

June 14, 2013

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF ADMINISTRATION

DIVISION OF PURCHASES BID NO. 7468370

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2012-CB-001

FEDERAL-AID PROJECT NO. FAP Nos: BRO-0182(002)

Replacement of Central Bridge No. 018201 & Access Improvements to Route 114

Sta. 0+56.00 to Sta. 16+38.00

CITY/TOWN OF Barrington

COUNTY OF BRISTOL

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 1 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this Contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Clarification

1. Pre-Bid Conference Sign-In Sheet

The sign-in sheet from the June 6, 2013 Pre-Bid Conference is attached to this Addendum No. 1.

2. Completion Dates

The "Phase 2 Completion Date" included in the Quest Lite Bid File is defined as the "Interim Completion - Bridge Open" date as defined in Special Provision 12.108.1000 "Prosecution and Progress." Bidders shall note that this "Phase 2 Completion Date" differs from the phases identified as Phases I, II, IIA, III, IV, and V on the Plans and elsewhere in the Contract Documents.

3. Concrete Filled Steel Pipe Piles

All concrete to be used as fill in the steel pipe piles shall be Self Consolidating Concrete as specified in Concrete Note 2 on Plan Sheet 36 of 103.

4. Dynamic Pile Tests

Dynamic pile tests shall be considered incidental to Item Codes 804.9901 and 804.9902 as indicated in the Special Provision and on Plan Sheet 51 of 103.

5. In-Water Work Restriction Dates

The RIDEM WQC (and by reference the CRMC Assent) restricts in-water work from February 1 through May 15. The ACOE Permit restricts in-water work from March 15 through June 1. These dates are enveloped by the in-water work restriction dates of February 1 through June 1 given in Section 5b of the CS Pages and on Plan Sheets 5 and 33 of 103.

6. Dowels at Concrete-Filled Pipe Piles

The reinforcing dowels with 90° bends extending from the top of the concrete-filled pipe piles into the abutment, return wall, and pier pile caps shall be constructed as shown on Sheet 51 of 103. Straight dowels or omitting the dowels will not be permitted.

7. Barge Placement Plan

RIDEM WQC Construction Condition No. 13 states that the barge envelope site plan is not approved. RIDEM has subsequently approved the Barge Placement Plan as shown on Plan Sheet 34 of 103. A copy of the approval is attached to this Addendum No. 1.

8. Terrapin Barrier

RIDEM WQC Construction Condition No. 15 states that a terrapin barrier must be constructed before or at the start of construction. This barrier has been constructed under a separate contract. It is located north of and outside the limits of the project.

9. Detour Plans & Transportation Management Plan (TMP)

The Maintenance and Protection of Traffic Plans and the TMP provide for limited bridge closures. These closures are anticipated to be necessary for some isolated construction activities such as setting beams where the work can't be completed while maintaining one or two-way traffic as permitted by the TMP. The allowable closure times are given in the "General Restrictions Chart" attached to the TMP, generally 8:00 PM to 6:00 AM weekdays.

10. Mass Concrete

Payment for complying with the requirements of Special Provision 607 "Mass Concrete" shall be considered incidental to the respective items under which each concrete pour is paid. No separate payment will be made for this work for any concrete pour.

11. References to "Pile Caps" and "Footings"

In the Proposal, standard item descriptions for Item Codes 808.0502 and 808.0504 reference "Footings." These items are intended to cover concrete for the abutment pile caps, return wall caps, and SE and SW wall pile caps.

12. Terrapin Informational Meeting Duration

Per Special Provision 999.9902 "Terrapin Consulting Services," it is anticipated that the informational meeting to educate the Contractor and Subcontractors about the Northern Diamondback Terrapin will take approximately 30 minutes followed by a question and answer period.

13. Navigational Channel

The Contractor shall be responsible for maintaining a safe navigational channel in accordance with USCG and the Town of Barrington Harbormaster's requirements. No additional payment will be made for this work. Refer to Section 5b of the General Provisions - Contract Specific.

14. Item Codes 804.9901 and 804.9902

The quantities shown have been calculated based on the proposed cut-off elevations and the estimated pile-tip elevations shown on Sheets 41 and 51 of 103. The minimum penetration elevations shown on these sheets are the minimum required even if the specified axial capacity is achieved above these elevations.

B. Distribution of Quantities

1. Index
Delete the Index in its entirety and insert the Index (R-1) attached to this Addendum No. 1. The Index has been updated.
2. Item 925.0110 "Portable Changeable Message Sign"
Replace Page 30 of 43 with Page 30 of 43 (R-1) attached to this Addendum No. 1. The quantity for Item 925.0110 "Portable Changeable Message Sign" has been modified.
3. Anchored Precast Concrete Barrier for Temporary Traffic Control
Replace Page 30 of 43 with Pages 30(R01) and 30a of 43 attached to this Addendum No. 1. A quantity for Item 926.0120 "Anchored Precast Concrete Barrier for Temporary Traffic Control" has been added.
4. Item 999.9901 "Terrapin Barrier"
Replace Page 34 of 43 with Page 34 of 43 (R-1) attached to this Addendum No. 1. Item 999.9901 "Terrapin Barrier" has been removed from the Contract.
5. Item Codes L08.0109 and L10.0101
Replace Page 35 of 43 with Page 35 of 43 (R-1) attached to this Addendum No. 1. Item L08.0109 "Tree Trimming" and L10.0101 "Mechanical Tree and Shrub Root Pruning" have been removed from the Contract.
6. Item Codes T20.9906 and T20.9907
Replace Pages 42 and 43 of 43 with Pages 42 and 43 (R-1) of 43 attached to this Addendum No. 1. Item Codes T20.9906 and T20.9907 have been replaced with Standard Item Codes T20.0820 and T20.0822.
7. Item 201.9902 "Handling of Contaminated Pipe"
Replace Page 43 of 43 with Page 43 of 43(R-1) attached to this Addendum No. 1. Item 201.9902 "Handling of Contaminated Pipe" has been added.

C. General Provisions - Contract Specific

1. Utility and Municipal Notification and Coordination
Replace Pages CS-4 and CS-5 with Page CS-4(R-1) and 5(R-1) attached to this Addendum No. 1. The contact name for National Grid Gas has changed and the paragraph regarding testing and removal of the existing gas main has been revised. In addition, the last paragraph on Page CS-5 regarding utility durations has been modified.
2. Available Documents
Replace Page CS-13 with Page CS-13(R-1) attached to this Addendum No. 1. A document has been added to the "Available Documents" section.

D. Specifications - Job Specific

1. Index
Insert Page JS-iv attached to this Addendum No. 1. The index has been updated.

2. Portland Cement Concrete

Replace Pages JS-31, 32, and 42-48 with Pages JS-31, 32, and 42-48 (R-1) attached to this Addendum No. 1. The Portland Cement Concrete Special Provision has been updated.

3. Mass Concrete

Replace Page JS-49 with Page JS-49(R-1) attached to this Addendum No. 1. The measurement units associated with the calculation of the surface area/volume ration has been defined.

4. Central Bridge No. 182

Replace Page JS-97 with Page JS-97(R-1) attached to this Addendum No. 1. The paragraph entitled "Excluded Items of Work" has been revised.

5. Concrete Filled Pipe Piles

Replace Page JS-102 with Page JS-102(R-1) attached to this Addendum No. 1. The type of concrete to be used with each pile size has been revised.

6. Concrete Protective Sealers

Insert Page JS-187. Special Provision M.12.03 "Concrete Protective Sealers" has been added.

7. Handling of Contaminated Pipe

Insert Page JS-188 attached to this Addendum No. 1. Item 201.9902 "Handling of Contaminated Pipe" has been added.

E. Drawings/Plans - Change/Addition

1. Sheets 23, 43, & 83 - Anchored Precast Concrete Barrier

Sheets 23, 43, & 83 of 103 are modified as shown in Sketches 3-5 attached to this Addendum No. 1. The temporary precast barrier on the proposed bridge has been changed to Anchored Precast Concrete Barrier for Temporary Traffic Control.

2. Sheets 37 and 38 - Bridge Demolition Plans

Sheets 37 and 38 of 103, Bridge Demolition Plans 1 and 2, are modified as shown in Sketches 1 and 2 attached to this Addendum No. 1. A note regarding included items of work has been added.

3. Sheet 34 - Barge Placement Plan

Sheet 34 of 103, Barge Placement Plan, is modified as shown in Sketch 6 attached to this Addendum No. 1. A note regarding buoy placement along salt marsh and mud flat areas has been added.

4. Sheet 51 - Pile Details

Sheet 51 of 103, Pile Details, is modified as shown in Sketch 7 attached to this Addendum No. 1. A note regarding predrilling equipment has been added.

F. Contract Dates

1. Bid-Opening Date

The Bid-Opening Date has been updated to 07/10/2013.



RI Department of Transportation
Chief Engineer



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

May 7, 2013

Peter Healey
RIDOT
2 Capitol Hill, Rm. 226
Providence, Rhode Island 02903

RE: **Barge Envelope Plan**
Central Bridge No. 182
WQC File No. 11-002

Dear Mr. Healey:

The Rhode Island Department of Environmental Management has reviewed the Barge Envelope Plan submitted on April 17, 2013. The Department finds the Plan adequate for the placement and installation of barges during the construction phase of the above referenced project.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell J. Chateaufneuf".

Russell J. Chateaufneuf, P.E., Chief
Groundwater and Wetlands Protection

RJC/emg

Xc: Edward Leblanc, U.S. Coast Guard
Grover Fugate, RI CRMC
Eric Schneider, RIDEM
Michael Elliott, U.S. ACOE



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201.0321	CLEARING AND GRUBBING	1
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201.0402	REMOVE AND DISPOSE CONCRETE CURB	1
201.0403	REMOVE AND DISPOSE SIDEWALKS	1
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	1
201.0411	REMOVE AND DISPOSE CATCH BASIN AND GUTTER INLETS	2
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201.0414	REMOVE AND DISPOSE PIPE - ALL SIZES	2
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201.0429	REMOVE AND DISPOSE CURB STOP BOX	3
201.0432	REMOVE AND DISPOSE HEADWALL	3
201.0610	REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS	4
201.9901	PRE AND POST CONSTRUCTION SURVEYS OF EXISTING STRUCTURES	4
202.0100	EARTH EXCAVATION	5
202.0201	ROCK EXCAVATION MECHANICAL	5
202.0700	COMMON BORROW	5
203.0100	STRUCTURAL EXCAVATION EARTH	5
203.0203	STRUCTURAL EXCAVATION BOULDERS	5
203.0530	DEWATERING	6
203.0600	FILL GRAVEL BORROW UNDER STRUCTURES	6
203.0650	CRUSHED STONE FILL UNDER STRUCTURES	6
203.0700	PERVIOUS FILL	7
203.9901	HANDLING, HAULING, AND DISPOSAL OF MATERIAL EXCAVATED BELOW MHW	7
204.0100	TRIMMING AND FINE GRADING	8
206.0208	REMOVAL OF BALED HAY EROSION CHECKS	8
206.0230	BALED HAY EROSION CHECK AND SILT FENCE COMBINED STANDARD 9.3.0	8
208.0100	DEWATERING BASIN STANDARD 9.7.0	8
208.9901	STOCKPILE BASIN	8
209.9901	INLET SEDIMENT CONTROL DEVICES	9
212.2000	CLEANING AND MAINTENANCE OF EROSION CONTROLS	9
213.0100	PLACEMENT OF MILLINGS BENEATH GUARDRAIL	9
301.0300	CRUSHED STONE OR CRUSHED GRAVEL BASE MODIFIED	10
301.9901	GEOGRID FABRIC	10
302.0100	GRAVEL BORROW SUBBASE COURSE	10
401.9903	HOT MIX ASPHALT - CLASS 12.5	10
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403.0300	ASPHALT EMULSION TACK COAT	11
408.0100	CLEANING AND SEALING CRACKS IN BITUMINOUS CONCRETE PAVEMENT: CRACKS LESS THAN 1 INCH IN WIDTH	11
408.0200	CLEANING AND SEALING CRACKS IN BITUMINOUS CONCRETE PAVEMENT: CRACKS 1 INCH AND OVER IN WIDTH	11
601.0300	CLASS A PORTLAND CEMENT CONCRETE	12
603.1000	CONTROLLED LOW STRENGTH MATERIAL	12
700.9901	CORRUGATED STEEL PIPE FOR UTILITY POLES	12
701.0412	REINFORCED CONCRETE PIPE M 170 CLASS III 12 INCH	13
701.0512	REINFORCED CONCRETE PIPE M 170 CLASS IV 12 INCH	13
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708.9040	CLEANING AND FLUSHING PIPE ALL SIZES	17
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923.0200	FLUORESCENT TRAFFIC CONES STANDARD 26.1.0	30
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T20.2006	6 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	40
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T20.2022	EPOXY RESIN PAVEMENT MARKING WORD "ONLY" STANDARD 20.1.0	41
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
112	922.0100	Cont.				
		Item 922.0100 Total:		824.00		
113	923.0105	DRUM BARRICADE STANDARD 26.2.0	B DAY			
		ROADWAY				
		PROJECT WIDE		19,000.00	0010	01
		Item 923.0105 Total:		19,000.00		
114	923.0120	PLASTIC PIPE BARRICADE STANDARD	EACH			
		26.3.0				
		ROADWAY				
		PROJECT WIDE		30.00	0010	01
		Item 923.0120 Total:		30.00		
115	923.0200	FLUORESCENT TRAFFIC CONES STANDARD	EACH			
		26.1.0				
		ROADWAY				
		PROJECT WIDE		300.00	0010	01
		Item 923.0200 Total:		300.00		
116	925.0112	PORTABLE CHANGEABLE MESSAGE SIGN	P DAY			
		ROADWAY				
		PROJECT WIDE		1,096.00	0010	01
		Item 925.0112 Total:		1,096.00		
117	926.0120	ANCHORED PRECAST CONCRETE BARRIER	LF			
		FOR TEMPORARY TRAFFIC CONTROL				
		BRIDGE				
		EXISTING BRIDGE		330.00	0010	01
		PROPOSED BRIDGE		330.00	0010	01
		Item 926.0120 Total:		660.00		
118	926.0130	PRECAST MEDIAN BARRIER FOR	LF			
		TEMPORARY TRAFFIC CONTROL STANDARD				

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<u>Item No.</u>	<u>Item Code</u>	<u>Description</u>	<u>UM</u>	<u>Qty.</u>	<u>Pay Code</u>	<u>Seq. No.</u>
118	926.0130	Cont. 40.5.0				

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R.I. Contract No. - 2012-CB-001

FAP Nos: BRO-0182(002)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
132	943.0200	TRAINEE MAN-HOURS	MHRS			
		PROJECT WIDE				
		PROJECT WIDE		2,500.00	0010	01
Item 943.0200 Total:				2,500.00		
133	999.9901	TERRAPIN BARRIER	LF			
		COUNTY ROAD				
		COUNTY ROAD			0010	01
Item 999.9901 Total:				**DELETED**		
S134	999.9902	TERRAPIN CONSULTING SERVICES	LS			
		PROJECT WIDE				
		PROJECT WIDE		1.00	0010	01
Item 999.9902 Total:				1.00		
S135	L01.0102	LOAM BORROW 4 INCHES DEEP	SY			
		ROADWAY				
		00+56 RT - 03+00 RT		510.00	0010	01
		09+42 LT - 14+46 LT		467.00	0010	01
		10+52 RT - 12+75 RT		283.00	0010	01
		13+00 RT - 16+38 RT		22.00	0010	01
		15+66 LT - 15+75 LT		6.00	0010	01
Item L01.0102 Total:				1,288.00		
S136	L02.0102	RESIDENTIAL SEEDING (TYPE 2)	SY			
		ROADWAY				
		FROM ITEM L01.0102		1,288.00	0010	01
Item L02.0102 Total:				1,288.00		
S137	L02.9901	WETLAND MITIGATION AREA -	LS			
		MASSASOIT AVENUE				
		BRIDGE				
		MASSASOIT AVENUE		1.00	0010	01

Distribution of Quantities

Project Name - Replacement of Central Bridge No. 018201 & Access Improvements to Route 114

Estimate Name - Addendum 1 Bridge No. 182

R.I. Contract No. - 2012-CB-001

FAP Nos: BRO-0182(002)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S137	L02.9901	Cont.		1.00		
				Item L02.9901 Total:		
138	L02.9902	WETLAND MITIGATION AREA - VIRGINIA ROAD	LS			
				ROADWAY		
				VIRGINIA ROAD		
				1.00	0010	01
				Item L02.9902 Total:		1.00
139	L02.9903	WETLAND MITIGATION AREA - RIVERVIEW DRIVE	LS			
				ROADWAY		
				RIVERVIEW DRIVE		
				1.00	0010	01
				Item L02.9903 Total:		1.00
140	L08.0109	TREE TRIMMING	MHRS			
				ROADWAY		
				10+50 LT - 13+10 LT		
					0010	01
				Item L08.0109 Total:		**DELETED**
141	L10.0101	MECHANICAL TREE AND SHRUB ROOT PRUNING	LF			
				ROADWAY		
				11+50 LT - 13+08 LT		
					0010	01
				15+00 RT (TREE)		
					0010	01
				Item L10.0101 Total:		**DELETED**
142	L11.0102	TREE PLANT PROTECTION DEVICE	EACH			
				STANDARD 51.1.0		
				ROADWAY		
				14+99 RT		
				1.00	0010	01
				Item L11.0102 Total:		1.00
143	L11.0103	SHRUB PLANT PROTECTION DEVICE	LF			

Distribution of Quantities

Project Name - Replacement of Central Bridge No. 018201 & Access Improvements to Route
114

Estimate Name - Addendum 1 Bridge No. 182

R.I. Contract No. - 2012-CB-001

FAP Nos: BRO-0182(002)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
168	T20.2022 Cont.	ROADWAY				
		01+10 L		1.00	0010	01
		02+10 L		1.00	0010	01
Item T20.2022 Total:				2.00		
169	T20.9901	TEMPORARY 4 INCH EPOXY RESIN	LF			
		PAVEMENT MARKINGS YELLOW				
		TEMPORARY CONST.				
		CONST PHASE I & II		3,360.00	0010	01
		CONST PHASE IIA		3,400.00	0010	01
		CONST PHASE III & VI		3,380.00	0010	01
Item T20.9901 Total:				10,140.00		
170	T20.9902	TEMPORARY 6 INCH EPOXY RESIN	LF			
		PAVEMENT MARKINGS WHITE				
		TEMPORARY CONST.				
		CONST PHASE IIA		100.00	0010	01
		CONST PHASE III & VI		3,420.00	0010	01
Item T20.9902 Total:				3,520.00		
171	T20.9903	TEMPORARY 12 INCH EPOXY RESIN	LF			
		PAVEMENT MARKINGS WHITE				
		TEMPORARY CONST.				
		00+33 C - 00+33 L		30.00	0010	01
		14+35 C - 14+45 C		80.00	0010	01
		X3 APPLICATION		330.00	0010	01
Item T20.9903 Total:				440.00		
172	T20.9906	FAST DRYING WATERBORNE PAVEMENT	LF			
		ARROW - STRAIGHT, LEFT, RIGHT, OR				
		COMBINED STANDARD 20.1.0				
		ROADWAY				
		FROM ITEM T20.2020			0010	01

Distribution of Quantities

Project Name - Replacement of Central Bridge No. 018201 & Access Improvements to Route 114

Estimate Name - Addendum 1 Bridge No. 182

R.I. Contract No. - 2012-CB-001

FAP Nos: BRO-0182(002)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
172	T20.9906 Cont.					
				Item T20.9906 Total:	**DELETED**	
173	T20.9907	FAST DRYING PAVEMENT MARKING WORD "ONLY" STANDARD 20.1.0 WATERBORNE ROADWAY FROM ITEM T20.2022	LF		0010	01
				Item T20.9907 Total:	**DELETED**	
174	201.9902	HANDLING OF CONTAMINATED PIPE PROJECT WIDE PROJECT WIDE	LF		0010	01
				Item 201.9902 Total:	1,450.00	
175	T20.0820	FAST DRYING WATERBONE PAVEMENT ARROW - STRAIGHT, LEFT, RIGHT, OR COMBINED STANDARD 20.1.0 ROADWAY FROM ITEM T20.2020	EACH		0010	01
				Item T20.0820 Total:	5.00	
176	T20.0822	FAST DRYING WATERBONE PAVEMENT MARKING WORD "ONLY" STANDARD 20.1.0 ROADWAY FROM ITEM T20.2022	EACH		0010	01
				Item T20.0822 Total:	2.00	

3. UTILITY AND MUNICIPAL NOTIFICATION AND COORDINATION

The Contractor shall schedule the construction so as to allow for a coordinated highway and utility effort. The Contractor is to coordinate utility work with the appropriate utility companies to avoid conflicts during construction. Upon award, the Contractor shall notify the lead utility relative to his anticipated construction start date. Immediately following the Pre-Construction Conference, the Contractor shall initiate the survey layout required for utilities. The following municipal agencies and utility companies can be contacted for information regarding utilities, verification, or monitoring:

The Contractor shall coordinate the construction schedule with the Engineer as it relates to all lane closures and detours such that the Engineer can coordinate with the Town at least three days in advance each lane closures and detour.

