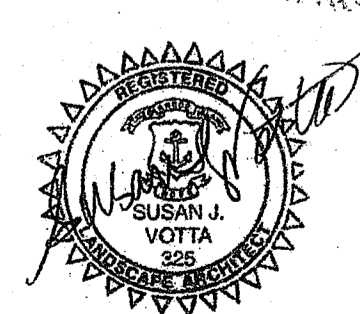
BASE OF LEVELS  
NGVD 29

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED APR 5 2019 FILE # 18-017  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
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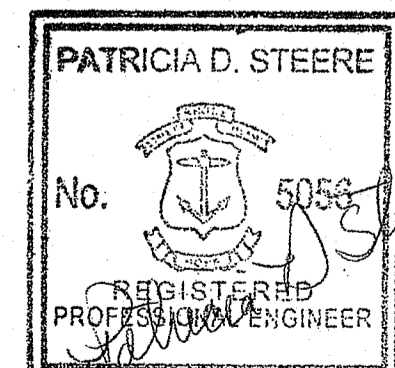
RIDEM SUBMISSION  
OCTOBER 2018



FOR SHEETS  
1-42



FOR SHEET  
39



FOR SHEETS  
49-54



Contract Number 2018-CT-054

Number of Sheet 1

Total Sheets 54

R.I. DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
ADMINISTRATOR, PROJECT MANAGEMENT	DATE
APPROVED	DATE
CHIEF ENGINEER OF INFRASTRUCTURE	DATE
APPROVED	DATE
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	DATE
DIVISION ADMINISTRATOR	DATE