Utility and Municipality Representatives

Water

Mr. Ray Johnson 401-245-2033
Distribution Superintendent
Bristol County Water Authority
472 Child Street
Warren, RI 02885

Electricity

Mr. Thomas Capobianco 401-784-7248
Project Manager-RIDOT
c/o The Narragansett Electric Company d/b/a National Grid
Melrose Street
Providence, Rhode Island 02901

Telephone

Mr. Anthony Filomeno 401-727-9543
State Highway Administrator
Verizon Communications, Inc. -RI
85 High Street
Pawtucket, Rhode Island 02860

Gas

Mr. James M. Paulette 781-466-5486
Project Engineering and Design
National Grid Gas
40 Sylvan Road
Waltham, MA 02451

Cable

Mr. David Velilla 401-615-1284
Capital Support & Utility Coordinator
Cox Communications
9 J.P. Murphy Highway
West Warwick, Rhode Island 02893

Town of Barrington

Mr. Alan Corvi 401-247-1907
Director
Department of Public Works
84 Upland Way
Barrington, RI 02806

Raymond J. Sousa 401-437-3930
Harbormaster
100 Federal Rd.
Barrington, RI 02806

Fire

Gerald A. Bessette 401-437-3940
Fire Chief
Barrington Fire Department
100 Federal Rd.
Barrington, RI 02806

Police

John M. LaCross 401-437-3935
Chief of Police
Barrington Police Department
100 Federal Rd.
Barrington, RI 02806

The Contractor shall provide all necessary temporary traffic control for the utility company work to be performed. The Contractor shall not demolish the existing bridge until all overhead utility relocations are complete.

Regarding the overhead utilities, the Contractor shall be aware that:

1. The overhead electric lines along Massasoit Avenue are energized at 12,470 V line-to-line (7,200 V line-to-neutral) and shall plan all construction operations accordingly, and
2. The lines cannot be de-energized at any time during construction.

The Contractor shall notify National Grid Gas no less than 2 weeks after notice to proceed to have the existing gas main tested for PCB contamination. Should the test results show no contamination, there are no further restrictions on pipe demolition. However, should the test results show PCB contamination, the Contractor shall coordinate the construction schedule with National Grid to have an open-top container delivered to the site to receive the PCB contaminated pipe. National Grid will haul the container away and dispose of the pipe.

The following durations for the relocation of utilities along with minimum advance notice requirements have been provided by the utility companies. These durations and advance notice requirements are provided solely for the convenience of the Contractor. The Contractor shall be responsible for coordinating with the appropriate utility companies to establish durations for this work to include in the construction schedule.

This document is included in the advertising disk for informational purposes only, but shall not be considered part of the Contract Documents. The Contractor shall be responsible for field-verifying the information shown in this document.

2. April 2011, *Bridge Inspection Report* for Central Bridge No. 182, Rhode Island Department of Transportation, prepared by AI Engineers, Inc.

This document is available for informational purposes only and may be requested from RIDOT. It shall not be considered part of the Contract Documents. The Contractor shall be responsible for field-verifying the information shown in this document.

3. 1998, Selected sheets from *Reconstruction of the County Rd./Massasoit Ave. Intersection and County Rd./Lincoln Ave Intersection*, Rhode Island Department of Transportation, prepared by Pare Engineering Corporation.

This document is provided for informational purposes only, but shall not be considered part of the Contract Documents. The Contractor shall be responsible for field-verifying the information shown in this document.

19. ACCEPTANCE TESTING AND QUALITY/PROCESS CONTROL TESTING AND SAMPLING RESULTS

1. All acceptances will be based on sampling, testing and inspection performed by the State, and the Contractor's testing results will not be included in the acceptance decision.
2. The Contractor shall be responsible for performing its own process/quality control sampling and testing, for all fill and backfill Material placed under the following Standard Specifications as may be modified/appended by governing Special Provisions:

Section 202 Excavation and Embankment
Section 203 Structure Excavation and Backfill
Section 301 Aggregate and Gravel Base Courses
Section 302 Gravel Borrow Subbase Courses

This testing shall be performed on each lift of placed Material. The frequency of testing shall be not less than that specified under Subsection 202.03.3b of these Special Provisions.

3. The Contractor is required to record and report the results of all completed Quality/Process Control sampling and testing. Two copies of the Quality/Process Control sampling and testing results shall be provided to the Engineer within 24 hours or as directed by the Engineer. All testing shall be performed at an AASHTO Accredited laboratory.
4. Failure to comply with the provisions of this section may result in suspension of Contractor operations until all specified requirements have been met.

20. PROJECT QUALITY CONTROL PLAN

In addition to the Contractor's Quality/Process Control requirements included in the Contract, the Contractor shall submit for review and approval a comprehensive Quality Control Plan to address each item within the areas of work within the Project. The Contractor shall refer to the Standard Specifications including the Master Schedule for the Preparation of a Project Schedule for Sampling, Testing and Certification of Materials to identify the project specific requirements and minimum frequencies for each item.

INDEX OF DRAWINGS

SHEET No.	DESCRIPTION
1	COVER SHEET
2	PLAN SYMBOLS & GENERAL LEGEND
3	TYPICAL SECTIONS
4-8	GENERAL PLAN and PROFILE Nos. 1-5
9-13	DRAINAGE and UTILITY PLAN Nos. 1-5
14-18	LOCATION PLAN Nos. 1-5
19-20	SIGNING and STRIPING PLAN Nos. 1-2
21	SIGNAL PLAN No. 1
22	DETAILS - 1
23	DETAILS - 2
24	CONSTRUCTION SIGNING PLAN
25	MAINTENANCE and PROTECTION OF TRAFFIC PLAN
26-28	RETAINING WALL PLAN & ELEVATION (SHEETS 1-3)
29	RETAINING WALL SECTIONS & DETAILS
30	WALL TIE SECTION, DETAILS & NOTES
31	RETAINING WALL NOTES
32	4-BAR END POST SECTIONS & DETAILS
33	2-BAR END POST SECTIONS & DETAILS
34	4-BAR RAIL SECTIONS & DETAILS
35	2-BAR RAIL SECTIONS & DETAILS
36-38	EARTH SUPPORT SYSTEM PLAN & ELEVATION (SHEETS 1-3)
39-40	BORING LOGS, SHEETS 1-2
41-46	CROSS SECTIONS - 33+60 TO 44+00
47-54	CROSS SECTIONS - F2+00 TO F14+00
55-56	CROSS SECTIONS - M0+50 TO M3+00
57-68	RHODE ISLAND STANDARDS
69	GENERAL PLAN-COUNTY ROAD and LINCOLN AVENUE
70	EROSION CONTROL PLAN-COUNTY ROAD and LINCOLN AVENUE
71	SIGN AND PAVEMENT MARKING PLAN-COUNTY ROAD and LINCOLN AVENUE

R.I. STANDARD SPECIFICATIONS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1997 EDITION, AND; THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS AS INCLUDED.

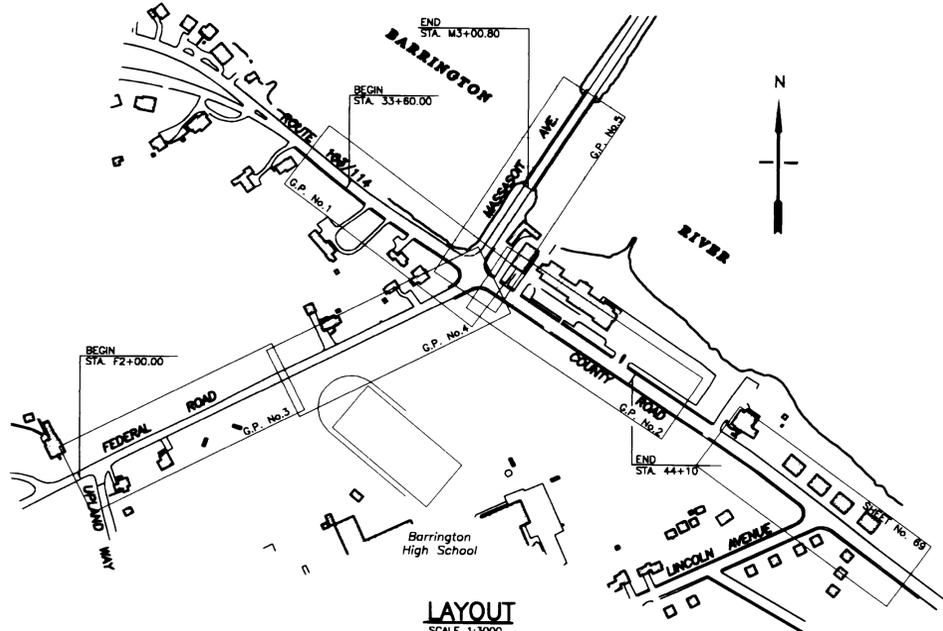
THE FOLLOWING STANDARD DETAILS ARE INCLUDED IN THIS PROJECT:

STANDARD No.	DESCRIPTION
4.31	PRECAST CATCH BASIN - 4', 5', OR 6' DIAMETER
4.33	PRECAST MANHOLE - 5' DIAMETER
4.34	PRECAST MANHOLE - 6' DIAMETER
4.35	PRECAST MANHOLE AND CATCH BASINS
4.36	MAXIMUM PIPE SIZE STANDARDS
4.95	PRECAST ALTERNATE TOP SLAB
5.17	CONCRETE COLLARS
5.22	SQUARE FRAME & COVER, HEAVY DUTY
5.33	ROUND FRAME & COVER, HEAVY DUTY
7.11	C.B./M.H. STEP
7.18	PRECAST CONCRETE CURB
7.43	3' PRECAST CONCRETE TRANSITION CURB
7.44	BITUMINOUS BERM
7.51S	BITUMINOUS CONCRETE WIP CURB
7.51C	GRANITE CURB QUARRY SPLIT, (STRAIGHT)
7.56	GRANITE CURB QUARRY SPLIT, (CIRCULAR)
7.57	GRANITE CURB QUARRY SPLIT, (CIRCULAR)
7.58	GRANITE APPROACH STONE FOR ROUND CURB
9.1	BALED HAY EROSION CHECK
9.2	BALED HAY DITCH EROSION CHECK
9.5	BALED HAY EROSION CHECK
9.6	R.I. STD. 9.1 WITH SILT FENCE
14.1	CONCRETE HIGHWAY BOUND
15.30	POST & MOUNTINGS FOR RURAL MAILBOXES
18.10	PRECAST HANDHOLE TYPE "A"
19.5	INDUCTANCE LOOP VEHICLE DETECTOR
19.6	GENERAL NOTES-TRAFFIC SIGNALS
19.9	POLE MOUNTED CABINET INSTALLATION
19.10	STREET NAME SIGN
19.15	PAVEMENT MARKINGS - ARROWS AND ONLY
19.31	SPAN POLE FOUNDATION
24.0	GENERAL NOTES REGULATORY & WARNING SIGNS MOUNTINGS
24.1	REGULATORY AND WARNING SIGNS MOUNTINGS
24.3	ROUTE MARKER MOUNTING SINGLE 4"x6" POST
24.11	REGULATORY SIGN MOUNTING SINGLE 4"x4" POST
24.14	PARKING SIGN MOUNTING
25.0	CONSTRUCTION & TEMPORARY SIGNS & MOUNTINGS
25.5	CONSTRUCTION & TEMPORARY SIGN MOUNTINGS
25.8	BOX FORM
26.0	GENERAL NOTES BARRICADES
26.5	POLYETHYLENE DRUM w/ MARKINGS
26.6	FLUORESCENT TRAFFIC CONES
27.0	REGULATORY SIGNS
27.1	TRAFFIC FINES IN WORK ZONE
28.0	WARNING SIGNS
29.0	GUIDE SIGNS AND CONSTRUCTION SIGNS
29.50	FIELD OFFICE IDENTIFICATION SIGN
31.3	CHAIN LINK FENCE (5FT. - 6FT.)
31.31	CHAIN LINK FENCE ENDS OR CORNER POSTS
31.32	CHAIN LINK FENCE INTERMEDIATE POST
31.33	CHAIN LINK FENCE END BAND
34.10	GUARDRAIL CONNECTION TO EXISTING END POST TRAILING END SECTION
34.11	GUARDRAIL CONNECTION TO EXISTING END POST APPROACH END SECTION
34.23	STEEL BACKED TIMBER GUARDRAIL
34.24	STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION
40.5	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
43.1	CEMENT CONCRETE SIDEWALK
43.2	BITUMINOUS CONCRETE SIDEWALK
43.31	CORNER WHEELCHAIR RAMP w/5" THICK CONCRETE
43.32	WHEELCHAIR RAMP (NON-INTERSECTION)
43.41	DRIVEWAY DEVELOPMENT FOR 3' TRANSITION CURB
43.42	DRIVEWAY DEVELOPMENT FOR 6' TRANSITION CURB
43.50	PORTLAND CEMENT CONCRETE DRIVEWAY
47.0	PAVEMENT REMOVAL DETAIL TRANSVERSE DROP OFF

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

Plan, Profile, and Sections of Proposed
STATE HIGHWAY
RECONSTRUCTION OF THE
COUNTY RD./MASSASOIT AVE.
INTERSECTION and
COUNTY RD./LINCOLN AVE. INTERSECTION
TOWN of BARRINGTON, RHODE ISLAND
BRISTOL COUNTY

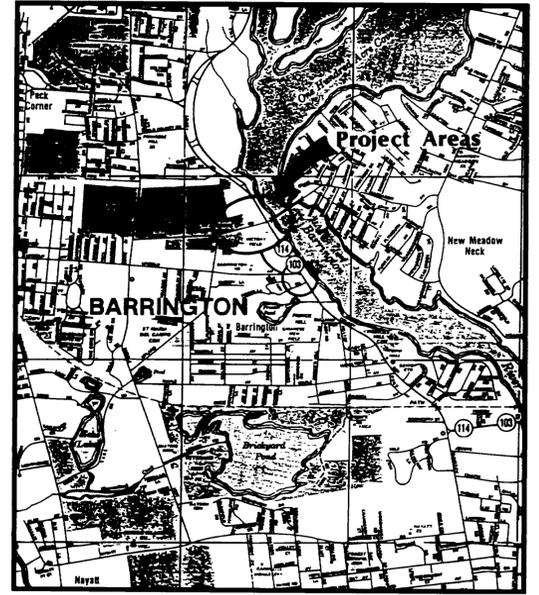
R.I. CONTRACT No. 9894
R.I. FEDERAL AID PROJECT No. NHS-0114(017)
NHSG-0114(018)
LENGTH = .246 Mi



BASE OF LEVELS
N.G.V.D. of 1929

PARE ENGINEERING CORPORATION
Engineers - Planners - Consultants
8 Blackstone Valley Place, Lincoln, RI 02865
401/334/4100 Fax:401/334/4108

Contract Number **9894**
Number of Sheet **1**
Total Sheets **71**



LOCATION MAP
SCALE 1:24,000

PAVEMENT COMPOSITION

COUNTY ROAD STA. 34+50 TO STA. 39+00	COUNTY ROAD STA. 39+00 TO STA. 44+10
2" BITUMINOUS SURFACE COURSE, TYPE I-1	2" BITUMINOUS SURFACE COURSE, TYPE I-1
2" BITUMINOUS BINDER COURSE	3" EXISTING BITUMINOUS BINDER COURSE
4" BITUMINOUS BASE COURSE	8" EXISTING REINFORCED CONCRETE BASE
3" GRAVEL BORROW SUBBASE	12" EXISTING GRAVEL BORROW SUBBASE
ON EXISTING GRAVEL BORROW SUBBASE	(COLD PLANE EXISTING 2" BITUMINOUS SURFACE COURSE)
FEDERAL ROAD	MASSASOIT AVENUE
2" BITUMINOUS SURFACE COURSE, TYPE I-1	2" BITUMINOUS SURFACE COURSE, TYPE I-1
4" BITUMINOUS BASE COURSE	4" BITUMINOUS BASE COURSE
14" GRAVEL BORROW SUBBASE	EXISTING GRAVEL BORROW SUBBASE
	(GRAVEL BORROW SUBBASE TO BE ADDED AS NECESSARY IN THE EXISTING ROAD AREA)
	14" GRAVEL BORROW SUBBASE REQUIRED IN AREAS OF PAVEMENT WIDENING)
LINCOLN AVENUE	
2" BITUMINOUS SURFACE COURSE, TYPE I-1	
2" BITUMINOUS BINDER COURSE	
4" BITUMINOUS BASE COURSE	
12" GRAVEL BORROW SUBBASE	

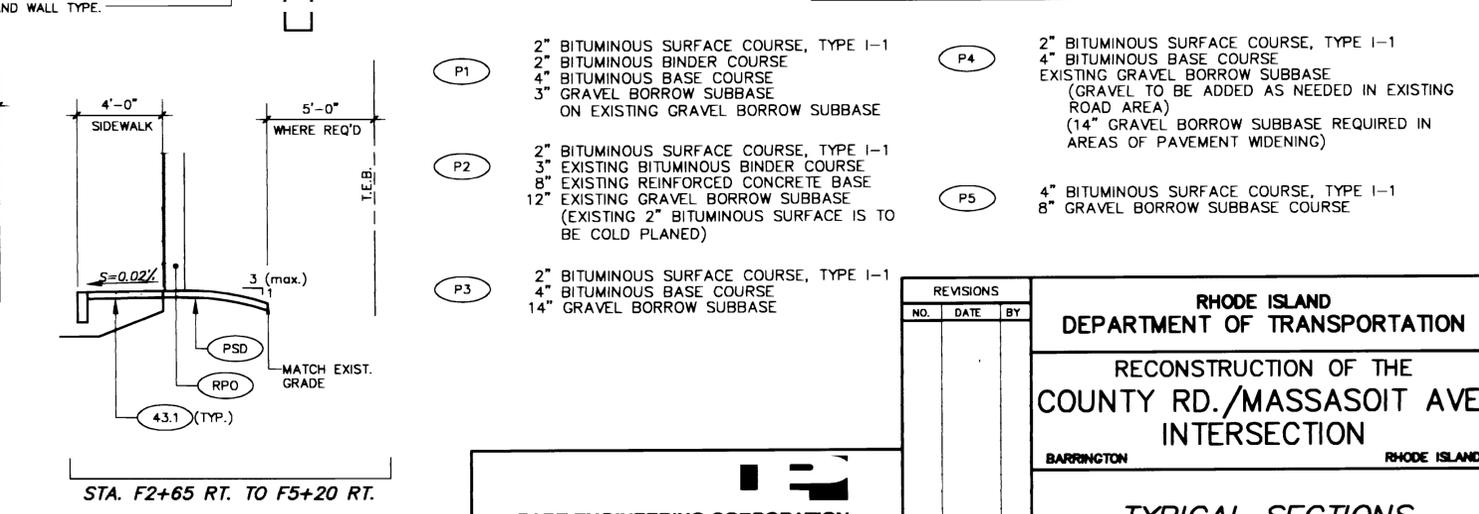
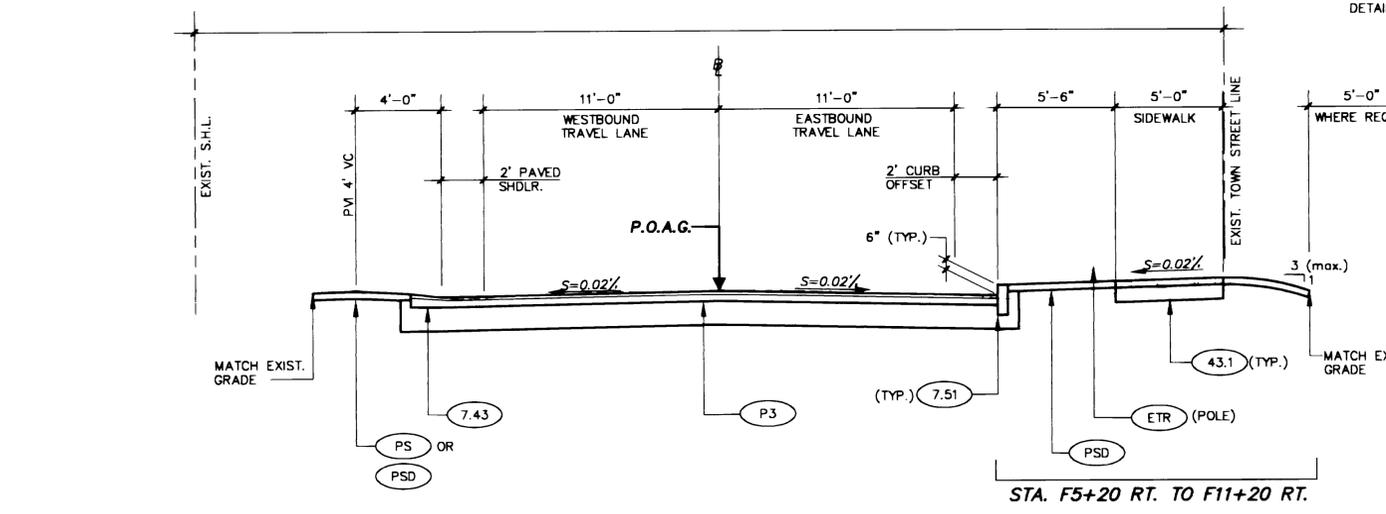
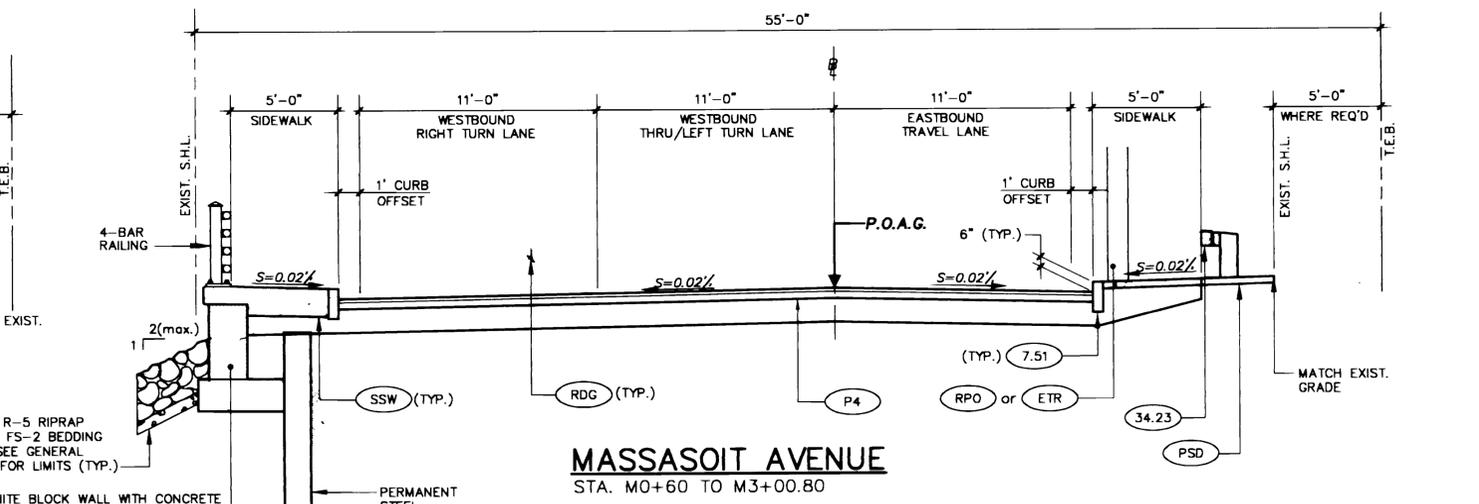
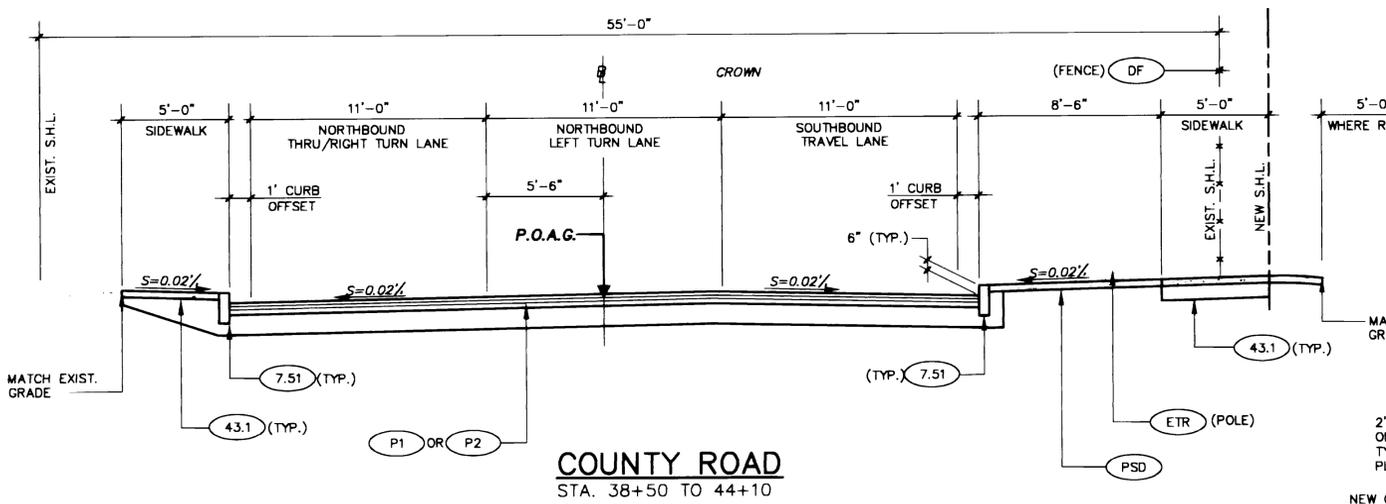
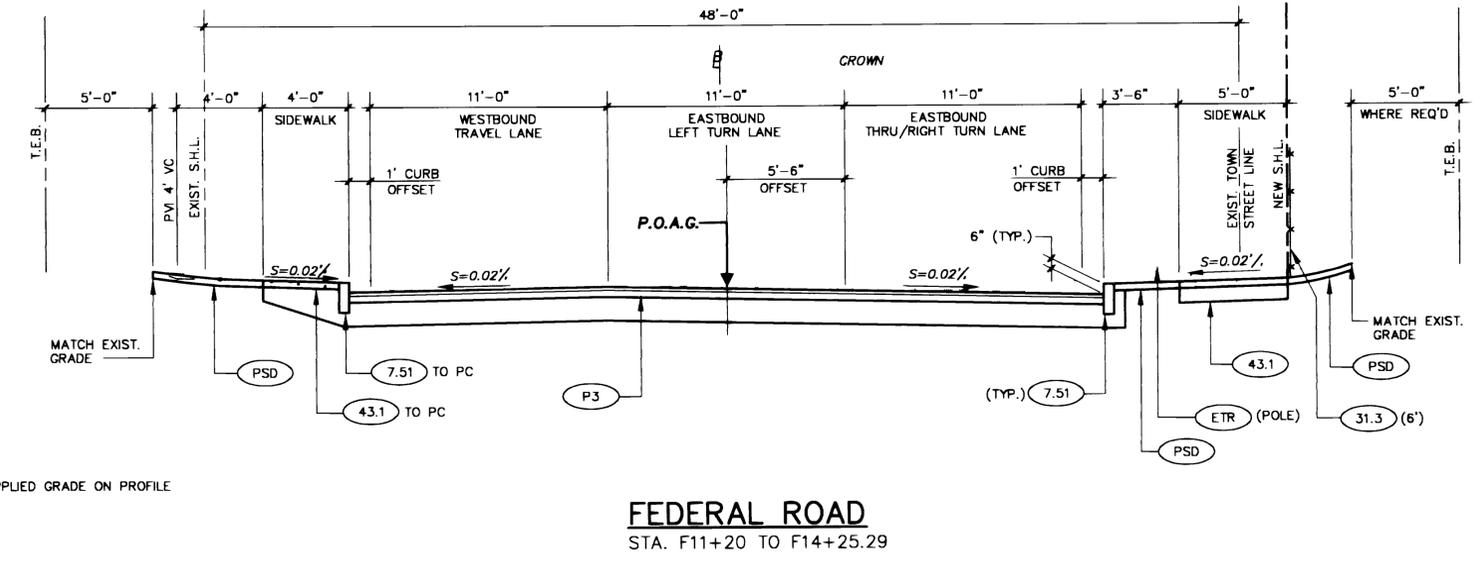
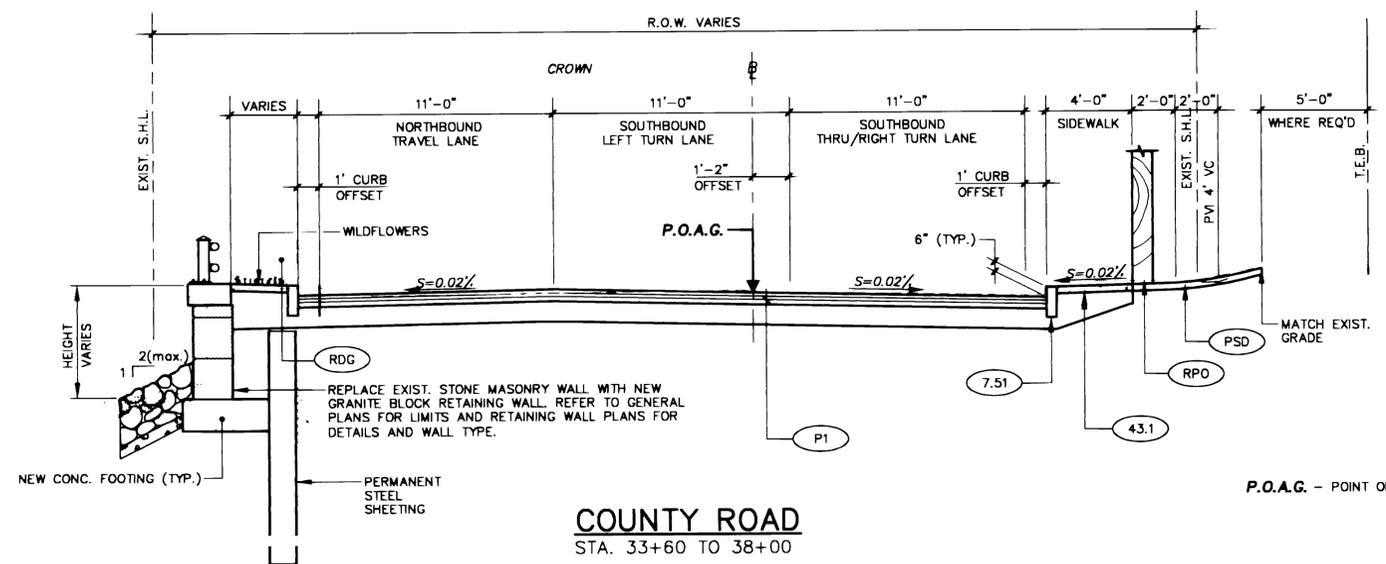
DESIGN DESIGNATION

1992 AADT (VPD)	19,800
2010 AADT (VPD)	20,900
DHV (VPH)	2,200
D (%)	49/51
T (%)	2
V (MPH)	30



R.I. DEPARTMENT OF TRANSPORTATION
APPROVED
Edmund J. Pudek 8/25/98
CHIEF DESIGN ENGINEER DATE
APPROVED
John A. Gagliardi 8-25-98
CHIEF ENGINEER DATE
APPROVED
J.P. O'Connell 8-25-98
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE



- PAVEMENT STRUCTURE**
- (P1) 2" BITUMINOUS SURFACE COURSE, TYPE I-1
2" BITUMINOUS BINDER COURSE
4" BITUMINOUS BASE COURSE
3" GRAVEL BORROW SUBBASE
ON EXISTING GRAVEL BORROW SUBBASE
 - (P2) 2" BITUMINOUS SURFACE COURSE, TYPE I-1
3" EXISTING BITUMINOUS BINDER COURSE
8" EXISTING REINFORCED CONCRETE BASE
12" EXISTING GRAVEL BORROW SUBBASE
(EXISTING 2" BITUMINOUS SURFACE IS TO BE COLD PLANED)
 - (P3) 2" BITUMINOUS SURFACE COURSE, TYPE I-1
4" BITUMINOUS BASE COURSE
14" GRAVEL BORROW SUBBASE
 - (P4) 2" BITUMINOUS SURFACE COURSE, TYPE I-1
4" BITUMINOUS BASE COURSE
EXISTING GRAVEL BORROW SUBBASE
(GRAVEL TO BE ADDED AS NEEDED IN EXISTING ROAD AREA)
(14" GRAVEL BORROW SUBBASE REQUIRED IN AREAS OF PAVEMENT WIDENING)
 - (P5) 4" BITUMINOUS SURFACE COURSE, TYPE I-1
8" GRAVEL BORROW SUBBASE COURSE

REVISIONS		
NO.	DATE	BY

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

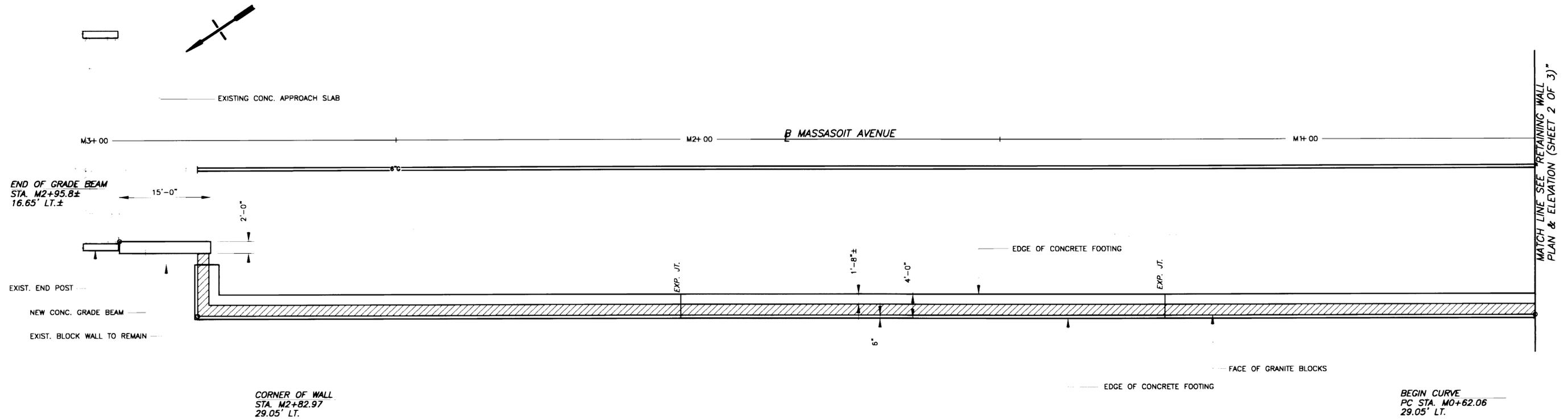
**RECONSTRUCTION OF THE
COUNTY RD./MASSASOIT AVE.
INTERSECTION**

BARRINGTON RHODE ISLAND

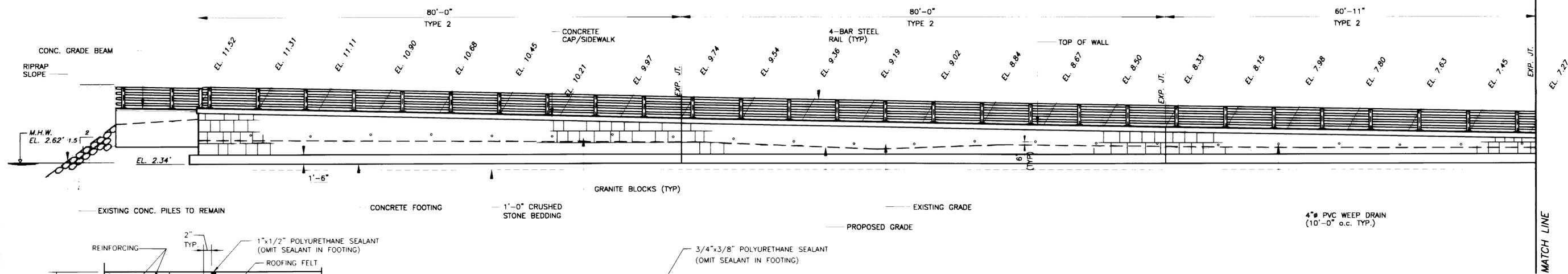
TYPICAL SECTIONS

CHECKED BY: _____ DATE: _____ SCALE: 1/4"=1'-0"

PAE ENGINEERING CORPORATION
Engineers - Planners - Consultants
8 Blackstone Valley Place, Lincoln, RI 02865
401/334/4100 Fax: 401/334/4108

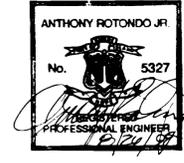
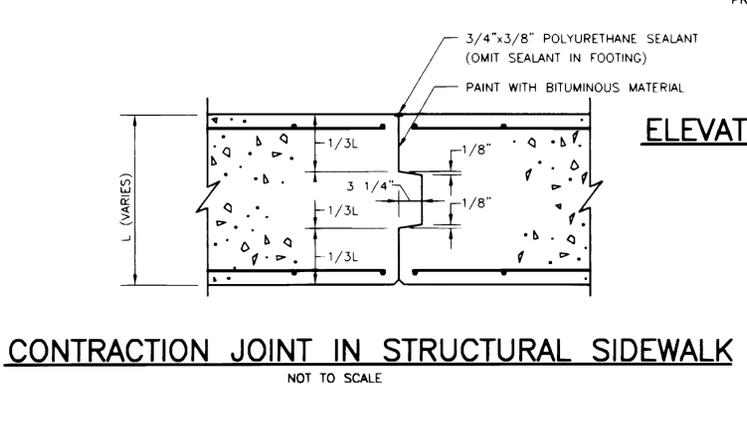
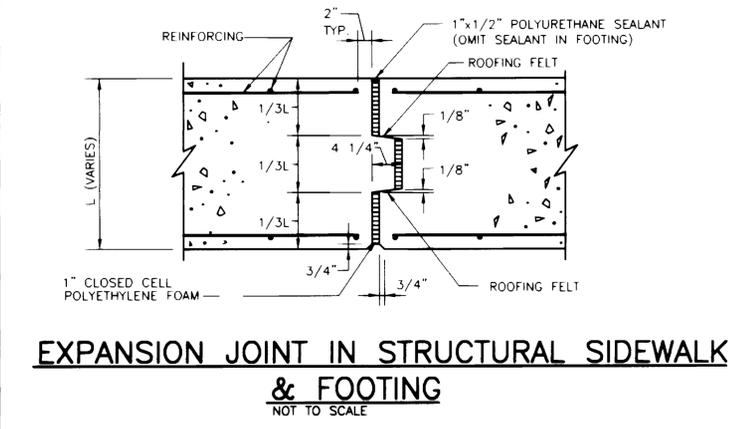


FOOTING PLAN



ELEVATION

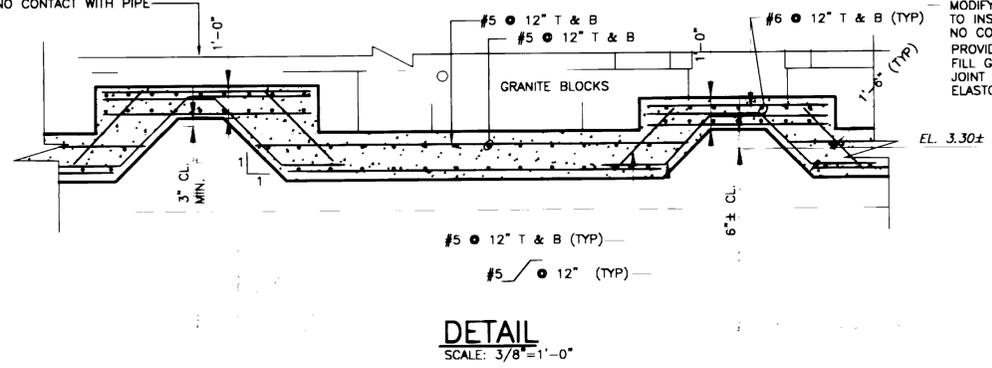
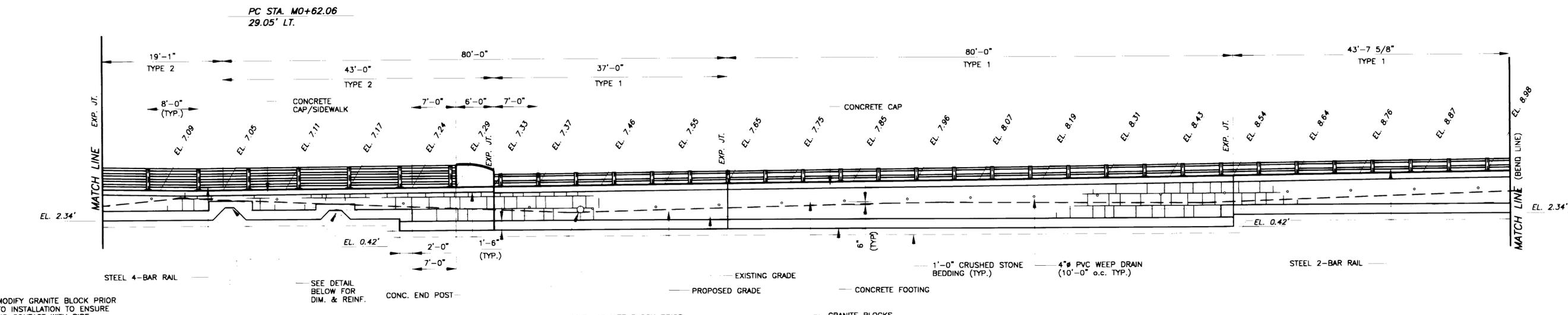
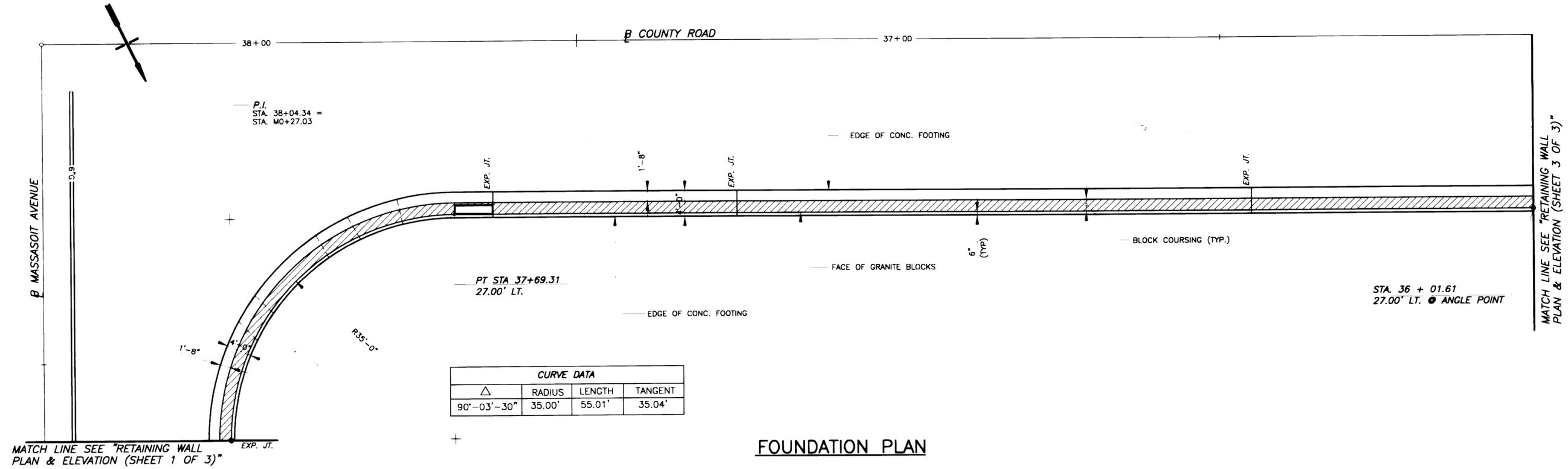
- NOTES:**
1. ALL WALL STATIONING AND OFFSETS ARE TO THE FRONT FACE OF GRANITE BLOCKS.
 2. TOP OF WALL ELEVATIONS ARE AT 10'-0" INCREMENTS UNLESS NOTED OTHERWISE.



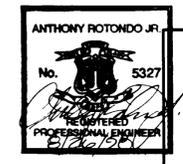
PARE ENGINEERING CORPORATION
 Engineers - Planners - Consultants
 8 Blackstone Valley Place, Lincoln, RI 02865
 401/334/4100 Fax: 401/334/4108

REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION
 BARRINGTON RHODE ISLAND
RETAINING WALL PLAN & ELEVATION (SHEET 1 OF 3)
 CHECKED BY: _____ DATE: _____ SCALE: 1/8"=1'-0"



- NOTES:**
- ALL WALL STATIONING AND OFFSETS ARE TO THE FRONT FACE OF GRANITE BLOCKS.
 - TOP OF WALL ELEVATIONS ARE AT 10'-0" INCREMENTS UNLESS NOTED OTHERWISE.



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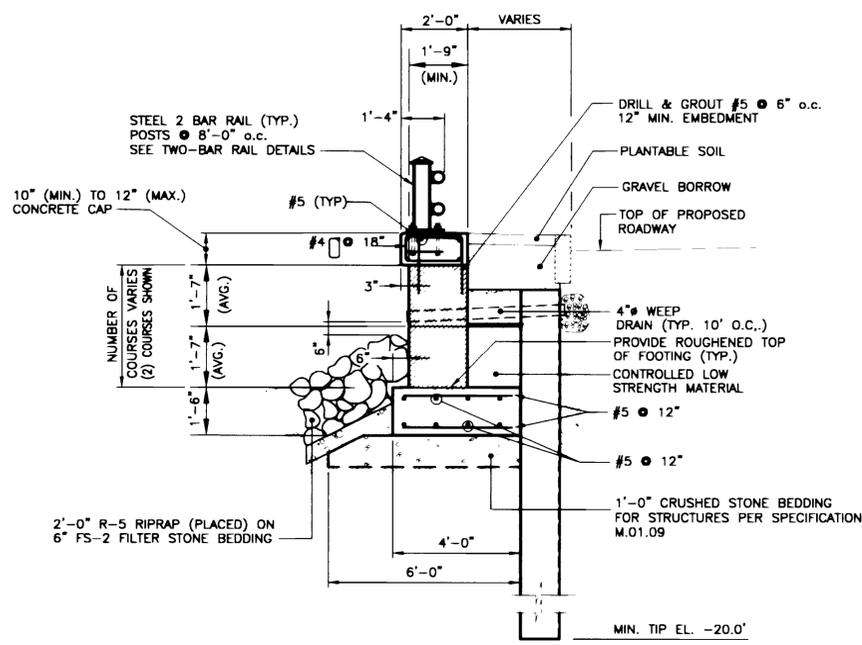
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION

BARRINGTON RHODE ISLAND

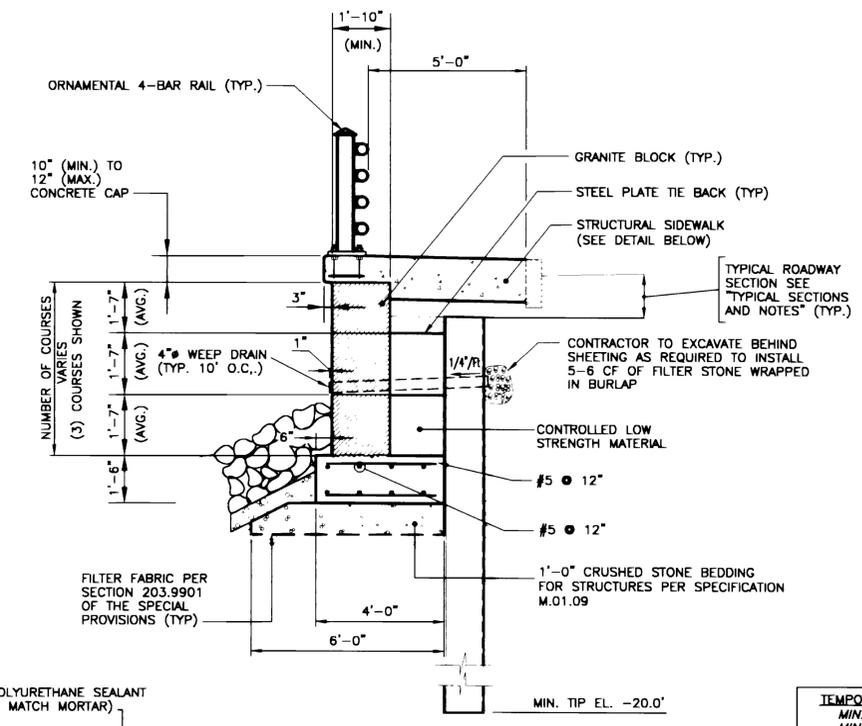
RETAINING WALL PLAN & ELEVATION (SHEET 2 OF 3)

CHECKED BY: _____ DATE: _____ SCALE: 1/8"=1'-0"

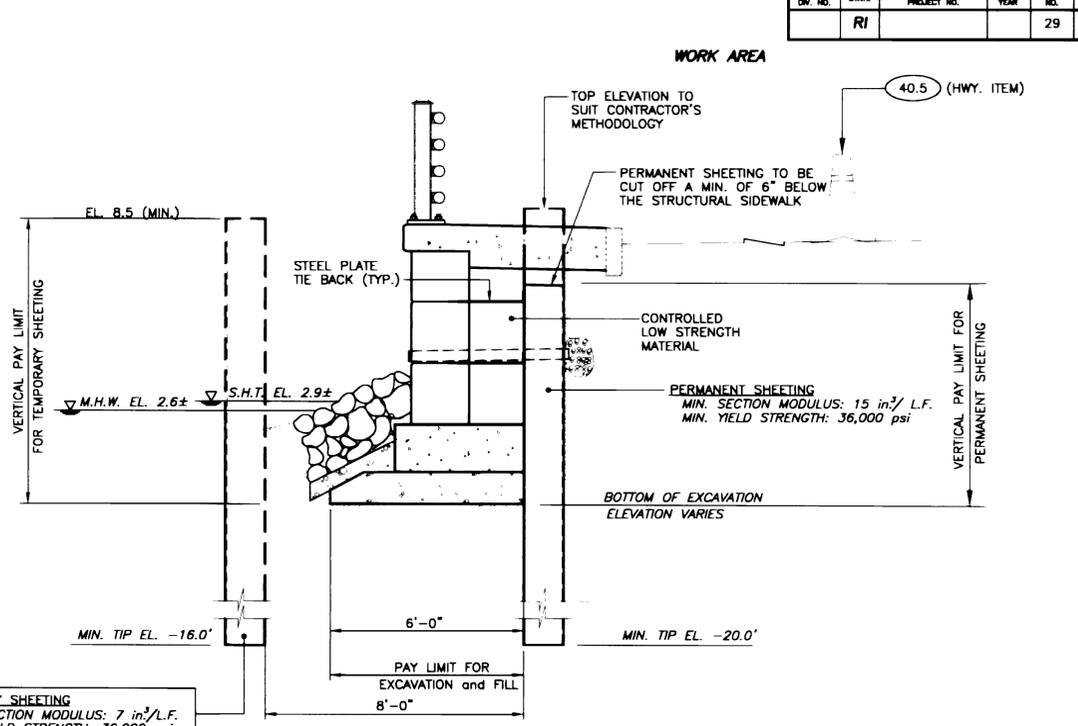
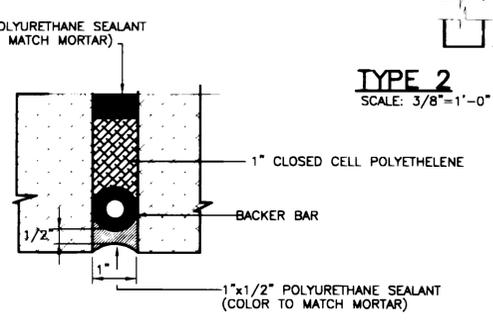


TYPE 1
SCALE: 3/8"=1'-0"

NOTE:
THE MORTAR JOINTS SHALL BE NO GREATER THAN 1" THICK AND NO LESS THAN 3/4" THICK. THE JOINTS SHALL BE TOOLED CONCAVE.



TYPE 2
SCALE: 3/8"=1'-0"

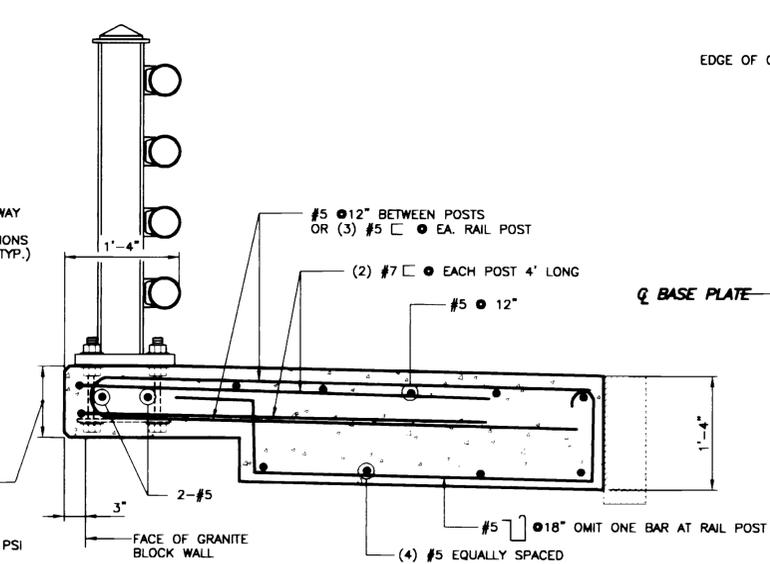


PAY LIMIT NOTES:

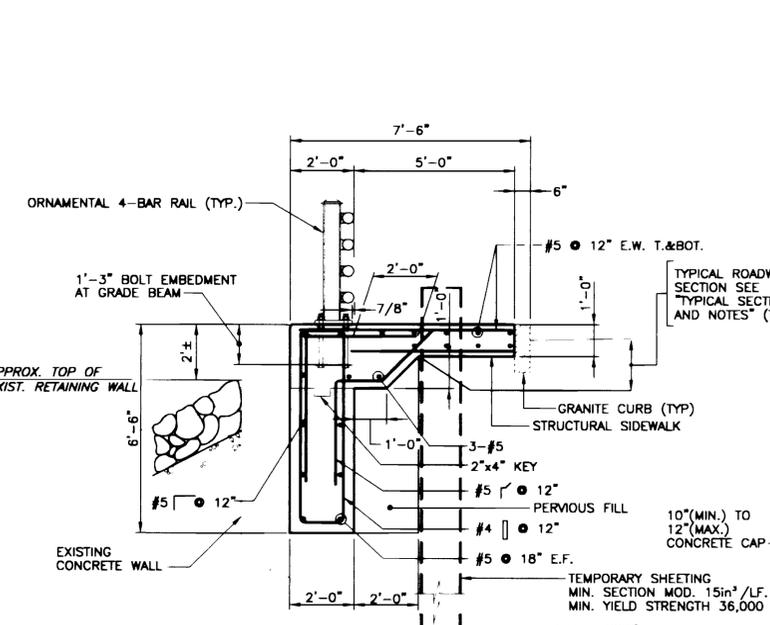
1. THE UPPER BOUND OF THE VERTICAL PAY LIMIT FOR THE PERMANENT SHEET PILE SHALL BE THE EXISTING GRADE AS SHOWN ON THE "CROSS SECTIONS" SHEETS.
2. THE LOWER BOUND OF THE VERTICAL PAY LIMIT FOR ALL SHEET PILES SHALL BE THE BOTTOM OF EXCAVATION REQUIRED FOR THE CONSTRUCTION OF THE RETAINING WALL.
3. PLACEMENT OF BEDDING AND RIPRAP SHALL BE DONE AT OR AROUND THE TIME OF LOW TIDE.

TYPICAL PAY LIMIT
SCALE: 3/8"=1'-0"

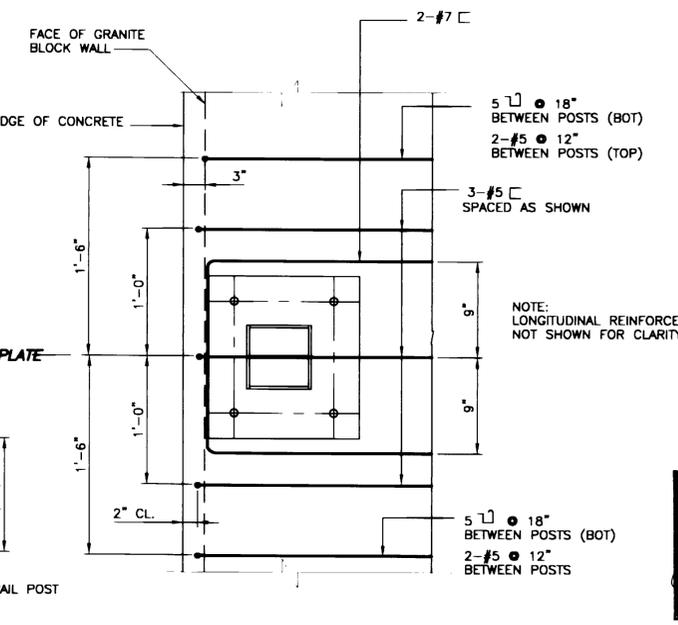
STONE WALL EXPANSION JOINT DETAIL
NOT TO SCALE



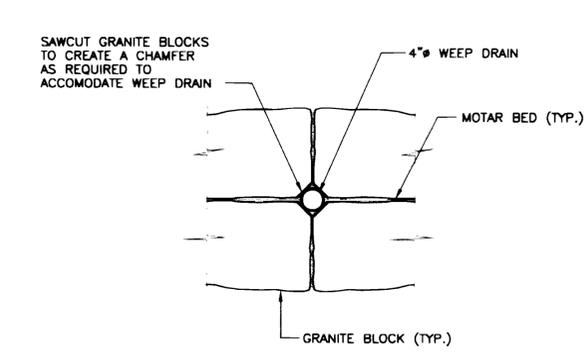
SECTION
TYPICAL STRUCTURAL SIDEWALK REINFORCING
SCALE: 1"=1'-0"



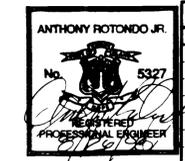
GRADE BEAM DETAIL
SCALE: 3/8"=1'-0"



PLAN @ POST



TYPICAL WEEP DRAIN DETAIL
NOT TO SCALE



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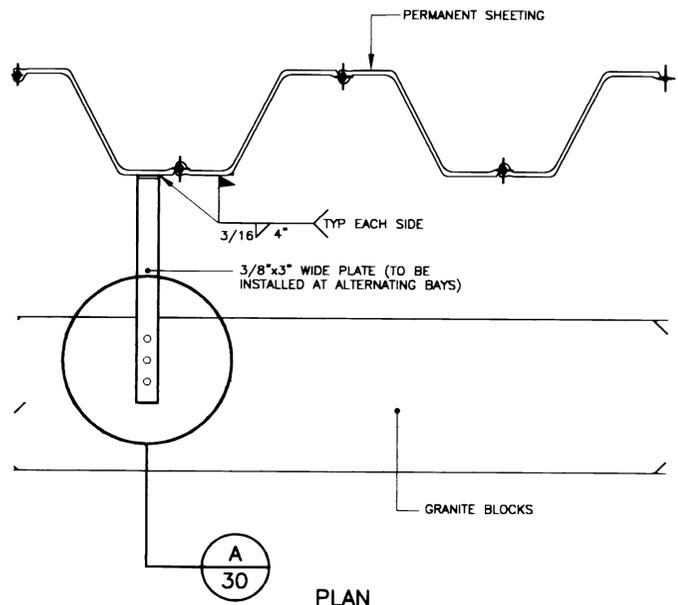
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION

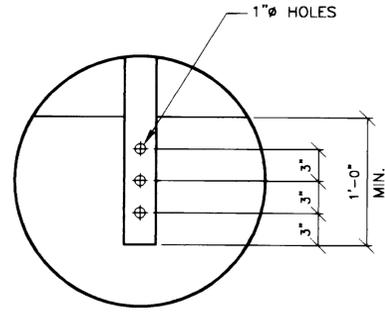
BARRINGTON RHODE ISLAND

RETAINING WALL SECTIONS & DETAILS

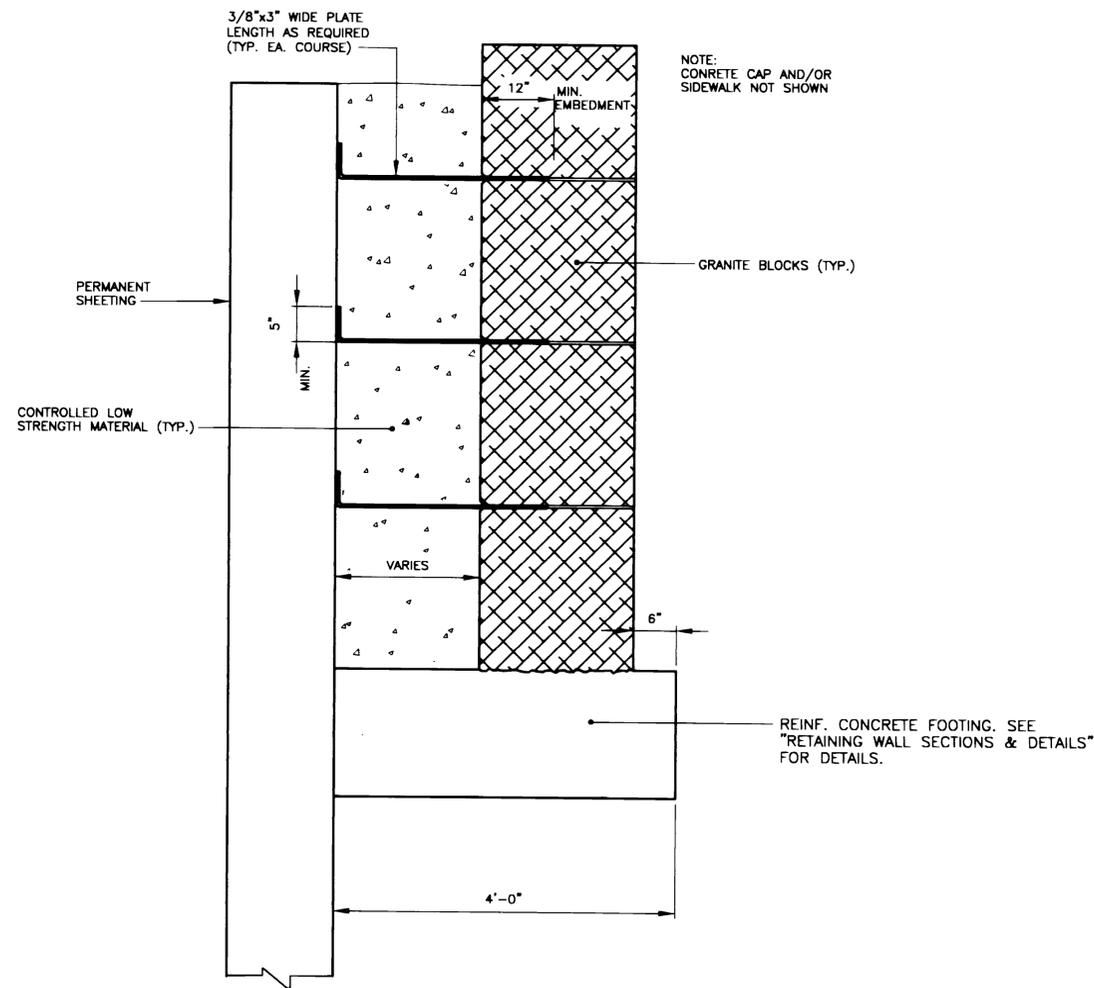
CHECKED BY: _____ DATE: _____ SCALE: AS NOTED



TYPICAL WALL TIE DETAIL



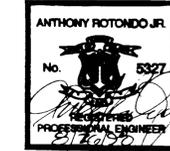
DETAIL A



TYPICAL WALL TIE SECTION

NOTES

1. PLATES SHALL BE POSITIONED TO ENSURE THEY ARE COMPLETELY ENCAPSULATED IN THE MORTAR BED BETWEEN GRANITE BLOCK COURSES.
2. PLATES SHALL BE FABRICATED TO LENGTHS TO MATCH THE REQUIREMENTS IN THE FIELD. THIS LENGTH IS EXPECTED TO VARY BECAUSE OF THE IRREGULARITY OF THE GRANITE BLOCKS.
3. THE SPACE BETWEEN THE PERMANENT SHEETING AND THE GRANITE BLOCKS SHALL BE FILLED WITH "CONTROLLED LOW STRENGTH MATERIAL" FLOWABLE FILL OR LEAN CONCRETE AS SPECIFIED ELSEWHERE.
4. TO PROTECT AGAINST THE DEVELOPMENT OF EXCESS HYDROSTATIC PRESSURES DURING CONSTRUCTION, PLACE "CONTROLLED LOW STRENGTH MATERIAL" OR LEAN CONCRETE IN LIFTS THAT DO NOT EXCEED THE HEIGHT OF 2 BLOCK COURSES. THE "CONTROLLED LOW STRENGTH MATERIAL" OR LEAN CONCRETE SHALL BE ALLOWED TO SET A MINIMUM OF TWENTY-FOUR (24) HOURS PRIOR TO PLACING ADDITIONAL LIFTS.
5. REVERSE PLATE AT SHEETING FACE TO ACCOMMODATE THE INSTALLATION AT THE TOP COURSE OF THE WALL IF NECESSARY.



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**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

**RECONSTRUCTION OF THE
COUNTY RD./MASSASOIT AVE.
INTERSECTION**

BARRINGTON RHODE ISLAND

**WALL TIE SECTIONS,
DETAILS & NOTES**

CHECKED BY: _____ DATE: _____ SCALE: _____ N.T.S.

GENERAL NOTES

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH:
 - THE LATEST REVISION OF AND MODIFICATIONS TO THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS ROAD AND BRIDGE CONSTRUCTION.
 - THE SIXTEENTH EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 1996.
 - THE SPECIFICATIONS ACCOMPANYING THESE PLANS.
 IN CASE OF CONFLICT, THE SPECIAL PROVISIONS OF THE SPECIFICATIONS ACCOMPANYING THESE PLANS SHALL GOVERN.
- 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 NGVD 1929.
- COORDINATES USED ON THESE PLANS ARE BASED ON THE STATE RECTANGULAR COORDINATE SYSTEM.
- FOR BENCH MARKS SEE GENERAL 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 PLACING OF CONCRETE.
- ALL WALLS ARE DRAWN LOOKING AT THE EXPOSED FACES.

DESIGN DATA

- SPECIFICATIONS
- SIXTEENTH EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), DATED 1996.
 - THE 1997 STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- DESIGN MANUAL
- THE LATEST EDITION OF THE STATE OF RHODE ISLAND DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, INCLUDING ALL REVISIONS TO DATE.

MATERIALS

- STRUCTURAL STEEL:
- AASHTO DESIGNATION M 270 (ASTM DESIGNATION A 709) GRADE 50. (UNLESS NOTED OTHERWISE)
- REINFORCING STEEL:
- AASHTO DESIGNATION M31 (ASTM DESIGNATION A 615) GRADE 60.
- CONCRETE:
- CLASS XX(AE) $f'_c = 4,000$ PSI
- FOUNDATIONS:
- MAXIMUM ALLOWABLE SOIL BEARING CAPACITY 2,600 PSF
- GRANITE BLOCKS:
- THE CONTRACTOR MAY UTILIZE THE GRANITE BLOCKS CURRENTLY STOCKPILED BY THE DEPARTMENT OF TRANSPORTATION AT TWO LOCATIONS IN EAST PROVIDENCE DESCRIBED IN CODE 807.9901.
 - THE CONTRACTOR WILL UTILIZE APPROVED STRAPS TO LIFT BLOCKS AND WILL LOAD THEM ONTO FLATBED TRUCKS FOR TRANSPORT. THE USE OF CHAINS OR ANY OTHER MEANS OF LIFTING AND TRANSPORTING THE BLOCKS THAT MAY DAMAGE THE BLOCKS IS PROHIBITED.
 - ONLY THOSE STONES SUITABLE FOR USE IN CONSTRUCTING THE WALL ARE TO BE TRANSFERRED FROM THE STOCKPILE TO THE SITE. WHEN THE CONSTRUCTION OF THE WALL IS COMPLETE, THE CONTRACTOR WILL RETURN ANY UNUSED BLOCKS TO THE STOCKPILE IN EAST PROVIDENCE AT NO ADDITIONAL COST TO THE STATE.

CONCRETE NOTES

- CONCRETE SHALL BE XX(AE) AS DESCRIBED IN THE LATEST REVISION OF TABLES (1) & (2) UNDER SECTION 601 "PORTLAND CEMENT CONCRETE" OF THE 1997 RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.
 - ALL PORTLAND CEMENT CONCRETE SHALL BE AIR-ENTRAINED PORTLAND CEMENT CONCRETE AS DESIGNATED BY THE SYMBOL (AE) FOLLOWING CLASS OF CONCRETE.
 - REINFORCING STEEL SHALL CONFORM TO AASHTO DESIGNATION M 31 (ASTM DESIGNATION A 615) GRADE 60. ALL BARS SHALL BE EPOXY COATED.
 - UNLESS OTHERWISE SHOWN ON THE PLANS, ALL REINFORCING SHALL BE LAPPED A MINIMUM OF 12".
- NOTE: ALL CRITICAL SPLICES SHALL BE AS SHOWN ON THE PLANS.
- ALL REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVER:

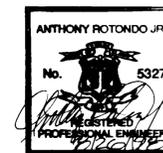
CONCRETE CAST AGAINST OR PERMANENTLY EXPOSED TO EARTH (FOOTINGS, AND WALL FACES)	3"
STIRRUPS, TIES AND SPIRALS	1 1/2"
ALL OTHER BARS	2"
 - ALL ANCHOR BOLTS SHALL BE SET PRIOR TO PLACEMENT OF CONCRETE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
 - HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON PLANS WILL NOT BE PERMITTED WITHOUT WRITTEN REQUEST BY THE CONTRACTOR AND PRIOR AUTHORIZATION BY THE ENGINEER.
 - IN ACCORDANCE WITH THE RHODE ISLAND STANDARD SPECIFICATIONS, ALL METAL TIES OR ANCHORAGES WHICH ARE REQUIRED FOR CONCRETE FORM WORK SHALL BE SO CONSTRUCTED THAT THEY CAN BE REMOVED TO AT LEAST TWO INCHES FROM 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 A CONTRACTOR PROPOSES TO USE THEM HE MUST SUBMIT A CATALOG CUT AND OTHER NECESSARY INFORMATION 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 TO THE SATISFACTION OF THE ENGINEER.

EARTH SUPPORT SYSTEM GENERAL NOTES

- PRIOR TO COMMENCING WORK TO INSTALL THE SHEET PILES, THE CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF THE EXISTING CONDUITS THAT CROSS THE EXCAVATION AND THE WATERLINE THAT PARALLEL THE EXCAVATION ALONG COUNTY ROAD. AREAS OF WATERLINE LOCATED CLOSER THAN 6" FROM THE BACK FACE OF THE SHEETING (AS INDICATED ON THESE PLANS) SHALL BE LOCATED BY TEST PITS PERFORMED AT A MAXIMUM OF 50' SPACING. CARE SHALL BE TAKEN TO AVOID DAMAGING THE CONDUITS DURING INSTALLATION OF THE SHEET PILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITY CONDUITS THAT WILL BE AFFECTED BY THE INSTALLATION OF THE SHEET PILING BEFORE CONSTRUCTION BEGINS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW IN THE AFFECTED CONDUITS AS NECESSARY DURING CONSTRUCTION. THERE SHALL BE NO SEPARATE PAY ITEM FOR LOCATING THE CONDUITS. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR FURNISHING SHEET PILES.
- CONTRACTORS ATTENTION IS DIRECTED TO THE LOCATIONS PROVIDED FOR THE TEMPORARY DEWATERING BASIN. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO LIMIT DEWATERING DISCHARGES TO THE LOCATIONS SHOWN ON THE PLANS.
- SHEETING INSTALLED ALONG THE WATERSIDE FACE OF THE EXCAVATION SHALL BE REMOVED AFTER CONSTRUCTION OF THE WALL IS COMPLETED.
- THE CONTRACTOR IS TO CONFINE ALL OPERATIONS INCLUDING STORAGE OF MATERIALS AND ACCESS TO AND FROM THE WORK AREA TO THE LIMITS SHOWN ON THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY TEMPORARY SHORING OR BRACING THAT MAY BE NECESSARY TO PROTECT THE SAFETY OF THE WORKMEN, THE PUBLIC, UTILITIES, AND THE PROPERTY ADJACENT TO THE WORK AREA DURING CONSTRUCTION.
- THE DESIGN SURCHARGE BEHIND THE PERMANENT EARTH SUPPORT SYSTEM IS 240 PSF. A 1/3 STRESS INCREASE IN THE ALLOWABLE BENDING STRESS CAN BE APPLIED FOR TEMPORARY CONSTRUCTION LOADINGS.
- UNLESS OTHERWISE NOTED STEEL SHEET PILES INSTALLED ALONG THE WATERSIDE OF THE EXCAVATION SHALL MEET THE MINIMUM SECTION MODULUS AND YIELD STRENGTH CRITERIA FOR TEMPORARY SHEET PILES AS INDICATED ELSEWHERE. IN ADDITION SHEET PILES SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR STEEL SHEET PILING OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS, ASTM DESIGNATION A328, GRADE 36. SHEET PILES INSTALLED ALONG THE LAND SIDE OF THE EXCAVATION SHALL MEET THE MINIMUM SECTION MODULUS AND YIELD STRENGTH CRITERIA FOR PERMANENT SHEET PILES AS INDICATED ELSEWHERE. IN ADDITION, SHEET PILES SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR STEEL SHEET PILING OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS, ASTM DESIGNATION A328, GRADE 36.
- TEMPORARY SHEET PILES SHALL BE FURNISHED WITH PULLING HOLES.
- STRUCTURAL STEEL SHAPES AND PLATE STOCK SHALL CONFORM TO ASTM A36, LATEST REVISION. ALL BOLTS, EXCEPT THOSE ASSOCIATED WITH THE WALL TIE SYSTEM, SHALL BE ASTM A325.
- WELDING SHALL MEET AWS SPECIFICATION D1.1, LATEST REVISION. WELDERS SHALL BE CERTIFIED. ELECTRODES SHALL BE E70XX LOW HYDROGEN OR APPROVED EQUAL.
- SPECIAL FABRICATION OR BENDING OF SHEET PILES SHALL BE REQUIRED AT VARIOUS LOCATIONS ALONG THE ALIGNMENT. THE CONTRACTOR SHALL FIELD MEASURE AND PROVIDE SHOP DRAWINGS FOR SPECIAL FABRICATIONS.
- FABRICATED CONNECTIONS SHALL BE THE MANUFACTURER'S STANDARD UNLESS OTHERWISE INDICATED.
- POSITION SHEET PILES USING TEMPORARY GUIDE WALES. THE GUIDE WALES SHALL BE SUPPORTED SO THAT THEY ARE RIGID STRUCTURES CAPABLE OF RESISTING ALL FORCES EXERTED BY SETTING AND DRIVING THE SHEET PILES. THE GUIDE WALE SHALL NOT MOVE WITH FLUCTUATING WATER STAGE.
- SHEET PILES SHALL BE STORED AND HANDLED SO AS TO AVOID DAMAGE TO THE PILES. BENT OR KINKED PILES THAT, IN THE OPINION OF THE ENGINEER, CANNOT BE STRAIGHTENED WITHOUT DAMAGE TO THE PILE SHALL BE REJECTED.
- IF REFUSAL IS REACHED BEFORE DRIVING TO THE SPECIFIED TIP ELEVATION, THE OBSTRUCTION SHALL BE REMOVED OR PENETRATED. JETTING AUGURING, OR OTHER METHODS OF PREDRILLING WILL NOT BE PERMITTED.
- IF A SHEET PILE STRIKES AN OBSTRUCTION, ADJACENT SHEET PILES MAY BE DRIVEN BELOW THE ELEVATION OF THE OBSTRUCTION BEFORE ATTEMPTING TO CLEAR THE OBSTRUCTION.
- DRIVE ALL PILES TO THE TIP ELEVATIONS SHOWN ON THE PLANS. PILES THAT ARE RAISED DURING THE PROCESS OF DRIVING ADJACENT SHEET PILES SHALL BE REDRIVEN TO THE REQUIRED TIP ELEVATION.
- IF A SHEET PILE BECOMES DAMAGED DURING INSTALLATION FOR ANY REASON, IT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE, INCLUDING THE COST OF REPLACING THE PILE.
- ANY PROPOSED CHANGES TO THE DESIGN SHALL BE SUBMITTED TO THE ENGINEER IN WRITING FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK.

SEQUENCE OF CONSTRUCTION

- LOCATE UTILITIES AND WATER LINE
- INSTALL SHEET PILES, DISCONNECT AND RECONNECT IMPACTED UTILITIES AS NECESSARY.
- EXCAVATE AND REMOVE EXISTING WALL TO FACILITATE INSTALLATION OF CONCRETE FOOTING.
- IMPLEMENT DEWATERING SYSTEM.
- CONSTRUCT FOOTING.
- PLACE GRANITE BLOCKS AND INSTALL WALL TIE SYSTEM AT EACH COURSE.
- BACKFILL BETWEEN WALL AND PERMANENT SHEETING WITH "CONTROLLED LOW STRENGTH MATERIAL" OR LEAN CONCRETE. MAXIMUM MEAN HEIGHT OF BACKFILL SHALL NOT EXCEED 2 BLOCK HEIGHTS AND THE MATERIAL MUST SET FOR 24 HOURS PRIOR TO PLACING MORE BACKFILL.
- REMOVE TEMPORARY SHEETING.
- PLACE RIPRAP ALONG FRONT OF WALL.
- CUT PERMANENT SHEETING TO FACILITATE INSTALLATION OF STRUCTURAL SIDEWALK.
- CONSTRUCT STRUCTURAL SIDEWALK AND CONCRETE CAPS AS APPLICABLE AND INSTALL REQUIRED RAILINGS.



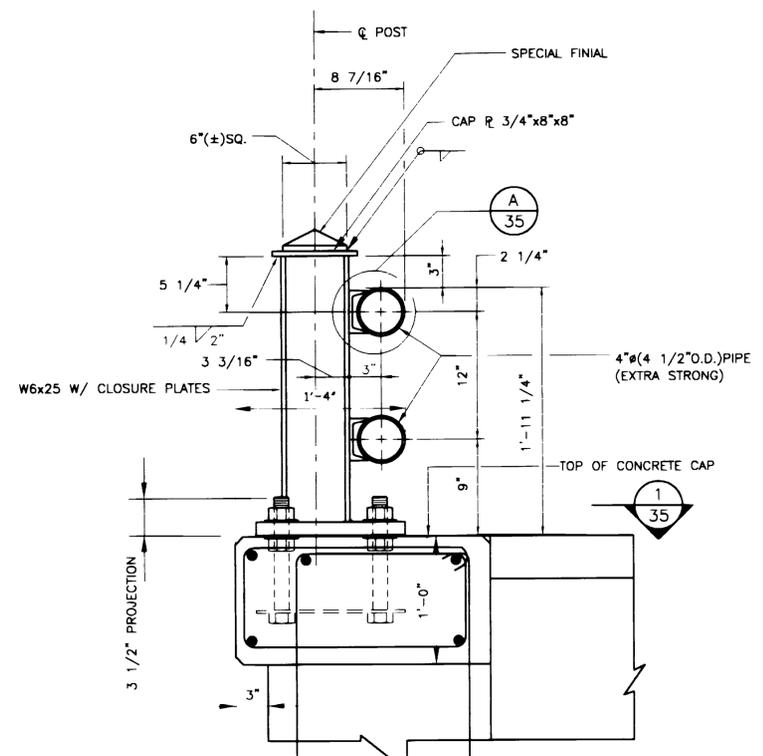
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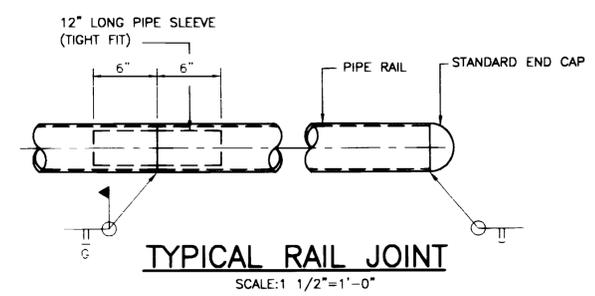
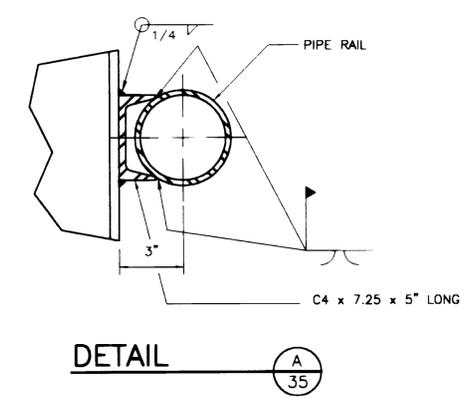
RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION	
BARRINGTON	RHODE ISLAND
RETAINING WALL NOTES	
CHECKED BY: _____ DATE: _____ SCALE: _____	

STEEL RAILING NOTES

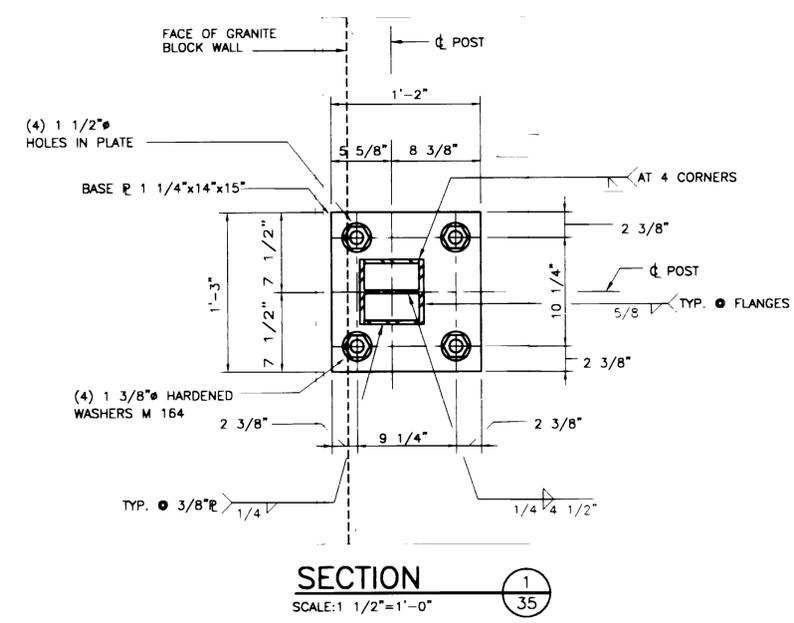
- 1 THE ENTIRE RAILING SYSTEM SHALL BE THERMAL SPRAYED ZINC COATED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 827. THERMAL SPRAYED ZINC COATING FOR NEW STRUCTURAL STEEL OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD BRIDGE CONSTRUCTION, AND PAINTED BLACK AS SPECIFIED IN SECTION 825, PAINTING AND STRUCTURAL STEEL OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- 2 STANDARD AND EXTRA STRONG STEEL PIPES SHALL CONFORM TO THE LATEST REQUIREMENTS OF ASTM DESIGNATION A 53, GRADE B.
- 3 STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M 270 GRADE 36.
- 4 ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 307.
- 5 RAIL POSTS SHALL BE SET VERTICAL IN THE FIELD. LEAD SHIMS SHALL BE PROVIDED UNDER THE BASE PLATES TO MAKE UP THE DIFFERENCE BETWEEN THE FABRICATED POST UNIT AND THE ACTUAL SLOPE OF THE SIDEWALK OR BRUSH CURB.
- 6 MAXIMUM POST SPACING SHALL BE 8'-0".
- 7 THE RAILS SHALL BE WELDED PARALLEL TO THE ACTUAL SLOPE OF THE SIDEWALK OR BRUSH CURB.
- 8 RAILINGS SHALL BE SPliced OVER EXPANSION JOINT.
- 9 FOR RAIL ANCHORAGE AT THE END POSTS SEE "4-BAR END POST SECTIONS & DETAILS" SHEET.



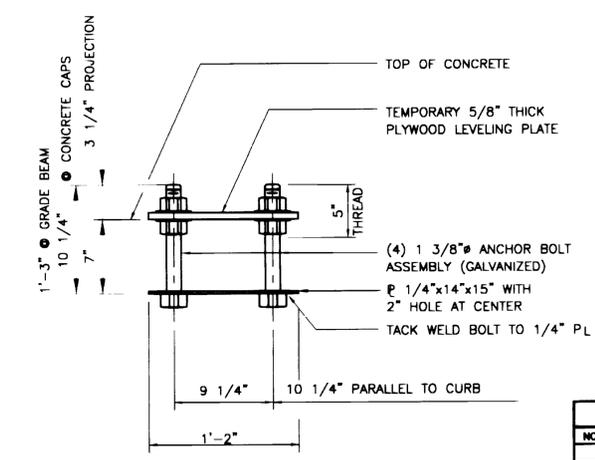
ORNAMENTAL 2-BAR RAIL DETAIL
SCALE: 1/2"=1'-0"



TYPICAL RAIL JOINT
SCALE: 1/2"=1'-0"

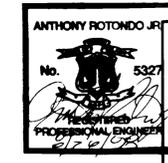


SECTION
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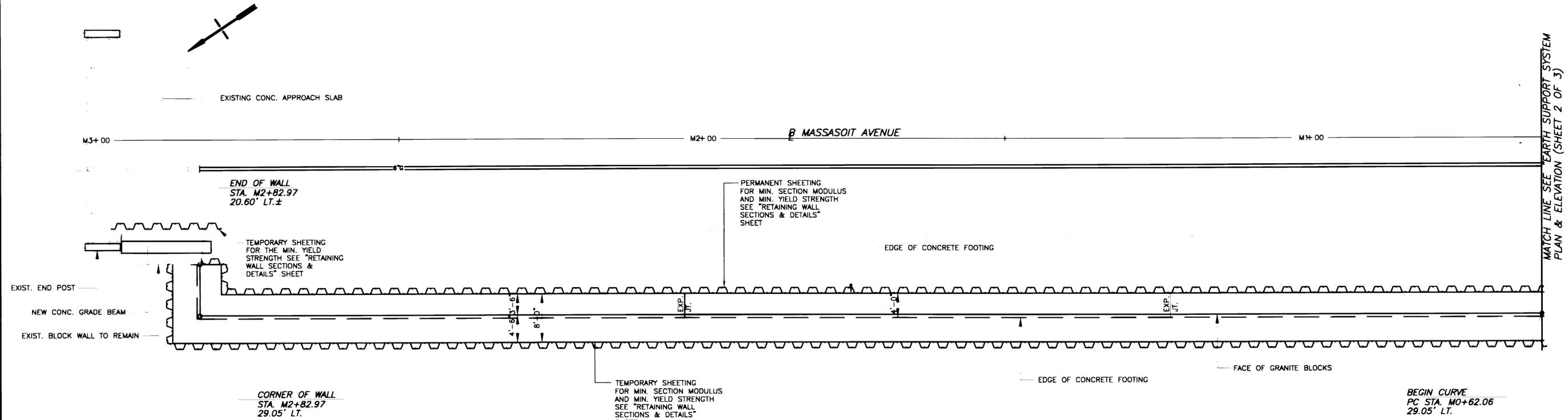


2-BAR ANCHOR BOLT ASSEMBLY
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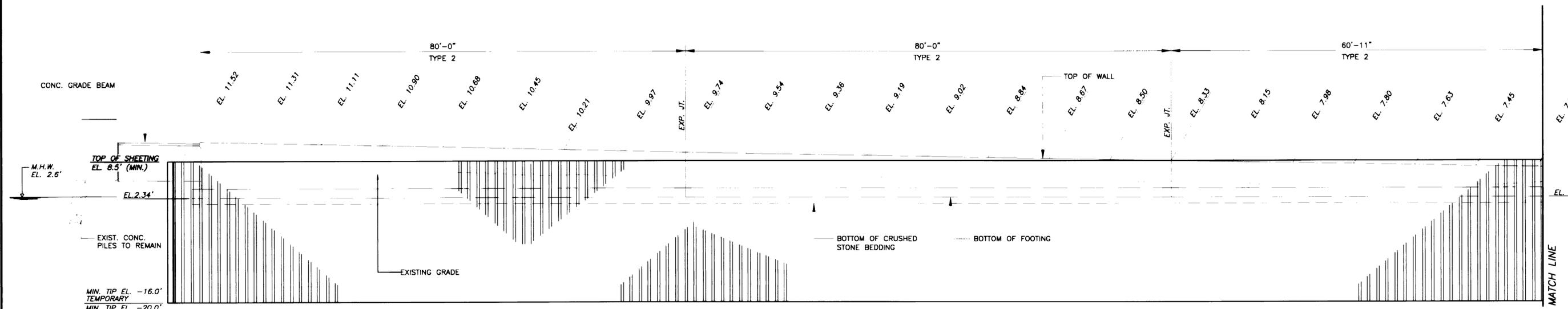
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NO.	DATE	BY		
			RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION	
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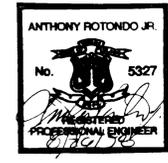
PLAN



ELEVATION

NOTES:

1. TOP OF WALL ELEVATIONS ARE GIVEN AT 10'-0" INCREMENTS UNLESS NOTED OTHERWISE.



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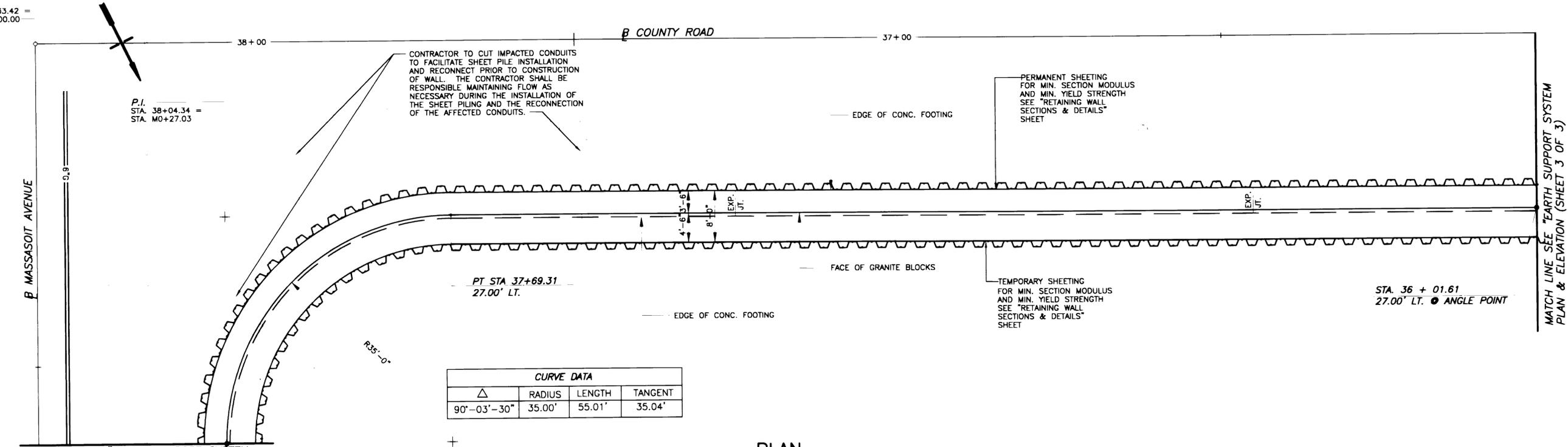
RECONSTRUCTION OF THE
COUNTY RD./MASSASOIT AVE.
INTERSECTION

BARRINGTON RHODE ISLAND

EARTH SUPPORT SYSTEM
PLAN & ELEVATION
(SHEET 1 OF 3)

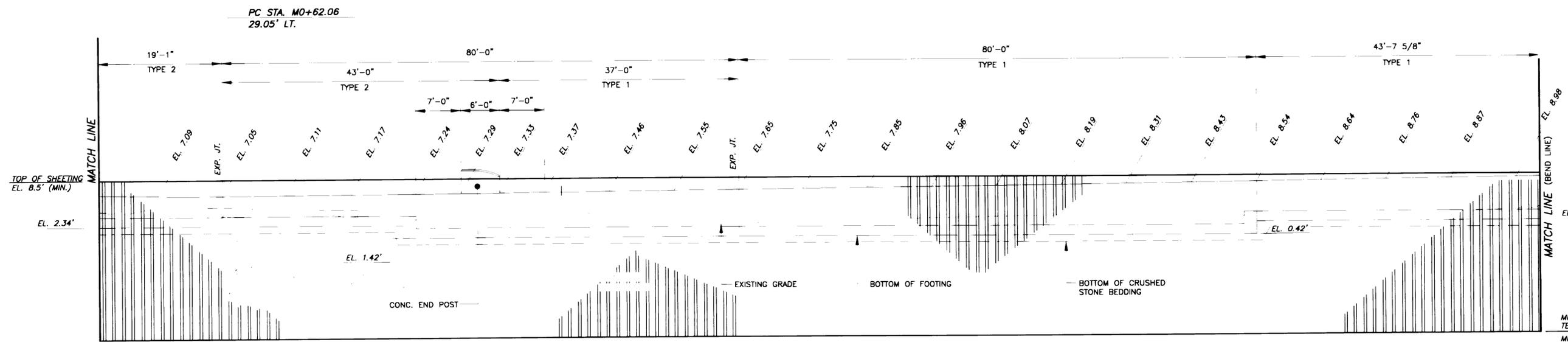
CHECKED BY: _____ DATE: _____ SCALE: 1/8"=1'-0"

STA. 38+33.42 =
STA. M0+00.00



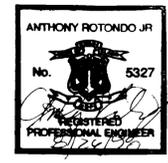
MATCH LINE SEE "EARTH SUPPORT SYSTEM PLAN & ELEVATION (SHEET 1 OF 3)"

PLAN



ELEVATION

NOTES:
1. TOP OF WALL ELEVATIONS ARE GIVEN AT 10'-0" INCREMENTS UNLESS NOTED OTHERWISE.



PARE ENGINEERING CORPORATION
Engineers - Planners - Consultants
8 Blackstone Valley Place, Lincoln, RI 02865
401/334/4100 Fax: 401/334/4108

REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RECONSTRUCTION OF THE COUNTY RD./MASSASOIT AVE. INTERSECTION

BARRINGTON RHODE ISLAND

EARTH SUPPORT SYSTEM PLAN & ELEVATION (SHEET 2 OF 3)

CHECKED BY: _____ DATE: _____ SCALE: 1/8"=1'-0"

<u>CODE</u>	<u>TITLE</u>	<u>PAGE</u>
M.12.03	Concrete Protective Sealers	187
201.9902	Handling of Contaminated Pipe	188

Delete Table 2 included in subsection **601.03.1 Proportioning** in its entirety and replace it with the following:

Table 2

Class¹	A	XX	HP	MC²	Z
Minimum Cementitious Content, lb/yd ³	400	500	500	-	500
Maximum Cementitious Content, lb/yd ³	700	700	700 ⁴	600	700
Maximum w/cm	0.45	0.42	0.40	0.40	0.40
Acceptance Criteria					
Consistency Range ³ , AASHTO T119 Slump, in.	2 – 4	2 – 4	2 – 4	2 – 4	<1
AASHTO T23 Minimum Compressive Strength, psi					
28 days	3000	4000	5000	3500	5000
56 days	----	----	----	5000	----
Air Content Range, AASHTO T152, %	5 – 9	5 – 9	5 – 9	5 – 9	6 – 9
Prequalification Criteria					
Chloride permeability, AASHTO T277, coulomb					
28-day standard cure		<3000	<2000	<3000	
28-day accelerated cure		<1500	<1000	<1500	
Maximum 28-day drying shrinkage, AASHTO T160, %			-0.040	-0.045	
Maximum 28-day expansion ASTM C 1567, %		0.10	0.10	0.10	0.10

Table 2 Footnotes:

1. A single concrete mixture may be used for multiple classifications if performance and prequalification criteria are satisfied.
2. Class MC concrete may have a total supplementary cementitious content of 75 percent by weight of total cementitious material when using either ground-granulated blast-furnace slag meeting the requirements of AASHTO M 302, or combinations of slag and other supplementary cementitious materials. Maximum cement replacement by fly ash or other pozzolan meeting requirements of AASHTO M 295 is 30 percent by weight. Maximum cement replacement by silica fume meeting the requirements of AASHTO M 307 is 7 percent by weight.

3. Slump range measured at the point of discharge. The Contractor shall submit for approval by the Engineer, the target slump range for each element. Slump shall not exceed 4 inches for surfaces sloped greater than 4 percent. If additional workability is desired the Engineer may allow an increase of the maximum specified slump to 6 inches if an AASHTO M 194 Type A - Water Reducing Admixture is used, or an increase of up to 9 inches if an AASHTO M 194 Type F or G - High Range Water Reducing admixture is used. The Engineer may allow a concrete slump test result up to 10" provided segregation is not observed. The Engineer shall be the sole judge of acceptance of concrete with slumps above 9 inches.

AASHTO M 194 Type F or G - High Range Water Reducing Admixture is required when concrete is to be placed by pumping equipment. Admixtures must be used in accordance with manufacturers' recommended dosages.

4. The maximum cementitious content for Class HP may be exceeded for the fabrication of precast/prestressed concrete structures as approved by the Engineer. Class HP concrete shall replace all references to Class X in RIDOT's standard specifications.

Replace the last paragraph at the end of Subsection 601.03.1 b Design and Approval of Concrete Mixtures, with the following:

No changes in the sources or character of the materials shall be made without approval of the Engineer. New materials shall not be used until a revised mixture design and new proportions based on laboratory tests and 3 cubic yard trial batches are approved by the Engineer. Trial batch testing shall be conducted by an AASHTO Accredited laboratory and witnessed by the Engineer at the Contractor's expense. Testing requirements are as follows:

- a. No testing is required for changes in admixture dose provided the proposed dose does not exceed manufacturer recommendations, and the admixture does not retard or accelerate setting characteristics.
- b. Trial batches for the proposed mixture(s) and a control batch of the existing approved concrete mixture shall be conducted on the same day for comparison. All required tests shall be conducted for both the approved and proposed mixtures.
- c. Slump, air content, concrete temperature and unit weight is required for all modifications
- d. 28 day compressive strength is required for all modifications.
- e. AASHTO T277 and T303 testing is required for any change to aggregate source, cementitious material source, cementitious material content, or water content for concrete classes XX, HP and MC. T277 testing not required for admixture modifications.
- f. AASHTO T160 Shrinkage testing is required for concrete classes HP and MC as determined by the Engineer. Testing is required for changes to coarse aggregate source, size, or content greater than 300 lb/yd³, cementitious material source, cementitious material proportions, or water content. Shrinkage testing is not required for admixture-only modifications.
- g. AASHTO T303 or C1567 Expansion testing is required for all classes of concrete, except class A. Testing is required for any change to aggregate source, cementitious material source, cementitious material content or water content. T303 or C1567 testing is not required for admixture only modifications.
- h. Heat development, as determined by calorimetry, is required for any change in cementitious material content or source for Class MC concrete.

TABLE 4

MINIMUM PROCESS CONTROL FREQUENCY Ready Mix Portland Cement Concrete	
Control Requirement	Minimum Frequency (NOTE A)
A. PLASTIC CONCRETE	
1. Entrained Air Content (meter)	First two loads then 1 per 50 CY (NOTE B)
2. Slump	First two loads then 1 per 50 CY (NOTE B)
3. Temperature	Per Specifications
4. Yield (Unit Weight)	Per Specifications
5. Compressive Strength	For each class concrete delivered and placed on a calendar day from a single supplier. One set for 0-100 CY inclusive and one set of each additional 100 CY or fraction thereof and as necessary for formwork removal (include air content and slump test results).

TABLE 5

MINIMUM PROCESS CONTROL FREQUENCY Prestress Plant Concrete Production	
Control Requirement	Minimum Frequency
A. AGGREGATES PRODUCTION	
1. Fine and Coarse Aggregates	
a. Gradation	a. Randomly every 100 cubic yards. Min. 1 set per month
b. Moisture	b. Daily/prior to start of production, randomly once every 100 cubic yards
B. PLASTIC CONCRETE	
1. Entrained Air Content (meter)	Plastic concrete tests performed on the first two loads then 1 randomly per 20 CY
2. Slump	for each concrete class delivered and placed on a calendar day from a single supplier. One set of compressive strength specimens for 0-20 CY inclusive and one set of each additional 20 CY or fraction thereof and as necessary for formwork removal, stress transfer, and shipping (include concrete temperature, air content and slump test results).
3. Concrete Temperature	
4. Yield (Unit Weight)	
5. Compressive Strength	

TABLE 6

MINIMUM PROCESS CONTROL FREQUENCY Precast Plant Concrete Production	
Control Requirement	Minimum Frequency
A. AGGREGATES PRODUCTION 1. Fine and Coarse Aggregates a. Gradation b. Moisture	a. Randomly every 50 Cubic Yards. Min. 1 set per month b. Daily/prior to start of production, randomly once every 50 yd ³
B. PLASTIC CONCRETE 1. Entrained Air Content 2. Slump 3. Temperature 4. Unit Weight 5. Compressive Strength	Plastic concrete tests performed on the first two loads then 1 randomly per 20 CY For each concrete class delivered and placed on a calendar day from a single supplier. One set of compressive strength specimens for 0-20 CY inclusive and one set of each additional 20 CY or fraction thereof and as necessary for formwork removal, and shipping (include air content and slump test results).

NOTE A The Contractor shall test the first two loads. If adjustments are needed the Contractor shall test subsequent loads until conformance to the specification is achieved on two or more subsequent tests.

3.2. d Documentation. The Contractor shall maintain complete records of all inspections and tests. The records shall indicate:

- i. the names of the person(s) sampling and testing the material,
- ii. the nature and number of observations made,
- iii. the number and type of deficiencies found,
- iv. the quantities conforming and non-conforming, and
- v. the nature of corrective action taken as appropriate.

The Contractor's documentation procedures shall be described in the Quality Control Plan and will be subject to approval by the Engineer prior to the start of the work and thereafter to compliance checks by the Engineer during the progress of the work. The Contractor is referred to the CS pages regarding the "REPORTING OF QUALITY/PROCESS CONTROL TESTING AND SAMPLING RESULTS".

3.2.d.1 Charts and Forms. All conforming and non-conforming inspections and tests results shall be documented on charts or forms, shall be kept complete, and shall be available to the Engineer at all times during the performance of the work. The contractor shall retain the complete quality control records for the period of one year after final acceptance of the project by the State. Forms shall be on a computer-acceptable medium. Batch tickets and gradation data shall be documented in accordance with Department requirements. Copies shall be submitted to the Engineer as the work progresses (or weekly at minimum).

Test data for Portland cement concrete, including but not limited to critical gradation(s) (i.e. passing no. 4, no. 100, no. 200 sieve), air content, unit weight, 7-day and 28-day compressive strength, shall be on control charts that indicate lots and sub-lots, target values, control limits, running average of the last three test results, all in chronological order with legend.

The Contractor may use other types of control charts as deemed appropriate and as approved by the Engineer. It is normally expected that testing and charting will be completed within 24 hours after sampling.

3.2.d.2 Certification. At the conclusion of the project the contractor shall certify in writing to the Engineer that the project has been constructed and inspected, and all materials have been tested in accordance with the QCP and Contract.

3.2.e Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the incorporation into the work materials and products that do not conform to the requirements of the Contract Documents. The Quality Control Plan shall describe the persons responsible for directing corrective action, procedures for handling corrective actions, documentation and reporting requirements.

3.2.f Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling nonconforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Engineer. The Quality Control Plan shall describe the persons responsible for directing disposal or rework of non-conforming materials, requirements for reporting to the Engineer, and documentation procedures for the identification and disposition of non-conforming materials. Standard forms shall identify if material does not conform to specifications and provide space to describe disposition.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Segregated holding areas shall be provided by the Contractor, subject to approval by the Engineer.

3.2.g For Controlling Construction Operations. For determining adequacy of cure and protection, and for determining when loads or stresses can be applied to concrete structures, test cylinders shall be cured with the structure under the same conditions that are not more favorable than the most unfavorable conditions for the portions of the structure which they represent as described in AASHTO T 23 (ASTM C 31/C 31M), Article 9.4. Sufficient test cylinders shall be made and tested at the appropriate ages to determine when operations such as release of falsework, application of prestressing forces, or placing the structure in service can occur.

B. Engineer's Acceptance Sampling, Testing and Inspection.

The Engineer is responsible for sampling, testing, and inspection for acceptance, except for furnishing of necessary materials, which shall be the Contractor's responsibility as directed by the Engineer and at no additional cost to the State. Acceptance is based on the Engineer's inspection of the construction, monitoring of the Contractor's quality control program, and the acceptance test results.

The Contractor shall afford the Engineer all reasonable access without charge.

Samples of fresh concrete for testing will be taken after all concrete retempering is performed. When sampling from within the forms is impractical, samples will be taken at the nearest accessible point in the conveyance system prior to placement into the forms.

Acceptance sampling and testing shall meet the requirements of the Contract and the "Master Schedule for the Preparation of a Project Schedule for Sampling, Testing, and Certification of Materials."

Whenever random samples do not meet specifications, subsequent continuous samples will be taken from each truck batched until field test results indicate that specifications are satisfied, after which time random sampling will resume.

Compressive strength test specimens will be standard 4"x 8" cylinders for all placements unless otherwise modified by the Engineer.

C. Engineer's Acceptance Plan.

The following is the acceptance plan necessary to obtain samples, perform tests and provide inspection of the work. The terms used in this acceptance plan are defined as follows:

1. **Placement.** For a given class of concrete, the portions of a concrete structure constructed during one continuous concrete operation.
2. **Acceptance Plan.** The method of taking and making measurements on a sample, for the purpose of determining the acceptability of a Placement of material or construction.
3. **Random Sample.** A sample chosen in such a manner that each increment in the Lot has an equal probability of being selected. The Engineer reserves the right to take more samples, in addition to those samples taken in accordance with the random sampling plan.
4. **Acceptance.** As defined in Table 5 - Placement Acceptance Schedule.
5. **Rejection.** When used in this context "rejection" shall mean remove, dispose and replace at the Contractor's expense, or at the discretion of the Engineer "rejection" will mean acceptance at a lower price determined by Pay Factors, as specified herein.
6. **Lot.** An isolated quantity of material from a single source or a measured amount of construction produced by the same process. For Placements less than 750 cubic yards the Lot shall be 150 cubic yards or less. For Placements of 750 cubic yards or greater the Lot shall be 250 cubic yards or less.

Lots will be determined as follows:

- a) The total cubic yards for the Placement will be divided by 150 for Placements less than 750 cubic yards and 250 for Placements greater than or equal to 750 cubic yards.
 - b) The result will then be rounded up to the next whole number. This number is the number of Lots in the Placement.
 - c) The total cubic yards for the Placement in (a) will be divided by the number in (b) to determine Lot size.
 - d) Each Lot size will be calculated by rounding to the nearest 10 CY (one truck / load). The total CY for all the Lots shall equal the Placement volume.
7. **Sublots.** Equal divisions or portions of a Lot as defined herein.

The Sublot size for each Lot will be calculated by dividing each Lot into thirds rounded to the nearest truck.

- a) Cylinders shall be cast for each Placement less than or equal to 150 cubic yards of concrete delivered for each class of concrete in accordance with the following:

1 truck = 4 cylinders from the 1 truck
(6 cylinders for Class MC)

2 trucks = 4 cylinders from 1 randomly selected truck
(6 cylinders from 1 randomly selected truck for Class MC)

3 trucks = 2 cylinders from 2 randomly selected trucks
(3 cylinders from 2 randomly selected trucks for Class MC)

4 thru 10 trucks = 2 cylinders from 1 randomly selected truck from the first half of the Placement and 2 cylinders from 1 randomly selected truck from the second half of the Placement.
(3 cylinders from 1 randomly selected truck from the first half of the Placement and 3 cylinders from 1 randomly selected truck from the second half of the Placement for Class MC).

11 thru 15 trucks = 2 cylinders from 1 randomly selected truck from the first third of the Placement, 2 cylinders from 1 randomly selected truck from the second third of the Placement and 2 cylinders from 1 randomly selected truck from the final third of the Placement.

- b) Cylinders shall be cast for each Placement greater than 150 cubic yards and less than 750 cubic yards of concrete delivered for each class of concrete in accordance with the following

2 cylinders from 1 randomly selected truck from the first third of the Lot, 2 cylinders from 1 randomly selected truck from the second third of the Lot and 2 cylinders from 1 randomly selected truck from the final third of the Lot.

- c) Cylinders shall be cast for each Placement greater than or equal to 750 cubic yards of concrete delivered for each class of concrete in accordance with the following:

2 cylinders from 1 randomly selected truck from the first third of the Lot, 2 cylinders from 1 randomly selected truck from the second third of the Lot and 2 cylinders from 1 randomly selected truck from the final third of the Lot.

Sidewalk placements will have a minimum of one set of four cylinders taken from one randomly selected truck per project per day.

D. Placement Acceptance Compressive Strength Evaluation.

Acceptance for compressive strength will be evaluated relative to compliance with the minimum 28 or 56 day compressive strength (f_c) specified herein or as required in the contract documents for each class of concrete produced in accordance with TABLE 5 - Placement Acceptance Schedule. Acceptance for Class MC will be based on 56-day compressive strength test.

Three cylinders randomly selected from each set of 4 or 6 cylinders, as determined under "Sublots", will be tested for either 28-day or 56-day compressive strengths.

Case A: Single Lot Placement.

The average 28 or 56 day compressive strength of 3 cylinders selected from a set of 4 or 6 cylinders and the Range, the difference between the largest and the smallest test result, will be used to calculate the acceptance of the Placement. The following formulas will be used to calculate the Placement Acceptance Test Result (PATR). The Engineer reserves the right to use Formula – B for any Lot size when more than one set of 3 cylinders are tested.

Formula - A

$$\text{PATR} = \bar{X} = \frac{X_1 + X_2 + X_3}{3}$$

$$\text{RANGE (R)} = X_{(\text{largest})} - X_{(\text{smallest})}$$

Symbols

X = individual test value which is the 28-day compressive strength of each cylinder tested.

\bar{X} = the mean (average) 28-day compressive strength of a set of 3 cylinders.

R = (Range), the difference between the largest and smallest 28-day compressive strength test result (56 day -Class MC).

PATR = Placement acceptance test result.

Case B: Multiple Lot Placements.

For multiple Lot placements 3 cylinders from each set of 6 cylinders from each Lot shall be tested for 28 or 56 day compressive strength) The mean value of the sum of the average compressive strengths and the mean value of the sum of the Ranges will be used to calculate the acceptance of the Placement. The following formula will be used to calculate the Placement Acceptance Test Result (PATR).

Formula - B

$$\text{PATR} = \bar{\bar{X}} = \frac{\bar{X}_1 + \bar{X}_2 + \dots + \bar{X}_n}{n}$$

$$\bar{R} = \frac{R_1 + R_2 + \dots + R_n}{n}$$

Symbols

\bar{X} = the mean (average) 28-day compressive strength of a set of 3 cylinders for each Lot.

$\bar{\bar{X}}$ = the mean (average) of the sum of the average 28-day compressive strength test result of each Lot.

\bar{R} = the average of the sum of the Ranges (R) for each Lot.

n = number of sets.

Concrete will be evaluated for acceptance in accordance with Table 5 - Placement Acceptance Schedule, on the basis of the calculated Placement Acceptance Test Results (PATR).

Table 5
Placement Acceptance Schedule

Placement Acceptance Test Result (PATR) (\bar{X} or $\bar{\bar{X}}$)	Pay Factor (PPF)
Not less than $f'c + 0.21 \bar{R}$ (or R)	1.00
Not less than $f'c + 0.04 \bar{R}$ (or R)	0.95
Not less than $f'c - 0.10 \bar{R}$ (or R)	0.70
For less than $f'c - 0.10 \bar{R}$ (or R)	0.50

1. $f'c$ is the 28-day compressive strength specified on the Plans.
2. Range \bar{R} (or R) is the difference between the results of the largest and smallest Lot acceptance test results.

Acceptance of the Placement at the 0.95 Placement Pay Factor (PPF) in lieu of remove, dispose and replacement of the Placement will be at the request of the Contractor and approval by the Engineer.

Acceptance at the 0.70 or 0.50 Placement Pay Factor (PPF) in lieu of remove, dispose and replacement will be as determined by the Engineer on the basis of the effect of the defective Lot on the structural integrity of the concrete structure.

The Contractor may elect to remove and dispose any defective material and replace it with new material to avoid a pay factor of less than 1.00. Any such new material will be sampled, tested, and evaluated for acceptance in accordance with the applicable requirements of this SECTION 601.

The Engineer may reject any quantity of material which appears to be defective based on visual inspection or test results. Such rejected material shall not be used in the work and the results of the tests run on the rejected material will not be included in the calculation of the Placement Acceptance Test Results.

Delete subsection **601.05 BASIS OF PAYMENT** in its entirety and replace it with the following:

601.05 BASIS OF PAYMENT. "Portland Cement Concrete," complete in place and fully accepted, will be paid for as provided in the Specifications. These payments shall constitute full compensation for furnishing all labor, materials, equipment, tools, and incidentals to produce, place, and protect the concrete as herein specified, in addition to any requirements in the Specifications for the particular use, except that a reduction in payment will be made for each Placement of concrete not fully accepted. This reduction in payment for each Placement will be based on the following:

Case 1: For concrete for which a unit price is provided in the Proposal:

$$\text{Unit price reduction} = (1.00 - \text{PPF}) \times \text{the unit bid price in the Proposal}$$

Case 2: For concrete which is paid for as part of a lump sum item or lump sum items as listed in the Proposal:

$$(1.00 - \text{PPF}) \times \text{the price of the various items of concrete per cubic yard as provided in the approved Contractor's Lump Sum Breakdown}$$

PPF is the pay factor determined in **Subsection 601.03.7 D.**

JOB SPECIFIC

CODE 607 MASS CONCRETE

607.01 DESCRIPTION. This specification covers the requirements for concrete used in mass concrete elements. Concrete proportioned for mass concrete applications shall conform to the applicable requirements of PARTS 600 and 800 of these specifications, together with the additional provisions set forth below.

607.01.1 DEFINITIONS. Mass Concrete is defined as any elements so specified on the Plans and any other concrete pour where the ratio of the total surface area to the volume of the element equals or exceeds 0.6 and has a minimum dimension of 3 feet in any of the three planes. Calculation of the ratio shall be performed based on all dimensions measured in feet.

Requirements for mass concrete construction include laboratory testing, thermal modeling, temperature monitoring, and providing concrete temperature control before, during, and after placement. All testing shall be performed at a laboratory with recognized accreditations for performing the necessary tests, with the provision that no exception is taken by the Engineer with the Contractor's choice of laboratory.

The peak temperature is defined as the average of the values measured at any given time by the two temperature sensors placed at the location of the highest temperature as determined by the thermal model for the structural element. The highest acceptable peak temperature is 155 degrees F.

The differential temperature is defined as the value measured at any given time by the temperature sensor in any given location (or the average, if two sensors placed in the location) in the structural element and the peak temperature as defined above. The highest acceptable differential temperature until the completion of temperature control is 35 degrees F.

The performance-based differential temperature is defined as a limit that changes as the concrete gains strength, determined as a function of the established maturity curve for the mix. The benefit of this method is a potential acceleration of the production schedule over the use of a fixed limit. This option may be considered by the Engineer, with the proper submission of an implementation plan for the process as described herein, after the contractor has demonstrated good control of the concrete mix during batching, placement and curing.

607.02 MATERIALS AND EQUIPMENT.

607.02.1. CONCRETE. The applicable material requirements of Section 808 and Section 601. Unless specified in the contract documents, calcium nitrite based corrosion inhibitor shall not be allowed in Mass Concrete mixtures. Any proposed mixture adjustment that meets the requirement in Section 601 for a new approval of the mix design will also require a new approval of the mass concrete temperature control plans per this specification.

607.02.2 TEMPERATURE AND MATURITY RECORDING. Primary temperature measuring loggers shall be designed specifically for determining the maturity of concrete in accordance with ASTM C1074. They shall operate in the range of 0 degrees F to 212 degrees F to an accuracy of +/- 1 degree F and internally record the time and temperature at a minimum of 1 hour intervals for a minimum of 90 days. Each logger shall have a unique serial number and shall upon download of the information using the compatible reader or other appropriate data connection, produce a secure (unalterable) Windows PC-readable file that identifies the logger by its serial

JOB SPECIFIC

CODE 800.9901 CENTRAL BRIDGE NO. 182

DESCRIPTION: Except for the excluded items of work indicated below, the work under this item shall consist of constructing the Central Bridge No. 182 in its entirety. This shall comprise all work pertaining to the construction of:

Superstructure: All the components above the beam seats inclusive of all the bridge bearings, the roadway bridge joints, and any and all embedded or attached components. All of the above work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and the Basis of Payment will be in accordance with these Special Provisions.

Substructure: All components from the tops of the proposed abutment, return wall, and south wall pile caps up to the tops of the backwalls, railings, midposts, and endposts inclusive of any and all closed-cell foam and embedded or attached components. The work under this item shall also include all the work pertaining to the construction of the reinforced concrete approach slabs, pier pile caps, moment slabs (including granite curb), endposts, sidewalks partially supported on the walls, reinforcing and concrete coatings and finishes for concrete components, railings and railing coatings, and steel-backed timber guardrail connection to structure. Reinforcing extending through the joints between the pile caps and stems and between the pier caps and piles is included in this Item. All of the above work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and the Basis of Payment will be in accordance with these Special Provisions.

Excluded Items of Work: The work pertaining to the following items of work are excluded from this lump sum item and instead will be measured and be paid for separately under their own appropriate unit bid or lump sum items as listed in the Proposal: Earthwork (structural excavation and various fill materials), concrete pile caps (abutments and walls), reinforcing in concrete pile caps (abutments and walls), electrical items, water main, and gas-main installation.

All work shall be in accordance with the 2010 Rhode Island Standard Specifications for Road and Bridge Construction, including the latest interim revisions, and the Special Provisions for work included in this item.

METHOD OF MEASUREMENT: “Central Bridge No. 182” will be measured for payment as a “Lump Sum.”

BASIS OF PAYMENT: “Central Bridge No. 182” will be paid for at the contract “Lump Sum” price as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, and all other incidentals required to complete the construction of Central Bridge No. 182 as described in this Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Partial payments for this Lump Sum item will be made in accordance with Standard Specifications/Rhode Island Department of Administration Procurement Regulations Section 12.109.07.

JOB SPECIFIC

**CODE 804.9901
CONCRETE FILLED 14-INCH PIPE PILES**

**CODE 804.9902
CONCRETE FILLED 26-INCH PIPE PILES**

**CODE 804.9903
PILE CUTOFFS**

DESCRIPTION: This work shall consist of the provision of concrete filled steel pipe piles, cutting off of piles at the specified elevations, and coating the piles at the locations and to the details indicated on the Plans or as directed by the Engineer, all in accordance with this Special Provision and Section 804 “Driven Piles” of the Standard Specifications.

MATERIALS: All materials shall be in accordance with Section 804 “Driven Piles” of the Standard Specifications and the following:

- A. Concrete fill shall be Class XX $\frac{3}{4}$ ” for the 14-inch pipe piles and Class HP $\frac{3}{4}$ ” for the 26-inch pipe piles.
- B. Reinforcement shall be in accordance with Section 810 “Reinforcing Steel of the Standard Specifications and shall be epoxy coated.
- C. The coating system shall be as specified in Special Provision 804.9900.

CONSTRUCTION METHODS: All construction shall be in accordance with Section 804 “Driven Piles” of the Standard Specifications and the following:

- A. The Contractor shall submit to the Engineer, information on the type of equipment proposed to be used, proposed methods of operation, proposed sequence of driving, and details of all pile driving equipment and accessories for each pile type specified, all in accordance with this Special Provision.
- B. Foundation piles shall be driven to a sufficient depth and resistance to adequately develop their specified load supporting capacity. The Engineer shall be the sole judge, based on soil data and the results of the pile load test, of the required depth and driving resistance to develop the load capacity.
- C. The Contractor shall perform Wave Equation Analyses for each pile type and driving method coupled with Dynamic Pile Tests in accordance with section 804.03.9-2 “Method B - Wave Equation Analysis Calibrated with Dynamic Pile Tests” of the Standard Specifications. Dynamic test piles shall be those three (3) that will also be subject to static pile load tests as indicated below. These dynamic calibration tests shall be considered incidental to Item Codes 804.9901 and 804.9902.
- D. Test piles shall be driven to the driving resistance determined from the Wave Equation Analysis for the required ultimate static capacities. This driving resistance shall be proposed by the Contractor subject to review by the Engineer.

JOB SPECIFIC

**CODE M.12.03
CONCRETE PROTECTIVE SEALERS**

Unless otherwise modified elsewhere in the Contract Documents, **Section M.12.03** of the Rhode Island Standard Specifications for Road and Bridge Construction is revised as follows:

Delete **Section M.12.03** and replace it with the following (**Subsections M.12.13.1** and **M.12.03.2** shall remain unmodified):

M.12.03 CONCRETE PROTECTIVE SEALERS. All material is subject to the approval by the Department and shall have been tested by an independent accredited laboratory in accordance with the RIDOT procedure “Evaluation of Concrete Surface Sealers”, which will be provided upon request. Following laboratory testing, approval of the sealer is contingent upon a successful field trial in Rhode Island, at a site selected by the Department. The field trial will last a minimum of one year.

Any submitted sealer will comply with the following:

- a. Shall meet all current Federal and State environmental regulations.
- b. Shall not contain oxidizing ingredients such as marine oils, stearates and vegetable oils.
- c. Shall reduce the chloride intrusion into concrete by 90 percent when tested in accordance with AASHTO T259 “Resistance of Concrete to Chloride Ion Penetration” or by 55 percent when tested in accordance the RIDOT procedure “Evaluation of Concrete Surface Sealers.”
- d. Shall reduce the net moisture weight gain of concrete after drying to 30 percent or less as tested in accordance with RIDOT Materials Laboratory Test “Water Absorption and Water Vapor Transmission of Concrete Sealers,” as described in the RIDOT procedure “Evaluation of Concrete Surface Sealers.”
- e. Shall provide effective freeze-thaw protection to the underlying concrete as tested in accordance with ASTM C666; “Resistance of Concrete to Rapid Freezing and Thawing,” as modified by RIDOT for coated specimens, as described in the RIDOT procedure “Evaluation of Concrete Surface Sealers.”
- f. Shall be applied in a minimum of two coats, or as recommended by the Manufacturer.
- g. Shall be used as supplied by the manufacturer. It shall not be diluted or altered in any way, unless approved by the manufacturer in writing and accepted in writing by the Engineer.

At least 2 weeks prior to the start of application on any project, upon request by the Resident Engineer, a one quart sample of each component of the product and all pertinent information, including but not limited to, current product literature and materials safety data sheets, shall be submitted to the Department.

JOB SPECIFIC

**CODE 201.9902
HANDLING OF CONTAMINATED PIPE**

DESCRIPTION: The Work covered under this Special Provision shall consist of the handling of PCB-contaminated gas main pipe. Removal and disposal will be paid for under Item 201.0414 “Remove and Dispose Pipe – All Sizes” and Item 803.0000 “Removal of Existing Bridges.”

Refer to Section 3 of the General Provisions – Contract Specific regarding testing of the existing gas main by National Grid. Should the existing pipe, or a portion thereof, contain PCBs, Item 201.9902 “Handling of Contaminated Pipe” is intended to cover the additional work required to handle the contaminated pipe above and beyond the work already included in Item 201.0414 “Remove and Dispose Pipe – All Sizes” and Item 803.0000 “Removal of Existing Bridges.”

MATERIALS: Not applicable

CONSTRUCTION METHODS: All construction shall be in accordance with the Standard Specifications and the following:

- A. The Contractor shall be responsible for conducting all work in accordance with applicable Federal, State, and local regulations regarding the handling of PCB contaminated materials.
- B. The Contractor shall coordinate with National Grid for the delivery, placement, and removal of the open-top container for the contaminated pipe.
- C. Upon removal of the contaminated pipe, the Contractor shall place the pipe in the open-top container provided by National Grid.

METHOD OF MEASUREMENT: “Handling of Contaminated Pipe” will be measured by the number of liner feet of contaminated pipe actually removed as directed by the Engineer.

BASIS OF PAYMENT: The accepted quantity of “Handling of Contaminated Pipe” will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, and equipment, and all other incidentals required to finish the work, complete and accepted by the Engineer.



9. ITEM 803.0000 "REMOVAL OF EXISTING BRIDGES" INCLUDES COMPLETE REMOVAL OF ALL EXISTING BRIDGE ELEMENTS. THE ELEMENTS TO BE DEMOLISHED INCLUDE BUT ARE NOT NECESSARILY LIMITED TO: PILES AND JACKETS, PILE CAPS, ABUTMENTS, RETURN WALLS, ALL COMPONENTS ABOVE AND SUPPORTED ON THE BEAM SEATS, UTILITIES, ROADWAY AND SIDEWALK JOINTS, AND APPROACH SLABS, INCLUDING ALL EMBEDDED, SUPPORTED, AND ATTACHED COMPONENTS.

ALSO INCLUDED ARE COMPONENTS OF THE EXISTING NORTHWEST RETAINING WALL, INCLUDING BUT NOT NECESSARILY LIMITED TO CONCRETE MOMENT SLABS AND ATTACHED GRANITE CURB, RAILING CONCRETE FOOTINGS, AND CLSM INCLUDING ALL EMBEDDED, SUPPORTED, AND ATTACHED COMPONENTS. THE EXISTING SHEETING MAY BE BUT NEED NOT BE REMOVED IN ITS ENTIRETY. HOWEVER, REMOVAL OF THE EXISTING SHEETING AT LEAST TO THE EXTENT REQUIRED TO CONSTRUCT THE PROPOSED STRUCTURE AND APPROACHES SHALL ALSO BE CONSIDERED INCLUDED IN ITEM 803.0000 "REMOVAL OF EXISTING BRIDGES."



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401-334-1100

BRIDGE DEMOLITION PLAN - 1

R.I. CONTRACT
No.
2012-CB-001

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9. ITEM 803.0000 "REMOVAL OF EXISTING BRIDGES" INCLUDES COMPLETE REMOVAL OF ALL EXISTING BRIDGE ELEMENTS. THE ELEMENTS TO BE DEMOLISHED INCLUDE BUT ARE NOT NECESSARILY LIMITED TO: PILES AND JACKETS, PILE CAPS, ABUTMENTS, RETURN WALLS, ALL COMPONENTS ABOVE AND SUPPORTED ON THE BEAM SEATS, UTILITIES, ROADWAY AND SIDEWALK JOINTS, AND APPROACH SLABS, INCLUDING ALL EMBEDDED, SUPPORTED, AND ATTACHED COMPONENTS.

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BRIDGE DEMOLITION PLAN - 2

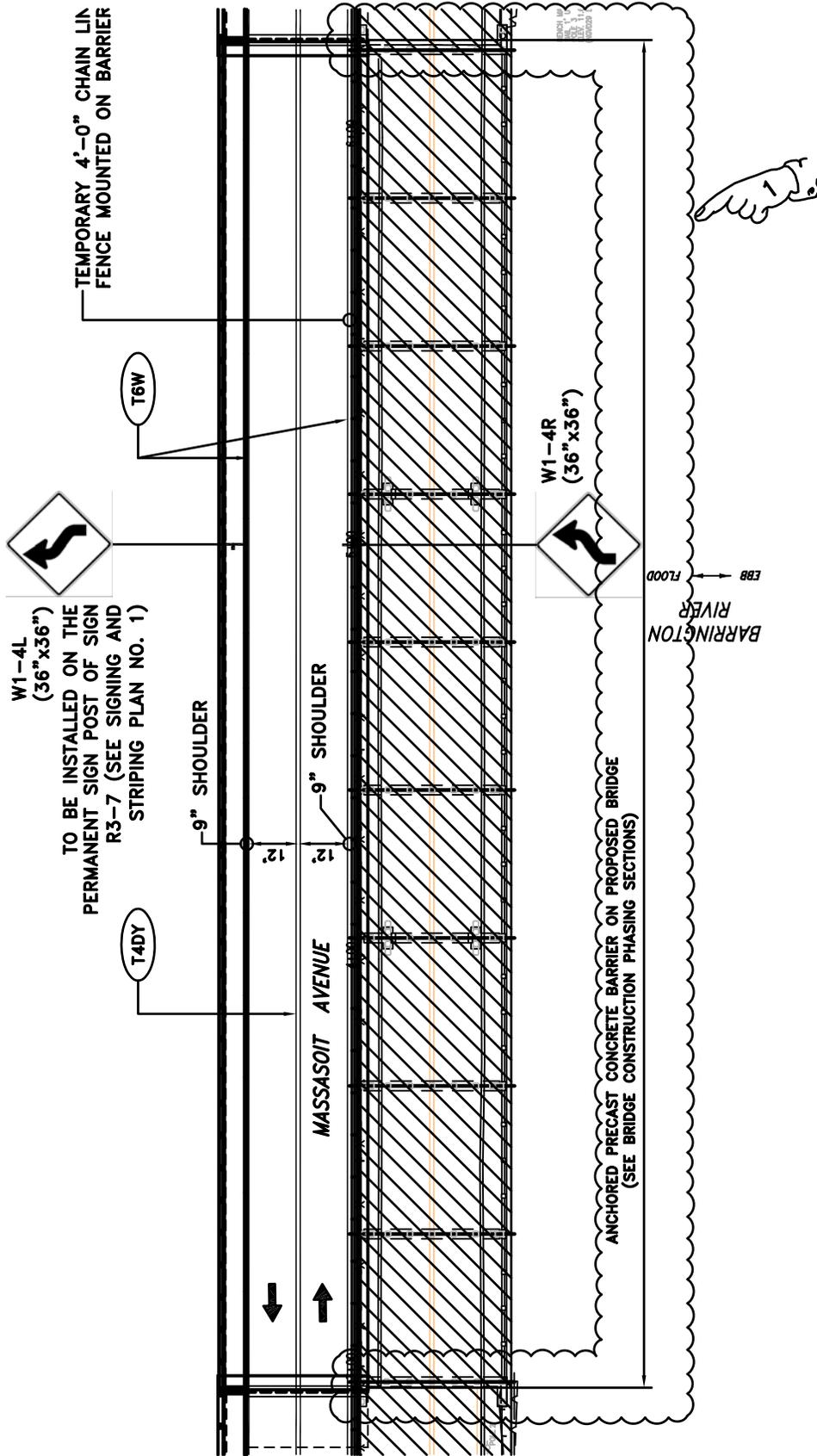
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MAINTENANCE AND PROTECTION OF TRAFFIC

PLAN No. 3

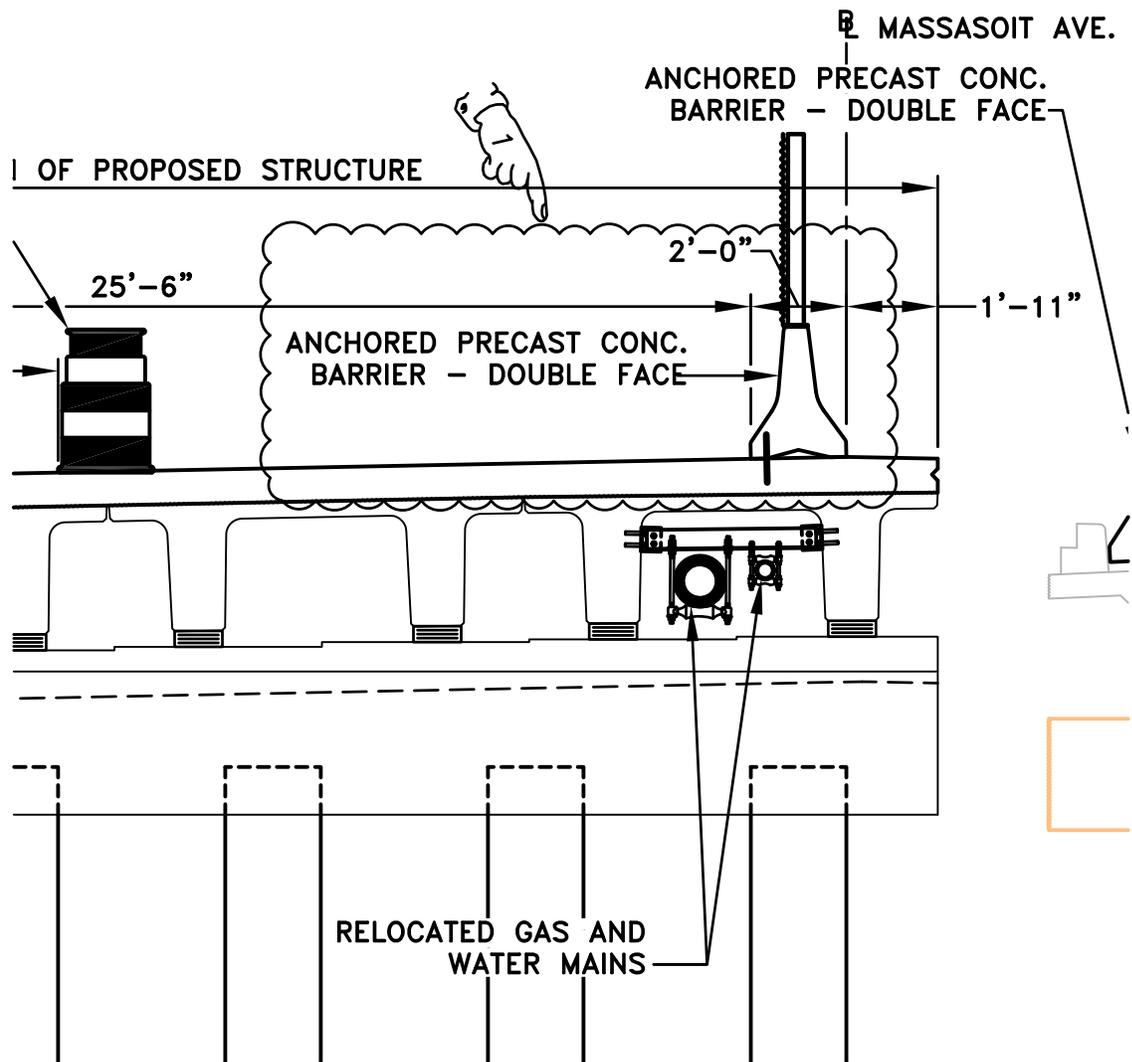
R.I. CONTRACT
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**BRIDGE CONSTRUCTION
 PHASING SECTIONS - 1**

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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 926 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL BOLTS, ANCHORS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A325 AND SHALL BE GALVANIZED ACCORDING TO ASTM A153.
3. BEND REBAR AROUND A 1 3/8" Ø PIN. BARS R-1 SHALL BE FABRICATED CONTINUOUSLY. BARS R-2 SHALL BE FABRICATED WITH 2'-0" MINIMUM LAPS AS SHOWN ON DETAIL.
4. MINIMUM EMBEDMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO DEVELOP MINIMUM REQUIRED ANCHOR CAPACITY OF 2,500LB SHEAR AND 6,000LB TENSION IN 3000 PSI CONCRETE.
5. PRIOR TO BARRIER PLACEMENT, LONGITUDINAL DECK REINFORCEMENT SHALL BE LOCATED AND MARKED ON THE DECK USING A PACHOMETER. THE POSITION OF THE BARRIER SHALL THEN BE ADJUSTED TO MINIMIZE INTERFERENCE BETWEEN THE ANCHORS AND LONGITUDINAL DECK REINFORCEMENT, AT THE DIRECTION OF THE ENGINEER.



6. ADHESIVE ANCHORS WILL NOT BE PERMITTED ON THE PROPOSED BRIDGE.
7. ON THE PROPOSED BRIDGE DECK, REMOVE ANCHOR AND FILL HOLE WITH A DEPARTMENT-APPROVED NON-SHRINK GROUT.

 <p>PARE CORPORATION ENGINEERS - SCIENTISTS - PLANNERS 8 BLACKSTONE VALLEY PLACE LINCOLN, RI 02885 401-334-4100</p>	<p>ANCHORED PRECAST CONCRETE BARRIER - DOUBLE FACE</p>	<p>R.I. CONTRACT No. 2012-CB-001</p>	<p>SKETCH No. 5</p>
<p>JUNE 2013</p>	<p>ADDENDUM No. 1</p>	<p>REVISION TO SHEET 83 of 103</p>	

NOTES:

1. THIS PLAN HAS BEEN PREPARED TO ADDRESS CONDITION NO. 14 OF THE WATER QUALITY CERTIFICATION (WQC) ISSUED FOR THE PROJECT (RIDEM APPLICATION NO. 11-002) AND INCLUDED IN THE GENERAL PROVISION – CONTRACT SPECIFIC. SUBSEQUENT TO THE ISSUANCE OF THE WQC, RIDEM DETERMINED THAT THE EELGRASS SURVEY ORIGINALLY REQUIRED UNDER CONDITION 14 IS NOT NECESSARY.
2. SALT MARSH IN THE VICINITY OF THE BRIDGE WAS DELINEATED ON SEPTEMBER 14, 2009.
3. ADDITIONAL SALT MARSH WAS DELINEATED ON FEBRUARY 26, 2013.
4. MUD FLATS WERE DELINEATED AT LOW TIDE ON FEBRUARY 26, 2013.
5. BARGES SHALL NOT BE SPURRED OUTSIDE THE LIMITS SHOWN WITHOUT THE APPROVAL OF RIDEM AND CRMC.
6. WORK ON THE BRIDGE SHALL NOT BE CONDUCTED FROM BARGES OUTSIDE THE LIMITS SHOWN WITHOUT THE APPROVAL OF RIDEM AND CRMC.
7. THE CONTRACTOR SHALL SET BUOYS ALONG ALL SALT MARSH AND MUDFLAT AREAS IN ACCORDANCE WITH CONDITION NO. 14 OF THE WQC. THE BUOYS SHALL BE SET AT A SPACING OF NO MORE THAN 50 FEET.



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NOTES:

1. FOR THE REQUIREMENTS PERTAINING TO THE FURNISHING AND DRIVING OF FOUNDATION PILES, REFER TO THE RHODE ISLAND STANDARD SPECIFICATIONS AND SECTIONS 804.9900 THROUGH 804.9903 OF THE SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, INFORMATION ON THE TYPE OF EQUIPMENT PROPOSED TO BE USED, PROPOSED METHODS OF OPERATION, PROPOSED SEQUENCE OF DRIVING, AND DETAILS OF ALL PILE DRIVING EQUIPMENT AND ACCESSORIES FOR EACH PILE TYPE SPECIFIED, ALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
3. PIPE PILE TYPES
 - TYPE P1: PIPE PILE 14" X 0.50" (ABUTMENTS AND WALLS)
 - TYPE P2: PIPE PILE 26" X 0.50" (PIERS)ALL PILE TYPES ARE VERTICAL (NO BATTER).
4. PREDRILLING DIAMETER AND ELEVATION
 - PILE TYPE P1 AT WEST ABUTMENT AND WALLS: 13" DIAMETER TO ELEV. -50.0
 - ALL OTHER PILES: NO PREDRILLING
5. ESTIMATED AND MINIMUM PILE TIP ELEVATION

THE CONTRACTOR SHALL HAVE THE APPROPRIATE EQUIPMENT AVAILABLE TO ACCOMMODATE OBSTRUCTIONS WHEN PREDRILLING FOR PILES AT THE WEST ABUTMENT AND WALLS. PAYMENT FOR PREDRILLING WILL BE MADE UNDER ITEM 804.0100 "PREBORING."

PILE TYPE P1 - WEST ABUTMENT AND RETURN WALLS



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PILE DETAILS

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